





RA – 800

REALTIME ARRANGER

1 – Player's guide

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR		
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

WARNING - When using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. Do not use this product near water — for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
3. This product should be used only with a cart or stand that is recommended by the manufacturer.
4. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
5. The product should be located so that its location or position does not interfere with its proper ventilation.
6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
8. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
9. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
10. The product should be serviced by qualified service personnel when:
 - A. The power-supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled onto the product; or
 - C. The product has been exposed to rain; or
 - D. The product does not appear to operate normally or exhibits a marked change in performance; or
 - E. The product has been dropped, or the enclosure damaged.
11. Do not attempt to service the product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

For the USA

This product may be equipped with a polarized line plug (one blade wider than the other) . This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.

For Canada

For Polarized Line Plug

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR ÉVITER LES CHOCs ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU' AU FOND.

For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

Introduction

Welcome to the RA-800

Thank you for purchasing the Roland RA-800 Realtime Arranger. Ever since the introduction of its Intelligent Synthesizer/Keyboard and Arranger lines, the name Roland has come to be associated with the best sounding and certainly most musical "keyboards" available.

The RA-800 is the professional module version of the Roland keyboard series, and as such designed to provide everything the entertaining artist and serious amateur musician needs on stage, in the studio, or at home.

Manuals

The RA-800 is supplied with two manuals: the *Player's Guide* and the *Reference Manual*. The *Player's Guide* explains how to set up, switch on, connect, and use the RA-800. This is probably the document you will read first.

Later on, you can refer to the *Reference Manual* for full details about all the RA-800's parameters and functions.

Note: You will find a general alphabetical index at the end of both manuals that will help you locate information quickly.

Note: To avoid confusion, let us agree to use the word "button" for all keys (except the function keys) on the front panel. The word "key" is only used when we talk about an external keyboard used to control the RA-800.

Main features of your RA-800

- * **128 High-definition Music Styles**
Your RA-800 comes loaded with an impressive 128 high-definition Music Styles covering every musical genre you need. Each Style comprises four versions (Basic, Advanced, Original, and Variation), two Intros, two Endings, and various other elements that actually add up to far more than 128 accompaniments.
- * **8 User Styles**
The RA-800 allows you to have 8 User Styles in RAM at any given time. The User Style memories can be used to load your own Styles or any eight Styles from existing MSA, MSD, and MSE Style Library disks (available from Roland and third-party suppliers). When creating your own Styles, you can edit existing Styles or program your own accompaniments from scratch, and then save them to floppy disk.
- * **MIDI Sets specially programmed for various controllers**
The RA-800 comes loaded with 8 MIDI Sets (memories containing MIDI settings) that contain the right settings of all MIDI parameters for 8 types of external controllers (acoustic piano, Roland piano/synthesizer, MIDI accordion, etc.). That means, you can switch on the RA-800 and start making music right away.
- * **192 Performance Memories**
Apart from allowing you to customize existing Styles quickly, the Performance Memories are also used to save all panel settings. If you need more than 192 memories, you can save the contents of the Performances to floppy disk and load them whenever necessary.
If you do not wish to program Styles, or if you are too busy to delve into this matter, you can personalize existing Styles by modifying the instrument assignments to any given

Arranger part (bass, drums, chord backing, etc.), and then save these changes to one of the 192 Performance Memories in RAM.

Note: The RA-800 contains 64 Performance Memory settings in Group A of its internal memory. These settings supplement the MIDI Sets. Unlike the MIDI Sets, however, that also reside in RAM memories, the Performance Memory settings will not be restored when you initialize the RA-800 ("Load Factory Setup"). It would therefore be a good idea to save these Performance Memory settings to a blank disk before you start programming your own settings.

- * **Truly intelligent**

Your RA-800 is intelligent in that it adapts Style playback to the chords you play. While previous models were unable to cope with syncopated chord changes, the Arranger of your RA-800 will change accordingly, so that you could even play different chords for every eighth note (quaver) of a bar and still benefit from a professional sounding accompaniment.

Furthermore, you only need to play root notes in order to have the Arranger play major chords, or press a mere two or three keys to sound even the most complex chords you can think of (Chord Intelligence).
- * **Refined chord recognition**

Thanks to one of the most refined chord recognition systems to date, your RA-800 can handle virtually any chord you play. Feel free to add the odd 9/13 or "+" to your chords whenever the song you are playing requires it.
- * **Three trigger modes**

The Music Styles of your RA-800 can be triggered in one of three modes: Standard, Intelligent or Piano Style. In Standard mode, the chord recognition of the Arranger is pretty straight-forward: only the notes you play will be taken into account for the melodic accompaniment.

In Intelligent mode, you do not have to play complete chords in order to hear them. Pressing one, two, or three keys will produce even the most complex chords you can think of.

The Piano Mode, finally, is provided for those with a "pianistic" background and probably suited for those who own a digital piano.
- * **Dynamic Arranger**

In Dynamic Arranger mode the level of certain parts played by the Arranger respond to velocity changes. Combined with a few clever programming tricks, this allows you to mute or sound any given part of the automatic accompaniment simply by varying the force with which you strike the keys (a kind of velocity switch effect applied to accompaniment parts rather than sounds).
- * **High-resolution Music Styles**

All Music Styles were programmed at a 120CPT/J resolution and contain modulation and pitch bend messages that add that little "something" one invariably associates with a musical performance (slides, vibrato, etc.).
- * **689 top-notch sounds**

Your RA-800 comes with 654 sounds and 35 JV series Variations, most of which are derived from Roland's professional synthesizers and samplers. No matter which style you want to play, there will always be a few sounds to choose from.
- * **Sound editing**

True to the Roland tradition, the RA-800 allows you to customise your sounds (or Tones, as we call them) by editing the available Part parameters. These changes may be saved to any one of the 192 Performance memories along with the Arranger settings, etc.
- * **3 effects and two-band equalizer**

Apart from the Chorus and Reverb effects, the RA-800 is also equipped with a fully programmable Delay effect and a two-band equalizer.

-
- * **64-voice polyphony, 32-part multitimbral**

The sound source of your RA-800 is 64-voice polyphonic with dynamic voice allocation, giving you all the musical freedom you need to sound great on stage or at home. If used as sound module, your RA-800 can play back as many as 32 MIDI parts at a time for full-fledged orchestral arrangements.
 - * **Revolutionary Basic Channel design providing the same functionality as a keyboard with Realtime Arranger**

Rather than working with several MIDI channels to access the RA-800's sections, you can transmit your MIDI messages on the Basic Channel, thereby taking advantage of the Split, Layer, Melody Intelligence, etc., functions while using only one MIDI channel. Combinations of Basic and multiple channel control are also possible for enhanced operation with MIDI accordions, organs, etc.
 - * **Five "Realtime" parts**

Even while using the Arranger, you can play two solo parts (Upper 1 and Upper 2) as well as a left-hand part (called Lower), and a Manual Bass (M. Bass) part. The fifth Realtime part (Manual Drums) assigns different percussion sounds to every note.

The Realtime parts remain active during playback of Standard MIDI or Roland i^o files so that you are free to add whichever part you like to recorded music.

The Upper 2 part can be used in Layer, Split, or Melody Intelligence mode, the latter being a learned name for counter-melody that the Arranger will add automatically depending on the chords you play.
 - * **Intuitive user interface**

The large 240 x 64 pixel display keeps you posted about the status of the RA-800 and allows you to access various functions via the function key pad. Depending on the display page, the five knobs below the display can be used to set the volume, pan, Chorus/Reverb/Delay send level, to select Tones and Styles, or to change parameter values. Several of these functions are duplicated by dedicated buttons on the RA-800's front panel.
 - * **Multitasking**

Your RA-800 can perform several actions at a time, allowing you to format or save to a disk while playing or editing settings.
 - * **Chord Sequencer**

The Chord Sequencer allows you to record the "changes" of an entire song before playing it, keeping your left hand free for pitch bend and modulation effects during actual performance.

Not only does the Chord Sequencer allow you to record the chord changes, it also stores all actions related to Music Style selection and Arranger trigger changes.
 - * **MIDI File Player/Recorder**

Thanks to the advanced Chord Sequencer and the MIDI File Player/Recorder, the RA-800 gives you enough flexibility to make professional sounding recordings. True to the Roland tradition, everything the Arranger plays can be recorded so that you can play back Standard MIDI Files recorded with the Recorder on any SMF compatible sequencer, using any GM/GS compatible sound source, and still benefit from the magnificent accompaniment you used during the recording.

Unpacking Your RA-800

Your RA-800 comes with the following items. Please check the contents of the cardboard box and report any problems to the Roland dealer you purchased the RA-800 from.

- This Player's Guide and a Reference Manual.
- Floppy disks containing Music Styles and demo songs.

Useful options

- * **KP-24**
The acoustic piano pickup was designed to provide MIDI control from an acoustic piano and can be used to control the RA-800.
- * **FC-7 Foot Controller**
The FC-7 Foot Controller allows you to perform various Style selection functions (Fill In To Original/To Variation, Start/Stop, etc.) by foot. Connect it to the FC-7 connector at the back of your RA-800.
Note: The FC-7 cannot be used as MIDI pedal board. Please note that it sends pulses rather than MIDI messages. Do not try to connect it to the MIDI IN jack of your RA-800, or any other instrument.
- * **EV-5 Expression pedal**
An optional EV-5 expression pedal (connected to the EXPRESSION jack) can be used to perform various tasks, such as master volume changes.
- * **DP-2, DP-6, or FS-5U Foot Switch**
You will probably need two DP-2 (DP-6 or Boss FS-5U) footswitches. One should be connected to the SUSTAIN FOOTSWITCH connector to function as Hold pedal.
A second DP-2 (DP-6 or Boss FS-5U) can be used to perform various selectable tasks. The FOOT SWITCH assignment can be saved to a Performance memory along with all other settings. -
- * **MSA, MSD, and MSE series Style Disks**
The MSA, MSD, and MSE series Music Style disks contain new Styles for you to load into the 8 User Style memories of your RA-800. The MSE Music Style series is a new series specially developed for the RA-800. Note that you cannot share MSE Styles with colleagues that own an older E series or RA series instrument because the MSE series Styles take advantage of the RA-800's sound source. You will have no trouble reading MSA and MSD series Style disks on your RA-800 (upward compatibility).
- * **Amplification**
Your RA-800 deserves a decent amplification system with a built-in or external effects device for your vocals. As you're probably a professional or very serious amateur, you may already own a small, powered mixer driven, sound system. See your dealer for the available Roland sound reinforcement units.

Compatibility with other instruments/formats

Once you have come to grips with the functions of your RA-800, do take the time to read the section about "Compatibility" on page 155.

Precautions

In addition to the items listed under Safety Precautions inside the front cover, please read and observe the following:

Power Supply

- Before connecting the RA-800 to other devices, turn off the power to all units; this will help prevent damage or malfunction.
- Do not use the RA-800 on the same power circuit with any device that will generate line noise; an electric motor or variable lighting system for example.

Placement

- Using the RA-800 near power amplifiers (or other equipment containing large power transformers) may induce hum.
- The RA-800 may interfere with radio and television reception. Do not use it in the vicinity of such receivers.
- Do not expose the RA-800 to temperature extremes or install it near devices that radiate heat. Direct sunlight in an enclosed vehicle can deform or discolor the RA-800.

Maintenance

- For everyday cleaning wipe the RA-800 with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Additional precautions

- Protect the RA-800 from strong impact.
- Never strike or apply strong pressure to the display.
- Before using the RA-800 in a foreign country, consult with qualified service personnel.
- A small amount of noise may be heard from the display during normal operation.

Memory backup

- The RA-800 contains a battery which powers the unit's memory circuits while the main (AC) power is off. The expected life of this battery is 5 years or more. However, to avoid the untimely loss of memory data, it is strongly recommended that you change the battery every 5 years. Please be aware that the actual life of the battery will depend upon the physical environment—especially the temperature—in which the unit is used. When it is time to change the battery, consult with qualified service personnel.
 - Please be aware that the contents of memory may at times be lost; when the RA-800 is sent for repairs or when by some chance a malfunction has occurred. Important data should be saved to disk. During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data.
 - The settings of the 64 Performance Memories (Group A, Banks 1~8) the RA-800 comes loaded with reside in RAM memories and are not supplied on a separate disk. Saving your own settings to one of these memories will overwrite the Performance Memory in question. It is not possible to restore the contents of the 64 factory Performance Memories by initializing the RA-800. Please save the internal Performance Memories to disk before writing your own settings.
-

Table of contents

Introduction	3
Precautions	7
1 Setting up	13
1.1 Connections	13
1.2 MIDI Sets and other points specific to the RA-800	14
1.3 Functions exclusive to Basic Channel control	16
1.4 Demo songs	16
2 Panel Descriptions	18
2.1 Front panel	18
2.2 Rear panel	21
3 User interface	23
3.1 [F5] Exit	23
3.2 Master page	23
3.3 Navigating through the display pages	25
Function keys and [SHIFT] button	25
Knobs, [TONE], and [VOLUME] buttons	25
Reversed/positive value display	26
[PAGE] ▲▼ and Part Select buttons	26
3.4 Realtime display	27
4 Realtime parts	28
4.1 What are Parts?	28
4.2 Selecting Realtime parts for playing (via the Basic Channel)	28
Layering and selecting Upper2	29
Selecting the Lower and M.Bass Parts	29
W Right (Whole Right)	29
W Left (Whole Left)	29
Split and split point	30
Selecting the Manual Drums part	31
Roll	32
4.3 Selecting Tones for the Realtime parts	32
4.4 Selecting Drum Sets for the M.Drums Part	35
4.5 Who selects the Tones? – Tone Change	35
4.6 General notes	36
4.7 Realtime Performance functions	36
Pitch Bend and Modulation	36
Transpose and Octave Up/Down	37
Sustain pedal (Hold)	38
Assignable footswitch	38
Expression pedal	38
Expression pedal	39
Metronome	39
Master Tune	39
5 Playing with accompaniment – Arranger	40
5.1 Arranger and Music Styles	40
5.2 Selecting the chord recognition area	41
5.3 Selecting the Arranger Chord mode	42
Standard	43
Piano Style	43
Intelligent	43
5.4 External Keyboard Cancel	44
Basic Channel vs. multiple channel control	45
5.5 Chord Inversion and Hold	45
5.6 Music Style (Arranger) functions	46

Starting a Music Style	46
Stopping a Music Style	46
Selecting another Style division	47
Basic and Advanced	47
Major, minor, seventh	47
Fills: To Original and To Variation	48
Complementary Fill functions: Fill In Half Bar and Fill In Rit	48
Intro and Ending	49
Realtime changes of the drum accompaniment	50
Other useful Style playback functions	50
One Touch Program	50
Melody Intelligence	50
Fade Out	51
Reset	51
5.7 Selecting Music Styles	51
Using external (User) Styles	52
5.8 Style Tempo	53
Tempo dial and indicators	53
Tap Tempo	54
Auto Tempo and Tempo Lock	54
Tempo Rit and Tempo Acc	54
5.9 Customizing Music Styles	55
Assigning other Tones to the Arranger Parts	55
Tone Change	55
5.10 Working with User Style Sets	56
Compiling and saving your own Style Sets	56
Loading User Style Sets	58
6 Saving and loading registrations – Performance Memories	59
6.1 Writing your settings to a Performance Memory	60
Memory Protect	60
Performance name	61
Writing a Performance Memory	61
6.2 Selecting Performance Memories	62
Selecting 00 FreePnl	62
Resume	62
Selecting a Performance Memory (Group, Bank, Number)	63
Automated User Style access	63
Selecting a Performance Memory using the ◀DOWN/UP▶ buttons	64
Selectively loading Performance Memory settings (Performance Memory Hold)	64
7 Chord Sequencer	66
7.1 Recording the accompaniment of an entire song	66
7.2 Two Chord Sequencer modes	66
NTA (Note To Arranger)	66
Style Change	67
7.3 “Realtime” chord sequencing	67
7.4 Playing back a Chord Sequence	68
8 Recorder (GM/GS mode)	69
8.1 How to record a song	69
Formatting a disk	69
8.2 Before recording	70
8.3 You're on...	70
Song name	71
8.4 Song playback	71
All Song playback	72
Playback of a specific song on disk	72
8.5 Useful Recorder playback functions	72
Lyrics function	72
Fast Forward, Rewind, and Reset	73
Markers and playback loops	73
8.6 Live performances with Standard MIDI File backing (Minus One)	74

Changing the song tempo	74
Soloing and muting parts on disk	75
Overriding song settings	76
Song part volume (balance)	76
Song master volume	77
Tone Change: Old and New	77
Link	78
9 Easy editing	79
9.1 Part Balance (Volume)	79
Grouped and buss faders	79
Mixer mode: modifying the volume of the buss members	81
Muting parts	81
Panpot (stereo position)	82
9.2 Effects and Equalizer	82
Applying Reverb, Chorus, or Delay to a part	82
Effect settings	83
Equalizer	84
9.3 Source: your settings or those of the Arranger/Song?	85
10 Part editing	87
10.1 Editing the Part parameters	87
Modulation (Vibrato)	88
Timbre (Filter)	88
Envelope	89
10.2 Another Source switch: Tone Edit	90
10.3 Upper2 settings	91
Tuning Upper2: Coarse and Fine	91
Upper2 Tune Source	92
Intelligent melodies played by Upper2	92
11 Advanced features	93
11.1 Settings relating to the Arranger	93
Fill Rit value	93
Rit/Acc value: Tempo Change	93
Major, minor or seventh accompaniment? – Chord Family Assign, Alteram	94
Musical Style playback: Wrap	95
Dynamic Arranger: velocity sensitivity of the Arranger parts	95
Footswitch function	96
11.2 Settings relating to the Realtime parts	96
Velocity switching (Min and Max)	96
Roll resolution for the M.Drums part	97
Monophonic/polyphonic, with or without portamento (Upper1 and Upper2)	97
Pitch Bend range	98
Expression pedal: blending effects or just plain volume	99
Playing in other scales: Keyboard Scale	99
Source switches	100
11.4 Metronome	100
11.5 Song Sets	101
12 Programming User Styles	103
12.1 Concept	103
Patterns	103
Tracks	104
Looped vs one-shot	104
12.2 Recording User Styles from scratch	106
Selecting the User Style mode	106
Selecting the track, the Mode, the Type and the Division	107
Working with clones	107
Record mode	107
Specifying the key	108
Quantize	109
Tone selection	109
Time signature	110

Length: specifying the pattern length	110
Tempo	112
Recording	112
Playback, and then keep or redo?	113
Saving your Style to disk	113
Programming other parts and divisions	114
Muting parts while recording others (Status)	114
Remarks	115
12.3 Copying existing Styles	116
Copying entire Style divisions using Load (all tracks, several divisions)	116
Copying individual User Style tracks	117
12.4 Editing User Styles	119
Editing on the fly by recording	119
12.5 Programming User Styles using an external sequencer	123
Data that can be recorded	123
Connection and synchronization	124
Preparation of your sequence	125
Preparation on the RA-800	125
Recording	126
Recording using "dedicated" controllers	126
12.6 Where to go from here – Editing User Styles (2)	127
User Style Edit mode	127
Example: using Erase to remove Panpot settings	128
Track Erase ([F1])	128
Track Delete ([F2])	129
Track Insert ([F3])	129
Track Transpose ([F4])	129
Track Velocity Change ([SHIFT]+[F1])	129
Track Quantize ([SHIFT]+[F2])	130
Track Change Gate Time ([SHIFT]+[F3])	130
Track Shift ([SHIFT]+[F4])	130
Editing in Micro mode	130
12.7 Example: recording in Step time	131
12.8 Deleting a User Style from a User Style memory	134
13 MIDI	135
13.1 MIDI in general	135
Requirements for receiving and transmitting MIDI data	135
MIDI on your RA-800	137
MIDI channels & RX parts	137
13.2 MIDI connections	138
Receiving MIDI data from external instruments	138
Sending MIDI data to external instruments or computers	138
13.3 Receiving MIDI data	139
Receive channels (RX) and switches	139
Realtime sections (RTIME)	139
Arranger and Song sections (Arrang and Song)	139
NTA channel	139
Basic channel	140
Style Select channel	141
Recorder and MIDI INputs	141
13.4 Transmit (TX) channels and transmit switches	142
13.5 Other MIDI settings	142
Switching Off MIDI reception/transmission	142
MIDI receive/transmit filters	142
Shift and RX Octave	143
Zones (Low/High Limits)	144
Local function	145
13.6 More MIDI settings	146
Rx Velo, TX Velo	146
Soft Thru (for digital pianos)	146
13.7 MIDI synchronization	147

13.8 MIDI Sets	147
Writing a MIDI Set	147
Memory Protect	147
Writing your settings to a MIDI Set	148
Selecting a MIDI Set	148
Saving MIDI Sets to disk	148
Loading a MIDI Set from disk	149
14 Housekeeping	150
14.1 General remarks	150
14.2 Disk copy (backups)	150
14.3 Renaming files on disk	152
14.4 Deleting files on disk	152
14.5 Initializing your RA-800 (Load Factory Setup)	153
14.6 Compatibility	153
Tone lists	157
RA-800 Tone Map (Banks A & B)	157
SC-55 Tone Map (Banks C & D)	159
SC-55 Map (CM-64 Tones)	160
GM Tones	161
GS Tones	162
MIDI Set lists	163
Index	167

1 Setting up

1.1 Connections

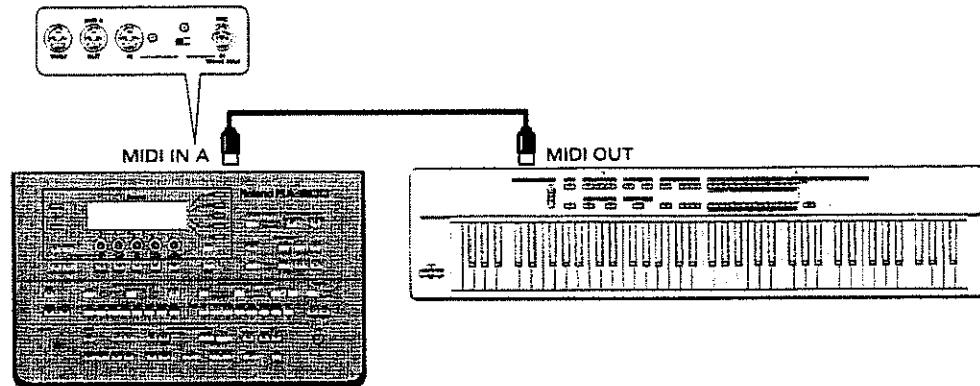
Note: A metronome output with a dedicated level control is provided for a drummer. You can connect stereo headphones to the METRONOME OUT jack. Please bear in mind that the metronome level is quite loud when set to maximum. Before connecting a pair of stereo headphones, turn the METRONOME LEVEL button all the way down and then gradually increase it to a comfortable level.

Establishing one of the following connections according to the controller you use is one thing. Another thing is to select the correct MIDI settings for this connection. We realize, of course, that you would like to start playing right away. That is why we've prepared a series of eight MIDI settings for different external MIDI instruments (let's agree to call them *controllers*). These settings reside in eight memories that we call *MIDI Sets*. Refer to the following table for the selection of the factory preset MIDI settings for your type of controller:

MUSIC STYLE/ MIDI SET button	For	Explanation
1	Acoustic Piano	Settings for a KP-24
2	Digital Piano, Synth	1-channel MIDI control
3	MIDI Master Keyboard	1-channel MIDI control
4	MIDI Accordion 1	5-channel MIDI control
5	MIDI Accordion 2	5-channel MIDI control (providing better chord recognition for certain accordions).
6	MIDI Guitar	1-channel MIDI control for a GI-10, GR-09 or GR-1
7	MIDI Organ 1	Control on MIDI channels 11, 12, 13 (Roland Atelier series)
8	MIDI Organ 2	Control on MIDI channels 1, 2, 3 (other brands)

These are the factory presets. The first time you switch on your RA-800, the MIDI Sets will perform as expected. See page 163 for the contents of the factory MIDI Sets. Please bear in mind that you can save your own MIDI settings in these memories, which is wonderful, of course, yet it also means that you can overwrite the factory presets. Be careful not to overwrite the MIDI Sets that suits your MIDI setup until you fully understand the RA-800's possibilities and MIDI parameters.

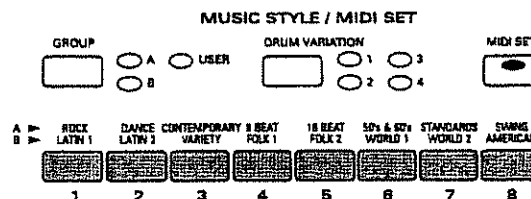
Below please find an illustration showing you how to connect your controller to the RA-800. In most instances, you need to connect the controller's MIDI OUTput to the RA-800's MIDI IN A jack. Only when using a KP-24 Keyboard Pickup installed on an acoustic piano do you need to connect its plug to the RA-800's RRC connector. In that case, set the MIDI IN A/RRC switch to the RRC position.



1.2 MIDI Sets and other points specific to the RA-800

The RA-800 is an Arranger module, which means there are a few points you have to bear in mind:

- (1) The RA-800's Arranger and Realtime parts only play in response to MIDI messages. That requires that you use either a keyboard controller (MIDI Master Keyboard), a KP-24, or any other MIDI instrument capable of sending MIDI messages. In order to get you up and running right away, your RA-800 comes loaded with eight MIDI settings, one of which is bound to work for the equipment you use. These settings reside in the eight MIDI Set memories. All you need to do is press the [MIDI SET] button, and then select a MIDI Set memory by pressing one of the MUSIC STYLE/MIDI SET number buttons:



Press one of these buttons to select a MIDI Set.

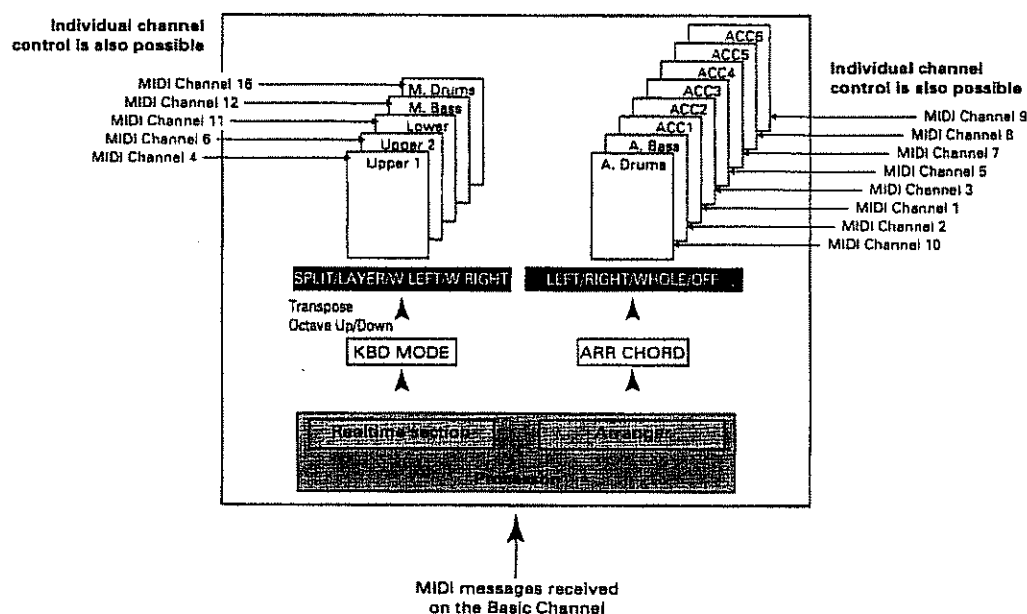
Note: See page 163 for the factory preset MIDI Set table.

- (2) Your RA-800 can be used like a keyboard without keyboard: you can control several parts simultaneously while transmitting on only one MIDI channel. That channel is called the Basic Channel. In most instances, this is probably the way you want to use the RA-800. When you select MIDI Set 2 (Digital Piano & Synth) or MIDI Set 3 (Master Keyboard), the Basic Channel is set to 1. For the other factory MIDI Sets, the Basic Channel is set to Off. Controlling the RA-800 via its Basic Channel is by far the most convenient method because the RA-800 then relies on your ARR CHORD, KBD MODE, TRANSCOPE, and OCTAVE UP/DOWN settings. As stated above, when controlled on the Basic Channel, the RA-800 behaves like an intelligent keyboard without keyboard.
- (3) Please remember that replacing a factory preset MIDI Set by your own settings requires some insight into the RA-800's MIDI functions.

At first, it is probably wiser to adapt your instrument (digital piano, MIDI accordion, etc.) to the MIDI parameters. Selecting another Basic Channel, for example, may also require that you set a number of MIDI receive switches to Off. As a rule, it is usually a good idea to deactivate MIDI reception for all parts that you do not wish control – including the part that receives on the same MIDI channel as the Basic Channel (and there will always be one).

Tip: There is a way to ensure that the RA-800 automatically selects "your" MIDI Set every time you switch it on: switch off the RA-800 and hold down the MIDI Set number button corresponding to the MIDI Set you usually use while you switch the RA-800 back on.

- (4) You can also control the RA-800 on various channels simultaneously (let's call that "multiple channel control"), which is convenient for a MIDI accordion or for sequencing, for example. In that case, however, setting the ARR CHORD and KBD MODE parameters will not produce the expected result because those settings are bypassed. Consider the following illustration:



In other words, to sound the Upper1 Part, you will have to transmit on MIDI channel 4, while the Arranger will only play the desired accompaniment when you transmit on one or both NTA channels.

Or to put it yet another way: the functions assigned to the [ARR CHORD], [KBD MODE], [TRANSPOSE], and [OCTAVE UP/DOWN] buttons are only used when the RA-800 is being controlled via the Basic Channel. There is thus no need to set them when you control the RA-800 on multiple channels.

- (5) You can combine Basic and multiple channel control. Even when using a MIDI accordion or organ to control the RA-800, you should consider doing so on its Basic Channel as much as possible. That is, you should set at least two sections of a MIDI accordion (the solo and bass channels) to the MIDI channel number assigned to the Basic Channel and only control the NTA section(s) on a separate MIDI channel. The latter is necessary because the chord section of a MIDI accordion may transmit note numbers that lie to the right of the Split point you program on the RA-800, which would produce incomplete or wrong Arranger chords.
- (6) Seeing that controlling the RA-800 is only possible via MIDI, it would be a good idea to start looking for the manual of the instrument you intend to use the RA-800 with. More specifically, you should have a look at the controller's MIDI transmit (TX) channel(s). Next, turn to the RA-800's MIDI Set table to see whether one of the factory MIDI Sets does the trick (which should be the case).

- (7) The RA-800 comes loaded with 64 Performance Memory settings for each MIDI Set, each containing optimized settings for a given situation.

Note: Seeing that it is possible to overwrite the contents of the 64 Performance Memories in the A-Group, you should save the factory settings to disk as a Set. See page 59.

- (8) Do not forget to connect the external instrument's MIDI OUT connector to the RA-800's MIDI IN A connector and to set the MIDI IN A/RRC switch to MIDI IN A.

If you intend to work with a KP-24, connect it to the RRC connector instead and set the MIDI IN A/RRC switch to RRC.

Note: Make sure the controller (keyboard, sequencer, accordion etc.) is not transmitting MIDI messages to the RA-800 while you change the setting of the MIDI IN AIRRC switch. Furthermore, the setting of this switch may be changed inadvertently. You should therefore carry out a routine check of its setting before you start performing. Nothing's more embarrassing than a soloist who starts ahead of the accompaniment...

1.3 Functions exclusive to Basic Channel control

For your convenience, here is a list of the most important parameters exclusive to Basic Channel control. The settings of these parameters can be saved to a Performance Memory, which is highly useful for live situations.

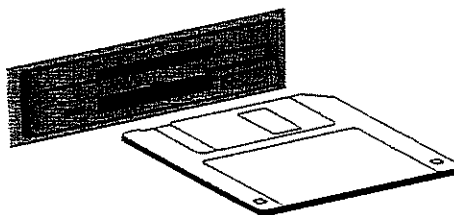
KBD Mode:	ARR Chord:
W Left, Split, or W Right	Left, Right, Whole, or Off
Realtime parts on/off	
Roll on/off	Split points (Main and Upper 2)
Lower Hold on/off	Octave Up/Down
Up2 Split on/off	

If you plan to use these parameters, consider controlling the RA-800 on its Basic Channel. You are free to assign any number to the Basic Channel function and thus in no way tied to the factory preset.

1.4 Demo songs

The RA-800 is shipped with 8 demonstration songs on a floppy disk to give you an accurate impression of the versatility of your RA-800. Here is how to listen to the demo songs:

- (1) Connect the RA-800 to your sound system, or connect a pair of headphones to the PHONES jack, and power on your RA-800.
- (2) Simultaneously press [CANCEL] ◀▶ to select the FreePanel Performance Memory. (This will ensure that the songs are played back the way they were meant to sound.)
- (3) Insert the demo disk into the disk drive.



- (4) Allow a few seconds for the RA-800 to locate the data on the floppy disk. At first, nothing in the display tells you that you have just inserted the demo disk into the drive.
- (5) Turn down the [VOLUME] slider.
- (6) To listen to all songs, press the [PLAY ▶/STOP ■] button in the RECORDER section.

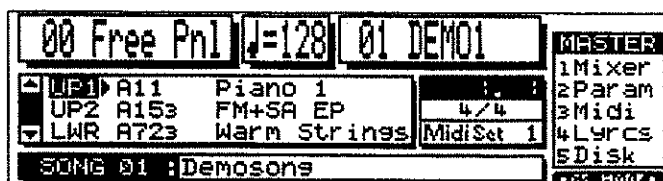


- (7) Adjust the [VOLUME] slider to a comfortable level.

In *All Song* mode, the RA-800 will play all demo songs consecutively. Note that playback doesn't stop automatically. You have to press the [PLAY ►/STOP ■] button to stop playback. But now is probably the time to listen to all your RA-800 can do.

All demosongs © 1995 by Roland Europe in collaboration with Luigi Bruti and Roberto Lanciotti. All rights reserved.

If you'd rather listen to a specific demo song, see "Playback of a specific song on disk". The name of the song you select will appear both on the bottom line and in the right hand corner of the display ("01 Demo1").



When you start playback or select another song with Song Select [NEXT ►], the RA-800 activates the GM/GS mode and the display shows the song tempo and time signature.

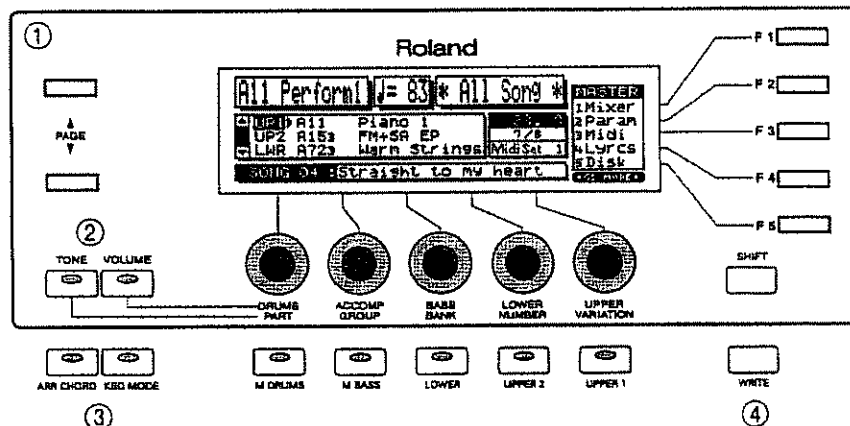
- (8) To stop playback of the demo songs, press [PLAY/STOP].

Don't press [PLAY/STOP] just yet. Leave the demo performance running while you turn to the next chapter.

Note: The demo songs are based on the preset Music Styles and Tones of your RA-800 but have been recorded in Standard MIDI File format. If you own a floppy disk with GM/GS compatible Standard MIDI Files, you can play those back right away by going back to step (3).

2 Panel Descriptions

2.1 Front panel



(1) **DISPLAY and navigation section**

The 240 x 64 pixel display shows all the information you need in a given situation. The function keys to the right of the display allow you to select one of the five displayed Menu options.

The knobs are assigned to the function displayed on the bottom line of the display, and allow you to modify the corresponding setting.

The Part Select buttons ([M.DRUMS], [M.BASS], [LOWER], [UPPER2], and [UPPER1] below the display) allow you to select the Realtime part you wish to assign a Tone to, but may also serve to execute a display function.

(2) **TONE and VOLUME buttons**

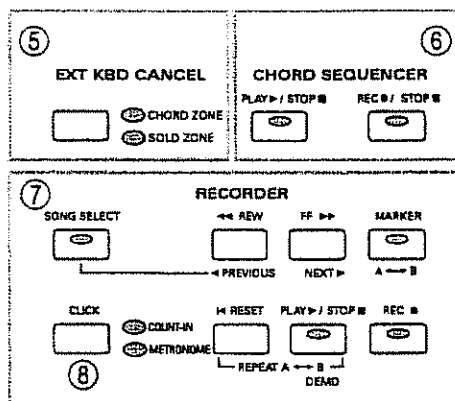
These two buttons allow you to access the Tone and Volume pages respectively. While the former is used to assign sounds (or *Tones* as we call them) to the Realtime and Arranger parts, the latter allows you to establish the desired volume balance between the Realtime and Arranger or Song sections.

(3) **ARRANGER CHORD and KBD MODE buttons**

These two buttons provide access to two display pages called Arranger Chord and Keyboard Mode. When controlling the RA-800 on the Basic Channel (i.e. one MIDI channel), these display pages allow you to split the keyboard (even though you are only using one MIDI channel), to program Layers, to choose the keyboard area used to control the Arranger etc.

(4) **WRITE button**

The [WRITE] button allows you to save your panel settings to a Performance Memory or your MIDI settings to a MIDI Set.



(5) EXT KBD CANCEL button

The [EXT KBD CANCEL] button allows you to split a digital piano (of the Roland HP series, for example) into one half that controls the RA-800's Arranger function, while the right hand will control the HP's sound source (Chord Zone), or to use the right hand for controlling the RA-800, while the left hand sends its MIDI data to the piano's internal sound source (Solo Zone). This requires, however, that you connect both the piano's MIDI IN and MIDI OUT jacks to the RA-800. Furthermore, the piano must be equipped with a Local function. The split point between the "internal" and "external" zones is programmable.

(6) CHORD SEQUENCER section

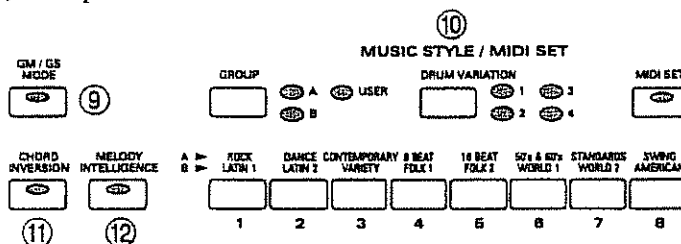
These buttons are used to operate the powerful on-board Chord Sequencer that allows you to record and playback entire accompaniments including the chord changes. See "Chord Sequencer".

(7) RECORDER section

The buttons of this section allow you to operate the on-board Recorder/Standard MIDI File Player. See "Recorder (GM/GS mode)".

(8) CLICK button

This button is used to select the built-in metronome's function. You can use it for counting in (Count In) or as plain metronome.



(9) [GM/GS MODE] button

Press this button to activate (indicator lights) or switch off the RA-800's GM/GS mode. The GM/GS mode is automatically selected whenever you playback a Recorder song. You cannot use the Arranger while the GM/GS mode is active.

(10) MUSIC STYLE/MIDI SET section

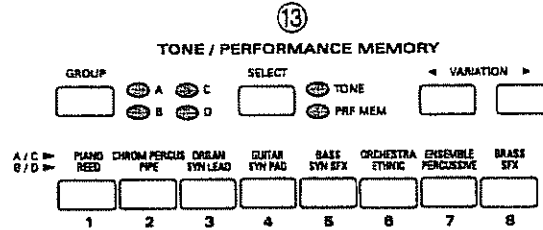
The Music Style section buttons are used to select Music Styles – i.e. automatic accompaniments (see "Selecting Music Styles"). When the indicator of the [USER] button lights, the eight number buttons allow you to select User Styles. When the indicator of the [MIDI SET] button lights, you can use the eight number buttons to select a MIDI Set (see "MIDI Sets").

(11) CHORD INVERSION button

Press the [CHORD INVERSION] button whenever you want the Arranger to use the lowest note of your chord as automatic bass note.

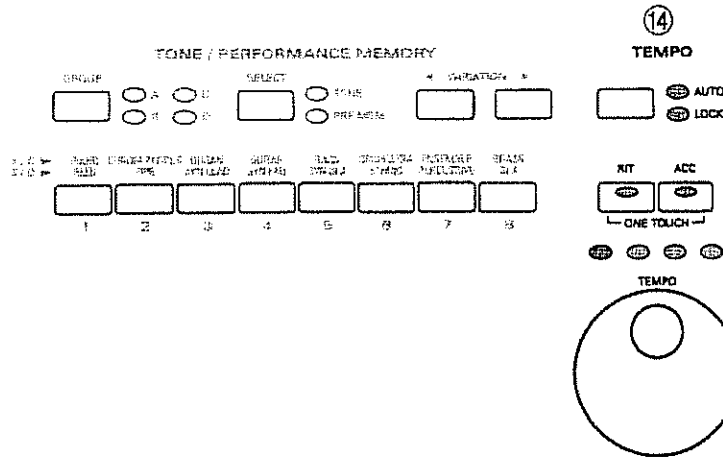
(12) MELODY INTELLIGENCE button

When the indicator of the [MELODY INTELLIGENCE] button lights, the Upper2 part plays a counter-melody consisting of 1 or 2 voices that will be added to the melody you play. The notes of the counter-melody depend on the chords you play in the keyboard section of your external instrument that controls the automatic accompaniment of the Arranger.



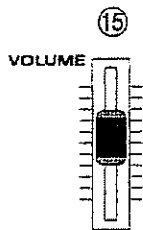
(13) TONE/PERFORMANCE MEMORY section

The buttons in this section allow you to select Tones for the various sections (Upper1, Upper2, etc.) as well as Performance Memories. Use the [SELECT] button to tell the RA-800 whether you want to select Tones or Performance Memories.



(14) TEMPO section

Use the TEMPO dial to set the Arranger or Recorder playback tempo. The [TEMPO] button allows you to override preset tempo settings (see "Auto Tempo and Tempo Lock"). The [RIT] button is used to gradually reduce the Arranger playback tempo, while the [ACC] button allows you to gradually increase the Arranger playback tempo (see "Tempo Rit and Tempo Acc"). When pressed simultaneously, the [RIT] and [ACC] buttons provide access to the One Touch function.

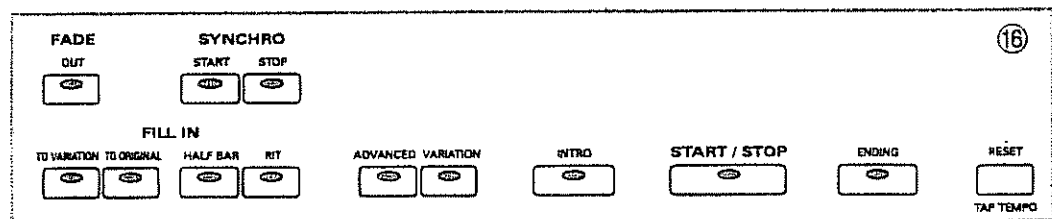


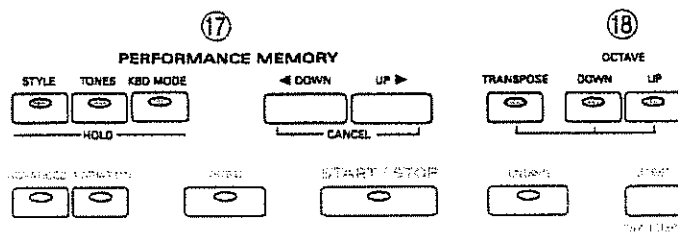
(15) VOLUME slider

This slider controls the master volume of your RA-800, i.e. the volume of the signals present at the STEREO OUTPUT R, L/MONO jacks and the PHONES jack.

(16) Arranger Control section

These buttons are used to select Music Style patterns (Intro, Ending, Fill-Ins etc.). See "Music Style functions".





(17) PERFORMANCE MEMORY section

These buttons are used to select Performance Memories (using the [UP/DOWN] buttons) and to specify which settings of the Performance Memories are to be recalled (not all Performance Memory settings need to be loaded every time).

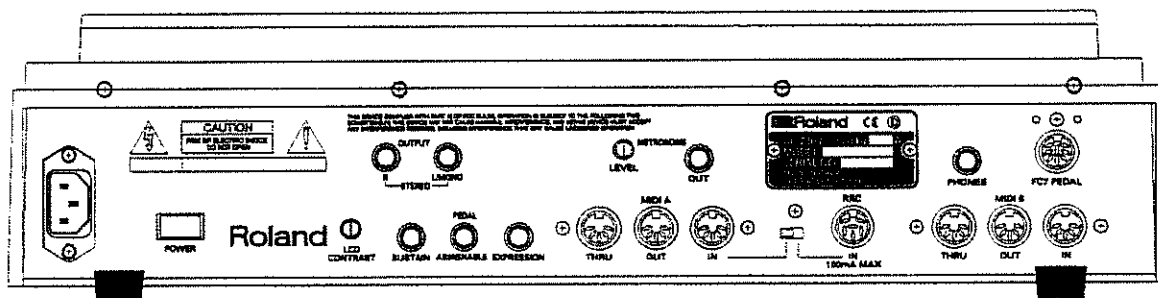
(18) [TRANSPOSE], OCTAVE [UP]/[DOWN] buttons

Use these buttons whenever you want to sound in a different key (Transpose) or octave than the one you are playing in.

(19) Disk drive (front side)

The disk drive is used to record and playback Recorder songs and to save or load User Styles, Performance Memories, MIDI Sets, and Chord Sequences. You may use 2DD or 2HD disks.

2.2 Rear panel



AC connector

This is where you connect the supplied power cable.

POWER switch

Press this switch to power on your RA-800. Press it a second time to power off your RA-800.

Note: The User Style memories have no power backup, which means that their contents will be erased when you power off your RA-800. This is also the case of all front panel settings that have not been saved to a Performance Memory or MIDI Set.

STEREO OUTPUT R, L/MONO jacks

Connect these jacks to the inputs of your stereo amplifier or mixer. If you wish to use your RA-800 in mono, only connect the L/MONO jack.

METRONOME LEVEL knob and OUT jack

You can connect a pair of stereo headphones to the Metronome OUT jack to hear the metronome. Depending on the metronome settings, the metronome will only be audible in the headphones connected to the METRONOME OUT jack. This jack is useful for a drummer, for example. Use the METRONOME LEVEL knob to set the output level of the metronome signal.

LCD CONTRAST knob

Use this knob to set the contrast whenever you are having problems reading what is written on the display. Turn it to the right to make the characters darker or to the left to make the characters lighter.

SUSTAIN connector

Connect an optional DP-2 or DP-6 to this jack to sustain the notes of the Realtime section you are playing after releasing the key(s) you pressed.

PEDAL ASSIGNABLE jack

Connecting an optional DP-2 or DP-6 to this jack allows you to control an assignable function by foot. These functions include starting and stopping Arranger or Recorder playback. See "Assignable footswitch".

EXPRESSION jack

Connect an optional EV-5 expression pedal to this jack to control the volume of one or several parts by foot. See "Expression pedal".

MIDI A and MIDI B connectors

You will need at least one of these connectors to control your RA-800. If you want to use the MIDI IN A connector, you need to set the MIDI IN A/RRC switch to *MIDI*. See "MIDI".

RRC IN connector

This is where you can connect a KP-24 controller you can install on the keyboard of an acoustic piano, thereby providing MIDI control from an acoustic instrument. If you want to use a KP-24, you need to set the MIDI IN A/RRC switch to *RRC*.

PHONES jack

This is where you can connect a pair of stereo headphones that carries the same signal as the one sent to the STEREO OUTPUT R, L/MONO jacks. Connecting a pair of headphones to the PHONES jack does not turn off signal output to the STEREO OUTPUT R, L/MONO jacks.

FC-7 PEDAL connector

This is where you can connect an optional FC-7 footswitch unit that allows you to start, stop, and select Style divisions by foot.

3 User interface

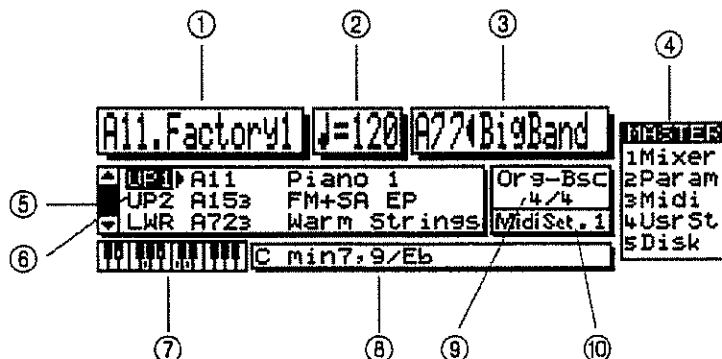
Your RA-800 has been designed to provide everything you may need on stage or at home, and to allow you to access all functions and parameters as quickly as possible. That is why most actions can be performed using the display and the commands related to it.

3.1 [F5] Exit

The Exit function is usually assigned to the [F5] function key. Pressing [F5] once or twice always takes you back to the Master page.

3.2 Master page

The Master display page is what you see after powering on your the RA-800. Let's agree to call it the Master page since the menu heading clearly says MASTER here:



- (1) **Performance Memory address and name**
This is where the address (Group, Bank, and Number) and the name of the currently selected Performance Memory appear.
- (2) **Tempo window**
The tempo window indicates the playback tempo for the currently selected Music Style or Standard MIDI File. You are free to override the preset tempo using the TEMPO section dial and buttons.
- (3) **Music Style or Song address and name**
This part of the display shows the address (Group, Bank, and Number) and name, or the number and name of the currently selected Music Style or Song.
- (4) **Function menu**
The function menu tells you what the five function keys ([F1]~[F5]) allow you to do. The function menu on the Master page allows you to select one of five RA-800 modes (Mixer, Param, MIDI, UsrStl, or Disk). Pressing a function key will take you to the corresponding mode menu, where the function keys are used to select options related to that mode.
The RA-800 modes are as follows:

Abbreviation	Mode	Explanation
Mixer	Mixer	The Mixer mode allows you to modify the volume balance, effect send levels and various other functions related to the way the RA800 produces sound.
Param	Parameter	The Parameter mode is used to edit general parameters, effects parameters and various other functions.
Midi	MIDI	This is where you can find the MIDI functions (channel settings and MIDI filters) of your RA800.
UserSt1	User Style	Select this mode when you want to create your own accompaniments.
Disk	Disk	The Disk mode is used to save data to and load data from disk. It also allows you to format disks and to make backups of your disks.

There are two other modes you can access via dedicated buttons: the Tone mode (press [TONE], to the left of the display) and the Volume mode (press [VOLUME], next to the [TONE] button).

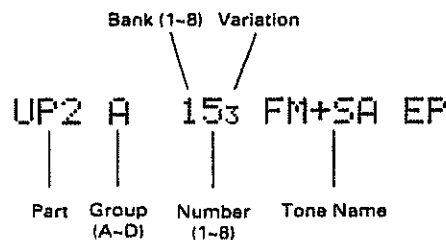
(5) Page scroll bar

The two arrows are actually a graphic representation of the [PAGE] ▲▼ buttons. Since the display can only show three parts at any given time, you have to use the [PAGE] ▲▼ buttons to call up information on the currently invisible parts.

Note: The black cursor (currently on UP1) shows which part is selected for Tone selection. It is perfectly possible to scroll to a currently invisible part without selecting it. To select a part, you must use the leftmost knob below the display (called [DRUMS/PART]) or the Part Select buttons.

(6) Part Information window

This window keeps you posted about the Tones that are currently assigned to the RA-800 parts. The display format is as follows:



The Variation number is not always displayed. The Tone assigned to Upper1 (UP1) is a "normal" one (called Capital). The reason why your RA-800 also uses the Variation format is that it contains far more sounds than the MIDI standard can handle. A Variation is usually another kind of sound within a given group (hence the name *Variation*). The FM+SA EP Tone assigned to Upper2, for example, is another kind of electronic piano sound, which is why it is not considered a Capital by the RA-800.

(7) Graphic Chord display

This display shows which keys you pressed in the chord recognition area. The chord information is used to "feed" the Arranger (see "Selecting the chord recognition area").

(8) Chord Symbol window

This window indicates the name of the last chord you played. The information displayed here may be helpful for the guitarist of your band.

Tip: This display can be invaluable when you start improvising and then find the changes you played were so nice that you would like to turn them into a song. Your RA-800 is equipped with a function that helps you remember the changes. We suggest you activate the Chord Sequencer whenever you start improvising. That way, you can play back the changes and write them down by copying the information that appears in the Chord Symbol window.

- (9) Style/Song Information window
This window either displays the current Style division and time signature or the current bar/beat and time signature of the Recorder song you are playing back.
- (10) MIDI Set window
This window displays the number of the MIDI Set that is currently active.

3.3 Navigating through the display pages

Function keys and [SHIFT] button

Every function key is assigned to a specific line of the function menu. The function itself may vary, but the second item on the menu can always be accessed using [F2]. Certain menus are too large to fit on one display page. In that case, the lower right of the function menu will look like this:



This symbol means that you have to "turn the page" in order to access the remaining menu items.

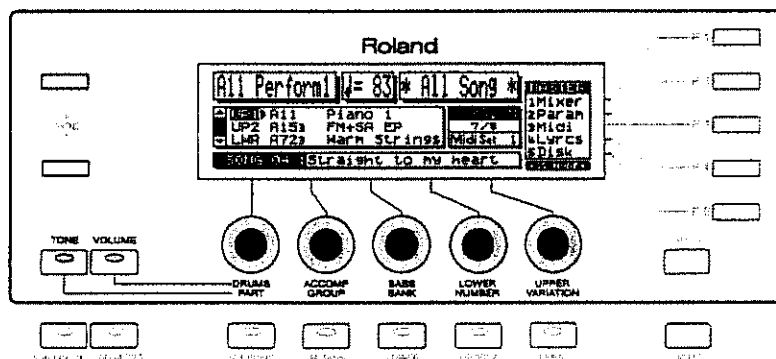


Means that this is the second of two pages.

- (1) To do so, press and hold down [SHIFT]...
- (2) ... and press the function key that is assigned to the item you need.
But let's return to the Master page.
- (3) Press [F5] (Exit) until the Master page reappears:



Knobs, [TONE], and [VOLUME] buttons

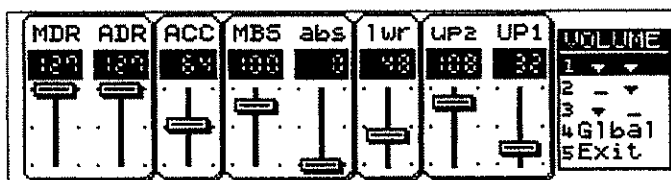


As stated above, the RA-800 has seven levels, five of which can be accessed via the function keys. Two levels can be selected via dedicated buttons:

Pressing	Allows you to use the knobs to...
TONE	...access the Tone select page. Here, the knobs allow you to select a Part, Tone group (A-D), Bank (1-8), Number (1-8), and Variation. To leave this level, either press TONE again or [F5] (EXIT).
VOLUME	...call up the mixer, where you can set the balance of all RA-800 parts (both Realtime and Arranger parts). Note, however that only the Realtime parts can be selected via dedicated buttons (see below). Press [VOLUME] or [F5] (Exit) to exit this level.

The knobs are always assigned to an item that appears on the display. They usually work from left to right, i.e. the leftmost knob controls the leftmost item in the display, etc.

Note: If you did not select any specific function level nor press the [TONE] button, using one of the knobs will take you to the Volume page:



Rotating the same knob again, or another knob, will modify the setting of the corresponding volume slider on the display.

- * The knobs are velocity sensitive. Turning them slowly will produce small value increments or decrements, while turning them fast will result in more substantial changes.

Reversed/positive value display

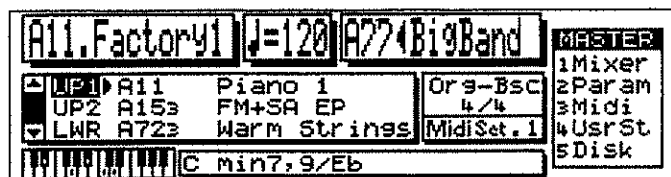
You will find that there is a reason why certain values appear on a blue background, while others appear on a light background. The RA-800 contains a series of switches for selecting which volume, pan, etc. parameter values to use in a given situation:

Display	Meaning
Reversed (white on blue)	The part in question uses your own settings or the ones contained in the active Performance Memory.
Positive (blue on white)	The part in question uses the Music Style or Song settings.

The system of white-on-blue characters is used consistently to point out that a certain Part uses either your settings or those of the selected Music Style or SMF.

[PAGE] ▲▼ and Part Select buttons

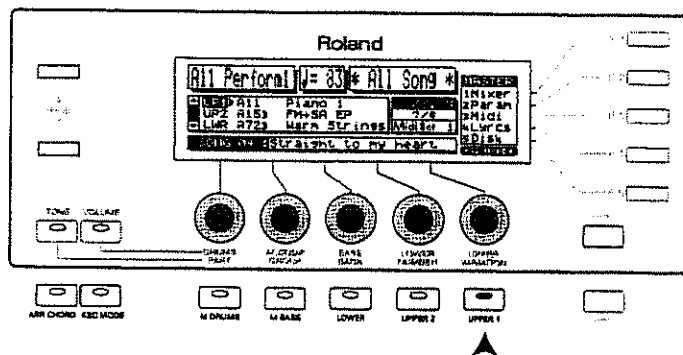
On the Master page, the [PAGE] ▲▼ buttons are used to cycle through the RA-800's parts. That way, you can quickly check which Tones are assigned to the Realtime Parts.



Cycling through the parts with the [PAGE] ▲▼ buttons does not mean that the part on the top line of the Part Information window is automatically selected. That explains why the black cursor and right arrow are not always visible.

Only one part will be highlighted at any one time. That part is active for Tone selection and other edit operations. Note that the indicator of the Part Select [UPPER1] button is

currently lit. It duplicates the cursor function in the Part Information window to indicate that the Upper1 Part has been selected.

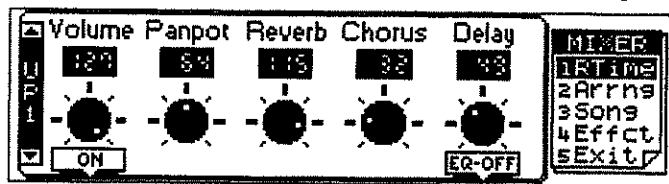


Pressing another Part Select button will do three things:

- Activate the indicator of the button you pressed.
- Place the cursor (and the right arrow) on the corresponding Part in the Part Information window.
- Place the selected part on the first line of the Part Information window.

Tip: Rather than using the [PAGE] ▲▼ buttons to check the Tone assignment, you can also press the Part Select button that corresponds to the Part whose assignment you wish to check. That has the advantage that the part in question is automatically activated for editing, which is not the case when cycling with the [PAGE] ▲▼ buttons.

In the Mixer mode as well as on the ARR Chord and KBD Mode pages, the Part Select buttons, located below the knobs, function as On/Off switches. For instance, on the following display page, Part Select [UPPER1] allows you to turn the equalizer on or off.



Whenever one of the Part Select buttons functions as On/Off switch, you can no longer select parts using these buttons. In that case, part selection has to be carried out using the [PAGE] ▲▼ buttons. That explains why the page scroll bar then specifies the name of a part (Upper1 here).

Note: On the KBD MODE page, you can press Part Select [UPPER1] and Part Select [UPPER2] simultaneously, to activate both parts (Upper1 and Upper2). Tone selection using the TONE buttons etc., however, will be maintained. This technique allows you to select the same Tone for Upper1 and Upper2 without resetting the Detune, Pan etc. values of either Part. Whenever you press Part Select [UPPER1] and Part Select [UPPER2] simultaneously, the RA-800 automatically assigns the currently active Upper1 sound to the Upper2 part, so that both parts use the same Tone.

3.4 Realtime display

You will soon notice that most display controls (i.e. the sliders and buttons that appear on the display) change whenever the corresponding part receives a volume, pan, effect send, etc. message from the Arranger (in Arranger mode) or the Standard MIDI File (in GM/GS mode). In other words, the position of the display controls faithfully reflects the current settings.

Note: If a certain slider etc. does not seem to move when you expect it to, there is an easy way to find out why that is the case. See "Reversed/positive value display".

4 Realtime parts

4.1 What are Parts?

Your RA-800 is a multitimbral instrument, which means that it can play several sounds simultaneously. There are two main sections:

*** Realtime section**

The Realtime section encompasses the parts you yourself can play. A part is a "voice", such as the melody, the solo, etc. The following Realtime parts are available on your RA-800:

Part	Explanation
Upper1	Though there are only slight differences between Upper1 and Upper2, Upper1 is normally the main solo part. In other words, select this part to play the melody or solo line. This part is automatically activated when you call up (factory) MIDI Set 2 or 3.
Upper2	Upper2 can either be used as second solo part or as additional sound to be layered with the Upper1 part. Furthermore, Upper2 can be triggered by the Arranger to play an automatic counter-melody (a function called Melody Intelligence).
Lower	The Lower part allows you to play chords with your left hand. Use it whenever you want to add an accompaniment such as strings to your right-hand melody. It goes without saying that you only need to select the Lower part when you want to play the chords with another sound than the one you chose for the Upper part(s).
Manual Bass	The Manual Bass (or M. Bass) part is used to play bass lines. Select this part whenever you want to play the bass accompaniment yourself.
Manual Drums	The Manual Drums (or M.Drums) part is somewhat different from the other Realtime parts in that you can only select Drum Sets for this part. Select this part whenever you feel like drumming on the keyboard.

Your RA-800 can assign different sounds (or Tones) to each of these parts. Note, however, that you can only assign Drum Sets to the M.Drums part, and that it is impossible to assign Drum Sets to the other Realtime parts (Upper1, Upper2, Lower, M. Bass).

*** Arranger section**

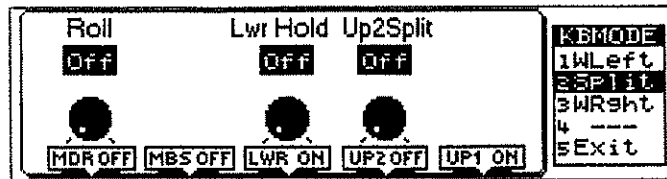
The Arranger section, on the other hand, encompasses all parts that will be played by the RA-800.

4.2 Selecting Realtime parts for playing (via the Basic Channel)

When you power on your RA-800, the Upper1 part is automatically selected and assigned to the right half of the keyboard. The Tone assigned to Upper1 is called A11 Piano 1. (If you press a key in the left half of the keyboard, you start Arranger playback. To stop it, press the [START/STOP] button.)

The indicator of the Part Select [UPPER1] button lights. This, however, does not necessarily mean that the Upper1 part is switched on. Rather, it means that that you can assign Tones to the Upper1 section.

However, the Upper1 section *is* switched on and the RA-800 is currently in Split mode. To check this, press [KBD MODE] to call up the following page:



You can turn off Upper1 by pressing the [UPPER1] button, in which case the message will read "UP1 OFF".

There is another thing you should pay attention to: the RA-800 is currently in Split mode (the "2 Split" message is displayed in reverse (white on blue). We'll come back to this later.

Press [UPPER1] once more to switch the Upper1 part on again.

Do not leave the KBD MODE page just yet because we need it for the following.

Layering and selecting Upper2

Let's select the Upper2 part now:

Press Part Select [UPPER2] to activate the Upper2 Part.

This does not turn off (or on) the Upper1 part, so that Upper1 and Upper2 are now layered. If you only want to hear the Upper2 part, you have to press [UPPER1] to turn off that part. Again play a few notes on the keyboard to hear the Tone assigned to Upper2.

Selecting the Lower and M.Bass Parts

The function buttons on the KBD MODE page allow you to choose the area on the keyboard where the Realtime parts can be played:

W Right (Whole Right)

When you press the [F3] (W Rght) button, you can play the Upper1 and/or Upper2 Parts (if they are both switched on) on the entire keyboard. Before trying this out, press the SYNCHRO [START] button (indicator must go off). Remember that it is perfectly possible to play Upper1 and Upper2 simultaneously.

W Left (Whole Left)

Whole Left means that either the Lower or M.Bass Part (or both) will be assigned to the entire keyboard. Press [F1] (W Left) now and play a few notes. In fact, you don't hear what you play because neither the Lower nor the M.Bass Part is currently active.

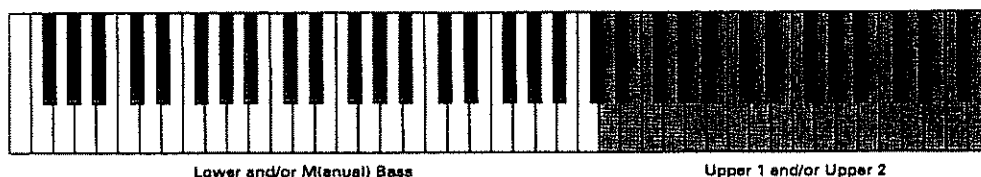
The UP2 ON and UP1 ON messages now appear in a dotted box, meaning that Upper1 and/or Upper2 are active but will not sound because the RA-800 now waits for note information for a Left part (Lower and/or M.Bass).

To hear the Lower part, you have to press the [LOWER] button so that the message reads "LWR ON". If you like, you can switch back to your latest Upper setting simply by pressing [F3] (W Right), in which case the outline of the "LWR ON" box will change. Press [F1] (W Left) again, followed by [M.BASS] to select the Manual Bass part. Again, selecting this part does not turn off the Lower part. Play a few notes on the external keyboard or controller. You will hear the strings sound assigned to the Lower part and the bass sound assigned to the M.Bass Part.

Note: When both the Lower and the M.Bass Parts are active, the Manual Bass Part is monophonic. In this case, the M.Bass Part will only sound the root note of the chord you play. You could, however press the [CHORD INVERSION] button so that the Manual Bass part will play the lowest note of your chords. If only the Manual Bass Part is active, it is polyphonic, which means that you can play chords with the Tone assigned to M.Bass.

Split and split point

The [F2] (Split) button on the KBD MODE page allows you to split the keyboard, thereby assigning the Lower and/or M. Bass Part to the lower half (left) of the keyboard, while the Upper1/2 parts are assigned to the upper half (right). Press this button now and play with both hands. Notice the way the names of the Realtime sections are displayed: they all appear in solid boxes now.

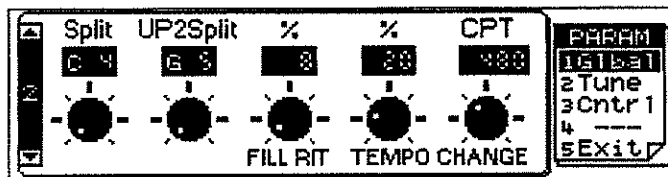


The split point is currently located at the C right in front of you (C4). This note is the lowest note of the Right (Upper1 + Upper2) section.

Setting the split point on the keyboard

To change the split point, proceed as follows:

- (1) Press [F5] (Exit) to return to the Master page.
- (2) Press [F2] (Param) to select the Parameter mode.
- (3) You probably do not need to press [F1] (Glb) at this point. Remember, though, that the RA-800 has a page memory function, so that it is a good idea to press [F1] anyway.



- (4) Use the PAGE ▲▼ down buttons to select page "2" (Split/Up2 Split...)
- (5) Use the [DRUMS/PART] knob to set the split point.

That note now becomes the lowest note of the Right section. You are free to set the Split point anywhere within the C2~C6 range. This may look like a limitation, but it is actually a clever way of avoiding that either the Left or Right section doesn't sound if the Split point is set too low or too high.

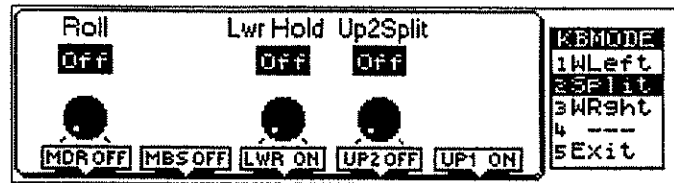
Feel free to use Layers (Lower + M.Bass and Upper1 + Upper2) to the left and right of the split point.

- (6) You could now return to the KBD MODE page by pressing [KBD MODE], or to the Master page by pressing [F5] (Exit).

Upper2 Split

But the RA-800 does not stop there. You can indeed program a second split between Upper1 and Upper2.

To activate the Upper2 split, you must press [KBD MODE] to call up the following page:



Now use the [LOWER/NUMBER] knob to switch the UP2 Split function on or off. When set to on, the Upper1 and Upper2 parts will be split (default setting: G5, lowest note of the Upper1 part).

To modify the Split Point setting, return to the Parameter Mode\Global-2 page (see above).



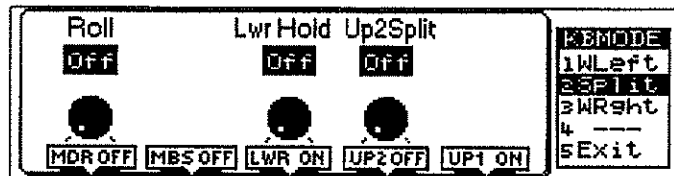
In effect, the RA-800 allows you to play three sounds assigned to three separate keyboard areas. On top of that, you can select the Arranger's chord recognition area, i.e. the notes that feed the Arranger.

Setting the UP2 split point is similar to setting the main split point. This time, however, you must use the [ACCOMP/GROUP] button.

Note: Upper2 Split only works if the Upper1 part is active. If you turn off Upper1, you will neither hear the Tone assigned to Upper1 nor the one assigned to Upper2. In other words, it is impossible to program an Upper split without using the Upper1 sound.

Tip: If you are satisfied with your split points, you should save them to a Performance Memory.

Lower Hold (Lwr Hold)



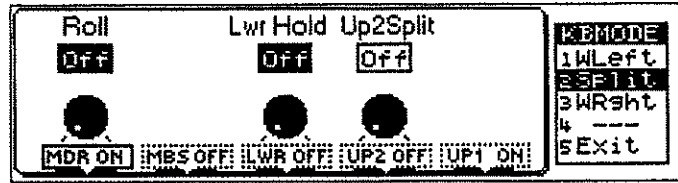
The RA-800 is an instrument that allows you to change many settings in realtime. Because you can trigger the Lower part and the Arranger simultaneously, selecting another Music Style division usually means that you have to lift your left hand from the keyboard or stop playing altogether. If the Lower Hold function is not active in W Left or Split mode, the Lower part stops sounding as soon as you release all keys in the Left area. If you activate LWR HOLD, however, the notes of the Lower part go on sounding until you play other notes in the Left area. It is probably a good idea to leave Hold on at all times.

Press [KBD MODE] to call up the KBD MODE display page and use the [BASS/ BANK] button to turn the LWR HOLD function on or off.

If both the Lower and M.Bass parts are active, the Hold function sustains both the Lower and M.Bass notes.

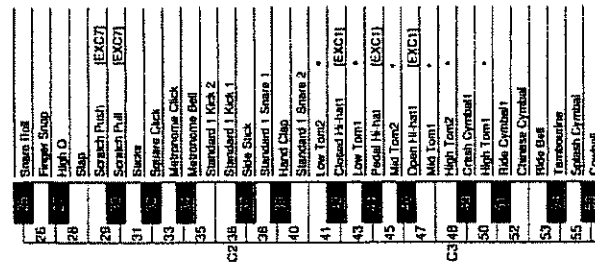
Selecting the Manual Drums part

On the KBD MODE page (press [KBD MODE] to select it), press the [M.DRUMS] button to assign a series of drum and percussion sounds (called Drum Set) to the entire keyboard, thereby overriding any KBD MODE setting you may have made beforehand. In other words, whenever you activate the M.Drums part, the other Realtime parts (Upper1,



Upper2, Lower, and M.Bass) cannot be played. This is indicated by a dotted box for all other parts.

The M.Drums part differs from the other Realtime parts in that it assigns different sounds to every key. If you play a C2, you trigger a bass drum sound. Play a D2 (the D to the right of the C2) to trigger a snare drum sound, and so on. Consequently, you won't be able to play melodies in Manual Drums mode. Consider the following illustration:



Roll

The Roll function allows you to play perfect drum rolls. Select the KBD MODE page and use the [DRUMS/PART] knob to select "On" to see what we mean. You can change the resolution of the Roll function. Rolls will always be played in time with the tempo displayed in the Tempo window. Try this out by changing the tempo using the [TEMPO] dial. Using a Modulation lever to send a CC1 message (press the lever away from you), you can modify the volume of the drum roll. Try this out now if your controller is fitted with a Modulation lever.

4.3 Selecting Tones for the Realtime parts

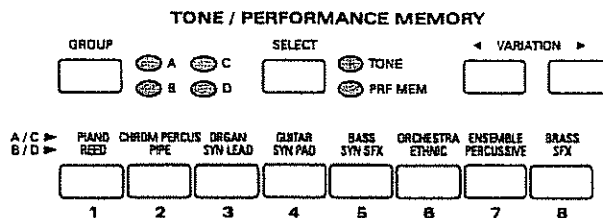
Your RA-800 is shipped with 689 sounds, or Tones, to choose from. These Tones are divided in the following way:

Name	Meaning
Groups	(A~D) The highest ranking unit. Each Group contains all of the following elements.
Banks	(1~8) Banks are "instrument families" (such a Brass, Chromatic Percussion, etc.). Each Bank contains the following elements.
Numbers	(1~8) Numbers are instruments of a given family (i.e. trumpet, trombone, etc. of the Brass bank).
Variations	(1~...) Variations are usually other or related sounds of a given instrument (i.e. muted trumpet).

Note: The difference between A/B, and C/D is that groups A and B contain the RA-800 sounds, while the C and D groups actually contain SC-55, MT-32/CM-64 sounds. There are two versions of practically every Tone: an old one (SC-55, C/D), and a new one (RA-800, A/B).

Selecting Tones using the TONE buttons

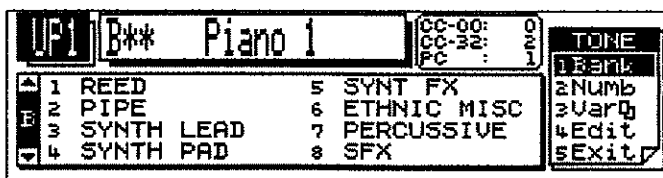
By way of example, let us assign another Tone to the Upper1 part.



- (1) Press Part Select [UPPER1] (indicator lights).

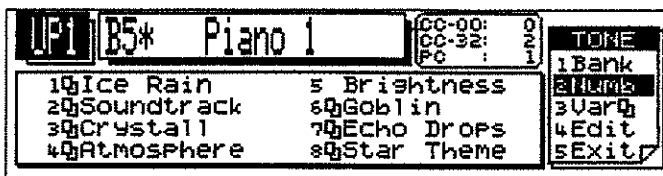
This will do two things: activate the Upper1 part for Tone selection and assign the TONE/PERFORMANCE MEMORY keypad to Tone selection (the [SELECT] TONE indicator lights). We did this to ensure that you don't have to worry about the SELECT setting while playing. Pressing a Part Select button will automatically activate the TONE function of the [SELECT] button. The same GROUP and NUMBER buttons are indeed also used for selecting Performance Memories. So even though you may have set [SELECT] to PRF MEM (indicator lights) – as soon as you press a Part Select button ([M.DRUMS]–[UPPER1]), the SELECT function will switch to TONE.

- (2) Press the GROUP button to select Group B (indicator lights).



Note that the Tone name next to B** is still the old one, i.e. Piano 1. There is no piano sound in Group B, Bank 1. The Tones in the information window, however, are those of Group B, Bank 1 (Soprano Sax, Alto Sax, etc.).

- (3) Press the [5] button to select the SYNTH FX bank.



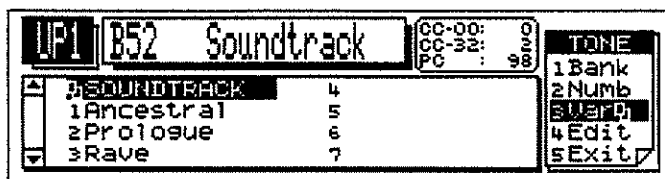
Bank 5 of Group B is now active but you still hear the piano sound.

- (4) Press the 2 button to select the Soundtrack Tone.

In fact, the RA-800 does not select the Soundtrack Tone but rather a Variation of that Tone (*Ancestral*). There is a reason for this: whenever you select a Tone using the TONE/PERFORMANCE MEMORY section, the RA-800 calls up the best sound of the Tone family you specify. That is why the number 2 is displayed white-on-blue to indicate that you haven't selected the Soundtrack Tone but rather a Variation of that family. The display returns to the Master page and the [TONE] indicator at the lower left of the display goes out shortly after you specified a Tone number.

If you'd rather select the Soundtrack Tone instead of the Variation, you have to press VARIATION ► once.

This takes you back to the Number display and shows you the Tone you selected by pressing the VARIATION ► button.



The □ here means that the Soundtrack Tone is the Capital of this Tone family.

Note: If you'd rather the display didn't return to the Master page at this point, press [TONE] to the left of the display (indicator lights). In that case, the only way to return to the Master page will be to press [TONE] again (indicator off).

Tone selection for other Parts

To select Tones for the other Realtime parts (Upper2, Lower, M.Bass), first press the corresponding Part Select button and then go back to step 2. If you still hear the Upper1 Part when you play on the keyboard, see "Selecting Realtime parts for playing".

Note: You are free to select whichever Tone you like for the above Parts (Upper1, Upper2, Lower, M.Bass). That is also true of the M.Bass sound. Remember, however, that the M.Bass part is monophonic when layered with the Lower Part.

Note: To select another Bank within the same group, press a number button to select the bank, followed by a number to select a Tone within that bank. Selecting the Group is only necessary if the new Tone resides in another Group.

Note: See "Effects and Equalizer" for how to apply effects to the selected Tones.

Display symbols

Here is what the symbols next to the Tone names mean:

Symbol	Example	Explanation
□	1 □ Piano 1	There are a few Variations for this Tone. Press VARIATION st to select one. In the Variation window, this symbol means that the Tone in question is the Capital.
"	1 "Piano 1	(Only in groups C and D). This Tone is an SC-55 Sound Canvas sound.
+	1 + Trumpet	(Only in groups C and D). This Tone is a sampled version of an MT-32 or CM-64 sound.

Selecting Tones using the knobs

Let us now select a Tone using the knobs.

- (1) Press [TONE] to the left of the display (indicator lights).
- (2) Select the part you wish to assign a Tone to.

You can either use the Part Select buttons or the [DRUMS/PART] knob. Be careful, however, not to select an Arranger part (ADR, ABS, AC1~AC6) when using the knob. We'll leave that for later.

- (3) Use the [ACCOMP/GROUP] knob to select a Group.

Note: This time, the sound selection is carried out immediately. Rotating the [ACCOMP/ GROUP] knob thus takes you to the Tone of the same Bank and Number within the newly selected Group. When selecting Tones with the TONE section buttons, the RA-800 always waits until you specify a Tone number before selecting that Tone (or its "best" Variation).

- (4) Use the [BASS/BANK] knob to switch to another Bank.
- (5) Use the [LOWER/NUMBER] knob to select another number.

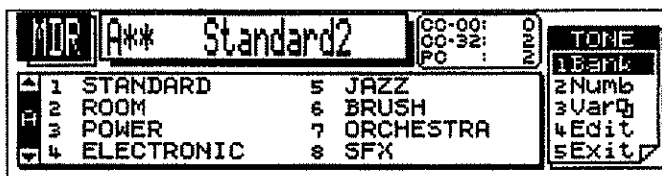
Note: Selecting a number with this knob always calls up the Capital of that Tone family. In other words, the "best of" method is not active here.

- (6) Use the [UPPER/VARIATION] knob to select another Variation.
Note: You can also use any combination of these two methods (using the TONE section and the knobs) to select Tones.
- (7) Press [TONE] again to return to the Master page.
Note: Tone selection can be automated using the Performance Memory feature.

4.4 Selecting Drum Sets for the M.Drums Part

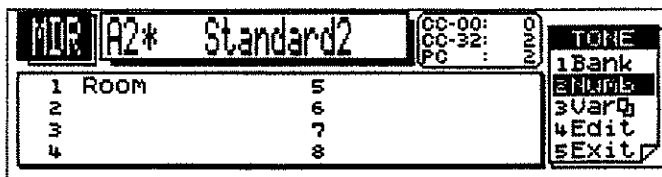
Here is how to select Drum Sets for the M.Drums part:

- (1) Press [KBD MODE] to select the KBD MODE page.
- (2) Press the [M.DRUMS] button to activate the M.Drums part.
- (3) Press [F5] (Exit) to return to the Master page.
- (4) Press [M.DRUMS] to select the M.Drums part for editing.
- (5) Press the GROUP button to select a group (A-D).



Remember that Groups A and B contain the RA-800 Drum Sets, while groups C and D contain the SC-55/MT-32/CM-64 Drum Sets.

- (6) Press a number button to select a bank (press 2, for example).



- (7) As you see, there is only one Drum Set in this bank. So press 1 to select the corresponding Drum Set.
Note: The RA-800 is clever enough to ignore any erroneous choice you might make at this stage. So even pressing 8 here will select the Room Set (even though the display will indicate that you selected the 8th memory of the active bank).
Note: Tone and Drum Set selection (along with a lot of other settings) can be saved to a Performance Memory. After assigning other Tones to the Realtime parts you should save these settings to a Performance Memory.

4.5 Who selects the Tones? – Tone Change

Tone selection will be carried out automatically in response to messages received from Recorder song data (for Realtime parts), the Music Style you are using (for Arranger parts), or the Performance Memory you select. In other words, every part of the RA-800 will select another Tone whenever it is instructed to do so by one of the RA-800's sections or a Standard MIDI File.

That may not always be to your liking. In such a case, you should set the Tone Change switch to Prf so that Tone selection can only be carried out by selecting Performance Memories or by yourself.

Prf	Tone selection remains in effect until you select another Tone or Performance Memory.
Sng	In this case, the Realtime Tone assignments are affected by program change messages included in the Standard MIDI File you are playing back. When set to Sng, the program change switch is set to respond to program change messages on disk

Note that there is little difference between Prf and Sng as long as you don't play back a Standard MIDI File.

Note: The Tone Change switch only applies to "internal" messages. Program changes received via MIDI IN A or B will always be executed, no matter how you set the Tone Change switches.

Here is how to set the Tone Change parameter:

- (1) Press [TONE] to select the Tone mode.
- (2) Hold down [SHIFT] and press [F1] (RTIME) to select the Realtime part page.
- (3) Use the [PAGE] ▲▼ buttons to select the Part whose Tone Change setting you wish to modify.



The name of the Part you select appears in the scroll bar.

- (4) Using the [DRUMS/PART] knob, set the Tone Change switch to Prf or Sng.
- (5) Press [F5] (Exit) to return to the Master page.

4.6 General notes

Before turning to the realtime performance functions of your RA-800, there are three remarks we would like to make:

- **Tone selection via the TONE/PERFORMANCE buttons is possible at all times.**
In other words, it doesn't matter which display function you selected or what you are currently doing, you can always select other Tones for the part whose Part Select button you pressed last.
- **Music Style selection is possible at all times.**
Again, you are free to select another Music Style whenever you like. The display may not always jump to the Tone or Style selection pages but the RA-800 will nevertheless carry out any action related to Tone and/or Style selection.
- **Except in User Style mode, Performance Memory selection is possible at all times.**

4.7 Realtime Performance functions

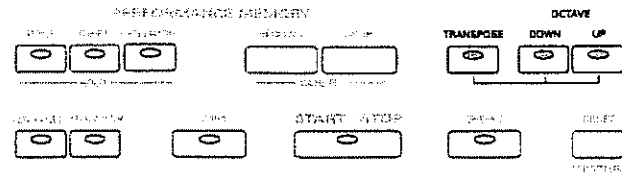
Your RA-800 also receives MIDI messages that add expression to what you are playing.

Pitch Bend and Modulation

Turn the BENDER/MODULATION lever on the external controller towards the right to bend the notes you are playing upwards, or to the left to lower the pitch. Release the lever to return to the standard pitch.

Push the lever away from you or use the Modulation wheel to add vibrato to the notes you are playing. Release the lever or wheel to remove the vibrato.

Transpose and Octave Up/Down



Transpose

If you are used to playing a song in a particular key, the Transpose function will allow you to go on playing in that key while sounding in another one. That way, you can accompany a singer or instrument that prefers to sing or play in another key than the one you are used to playing that particular song in.

Note: Transposition applies to all parts except the MDR (Manual Drums) and ADR (Accompaniment Drums) parts.

Setting the transposition interval in realtime

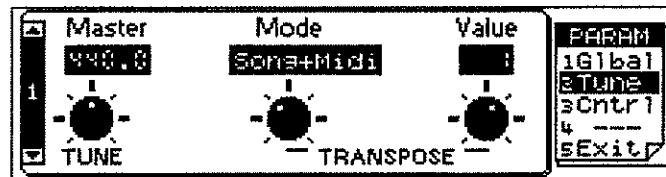
To set the transposition interval in realtime, press and hold the [TRANSPOSE] button (indicator lights) and press OCTAVE [UP] to raise the pitch, or OCTAVE [DOWN] to lower the pitch. Each press corresponds to one semitone. To transpose to the key of G, hold down [TRANSPOSE] and press OCTAVE [UP] six times (or OCTAVE [DOWN] five times). You may wonder why you have to press [UP] six times rather than seven (7 semitones equal a perfect fifth). That is because the factory setting of the transpose interval is "+1". The Transpose function does not allow you to specify "0" (i.e. C, or no transposition), so that, when transposing down, you jump from "1" to "-1", which is why the key of G must be selected by pressing [DOWN] only five times).

Pressing the [TRANSPOSE] button allows you to switch back and forth between the new key ([TRANSPOSE] indicator lights) and normal key ([TRANSPOSE] indicator goes off).

Setting the transposition interval via the display

If you prefer to set the transposition interval the "learned" way, here is how to:

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F2] (Tune).
- (3) If necessary, use the [PAGE] ▲▼ buttons to select the first Param\Tune page.



- (4) Use the [UPPER/VARIATION] knob to set the transposition interval (Value: -11~ 11).

Note: You cannot select the transpose value "0" because setting that interval (no transposition) has no purpose. To return to the normal key, press the [TRANSPOSE] button so that its indicator goes out.

You could also select another Transpose Mode using the [BASS/BANK] knob:

Transpose mode	Explanation
Int	If the [TRANSPOSE] indicator lights, only the Realtime and Arranger parts will be transposed (only valid if the RA-800 is being controlled on the Basic Channel).
Song	Only the Recorder song parts will be transposed.
MIDI	If the [TRANSPOSE] indicator lights, only the notes received via MIDI IN A/B will be transposed (RA-800 control on multiple MIDI channels, which is the case when you use a MIDI accordion, for example). In a way, this is the same as the Rx Shift parameter in the MIDI mode.

Int+Song	If the [TRANPOSE] indicator lights, the Realtime and Arranger parts (controlled via the RA-800's Basic Channel) as well as the Recorder song parts will be transposed.
Int+MIDI	If the [TRANPOSE] indicator lights, the Realtime and Arranger parts (controlled via the RA-800's Basic Channel) as well as all notes received via MIDI will be transposed.
Song+MIDI	If the [TRANPOSE] indicator lights, the Recorder song parts as well as all notes received on several MIDI channels will be transposed.
All	All sections will be transposed.

As you see, the Transpose function is extremely flexible. The Int+Song and All options are probably the ones you will select most of the time. *Int* or *MIDI* could be useful to transpose only the Realtime parts so that you can play to a Recorder song in "your" key but sound in the song's key.

Note: The MDR and ADR parts are never transposed because it makes no sense. After all, every key of the MDRIADR part is assigned to a different percussion sound and transposing it would mean that you would have to press other keys to trigger the sounds you need.

- (5) Press [F5] (Exit) to return to the Master page.

Octave Up/Down

The OCTAVE [UP] and [DOWN] buttons allow you to transpose the Realtime parts one octave up or down. Before being able to apply a positive (Up) or negative (Down) octave shift to a Realtime part, you have to select it on the Master page using its Part Select button.

To transpose the Lower part one octave down, for example, first press [LOWER] (indicator lights) and then OCTAVE [DOWN] (indicator lights).

After doing so, you can press other Part Select buttons to apply the same or a different octave shift. In other words: the selected octave will be maintained even if you select another Realtime part after activating Octave Up or Down for a part.

Note: The MDR part cannot be shifted.

Tip: The selected Octave mode remains in effect when you assign another Tone to a given Realtime part. If you do not wish to apply the same shift to the new Tone, you must turn off Octave Up or Down for the part in question.

Sustain pedal (Hold)

The Hold function can be used for the following parts in isolation or in combination: Upper1, Upper2, Lower, and M.Bass part, on condition that you select the W LEFT or W RIGHT keyboard mode. In SPLIT mode, the sustain pedal Hold function only works for the rightmost part. That is to say, when Upper1 and 2 are layered, the Hold effect will work for both Upper parts. In UP2 Split mode, however, the Hold effect will only be active for the Upper1 part.

Assignable footswitch

An optional DP-2, DP-6, or Boss FS-5U foot switch connected to the FOOTSWITCH jack can be used to perform various functions. If you do not change the factory setting, this footswitch allows you to start and stop Arranger playback.

Expression pedal

An optional EV-5 or EV-10 pedal connected to the EXPRESSION PEDAL jack allows you to control the volume of all parts by foot. You can reverse the expression pedal's effect and specify that certain parts are not to be controlled by the expression pedal.

Metronome

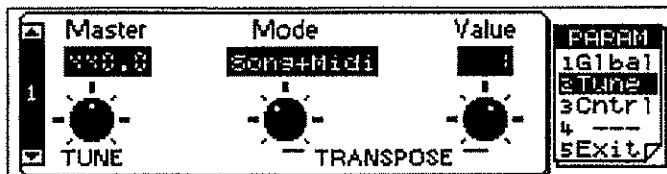
The RA-800 is equipped with two metronome functions. The first is the metronome whose signal is output from the METRONOME OUT jack, to which you can connect a pair of stereo headphones so that your drummer has no timing problems. Note that the metronome signal is not necessarily sent to the STEREO OUTPUT jacks, so that your performance will not be disturbed.

This metronome signal can, however, be sent to the STEREO OUTPUT (and PHONES) jacks, which is useful for recording User Styles or working with the Recorder function. Here is how to use the metronome while playing: press the [CLICK] button so that either the COUNT-IN or the METRONOME indicator lights. In the first case, Style and Song playback will be preceded by a count-in. In the second case, the metronome will sound during Style and Song playback. You are free to choose whether the metronome signal should be transmitted to the RA-800's STEREO outputs or just to the METRONOME OUT jack.

Master Tune

This is not really a performance function, but it allows you to tune your RA-800 to acoustic instruments that cannot be tuned.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F2] (Tune).
- (3) Use the [PAGE] ▲▼ buttons to select the first Param\Tune page.



- (4) Use the [DRUMS/PART] knob to tune your RA-800 to the acoustic instrument.

The displayed value (440.0Hz) is the standard pitch for the A4 note.

Note: The Master setting can be saved to a Performance Memory along with the other panel settings, so that you can instantly return to your "recorder" tuning (recorders are instruments notorious for their "off" tuning, but also oboes are extremely difficult to tune) should the need arise.

- (5) Press [F5] (Exit) to return to the Master page.

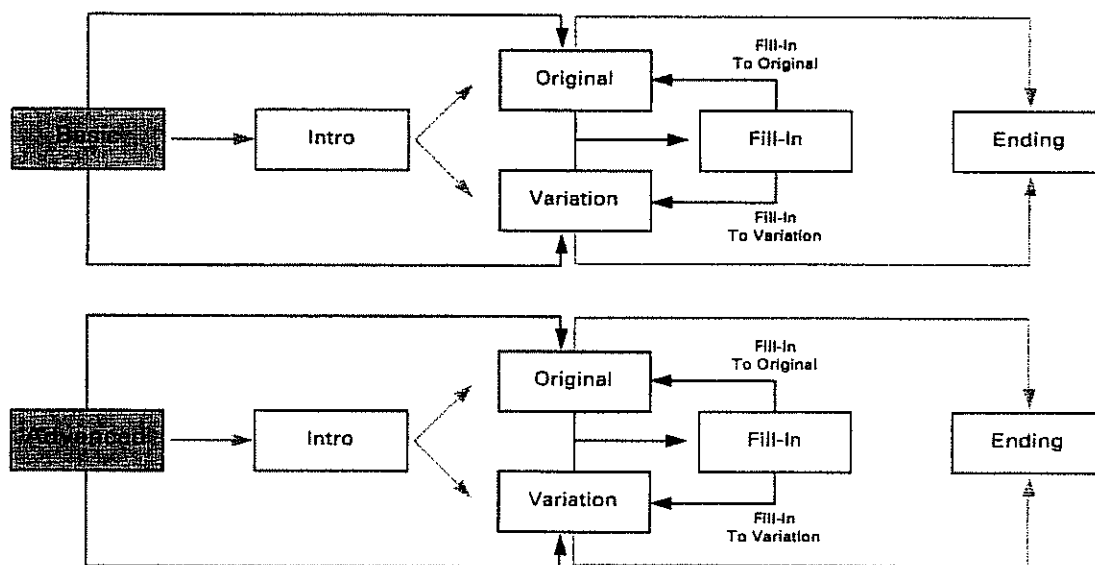
5 Playing with accompaniment – Arranger

Before showing you how to select Music Styles, let's briefly look at how they are organized.

5.1 Arranger and Music Styles

Think of the Arranger's Music Styles as your backing band. The following illustration shows that this suggestion is not as preposterous as it may sound because your RA-800 is capable of playing several "variations" (called *divisions*) of a given accompaniment. All you have to do is make up your mind about the kind of music you want to play: is it going to be salsa, rumba, pop-rock, or big band?

You are the band leader, which means that you have to tell the members of your band what to play. In other words, you must explain how many bars there are to each song part and how the melody and/or solo should be accompanied.



Every white square in the above illustration is called a *division*. Though you may not need the word here, it will help you understand how to program your own Styles. A division is one version of the selected accompaniment (or *Music Style*). As you see, there are two main modes: Basic and Advanced, each consisting of two divisions called Original and Variation.

As its name implies, Basic is the "normal" accompaniment level, with only the basic ingredients of a professional sounding accompaniment. The Advanced level, on the other hand, may contain another version of the selected Music Style or just a more elaborate one. On either level (Basic and Advanced) you can choose between the Original accompaniment or an alternative (called Variation). The latter usually adds one or two parts to the current accompaniment, for example power trumpets instead of muted ones.

As the leader of your band, you have to tell the musicians what to play and when to play it. If you want the accompaniment to become more complex as the song evolves, here is a useful sequence:

Typical song structure

1st Verse	2nd Verse	1st Chorus	3rd Verse	2nd Chorus
Basic Original	Basic/ Variation	Advanced/ Original	Basic/ Variation	Advanced/ Variation
ADVANCED VARIATION 	ADVANCED VARIATION 	ADVANCED VARIATION 	ADVANCED VARIATION 	ADVANCED VARIATION

Other elements help you refine the accompaniment. Rather than abruptly changing to Advanced/Original, you may want to play a short transition to announce a new part of the song. That is what Fill In [TO VARIATION] and [TO ORIGINAL] are for:

Typical song structure

1st Verse (bars 1-7)	V1 (bar 8)	2nd Verse	1st Chorus	3rd Verse	2nd Chorus
Basic Original		Basic/ Variation	Advanced/ Original	Basic/ Variation	Advanced/ Variation
ADVANCED VARIATION 	TO VARIATION 	ADVANCED VARIATION 	ADVANCED VARIATION 	ADVANCED VARIATION 	ADVANCED VARIATION

See “Music Style functions” for other Music Style divisions and functions you can use to create a professional sounding accompaniment.

Arranger parts

Each accompaniment (or Music Style) can consist of up to eight parts:

Part	Explanation
A. Drums	Accompaniment Drums. This part takes care of the rhythm. It triggers the drum and percussion sounds of the Drum Set assigned to the ADR part.
A. Bass	Accompaniment Bass. This part plays the bass line of the Music Style you selected.
Ac1~Ac6	These are the melodic accompaniment parts. Depending on the Music Style you selected, only a few of them actually play something, which can be anything from a piano line, a guitar line, an organ line to a synth pad line. Not all Accompaniment parts play chords.

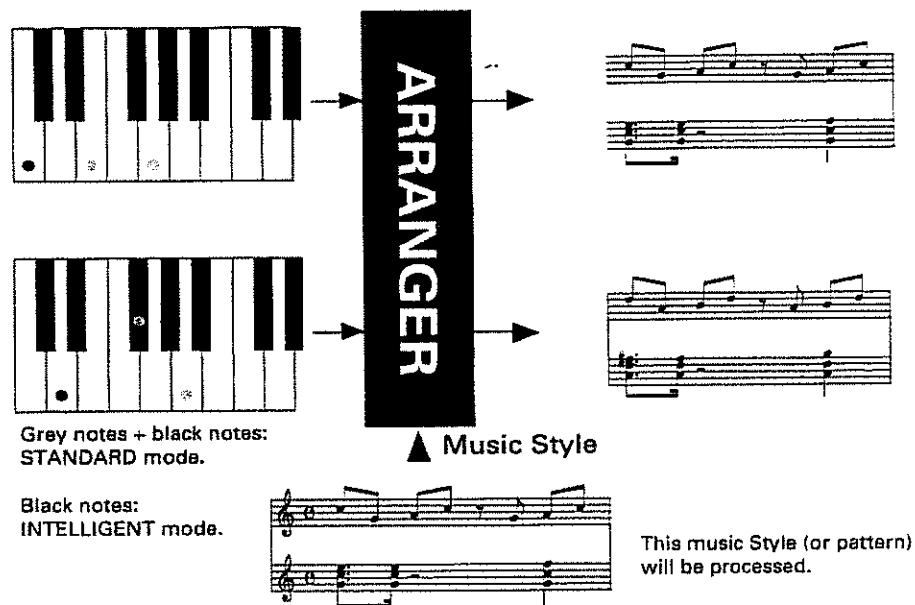
The A. Bass and Ac parts rely on the chord or note information you play in the chord recognition area of the external controller, i.e. the keyboard zone you have assigned to the Arranger using the ARR CHR D function.

If you start the Arranger without playing a chord in the Assign area, you will only hear the drums of the selected Music Style. In most cases, however, the RA-800 has already memorized a chord, so that you will hear the full accompaniment.

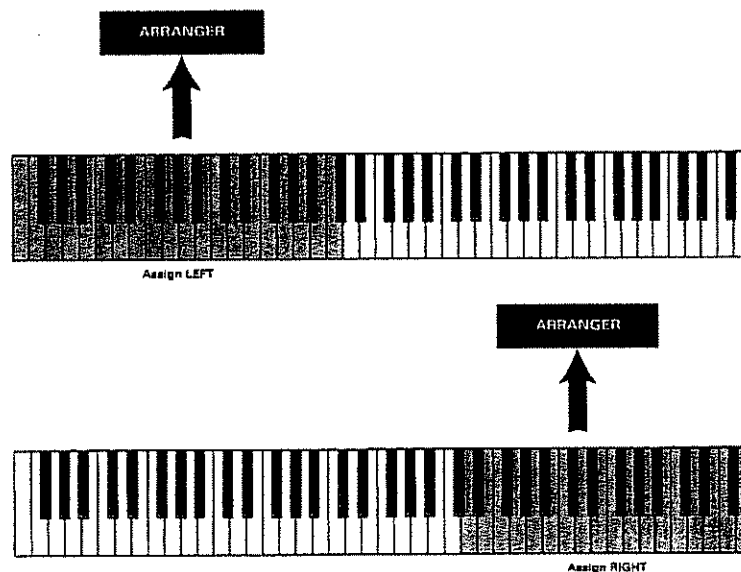
5.2 Selecting the chord recognition area

The RA-800’s Arranger is interactive. It is in fact a processor that uses a short “pattern” (the selected Music Style division) that is transposed in realtime according to the notes you play in the chord recognition area (see below), so that the accompaniment always sounds in the key you specify.

All Style Divisions of the Arranger are programmed to play in whichever key you choose by pressing the corresponding keys in the chord recognition area of the external keyboard.



You must also tell the RA-800 which MIDI note messages it is to scan for usable chords. Though ARR CHR Left is probably the mode you will usually use, you could select Right to have the Arranger use only right-hand notes. Note that it is possible to select Whole (entire keyboard) so that you can control the Arranger with all MIDI note numbers.

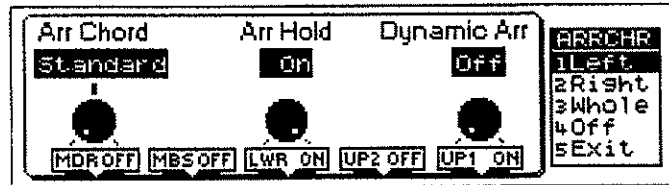


The range of the Left of Right keyboard areas can be set using the Split parameter. In other words, the split point you set for the Realtime parts will also act as split point between the Left and Right chord recognition (Arranger Chord) areas.

5.3 Selecting the Arranger Chord mode

Before using a Music Style, there are a few choices you have to make. The most important is how you want to go about it to send note information to the Arranger so that it plays the Music Style in the right key. There are three modes to choose from:

Press the [ARR CHORD] button to select the display page of the same name. Then use the [DRUMS/PART] knob to SELECT the desired Arranger Chord mode.



As you see in the bottom row, you could also switch on and off the desired Realtime parts. That way, you can fine-tune the RA-800's response to the MIDI note numbers it receives.

Standard

Setting ARR CHORD to STANDARD means that you select the normal chord recognition mode. In Standard mode, the melodic accompaniment plays the chords you play in the Arranger Chord Assign area of the keyboard. If you play only one note in that area, the accompaniment plays only that note, i.e. it assumes that you deliberately chose to omit the third and the fifth of your "chord".

To have the Music Style sound a major, minor or seventh chord, you can suffice to play three notes, by the way. Other, more complex, chords require that you press four keys.

Piano Style

Instead of selecting STANDARD, you could select PIANO STL to change the chord recognition method. Piano Style means that you can use your RA-800 as if you were playing on a piano. In this mode, it is probably a good idea to activate only the Upper 1 part (W RIGHT mode) so that you can play one Realtime part on the entire keyboard. The Piano Style mode works as follows: the Arranger decodes every chord you play – no matter where you play it. Causing the Arranger to play another chord requires that you play at least a triad (i.e. the three notes that make up a chord). You are free to play more than three chord notes but remember that two notes won't cause the Arranger to play another chord. Feel free to select Whole for a piano-style control of the Arranger.

Arranger keeps playing the previous chord



Arranger changes to C major

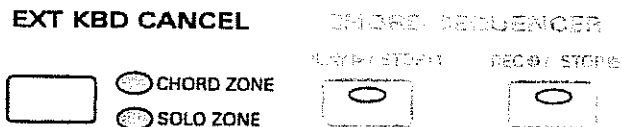


Intelligent

Select INTELLIGENT whenever you want the Arranger to add the missing notes of the chord you want to play. See the Reference Manual for a chart of the intelligent chords and

the way to play them. The RA-800 can handle virtually any chord you can think of – and playing them requires no more than three (for minor and seventh chords only two, and for major chords only one) finger(s)! This is probably the mode you will select most of the time.

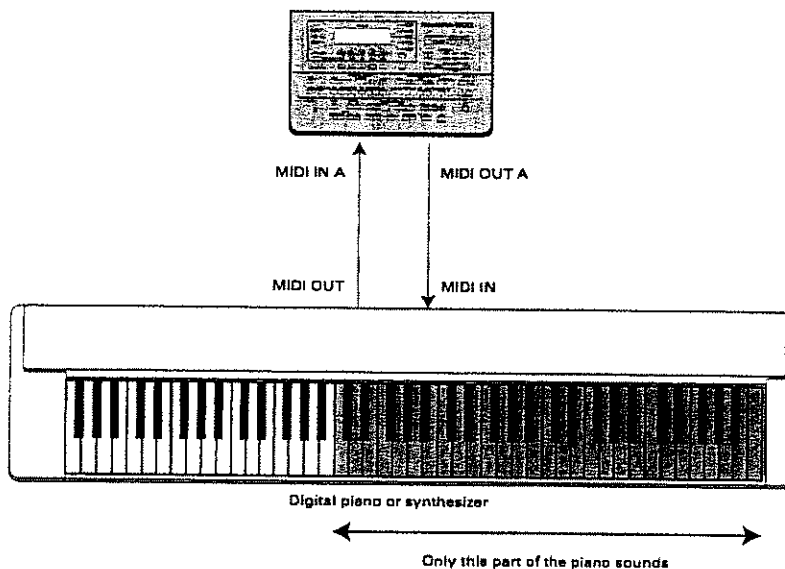
5.4 External Keyboard Cancel



The External Keyboard Cancel function (or EXT KBD CANCEL for short) is especially useful for digital pianos or synthesizers that do not provide a split function (and therefore transmit on only one MIDI channel at the time).

Thanks to some clever MIDI message filtering and setting of the piano's (or synthesizer's) Local function, the RA-800 will "mute" one half of the piano's keyboard, or to put it more scientifically, it will filter certain note numbers that are not retransmitted to the piano (Roland HP or ep series, for example).

This only works, however, if you connect the piano or synthesizer as follows:



Now select MIDI Set 2 if you haven't replaced those settings by your own yet. Otherwise, you will have to set the Soft Thru MIDI parameter to On. That way, the EXT KBD CANCEL function turns off the piano's Local switch, which means that the note messages originating on the piano are not passed on to its internal sound source. Instead, they are transmitted to the RA-800. Note messages that lie outside the EXT KBD CANCEL range (a parameter you can set on the ARR CHORD page) are then "echoed back" to the digital piano, causing its internal sound source to play the remaining notes.

Note: There is a link between this function and Soft Thru in that it will only yield the expected result if the Soft Thru function is set to On.

The EXT KBD CANCEL parameter provides four settings:

CHORD ZONE indicator	SOLO ZONE indicator	Meaning
On	Off	The piano does not sound when you play in the left half of the keyboard.
Off	On	The piano does not sound when you play in the right half of the keyboard.

On	On	The piano never sounds.
Off	Off	The External Keyboard Cancel function is off.

The reason why we mention EXT KBD CANCEL here is that it is an easy way of ensuring that the RA-800's Arranger parts are not duplicated by what you play with your left or right hand on the piano. The EXT KBD CANCEL setting, however, has no influence on the ARR CHORD settings. That is, it is perfectly possible to select "Right" for the Arranger Chord parameter, while setting EXT KBD CANCEL to Chord Zone= On, which means that the left half of the piano keyboard does not cause the internal sound source to play but neither controls the RA-800's Arranger. Something to keep in mind...

Note: When you use a digital piano (or the digital piano MIDI Set) to control the RA-800 on its Basic Channel, while taking advantage of the EXT KBD CANCEL and/or Soft Thru functions, it is important to switch off the transmission of the Realtime or Arranger part that sends its data on the same channel as the Basic Channel (see "Transmit (TX) channels and transmit switches").

Otherwise, the piano's sound source not only reproduces the notes you play on its keyboard but also the notes played by the RA-800's part transmitting on that MIDI channel. This will either cause each note to be sounded twice or two parts being played by the digital piano.

Note: Bear in mind that replacing factory preset MIDI Set 2 by your own settings may mean that you not only control the entire RA-800 the way you would on an Arranger with built-in keyboard but also one Realtime or Arranger part, which indicates that the corresponding MIDI Receive switch is set to On. For more information, see "Receive channels (RX) and switches".

Basic Channel vs. multiple channel control

The EXT KBD CANCEL function can be used both for one-channel or multiple channel control of the RA-800. The former means that you control the entire RA-800 on one MIDI channel, while the latter means that your accordion, organ, etc. transmits MIDI messages on several MIDI channels.

If you control the RA-800 on its *Basic Channel*, the split point between the Chord and Solo zones is the one you set on the Parameter\Global\2 page (Split parameter).

If, however, you control the RA-800 on *multiple channels*, the EXT KBD CANCEL parameter bears only on the NTA channels, in which case the chord recognition area of the Arranger parts is determined by the Low/High Limit settings of the NTA channels. As you will learn, these are MIDI parameters whose settings cannot be saved to a Performance Memory. Instead, you need to save them to a MIDI Set.

In either case, the use of the EXT KBD CANCEL function requires that you adapt other RA-800 settings to the simplified EXT KBD CANCEL system in order to avoid the pitfalls described above.

Tip: It is probably a good idea to select the desired EXT KBD CANCEL mode before you start modifying the RA-800's Split and Arranger Chord settings.

5.5 Chord Inversion and Hold

Chord Inversion

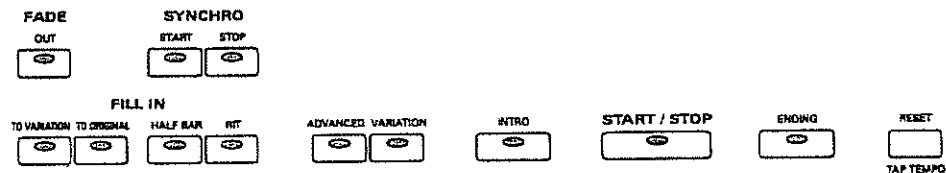
Press the [CHORD INVERSION] button (indicator lights) to change the way the Arranger reads the chords you play. If the indicator does not light, the A.Bass part plays the root of the chords that feed the Arranger, while the chords of the Accompaniment 1~6 parts are voiced in such a way as to avoid semitone intervals (for complex chords) that invariably produce enharmonic clusters (cacophony).

Activating Chord Inversion gives you more artistic license in that you specify the note played by the A.Bass part. Switch on Inversion for songs that rely on bass rather than on chord patterns (for example C – C/B – C/Bb, etc.).

Hold

Press ARR CHORD (indicator lights) and use the [BASS/BANK] knob to select ARR Hold= On. That way, the Arranger will keep playing. As soon as you play another chord, the accompaniment changes, but as long as you play no other chords, the melodic accompaniment keeps playing the previously specified chord. If you do not activate the ARR Hold function, the melodic accompaniment stops as soon as you release the note(s) that feed the Arranger.

5.6 Music Style (Arranger) functions



Starting a Music Style

Music Styles can be started in several ways:

- (1) Press the [START/STOP] button (indicator lights) to start the Arranger right away.
- OR:
- (2) Stop playback of the current Style (see below) and press the [INTRO] button (indicator lights) to start Style playback with a musical introduction.

The length of the Intro depends on the Style you selected. At the end of the Intro, the Arranger starts playing the Music Style division you select while the Intro is being played. In other words, you can select whichever division (Basic, Original, etc.) you like to be played upon completion of the Intro.

OR:

- (3) Press Synchro [START] (indicator flashes) and play a chord on the external keyboard (or just one note in Intelligent mode). The Arranger starts as soon as you play a note in the chord recognition area .

Note: Do not play chord changes while the Intro is running. Unlike the "normal" accompaniments (Basic, Advanced, Original, Variation), Intro patterns usually contain chord changes. Chord recognition is not deactivated during Intro playback, so that the beginning of a song may jump from one key to another.

Stopping a Music Style

There are three ways to stop Style playback:

- (1) Press [START/STOP] to stop playback right away.
- (2) Press [ENDING] (indicator flashes) to activate the Ending function. The Ending (or coda) pattern will start at the beginning of the next measure (next downbeat).

Note: Do not play chord changes while the Ending is running. Unlike the "normal" accompaniments (Basic, Advanced, Original, Variation), Ending patterns usually contain chord changes. Chord recognition is not deactivated during Intro or Ending playback, so that the ending of a song may jump from one key to another.

- (3) Press [SYNCHRO STOP] and release all keys in the chord recognition area of the keyboard. Whenever you do this, the accompaniment stops.

There is no need to restart Style playback manually if you also activate Sync Start (indicator lights)

Another way to end a song would be to use the Fade Out function.

Selecting another Style division

As stated above, you can “professionalize” your performance with the Arranger by selecting different accompaniment patterns. The levels and divisions you can select are:

Basic and Advanced

Press the [ADVANCED] button so that its indicator goes out to select the Basic version of the Music Style. Press the [ADVANCED] button again (indicator lights) to select the Advanced accompaniment level.

If necessary, press the [VARIATION] button (indicator must go out) to select the “normal” Basic Music Style accompaniment. As stated above, Basic/Original is the simplest of the four possible accompaniment patterns. The second accompaniment level can be selected by pressing [VARIATION] while the Basic mode is active. The same system also applies to the Advanced level, giving you a total of four accompaniments per Music Style (multiplied by three, see the next paragraph).

Let us summarize all this:

Indicator	Meaning
ADVANCED off	Basic mode is selected
ADVANCED on	Advanced mode (this is a more complex accompaniment level)
VARIATION off	Original mode (simpler version of either Basic or Advanced)
VARIATION on	Variation mode (more complex version of either Basic or Advanced)

The possible combinations are: Basic/Original, Basic/Variation, Advanced/Original, and Advanced/Variation.

Major, minor, seventh

This is an “invisible” Style division function of your RA-800. In time you will notice that the Intro and Ending patterns of a Music Style change according to the chord you play. There are three possibilities:

Before going any further, press Music Style [GROUP] to select the B group, Number 4, and Number 5 to select the B45 Musette Style. Press [INTRO], Synchro [START], and Synchro [STOP]. The corresponding indicators must light. (You will have to press [INTRO] before trying out each of the following.)

Chord type	What it does
Major (M)	Calls up the first (major chord) accompaniment level.
Minor (m)	Calls up the second accompaniment level. Try this out by playing a C major chord, press [INTRO] again and play a C minor chord.
Seventh (7)	Whenever you play a seventh chord, you activate yet another accompaniment level. Try this out by first playing a major and then a seventh chord.

In other words, the number of some divisions (such as the Intros and Endings) is in fact multiplied by three!

Note: The RA-800 is equipped with a function that allows you to freely assign various chord types (7/5, dim etc.) to one of these levels.

Fills: To Original and To Variation

Turn off Synchro [STOP] and activate ARR CHORD "HOLD" (press [ARR CHORD] to call up the parameter in question). Start playback of the current Style by pressing [START/STOP].

Fill In [TO ORIGINAL] and [TO VARIATION] are two fills (or transitions) you can use at the end of a musical phrase (verse, chorus, bridge). These two buttons do two things at a time:

	In Original mode	In Variation mode
TO ORIGINAL	Plays the Original Fill.	Plays the Original fill and selects the Original level.
TO VARIATION	Plays the Variation Fill and selects the Variation level.	Plays the Variation Fill.

Press these buttons now. Start with [TO VARIATION], next press [TO ORIGINAL].

Think of a Fill as the moment in a song when the drummer is allowed to play a roll and the bassist and keyboard players vary their accompaniment by adding a few notes here and there.

Fill-Ins last one bar, but you can produce shorter fills by proceeding as follows: press [TO VARIATION] or [TO ORIGINAL] on the first through the penultimate beat of a bar (i.e. the 1st, 2nd or 3rd beat of a 4/4 bar, or the 1st or 2nd beat of a 3/4 bar) to start the fill right away. It will then last until the end of the current bar. If you press the [TO VARIATION] or [TO ORIGINAL] button on the last beat of the current bar, the fill will start on the following downbeat and last an entire bar.

Note: You can also start Style playback with either the [TO ORIGINAL] or [TO VARIATION] button. Again, the Arranger will select the level (Original or Variation) the fill is headed for.

Tip: The Intro and Ending of the currently selected Style can also be used as "fills". See "Intro and Ending" for more information.

Do not stop Style playback.

Complementary Fill functions: Fill In Half Bar and Fill In Rit



Certain pop songs in 4/4 contain bars that only last two beats. The usual place for such a bar is between the first and the second verse. Another favorite position of "halved" bars is at the end of a chorus or the bridge. Your RA-800 allows you to faithfully reproduce these "anomalies". Press Fill In [HALF BAR] (indicator lights) to activate the Half Bar function. This does not change Style playback right away. Only when you press [TO ORIGINAL] or [TO VARIATION] will the Half Bar function be active and play half the number of beats of the fill you selected.

Half Bar is on. The Fill
only lasts two beats (2/4)

1st Verse (bars 1-7)	V1 (bar 8)	2nd Verse	1st Chorus	3rd Verse	2nd Chorus
Basic Original		Basic/ Variation	Advanced/ Original	Basic/ Variation	Advanced/ Variation
ADVANCED VARIATION	TO VARIATION	ADVANCED VARIATION	ADVANCED VARIATION	ADVANCED VARIATION	ADVANCED VARIATION

You can press [HALF BAR]
in the 7th measure.

The [RIT] button, on the other hand, is probably more suitable for ballads. Press it (indicator lights) to cause the next fill (To Original or To Variation) to slow down ("ritardando"). Try using this function now: press [RIT] (indicator lights) and press either [TO ORIGINAL] or [TO VARIATION]. Watch the tempo window.

The tempo will slow down during the fill. At the end of the fill, the Style will return to the previously set tempo (this is called "a tempo"). If that was too fast for you, just press the same Fill button again while watching the display.

Switch Fill In [RIT] (and [HALF BAR]) off again, and stop Style playback.

Intro and Ending

While the selected Style is stopped, press the [INTRO] button (indicator lights) to cause Style playback to start with a musical introduction. Do not forget to press [START/STOP] (or activate Synchro [START]) to start Style playback.

The length of the introduction depends on the Style you selected. Some Intros are two measures long, others eight, and so on. It is also possible to use the Intro function along with Sync Start (see below).

During playback of the Intro, you can press [VARIATION] (indicator lights) to select another division that will then be launched upon completion of the Intro.

Note: You can also press [INTRO] in the middle of a song. In that case, the indicator will flash until the end of the current bar and then light on the next downbeat to indicate that the Arranger is playing the introductory pattern.

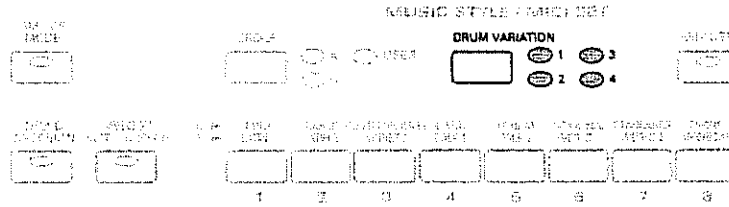
Tip: The Intro is "renewable", i.e. you can press the [INTRO] button again while the Intro is playing. Doing so on the fourth beat of the first Intro bar, for instance, will retrigger the beginning of the Intro in the second bar. Even though this is only musically useful for certain Intro patterns (those that do not start with a drum roll etc.), you could combine this feature with the Fade Out function to further "customize" the ending of your songs.

If you press [ENDING] during Style playback, its indicator will flash until the end of the current bar and then light on the next downbeat to indicate that the Arranger is playing the Ending pattern. The Ending function supplies a musical ending for your songs. Again, the length of the Ending patterns depends on the Style you selected.

Style playback will be stopped at the end of the Ending pattern.

Tip: The Intro and Ending of the currently selected Style can also be used as "fills". Likewise, you could begin a song with the Ending pattern and end with the Intro. Remember, however, that the length of the Intros and Endings varies from Style to Style. So before using this feature in a real life situation, you should probably try it out and count the number of bars. Furthermore, Style playback will be stopped at the end of the Ending pattern, which is something you have to bear in mind when using the Ending as intro.

Realtime changes of the drum accompaniment



Your RA-800 allows you to "modify" the drum accompaniment in realtime. Selecting a Drum Variation level indeed removes (or adds) drum and percussion instruments. The changes (i.e. the sounds that are added or removed) are preset.

Pressing the DRUM VARIATION button to make the "4" light will call up all drum and percussion parts of the selected Style. If you select DRUM VARIATION "3", you will notice that one or two percussion sounds (the congas, for example) disappear. Select DRUM VARIATION "1" to call up the simplest drum accompaniment of the current Style, or "2" for a slightly more stuffed drum part.

Other useful Style playback functions

One Touch Program

You may find yourself using the One Touch function at regular intervals because it automates quite a few tasks:

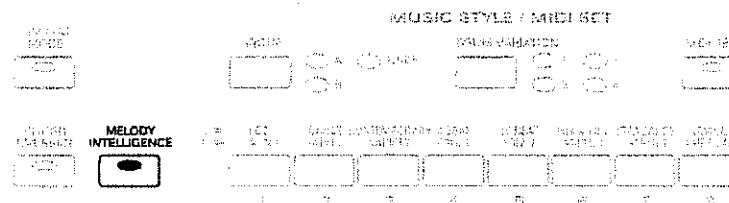
Simultaneously press [RIT] and [ACC] to activate the One Touch function. The display responds with placing an arrow (◀) next to the Style name (e.g. B45◀Musette). You may have to keep the buttons depressed for about one second to activate or deactivate One Touch Program. If you select a Music Style while One Touch is active, the RA-800 automatically selects the following:

- Arranger Chord (ARR CHORD page): Standard, and ARR Hold: On
- Preset Style tempo
- Synchro [START] (lit)
- A Tone for Upper1 and Upper2 that are suitable for the selected Style (for example A36 Accordion Fr for Upper1)
- Keyboard Mode (KBD MODE page): Split ([F2])
- Suitable Reverb, Chorus, and Delay settings for Upper1 and Upper2.

One Touch is useful for situations where you have to respond to song requests, knowing that none of your Performance Memories contains suitable settings. For your own "repertoire", using Performance Memories is more efficient.

Note: The One Touch function will be cancelled as soon as you select a Performance Memory.

Melody Intelligence



The Arranger of your RA-800 can not only play chords but also a counter-melody based on the chords you play in the chord recognition area. This counter-melody will be played by the Upper2 part and added to the Upper1 part. As soon as you press [MELODY INTELLIGENCE] (indicator lights), the Upper2 part will be activated (but the UP2

message on the KBD MODE page will change to OFF). You can assign whichever Tone you like to the Upper2 part.

Fade Out

Fade Outs are extremely popular in pop music, and the RA-800 allows you to end a song just like the original. To do so, press [FADE OUT] (indicator flashes). The volume then gradually decreases until it reaches zero (indicator lights steadily).

To reset the master volume after a Fade Out, press [FADE OUT] once more. Style playback will be stopped automatically at the end of a Fade Out.

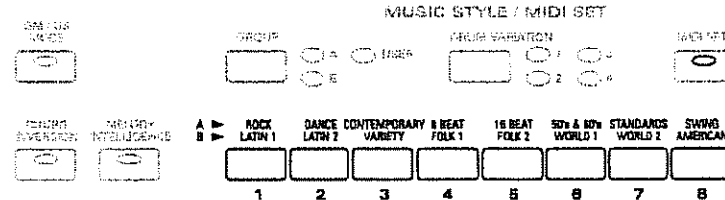
Tip: To avoid volume glitches when resetting the master volume you should first press the [START/STOP] button, wait a moment and then press [FADE OUT].

Reset

As a performing artist, you know there is always someone in the audience who, at some point, wants you to accompany him while he sings his favourite song. Accompanying such a person can be a real challenge because most amateur singers (no offense), no matter how well they sing, have one serious problem: timing.

Enter the [RESET] function. Press this button whenever you are hopelessly out of sync with the singer (or vice versa). Pressing [RESET] (located to the left of the [ENDING] button) will immediately restart Style playback on the first beat.

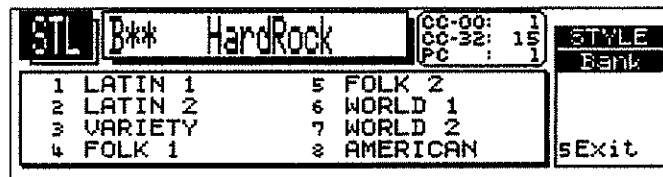
5.7 Selecting Music Styles



The RA-800's Music Styles are divided into two Groups: A and B. Each Group contains 8 banks of 8 Styles. At power-up, the RA-800 automatically selects the A37 Contemp1 Style.

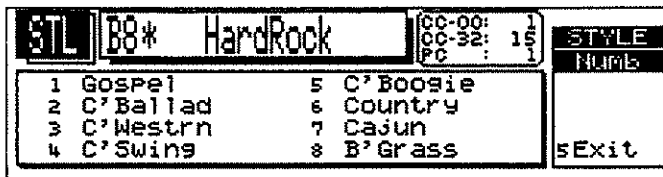
Here is how to select another style:

- (1) Press the [GROUP] button in the MUSIC STYLE section to select Group A or B (corresponding indicator lights).



The control change (CC) and program change (PC) numbers refer to the Style's MIDI address. In other words, you can also select Music Styles via MIDI (on the Style Select channel). The control change numbers define the Style, whereas the Program Change number defines the division (Intro, Ending, etc.). You can check this by selecting another division (Advanced, for example), and watch the PC number.

- (2) Press a Number button to select a Music Style bank.
Press button number 8, for example.



- (3) Finally, to select a Style number of this Bank, press another or the same number button. Press 5, for example, to select the C'Boogie Style. The display now returns to the Master page and the tempo and name of the new Style appear on the top line:



To select another Style within the same bank, just press a number button. The tempo and name of that Style will appear on the top line.

Note: There is no way to select another Music Style Group or Bank without specifying the subsequent entries (Bank or Number). However, the Style selection can be saved to a Performance Memory, so that calling up that Performance Memory will also select the Music Style you need.

Using external (User) Styles

Apart from the internal Music Styles in ROM, you can also work with Styles coming from a Style disk. Your RA-800 is shipped with Demo/Style Disks that also contain new Styles. Other MSA, MSD, and MSE Style disks are available from your Roland dealer.

You can also program and load your own Styles. Let's call all Styles that do not reside in the internal Style memory User Styles.

The RA-800 can hold 8 User Styles at any one time. These Styles must be loaded from a Style disk, which means that a copy will be transferred to the RAM User Style memory. Note that this is a memory without power backup, so that the User Styles will be erased when you switch off your RA-800.

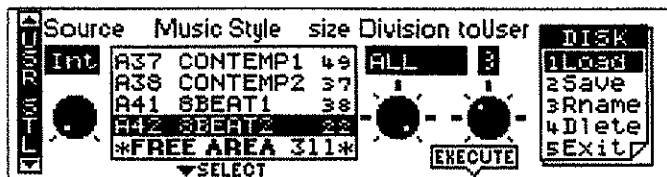
Autoload

If you insert the supplied Demo/Style disk into the drive before switching on your RA-800, it will automatically load the eight Styles contained in the Autoload Style Set on that disk. These Styles have been selected to include additional accompaniments you may need right away. The automatic load function also works for your own Style Sets on other disks. Just save them under the Autoload name, insert the disk into the drive and switch on your RA-800 to load the eight Styles you want to start performing with.

Loading User Styles

Here is how to load User Styles:

- (1) Insert the supplied Demo/Style disk into the disk drive.
- (2) On the Master page, press [F5] (Disk) to select the Disk mode.
- (3) If the 1 Load option is not highlighted, press [F1] (Load) to select it.
The message in the scroll bar (left-hand side) should read USR STL. If that is not the case...
... press [PAGE] ▲▼ until the scroll bar reads USR STL.
- (4) Using the [DRUMS/PART] knob, select Dsk for the Source parameter.



Failure to do so will result in an internal Style being copied to the selected User Style memory. That is only necessary if you want to edit the Style in question – but not what we want to do now.

The Music Style info window displays a list of Styles on the floppy. The last message in this window indicates the free User Style memory area.

- (5) Use the [ACCOMP/GROUP] knob to scroll through the list of available Styles. The highlighted (white-on-blue) Style will be loaded.

Next, you have to decide which elements of the Style you want to load. (These elements, as you know, are called divisions: Original, Basic, Ending, Intro, etc.)

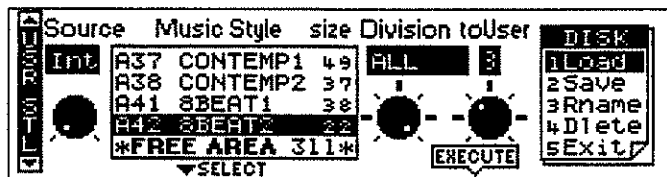
- (6) Use the [LOWER/NUMBER] knob to select the Style division you need.

Here, we just want to load a Style and use it like an internal Style, so select ALL (all divisions).

- (7) Use the [UPPER/VARIATION] knob to select the User Style memory you want to copy the Style to (to User). Let's select User Style memory 1.

Note: Be careful not to load User Styles to a User Style memory that already contains a Style. The RA-800 will not warn you that you are overwriting the Style in the memory you select here!

- (8) Press [UPPER1] (Execute) to load the Style.



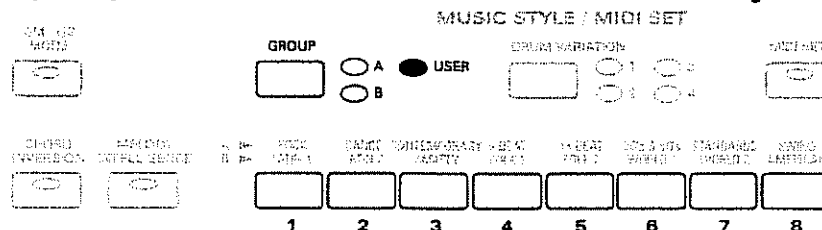
- (9) Press [F5] (Exit) to return to the Master page.

You have now loaded one User Style to the first User Style memory. (See “Working with

- User Style Sets” to load 8 Styles at a time.) The next step is to use the Style you have just loaded. Here is how to:

Selecting User Styles

- (1) Press the [GROUP] button in the MUSIC STYLE section to make the USER indicator light.



- (2) Press a number button to select the corresponding User Style memory.

Note: Style selection is one of the elements that can be saved to a Performance Memory.

5.8. Style Tempo

Tempo dial and indicators

Every Music Style contains a preset tempo setting that you are free to override using the [TEMPO] dial. If you think the tempo of the selected Style is too fast or too slow, you can

change it right away. Again, the tempo value you specify manually will be saved to a Performance Memory.

The TEMPO indicators will flash in the rhythm of the selected tempo. The first indicator flashes red to indicate the downbeat (the beginning) of a new bar. For time signatures like 6/8, etc. the fourth indicator flashes repeatedly to supply the “missing” beats.

There are a few things to remember about Style tempo:

- Every Style has a preset tempo that will be set every time you select that Style – unless you saved another tempo to a Performance Memory and select the Style via that Performance Memory.
- TEMPO AUTO/LOCK allows you to specify what happens when you select another Style while the current one is playing. See “Auto Tempo and Tempo Lock”.

Tap Tempo

Tap Tempo is a musical way of specifying the playback tempo: stop Music Style playback and press the [RESET/TAP TEMPO] button the way a drummer does when counting in. After the second tap, the tempo display already indicates a new tempo value. In other words, you could suffice to press this button only twice. Most of the time, however, you will press it four times for a 4/4 bar, three times for a 3/4 bar, and so on.

Auto Tempo and Tempo Lock

The [TEMPO] button, located above the [TEMPO] dial allows you to specify if and how the tempo changes when you select another Style:

AUTO indicator	LOCK indicator	If Arranger playback is stopped at the time you select another Style	If a Style is running at the time you select another Style
●	○	The Arranger loads the preset tempo of the new Style.	The new Style will be played back at the tempo of the previous Style.
○	●	The preset tempo of the new Style is not loaded. Instead, the Style will be played back at the tempo that appears in the Tempo window.	
○	○	The Style's preset tempo is loaded.	The Style's preset tempo is loaded, so that the playback tempo changes.

Tempo Rit and Tempo Acc

The Tempo [RIT] (ritardando) button works more or less the same as the Fill In [RIT] button, except that it applies to Style playback in general, while Fill-In [RIT] only applies to fills. Press [RIT] to cause the playback tempo to slow down (indicator flashes). As soon as the ritardando is completed, the [RIT] indicator goes off. Depending on what you do before pressing [RIT], this function does one of two things. Press both [RIT] and [ACC] (accelerando) to return to the previous tempo value.

Action before pressing [RIT]	Tempo
You did not press [ACC].	The tempo slows down by the preset amount. EXAMPLE: if the Style tempo is currently ♩ = 120, it will drop to ♩ = 96.
You pressed [ACC] and waited until the indicator went off.	The tempo returns to the original value (i.e. ♩ = 120 in the above example).

Note: The RA-800 allows you to set the ritardando (or Rit) and accelerando (Acc) speed.

Tempo [ACC] does the opposite: it speeds up the Style tempo by the specified amount. Depending on what you do before pressing [ACC], this function does one of two things:

Action before pressing [ACC]	Tempo
You did not press [RIT].	The tempo slows down by the preset amount. EXAMPLE: if the Style tempo is currently ♩ = 120, it will rise to ♩ = 140.
You pressed [RIT] and waited until the indicator went off.	The tempo returns to the original value (i.e. ♩ = 120 in the above example).

5.9 Customizing Music Styles

Assigning other Tones to the Arranger Parts

You can select other Tones for the Arranger parts of the currently selected Music Style. Assigning another Drum Set to the A. Drums part may already dramatically change the Music Style's character. Likewise, replacing the acoustic piano by an electric one is an easy way of adapting a preset Music Style to your specific needs.

Tone selection for the Arranger Parts works the same as Tone selection for the Realtime Parts, except that you cannot call up the Arranger parts using the Part Select buttons below the display. You have to press the [TONE] button and to select the desired Part using the [DRUMS/PART] knob in Tone mode. The Arranger parts are called ADR (accompaniment drums), ABS (accompaniment bass), and AC1~6 (accompaniment parts 1~6).

See "Selecting Tones using the knobs" for how to select Tones.

Tone Change

It's up to you to decide whether the RA-800 should remember which Tones you assigned to the Arranger parts. If you do not modify the Tone Change setting, you will notice that after a while, the Music Style returns to the original, preset, Tones.

Thanks to the Tone Change switch, however, you can ensure that the preset Tone selection will be overridden by your own choices. See "Who selects the Tones? – Tone Change" for more information about the Tone Change parameter.

Prf	Tone selection remains in effect until you select another Tone or another Performance Memory.
Arr	Your own Tone selection for the Arranger parts is modified by the settings contained in the Music Styles.

Note: The Tone Change switch only applies to "internal" messages. Program changes received via MIDI IN will always be executed, no matter how you set the Tone Change switches.

Here is how to set the Tone Change parameter:

- (1) Press [TONE] to select the Tone mode.

- (2) Hold down [SHIFT] and press [F2] (Arrng) to select the Arranger page.
- (3) Use the [PAGE] ▲▼ buttons to select the Part whose Tone Change setting you wish to modify.



The name of the Part you select appears in the scroll bar.

- (4) Using the [DRUMS/PART] knob, set the Tone Change switch to Prf or Arr.
- (5) Press [F5] (Exit) to return to the Master page.

Note: Style and Tone selection (along with a lot of other settings) can be saved to a Performance Memory. After assigning other Tones to the Arranger parts and changing the Tone Change settings, you should save these settings to a Performance Memory .

5.10 Working with User Style Sets

Compiling and saving your own Style Sets

Working with User Style Sets is the most efficient way to prepare all the User Styles you need in a given situation. We strongly advise you to take advantage of the User Style Set feature even though preparing Style Sets may take some time. It has indeed the advantage that you can use Styles from different disks (but saved to one disk) and thus have eight accompaniments you need, ready to be loaded as a Set.

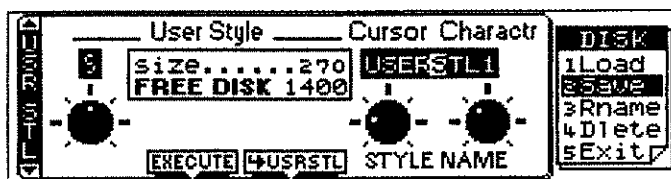
- (1) Load eight Styles into the RA-800's User Style memories (see steps 2-9 above and repeat steps 5-9 until all eight User Style memories contain Music Styles). Do not forget to change disks if your Style Set is to contain Styles from different disks.

Note: Do not press [F5] (Exit) when you're done.

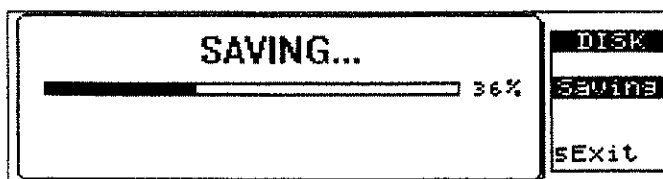
Style Sets are in fact containers that refer to existing files on disk. That is why we now have to save the eight Styles in the RA-800's memory to a new disk:

Saving User Styles to disk

- (2) Insert a new 2DD or 2HD disk into the drive. If it is not formatted, you are given the opportunity to do so now. If it is IBM PC formatted, you can proceed right away.
- (3) Press [F2] (Save) on the Disk page.
- (4) Using the [PAGE] ▲▼ buttons, select the following display page:



- (5) Use the [DRUMS/PART] knob to select User Style memory 1.
 You probably do not want to change the name, so we'll skip that part here.
 If you do want to change the Style's name, however, use the [LOWER/NUMBER] knob to select the character you want to change, and enter the new character using the [UPPER/VARIATION] knob.
- (6) Press [M.BASS] (Execute) to save the Style to disk.



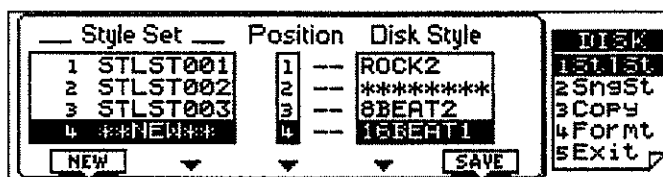
- (7) Repeat steps 5-6 to save the Styles 2-8 to disk.
In other words, in step 5 you will have to select "2", "3", ... "8".

Saving a User Style Set

Now that you have eight Styles on disk, you can combine them to a Style Set. It goes without saying that you can save a lot more User Styles to the same disk and combine them to other Style Sets.

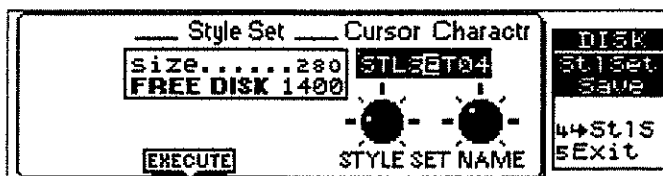
Here is how to compile and save a Style Set:

- (8) Assuming that you are still in Disk mode, hold down [SHIFT] and press [F1] (StSt).



Obviously, the Style Set window on this display page does not look like the one on your RA-800 since your disk does not yet contain User Style Sets. But let us go through the motions:

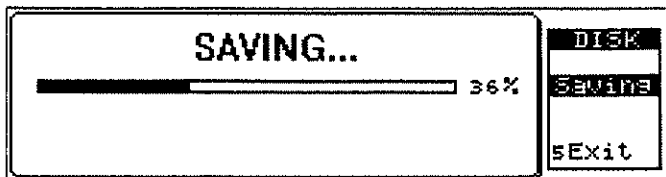
- (9) Press [M.DRUMS] (New) to create a new Style Set.
 (10) Use the [BASS/BANK] knob to select a Style Position.
 The Position represents the User Style memory the Style will be copied to when you load the User Style Set. In other words, "1" means that the User Style you assign to this Position will be copied to User Style memory 1, and so on.
 (11) Use the [LOWER/NUMBER] knob to assign a disk Style to the position you have just selected.
 The Disk Style window shows all Styles that are available on the disk in the drive.
 (12) Repeat steps 11 and 12 to complete your Style Set.
*Note: You can also select *** for a Position, which means that the corresponding User Style memory will not be overwritten when you load this Style Set. You could use this feature to keep the corresponding User Style memory free for direct Performance Memory access.*
 (13) Pressing [UPPER1] (Save) will take you to the following display page:



The Style Set window tells you everything you want to know about the Style Size (in bytes) and the Free Disk area (also in bytes). The name of the Style Set you are about to save will be STLST followed by a number (in your case probably "001"), unless you change it now.

Use the [LOWER/NUMBER] knob to select a character position and the [UPPER/VARIATION] knob to assign the character of your choice to that position. When the name is complete...

- (14) ... press [M.BASS] (Execute) to save the Style Set to disk.
The display will respond with:



Since your RA-800 is multitasking, you can press [F5] (Exit) and do something else while the RA-800 saves your Style Set to disk.

When the User Style Set is saved, the OK Function Complete message will be displayed.

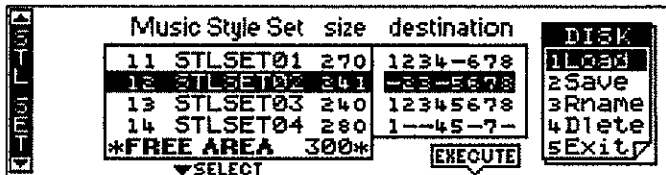
Loading User Style Sets

Instead of loading User Styles one at a time, you can also load User Style Sets containing 8 Styles. Not only will this speed up the loading process, it also allows you to compile Sets of all the User Styles you need in a given situation. To see how the User Style Sets work, let us load the Set you have just compiled:

- (1) Insert your disk into the disk drive.
- (2) On the Master page, press [F5] (Disk) to select the Disk mode.
- (3) If the 1 Load menu option is not highlighted, press [F1] or [SHIFT]+[F1] (Load) to select the Load page.

The message in the scroll bar (left-hand side) should read STL SET. If that is not the case...

- (4) ... press [PAGE] ▲▼.

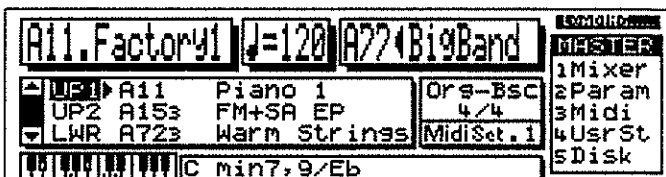


- (5) Use the [ACCOMP/GROUP] knob (Select) to scroll through the list of available Style Sets and select one.

The right information window (Destination) indicates which User Style memories the Set will overwrite. A dash ("-") means that the Style Set contains no data for the corresponding memory. The first line in the above Destination window means that the currently selected Style Set contains no data for User Style memories 1 and 4. Consequently, those internal memories will not be overwritten.

- (6) Press [UPPER1] (Execute) to load the Style Set.
- (7) Press [F5] (Exit) to return to the Master page.

While the load operation is in progress, the message LOADING appears in the upper right corner of the Master page:



6 Saving and loading registrations – Performance Memories

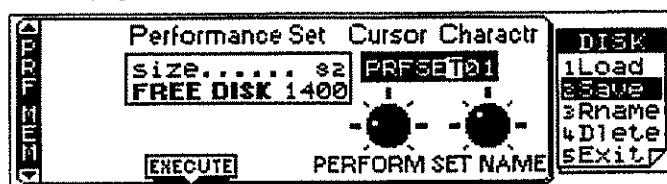
The RA-800 is equipped with 192 Performance Memories that allow you to store almost all settings (or registrations) you make on the front panel. So far, we have only discussed the easy part of changing the preset settings. Later on, you will discover that you can also carry out a lot of in-depth work. Those settings can also be saved to a Performance Memory. Before taking a closer look at the RA-800's Performance Memories, there is one thing we have to point out, though. *All settings relating to MIDI must be saved to a MIDI Set.*

MIDI settings are not saved to a Performance Memory. The reason for this is simple: You probably need a lot more memories for your performance settings than you do for your MIDI settings. Saving the MIDI settings to the Performance Memories would slow down the loading process.

Your RA-800 comes loaded with 64 Performance memory settings specially adapted to the 8 factory MIDI Sets. These Performance memory settings reside in Group A, Banks 1–8, Numbers 1–8 but not in ROM. Please bear in mind that by replacing one of these Performance Memory settings, you will lose the original Performance memory. **There is no way to restore the original factory Performance Memory settings.** You can, however, save them to disk before writing your own settings. Here is how to:

Saving a Performance Memory Set to disk

- (1) On the Master page, press [F5] (Disk).
- (2) Press [F2] (Save). The display now looks like this:



The first thing you should do now is to program a name for your Performance Memory Set. That's right: the contents of all 192 Performance Memories can be saved to disk in one go. A meaningful name would be "PRESPRF" (Preset Performance Memories).

- (3) Use the [LOWER/NUMBER] knob to move the cursor to the position you wish to select another character for.
- (4) Use the [UPPER/VARIATION] knob to select another character for that position.
- (5) Insert a blank disk into the disk drive. If it is MS-DOS-formatted, you can proceed right away. (If it isn't, the RA-800 will ask you whether you would like to format the disk. Follow the instructions that appear in the display.)
- (6) Press [M.BASS] to save the Performance Memory Set to disk.
- (7) Press [F5] (Exit) to return to the Master page.

This function allows you to save all 192 Performance Memories as a set. The Size value indicates the capacity required to save the Performance Set to disk, while Free Disk tells you something about the remaining disk capacity.

We would like to draw your attention to the fact that your RA-800 also memorizes the name of the User Style you use in a given situation. If, at the time you load such a Performance Memory, that Style does not reside in the internal User Style memory, the display will respond with:



See "Automated User Style access" for what to do in that case.

Quite a few parameter settings are related to controlling the RA-800 on its Basic Channel (Keyboard Mode, Arranger Chord, Split point, etc.) and do not apply to multiple channel control of the RA-800 (where only the MIDI parameters are taken into consideration).

This may be another indication that the RA-800 is probably more powerful when controlled on its Basic Channel. If your MIDI instrument allows you to transmit all data on one MIDI channel (rather than two or three), you should consider taking advantage of that possibility. The only exception are MIDI accordions. There, the chord section should be set to transmit on an NTA channel rather than the Basic Channel in order to obtain the correct "chord readings".

6.1 Writing your settings to a Performance Memory

It is a good idea to save your settings frequently even if you still need to do some editing afterwards. Those intermediary saves allow you to return to the previous stage whenever you do not like your last modifications. In other words, you could (and probably should) use the Performance Memories as "recall buffers" to be able to return to the previously edited settings, discarding only the latest modifications.

Try to save your settings after...

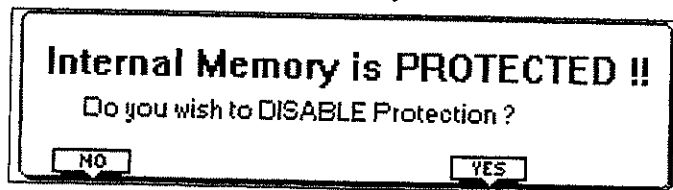
- ...selecting Tones for the Realtime parts.
- ... selecting a Style, the first division, and after setting the tempo.
- ... assigning other Tones to the Arranger parts.
- ... modifying the volume balance and the effect settings.
- ... editing the Source settings.

In short, every time you like the settings you just made. That way, every subsequent modification can be undone by loading the "provisional" Performance Memory settings you do not want to lose.

Memory Protect

Your RA-800 is equipped with a Memory Protect function that is activated every time you power on your instrument. Memory Protect does what its name implies: it protects your Performance Memories and MIDI Sets from accidental erasure.

You will be given the opportunity to turn off Memory Protect before saving your settings to a Performance Memory. If the RA-800's memories are protected when you press the [WRITE] button (see below), the display will respond with:

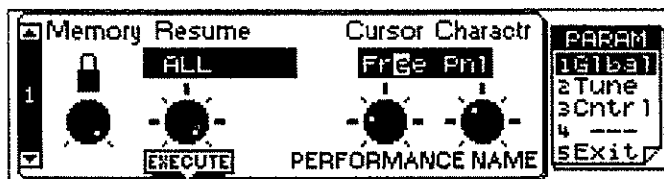


Press [UPPER1] (Yes) to turn off the Memory Protect function.

If you do not want to turn off the Memory Protect function press Part Select [M.DRUMS] (No) instead.

There is another way to turn off Memory Protect, which you might use after powering on your RA-800:

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F1] (Gibal) to select the Global mode.
- (3) Press [PAGE] ▲▼ to select the first Global page:



- (4) Use the [DRUMS/PART] knob to “unlock” the RA-800’s memory.
 - (5) Press [F5] (Exit) to return to the Master page.
- At a later stage, you could return to this display page to turn the Memory Protect function back on.

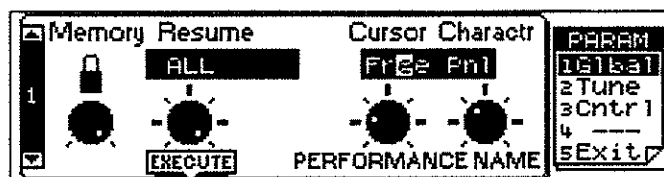
Performance name

One final step before saving your settings to a Performance Memory is to assign a name to your settings. Note that you only have to do this the first time you save new settings to a Performance Memory, and that you can also name your Performance after saving it. If you do it now, you do not have to worry about renaming your Performance at a later stage.

Use a name that somehow summarizes the memory’s content. The name of the song you will use these settings for is probably the most explicit name you can think of.

Here is how to name your performance settings:

- (1) If necessary, select the Parameter\Global\Memory Resume page (see steps 1–3 above).



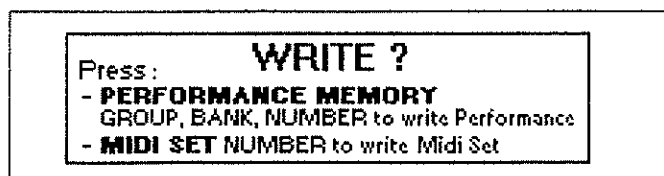
- (2) Use the [LOWER/NUMBER] knob to select the character position you want to change, and enter the new character using the [UPPER/VARIATION] knob.
- (3) Repeat step 2 to complete the name.
- (4) Press [F5] (Exit) to return to the Master page.

Writing a Performance Memory

It is perfectly possible to program several Performance Memories for one song. Selecting a Performance Memory is a lot faster than calling up one of the RA-800’s menu pages, modifying the settings, etc., while playing. In other words, you could program one Performance Memory for the first part of a song, another one for the bridge, and a third one for the closing section. Doing so allows you to “play” with the effect settings of the Realtime and/or Arranger parts, for example.

- (1) Press and hold down the [WRITE] button.

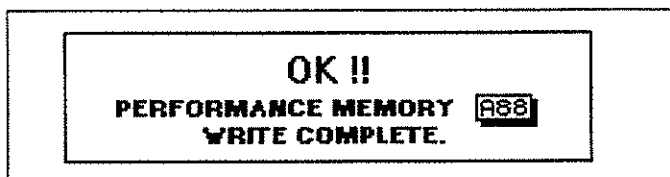
The display asks you whether you are sure want to write your settings to a Performance Memory. If you are, go on. Otherwise, release the [WRITE] button.



You may wonder why you have to keep [WRITE] depressed. We did that so that it is impossible to accidentally overwrite an existing Performance Memory. After all, you may very well hit the wrong button while performing, and the last thing you want to do is overwrite the settings you took so much time to program.

- (2) Press the [GROUP] button in the TONE/PERFORMANCE SECTION to select a Group (A, B, or C - indicator lights).
- (3) Press a number button (1-8) to specify the bank number.
- (4) Press a number button to select a memory within the selected Bank.

The display briefly confirms that your settings have been written to the memory you selected:



- (5) Release the [WRITE] button.

6.2 Selecting Performance Memories

Selecting 00 FreePnl

Loading a Performance Memory does a lot more than meets the eye. Thus, after loading a certain Performance Memory, you may start wondering why a Realtime part does respond to program changes transmitted by a Standard MIDI File, for example, even though you are absolutely positive about having deactivated the corresponding Tone Change switch.

To keep things transparent, the RA-800 provides a factory Performance Memory *00 FreePnl* that contains the default settings of your RA-800. Though the settings of *00 FreePnl* are something to "cling to", please bear in mind that it is possible to change them temporarily. That explains why loading Performance Memory does not *always* call up the factory settings. You may remember that selecting Performance Memory *00* is what we did before listening to the demo songs.

The surest way to return Performance Memory to its original state is to switch the RA-800 off, wait a few seconds, and then switch it on again to erase the contents of its RAM memory). Another method is to use the Resume function. See below. Here's how to *load 00 FreePnl*.

Simultaneously press Performance Memory ◀DOWN/UP▶ (CANCEL) to select the *00 FreePnl* settings.

Note: This Performance Memory is read-only. You cannot save data to this memory.

Resume

The Resume function loads the factory-set *00 FreePnl* settings (as opposed to the settings you may have modified since you switched on the RA-800), thereby erasing any modifications you may have made since powering up your RA-800. Resume allows you to specify which settings of the factory set Performance Memory *00* are to be loaded:

Settings to be loaded	Meaning
Mixer	Only the Mixer settings of Performance Memory <i>00</i> will be loaded.
Parameter	Only the Parameter mode settings will be loaded.
Tone	Only Tone selection and the Source Tone Change settings of Performance Memory <i>00</i> will be loaded.
All	All settings of Performance Memory <i>00</i> will be loaded.

Here is how to load Performance Memory 00 using the Resume function:

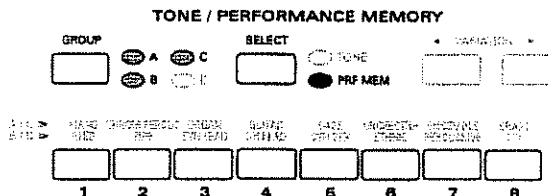
- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F1] (Glb) to select the Global mode.
- (3) Press [PAGE] ▲▼ to select the first Global page:



- (4) Use the [ACCOMP/GROUP] knob to select the settings you want to load (see the table above).
- (5) When you are ready to load these settings, press [M.BASS] (Execute) to load the settings.
- (6) Press [F5] (Exit) to return to the Master page.

Note: You can also load the 00 FreePant settings by powering off your RA-800 and turning it back on again. This, however, is the same as selecting All.

Selecting a Performance Memory (Group, Bank, Number)



- (1) Press the [GROUP] button in the TONE/PERFORMANCE MEMORY section to select Group A, B, or C (indicator lights).

Note: There are only three Performance Memory groups (you cannot select "D").

- (2) Press a number button to select a bank number.

Note: You can perform these steps a little ahead of the song part where you want the new settings to take effect. Only when you specify the Performance Memory number will the corresponding settings be loaded.

- (3) Press a number button to select a memory.

The settings of the selected Performance Memory will be loaded.

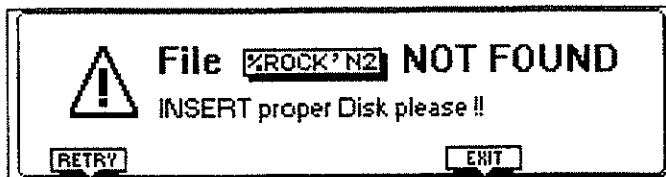
Note: You do not need to load all Performance Memory settings. See "Selectively loading Performance Memory settings (Performance Memory Hold)" for more information.

Automated User Style access

Note: Whenever you select a Performance Memory programmed to select a User Style, the RA-800 scans the User Style memory whose number was saved to the Performance Memory. If the Style in that User Style memory has a different name than the one the RA-800 expects, the display will respond with a message similar to the following:



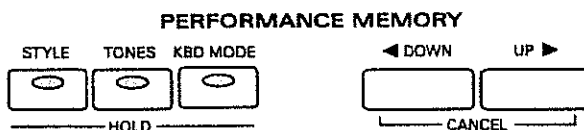
The Style name and User Style memory number may vary, of course, but you can now press Part Select [M.DRUMS] to load the missing Style to the specified memory. If the disk in the disk drive contains the Style the RA-800 is looking for, it will be loaded. If not, the display responds with:



Here, you can either select Retry if you are certain the Style in question is on the disk you inserted into the drive, or insert another disk and press Retry. Alternatively, you can Exit (Part Select [UPPER2]) to ignore the warning and return to the previous display page.

Note: On the previous display page you can also press Part Select [UPPER2] if you do not want to load the missing Style.

Selecting a Performance Memory using the ◀DOWN/UP▶ buttons



The following method is especially useful if you programmed two or more Performance Memories for a song or if the Performance Memory sequence corresponds exactly to the song sequence you are about to play (i.e. settings of the first song or song part in memory A11, settings of the second song or song part in A12, etc.). Pressing ◀ or ▶ immediately selects the following or preceding Performance Memory so that you don't have to worry about pressing the right [GROUP] and number buttons.

Button	Meaning
▶	Selects the following Performance Memory (for example A13 if you selected A12 before pressing this button).
◀	Selects the preceding Performance Memory (for example A11 if you selected A12 before pressing this button).

Note: If you press ▶ after selecting A88, your RA-800 will call up B11. Like wise, if you press ◀ after selecting B11, your RA-800 will call up A88, and so on.

Note: Higher Performance Memory numbers can also be selected using the footswitch connected to the FOOT SWITCH jack on the rear panel. In that case, the footswitch effectively duplicates the function of the ▶ button.

Selectively loading Performance Memory settings (Performance Memory Hold)

The RA-800 is equipped with a function that works more or less the same way as Resume for Performance Memory 00 (see above). This function is called Performance Memory Hold and applies to the "regular" (i.e. programmable) Performance Memories.

Performance Memory Hold allows you to keep certain settings of the previous Performance Memory while selecting another Performance Memory. Selectively loading Performance Memory settings allows you to quickly assign other Tones to the Realtime and/or Arranger parts without loading the Style parameters contained in the new Performance Memory, for example.

Let's have a look at the possibilities. The desired Performance Memory Hold mode can be set using dedicated buttons on the front panel.

Button	Meaning
[STYLE]	Press this button (indicator lights) to load all Performance Memory settings except those related to the Arranger (Style and Division).
[TONES]	Press this button (indicator lights) to load all Performance Memory settings except Tone selection for the Realtime, Arranger, and Song parts.
[KBD MODE]	Press this button (indicator lights) to load all settings except the Assign (W Left, Split, W Right, etc.) and Arranger Chord settings (Standard, Piano Style, Left, Right, etc.).

Pressing a Performance Memory Hold button without selecting a Performance Memory afterwards has no effect. Only when you select another Performance Memory will the selected data filter (because that is what Performance Memory Hold is) start working. In this case, *Hold* is thus taken to mean “keep the settings of the previously selected Performance Memory”. To load all settings of the new Performance Memory, press the Performance Memory Hold button whose indicator lights (i.e. all indicators must be off).

7 Chord Sequencer

The Chord Sequencer of your RA-800 is a very powerful tool that allows you to record a chord sequence to be repeated several times while you concentrate on the melody or solo, or to prepare the accompaniment of an entire song before recording it with the Recorder. A Chord Sequence is a series of instructions telling the Arranger when to play other chords. Some musicians refer to a Chord Sequence as "the changes" of a song.

7.1 Recording the accompaniment of an entire song

The RA-800's Chord Sequencer allows you to record the accompaniment of an entire song from start to finish. You could (and probably should) use this technique to prepare a recording using the Recorder. That way, you don't have to worry about selecting Styles, divisions, and so on while playing the melody.

- (1) Select the Style, the division, and the level (Advanced or Basic) of the Music Style you want to use. (Alternatively, you can load a Performance Memory.)
- (2) Set the tempo if you do not want to use the preset Style tempo.
If you want to be absolutely sure that the tempo you set will be used, see "Auto Tempo and Tempo Lock". The tempo value you set here will also be recorded.
- (3) Activate the Sync Start function if that is how you want to launch Style playback.
- (4) Press Chord Sequencer [REC ●/STOP ■] (indicator flashes).
- (5) Play the first chord in the chord recognition area or on the NTA channel (see below), or press the [START/STOP] button to manually start Music Style playback and do everything you would do during a normal performance involving Music Styles.
- (6) At the end of the song, press [START/STOP] (Arranger section).
There is no need to press [START/STOP] if you end the song with the Ending or Fade Out function.
- (7) Press the Chord Sequencer [PLAY ►/STOP ■] button (indicator flashes).
- (8) Playback of the Chord sequence can be performed in the same ways as playback of a Music Style. See "Starting a Music Style".

7.2 Two Chord Sequencer modes

The RA-800 is equipped with a function that allows you to choose what should be recorded by the Chord Sequencer. First, you should understand the concept *Note To Arranger*.

NTA (Note To Arranger)

The Arranger responds to note and chord changes you perform in the chord recognition area of the external keyboard. The MIDI note messages that cause the Arranger to switch to another chord are called Note To Arranger (or NOTES used TO feed the ARRANGER). The Note To Arranger notes are precisely the notes the Arranger "reads" to decide which chord should be played next. Any chord change will cause all Arranger parts (except the drum part) to play in another key.

The advantage of the NTA (or Note to Arranger) system is that it is easy on the memory of the Chord Sequencer or an external sequencer because the accompaniment patterns

themselves and all the notes and instructions that go with them are not recorded. Using this feature, however, requires that you select exactly the same Style settings as the ones that were active at the time you recorded the NTA notes – and above all that the NTA notes be sent to an instrument equipped with an Intelligent Arranger, which is clearly the case of the RA-800.

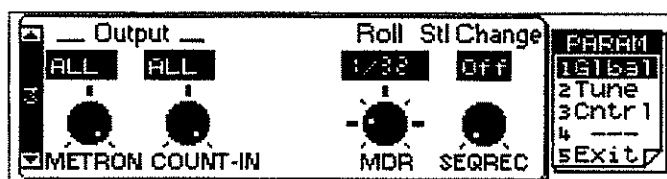
Note: The RA-800's Recorder does not record NTA notes. Instead, it records the entire Style and realtime performance. Playback of a Standard MIDI File recorded with the RA-800's Recorder thus only requires a sequencer and a GM/MS compatible sound module.

Style Change

The RA-800 is equipped with a function that allows you to specify what exactly the Chord Sequencer should record. This function is called Style Change (or Stl Change for short).

Here is what that function does and how to set it:

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Next press [F1] (Glb) to go to the Global page.
- (3) Press [PAGE] ▼ as many times as necessary to call up the following page:



- (4) Use the [UPPER/VARIATION] knob to select On or Off.

Stl Change	Means
On	All actions relating to the Arranger are recorded by the Chord Sequencer. That includes: <ul style="list-style-type: none"> • Style selection • Division changes (i.e. whenever you press [ENDING], [ORIGINAL], etc.) • Tempo settings (including AUTO and LOCK) and changes • Playback volume of the Accompaniment parts (controlled by the Dynamic Arranger function) • All Performance Memory settings relating to the Arranger. • NTA notes
Off	In this case, the Chord Sequencer records only the NTA notes. That way, you are free to choose another Music Style, etc. when playing back the Chord Sequence.

In most cases, you will probably use the On setting to ensure that everything relating to the Arranger is recorded by the Chord Sequencer. That is why On is the default setting. If you only want to record the NTA information, select Off.

- (5) Press F5 (Exit) to return to the Master page.

Tip: Use the Chord Sequencer function as “backing track” for your recordings using the actual Recorder, so that you only need to play the melody at that time.

7.3 “Realtime” chord sequencing

Recording and playing back in realtime means that the Arranger is already running when you start recording your Chord Sequence. But this also requires that you set Stl Change to Off.

- (1) Start playback of the Arranger.
- (2) Press Chord Sequencer [REC ●/STOP ■] a little (one or two beats) ahead of the bar where the RA-800 is to start recording.

The indicator of the [REC ●/STOP ■] button will flash until the next downbeat and then light steadily to indicate that the Chord Sequencer is recording.

- (3) At the end of the chord pattern press [PLAY ►/STOP ■].

At the next downbeat, the Chord Sequencer returns to the beginning of the pattern and plays it back again and again until you press the [PLAY ►/STOP ■] button.

Note: The realtime record feature and Chord Sequencer loop function are only available in Stil Change Off mode.

If you do not want to play back the Chord Sequence right after recording it, press the Chord Sequencer [PLAY ►/STOP ■] button.

Note: The last Chord Sequence you record before switching off your RA-800 will remain in memory until you record another Chord Sequence.

Tip: Chord Sequences can be saved to and loaded from disk. Before recording another Chord Sequence you could save the current one to disk and load it some other time.

7.4 Playing back a Chord Sequence

To play back a Chord Sequence, you have to press the Chord Sequencer [PLAY ►/STOP ■] button (indicator lights) and start Music Style playback in one of the possible ways.

Press [PLAY ►/STOP ■] to stop playing back the Chord Sequence. Note that this does not stop the Arranger.

8 Recorder (GM/GS mode)

The Recorder of your RA-800 is a Standard MIDI File player/recorder, which means that all songs are directly recorded to disk and on one track (SMF format 0). The advantage of having a Standard MIDI File player/recorder rather than a full-fledged sequencer is that you can play back Standard MIDI files without having to (convert-) load them into the internal memory.

Furthermore, the Chord Sequencer allows you to prepare the accompaniment to such an extent that you can concentrate on the solo parts without having to worry about pressing buttons and selecting Styles.

The RA-800's Recorder reads GM/GS compatible Standard MIDI files and Roland i[®] files. Roland i[®] is a proprietary Roland song format with set part-to-track assignments for educational purposes.

Note: You may be confused by the words "song" and "Standard MIDI File" we use in this chapter. There is absolutely no difference because the Recorder songs are saved to disk as GM/GS compatible Standard MIDI Files. Thus, all playback functions explained below also apply to commercially available Standard MIDI Files.

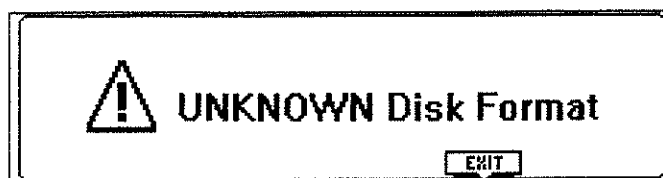
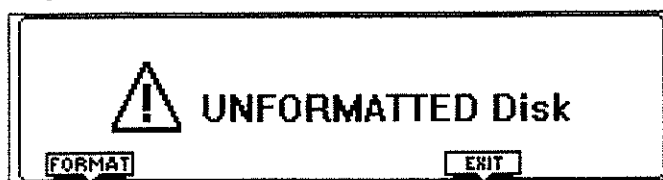
8.1 How to record a song

Formatting a disk

Before using the RA-800's Recorder, you need to prepare a floppy disk because the songs are directly written to disk. You are free to use 2DD or 2HD disk. Please do not use the cheapest disks available unless you are absolutely sure that they are reliable. It would be a pity to lose a great recording because the disk you recorded it to has become unreadable.

If the floppy you are about to use is IBM PC formatted, there is no need to format it, though disk access is faster with RA-800 formatted disks. Otherwise proceed as follows:

- (1) Insert the disk into the disk drive. If it is not yet formatted or formatted for a computer or sequencer other than the RA-800 (or an IBM PC or compatible computer), the display will respond with one of the following messages:



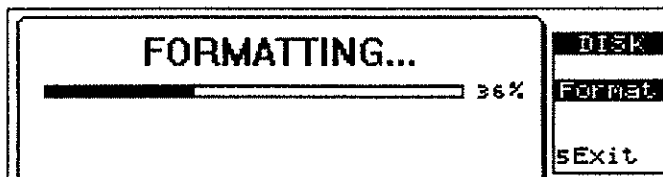
In the first case (Unformatted Disk) you are given two options: you can either press the Part Select [M.DRUMS] button to format the disk or hit the Part Select button that functions as Exit button to leave this display page without formatting the disk.

In the second case (Unknown Disk Format) you can only leave this display page (Exit). Remove the disk from the drive and insert another one. If, however, you are sure that the "Unknown" disk contains no material you want to keep, you can format it using the

Format function: press [F5] (Midi) on the Master page, hold down [SHIFT] while pressing [F4] (Format), and follow the instructions that appear on the display.

For now, we'll assume that your disk is not formatted (Unformatted Disk).

- (2) Press Part Select [M.DRUMS] to format the disk. The RA-800 will start formatting the disk and the display will read:



You can exit this display page without interrupting the formatting process by pressing [F5] (Exit). That allows you to do something else while the RA-800 is formatting. While the RA-800 is formatting in the background, the message FORMATTING will appear in the right-hand corner of the display page you exit to.

8.2 Before recording

Though you can record without using the Arranger, that is probably not what you want to do. Here are a few things you should do before starting to record:

- (1) First record the Chord Sequence if you'd rather not control the Arranger in Realtime.
- (2) Stop playback of the current Style.
- (3) Assign the desired Tones to the Realtime parts you want to use for recording (or, in multiple channel control mode, send program change messages on the respective MIDI channels).
- (4) Select the desired Keyboard Mode.
- (5) Select the desired Arranger Chord mode.

Steps 6 and 7 are only necessary if you do not want to use your Chord Sequence as backing track.

- (6) Select the Style, the division etc. you want to use.

OR:

Hit the [PLAY ►/STOP ■] button of the Chord Sequencer (indicator flashes).

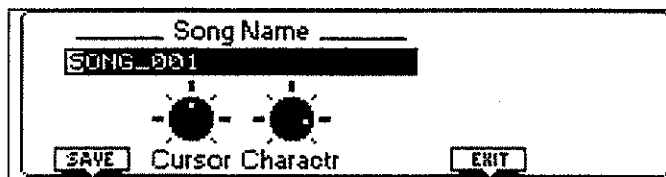
- (7) Press [SYNCHRO START] (indicator lights).

Note: Instead of going through all these steps (except for hitting the CHORD SEQUENCER'S [PLAY ►/STOP ■] button), you can also select the Performance Memory that contains all the settings you need for the song you are about to record.

8.3 You're on...

- (8) Press the [REC ●] button of the Recorder section.
- (9) Press the [START/STOP] button (Arranger section) or play one note in the chord recognition area of the keyboard (if you activated the Synchro START function).
- (10) Start playing.
- (11) At the end of the song, press [START/STOP] again to stop recording.

The display now asks you whether, and under which name, you want to save your song:



Note: If you did not like your recording, press the [UPPER1] button to exit without saving and go back to step 8.

- (12) Let's assume that you are pleased with what you recorded and now want to save it to disk. The wisest would be to specify the name of the song before saving it.

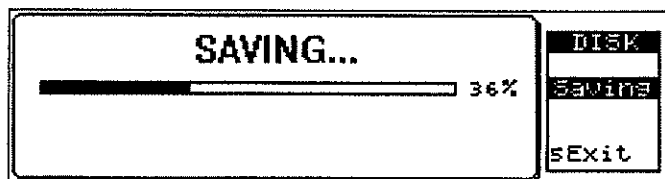
Song name

You could save this song with the current default name (SONG_001). A proper name, though, will help you identify the song file at all times. We therefore suggest you take the time to specify a meaningful name.

- (13) Use the [ACCOMP/GROUP] knob to move the cursor.
 (14) Using the [BASS/BANK] knob select a character for the position indicated by the cursor.
 (15) Move the cursor to the second position, specify a character, and so on.

For MS-DOS® compatibility reasons, only the first eight characters will be saved to disk. In other words, the song names *ANDILOVEHER* and *ANDILOVERHERSO* will both be converted to *ANDILOVE*. You cannot use the same name twice on the same disk, though, which is why you should try to use meaningful abbreviations.

- (16) Press Part Select [M.DRUMS] to save your song to disk. The display will respond with:



Again, you do not have to wait until the file is saved to disk. Just hit [F5] (Exit) to jump to the Master page. The RA-800 will go on saving the file in the background (indicated by the SAVING message in the right hand corner of the page you jump to).

8.4 Song playback

Playing back a Standard MIDI File song requires that you insert a disk containing song files into the disk drive. Though the drive will spin up, the display does not automatically show you the contents of the disk you inserted. We did this to allow you to change disks while playing on the RA-800 using the Arranger. Recorder song playback indeed transforms the RA-800 into a GM/GS sound module, thereby deactivating the Arranger section of your instrument. To avoid accidental mode changes while you are performing on stage, the GM/GS mode will only be selected when you start playback or press the [GM/GS MODE] button. Just remember that the Recorder is ready to play back the songs on disk as soon as you want it to.

The Realtime parts remain active in Recorder mode and you can mute any part of the song you are playing back. That way, you can also use Standard MIDI Files as backing tracks.

- (1) Simultaneously press Performance Memory [CANCEL] ◀▶ to select the factory Performance Memory (FreePanl).

The 00 Free Pnl Performance Memory contains the default settings for all parts and is the only guarantee that the songs on disk will sound exactly the way the recording artist wanted them to.

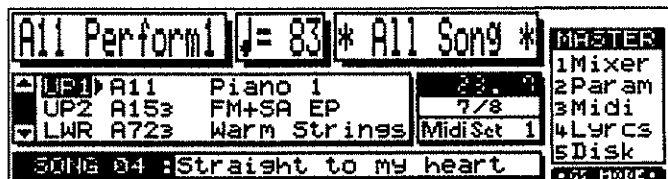
Note, however, that the RA-800 allows you to modify the way Standard MIDI Files are played back and to save these modifications to a Performance Memory. Doing so allows you to “customize” Standard MIDI File playback so that, instead of using the Arranger, you can perform with an accompaniment coming from a Standard MIDI File. We'll tell you how in a minute. Let us first look at how to start song playback.

There are two ways to start song playback:

All Song playback

- (2) Press the Recorder [PLAY ►/STOP ■] button.

Doing so means that the RA-800 will select the *All Song* playback mode, so that all songs on disk will be played back in sequence, and that playback will not stop automatically.



Note: As soon as you hit the Recorder [PLAY ►/STOP ■] button, the indicator of the [GM/GS MODE] button will light to indicate that the Arranger can no longer be used and that the RA-800 now works as a GM/GS compatible sound module.

- (3) To stop playback, press the Recorder [PLAY ►/STOP ■] button again or hit [START/STOP].
- (4) Press [GM/GS MODE] to exit the GM/GS mode and return to the Arranger mode.

Playback of a specific song on disk

Press the [GM/GS MODE] button (indicator lights and all indicators related to the Arranger go off) to select the GM/GS sound module mode.

Note: GM/GS selection is an exception to the multitasking rule. Pressing [GM/GS MODE] will have no effect as long as the Arranger is running. You have to stop the Arranger before being able to select the GM/GS mode. Likewise, you cannot start Arranger playback when the [GM/GS MODE] indicator lights.

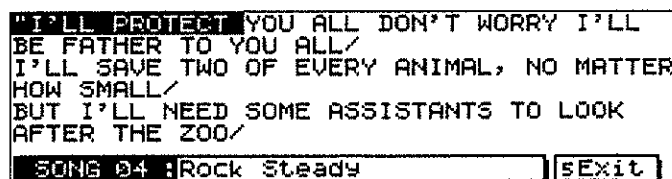
The display now shows the complete name of the first (or any other) song on disk on the bottom line and the MS-DOS® (i.e. the actual file) name in the "Music Style or song address and name" window.

- (2) Use [SONG SELECT] + [◀PREVIOUS] and [NEXT▶] to select the song you want to play back. The GM/GS mode will be selected automatically, so there is no real need to activate it using the [GM/GS MODE] button.
- (3) Press the Recorder [PLAY ►/STOP ■] button to start playback of that song. Playback will continue until the end of that song and then stop. You can stop the Recorder before the end of the song by pressing the [PLAY ►/STOP ■] button again. *Note: The RA-800 also allows you to program song chains. See the Reference Manual for details.*
- (4) Select another song using the [◀PREVIOUS] and [NEXT▶] buttons, or press [GM/GS MODE] to return to the Arranger mode.

8.5 Useful Recorder playback functions

Lyrics function

After selecting the GM/GS mode, the fourth option on the Master page no longer reads UstrSt but [F4] Lyrcs. This function was provided to allow you to read the lyrics of the song the Recorder is playing back in a karaoke fashion: the words to sing will be highlighted at the right time. Note that this function is only available for Standard MIDI Files that contain lyrics. Ask your dealer for details.



To return to the Master page, press [F5] (Exit).

Fast Forward, Rewind, and Reset

To fast forward or rewind within the current song, first press Recorder [PLAY ►/STOP ■] and then [FF ►►] to fast forward, or [◀◀ REW] to rewind. Pressing [FF ►►] takes you to the next measure of the current song, while [◀◀ REW] takes you to the measure before the current one. You can hold down either button to accelerate the fast forward or rewind process. The display will help you locate the measure you need (see the Measure window):



Press [◀ RESET] to jump back to the first measure of the song or to the A measure (see below). Again, you need to stop playback before being able to use the [◀ RESET] button.

Note: These buttons only work in GMIGS mode. You cannot use them while the Arranger mode is active. In other words, you have to press the [GMIGS MODE] button before you can fast forward, rewind, or reset.

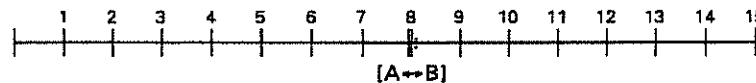
Note: Allow some time for the Recorder to locate the desired measure when fast forwarding. The data have to be read from disk, which takes some time.

Markers and playback loops

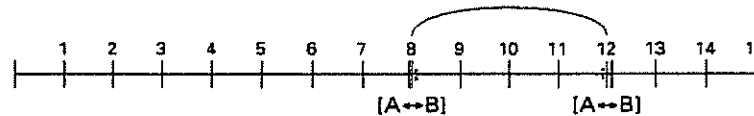
The RA-800 also provides a marker and loop function for you to practice difficult solos or to repeat a given song part.

You can program playback loops during playback or while the Recorder is stopped.

- (1) Press [A↔B] where you want the loop to begin (indicator flashes).



- (2) Fast forward to the measure where you want the loop to end and press [A↔B] again (indicator goes off).



As stated earlier, you can also program loops on the fly. Remember, however, that the Recorder always memorizes the beginning (downbeat) of the next measure.

- (3) To play back the loop you have just programmed, hold down Recorder [◀ RESET] and press [PLAY ►/STOP ■].

At the end of the B measure, the Recorder immediately jumps back to the beginning of measure A.

- (4) To stop playback, press the Recorder [PLAY ►/STOP ■] button.

8.6 Live performances with Standard MIDI File backing (Minus One)

Your RA-800 allows you to mute any given part of the song you are currently playing back. You could use this feature to mute the solo part on disk so that you can play it yourself. This is called Minus One playback (because one part of the original song will not be played back).

But your RA-800 can do more than that: you can solo whichever part you like and mute several parts if you think the song arrangement is a little over the top or to play two parts (i.e. the solo and the chord backing).

All Realtime parts remain active in Recorder (or, should we say, GM/GS) mode. In other words, you are free to use the Upper1, Upper2, Lower, and Manual Bass parts in whichever split or layer combination you like. The Manual Drums part is also available but, as you remember, selecting the M.Drums part means that the other four Realtime parts are temporarily deactivated.

Note: Whenever you start playing back a new song or return to the beginning of the current song (using [I◀ RESET]), all Realtime parts, except Upper1, will be switched off and the RA-800 will select the W Right keyboard mode if you selected 00 FreePani using the CANCEL ◀▶ buttons.

Note: Do not select the 00 Free Pan! Performance Memory if you wish to be in control of the Keyboard Mode and Tone selection. Select any other Performance Memory, set the Realtime parts the way you want to use them and write the settings to a Performance Memory beforehand.

Tone selection works exactly the same as in Arranger (normal RA-800) mode. See "Selecting Tones for the Realtime parts". There is, however a function that allows you to link Tone selection and the parameter settings of the song parts, so that the Realtime parts you use during a Minus One performance will sound exactly the same as the original part on disk (see "Tone Change: Old and New").

Changing the song tempo

You can change the (programmed) song tempo with the [TEMPO] dial. Using the [TEMPO] dial, however, means that the tempo will still change if the song you are playing back contains tempo change messages. Furthermore, every time you jump back to the beginning of the song using [I◀ RESET], the preset song tempo will be set. The button of the Tempo section (AUTO/LOCK), however, can be used in much the same way as in RA-800 (or Arranger) mode:

AUTO Indicator	LOCK indicator	
●	○	The Recorder does not load the preset song tempo when you play back a Standard MIDI File from the beginning. Tempo changes, however, will be executed in a relative way. In other words, if you set the song tempo, any tempo changes included in the song will be executed on the basis of your setting. Example: A given song programmed to playback at $\text{♩} = 100$ contains a message that changes the tempo to $\text{♩} = 120$ (+20%). You set the tempo to $\text{♩} = 80$. The tempo change message will thus cause the tempo to rise to $\text{♩} = 96$.
○	●	The Recorder does not load the preset song tempo when you play back a Standard MIDI File. Tempo changes will not be executed.
○	○	Default GM/GS mode setting. The Recorder loads the preset song tempo whenever you jump back to the beginning of a song using [I◀RESET] or whenever you start playing back a new song. All tempo changes will be executed as programmed.

Note: Every time you select the GM/GS mode by pressing [GM/GS MODE] (indicator lights) or starting song playback (Recorder [PLAY ▶/STOP ■]), the RA-800 automatically sets the Tempo function to Auto (default). When you return to the Arranger mode by pressing [GM/GS MODE] (indicator goes off), the RA-800 sets the Tempo function to Auto On.

Soloing and muting parts on disk

Before deciding which part you want to mute, you have to know which part (MIDI channel/track) plays the part you do not want to hear. Unfortunately, the Standard MIDI File format, specific though it may be about certain aspects, still leaves a considerable amount of liberty for programmers. Finding the part you want to mute is not always easy, though the RA-800 can help you find it.

Generally speaking, the part/MIDI channel assignment of Standard MIDI Files looks like this:

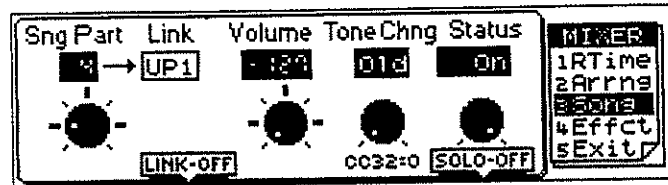
Standard MIDI File part	MIDI channel	RA-800 Realtime part
Drums	10	Manual Drums
Piano	1	—
Bass	2	Manual Bass
Chord Backing	3	Lower
Solo/melody	4	Upper1
Counter-melody	6	Upper2

Complex songs, however, may use all 16 MIDI channels. In such cases, the Solo function may be of invaluable help:

Soloing parts

To find out which part is assigned to which MIDI channel, you can use the solo function. This function mutes all other parts except the current one. Here is how to solo a part:

- (1) On the Master page, press [F1] (Mixer). You can do this while the Recorder is playing back.
- (2) Press [F3] (Song) to go to the following display page:

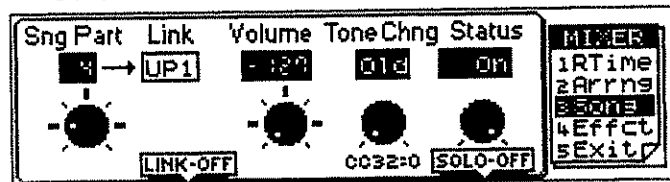


- (3) Press the [UPPER1] button to solo the first song track (Song Part 1).
By doing so, you mute all other Song Parts – and you may end up hearing nothing at all. Be patient, though, play the song once trough and listen. If you hear nothing, that track is not being used. Sometimes, a track starts halfway into the song, which is why you'd better wait before deciding that the current part is not being used.
- (4) Using the [DRUMS/PART] knob, select Song Part 2.
- (5) Again, press [UPPER1] to solo that track.
This time, you will most probably hear the bass line. If you return to the previous track using [DRUMS/PART], you will notice that it is still in solo mode and that you hear the piano line (if available) instead of the bass. Going back to the second Song Part will solo the bass again. In other words, you can solo all parts and then scroll through them using the [DRUMS/PART] knob.
Note: If you return to the Master page after soloing one or more song parts, you will only hear the song part you selected last. It is not possible to solo two or more tracks.
- (6) Go back to step 4 to select and solo the remaining Song Parts.
- (7) Finally, exit the Mixer\Song page by pressing [F5].

Muting Song parts (Status)

The Mixer\Song page also allows you to *mute* Song parts. Obviously, muted Song Parts do not sound during playback.

- (1) Select the Mixer\Song page (see "Soloing parts").



- (2) Select the song part you wish to mute using the [DRUMS/PART] knob.
- (3) Mute that part using the [UPPER/VARIATION] knob (Status= Mute).
Note: The Solo status takes precedence over the Mute status. To mute a soloed part, you must turn off the Solo function (Solo-Off).
- (4) Exit the Mixer\Song page by pressing [F5] (Exit), or go on the next chapter.

Overriding song settings

On the Mixer\Song page (see above), there are two other settings you can change. These settings apply to the song part you select with the [DRUMS/PART] knob.

Song part volume (balance)

This parameter is a relative volume value, allowing you to either increase (positive values) or decrease (negative value) the playback volume of the selected Song part. Relative means that the volume value you set here is added to (or subtracted from) the volume value of that particular track (set by MIDI control change CC7).

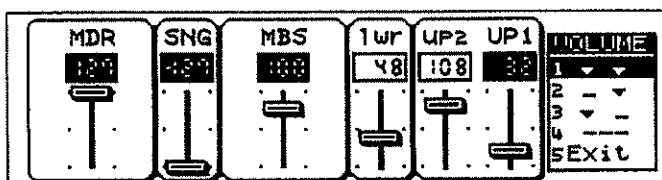
Rotate the [BASS/BANK] knob towards the left to decrease the song part volume (negative values) or towards the right to increase it (positive values).

Tip: The balance of Standard MIDI File parts is usually ok. You could use this Volume parameter for practising purposes, however. Decrease the volume of the part you wish to practice and play it yourself using one of the Realtime parts. Once you have mastered the melody line, etc., you can mute the original part.

Song master volume

Whenever you are experiencing problems with the Realtime part volume settings, there is a useful feature you can use to address those problems. It sometimes happens that the Upper1 (or any other Realtime) part is still too soft when you set its volume to 127. In that case, try reducing the overall song volume. Here is how to:

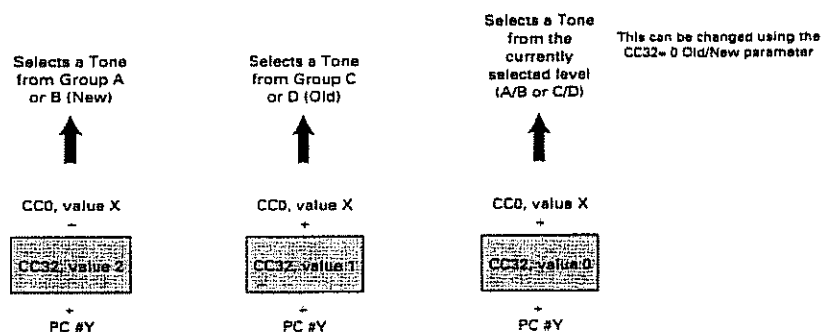
- (1) On the Master page in GM/GS mode, press [VOLUME] to select the Volume mode.



- (2) Use the [ACCOMP/GROUP] knob to set a value between -1 and -127 to reduce the overall song volume.
- (3) Press [F5] to return to the Master page.

Tone Change: Old and New

The Tone Change parameter allows you to specify which Tone (or sound) level can be selected by the currently active Standard MIDI File part. You probably remember that the RA-800 has four Tone Groups: A, B, C, and D, two of which contain new Tones (groups A and B), while groups C and D contain Roland SC-55 sounds (E-70 sounds). Groups C and D are called Old here, while the sounds of Groups A and B are referred to as New. The reason why the Tone level is selectable is that, starting with the SC-88 Sound Canvas module, Roland's GM/GS MIDI bank selection has been revamped to include two control change numbers: CC0 and CC32. True to the SC-55 standard, however, quite a few Standard MIDI Files only contain CC0 bank select messages. The second bank select message (CC32), is used to choose between the new (CC32= 2) and "old" RA-800 Tones (CC32= 1). Whenever CC32 is set to 0 or missing, the RA-800 assumes that you do not wish to leave the current Tone level (A/B or C/D) and thus selects the Tone that corresponds to the program change and bank select CC0 messages of the current level.



The Tone Change parameter on the Mixer/Song page allows you to override this default setting and to specify that the RA-800 should select its own Tones (New) or the SC-55 Tone level (Old).

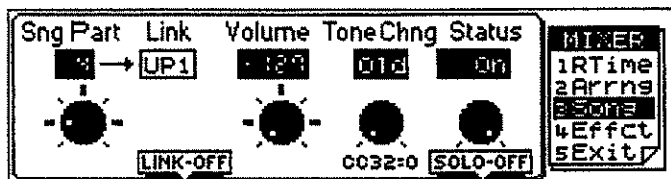
Note: This only works if the Standard MIDI File you play back using the Recorder contains no CC32 message or a CC32 message whose value is set to 0. The CC32= 0 prompt should therefore be interpreted as "what do I (= RA-800) do when control change #32 is set to 0 or missing?"

Use the [LOWER/NUMBER] knob to select Old or New.

Link

The Link parameter on the Mixer\Song page is used to specify whether (Link On) or not (Link Off) the corresponding Realtime part (Upper1, Upper2, Lower, Manual Bass, or Manual Drums) will select the same settings as the song part it is assigned to.

- (1) Select the Mixer\Song page (see "Soloing parts").



- (2) Use the [DRUMS/PART] knob to scroll through the 16 Song Parts and watch the Link box. As soon as you select Song Part 2, the Link box will read MBS, indicating that the Manual Bass part is assigned to song part 2. Note that you can only link song parts that are assigned to Realtime parts of the RA-800.
- (3) Use the [M.BASS] button to select Link On or Link Off.

Note: The song part-to-Realtime part assignment is fixed and in no way connected with the MIDI channel number you assign to a Realtime part in MIDI mode. Thus, Upper1 can only be linked to Song Part 4, etc.

Note: The Link function acts as master switch for the Source\Song switches, such as volume, effect send level etc. (see "Source: your settings or those of the Arranger\Song?").

Note: The Link function also works when the corresponding Song part is muted. In fact, that is when Link is most useful because it allows you to play the muted part yourself using the Tone selection contained in the Standard MIDI File.

9 Easy editing

Editing is a term used to describe any action that changes the settings that are currently in effect. Selecting other Tones for the Realtime parts is already a form of editing.

The settings of all parameters in this chapter can be saved to a Performance Memory and loaded whenever you need them (see "Saving and loading registrations – Performance Memories").

9.1 Part Balance (Volume)

Part balance is the single most important editing operation because the volume of the parts you play determines the sound mix. If a part is too soft, you don't hear it, if it is too loud, the sound image will seem out of balance.

Note: We strongly recommend that you first assign the Tones you need to the parts you intend to play because the character of the sounds you use affects the balance. Thus, a trumpet sound will be perceived louder than a flute because the former contains more harmonics (overtones).

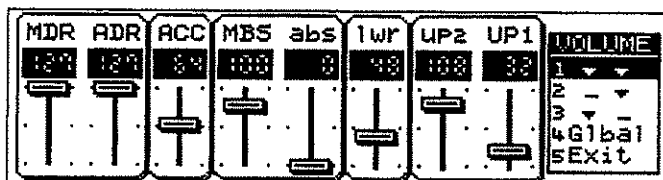
There are two ways to select the RA-800's Volume page:

Use any knob while on the Master page.

OR:

Press the [VOLUME] button to the lower left of the display.

In either case the display now looks like this (in Arranger mode):



Note that when called up using any of the knobs, the Volume page will disappear after a few seconds of inaction. For now, it is probably wiser to press the [VOLUME] button.

Grouped and buss faders

What you see is an eight-channel mixer, which is more than there are Realtime parts and not enough to cover all Realtime and Arranger parts. That is because the ACC fader represents a group of six parts. In other words, this fader controls the volume of the ACC1–ACC6 parts. Let's agree to call all display controls that affect several elements *buss controls*. That way, we can use the term *group* for something else without confusing you.

Note: Buss faders or buttons always indicate the setting of the highest value of that buss. If the volume of five ACC parts is set to 60, while the remaining ACC part is set to 79, the ACC buss slider on the Volume page will indicate the value 79. In other words, even though it is a buss master fader, it cannot be set to 127 without setting at least one part of that buss to 127 (unlike on a mixing console).

Let us now modify the volume of the Upper1 Part:

- (1) Rotate the [UPPER/VARIATION] knob and watch the display.

As you see, the volume of the Upper2 part changes by the same amount. If the volume of Upper1 is set to 127, while Upper2 is set to 90 (default) and you then set the Upper1 volume to 90, the volume of Upper2 will drop to 53.

That is because the Upper1 & 2 faders are grouped.

The same is true of the MDR (Manual Drums) and ADR (Accompaniment Drums), and MBS (Manual Bass) and ABS (Accompaniment Bass) faders. You could rotate the [DRUMS/PART] or [BASS/BANK] knob to check this.

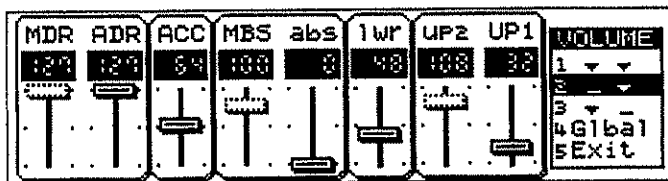
Let us briefly summarize the fader functions on this page:

Fader type	Means	Knob/Fader
Individual	Controls the volume of one Part.	Lower/LWR
Grouped	In ▼▼ mode (see below), one knob modifies the setting of two faders.	Upper/UP1 & UP2 Bass/MBS & ABS Drums/MDR & ADR
Buss	Controls the volume of several faders.	Accomp/ACC

Note: The relative balance between two grouped faders is only maintained as long as you do not decrease (or increase) the volume of the parts in question once either fader has reached the value 0 (or 127). If you increase the volume of a grouped pair or buss beyond the point where one of them has reached 127, only the volume of the part whose volume hasn't yet reached 127 will change. The same is true when you decrease the volume of a grouped pair or buss after one part has reached the value 0. There is no way to restore the relative balance that was in effect before you destroyed it.

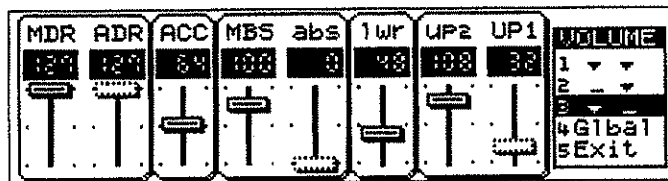
There is a way of selecting only one fader of a group:

Press F2 (_ ▼) to activate only the right fader of a group. The display now looks like this:



Rotating the knobs below the display will only modify the volume of the Upper1, Accompaniment Bass, and Accompaniment Drums parts without affecting the setting of the other fader of that group. Note that the left faders of all groups are now greyed. [F2] (and also [F3]) allows you to ungroup faders.

Press F3 (▼ _) to activate only the left fader of a group.



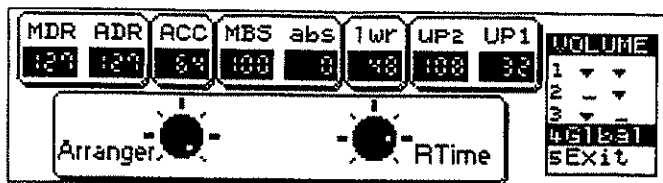
Now the knobs only bear on the Upper2, Manual Bass, and Manual Drums parts.

Section balance

The RA-800 provides two master (display) knobs that allow you to modify the global volume of the Realtime and Arranger sections. Use this feature when you like the part balance you have set but think that either the Realtime or Arranger section is too loud as a whole.

Note that obtaining the right balance is not always a matter of increasing the volume of one section. In many instances decreasing the volume of the part or section that is too loud with respect to the others, is more effective.

- (1) Return to the Master page by pressing [F5] (Exit).
- (2) Press [VOLUME] to the lower left of the display (indicator lights).
- (3) Press [F4] (G1ba1) to call up the following page:



Here, you can modify the volume of the Realtime (Upper1, Upper2, Lower, M.Bass, M.Drums) and Arranger (A.Bass, A.Drums, Accompaniment 1-6) sections.

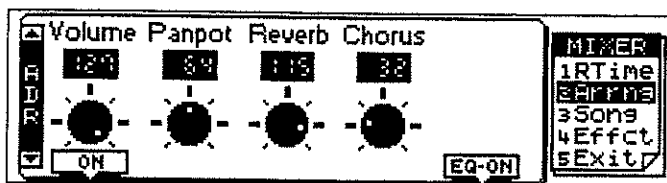
- (4) Use the [ACCOMP/GROUP] knob to modify the volume of the Arranger section, or the [LOWER/NUMBER] knob to modify the volume of the Realtime (RTIME) section.

Note: Again, the relative balance of the individual parts that make up a section will be changed when you decrease the Global volume once one of the parts of that section has reached the value 0. The same is true when you continue increasing the volume once one of the parts reaches 127. We strongly advise you to stick to the graphic volume button to avoid rotating it beyond the point where it reaches the minimum (0) or maximum (127) value. Though perfectly possible, doing so changes the balance of the affected section.

Mixer mode: modifying the volume of the buss members

Let's assume that you selected the B11 Bossa1 Style (just select Group B and press 1, and 1 again) and find that the nylon string guitar of the Basic/Original division is a bit too prominent in this style. Start playback of the B11 Bossa1 Style and play a chord in the chord recognition area.

- (1) On the Master page, press [F1] (Mixer) to select the Mixer mode.
- (2) Press [F2] (Arrng) to select the Arranger Mixer page.



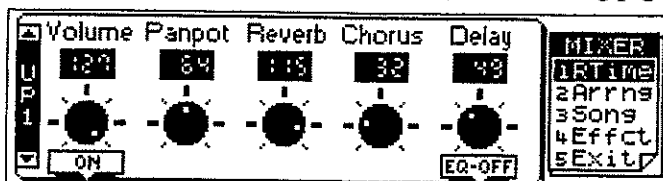
- (3) Press the [PAGE] ▲▼ buttons until the page scroll bar on the left reads ACC2.
- (4) Rotate the [DRUMS/PART] knob (assigned to Volume) to the left to decrease the volume of the guitar. In the same way, you could now modify the volume of the other ACC parts: select them with the [PAGE] ▲▼ buttons and use the [DRUMS/PART] knob to modify the volume setting.

Muting parts

On the Mixer page you can press Part Select [M.DRUMS] to mute the selected part, in which case the On prompt below the display knob will read Off, while the part name in the scroll bar will be displayed in lower case letters (e.g. acc2).

- (1) Press [F1] (RTIME) or [F2] (Arrng), depending on whether you wish to mute a Realtime or Arranger part.

Let's mute the Upper1 part here, so press [F1] to call up the following page:



- (2) If necessary, use the [PAGE] ▲▼ buttons to select the display page corresponding to the part you wish to mute.
Select the UP1 page.

- (3) Press the Part Select [M.DRUMS] button to select Off.
- (4) Press [F5] (Exit) to return to the Master page.

Panpot (stereo position)

The RA-800 allows you to specify the pan setting of every part individually. One sensible way of using the Panpot parameter could be to move the Upper1 part to the left output, while the Upper2 part is moved to right output. If you then layer Upper1 and Upper2 (by selecting either SPLIT or W RIGHT, as well as [UPPER1] and [UPPER2]), the Upper1 sound will come from the left speaker, while that of the Upper2 part will come from the right speaker.

Here is how to specify the Panpot setting of a part:

- (1) On the Master page, press [F1] (Mixer) to call up the Mixer page.
- (2) Select the part group (Realtime or Arranger) by pressing either [F1] (RTIME) or [F2] (Arrng).
- (3) Select the part whose Pan setting you wish to change by pressing [PAGE] ▲▼.
- (4) Use the [ACCOMP/GROUP] knob to set the desired Pan position.

Set a value between 1 and 63 to move the part further to the left, or 65-127 to move the part further to the right. Note that you can also select Rnd (random), which means that the part will alternate between the left and right channels in a random way. To do so, turn the [ACCOMP/GROUP] knob all the way to the left.

Note: The knobs are velocity sensitive. The faster you turn them, the bigger the change you obtain. A swift turn from left to right thus allows you to jump from Pan 1 to Pan 127. The slower your movement, the smaller the increments/decrements.

- (5) Do not exit the Mixer page because we need it for the following:

9.2 Effects and Equalizer

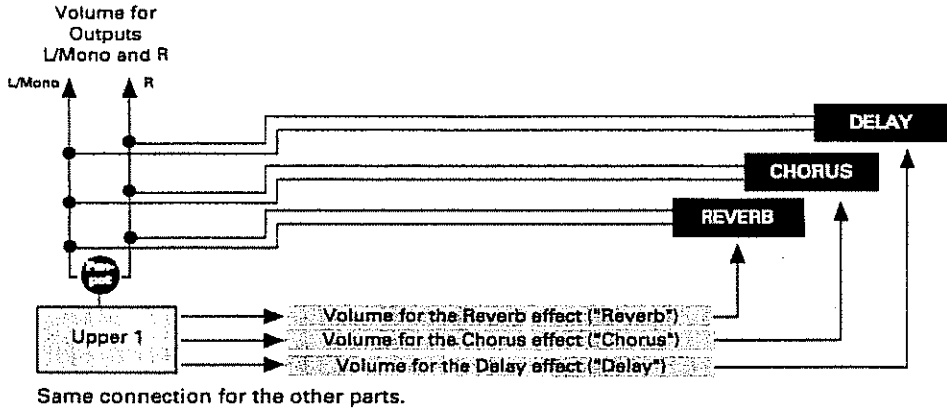
The RA-800 is equipped with three programmable effects: Reverb, Chorus, and Delay. There is also a parametric two-band equalizer you can use.

Note: Any changes to the effects programs apply to all parts as there is only one Reverb, one Chorus, one Delay, and one Equalizer (EQ). What can be specified for every part individually, though, is the amount of effect to be applied (effect depth).

Note: The Delay effect can only be applied to Realtime parts.

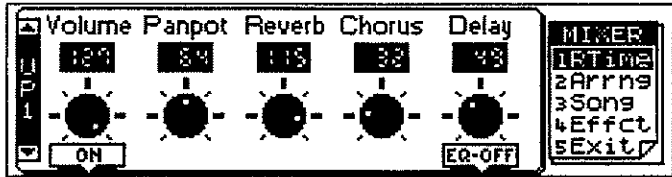
Applying Reverb, Chorus, or Delay to a part

- (1) On the Mixer page -see "Panpot (stereo position)", steps 1-3- select the Part group and Part whose effect send setting you wish to change.
The effect send settings on the Mixer page specify the part volume for the signal that is fed to the Reverb, Chorus, and Delay effect respectively. Setting high Reverb, Chorus, and Delay values on this page means that you effectively increase the effect volume.



It works much the same way as a cathedral: the louder you sing, the more Reverb you hear. In the case of the cathedral, singing louder means that you increase the effect send level, i.e. the level of the signal (your voice) that will be processed by the acoustic environment.

- (2) Use the [BASS/BANK] knob to modify the Reverb send level (Reverb).



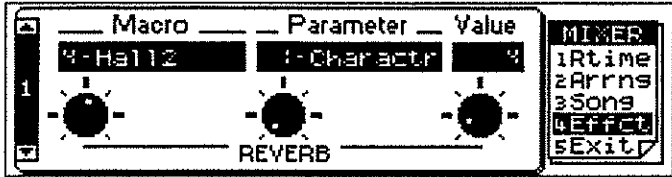
- (3) Use the [LOWER/NUMBER] knob to modify the Chorus send level.
- (4) Use the [UPPER/VARIATION] knob to modify the Delay send level.

Effect settings

The RA-800's effects are editable, thus allowing you to tailor them to your needs. For instance, you may think that the currently selected Reverb type is not quite what you had in mind for the song you are about to play, or that the Chorus effect is not strong enough.

- (1) On the Master page, press [F1] (Mixer).
- (2) Press [F4] (Effect) to select the effects pages.

Note: You may have noticed that upon selecting the Mixer mode, the RA-800's display jumps to the Mixer page you selected last (probably the 2 Arrng page). This page memory function was included to allow you to jump back and forth between display pages of different modes.



- (3) Press [PAGE] ▲▼ to call the display page of the effect you wish to edit. The sequence is as follows:

Effect	Display page
1	Reverb parameters
2	Chorus parameters
3	Delay parameters
4	Equalizer (EQ) parameters

On the first three of these pages (Reverb, Chorus, and Delay), the leftmost knob ([DRUMS/PART]) allows you to choose an effect type. Different types are available for

every effect. Thus, the "Chorus" effect also provides a Flanger, for example. The [BASS/BANK] knob, however, is used to select a parameter whose value can be edited with the [UPPER/VARIATION] knob. See the *Reference Manual* for details.

- (4) Use the [DRUMS/PART] knob to select the type of effect you need.

Note: Every time you select another effect type, the effect parameters (see below) are reset to their default values. In other words, returning to a previously selected effect type after realizing that the first type was probably the best will not restore any effect parameter values you may have edited.

- (5) Rotate the [BASS/BANK] knob to select an effect parameter.

See in the *Reference Manual* for details about the effect parameters.

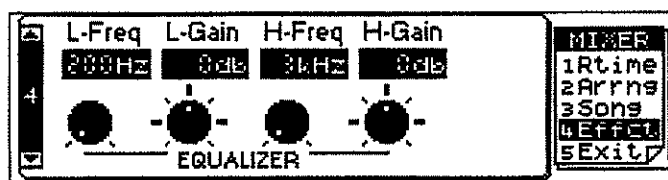
- (6) Using the [UPPER/VARIATION] knob, set the value of the parameter you selected in step 5.

Note: Please bear in mind that any changes you make here apply to all parts that use the effect. Therefore always check what the settings sound like when you play other parts.

Tip: The RA-800 has a dedicated Delay effect, so do not to choose a similar type for either the Reverb or Chorus effect (Delay, Pan-Delay or SDelay, SDelayFb). That way, you can program globally usable Reverb and Chorus settings, while the Delay can be assigned to the part that you wish to process with an echo effect.

Equalizer

- (1) Press [PAGE] ▼ to call up the following display page.



This is where you can program the two-band equalizer. This equalizer works the same way as the Treble and Bass knobs on an amplifier. It allows you to boost or cut the high and/or low frequencies of the Tones. By boost we mean that the volume of a certain frequency band is increased, while cut means that the volume is decreased. The Low and High frequencies to be boosted or cut are selectable.

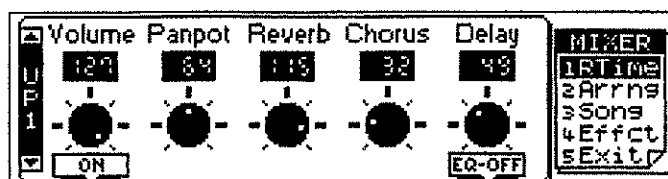
- (2) Rotate the [DRUMS/PART] knob to select the low frequency (L-Freq) to be boosted or cut.
- (3) Using the [ACCOMP/GROUP] knob, enter a positive (boost) or negative value (cut) for the L-Gain parameter.
- (4) Repeat these steps for the high frequency band using the [BASS/BANK] (H-Freq) and [LOWER/NUMBER] (H-Gain) knobs.

Choosing the parts to be processed by the equalizer

When you power on the RA-800, all parts are set to be processed by the equalizer, so that you can use the equalizer as master tone control that modifies the bass and treble response of your instrument.

An equalizer is usually only effective when used to correct the frequency band of one sound that is in the way of other sounds. Therefore, we now need to switch the equalizer off for all parts that don't require tone correction.

- (1) On the Master page, press [F1] (Mixer).
Let us first switch off the equalizer of the Realtime parts.
- (2) Press [F1] (RTime) to jump to the Mixer\RTTime page.



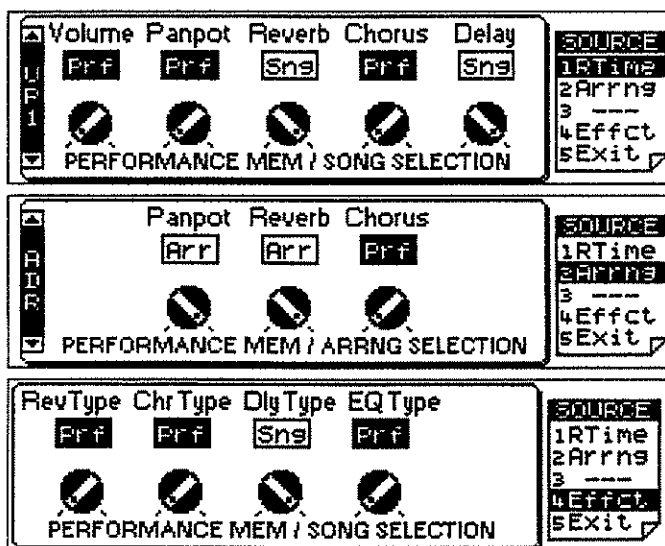
- (3) Select the part whose equalizer status you wish to change using the [PAGE] ▲▼ buttons.
- (4) Press [UPPER1] below the display to select EQ-ON or EQ-OFF.
- (5) Go back to step 3, select the other parts, and specify their equalizer status.
- (6) Next press [F2] (Arrng) to select the Arranger part level and go back to step 3.
- (7) Press F5 (Exit) to leave Mixer mode and return to the Master page.

9.3 Source: your settings or those of the Arranger/Song?

One final aspect to cover in this chapter is the Source function. It allows you to choose whether what you have just edited will be used or not.

Here is how to select the Source pages:

- (1) On the Master page press [F1] (Mixer) to select the Mixer mode.
- (2) Hold down [SHIFT] while pressing [F1] (RTIME), [F2] (Arrng), or [F4] (Effct).



Realtime (RTIME) Source

The options on the first page (RTIME) are Prf and Sng. Here is what they mean:

Prf	The settings you make for the following parameters (see below) remain in effect until you change them again or until you select another Performance Memory. (Prf is short for Performance Memory).
Sng	In this case, the Realtime part settings are affected by control changes included in the Standard MIDI File you are playing back. In other words, when set to Sng, the Panpot setting of the Upper1 part will change as soon as the Standard MIDI File sends a CC10 (Pan) message on MIDI channel 4. There is little difference between Prf and Sng as long as you don't play back a Standard MIDI File.

Note: Selecting Prf does not mean that your settings will be automatically saved to the current Performance Memory. To do so, you must use the Write function before selecting another Performance Memory or before powering off your RA-800.

Note: The Source Delay parameter does not appear on the MDR page.

Use the knobs to modify the Source settings.

The Source parameter of the Realtime parts can be set for the following parameters: **Volume**, **Panpot**, **Reverb** (Send), **Chorus** (Send), and **Delay** (Send). You could, for instance specify that the volume of a part may change in response to MIDI messages

coming from a standard MIDI File (select Volume=Sng), while the other settings must not change (select Prf) in response to the settings coming from the Standard MIDI File.

When you select Sng for one of the above parameters, the Source message of that parameter changes from Prf (white-on-blue) to Sng (blue-on-white). This visual help is consistently used on all display pages.

Set the Volume Source parameter to Sng.

Let us now check whether the RA-800 really is consistent. Hold down [SHIFT] while pressing [F1] to jump to the Mixer/RTIME page and use [PAGE] ▲▼ to select the UP1 page. The Volume value appears blue-on-white.

You can still edit blue-on-white values, but don't be surprised if they suddenly change during Song playback. In such a case, remember the Source function.

Hold down [SHIFT] and press [F2] (Arrng).

Arranger (Arrng) Source

Music Styles not only contain notes (i.e. the drum, bass and accompaniment parts) but also a series of settings that specify how the parts are to be played back. These settings include program change messages, Panpot, volume, etc. Music Styles are accompaniment patterns that are repeated every so often (usually after four bars). The non-note information is located at the beginning of a pattern, so that, when you select Arr, the Mixer page settings of the Arranger parts will be reset as soon as the pattern restarts from bar 1 or whenever you select another division (for example "Fill-In To Variation").

If you do not want your changes to be overwritten by the information contained in a Music Style, select Prf using the knobs. The options are:

Prf	The settings you make for the following parameters on this page remain in effect until you change them again or until you select another Performance Memory. (Prf is short for Performance Memory).
Arr	The settings contained in the Music Styles will override your own settings or those of the Performance Memory you selected.

Effect Source

This Source page allows you to specify whether or not the effect parameters are to change in response to MIDI messages coming from the Standard MIDI Files you play back using the internal Recorder.

Prf	The effect settings will be the ones you set or the ones of the Performance Memory you load.
Sng	The effect settings (Macro and Parameter) change in response to MIDI messages contained in the Standard MIDI File you are playing back.

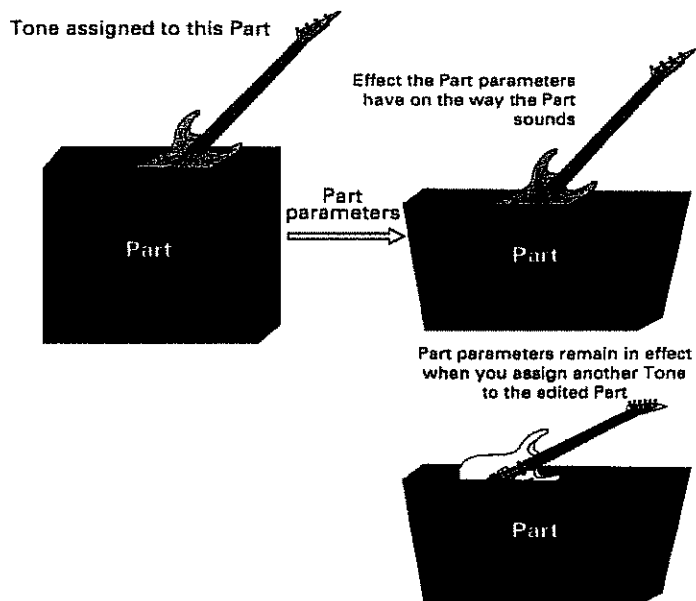
Note: The Source parameter settings on all three pages (RTIME, Arrng, and Effect) have no effect on the reception of MIDI control change messages via one of the RA-800's MIDI IN ports. In other words, when you set the Source parameters to Prf, the volume, pan, effect, etc. parameters can still be changed via MIDI (i.e. when you modify the volume on your controller or, in the case of a Master Keyboard, transmit control change messages to the RA-800). However, the RA-800 is also equipped with MIDI filters that allow you to filter out certain messages received via MIDI IN.

10 Part editing

Your RA-800 allows you to edit certain parameters that affect the way a part sounds when you play it. These parameters will help you “customize” the parts by adjusting their brilliance, their modulation speed (Vibrato Rate), and so on.

Please bear in mind that the parameters discussed in this chapter always apply to parts (Upper1, Upper2, Lower, etc.). Assigning another Tone to a part does not reset the part parameters discussed below. In other words, if you modify the envelope of the piano sound assigned to the Upper1 part, you might be inclined to think that you have changed the envelope of the piano Tone and that selecting another Tone for Upper1 will load other envelope settings. Though that is partly correct, the part parameter settings are added to the settings of the Tone you assign to a part.

Parts are in fact containers in which you can “put” a Tone and whose sound can be modified using the parameters described below. That is why the parameters discussed below are called Part parameters rather than Tone parameters:



Note: All Part parameters are relative parameters that will be added to or subtracted from the preset Tone parameter values. That is why you can specify both positive (“more”) and negative (“less”) values.

10.1 Editing the Part parameters

Like most other parameters, you can edit the Part parameters via the display using the display controls:

- (1) On the Master page, press the [TONE] button at the lower left of the display.
- (2) Press [F4] (Edit) to select the Tone\Edit page.



- (3) Rotate the [DRUMS/PART] knob to select the part you wish to edit.
Note: You can only edit the following Realtime parts: Upper1, Upper2, Lower, Manual Bass.
- (4) Use the [ACCOMP/GROUP] knob (Parameter) to select the parameter (see below) whose value you want to modify.
- (5) Use the knob assigned to VALUE to specify the value of the selected parameter.
- (6) Continue with step 3 to select another Part for editing.

Here are the Part parameters you can edit:

Modulation (Vibrato)

Vibrato is an effect created by modulating the pitch. Applying vibrato makes the sound more expressive. Pitch modulation adds a pleasant "wobble" to the notes you play. Use the following three parameters if you think the part in question has too much (or could use a little more) vibrato.

Vibrato Rate [-64~+63]

This parameter adjusts the speed of the pitch modulation. Positive (+) settings make the preset pitch modulation faster, and negative (-) settings make it slower.

Vibrato Depth [-64~+63]

This parameter adjusts the intensity of the pitch modulation. Positive (+) settings mean that the "wobble" becomes more prominent, while negative (-) settings make it shallower.

Vibrato Delay [64~+63]

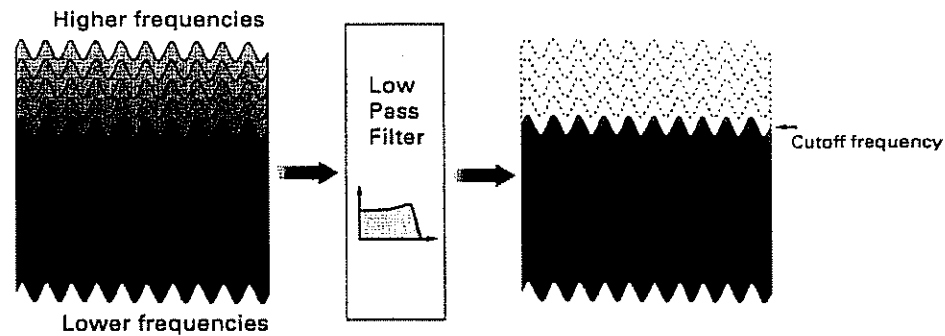
This parameter adjusts the time required for the vibrato effect to begin. Positive (+) settings increase the time before vibrato will begin, and negative settings shorten the time.

Timbre (Filter)

By modifying the filter settings, you can control the timbre (tone) of the sound. The RA-800 uses Low Pass Filters (LPF) that allow only frequencies lower than the specified frequency to pass. The frequency where the filter starts "cutting off" harmonics (or overtones) is called the Cutoff Frequency. By modifying the setting of the Cutoff Frequency you can make the sound brighter or darker. The Cutoff Frequency can change over time, controlled by the "envelope". By adjusting the filter and envelope settings, you can create sounds that have movement and expression.

TVF Cutoff [-63~+63]

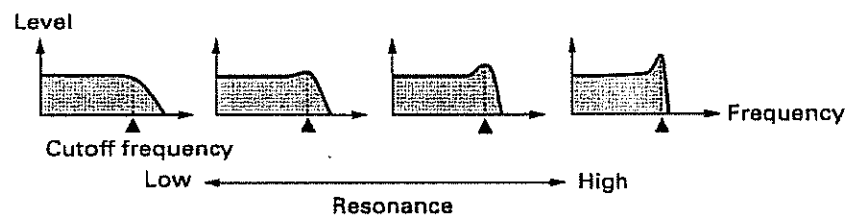
Positive Cutoff Freq settings mean that more overtones will be allowed to pass, so that the sound becomes brighter. The further this value is set in the negative direction, the fewer overtones will be allowed to pass, and the sound will become softer (darker).



Note: For some sounds, positive (+)Cutoff Freq settings will cause no noticeable change because the preprogrammed Cutoff Freq parameter is already set to its maximum value.

TVF Resonance [-64~+63]

This is a parameter one invariably associates with a synthesizer. When the Resonance value is increased, the overtones in the area of the cutoff frequency will be emphasized, creating a sound with a strong character.



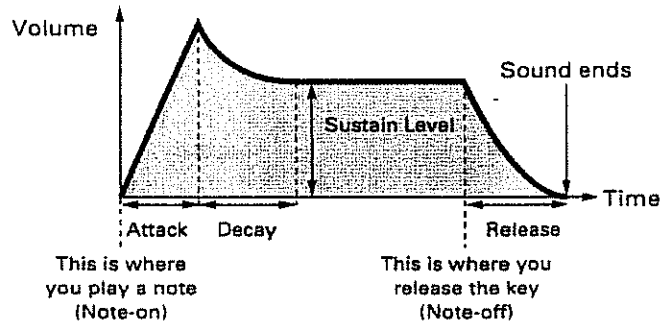
Tip: The Resonance parameter can be used to reduce the volume of a sound's low frequency content, effectively duplicating the Bass control of an amplifier. This only works, however, when the Cutoff Freq is relatively high (to avoid an unnatural boost of middle frequencies) and for values between +1 and +15. Higher values lead to a noticeable Resonance effect.

Note: For some sounds, negative (-) settings of Resonance will cause no noticeable change in the sound.

Envelope

The volume of an instrument changes with time, from the moment the note begins to sound to when it disappears. This change can be indicated on a graph as shown in the following diagram. The envelope shape is unique to each instrument, and is an important element in how we distinguish sounds we hear. The envelopes of musical instrument sounds can change depending on how the instrument is played. For example if a trumpet is played sharply and strongly, the attack will be quick and the sound will be sharp. But if a trumpet is played lightly and softly, the attack will be softer. In order to adjust the attack of a sound, you can modify the Attack Time of the envelope. By modifying the values of the envelope you can simulate the characteristics of many different instruments.

The envelope parameters affect both the volume (or amplitude) and the filter. If the cutoff frequency has been lowered, it will rise as the envelope rises, and will fall as the envelope falls.



Env Attack [-64~+63]

This parameter adjusts the onset of the sound. Negative values speed up the attack, so that the sound becomes more aggressive.

Env Decay [-64 ~+63]

This parameter adjusts the time over which the sound will fall from the highest point of the attack down to the sustain level.

Note: Percussive sounds usually have a sustain level of 0. Piano and guitar sounds are in this category. Holding the keys for a long time will thus have little effect on the duration of the notes your are playing.

Env Release [-64~+63]

This parameter adjusts the time over which the sound will decay after the note is released until it is no longer heard. The cutoff frequency will also fall according to this setting.

10.2 Another Source switch: Tone Edit

The Tone Edit switch of each part is yet another Source switch that allows you to protect your Part Parameter settings from any parameter (NRPN) changes contained in a Standard MIDI File (for the Realtime parts). Just like for the other Source switches (see, for example, "Who selects the Tones? – Tone Change"), you can select one of two possibilities:

Prf	The Part parameter settings remain in effect until you select another Performance Memory (or until you change them).
Sng	In this case, the Realtime Part Parameters are affected by the settings included in the Standard MIDI File you are playing back. In other words, when you select Sng, Part Parameter settings will change if the Standard MIDI File contains other settings. Note that there is little difference between Prf and Sng as long as you don't play back a Standard MIDI File.

Before showing you how to set the Tone Edit parameter, let us briefly summarize all the Source switches discussed so far. This summary will allow you to locate the relevant sections in this manual – and also give you a clearer idea of the parameters you can protect from "accidental" modification.

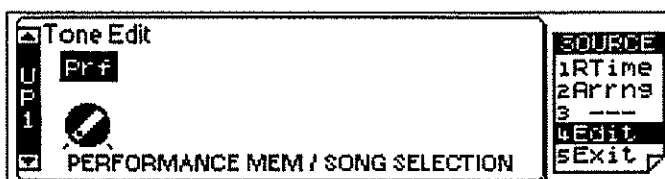
- Tone Change.
- Volume, Panpot, Reverb, Chorus, Delay for the Realtime parts, and Panpot, Reverb, Chorus for the Arranger Parts.

- Effect settings.
- Master Tune, Upper2 Tune, Scale, Upper1/2 Portamento.
- Pitch Bender Range.

At first, these switches may seem confusing because their number is rather impressive. You will find, however, that they allow you to spend less time fine-tuning your Performance Memories, because you only need to program those parameters that should not be changed by the Standard MIDI File or Music Style you are playing back. Select Sng or Arr for parameters that are to change and don't bother programming them.

Here is how to set the Tone Edit switches:

- (1) Press [TONE] to select the Tone mode.
- (2) Hold down [SHIFT] and press [F4] (Edit) to select the Source>Edit (Tone Edit) page.
- (3) Use the [PAGE] ▲▼ buttons to select the Part whose Tone Edit setting you wish to modify.



The name of the part you select appears in the scroll bar.

- (4) Using the leftmost knob, set the Tone Edit switch to Prf or Sng (or Arr).
- (5) Press [F5] (Exit) twice to return to the Master page.

10.3 Upper2 settings

Tuning Upper2: Coarse and Fine

The Upper2 part can be used as full-fledged solo or melody sound, as “intelligent counter-melody”, or to “fatten” the sound of Upper1. Note that the latter only works when you layer Upper2 and Upper1. By layering we mean that every time you press a key in the right half of the keyboard (assuming that you selected the Assign Split mode) or anywhere on the keyboard (Whole Right mode), you trigger two Tones: the one assigned to Upper1 part and the one assigned to Upper2”. See also “Layering and selecting Upper2”.

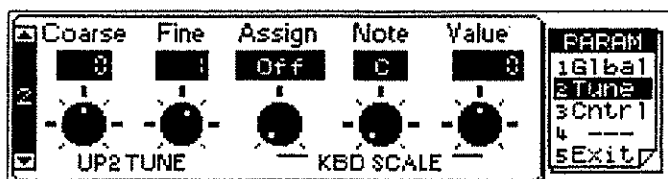
Note: Layering is usually only possible if you control the RA-800 on its Basic Channel.

The following parameters allow you to transpose (Coarse) or to detune (Fine) the Upper2 part relative to the Upper1 part.

You could use *Coarse* to program an interval of a fifth (7 semitones) for Upper2, which is especially effective for brass sounds and guitar power chords. Do not forget to activate both the Upper1 and Upper2 parts when you want to take advantage of the Upper2 Coarse and Fine parameters. If only the Upper2 part is active, the solos you play either sound off (oops, wrong key) or flat.

The *Fine* parameter works well when you assign the same or similar Tones to Upper1 and Upper2. In those cases, Fine creates a kind of natural chorus effect that you could enhance by panning Upper1 to the left and Upper2 to the right (or vice versa).

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F2] (Tune).
- (3) Use [PAGE] ▲▼ to select the second Tune page:



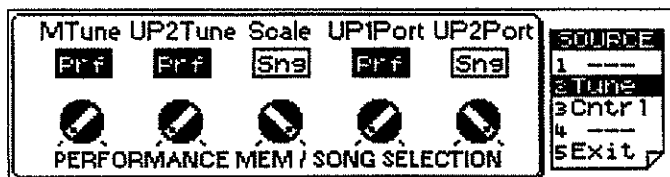
- (4) Use the [DRUMS/PART] knob to specify the Coarse interval (semitones) for Upper2.
- (5) Use the [ACCOMP/GROUP] knob to specify the Fine tune value for Upper2.
Note: If you wish to set the Upper2 Tune Source switch right away, you do not need to exit the ParamTune page. Otherwise...
- (6) ... press [F5] (Exit) to return to the Master page.

Upper2 Tune Source

After specifying the Coarse interval and/or Fine tune value for Upper2, you should ensure that these settings cannot be changed by the Standard MIDI File you play back.

Here is how to set the Source switch for the Upper2 Coarse and Tune parameters:

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
 This is only necessary if you decide to set this switch after quitting the second ParamTune page (see above).
- (2) Hold down [SHIFT] and press [F2] (Tune).



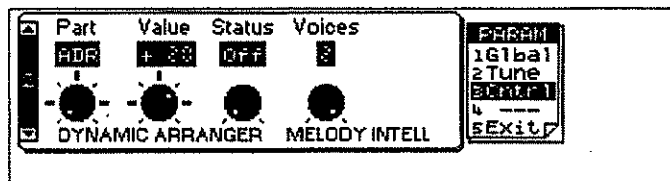
- (3) Use the [ACCOMP/GROUP] knob to select Prf or Sng for UP2Tune.
 Select Prf if you want to protect your Upper2 Tune settings (Coarse and Fine) from any modification caused by the data of the Standard MIDI File your are playing back
- (4) Press [F5] (Exit) to return to the Master page.

Intelligent melodies played by Upper2

You probably remember that the Upper2 part can be used either as Realtime part (in layer or split mode) or as automatic counter-melody part. In the latter case, you have to press [MELODY INTELLIGENCE] so that the Arranger can add a counter-melody to what you are playing using the Upper1 part. The counter-melody (or intelligent melody) is based on the chords you play in the chord recognition area of the keyboard.

The RA-800 is equipped with a parameter that allows you to specify how many counter-melodies (1 or 2) should be added when you activate the [MELODY INTELLIGENCE] function. Here is how to select the number of voices:

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F3] (Cntrl).
- (3) Use [PAGE] ▲▼ to select the second Cntrl page:



- (4) Use the [LOWER/NUMBER] knob to specify the number of voices (1 or 2) to be added by the Melody Intelligence function. These voices will be played by the Upper2 part.
- (5) Press [F5] (Exit) to return to the Master page.

Note: The Melody Intelligence function only works in Arranger mode. You cannot use it in GMIGS mode.

11 Advanced features

This chapter covers parameters that are related to other parameters or functions but whose link may not always be obvious. These are settings you may want to edit once you know how the RA-800 works – and only if you need to fine-tune the factory settings.

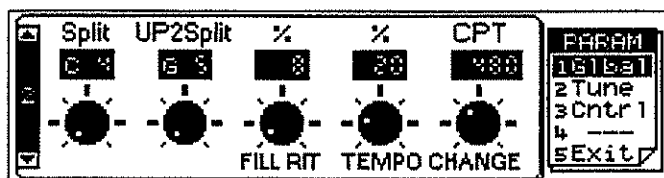
The settings of all parameters in this chapter can be saved to a Performance Memory and loaded whenever you need them (see “Saving and loading registrations – Performance Memories”).

11.1 Settings relating to the Arranger

Fill Rit value

The Fill Rit value applies to the Fill Rit function of the Arranger. It allows you to specify the degree of the ritardando during playback of a fill (To Original or To Variation). The Fill Rit value is only used when the [FILL RIT] indicator is lit.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F1] (Gibal).
- (3) Use the [PAGE] ▲▼ buttons to select the second Param\Gibal page.



- (4) Use the [BASS/BANK] knob to specify the Fill Rit value.
The higher the value, the more pronounced the ritardando of the Fill Rit function will be.
- (5) Press [F5] (Exit) to return to the Master page or go on to the next paragraph.

Rit/Acc value: Tempo Change

The Tempo Change function does more or less the same as Fill Rit, except that it applies to normal playback rather than fills. The corresponding buttons ([RIT]) and [ACC]) are part of the Tempo pad.

Note: The Tempo Change values you specify here apply both to ritardandos (Rit) and accelerandos (Acc).

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F1] (Gibal).
- (3) Use the [PAGE] ▲▼ buttons to select the second Param\Gibal page.
- (4) Use the [LOWER/NUMBER] knob to specify the tempo change ratio. Again, higher values mean that the tempo change will be stronger.
- (5) Use the [UPPER/VARIATION] knob to specify the speed of the tempo change.

To simulate the effect of a band that is gradually slowing down, you should consider higher CPT values.

CPT is short for *Clock Pulse Time*. It refers to the resolution of a crotchet (quarter note, ♩), i.e. the number of steps between one quarter note and the next. The resolution of your RA-800 is ♩ = 120CPT, so that the second quarter note of a bar is located at 120 clocks from the first.

If you want the tempo change to be completed at the end of four beats (or one 4/4 bar), you must specify the value 4 (beats) x 120 (clocks) = 480CPT (default). The next measure will then be played back at the new tempo (faster if you press [ACC], or slower if you press [RIT]).

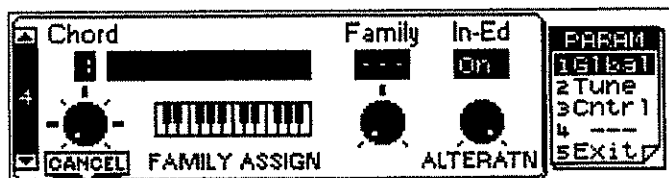
- (6) Press [F5] (Exit) to return to the Master page.

Major, minor or seventh accompaniment? – Chord Family Assign, Alteratn

We told you about there being three complete sets of Style divisions: one for major, one for minor, and one for seventh chords. If you listen very carefully to the internal Styles of your RA-800, you will notice that the accompaniment for minor chords sometimes differs from that for major and seventh chords. That is because these accompaniments can be programmed separately.

The Chord Family Assign function allows you to specify which mode (major, minor or seventh) should be used for the chords you play. For instance, if you'd rather the Arranger used the minor accompaniment for "6" chords, you should use the Chord Family Assign function to assign the "6" chord family (for instance C6, A6 etc.) to the minor accompaniment level.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F1] (Gibal).
- (3) Use the [PAGE] ▲▼ buttons to select the fourth Param\Global page.



- (4) Start by selecting one of the 8 available Chord memories by rotating the [DRUMS/PART] knob. If you haven't yet programmed any assignments, Chord memory 1 will be selected. If all memories are already assigned (which is indicated by the chord name to the right of the memory number), you can erase an existing assignment by pressing [M.DRUMS] (Cancel).
- (5) Play the chord you want to assign to another Family. The name of that chord appears to the right of the chord memory number.
- (6) Use the [LOWER/NUMBER] knob to select the Family –Major (M), Minor (m), or Seventh (7)– for the chord you have just played.

Now suppose you like the *accompaniment* you assigned your chord to, but you find that the Intro and Ending sound odd when you start a song with that chord (for instance C4). Consider the following example: you assigned the C4 chord to the major family and the Intro of the Style you are using contains the following progression:

C→Am→F→G

Starting the Intro with the C4 chord memorized would transform this progression into the following:

C4→Am7→F→G7

Note that the outcome is not really predictable. That is precisely why you can turn the Alteration function off. Doing so allows you to memorize the C4 chord but have the Intro or Ending play the normal progression (e.g. C, Am, F, G), and cause the Arranger to switch to the C4 chord when the Intro/Ending is finished.

- (7) Use the [UPPER/VARIATION] knob to activate (On) or turn off (Off) the Alteration (Alteratn) function.
- (8) Press [F5] (Exit) to return to the Master page.

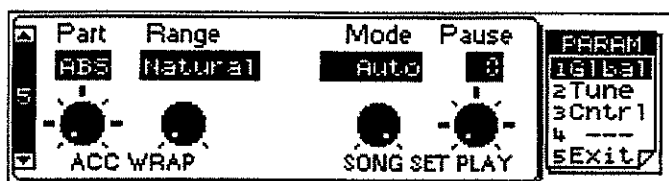
Musical Style playback: Wrap

The Wrap function is used to specify how the bass line and accompaniment parts should be played. If the bass, for instance, is programmed to play ascending scales, some notes may be too high or too low to sound natural in a given situation. Though perfectly possible for the built-in tone generator, playing the scales the way they were programmed affects the quality of your accompaniment.

So far, you may not have noticed the difference because the default setting for the Wrap function is "natural", meaning that all parts are played in their natural range. If set to Natural, the Wrap function transposes all accompaniment notes that are too low (for piccolo etc. sounds) or too high (for bass sounds etc.) one octave up or down. The Wrap point is preset for each Tone and cannot be changed.

The Acc Wrap parameter allows you to activate (Natural) or cut (Full) the Wrap function. In most cases, Natural is probably a sensible setting for Styles. Full is a good choice for recording songs using the User Style function.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F1] (Glb).
- (3) Use the [PAGE] ▲▼ buttons to select the fifth Param\Glb page.



- (4) Use the [DRUMS/PART] knob to select the accompaniment part (ABS, Acc1~Acc6) whose Wrap setting you want to change.
- (5) Use the [ACCOMP/GROUP] knob to specify Natural or Full.

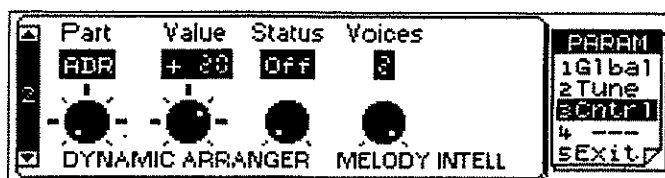
Natural	All notes played by the corresponding part will sound in a "natural" range for the selected Tone, i.e. neither too low nor too high.
Full	All notes of the corresponding part will be played the way you programmed them. Select Full if the chord progression you are playing requires ascending or descending lines or consistent chord voicing (such as when the User Style function is used for sequencing).

- (6) Press [F5] (Exit) to return to the Master page.

Dynamic Arranger: velocity sensitivity of the Arranger parts

The Dynamic Arranger function allows you to vary the volume of the accompaniment parts via the force with which you strike the keys in the chord recognition area. Use the Dynamic Arranger parameter on the Param\Cntrl page to specify the velocity sensitivity of the Arranger parts.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F3] (Cntrl).
- (3) Use the [PAGE] ▲▼ buttons to select the second Param\Cntrl page.



- (4) Select the Arranger part whose velocity sensitivity you wish to change with the [DRUMS/PART] knob.
- (5) Specify the velocity sensitivity Value with the [ACCOMP/GROUP] knob.

You can specify positive and negative sensitivity values. Positive values mean that the volume of the part in question increases when you strike the chord recognition area keys harder, while negative values mean that the volume of the part in question increases as your velocity becomes softer.

Tip: You could use extreme positive/negative accompaniment pairs (i.e. Value +127 and -127) to alternate between those two lines simply by varying your velocity. One part would then only be audible when you strike the keys softly, while the other would only be audible at high velocity values.

Subtler settings (i.e. +20 and -20 for a pair) can also be effective, of course. Set the Value to 0 for those parts whose volume should not be affected by your velocity values.

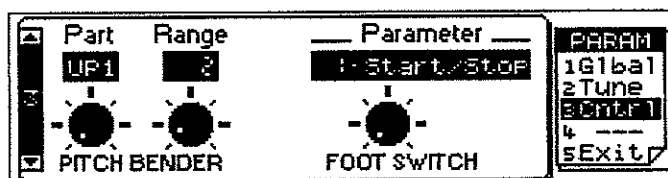
- (6) Use the [LOWER/NUMBER] button to turn the Dynamic Arranger function on or off (Status).
- (7) Press [F5] (Exit) to return to the Master page.

Footswitch function

As stated earlier, you can use an optional footswitch (DP-2, DP-6, or FS-5U) connected to the FOOT SWITCH jack (rear panel) to perform one of several possible functions. See the *Reference Manual* for the available footswitch functions. Since most of the selectable footswitch functions are related to the Arranger, we'll discuss this item here.

The most obvious function for the footswitch is to start and stop Style playback. Another useful function would be to activate and turn off the Inversion function of the Arranger.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F3] (Cntrl) to call up the Param\Cntrl page.
- (3) Select the third page using the [PAGE] ▲▼ buttons:



- (4) Use the [LOWER/NUMBER] knob to select a function for the optional footswitch.
- (5) Press [F5] (Exit) to return to the Master page.

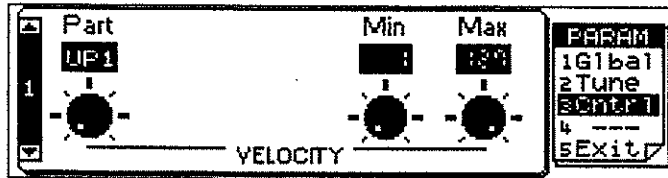
Note: The Footswitch function can be saved to a Performance Memory. Though the footswitch can be programmed to select the next Performance Memory, that Performance Memory may contain another footswitch assignment, so that it is impossible to select the following Performance Memory by foot (because the footswitch is programmed to Start/Stop Recorder playback, for example). You can only assign one function to the footswitch.

11.2 Settings relating to the Realtime parts

Velocity switching (Min and Max)

The following velocity settings are only available for the Realtime parts (Upper1, Upper2, Lower, M.Bass, M.Drums). They are used to specify the velocity sensitivity and the velocity range of the selected part.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F3] (Cntrl).
- (3) Use the [PAGE] ▲▼ buttons to select the first Param\Cntrl page.



- (4) Start by selecting the Realtime part whose velocity settings you wish to change ((DRUMS/PART)). Select UPI.
- (5) The [LOWER/NUMBER] and [UPPER/VARIATION] knobs allow you to specify the smallest (Min) and highest (Max) velocity value with which you can trigger the selected part.
This is probably only useful when applied to the Upper1 and Upper2 parts. *Do not change these values if you have no intention to use a "complementary" part* because, otherwise, you may start wondering why the Lower part, for instance, only sounds at high or low velocity values. Min and Max can be used effectively for the Upper1 and Upper2 parts, though, provided you layer these parts. Consider the following example:

Part	Min	Max	Sound
Upper1	1	85	Mute trumpet
Upper2	86	127	Trumpet

Both parts must be on. The above settings allow you to trigger the Mute Trumpet sound with velocity values between 1 and 85 (low to medium velocity), while any velocity value above 86 will only trigger the Tone assigned to Upper2. In other words, the above settings mean that only one Upper Tone will be audible at any one time.

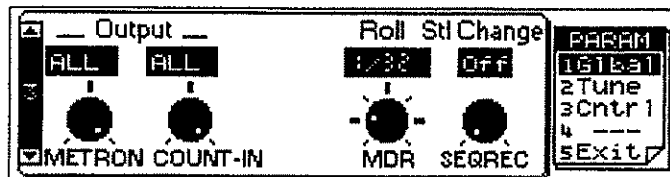
Tip: You do not need to select different sounds. You could assign the same sound to both Upper1 and Upper2 and only vary the cutoff frequency, so that Upper1 is darker, while Upper2 is considerably brighter. This should work well with solo synthesizer sounds.

- (6) Press [F5] (Exit) to return to the Master page.

Roll resolution for the M.Drums part

The Roll parameter specifies the note value of the automatic Roll function that only applies to the Manual Drums (or M.Drums) part.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F1] (Global).
- (3) Use the [PAGE] ▲▼ buttons to select the third Param\Global page.



- (4) Specify the value of the notes to be played by the Roll function using the [LOWER/NUMBER] knob.
Note: The speed of the Roll notes depends on the tempo that is currently displayed in the Tempo window. So "1/32" is probably not a good choice for high tempo values.
- (5) Press [F5] (Exit) to return to the Master page.

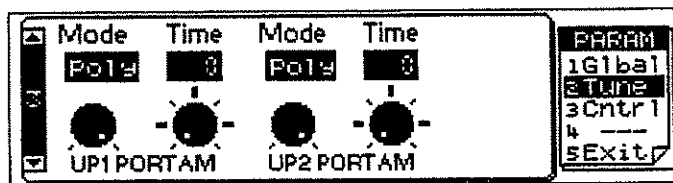
Monophonic/polyphonic, with or without portamento (Upper1 and Upper2)

Mono/Poly

The RA-800 also allows you to set the Upper1 and Upper2 parts to mono(phonic) mode. *Monophonic* means that you can only play one note at a time. You could select the Mono

mode to play a trumpet or woodwind part in a more natural way. *Poly*, on the other hand, means that you can play chords using the selected part.

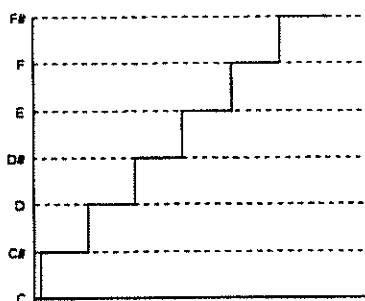
- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F2] (Tune) to select the Parameter/Tune page.
- (3) Use the [PAGE] ▲▼ buttons to select the third Tune page.



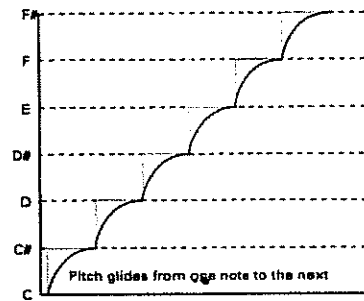
- (4) Use the [DRUMS/PART] or [BASS/BANK] knob to select the Upper1 or Upper2 mode.

Portamento time

Portamento is a realtime effect that produces smoother transitions between the notes you play:



Portamento time= 0
"Rough" pitch changes in semitone steps (normal)



Portamento time> 0
Smooth pitch changes

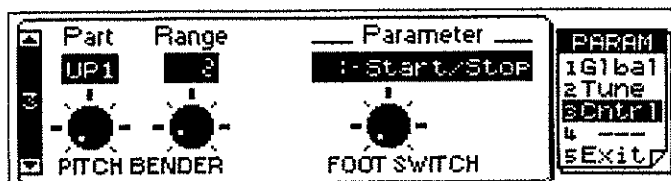
Instead of jumping in semitone steps (as you would expect), the pitch glides from one note to the next whenever the portamento time is higher than 0. The higher the value you set, the slower the glide. This effect is particularly useful for synthesizer or gypsy violin parts.

- (5) To specify the portamento time, rotate the [ACCOMP/GROUP] knob (for Upper1) or the [LOWER/NUMBER] knob (Upper2).
- (6) Press [F5] (Exit) to return to the Master page.

Pitch Bend range

The pitch bend range can be set for each Realtime part individually. In most cases, the factory setting (two semitones) is probably the best choice, but feel free to change the range for bigger or smaller intervals. A fretless bass sound, for instance, may sound more natural with a semitone interval (Range= 1) because that allows you to introduce pitch fluctuations that are small enough to create a pleasant sensation and big enough to simulate smooth glides whenever you need them.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F3] (Cntrl) to call up the Param\Cntrl page.
- (3) Select the third page using the [PAGE] ▲▼ buttons:



- (4) Before setting the pitch bend range for a part, you have to select it using the [DRUMS/PART] knob.

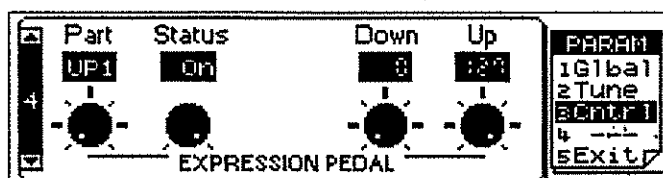
- (5) Specify the interval (Range) using the [ACCOMP/GROUP] knob.
To select an interval of a fifth, set the value "7" (seven semitones). Set Range to "12" for an octave. The Range value applies to both upward and downward bends.
Note: Be sure to specify the same Range for Upper1 and Upper2 if you intend to layer them.
- (6) Press [F5] (Exit) to return to the Master page.

Expression pedal: blending effects or just plain volume

If you connect an expression pedal (EV-5 or EV-10) to the EXPRESSION PEDAL jack of your RA-800, you can change the volume of the selected (Status= On) parts by foot. The default setting of your instrument is that all parts are affected by the position of the optional expression pedal.

The expression pedal can also be used for some clever effects. Instead of alternating between Upper1 and Upper2 by varying your velocity, which requires a considerable amount of "striking precision", you could invert Upper2's response to the expression pedal, so that Upper1 does not sound when Upper2 does and vice versa:

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F3] (Cntrl).
- (3) Use the [PAGE] ▲▼ buttons to select the fourth Param\Cntrl page.



- (4) Select the part whose expression settings you wish to change using the [DRUMS/PART] knob.
- (5) Use the [ACCOMP/GROUP] knob to specify whether (Status On) or not (Status Off) that part is to respond to expression messages.

Select "Off" for all parts that should not respond to the expression pedal.

- (6) Using the [LOWER/NUMBER] and [UPPER/VARIATION] knobs, specify the volume to be obtained when the expression pedal is depressed (Down) or closed (Up).

You do not need to specify "0" for the Up position. Selecting any other value will reduce the volume of that part up to the "Up" value. Likewise, you do not need to specify "127" as maximum value.

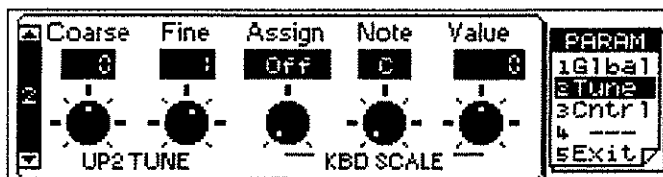
Note: The Down and Up values represent MIDI Expression (CC11) values.

- (7) Press [F5] (Exit) to return to the Master page.

Playing in other scales: Keyboard Scale

The following parameter allows you to modify the temperament of several or all parts to another tuning, so that you could play Arabic scales etc.

- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Press [F2] (Tune) to select the Parameter\Tune page.
- (3) Press [PAGE] ▲▼ to select the second Param\Tune page.



The first Kbd Scale parameter, *Assign*, allows you to activate (UP1-2, All) or deactivate (Off) the alternative tuning.

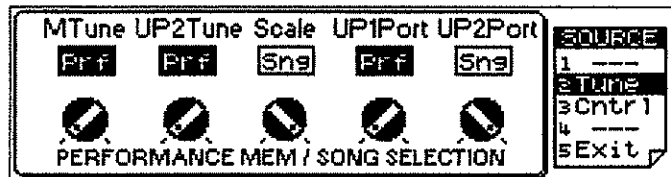
- (4) Use the [BASS/BANK] knob to select UP1-2, All, or Off for the Assign parameter.
If you want to set the tuning now, select UP1-2 (only Upper1 and Upper2) or All (all Realtime and Arranger parts) because otherwise you won't hear the changes you make.
- (5) Use the [LOWER/NUMBER] knob to select the note whose tuning you are about to change.
You will notice that every note can only be selected once. That is because the *Value* you specify for the note you select (see below) applies to all notes of the same name. In other words, if you change the tuning of the C, that value will be added to or subtracted from all Cs (C1, C2, C3, etc.).
- (6) Use the [UPPER/VARIATION] knob to specify the tuning Value. The value "0" represents the original (equal) tuning.
Negative values mean that the note in question will be lower than for equal temperament, while positive values raise the note's pitch. The value range is -128--+126 cent. Since 100 cent equal one semitone, you can lower or raise the pitch up to a little more than a semitone.
- (7) Repeat steps 5 and 6 to tune the other notes of the scale (C#, D, D#, E, etc.).
- (8) Press [F5] (Exit) to return to the Master page.

Source switches

After setting all or some of the parameters described in this chapter, you may want to modify the setting of the respective Source switch. See "Another Source switch: Tone Edit" for more information about Source switches and how to set them.

Here is how to select the Source\Tune page:

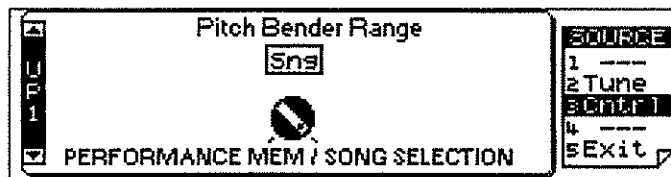
- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Hold down [SHIFT] and press [F2] (Tune).
- (3) Set the Source switches as required using the corresponding knob.



See "Master Tune".

To select the Source\Cntrl page:

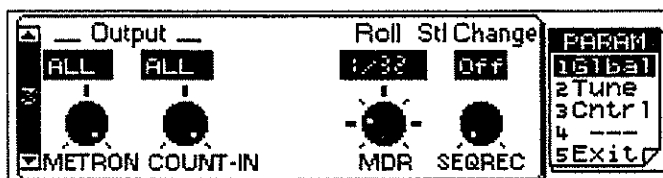
- (1) On the Master page, press [F2] (Param) to select the Parameter mode.
- (2) Hold down [SHIFT] and press [F3].



- (3) Press [F5] (Exit) to return to the Master page.

11.4 Metronome

Your RA-800 is equipped with a metronome function that you can use for programming User Styles, to feed to a pair of headphones for your drummer, or just for practising.

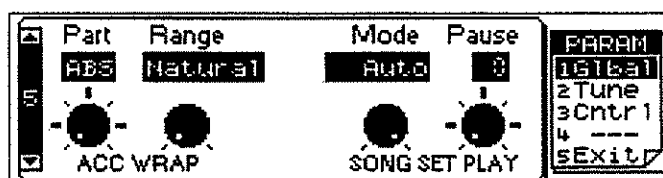


See the reference manual for details about the Metronome if you do not like the factory setting.

11.5 Song Sets

Song sets are another useful feature for performing artists because they allow you to take a break without leaving the audience without music. Song Sets are in fact little sequences that specify the order in which the Standard MIDI Files on a given disk are to be played back. Since you already know what User Style Sets are, you will have little difficulty understanding how to program Song Sets.

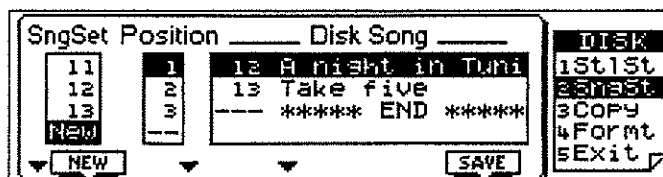
Song Sets can either produce continuous playback of up to 99 songs on disk or be programmed to stop at the end of each songs, which means that you have to start playback of the next song manually.



The Pause function is used to program the blanks between two songs.

Compiling a Song Set

- (1) Insert the disk that contains the songs you wish to combine to a Set into the drive.
Note: Do not use commercial Standard MIDI File disks. You may want to use the Song Copy or Disk Copy function before proceeding.
- (2) On the Master page, press [F5] (Disk).
- (3) Hold down [SHIFT] and press [F2] (SngSt).



The SngSt window displays the number of Song Sets already available on disk. The Position window allows you to program the song sequence, i.e. the order in which the songs are to be played back.

- (4) Press [M.DRUMS] to create a new Song Set.
- (5) Use the [BASS/BANK] knob to select the song on disk that is to be played first (assigned to Position 1).
- (6) Use the [ACCOMP/GROUP] knob to select Position 2.
- (7) Assign a song to this position using the [BASS/BANK] knob.
- (8) Repeat steps 6 and 7 to compile your Song Set.
Select End as last entry. All songs after the End marker will not be included in your Song Set.
- (9) Press [UPPER1] to save your Song Set.

Your Song Set will be saved under the first available number. You cannot name your Song Sets.

- (10) Wait until the OK Save Complete message is displayed and press [F5] (Exit) to return to the Master page.

Playing back a Song Set

To play back a Song Set, insert the disk into the drive and use the [SONG SELECT] + [◀PREVIOUS] buttons to select it (Song Set01~Song Setxx). Press Recorder [PLAY ▶/STOP ■] to start playback of your Song Set.

Before going on to the next chapter, power off your RA-800 and switch it back on again.

12 Programming User Styles

You can program your own accompaniments, or Styles as we have come to call them, on the RA-800. Styles you program do not reside in ROM, which is why we call them User Styles, or Styles created by a user (either you or someone else). After trying all Styles in ROM and possibly also on MSA, MSD, and MSE disks, you may find that no existing accompaniment is suited for the song you want to play and therefore decide to program one yourself.

Note: Since User Style programming does not involve playing chords, you should definitely transmit your note and other MIDI messages on the RA-800's Basic Channel. That way, you won't have to change the transmit channel on your controller to program the various Arranger parts. Furthermore, a keyboard instrument with BENDER/MODULATION lever is highly recommended. User Styles can indeed also contain Pitch Bend and modulation messages – so you need an instrument allowing you to program those MIDI messages.

12.1 Concept

There are two ways to create new Styles:

- By creating new accompaniments from scratch.
- By editing existing Styles, which requires that you copy them to a User Style memory and then alter the settings or notes you do not like.

The latter is much faster than the former because you only need to substitute those parts that, in one way or another, do not “work” for the song you want to play. Programming Styles from scratch is a lot faster than you may think because the RA-800 is equipped with a number of functions that allow you to cut down programming time to the absolute minimum.

Patterns

User Styles and internal Styles are short sequences or *patterns* (usually only four, sometimes eight measures long) you can select in realtime. That is precisely what we showed you in the chapter “Playing with accompaniment – Arranger”. If you have ever worked with a rhythm programmer (the Roland R-8MkII, for example), the pattern concept may sound familiar. You program a pattern only once and then use it at several points in a song. In other words, one short musical phrase can go a long way.

Pattern-based accompaniments usually consist of the following elements:

- The basic *groove*, i.e. the rhythm that is the backbone of the song
- Several alternatives for the basic groove that keep the accompaniment interesting and suggest some kind of “evolution” or “variation”
- Fill-Ins to announce the beginning of new parts
- The beginning and ending of a song

As a rule, programming four to eight drum patterns for a three-minute song is enough. Just use them in the right order to make them suitable for your song, and you're ready to play. In fact, what is called a “song” on a drum machine, is called a Music Style on the RA-800. Drum machine songs have to be programmed beforehand, while the Music Style patterns can be selected on the fly by pressing the Arranger buttons.

The RA-800 allows you to program 36 different patterns (or divisions) per Style, some of which are selectable via dedicated buttons, while others are selected on the basis of the chords you play in the chord recognition area of the keyboard (major, minor, seventh).

Tracks

Contrary to a drum machine, a Style not only contains the rhythm part (drums & percussion) but also a melodic accompaniment consisting of two to three musical parts, such as piano, guitar, bass, and strings. That is why the RA-800's divisions work with *tracks* – eight to be precise:

Track	Part	Explanation
1	ADR	Accompaniment drums. The drum and percussion line of an accompaniment.
2	ABS	Accompaniment bass. The bass line of the accompaniment.
3	ACC1	Accompaniment 1. First melodic accompaniment.
::	::	::
8	ACC6	Accompaniment 6. Sixth melodic accompaniment.

The part-to-track assignment is fixed. In other words, you cannot assign the ADR part to track 6, for example.

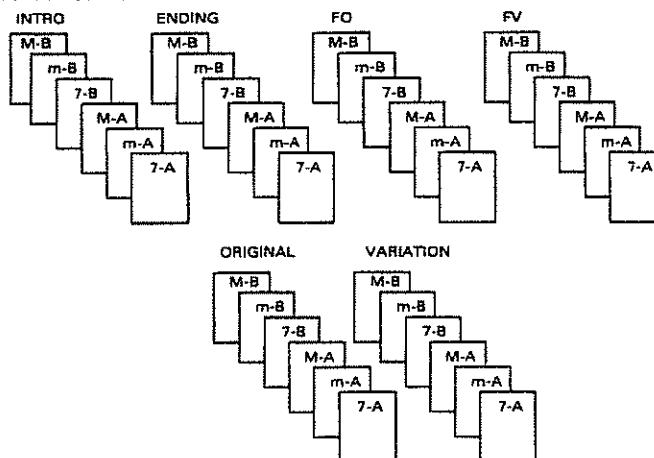
The reason why the ADR part is assigned to track 1 and the ABS part to track 2 is that most programmers and recording artists start by laying down the rhythm section of a song. The rhythm section (drums and bass) is indeed the rhythmic foundation that provides the right "feel" for recording the other parts.

There are exceptions to this rule, however, so feel free to start with any other part if that is easier for the Style you are programming. If you feel more comfortable starting with the piano, go ahead.

Note: Though there are six ACC parts, most Styles only contain two or three melodic accompaniment lines. In most cases, less means more, i.e. do not program six melodic accompaniments just because the RA-800 provides that facility; too many accompaniment lines tend to blur the arrangement. If you listen very carefully to a pop record, you will discover (perhaps to your surprise) that it is not the number of instruments you use that makes a song sound "big" but rather the right notes at the right time.

Looped vs one-shot

Let us call the RA-800's patterns *divisions*. There are two kinds of divisions on the RA-800: looped divisions and one-shot divisions.



Looped divisions

Looped divisions are accompaniments that are repeated for as long as you do not select another division or press [START/STOP] to stop Arranger playback. The RA-800 provides four looped divisions with three variations each. Let us agree to call the variations *modes*:

Division	Mode	Explanation
Basic/Original	Major Minor Seventh	As the name implies, this is the simplest accompaniment.
Basic/Variation	Major Minor Seventh	Basic/Variation is an alternative for the Basic accompaniment
Advanced/Original	Major Minor Seventh	An alternative for the Basic level. Usually contains more instruments but could also be another kind of accompaniment for a given Style.
Advanced/Variation	Major Minor Seventh	Variation of the Advanced/Original accompaniment.

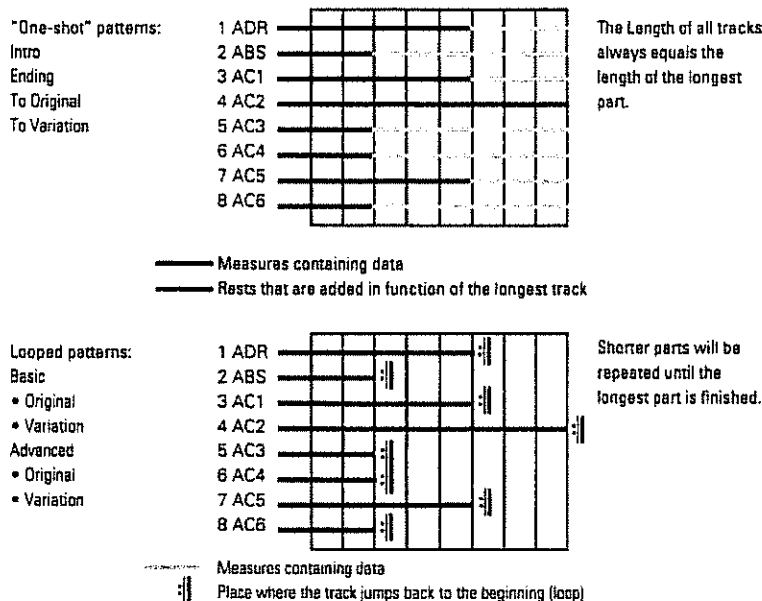
Looped divisions do not select other divisions when they are finished: they keep playing until you select another division by hand (or by foot with an optional FC-7).

One-shot divisions

One-shot divisions are accompaniments that are only played once and then select a looped division or stop the Arranger.

Division	Modes	Explanation
Intro (Basic or Advanced)	Major Minor Seventh	Introduction. Automatically goes to the Original division of the level you selected (Basic or Advanced).
Ending (Basic or Advanced)	Major Minor Seventh	Ending (or coda). As soon as the Ending is finished, the Arranger stops.
Fill-In To Original	Major Minor Seventh	A musical transition that selects the Original division of the currently active level.
Fill-In To Variation	Major Minor Seventh	A musical transition that selects the Variation division of the currently active level.

The type of division (looped or one-shot) affects the way in which the respective tracks are played back. Look at the following illustration:



The Arranger will insert the required number of rests for any one-shot track that is shorter than the longest one.

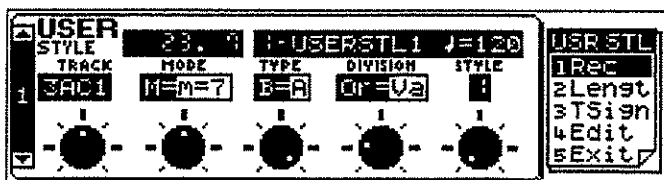
Any track of a looped pattern that is shorter than the longest track, however, will be repeated until the longest track is finished. In other words, a repetitive phrase of a looped division needs to be recorded only once because it will automatically be repeated until the longest track is finished, after which the entire division (including the "sub-loops") will be repeated. For instance, if the ADR part is only four measures long, while the ABS line is eight measures in length, the ADR will be repeated once while the Arranger plays measures 5~8 of the bass line.

12.2 Recording User Styles from scratch

Note: The following sections also contain comments on what we are doing and possible options. If all you want to do is program a Style, just read everything that appears in bold. You can come back to the related explanations whenever there is something you do not understand. See also the Reference Manual for more information.

Selecting the User Style mode

- (1) On the Master page, in the Arranger mode, press [F4] (UsrSt) to activate the User Style mode.
- (2) Press [F1] (Rec) if the 1Rec menu option is not selected.
- (3) Press [PAGE] ▲▼ to select the first User Style\Rec page.



Note: Let us call this page "the first User Style\Rec page" because, depending on the function you activate, the message in the left-hand corner can be User Style, Play, Record Erase, or Record Merge. The highlighted menu function, on the other hand, clearly reads Rec.

The message in the left-hand corner currently reads User Style, meaning that the RA-800 is waiting for you to launch playback or recording.

Selecting the track, the Mode, the Type and the Division

To keep things easy, let's start with the drums of the Basic/Original pattern.

- (4) Use the [DRUMS/PART] knob to select 1ADR (first track, accompaniment drums).

Now select a division. Start with the Basic/Original division.

- (5) Use the [LOWER/NUMBER] knob to select Or for the Division parameter.

Working with clones

On this page, you can activate three clone functions that allow you to record one part and copy it to up to three divisions and three modes each. Here is how it works:

Display function	Options	Explanation
Mode	M	Record only the major pattern.
	M=m	Record the major pattern and copy it to the minor pattern.
	M=m=7	Record the major pattern and copy it to the minor and seventh pattern.
	Other options: m, m=M, m=7, m=M=7, 7, 7=M, 7=m, 7=M=m	
Type	Bsc	Record only the Basic division.
	Adv	Record only the Advanced division.
	B=A	Record the Basic division and copy it to the Advanced division.
	Other options: A=B	
Division	Or	Record only the Original division.
	Va	Record only the Variation division.
	Fo	Record only the Fill-In to Original.
	Fv	Record only the Fill-In to Variation.
	In	Record only the Intro.
	Ed	Record only the Ending.
	Other options: Or=Va, Va=Or, Fo=Fv, Fv=Fo, In=Ed, Ed=In	

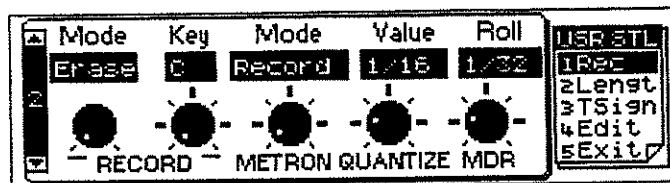
- (6) Use the [ACCOMP/GROUP] knob to select the mode(s), and the [BASS/BANK] knob to select the type(s).

Let us use the above display settings (see step 4), which mean "record the Basic/Original/Major pattern and copy it to all looped divisions". Thus, by programming one pattern, you will obtain 3 (M, m, 7) x 2 (Bsc, Adv) x 2 (Or, Va) = 12 identical drum patterns!

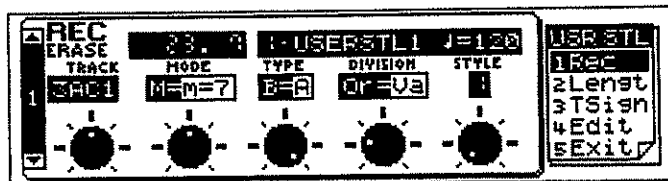
Note: You can only clone five parts for one-shot divisions because there is no Original/Variation level for Intro, Ending, To Original, or To Variation: only Basic and Advanced levels (see the illustration).

Record mode

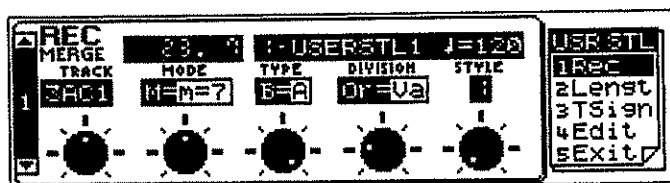
- (7) Press [PAGE] ▼ to select the second User Style Rec page:



The first parameter (Mode) allows you to select the Record mode. Depending on the mode you select here, the first User Style\Rec page will look like this...



...or like this...



... when you press the Recorder's [REC ●] button.

Record Erase means that everything you record will replace the data on the selected track. This mode is automatically selected when you activate the Record function for a track that does not yet contain data. If you select a track that already contains data, the message in the left-hand corner will read Record Merge.

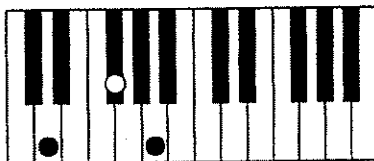
Record Merge means that the music or data you are going to record will be added to the existing data of the selected track.

- (8) Use the [DRUMS/PART] knob to select Erase or Merge.

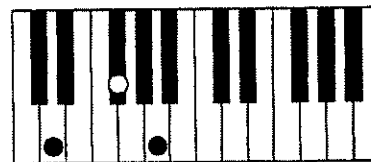
Specifying the key

If you want to use the accompaniment in a musically meaningful way (see "Remarks"), you have to tell the RA-800 what key you are recording in. That way, everything you play will be automatically transposed to C during Arranger playback, so that when you play a C (major, minor, or seventh) chord in the chord recognition area of the keyboard, you hear a C chord rather than an D chord, for instance:

If this is what you play while "Key" is set to C, you will hear a D chord (or D-F#-A) when you play a C chord in the chord recognition area during normal Arranger playback.



If this is what you play while "Key" is set to D, you will hear a C chord (or C-E-G) when you play a C chord in the chord recognition area during normal Arranger playback.



The RA-800 allows you to play in the original (or your favorite) key of the song. But do set the Key parameter to the right value before recording.

- (9) Use the [ACCOMP/GROUP] knob to set the Key. If you want to play in F#, set this value to F#; to play in A, you must set this value to A, etc.

Note: There is no need to specify the key for the ADR part since that part is never transposed.

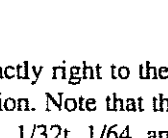
Quantize

Quantize is a function that corrects minor timing problems.

This is how you
played it



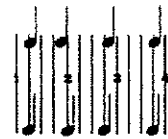
This is how it
will be corrected



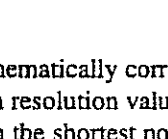
Quantize shifts the notes whose timing is not exactly right to the nearest “correct” unit. In the above example, we selected a 1/4 (♩) resolution. Note that the RA-800 only provides the following resolution values: 1/16, 1/16t, 1/32, 1/32t, 1/64, and Off.

With a 1/16 resolution, our above example would have looked like this after quantizing:

This is how you
played it

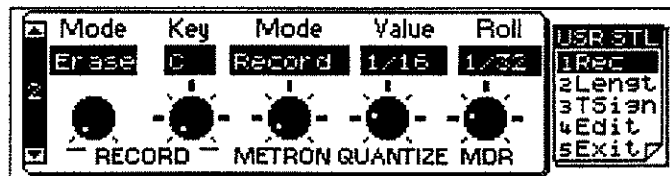


This is how it
will be quantized



Though the timing of the quantized notes is mathematically correct, the result is not what you expected. It is therefore necessary to select a resolution value that is fine enough to accept all note values you play, yet not finer than the shortest note. If the shortest notes of your accompaniment are 1/16th note triplets, set the Quantize value to 1/16t.

Here is how to set the Quantize function:



- (10) Use the [LOWER/NUMBER] knob to specify the quantize Value.

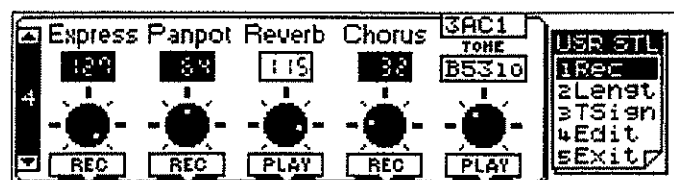
The preset value, 1/16, is ok for most situations. If you do not want quantize your music while recording, set this parameter to Off.

Tip: Off is a good choice here because you can also quantize the part after recording it. If you quantize all parts, your User Style may sound too perfect. Remember that music is all about tiny imperfections, one of which is a somewhat “loose” timing.

Let us skip the User Style\Rec3 page because it allows you to mute parts that have already been recorded, which is not the case here. See “Muting parts while recording others (Status)” for more information on how to mute parts in User Style mode.

- (11) Press [PAGE] ▼ twice to select the following display page:

Tone selection



Another important aspect is Tone selection because the address (Group, Bank, Number, Variation) of the Tones and Drum Set you select is recorded at the beginning of every division.

We are about to program the drums using the ADR part. The ADR part works the same way as the MDR part, so we now have to select a *Drum Set* rather than a Tone.

There are two ways to select Drum Sets (and Tones):

- (12) Use the buttons of the TONE/PERFORMANCE MEMORY section to select a Drum Set for the ADR part.

Or:

- (13) Use the [UPPER/VARIATION] knob on this display page to select a Drum Set (or Tone).

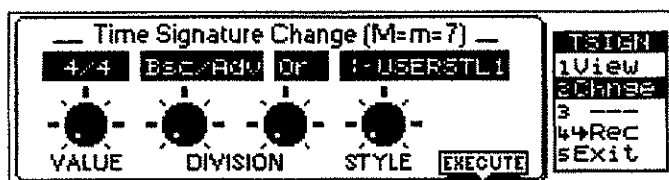
It is a good idea to play a few notes on the keyboard to check whether the sounds of the selected Drum Set are suitable for the accompaniment you are going to record. Try other Drum Sets until you find the one that sounds "right".

Note: Just ignore the Expression, Panpot, Reverb, and Chorus settings for now. We will come back to them later.

Time signature

Before you start recording, you must specify the time signature of your accompaniment. Select 4/4 for 8- or 16-beat patterns, 3/4 for waltzes, 2/4 for polkas and 6/8 (or 4/4) for marches. Note that it is also possible to select 5/4, 7/4 etc. time signatures and that the RA-800's Arranger even accepts polyrhythmic accompaniments.

- (14) Press [F3] (TSign).
 (15) Press [F2] (Change).



As you see in the leftmost window, 4/4 is already selected, so there is no need to change it. To specify another time signature, use the [DRUMS/PART] knob.

- (16) If the division you need (Basic) is not yet selected, use the [BASS/BANK] and [ACCOMP/GROUP] knobs to select it.

Since you are going to clone 11 patterns while recording, you could select Bsc/Adv and Or/Va here to specify the time signature for the four looped divisions. But even Bsc and Or do the trick because your material will be copied anyway.

On this page, the [LOWER/NUMBER] knob allows you to select another User Style memory for programming, but that is not what we want to do.

- (17) Confirm the (new) time signature by pressing [UPPER1] (Execute).

Note: If you do not want to specify the length of the pattern you are about to record, you can press [F4] at this point to jump back to the first User StyleRec page. But let us go through the motions.

Length: specifying the pattern length

User Styles are patterns, i.e. short musical phrases, some of which will be continuously repeated during Arranger playback. Every pattern must therefore have a set length. A 5-bar Intro, for instance, is no good for a song that has only four introductory bars. Setting the length *now* will help you avoid a lot of confusion once you start recording.

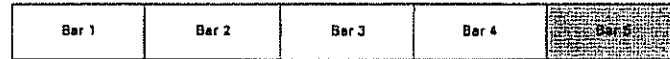
The reason why we suggest you specify the length now rather than cutting the pattern to size after recording it (using the same Length function) is that the Arranger tends to add blank bars at the end of a track, which is usually due to the fact that you stopped the recording a little late (i.e. after the last bar you played). In such a case, the Arranger adds a blank measure, so that you actually "record" five measures instead of 4:

Recording without
specifying the Length



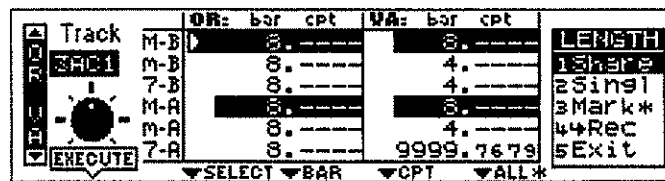
If you stop recording here,
track length will be 4 measures.

If you stop recording here,
track length will be 5 measures.



Furthermore, in User Style Record mode, *all patterns are looped*, so that the RA-800 keeps playing them back until you press the [START/STOP] button. A wrong number of measures (5 instead of 4, for example) is very likely to put you off, so do take the time to set the pattern length *before* you start recording.

- (18) Press [F2] (Lengt). To select a Length page from another page, hold down the [SHIFT] button and press [F2]. The display now looks like this:



It is perfectly possible to specify a different length value (and time signature) for each track and division. Remember, however, that the Basic and Advanced (Original and Variation) tracks are looped during "real-life" use, so that a 64CPT phrase will be repeated for as long as another track of the current division contains data.

Note: Even one-shot patterns are looped in User Style mode. That is not the case, however, during Arranger playback (i.e. everyday use of the Styles).

- (19) Use [PAGE] ▲▼ to select the length page corresponding to the division whose length you wish to set.

The second Length page contains the Length values of the Intros and Endings. The third Length page contains the Length parameters of the fill-ins.

The other options on this page are [F1] (Share) and [F2] (Singl). The former allows you to select all patterns that are being shared, i.e. patterns that have been or will be "cloned" during recording using the M=m=7, B=A etc. options. *Single*, on the other hand, allows you to treat all divisions as if they were independent patterns – and select only those whose length you wish to change after recording them. But that is for later.

Back to our accompaniment.

- (20) Start by selecting the Track whose length you wish to set (using [DRUMS/PART]).

Rotating the knob fully clockwise will call up the ALL option. Select ALL to set the length for all tracks (1~8).

- (21) Use [UPPER/VARIATION] (All) to select all Style divisions.

Note: Selecting All using [UPPER/VARIATION] means that you can specify the length of all divisions that appear on this page.

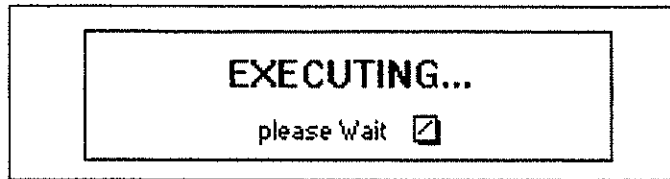
To specify the length of only one pattern, move the Select cursor to that pattern using the [ACCOMP/GROUP] knob. To specify the length of several patterns in one pass, select them using [ACCOMP/GROUP] and press [F3] (Mark) for every pattern whose length you wish to set. Selected patterns will be indicated by an asterisk (*).

- (22) Use the [BASS/BANK] (Bar) knob to specify the number of bars. Our pattern should be 4 measures long, so enter the value "4".

Note: You could also specify a CPT value using [LOWER/NUMBER]. That CPT value (♩ = 120CPT) will be added to the Bar length. Though possible, length values like 4 (bars): 96 (CPT) are probably not what you want to use every day.

- (23) Press [M.DRUMS] (Execute) to confirm the length you specified.

The display now reads:



Next, the OK Function Complete message is displayed to signal that the Length value has been successfully set.

The name of the 1adr track now appears in uppercase letters (1ADR) because that track contains data (i.e. the length setting, or, more specifically, the equivalent number of rests).

- (24) Press [F4] to jump back to the first User StyleRec page if you like.

This is not really necessary because you can start recording on any User Style page.

Tempo

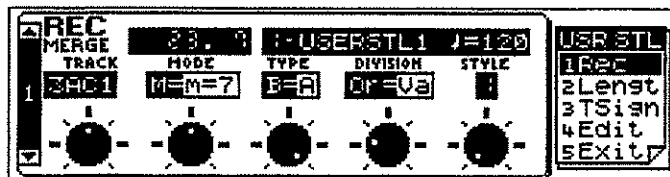
- (25) The tempo (currently set to ♩=120) is probably a bit fast for recording, so change it using the [TEMPO] dial.

The tempo value you set here will be recorded and regarded as preset tempo. You can change the preset tempo at any stage in User Style mode, so start by selecting a tempo that allows you to record the music the way you want it to sound. When all tracks and divisions are programmed, you can record the desired tempo value.

Recording

- (26) Return to the first User Style\Rec page and press the Recorder [REC ●] button (indicator lights).

Note that, when you return to the first User Style\Rec page, the message in the left-hand corner looks like this:



- (27) Press [START/STOP] (Arranger section) or [PLAY ►/STOP ■] (Recorder section). The metronome counts in one measure (4 beats if you selected the 4/4 time signature), and recording starts on the next downbeat.

Note: You can also start recording using an optional footswitch connected to the FOOTSWITCH jack.

You could start by playing only the bassdrum part. If you specified the track length (see above) before recording, the Arranger jumps back to the beginning of the pattern after four measures. The second time around you could add the snare drum, the third time the HiHat, and so on. – But you can also play the drum part in one go, of course.

When recording another part (ABS~AC6), do everything you would do during a live performance. Feel free to add modulation and pitch bend and use the hold pedal connected to the SUSTAIN FOOTSWITCH jack.

Note: You may notice a short delay before the Arranger jumps back to the beginning of the pattern. That delay is due to the fact that the data you record are "being processed". During playback, the loop will be perfect, however.

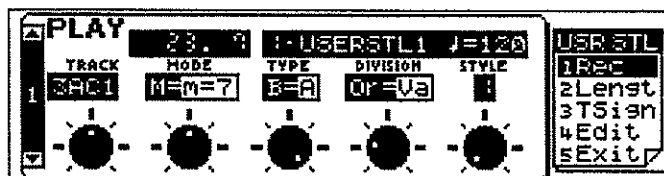
- (28) Press [START/STOP] again to stop recording.

Tip: If the above Mode, Type, and Division settings you selected for recording do not include all the patterns you wanted to clone, set the Mode, Type, and Division parameters to the desired values to supply the missing drum lines. Next, press [REC ●] and [START/STOP] or Recorder [PLAY ►/STOP ■] to start recording. Stop recording after the first or second beat (wait until the

count-in is finished before you start counting). Note that this function only adds clones. It does not allow you to erase existing patterns.

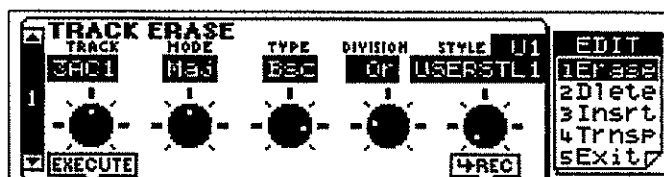
Playback, and then keep or redo?

- (1) Press the [START/STOP] or Recorder [PLAY ►/STOP ■] button again to listen to your performance. The first User Style\Rec page looks like this (if selected):



If you like your drum part, continue with "Saving your Style to disk". If not, you probably want to give it another try.

- (2) Press [F4] (Edit) and then [F1] (Erase).



We'll use Track Erase to erase the data because that way, the Length settings do not change. See "Track Erase ([F1])" for more information about this function. The 1ADR Track is already selected, as is the pattern that is used for cloning other tracks.

- (3) Press [M.DRUMS] (Execute) to erase the pattern.
- (4) Press [UPPER1] to jump back to the first User Style\Rec page.
- (5) Continue with step 27.

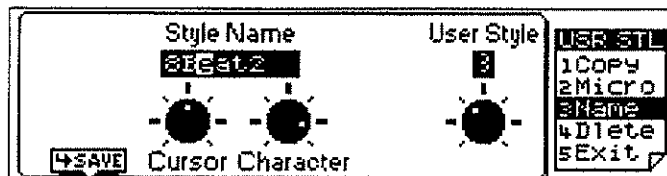
Saving your Style to disk

If you are serious about programming your own Styles, make it a habit to save them as frequently as possible. After all, if someone decided to turn off your RA-800 now, you would lose everything you have programmed so far.

Do yourself a favour and save your data after every part you add to a Style. That disk can also serve as backup whenever you erase or change something you actually wanted to keep.

Naming your User Styles

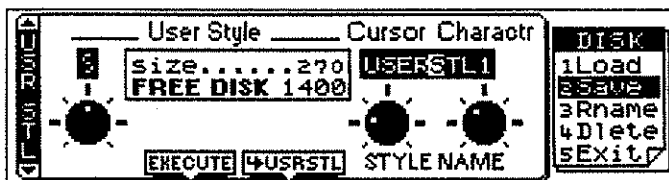
- (1) Hold down [SHIFT] and press [F3] (Name).



Before saving a Style to disk, you should name it. Choose a name that tells you something about the nature of the Style. Use the [ACCOMP/GROUP] knob to select the character position and the [BASS/BANK] knob to assign a character to the selected position.

Saving your Style

- (2) Press [M.DRUMS] to jump to the Save User Style page:



You have just specified the Style name, so there is no need to do so on this page.

- (3) Use the [DRUMS/PART] knob to select the Style you wish to save.
Your Style is already selected, so there is no need to do so here.
- (4) Insert a floppy disk into the drive and press [M.BASS] (Execute) to save your Style to disk.
Remember that your RA-800 is multitasking, so that you can leave this page as soon as the RA-800 starts saving the Style to disk:
- (5) Press Part Select [LOWER] to return to the User Style mode.
- (6) Press [SHIFT]+[F1] to jump to the first User Style\Rec page.

Programming other parts and divisions

You can now record the second part – probably the bass. If you'd like to do the guided tour again, go ahead. Do not forget to set the key for the bass part.

You probably know how to record other parts (ACC1~ACC6), so we'll leave you to it (see "Recording User Styles from scratch").

Once the first division is finished, you can record other divisions. Use the clone function to record several patterns in one go.

Do not forget to record the fills and the Ending(s) to complete your User Style.

Note: The ABS part is monophonic. You will not be able to program two-note patterns.

Muting parts while recording others (Status)

After programming a few tracks, you may find that certain tracks tend to confuse you. Playing a steady organ part while listening to a previously recorded syncopated part may indeed be difficult. That is why the RA-800 allows you to mute those parts that you do not want to hear during *recording*.

Note: The Status function only applies to the User Style mode. In normal Arranger playback mode, all tracks will be played. In other words, this is a help function.

Here is how to mute tracks in User Style mode:

- (1) On the User Style\Rec page, press [PAGE] ▼ until the following display page appears:



- (2) Select the track/part you wish to mute using the [DRUMS/PART] knob.
- (3) Use the [ACCOMP/GROUP] knob to set the Status to On or Off (mute).

Remarks

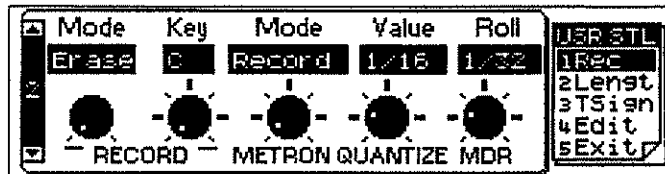
Working from top to bottom – programming hints

If you listen carefully to the factory Styles, you will notice that most divisions are very similar to one another and that the element of “evolution” or “amplification” between the Original/Variation and Basic/Advanced levels is usually derived from adding instruments to otherwise identical parts. The Advanced/Original division may for instance add an electric guitar to the drums, bass, and organ lines of the Basic level, but the drum, bass, and organ lines of the Advanced level are usually identical to those of the Basic level. In other words, why not do as Stan Laurel suggests in “Fra Diavolo”: start at the top and edit your way down to the bottom? Starting by recording the most complex accompaniment while cloning all other looped divisions will at first leave you with identical accompaniments, all containing that frantic distorted guitar, the brass section, and other bells and whistles. But if you then move to the Advanced/Original level and delete the bells and whistles, that division is already simpler than “the works”. The next step would then be to select the Basic/Original pattern and delete both the bells and whistles and the distorted guitar. Working this way has the distinct advantage that you can program the Style while your creative juices are flowing, leaving the buttons-and-knobs job for later.

Metronome

In User Style mode, the metronome sounds during recording. If you also need the metronome when listening to what you have just recorded, select another metronome mode. Here is how to:

- (1) On the first User StyleRec page, press [PAGE] ▼.



- (2) Use the [BASS/BANK] knob to set the Mode parameter to one of the following values:

Record	The metronome only sounds during User Style recording.
Play	The metronome only sounds during User Style playback in User Style mode.
Rec&Ply	The metronome sounds both during recording and playback.
Always	The metronome even sounds while the User Style is not playing.

Empty tracks

After recording a few accompaniment parts, you may not remember which tracks already contain data. There is an easy way to find out: for tracks that contain data, the corresponding part name will appear in uppercase letters (e.g. ADR). For tracks that don't contain data, the corresponding part name will appear in lowercase letters (e.g. aDr). Furthermore, if a track already contains data, the User Style function will switch to Record Merge whenever you press the Recorder's [REC ●] button.

Playback in Arranger mode

As stated earlier, the Arranger of your RA-800 is very similar to a drum machine, except for one thing: you do not need to program the pattern sequence beforehand. Just select the division you need while playing and feed the Arranger with the right chords so that all the

lines you programmed sound in the right key. In short: use your own Styles the way you use the internal Styles.

Note: If, during playback in Arranger mode (i.e. normal RA-800 mode), the Arranger stops unexpectedly, try different chord modes. Chances are that you only programmed the major division, so that the Arranger selects an empty pattern when you play a minor or seventh chord. Remember to always set the Mode parameter to M=m=7 until you have come to grips with the impressive number of possibilities of the RA-800's Arranger. That way, those three patterns will sound alike, but at least you are sure that the Arranger does not stop when you play a minor or seventh chord.

12.3 Copying existing Styles

Another way of programming User Styles is to use parts from internal Styles in ROM or User Styles. The RA-800 allows you to:

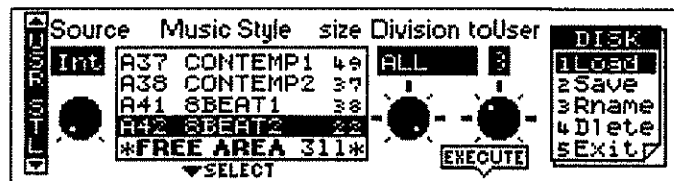
- Copy entire Styles to a User Style memory
- Copy the selected division of one or all tracks to a User Style memory
- Copy just a few notes of an existing part to a User Style memory
- Copy tracks or notes between divisions of the current User Style
- Create new Styles by using tracks from different existing Styles (the drums of Style B34, the bass of Style A63, etc.)

Note: You cannot copy an ADR (drum) track to another track (ABS-ACC6). Likewise, the bass part (ABS) can only be copied to an ABS track. As far as the ACC tracks are concerned, you are free to copy them to whichever ACC track you like.

Note: If the User Style memory you wish to copy to already contains data, save it to disk before copying. The RA-800 has no Undo function. Saving a Style to disk before copying will allow you to load the previous version in case something goes wrong. See "Saving your Style to disk".

Copying entire Style divisions using Load (all tracks, several divisions)

- (1) Press [F5] (Exit) to return to the Master page.
- (2) Press [F5] (Disk) to select the Disk mode.
- (3) If the 1 Load option is not highlighted, press [F1] (Load) to select it.
The message in the scroll bar (left-hand side) should read USR STL. If that is not the case...
- (4) ... press [PAGE] ▲▼ until the scroll bar reads USR STL.
- (5) Using the [DRUMS/PART] knob, select Int for the Source parameter.



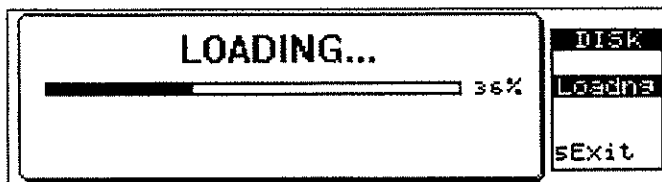
This allows you to select any internal Music Style (A11-B88, U1-U8) to be copied. If you wish to copy a User Style, insert the disk that contains it, and set Source to Dsk. The Music Style info window displays a list of Styles in the internal memory (Int) or on the floppy (Dsk). The last message in this window indicates the free memory of the User Style area.

- (6) Use the [ACCOMP/GROUP] knob to scroll through the list of available Styles. The highlighted (white-on-blue) Style will be loaded.
Next, you have to decide which elements of the Style you want to load (or copy). (These elements, as you know, are called *divisions*: Original, Basic, Ending, Intro, etc.)
- (7) Use the [LOWER/NUMBER] knob to select the Style division you need.
You can also select ALL (all divisions).

- (8) Use the [UPPER/VARIATION] knob to select the User Style memory you want to copy the Style to (to User). Let's select User Style memory 2.

Note: Be careful not to load Styles to a User Style memory that already contains data. The RA-800 will not warn you that you are overwriting the Style in the memory you select here!

- (9) Press [UPPER1] (Execute) to load the Style (or Style excerpt).



- (10) Press [F5] (Exit) to return to the Master page.

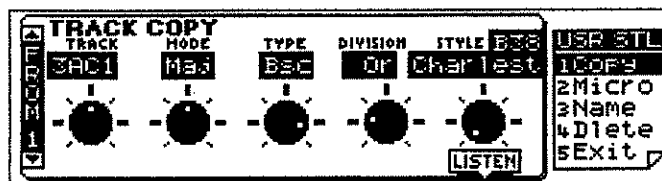
You have now loaded one User Style to the second User Style memory, which comes down to copying it.

- (11) Press [F4] (UsrStl) to return to the User Style mode.

Copying individual User Style tracks

While the previous function allows you to copy entire Styles or Style divisions, the Track Copy function can be used to copy individual tracks, modes, types, and divisions. Use the above function to make comprehensive copies and the current one to copy one track of an existing Style to the selected User Style memory.

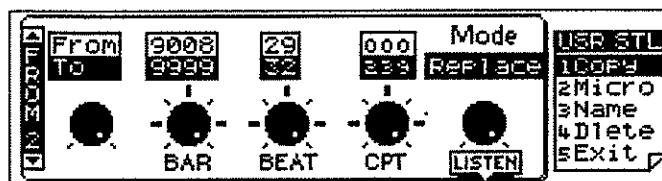
- (1) On the first User Style\Rec page, hold down [SHIFT] and press [F1] (Copy).



- (2) Use the [DRUMS/PART] knob to select the track to be copied.
 (3) Use the [ACCOMP/GROUP], [BASS/BANK], and [LOWER/NUMBER] knobs to select the Mode (Maj, Min, 7th), the Type (Bsc, Adv), and the Division (Or, Va, Fo, Fv, In, Ed).
 (4) Next, select the Style that contains the track(s) to be copied using the [UPPER/VARIATION] knob.

Note: You can also use the Music Style buttons to select the Style to be copied.

- (5) Press [M.DRUMS] (Listen) to listen to the excerpt you are about to copy.
 (6) Press [PAGE] ▼ to select the From 2 page:



From

Start by specifying the position of the first event (or note) of the source track to be copied.

- (7) Activate the From level. Select it using the [DRUMS/PART] knob.
 The word From and the related values (upper line) must be displayed white-on-blue.
 (8) Use the [ACCOMP/GROUP], [BASS/BANK], and [LOWER/NUMBER] knobs to set the Bar, Beat and CPT units respectively.

By default, the From parameters are set to the following values:

Bar	Beat	CPT
1	1	0

Before experimenting with the Beat and CPT values, it is probably a good idea to try copying entire bars. Remember, however that you can also choose to copy only those notes that you need, in which case, the Beat and CPT parameters will help you select a starting point that lies behind the first beat of the track you wish to copy.

To

- (9) Use the [DRUMS/PART] knob to select the To level (second line).
The To position indicates the end of the excerpt to be copied. By default, the To values are set to include the entire track.
- (10) Use the [ACCOMP/GROUP], [BASS/BANK], and [LOWER/NUMBER] knobs to set last Bar, Beat and CPT units respectively.
If you wish to copy an entire bar, select the Bar-Beat-CPT "0" value of the next bar, i.e. to copy bars 1~4 specify "From 1-1-0/To 5-1-0".
- (11) Press [M.DRUMS] (Listen) to listen to the excerpt again.

Copy mode

Copying can be carried out in one of two modes:

Copy mode	Explanation
Replace	The data in the selected range will be copied to the destination track and overwrite all data of the destination track in the selected source track range.
Mix	The data in the selected range will be added to any existing data on the destination track.

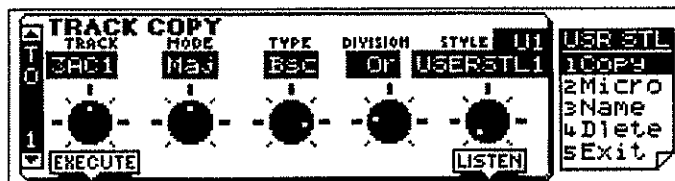
In either case, the length of the destination track may change to include all data of the source track. In other words, you may find that the destination track is longer after executing the copy function. Therefore...

Note: If the User Style memory you wish to copy to already contains data, save it to disk before copying. The RA-800 has no Undo function. Saving a Style to disk before copying will allow you to load the previous version in case something goes wrong. See "Saving your Style to disk".

- (12) Use the [UPPER/VARIATION] knob to select the copy mode (Replace or Mix).

Destination (To 1)

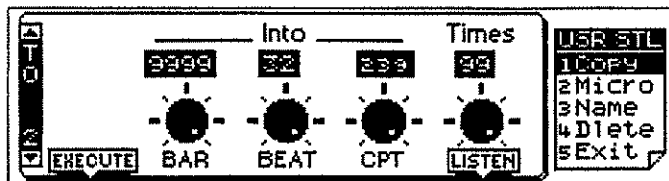
- (13) Press [PAGE] ▼ to select the To 1 page:



This page looks similar to the From 1 page (see above). Here, however, you start specifying the place the data you selected will be copied to, i.e. the destination.

- (14) Use the [DRUMS/PART] knob to select the track you wish to copy the data to.
Note: It is impossible to copy ADR data to other tracks than ADR tracks. Likewise, you cannot copy ABS data to other tracks than ABS tracks. Therefore, the options for selecting the destination track are somewhat limited. Feel free to copy AC data to any AC track (yet they cannot be copied to ADR or ABS tracks).

- (15) Use the [ACCOMP/GROUP], [BASS/BANK], and [LOWER/NUMBER] knobs to select the Mode (Maj, Min, 7th), the Type (Bsc, Adv), and the Division (Or, Va, Fo, Fv, In, Ed).
- Note: It is impossible to copy between looped and one-shot divisions. See "Looped vs one-shot" for more information about these two division types.*
- (16) Next, select the User Style you wish to copy the data to using the [UPPER/VARIATION] knob.
- (17) Press [M.DRUMS] (Listen) to listen to the track you are about to copy to.
- (18) Press [PAGE] ▼ to select the To 2 page:



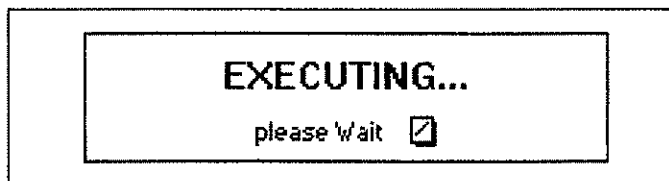
The Into position indicates the beginning of the excerpt you are about to copy. If you wish to copy the source data to the beginning of the selected track, select Bar= 1, Beat= 1, and CPT= 0.

- (19) Use the [ACCOMP/GROUP], [BASS/BANK], and [LOWER/NUMBER] knobs to set the Bar, Beat and CPT units respectively.
- (20) Press [UPPER1] (Listen) to listen to the destination track again.
- (21) Use the [UPPER/VARIATION] knob to specify the number of copies (Times) to be made. Select "1" if the excerpt is to be copied only once.

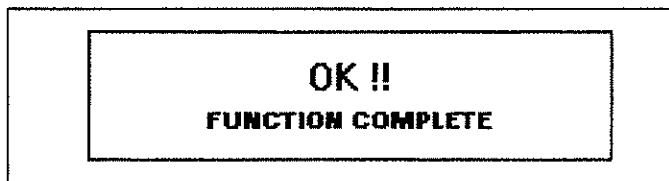
Before copying the data, check whether all settings are correct. Use the [PAGE] ▲▼ buttons to select other Copy pages. Then return to this page.

- (22) Press [M.DRUMS] (Execute) to copy the data.

The display now responds with the following message:



When the data are copied, the display will tell you:



You can press [UPPER1] to listen to the new data on the destination track (and the selected division).

12.4 Editing User Styles

Editing on the fly by recording

Adding notes in realtime

To add notes to an existing part, select Record Merge (2nd User Style page), select the part, and start recording by pressing [REC ●] (Recorder section) and [START/STOP] (Arranger section) or [PLAY ►/STOP ■] (Recorder section). Play the notes where you want them to sound.

Note: Do not forget to select the right Division, Mode, and Type.

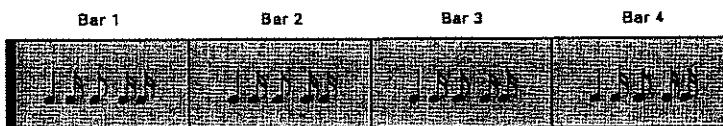
Adding controller data in realtime

To add controller data (modulation, pitch bend, Hold, expression) to an existing part, select Record Merge (2nd User Style page), select the part and division, and start recording by pressing [REC ●] (Recorder section) and [START/STOP] (Arranger section) or [PLAY ►/STOP ■] (Recorder section). Operate the controller (pitch bend lever, modulation lever, optional DP-2, DP-6, or FS-5U footswitch for Hold data, optional EV-5 or EV-10 foot controller for expression data) where needed.

Note: Do not forget to select the right division, mode, and type.

Adding or changing settings of existing parts

The following operations require that you record in Record Merge mode without touching the keyboard or controllers, select the track and division whose settings you wish to change, activate Record Merge, and start recording. Unless you wish to program continuous value changes (Panpot data, for example), you can stop recording after the first beat. Static settings are always written at the beginning of the track in question, so there is no need to record an entire cycle.



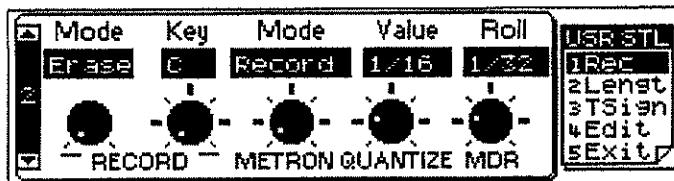
Tone/Drum Set
Expression
Panpot
Reverb Send
Chorus Send
etc.

Every division contains note data and other settings (usually located at the beginning)

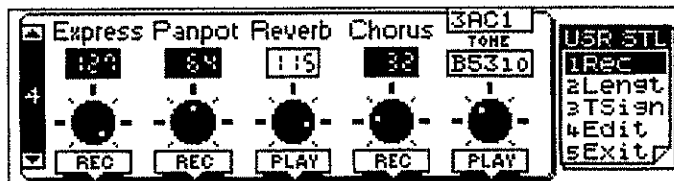
Tone/Drum Set selection

After programming a Style or division, you may find that the bass sound you selected for the ABS part, for instance, doesn't quite match the Tones assigned to the other parts, or that, all things considered, an acoustic piano works better than an electronic one. To select another Tone or Drum Set for an existing User Style part, proceed as follows:

- (1) On the first User Style\Rec page, select the Track you wish to assign another Tone or Drum Set to using the [DRUMS/PART] knob.
- (2) Select the division whose settings you wish to change, and possibly also all clones.
- (3) Press [PAGE] ▼ to select the following page:

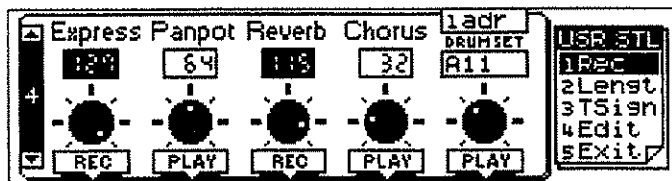


- (4) Use the [DRUMS/PART] knob to set Mode to Merge. (Let us assume that your part already contains data, though the following works the same for empty tracks.)
Merge means that the new data will be added to the existing data. In Erase mode, however, the new data would erase the previously recorded data.
- (5) Press [PAGE] ▼ until the following display page appears:



Look at the display before selecting another Tone. The Expression, Panpot, and Chorus values in the above illustration are reversed. As you see in the bottom row of the display, the corresponding Play/Record switches are set to REC, meaning that these values will be recorded next time around. The Reverb and Tone values, on the other hand, are displayed blue-on-white. If you look at the corresponding Play/Record switches, you will see that they are set to PLAY, meaning that the corresponding settings will not be recorded.

The abbreviation 3AC1 appears in uppercase, which means that the track in question already contains data. Now look at the following illustration that tells you that the ADR track of the currently selected division doesn't yet contain data:



- (6) Press the [M.DRUMS], [M.BASS], Part Select [LOWER], and Part Select [UPPER2] buttons to set the Play/Record switch of all settings you do not wish to record to PLAY.
- (7) Press [UPPER1] to set the Tone Play/Record switch to REC.
- (8) Select the new Tone to be assigned to the currently selected track and division using either the [UPPER/VARIATION] knob or the TONE section buttons.
- (9) Press the Recorder [REC ●] button.
- (10) Press [START/STOP] or Recorder [PLAY ►/STOP ■] to start recording.
- (11) Press [START/STOP] again after the first or second beat (but wait until the one-bar count-in is finished).

This completes Tone selection. The new Tone address (Group, Bank, Number, Variation) automatically replaces the old one.

Tip: You could use different Tones for every division of a User Style. Thus, the 3AC1 Basic/Original track may contain an electronic piano line that is played by an acoustic piano in the Basic/Variation division etc. Beware of too much "artistic license", though. Using another ACC track for the acoustic piano will avoid a lot of confusion.

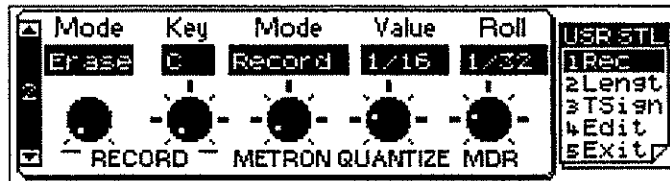
Customizing drum sounds – Drum Set Note Pitch

The fifth User Style\Rec page allows you to modify the pitch of certain sounds of the selected Drum Set. The eligible sounds and corresponding note numbers are:

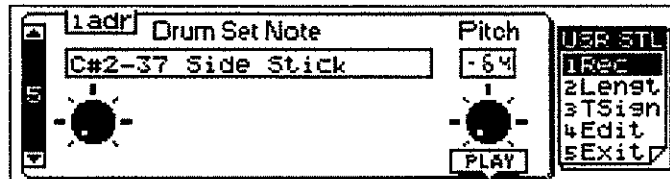
Note	Sound
C#2/37	Side Stick
D2/38	Snare Drum 1
E2/40	Snare Drum 2
F2/41	Low Tom 2
E3/52	Chinese Cymbal
G#3/56	Cowbell
A3/57	Crash Cymbal 2
F4/65	High Timbale

Note: The parameter on the User Style\Rec\5 display page can only be set if you selected the 1ADR track before calling up this function.

- (1) On the first User Style\Rec page, select the 1ADR track.
- (2) Select the division whose settings you wish to change, and possibly also all clones.
- (3) Press [PAGE] ▼ to select the following page:



- (4) Use the [DRUMS/PART] knob to set Mode to Merge. (Let's assume that your part already contains data, though the following also works for empty tracks.)
- (5) Press [PAGE] ▼ repeatedly until the following display page appears:



- (6) Select the drum sound whose pitch you wish to change with the [DRUMS/PART] knob.
- (7) Use the [UPPER/VARIATION] knob to set the desired pitch (-64~+63).
You can play on the keyboard to listen to the result.
- (8) Press [UPPER1] to set the Play/Record switch to REC.
- (9) Press the Recorder [REC ●] button.
- (10) Press [START/STOP] or Recorder [PLAY ►/STOP ■] to start recording.
- (11) Press [START/STOP] again after the first or second beat.

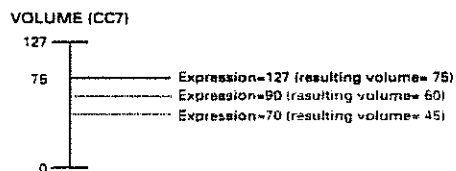
Expression, Panpot, Reverb, Chorus

Setting or modifying the Expression, Panpot, Reverb (Send), and Chorus (Send) parameters is similar to selecting another Tone for existing tracks. See "Tone/Drum Set selection" for details.

The Reverb and Chorus settings represent *send* values. The effect settings (Type, Time, etc.) can only be saved to a Performance Memory. In other words, a Music Style's character may change depending on the Performance Memory you select.

Expression (control change #11) is a subsidiary volume message that works relative to the volume (control change #7) message. Whenever you set Expression to "127" the resulting part volume will be equal to the value specified for Volume (CC7).

All other Expression values mean "less than the Volume (CC7) value":



(Note that the above values are only guesses, but at least they help you understand why the settings [Volume= 0/Expression= 127 or Volume= 127/Expression= 0] mean that the corresponding part does not sound.)

The Volume values of the Arranger parts can be set in Mixer or Volume modes. The advantage of working with Expression rather than Volume in User Style mode is that it allows you to work with two values that interact:

Control change

CC7 (Volume)	Can be set in Volume and Mixer modes (specifies the upper limit)
CC11 (Expression)	Can be set in User Style mode (specifies a percentage of the Volume value, whereby "127" = 100%)

Enough of this MIDIese, though. Just remember that Expression is a relative volume value that works the same way as the RA-800's Part parameters in that it allows you to override

(or rather correct) a given setting. But while the Part parameters work in two directions (“more” and “less”), Expression only works in one: “127” means “equal”, and all other Expression values mean “less”.

Use the [DRUMS/PART], [ACCOMP/GROUP], [BASS/BANK], and [LOWER/NUMBER] knobs to set the value you wish to record.

Tip: You can create interesting panning effects by slowly shifting the selected track from left to right (or vice versa) in the course of a pattern. This is especially effective for synthesizer or guitar riffs. Continuous changes mean that you have to keep recording until the end of the pattern.

Setting the preset tempo

The preset tempo is the tempo the Arranger selects in One Touch mode. By now, you know that the [TEMPO] dial and [TEMPO] AUTO/LOCK button allow you to override the preset Style tempo and save the new tempo value to a Performance Memory. Setting the right preset tempo is useful for those occasions where you wish to use One Touch Program.

To program another preset tempo, set it using the [TEMPO] dial, select any part on the first User Style\Rec page, activate Record Merge mode and record one or two beats.

Do not play on the keyboard or use any controllers connected to the RA-800, though!

Note: The last tempo value you record automatically becomes the Style's preset tempo. You should therefore program the preset tempo after recording all parts.

12.5 Programming User Styles using an external sequencer

A third way of programming User Styles is to use an external sequencer (computer with sequencer software or an MC-50MkII) and transmit the MIDI data in realtime while the Arranger is recording. Using an external sequencer has two advantages:

- You can program your music in Step time before turning it into an interactive Style.
- You can use existing lines from Standard MIDI Files or songs you recorded before purchasing the RA-800. And, of course, you can copy Styles of older Intelligent Arranger models that are not equipped with a disk drive.

Note: If you use commercially available Standard MIDI Files as a starting point for your User Styles, remember that the material is copyright protected. You are free to copy the tracks of a Standard MIDI File for your own personal use but under no circumstances may you sell User Styles based on commercially available files nor give copies of your “borrowed” User Styles to your friends and/or colleagues.

Note: Delete the GM System On or GS Reset message of the GM or GS Standard MIDI File you intend to use before sending MIDI data to your RA-800. These two messages are SysEx messages (System Exclusive) found at the beginning of a sequence that cause the RA-800 to switch to GM/IGS mode, thereby deactivating the Arranger. See your sequencer's manual for how to delete MIDI messages.

Data that can be recorded

Apart from note on/off and velocity data, the RA-800's Arranger also accepts the following MIDI messages:

MIDI message	Number	Name
Control Change	0	Bank Select MSB
Control Change	1	Modulation
Control Change	6	Data Entry
Control Change	7	Volume
Control Change	10	Pan
Control Change	11	Expression
Control Change	32	Bank Select LSB
Control Change	64	Hold*
Control Change	91	Reverb Depth
Control Change	93	Chorus Depth
PC		Program Change
PB		Pitch Bend
Control Change	98	NRPN MSB
Control Change	99	NRPN LSB

(*) Hold on/off messages will be converted to the equivalent note duration values. The Arranger tracks never contain Hold messages but the duration of the affected notes will be set in accordance with the length obtained by using the Hold pedal.

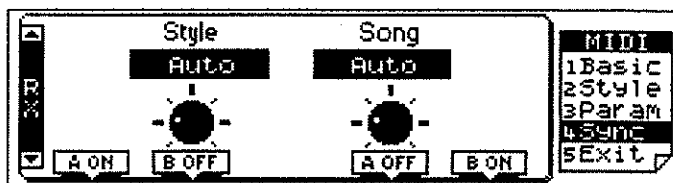
Unless the sequences you use are GM/GS compatible, we recommend you filter out all data except modulation (CC1), pitch bend, and hold (CC64). Specify the other settings manually on the RA-800 (see "Editing User Styles"). Though they may work in most cases, bank select and program change messages should also be specified manually. After all, the RA-800 contains lots of new sounds that you should take advantage of to enhance your Styles.

Connection and synchronization

- (1) Connect the MIDI OUT port of your sequencer or computer to the MIDI IN A connector of your RA-800. Do not forget to set the MIDI IN A/RRC switch to MIDI IN A.

The next step is to synchronize the RA-800 to your sequencer – or the sequencer to your RA-800. The former means that the RA-800 will be slaved to the sequencer's tempo, while the latter means that the RA-800 will act as tempo master. Let us use the RA-800 as slave here. Doing so allows you to transmit data and MIDI clock messages to the RA-800 using only one MIDI cable.

- (2) On the RA-800's Master page, press [F3] (Midi) to select the MIDI mode.
- (3) Hold down [SHIFT] and press [F4] (Sync).
- (4) If necessary, press [PAGE] ▼ until the following display page appears:



As we only need to set the Style sync parameter here, we won't talk about the Song Sync parameter.

- (5) Use the [ACCOMP/GROUP] knob to set the Style parameter to Auto.

You could also specify the MIDI IN connector to be used for receiving MIDI clock messages but since it is already set to A ON (reception possible via MIDI IN A), there is no need to change it. If, for some reason, you want to select the MIDI IN B connector, press [M.BASS] to select B ON. However, that also means you have to assign the Basic Channel to MIDI IN – so just stick to A here.

- (6) Press [F5] (Exit) to return to the Master page.

Preparation of your sequence

- (7) Isolate the measures you wish to record. This usually means that you have to copy the required number of bars to a new song.

For instance, if the User Style division is to be 4 measures long, you have to reduce the sequence (or rather a copy of it) to the four measures you wish to record. These measures have to be copied to the very beginning of the new song.

- (8) Check the track-to-MIDI channel assignment of all sequencer parts against the following table and modify the MIDI channels of your sequence accordingly.

MIDI channels

Every Arranger part/track is assigned to a MIDI channel. The factory settings are as follows:

User Style track	Part	MIDI channel
1	ADR (drums)	10
2	ABS (bass)	2
3	ACC1(melodic accompaniment)	1
4	ACC2	3
5	ACC3	5
6	ACC4	7
7	ACC5	8
8	ACC6	9

Preparation on the RA-800

- (9) Press [F4] (UserStl) to call up the User Style mode.
 (10) Press [F1] (Rec) if the 1Rec menu option is not selected.
 (11) Set the following parameters for the part you are about to record:

Operation	Operation
Part selection	Select a Tone or Drum Set (*)
Division selection	Specify the time signature
Specify the key of the tracks that require it (ABS, ACC1~ACC6)	Specify the pattern length
Set Quantize to Off (**)	

(*) This is only necessary if you do not record the original bank select and program change messages. As stated above, it is always a good idea to find out whether the RA-800 has better sounds than the ones that would be selected via MIDI.

(**) Though the MIDI data may be recorded with a short delay, it is wiser to use the Shift function to correct timing problems than to quantize a track that sounded more natural without quantization.

Recording

- (12) Solo the first part to be recorded on your sequencer or computer (or mute the other parts).
- (13) Press the [REC ●] button in the RA-800's Recorder section.
- (14) Start playback on your sequencer or computer.
- (15) Wait until the pattern is finished and then stop playback on your sequencer.
- (16) Return to step 11 to record the other parts of the current division.
- (17) To record other divisions, return to step 7.
- (18) When you are finished, press [F5] (Exit) to return to the Master page and set the Style Sync parameter back to Auto or Internal.

Note: Do not forget to save your Style to disk at regular intervals.

Note: If your User Style needs some touching up, see "Editing User Styles".

Recording using "dedicated" controllers

Most of the aspects covered in the "Programming User Styles using an external sequencer or another keyboard" section also apply to programming User Styles using external controllers – except synchronization, of course.

- You could ask a drummer to play the drum tracks of your Styles using a TD-7, TD-5, SPD-11, or PAD-80 (Octapad II), i.e. a device fitted with a trigger-to-MIDI convertor.
- If you know a guitarist who owns a GR-1 or GR-09 Guitar Synthesizer or a GI-10 pitch-to-MIDI convertor, you should ask him to play the guitar and bass parts.
- The GI-10 also allows you to use a microphone and sing a line that is too difficult to play on a keyboard. The GI-10 can indeed convert your singing (pitch) to MIDI note messages.

Using "specialists" for recording your User Styles will add to the realism of your accompaniments. In fact, most of the RA-800's Styles have been recorded by "real" musicians that played on the above instruments, which is why they sound so convincing. The only thing to worry about when recording User Styles using external MIDI controllers is the MIDI channel of your external controller:

User Style track	Part	MIDI channel
1	ADR (drums)	10
2	ABS (bass)	2
3	ACC1 (melodic accompaniment)	1
4	ACC2	3
5	ACC3	5
6	ACC4	7
7	ACC5	8
8	ACC6	9

Note: Set the guitar-to-MIDI controller so that it sends MIDI messages on one channel rather than six.

Connect the MIDI OUT connector of the external controller to the MIDI IN A connector of your RA-800 and you are ready to go. See "Recording User Styles from scratch" for how to record User Styles.

12.6 Where to go from here – Editing User Styles (2)

User Style Edit mode

User Style Edit mode provides eight functions: Erase, Delete, Insert, Quantize, Transpose, Change Velo, Change Gate Time, and Track Shift. See the *Reference Manual* for a detailed description of the available parameters and their setting ranges.

Here is how to select these Edit functions:

- (1) Select the User Style mode by pressing [F4] (UsrStl) on the Master page.
- (2) Press [F4] (Edit) to select the User Style Edit mode.
- (3) Use the [SHIFT] and function keys to select the desired User Style Edit mode:

Edit mode	How to select it
Erase	[F1] (Erase) (or [SHIFT] + [F1])
Delete	[F2] (Dlte) (or [SHIFT] + [F2])
Insert	[F3] (Insrt) (or [SHIFT] + [F3])
Transpose	[F4] (Trnsp) (or [SHIFT] + [F4])
Change Velocity	[SHIFT] + [F1] (Velo) (or [F1])
Quantize	[SHIFT] + [F2] (Quant) (or [F2])
Change Gate Time	[SHIFT] + [F3] (GateT) (or [F3])
Track Shift	[SHIFT] + [F4] (Shift) (or [F4])

If, after selecting one of these functions, you decide not to execute the transformation, press [UPPER1] (Rec) or [F5] (Exit) before pressing [M.DRUMS] (Execute).

The Edit functions' parameters are located on two or three display pages you select using the [PAGE] ▲▼ buttons. Entering the right values to achieve the desired result may at first take some time. Here are a few guidelines:

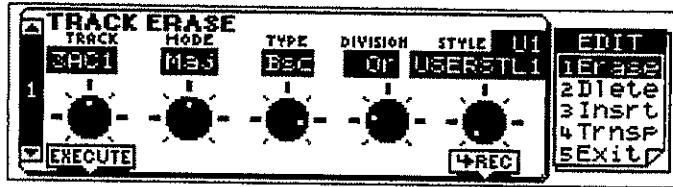
- Always start by selecting the User Style you wish to edit. You can do so on the first User Style\Rec page or on the first page of the selected edit function.

- Next, select the track(s) you wish to modify (1-ADR, 2-ABS, 3-AC1~8-AC6, or All). Do not forget to specify the pattern you wish to correct. Remember that you specify a pattern by entering the Mode (M, m, 7), the Type (B, A), and the Division (Or, Va, In, Ed, Fo, Fv or All).
- Select the range (From Bar, Beat, CPT~To Bar, Beat, CPT) for the edit operation.
- Enter what should be changed and how it should be changed.
- Execute the operation by pressing [M.DRUMS] (Execute).

Example: using Erase to remove Panpot settings

Note: Save your User Style to disk before continuing if you wish to keep the original Style. See "Saving your Style to disk".

- (1) Press [F1] (Erase) (or [SHIFT]+[F1]) on any User Style Edit page to select the Erase function.

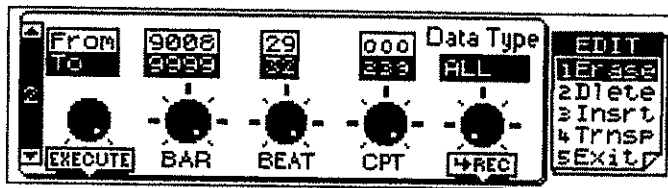


- (2) Use the [DRUMS/PART] knob to select the track whose data you wish to delete. The default setting is the last track you selected. Let's select 3AC1 (the first accompaniment track).
- (3) Use the [ACCOMP/GROUP], [BASS/BANK], and [LOWER/NUMBER] knobs to select the Mode (M, m, 7), the Type (B, A), and Division (Or, Va, Fo, Fv, In, Ed).

Note: The Type and Division can also be selected by pressing the corresponding buttons on the front panel.

- (4) If you haven't yet selected the User Style to edit, you can do so now using the [UPPER/VARIATION] knob. Select User Style 1.

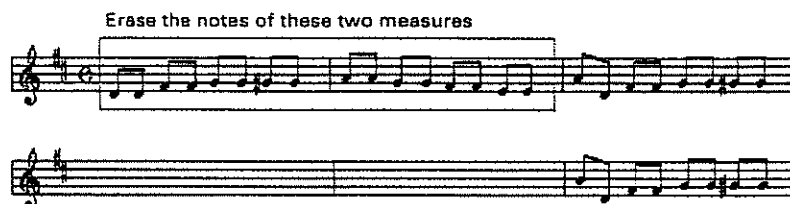
- (5) Press [PAGE] ▼ to select the Edit\Erase\2 page.



- (6) Use the [DRUMS/PART] knob to select the From level, and specify the position where the RA-800 is to start erasing ([ACCOMP/GROUP] Bar, [BASS/BANK] Beat, and [LOWER/NUMBER] CPT). Leave the default values (From 1-1-0 to end of track) to erase the data of the entire track.
- (7) Use the [UPPER/VARIATION] knob to select the Data Type to be erased. Set Data Type to PanPt.
- (8) Press [M.DRUMS] (Execute) to erase the selected data.

Track Erase ([F1])

Track Erase allows you to remove notes and/or other MIDI events (Note, Modul, PanPt, Expre, Revrb, Chorus, PChang, PBend, NRPN) from the selected track without removing the measures themselves:

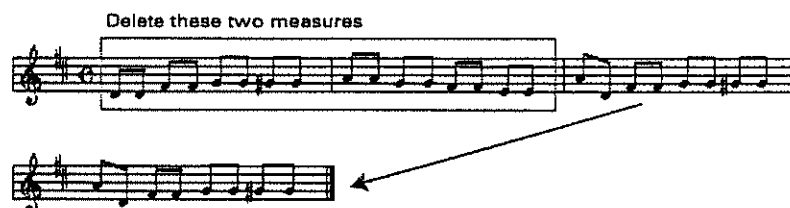


You can use Erase to remove just one type of data (for instance the continuous Panpot settings you recorded in realtime), while keeping all other data you recorded. In other words, Erase is a “selective” delete function.

Note: This function is duplicated by the Micro\Erase function.

Track Delete ([F2])

Though similar to Erase, the Delete function also removes the selected measures. You cannot select the data type to be deleted because Delete removes everything.



At first sight, Delete may appear to duplicate the Length function, but Delete is more flexible: whereas Length always leaves the beginning of a pattern intact, you can set the Delete From/To pointers in such a way that only the first bar of a pattern will be erased, for instance.

Delete means “delete all measures within the specified range” (for example bars 1 and 2 of a pattern, so that bar 3 becomes bar 1).

Track Insert ([F3])

Insert allows you to make an existing pattern longer by adding rests at the specified position. This will make room for new data and shift data that lie behind the From position further to the right. New data can either be added in realtime (do select Record Merge, though), by copying them to the specified position, or in Microscope mode.

Note: The Insert function does not provide a To pointer. Instead, you have to specify the length of the insert using the For value. “For 2 Bars, 2 Beats, 240 CPT” thus means “insert 2 bars, 2 beats and 2 beats” (because 120CPT = \downarrow).

Note: This function is duplicated by the Micro\Insert function.

Track Transpose ([F4])

Transpose allows you to change the key of what has already been recorded. It can be invaluable for tricky Intro/Ending patterns that you prefer to play only once. Copy the excerpt and transpose it in accordance with the harmonies of the other tracks.

Track Velocity Change ([SHIFT]+[F1])

Velocity Change allows you to boost (positive values) or reduce (negative values) the velocity of what you recorded. Use this function to make a part (or an excerpt) louder or softer.

Track Quantize ([SHIFT]+[F2])

Use this function if you chose not to quantize your music during recording and then realize that the timing is not quite what you expected it to be. Quantizing after recording has the advantage that you can first listen to the original and then correct only those notes whose timing is definitely off.

Quantizing during recording, on the other hand, will correct the timing of all notes, which tends to make a track sound robot-like.

Track Change Gate Time ([SHIFT]+[F3])

As stated earlier, Hold messages (CC64) sent by an optional DP-2, DP-6, or FS-5U footswitch are converted into the equivalent duration. Gate Time allows you to correct erroneous "Hold messages" by reducing the duration of the corresponding notes.

You can also use Gate Time to make existing notes longer (or shorter). That may be necessary if you recorded a track using a Tone with a long release, and then decide to use a Tone with a shorter release (or vice versa).

Track Shift ([SHIFT]+[F4])

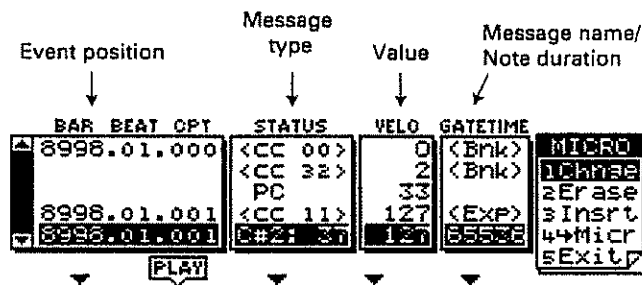
Shift allows you to move notes you have already recorded. This function is useful when you record User Styles based on sequences (see "Programming User Styles using an external sequencer") and then notice that all parts were recorded with a short delay. It is also useful for Tones with a slow attack. (Shift allows you to position all notes of such parts a little ahead of the mathematically "correct" clock). Again, Shift is applied to the selected To/From range.

Note: This function is similar to the Micro\Move function.

Editing in Micro mode

The RA-800's Micro mode is identical to the Microscope mode of a Roland MC series sequencer or the Grid Edit (or whatever it may be called) mode of a sequencer program. It allows you to edit events (notes, modulation data, program change, bank select, etc.) on a step-by-step basis.

A typical Micro page looks like this:

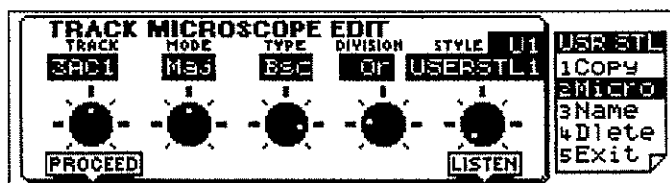


Most Micro pages feature a PLAY parameter (press the corresponding Part Select button) that allows you to audition the selected note (bank select messages, etc., obviously cannot be auditioned but will change subsequent notes). Notes will also be played back when you scroll through the events using the [PAGE] ▲▼ buttons.

As its name implies, the Micro mode is far more precise than the Edit functions – but also more time-consuming. Choose whichever mode is more convenient for you to modify existing data.

Here is how to select the Micro mode:

- (1) Press [F4] (UsrStl) to call up the Micro mode.
- (2) On any User Style\Rec page, hold down [SHIFT] and press [F2] (Micro).



- (3) Select the track and pattern (Mode, Type, Division) you wish to edit in Micro mode.
- (4) Press [M.DRUMS] (Proceed) to continue or [UPPER1] to listen to the selected pattern.
- (5) Select the edit function you need by pressing the corresponding function key.

Micro function	How to select it
Change	[F1] (Chnge)
Erase	[F2] (Erase) (or [SHIFT] + [F2])
Insert	[F3] (Insrt) (or [SHIFT] + [F3]) – Insert event [SHIFT] + [F1] (Insrt) – specify the type and value of the inserted event
Move	[SHIFT] + [F1] (Velo) (or [F1]) – Select the event to be moved [SHIFT] + [F1] (Velo) – Specify the new position of the selected event
Copy	[SHIFT] + [F2] (Copy) (or [F2]) – Select the event to be copied [SHIFT] + [F1] (Copy)– Specify the destination

See the *Reference Manual* for details about these functions. On the whole, they are pretty straight-forward and sufficiently flexible to grant you a considerable amount of liberty.

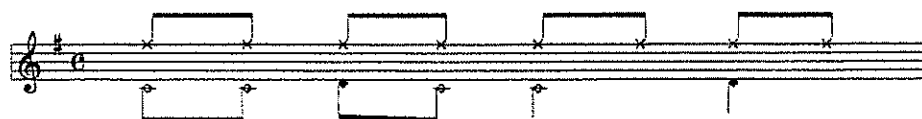
Note: If you are interested in a guided tour about inserting events, see "Example: recording in Step time".

Note: Every time you leave a Micro page (to select another function) or the Micro mode (by pressing [F5] (Exit), the display responds with an Executing message to indicate that your changes are being processed. There is no way to leave the Micro mode without confirming your latest settings (which might act as Undo). In other words, even if you do not Execute a function, it will nevertheless be carried out as soon as you leave the Micro mode.

In the Micro mode, you can press [F4] to return to the first Micro page (see above).

12.7 Example: recording in Step time

You can also record in Step time using the User Style Micro function. Let's program the following drum pattern (one bar):

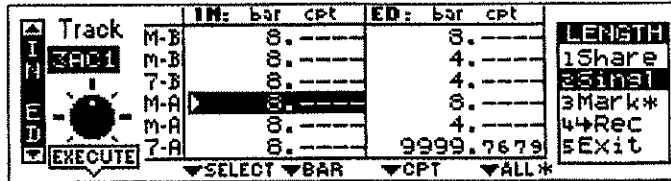


It is a simple groove consisting of a bassdrum (C2 or MIDI note number 36), a snare (D2 or note number 38), and a HiHat (F#2 or note number 41).

Let's assume that you just switched on your RA-800, so that the User Style memories are empty, and that you selected a container (Major/Basic/Intro, for example). The first thing we have to do is create an empty measure using the Length function.

Specifying the pattern length

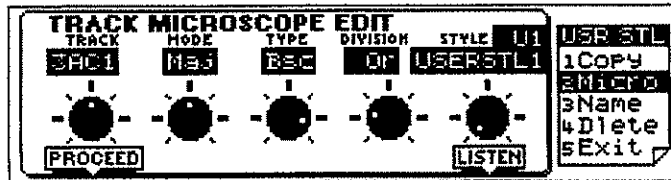
- (1) On the Master page press [F4] (UsrStl).
- (2) Press [F2] (Length).
- (3) Use [PAGE] ▼ to select the In/Ed Length page.



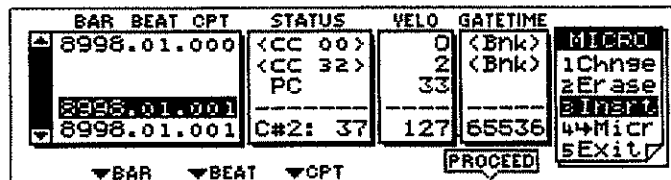
- (4) Use [DRUMS/PART] to select All (all tracks) or 1ADR.
- (5) Use the [ACCOMP/GROUP] knob to place the cursor (the black line) on the M-B line of the In column.
- (6) Use the [BASS/BANK] knob to enter the value 1.
Our pattern will indeed be 1 bar long.
- (7) Press [M.DRUMS] (Execute) to confirm the length you specified.
Wait until the OK Function Complete message has disappeared.
- (8) Press [F4] to jump back to the first User Style page.

Step time record

- (9) Hold down [SHIFT] while pressing [F2] to select the User Style\Micro mode.

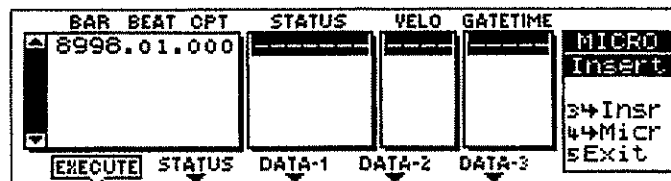


- (10) Select the 1ADR track and set Mode=Maj, Typ= Bsc, and Division= In.
The name of the ADR track must appear in uppercase letters.
- (11) Press [M.DRUMS] (Proceed) to select the next Micro page.
- (12) Press [F3] (Insert).
Since there is no "create event" function, we have to look for another way to create events. Inserting events actually comes down to creating new ones.



Let us start with the bassdrum.

- (13) Use the [DRUMS/PART] knob to set Bar= 1.
The Beat and CPT values are already set to "1" and "0" respectively, so there is no need to change them here.
- (14) Press [UPPER1] (Proceed).








You have just inserted an event that is now selected but still empty. Let us define the event:

- (15) Press the C2 key on your external keyboard or play a C2 on your controller.
If you hear a bassdrum sound, you hit the right C (the second from the left). You could also select the note using the [BASS/BANK] knob but that takes more time...
- (16) Use the [LOWER/NUMBER] knob to set the velocity value to 127.

If you specify the note via the keyboard, the RA-800 also reads the velocity value and inserts it.

- (17) Use the [UPPER/VARIATION] knob to set the GateTime value (duration) to 1.
 Since one quarter note equals 120 CPT, the duration of the note will be extremely short.
 However, for melodic parts, specify the right Gate Time (see the table below):

Note	CPT	Note	CPT
o	480		90
	240		60
	120		30

- (18) Press [M.DRUMS] (Execute) to confirm your settings.
 (19) Enter the values Bar= 1, Beat= 1, CPT= 60 using the [DRUMS/PART], [ACCOMP/GROUP], and [BASS/BANK] knobs respectively.

You just specified the second quaver (eighth note) of the first beat.

- (20) Press [UPPER1] to insert an empty event and jump to the second Insert page.
 (21) Press the C2 key on your external keyboard or play a C2 on your controller.
 (22) Use the [LOWER/NUMBER] knob to set the velocity value to 90.
 (23) Use the [UPPER/VARIATION] knob to set the GateTime value (duration) to 1.
 (24) Press [M.DRUMS] (Execute) to confirm your settings.
 (25) Now insert the remaining notes.

For your reference, here are the positions to specify and the keys to press:

Instrument	Position (Bar-Beat-CPT)	Velocity *	Key
Bassdrum	1-2-60	90	C2 (36)
	1-3-0	127	
Snare	1-2-0	120	D2 (38)
	1-4-0	127	
HiHat	1-1-0	127	F#2
	1-1-60	100	
	1-2-0	115	
	1-2-60	100	
	1-3-0	120	
	1-3-60	100	
	1-4-0	115	
	1-4-60	100	

* These are only suggestions.

As you see, it is perfectly possible to program sequences in Step time.

- (26) Press [F4] (Micro) to return to the Track Microscope edit page.
 (27) Press [SHIFT]+[F1] to return to the User Style\Rec page.
 (28) Press [START/STOP] or Recorder [PLAY ►/STOP ■] to listen to your pattern.

Note: You can also listen to your pattern on the Insert pages by pressing [START/STOP]. If you want to scroll through the events, use the [PAGE] ▲▼ buttons.

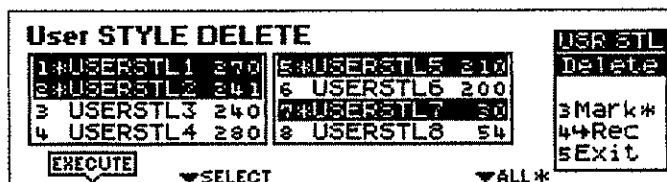
12.8 Deleting a User Style from a User Style memory

Delete is a function you will probably never need. For one, loading a new User Style from disk means that the previous Style in the target memory will be deleted automatically. Furthermore, all User Styles are deleted when you power off your RA-800.

Note: Before even thinking about selecting Delete, save the Style you are about to sacrifice to disk unless you are totally and utterly sure that you will never need it again.

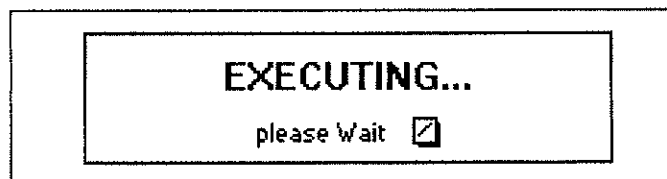
Alright, we warned you... So here is how to delete one or several Styles:

- (1) In the User Style mode, hold down [SHIFT] and press [F4] (Delete) (or just press [F4] if the 4 Dlete function is "on the menu").

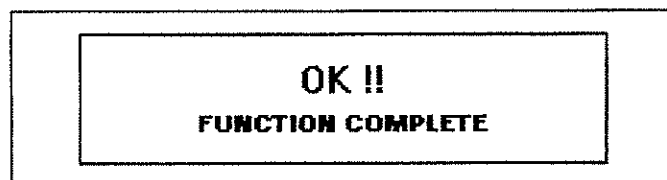


- (2) Use the [ACCOMP/GROUP] knob to place the cursor on the User Style you wish to delete, or use the [UPPER/VARIATION] knob to select the first four Styles (1-4), the next four (5-8) or all Styles. You can also select Style 1, 5, and 8 to be deleted. To do so, select them and press [F3] (Mark) to mark them (*).
- (3) After selecting the Styles to be deleted (do yourself a favour and double-check this), press [M.DRUMS] (Execute) to delete the Style(s).

The display will respond with:



The Styles will be deleted, after which the display tells you:



The display now returns to the first User Style\Rec page.

13^{MIDI}

MIDI is short for *Musical Instrument Digital Interface*. The word refers to many things, the most obvious being a connector type that is used by musical instruments and effects devices to exchange messages relating to the act of making music. Every time the RA-800 plays in response to the MIDI messages it receives, it will send MIDI data to one of its MIDI OUT ports. If you connect those ports to the MIDI IN port of another instrument, that instrument may play the same notes as one of the RA-800's parts.

MIDI is a language that translates every action relating to music into binary digits that can be transferred via a MIDI cable. It is a universal standard, which means that musical data can be sent to and received by instruments of different types and manufacturers. Furthermore, MIDI allows you to connect your RA-800 to a computer or hardware sequencer.

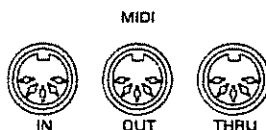
As stated all along in this manual, there are two ways of using the RA-800: by controlling it on its Basic Channel or via multiple channel control. The RA-800's MIDI parameters are surprisingly flexible (and numerous), so that almost any advantage of the Basic Channel control approach can be simulated (or duplicated) by clever MIDI parameter settings. One good reason for not doing so is that there are only 8 MIDI Sets, while the Basic Channel functions (Keyboard Mode and Arranger Chord to name but a few) are regular "registration parameters" that can be saved to a Performance Memory – of which there are 192. Seeing that Performance Memories also contain settings relative to Tone and Style selection, Part parameters, etc., you should use (and save) the MIDI parameter settings as sparingly as possible. Try to save as much as you can in the RA-800's Performance Memories. That will save you a lot of time both at home (because you do not have to program complex splits, etc.) and on stage (because everything can be recalled a the touch of one button). A MIDI Set (and the MIDI parameters in general) should be used the way they are intended: to optimise your MIDI setup. As such, even one memory should suffice. If one of the factory presets works for your application, don't even bother to read the following. If you wish to record the RA-800's performance with an external sequencer, read on.

13.1 MIDI in general

Requirements for receiving and transmitting MIDI data

MIDI connectors

MIDI messages are transmitted and received using three connectors and special MIDI cables:



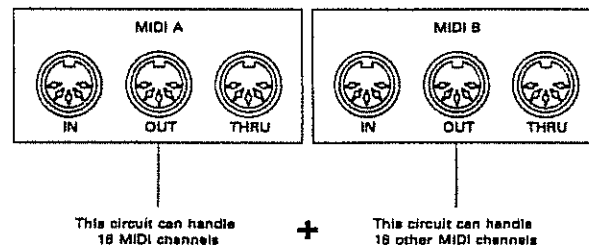
Connector	Function
MIDI IN	This connector receives messages from other MIDI devices.
MIDI OUT	This connector transmits MIDI messages generated on your RA-800
MIDI THRU	This connector "echoes back" all MIDI messages received via MIDI IN

Explaining MIDI in great detail lies beyond the scope of this Player's Guide. There is a booklet called *MIDI Guide* available from your Roland dealer that tells you the ins and outs of MIDI.

Channels

MIDI can simultaneously transmit and receive messages on 16 channels, so that up to 16 instruments can be controlled. Nowadays, most instruments –like your RA-800– are multitimbral, which means that they can play several musical parts with different sounds. That concept is not difficult to understand. Just think of your RA-800: it is equipped with an Arranger capable of playing the drums, the bass, and up to six accompaniment part, while at the same time allowing you to play up to four Realtime parts (Upper1, Upper2, Lower, and Manual Bass). The capacity to play all those parts using different Tones or sounds is called multitimbral. The same is true of sound modules such as the Sound Canvas series, the JV-1080, and indeed the XP series synthesizers.

Contrary to most available multitimbral instruments, however, your RA-800 can handle up to 32 MIDI channels. Now is that at all possible if MIDI only accommodates 16 channels? Yes, it is. The RA-800 is equipped with two separate MIDI circuits, called A and B. In other words, there are two MIDI INputs (A and B), two MIDI OUTputs (A and B), and also two MIDI THRU connectors (A and B):



There is no internal link between these two MIDI circuits, so that you can use $2 \times 16 = 32$ MIDI channels. In other words, your RA-800 is capable of playing 32 parts.

MIDI data

The most important aspect of the MIDI standard is that it allows one instrument to tell another when to play a note, for how long, and how strongly it should be played. These messages are called *note-on*, *note-off*, and *velocity* messages.

Other aspects of a musical performance include modulation (vibrato), pitch bend (bending), volume, panpot, etc. See the MIDI Implementation Chart for the MIDI data that your RA-800 receives and transmits.

Yet another group of MIDI messages is used to tell the receiver when to select another sound and which sound to select. These messages are called *bank select*, and *program change*. In fact, these are the messages that are automatically recorded at the beginning of each Style division and saved to a Performance Memory so that you can recall the Tone selection for all available parts pressing just a few buttons (Group, Bank, and Number). Program change and bank select messages also allow you to select Performance Memories, Styles, and Drum Sets (for the MDR and ADR parts).

Still other MIDI data allow you to synchronize two MIDI instruments so that they start and stop at the same time and run at the same tempo. You may remember that is what we did while programming User Styles via MIDI.

Finally, MIDI also allows to transmit parameter values in three ways:

Data type	Name
Parameter data for modifying settings available on all GM/GS sound sources. = Pitch Coarse/Fine, Pitch Bend Range	RPN (Registered Parameter Number)
Parameter data supported by only one type of instrument (usually of the same brand, such as the Sound Canvas family) = Part parameters	NRPN (Non-Registered Parameter Number)
Parameter data available only on certain instruments (usually only one model).	SysEx (System Exclusive)

MIDI on your RA-800

Again, this introduction does not cover everything that could be said about MIDI. It is merely intended to give you an idea of what you can do and to encourage you to explore the countless possibilities of MIDI.

MIDI channels & RX parts

Before showing you the factory assignment of the RA-800's parts to the MIDI channels, there is something else you have to know. Your Realtime Arranger is equipped with three parts that can only be played via MIDI. They work the same as the RA-800's Realtime parts, but you cannot select them on your RA-800. You could take advantage of those RX parts when using a computer or hardware sequencer for sequencing.

In other words, the RA-800's tone generator still has room for three more parts.

Here are the MIDI channel assignments:

Part	MIDI channel	Part	MIDI channel	Function	MIDI channel
Upper1	A4 ^a	A.Drums	A10	Style Select	A10 ^b
Upper 2	A6	A. Bass	A2	Basic Channel	A13 (Off) ^c
Lower	A11	Ac1	A1		
M.Bass	A12	Ac2	A3	Recorder Song Parts	B1~B16
M.Drums	A16	Ac3	A5		
RX1	A13	Ac4	A7		
RX2	A14	Ac5	A8		
RX3	A15	Ac6	A9		

(a) The letters A and B refer to the MIDI circuit. If you want the Upper1 part to send data to another module, you must connect the MIDI OUT A port to the module's MIDI IN port.

(b) This is possible because the Drum Sets are assigned to CC0=0 numbers, while the Style Select messages are always assigned to CC≠0 numbers.

(c) On in TX mode

These factory assignments are the same for sending (TX) and receiving (RX) MIDI data but can be set individually. Unless you have a very good reason, we recommend that you do not change them. Setting another MIDI receive or transmit channel may, however, be necessary for compatibility reasons with or sequences you recorded before purchasing the RA-800. As a rule, it is usually better to adapt your controller's MIDI channels to those of the RA-800.

Note: In a way, the Sng-B1~B16 parts work the same as the three RX parts: you can control and play them via MIDI to expand the number of parts on your RA-800. Contrary to the RX parts, however, the Sng parts also send MIDI data whenever you play back a Standard MIDI File using the RA-800's Recorder.

13.2 MIDI connections

Receiving MIDI data from external instruments

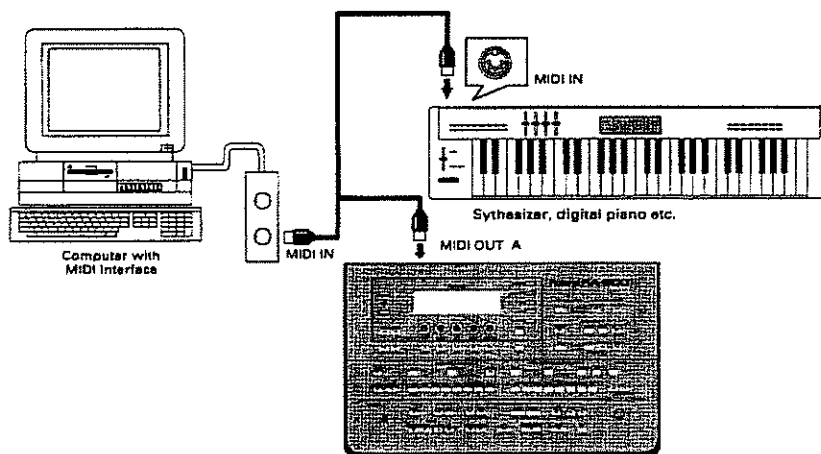
As you know by now, the RA-800 will only play in response to MIDI messages received from a master keyboard, a MIDI accordion, etc. A sequencer or computer with sequencer software should be connected in exactly the same way (that is, its MIDI OUTPUT to the RA's MIDI INPUT).

If the MIDI channel number of the part you wish to play via MIDI is preceded by an "A", you must connect the external controller to the MIDI IN A port. If the part you wish to control via MIDI is preceded by a "B", you must connect the external controller to the MIDI IN B port. As stated all along in this manual, you should take advantage of the RA-800's Basic Channel as much as possible. That way, you can use the KBD Split and Arranger modes as if you were playing on a G-800 (the keyboard version of the RA-800). **Tip:** The Song parts (i.e. the parts used for Recorder playback) are also available in Arranger mode, so that you can use your RA-800 as Realtime Arranger and 16-part multitimbral module at all times!

Note: Depending on the factory preset (or your own) MIDI Set you select, not all RA-800 Parts receive MIDI messages. See the MIDI Set table on page 163

Sending MIDI data to external instruments or computers

To have another instrument sound in response to the notes played by the RA-800, or to have a computer or sequencer record what you are playing, you must make the following connections:



If you want an external module to sound in response to the data sent by the Upper1 part, connect the module's MIDI Input to the RA-800's MIDI OUT A port.

Note: All RA-800 parts are set to send MIDI messages. If your external module does not seem to respond to the messages you send, you should check whether the external module's MIDI IN is connected to the right MIDI OUTPUT of your RA-800.

13.3 Receiving MIDI data

As stated above, changing the factory set MIDI channel assignments is probably not a very good idea. It may be necessary, though, to address certain problems related to the other MIDI instruments you use.

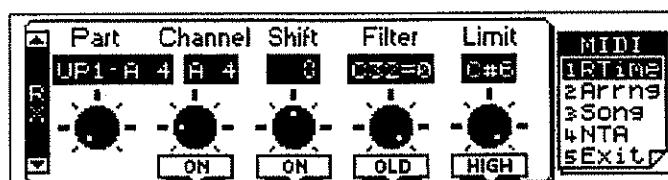
These assignments can be saved to a MIDI Set and recalled whenever you need them. That also means that any changes you make in MIDI mode are not automatically saved when you power off your RA-800 – nor are they saved to a Performance Memory.

Receive channels (RX) and switches

Realtime sections (RTIME)

Let us set the Upper1's MIDI receive channel to B1:

- (1) On the Master page, press [F3] (Midi).



- (2) Press [F1] (RTIME) to select the Realtime level.
The RX page is already selected, otherwise use the [PAGE] ▲▼ buttons to select it. (RX is short for *MIDI reception*.)
- (3) Use the [DRUMS/PART] knob to select the Upper1 (UP1) part.
- (4) Use the [ACCOMP/GROUP] knob to set Channel = B1.
Selecting B1 means that you assign MIDI channel 1 to the Upper1 part, and that the part now responds to MIDI channel 1 data received via the MIDI IN B port.
- (5) Press [F5] (Exit) to return to the Master page.

Arranger and Song sections (Arrang and Song)

Assigning other MIDI receive (RX) channels to the Arranger (ADR, ABS, AC1~AC6) and song parts (Sng B1~B16) is similar to assigning a receive channel to a Realtime, except that in step 2, you have to press [F2] (Arrang) or [F3] (Song).

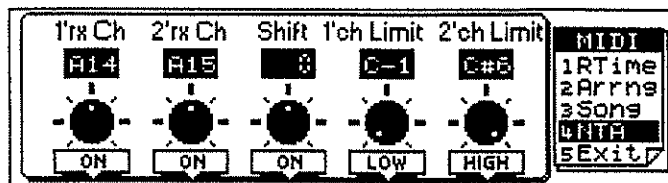
Note: Apart from the Realtime parts, you can also select the three RX parts (1, 2, and 3) on the Arrang page, i.e. the Realtime parts that can only be set (Tone selection, volume, etc.) via MIDI.

NTA channel

You may remember (see "NTA (Note To Arranger)") that NTA is short for Note to Arranger, or the notes you play in the chord recognition area. If you want the Arranger to use these notes, you must send them on the MIDI channels assigned to the NTA function. You probably noticed the plural in "channels". There are indeed two NTA receive channels, which is convenient for controlling the RA-800 using a MIDI accordion or any other MIDI instrument capable of transmitting on two channels. (MIDI accordions send their chord and bass notes on different MIDI channels, which should be no problem for your RA-800.)

Tip: You could also take advantage of these two NTA channels to control the Arranger from two external master keyboards or a PK-5 MIDI bass pedal unit.

- (1) On the Master page, press [F3] (Midi).
- (2) Press [F4] (NTA) to select the NTA level.



Note that there is no need to select the RX page because there is no TX page for the NTA level. The notes played by the RA-800's Arranger are indeed transmitted via MIDI, so there is no need to send the NTA notes themselves.

Before setting the (or just one) NTA receive channel, see the manual of your external MIDI controller to find out which channel(s) it transmits on.

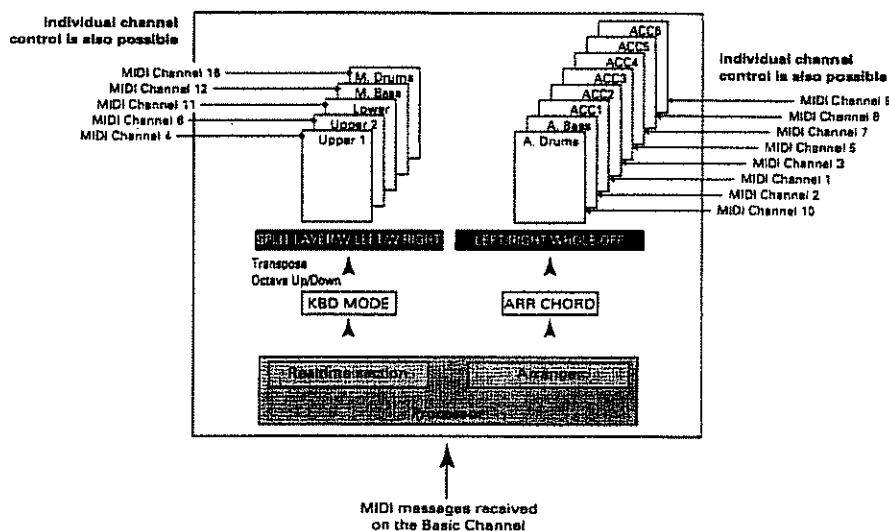
- (3) Use the [DRUMS/PART] knob to set the first NTA receive channel (1'rx Ch) and the [ACCOMP/GROUP] knob to set the second NTA receive channel (2'rx Ch).
- (4) Press [F5] (Exit) to return to the Master page.

Basic channel

The Basic Channel is the MIDI channel used for receiving and transmitting program change and bank select messages relating to the selection of Performance Memories. In other words, every time you select a Performance Memory on your RA-800, it will send a series of MIDI messages to the MIDI OUTput and on the MIDI channel you select on the TX page.

Likewise, if the RA-800 receives a series of messages (bank select and program change) on the Basic channel, it will select the Performance Memory that is assigned to the numbers contained in the received MIDI messages.

Furthermore, controlling the RA-800 on its Basic Channel has the advantage that messages sent on one MIDI channel can be used to control several RA-800 parts. Consider the following illustration:



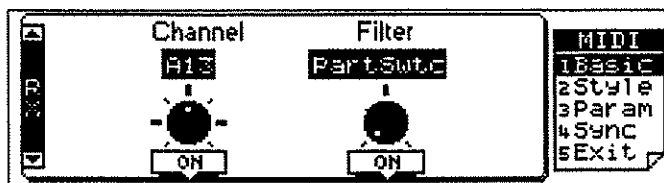
As you see, transmitting MIDI messages on the RA-800's Basic Channels provides access to the KBD MODE and ARR CHORD processors, so that you can control several parts (receiving on different MIDI channels) at once. Transmitting on the MIDI channel assigned to the desired part, however, bypasses the RA-800's processors. In that case, the Keyboard Mode and Arranger Chord Zone (Left, Right, etc.) no longer apply.

One important thing to bear in mind, however, is that the Parts triggered via Basic Channel control do not transmit on their data on the Basic Channel but on their individual channels, which makes sense for those who want to record their RA-800 performances using an external sequencer. Performance Memory selection messages (program change and bank select), on the other hand, *are* transmitted on the Basic Channel.

Just like the Realtime, Arranger, and Song parts, the Basic Channel's receive (RX) and transmit (TX) channels do not need to have the same numbers. It is perfectly possible to select Basic RX= A10 and Basic TX= B4, for example.

Here is how to set the Basic receive channel:

- (1) On the Master page, press [F3] (Midi).
- (2) Hold down [SHIFT] while pressing [F1] (Basic).



If the RX page is not selected, press [PAGE] ▲▼ to select it. The TX page allows you to specify the Basic transmit channel.

- (3) Use the [ACCOMP/GROUP] knob to set the Basic receive channel.
- (4) Press [F5] (Exit) to return to the Master page.

To specify the Basic transmit channel, press [PAGE] ▲▼ to select the Basic TX page.

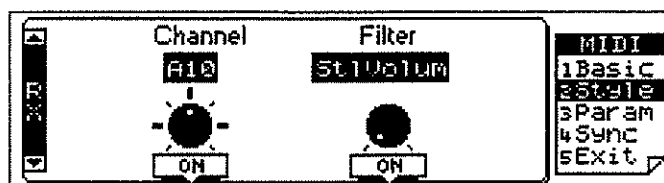
Note: After setting the Basic Channel, it is of prime importance to set the receive switch of the Arranger or Realtime part, that receives on the MIDI channel of the same number, to Off. Otherwise, you end up controlling the entire Basic Channel section (see the drawing above) as well as the part in question, which is probably not what you want. That is why most factory preset MIDI Sets contain several Off settings for the receive switches of the parts you are not supposed to control (refer to the MIDI Set table on page 163).

Style Select channel

As its name implies, the Style Select channel is used to receive and transmit program changes that cause the RA-800 or the receiver to select another Music Style. Note that the User Style memories can also be selected via MIDI.

Let us set the Style Select transmit (TX) channel to B16:

- (1) On the Master page, press [F3] (Midi).
- (2) Hold down [SHIFT] while pressing [F2] (Style).
- (3) Press [PAGE] ▼ to call up the MIDI\Style\TX page:



- (4) Use the [ACCOMP/GROUP] knob to set Channel to B16.
- (5) Press [F5] (Exit) to return to the Master page.

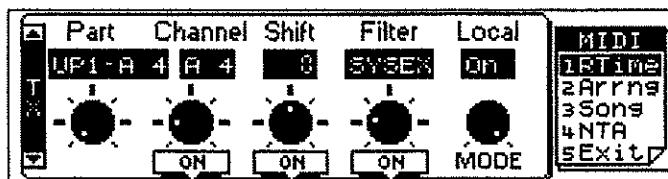
Recorder and MIDI Inputs

In Arranger mode, the Recorder tracks 1–16 are automatically connected to MIDI Input A, so that MIDI data coming from external modules will be recorded along with the Arranger and Realtime parts. You can also send data to the MIDI Input B parts but they will not be recorded.

In GM/GS mode, however, all external MIDI parts you want to record along with the Realtime parts (i.e. without using the Arranger) must be connected to MIDI Input B.

13.4 Transmit (TX) channels and transmit switches

The transmit channels of the Realtime, Arranger, and Song sections as well as of the Basic, and Style Select channels are the MIDI channels on which the respective parts or functions send their data. Setting them is similar to setting the receive channels, except that you have to select the TX page. A typical TX page looks like this:



If you do not want a part to select MIDI messages, set the Channel switch to Off.

Note: When you use a digital piano (or the digital piano MIDI Set) to control the RA-800 on its Basic Channel, while taking advantage of the EXT KBD CANCEL and/or Soft Thru functions, it is important to switch off the transmission of the Realtime or Arranger part that sends its data on the same channel as the Basic Channel. Otherwise, the piano's sound source not only reproduces the notes you play on its keyboard but also the notes played by the RA-800's part transmitting on that MIDI channel. This will either cause each note to be sounded twice or two parts being played by the digital piano.

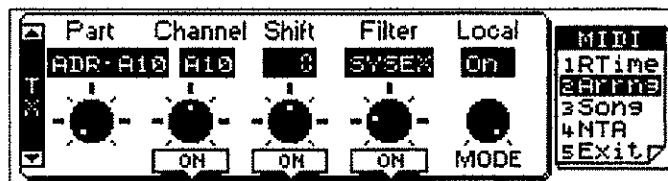
13.5 Other MIDI settings

Switching Off MIDI reception/transmission

As stated above, the RA-800's parts are set to send and receive MIDI data. In some cases, however, you may not want a certain part to respond to MIDI messages received from an external controller. Likewise, you can have the RA-800 play a part without it sending MIDI messages to the receiver. In those cases you have to set MIDI reception or transmission to Off using the On/Off switch located below the selected part's MIDI channel.

Suppose that you do not want the ADR part to send MIDI data to an external module. Here is how to switch off MIDI transmission:

- (1) On the Master page, press [F3] (Midi).
- (2) Press [F2] (Arrang) to select the Arranger level.
- (3) Press [PAGE] ▼ to call up the MIDI\Arrang\TX page:



- (4) Select the ADR part using the [DRUMS/PART] knob.
- (5) Press the [M.BASS] button to set the Channel switch to Off.
The ADR part will no longer transmit MIDI data (channel 10, MIDI OUT A).
- (6) Press [F5] (Exit) to return to the Master page.

MIDI receive/transmit filters

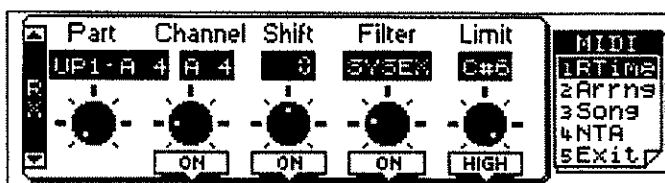
Turning off MIDI reception by pressing the [M.BASS] button of the selected part on the MIDN..RX or MIDN..NTX page means that the part in question no longer responds to or sends MIDI data. It is also possible, however, to specify just one or a few types of

messages that should not be received or transmitted rather than turning off MIDI reception altogether.

Thus, if you want the Upper2 part to play the notes received via MIDI without selecting another Tone in response to incoming bank select and program change messages, you must activate MIDI reception but switch off reception of MIDI program change/bank select data. That is what the Filter parameter on the RX pages is for.

Other messages that can be filtered are: PBend (pitch bend), Modul (modulation), Volm (volume), PanPt (pan), Expre (Expression), Hold, Sost (Sostenuto), Soft, Reverb (reverb), Chors (chorus), Delay, ACtrl (assignable controller function), RPN (registered parameter number), NRPN (non registered parameter number), SysEx (system exclusive), CC32=0. Let us activate the bank select/program change filter for the Upper1 part so that it doesn't select other Tones in response to MIDI messages received from an external controller:

- (1) On the Master page, press [F3] (Midi).
- (2) Press [F1] (RTIME) to select the Realtime level.
- (3) Press [PAGE] ▲▼ to call up the MIDI\RTIME\RX page:



- (4) Use the [DRUMS/PART] knob to select UP1 (Upper1).
- (5) Use the [LOWER/NUMBER] knob to select Filter= PChng.
- (6) Press Part Select [UPPER2] to set the Filter switch to Off.

If you want to filter other MIDI messages, select them using the [LOWER/NUMBER] knob and press Part Select [UPPER2] to switch off reception.

To activate reception of one of these message types, press Part Select [UPPER2] to select On again.

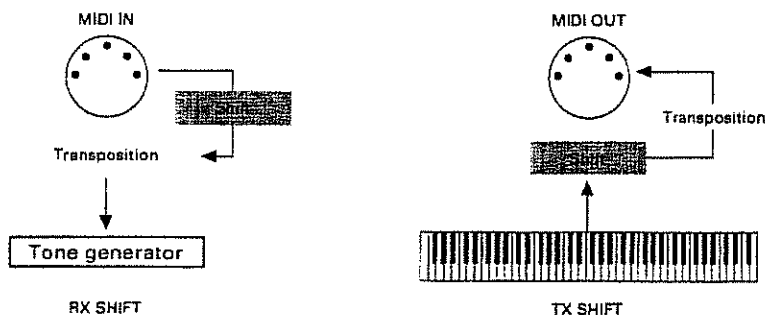
Note: The above setting (PChng) also means that the Upper1 part does not respond to bank select messages.

One switch, CC32=0, only allows you to select Old or New. You may remember this switch from the Recorder mode: it specifies whether to select an A/B (New) or C/D (Old) Tone whenever the CC32 bank select message is missing or equals 0. That allows you to take advantage of the RA-800 sounds without editing the sequence that you are playing back.

- (7) Press [F5] (Exit) to return to the Master page.

Shift and RX Octave

The Shift function on the RX and TX pages allows you to transpose MIDI note messages in semitone steps before sending them to the RA-800's tone generator (RX) or before sending them to the MIDI OUTPUT you specify for a given part (TX):

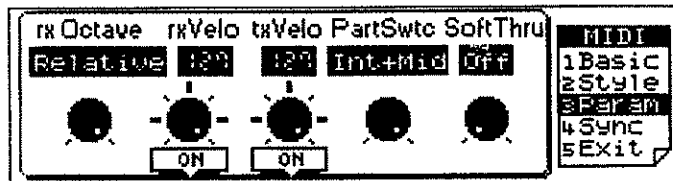


You could play in the key of D, but send the corresponding MIDI note numbers in the key of A by setting the TX Shift parameter of the part in question to +7. The same is true of

the notes received via MIDI IN A or B: you can transpose the notes sent by the external MIDI master keyboard or sequencer before sending them to the RA-800's tone generator, so that a melody in the key of A will be played back by the RA-800 in the key of C#, for example.

Note: If you transmit your MIDI messages directly to the RA-800 you wish to control, RX Shift is the only way to transpose that part. The TRANSPOSE and OCTAVE UP/DOWN settings indeed only apply to the MIDI messages received on the Basic Channel.

- (1) On the Master page, press [F3] (Midi).
- (2) Hold down [SHIFT] while pressing [F3] (Param).



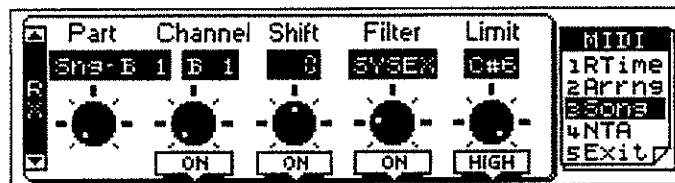
The RX Octave parameter can be set to *Absolute* or *Relative*. It applies to Tone selection. You may have noticed that whenever you assign a bass sound to the Upper1 part in Split Keyboard Mode, the notes are transposed in such a way that you can play a meaningful bass line using the Upper1 part. *Relative* then means that this internal (and automatic) transposition is applied to the received note numbers, so that receiving a C4 (note number 60) may actually result in note number 36 being played. This, of course, depends on the Tone you assign to the Upper1 part.

In *Absolute* mode, however, the MIDI note number will be the one received via MIDI (e.g. note number 60). The advantage of being able to choose between Absolute and Relative is that you can play a trumpet line on the external instrument (a synthesizer, for example) and double it with a bass part of the RA-800.

Note: If you decide not to use the Shift values, you can set the corresponding switch to Off. That is quicker than setting all Shift values back to "0".

Zones (Low/High Limits)

All Realtime, Arranger, and Song MIDNRX pages as well as the MIDNNTA page feature two Limit parameters, allowing you to "narrow" the MIDI note range to be received by the respective parts.



As you see, the switch below the Limit knob currently reads High, meaning that you can use the [UPPER/VARIATION] knob to set the upper note limit. The value in the above illustration means that the highest note the Sng-B1 part will play is C#6. Sending a D6 on MIDI channel B1 (channel 1, MIDI IN B) will not cause the Sng-B1 part to sound.

Press the [UPPER1] button to select Low.

Now you can set the lower limit of the Sng-B1 part. If you set it to C4, for example, the notes B3~C-1 no longer cause the Sng-B1 part to sound.

Set the Low Limit using the [UPPER/VARIATION] knob.

The greatest advantage of the Limit parameters is that it allows you to program splits applied to MIDI data. If you use a digital piano without split function as master keyboard (and prefer not to control the RA-800 on its Basic Channel), you could split the Upper1, Upper2, and Lower parts as follows:

- (1) Select the same receive channel and MIDI Input for Upper1, Upper2, and Lower.
- (2) On the MID\RTIME\RX page, set the following Limit values:

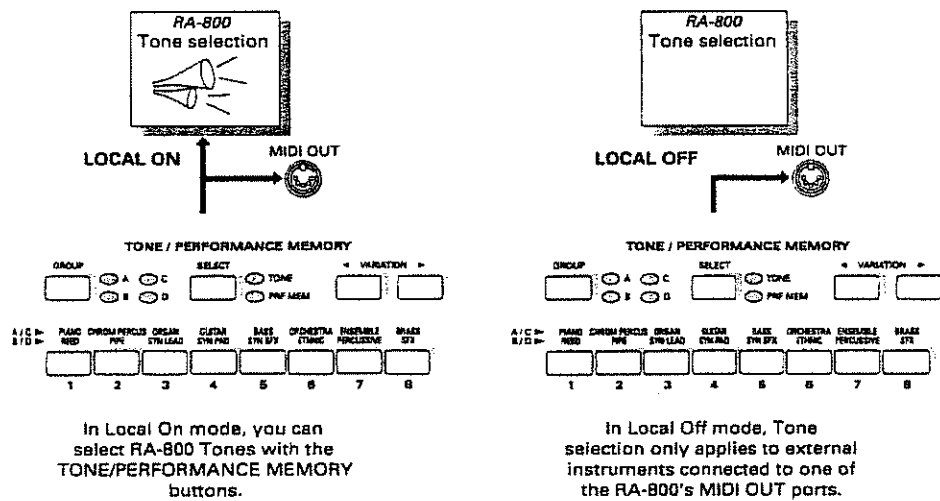
Part	Limit High	Limit Low
Upper1	G8	C#5
Upper2	C5	C4
Lower	B3	C-1

You now have three zones on the piano keyboard. Note that you could refine your splits by defining another range for the Manual Bass part, while still keeping one octave for the Arranger (NTA)!

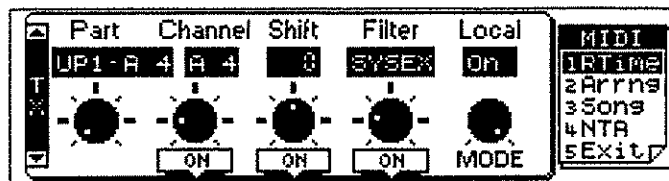
Note: The above is more an example of what is technically possible than a useful feature because controlling the RA-800 on its Basic Channel provides access to the Keyboard Mode functions that do exactly the same (choose KBD MODE= Split and activate the Upper1, Upper2, and Lower parts) – and can be saved to a Performance Memory.

Local function

The Local parameter on all Realtime, Arranger, and Song MIDNTX pages allows you to establish or remove the connection between the RA-800's front panel buttons and the internal tone generator.



When set to On (factory setting), Tone selection on the RA-800's front panel will cause the corresponding section to call up the desired Tone. If you select Off, the MIDI program change and bank select messages of the corresponding part are no longer sent to the internal tone generator. Local doesn't, however, interfere with the transmission of the corresponding MIDI data to the selected MIDI OUTput.



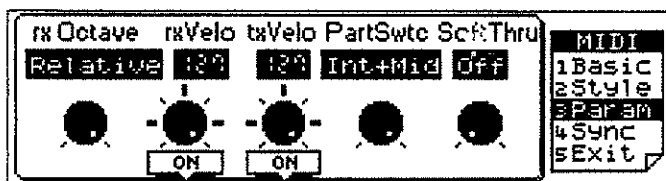
Use the [UPPER/VARIATION] knob to set Local to Off if you wish to transmit program change and bank select messages without selecting Tones on the RA-800 itself. These messages will be transmitted on the MIDI channel assigned to the part you select with the Part Select buttons or in the TONE menu.

13.6 More MIDI settings

Rx Velo, TX Velo

The MIDNParam page allows you to specify whether or not to receive and transmit MIDI velocity values, and if not, what fixed velocity value to substitute for the actual velocity values.

- (1) On the Master page, press [F3] (Midi).
- (2) Hold down [SHIFT] while pressing [F3] (Param) to call up the following page:



- (3) Use the [M.BASS] or Part Select [LOWER] buttons to select On (receive or transmit velocity values) for rxVelo and txVelo respectively.
If you select Off, you must specify the fixed velocity value to be used instead of the continuously changing velocity values that are actually received or transmitted.
- (4) Use the [ACCOMP/GROUP] or [BASS/BANK] knob to specify the fixed velocity values to be received or transmitted.

You could use this parameter to correct the fixed velocity values sent by a MIDI'ed organ etc. If the values sent by that instrument are too high to produce the right timbre of the selected Tone, set the rxVelo value to 90, for example – and set the corresponding switch to Off (reception of MIDI velocity data Off). Older drum machines and velocity “unsensitive” instruments send fixed velocity values of “64”, which may be too low to achieve the right timbre and volume of a Tone. In that case, try higher fixed velocity values.

Soft Thru (for digital pianos)

This function is particularly useful if you own a digital piano. When you set Soft Thru to On, some of notes received by the RA-800 will be re-transmitted to the NTA's MIDI OUTPUT. There are two uses for the Soft Thru function:

- (1) When controlling the RA-800 on its Basic Channel
In this case, you can use the EXT KBD CANCEL button to select the note range to be retransmitted to the digital piano: the left (SOLO ZONE) or the right half (CHORD ZONE) – on condition that Soft Thru is set to On.
Note: There is a link between this function and EXT KBD CANCEL in that the latter will only yield the expected result if the Soft Thru function is set to on.
- (2) When controlling the RA-800 on an NTA channel
When you set Soft Thru to On, all notes received on an NTA channel beyond the NTA's High and Low Limits are re-transmitted to the NTA's MIDI OUTPUT. In other words, if you set the NTA Limits to Low= C2/High=C4, the notes to the left of the C2 (EXT KBD CANCEL= Solo Zone) or to the right of the C4 (EXT KBD CANCEL= Chord Zone) will be sent to the NTA's MIDI OUTPUT and can be used to sound other notes on an external MIDI instrument.

This setting is in fact similar to the splits we talked about when discussing the use of the Limit parameters: you should use the Soft Thru feature for a digital piano or other keyboard instrument without split function. Doing so allows you to play the piano's sounds with your left or right hand, while RA-800's Arranger is triggered by the keys you press in the zone you specify using the NTA's Limit parameters.

Here is how it works:

- (1) Connect the digital piano's MIDI OUT to the MIDI INput assigned to the Basic Channel or NTA function.
- (2) Connect the corresponding MIDI OUTput to the MIDI INput of your digital piano.
- (3) Use the [UPPER/VARIATION] knob to set Soft Thru to On.

The RA-800 now sends a Local message (CC122) with a value "0" to the digital piano, which means that the piano's sound source no longer responds to the notes you play on its keyboard. Seeing that the RA-800 echoes back all notes that are not used to trigger the Arranger, however (the notes outside the Low/High Limit range), you hear what you play on the piano – except in the zone set apart for the Arranger.

When you set Soft Thru back to Off, the RA-800 sends a Local message with a value "127", thereby switching the piano's Local function back on.

13.7 MIDI synchronization

We already discussed Arranger synchronization via MIDI because we needed that function for recording User Styles via MIDI. See "Connection and synchronization".



The Start/Stop option allows you to start and stop Arranger or Song playback without synchronizing playback. That is useful if you wish to use a MIDI controller (footswitch, button, or PK-5) of an external master keyboard to start Arranger playback, for example. You can also select the MIDI IN (RX pages) or MIDI OUT (TX) connector to be used for receiving or transmitting Start/Stop/Continue, and Clock messages (A On, B Off, etc.). Note that the Recorder also sends and receives Song Position Pointer messages.

On the Master page, press [F3] (Midi), then hold down [SHIFT] and press [F4] (Sync) to select a Sync page. [PAGE] ▲▼ allow you to select the RX or TX pages.

Select RX Remote if the RA-800 is only to receive MIDI Start/Stop messages without locking to the MIDI Clock messages.

Note: If you select MIDI (RX), you can no longer start Arranger or Song playback on the RA-800. Instead, you have to start the external MIDI clock source.

13.8 MIDI Sets

MIDI Sets are in fact performance memories for the settings you make in the MIDI mode. The RA-800 has eight MIDI Set memories on board that you can use to change your MIDI configuration. You can also save your MIDI Sets to disk and load them whenever necessary.

Tip: Saving MIDI settings to a MIDI Set means that the former settings of that MIDI Set will be overwritten. Consequently, when saving your own settings, start by selecting MIDI Set memories you have never used so far. That way you are sure that the one MIDI Set you usually use is preserved.

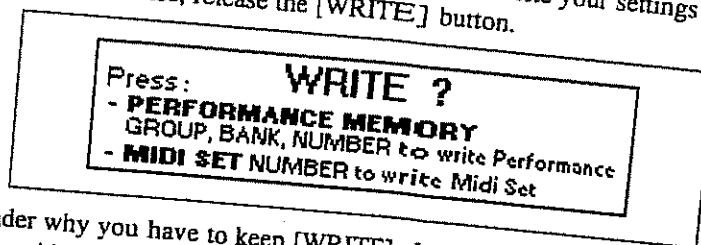
Writing a MIDI Set

Memory Protect

The Memory Protect function is activated every time you switch on your instrument. Memory Protect does what its name implies: it protects your Performance Memories and MIDI Sets from accidental erasure.

Writing your settings to a MIDI Set

- (1) Press and hold down the [WRITE] button (the [MIDI SET] indicator lights). The display asks you whether you are sure you want to write your settings to a MIDI Set. If you are, go on. Otherwise, release the [WRITE] button.



You may wonder why you have to keep [WRITE] depressed. We did that so that it is impossible to accidentally overwrite an existing MIDI Set. After all, you may very well hit the wrong button while performing, and the last thing you want to do is overwrite the settings you took so much time to program.

- (2) Press a Music Style number button to save your MIDI settings to the corresponding MIDI Set. The display briefly confirms that your settings have been written to the memory you selected:



- (3) Release the [WRITE] button.

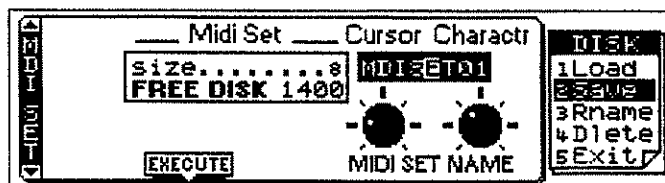
Selecting a MIDI Set

- (1) Press the [MIDI SET] button (Music Style section) so that its indicator lights.
- (2) Press a Music Style number button to select the corresponding MIDI Set.

Saving MIDI Sets to disk

After programming 8 MIDI Sets, you may find that you need a few more and that you have to make room for the new MIDI Sets. To do so without losing the previously saved MIDI Sets, you must save the "old" set to disk. Even if you do not program more than 8 MIDI Sets, it is a good idea to make a backup copy of your MIDI Sets in case someone else starts fiddling around with your settings.

- (1) On the Master page, press [F5] (Disk).
- (2) Press [F2] (Save) to select the Disk\Save level.
- (3) Use the [PAGE] ▲▼ buttons to select the Save\MIDI Set page:



Before saving a MIDI Set to disk, you should name it. Choose a name that tells you something about the contents. Use the [LOWER/NUMBER] knob to select the character position and the [UPPER/VARIATION] knob to assign a character to the selected position.

- (4) Insert a formatted floppy disk into the drive and press [M.BASS] (Execute) to save your MIDI Set to disk.

Remember that your RA-800 is multitasking, so that you can leave this page as soon as the RA-800 starts saving the MIDI Set to disk.

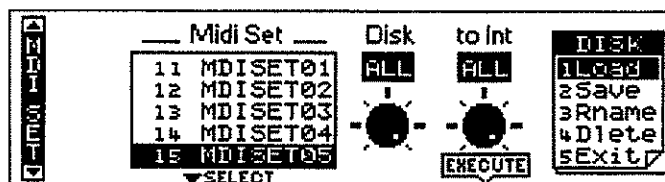
- (5) Press [F5] (Exit) to return to the Master page.

Note: When saving, the term Set is used to refer to all 8 MIDI Set memories. In others words, when you write "a" MIDI Set to disk, you save in fact the contents of all eight MIDI Set memories. Loading, on the other hand can be carried out selectively:

Loading a MIDI Set from disk

As stated in the above note, you are free to load just one MIDI Set container of a given MIDI Set on the disk you inserted into the RA-800's drive. Feel free to only load MIDI Set container 3 from a given MIDI Set if you do not need the other 7 settings of that Set.

- (1) On the Master page, press [F5] (Disk).
- (2) Press [F1] (Load) to select the Disk/Load level.
- (3) Use the [PAGE] ▲▼ buttons to select the Load\MIDI set page:



- (4) Insert the floppy disk that contains the MIDI Set data to load into the disk drive.
- (5) Use the [ACCOMP/GROUP] knob to select the MIDI Set (group) if your floppy contains more than one MIDI Set.
- (6) Use the [LOWER/NUMBER] knob to select the MIDI Set container you wish to load.
You can also select ALL, which means that all eight containers of the selected MIDI Set will be loaded. In that case, you cannot select the destination memory (see below).
- (7) Use the [UPPER/VARIATION] knob to select the internal MIDI Set memory you wish to load the selected settings to.
You can select Int= 1, =2, =3..., =8.
- (8) Press [UPPER1] (Execute) to load the MIDI Set data.
- (9) Press [F5] (Exit) to return to the Master page.

Tip: The possibility to selectively load MIDI Set containers allows you to compile "Best Of" MIDI settings by loading them to different internal MIDI Set memories. After loading your 8 favorite MIDI settings, use the Save function to save the "Best Of" MIDI Set to disk.

14 Housekeeping

14.1 General remarks

Backups

A very important aspect of working with an instrument like the RA-800 is to make backup copies of all important data. You may never need them but for a professional like yourself nothing is more embarrassing than to perform on stage (or in the studio), and suddenly find that the User Styles you took such great care to program can no longer be loaded from disk because the disk has become unreadable.

No musician in their right minds would ever dream of going on the road without at least one copy of every cartridge or floppy he or she needs to perform. Therefore, do take the time to backup all your data. See "Disk copy (backups)".

Do not forget to save all your settings in RAM-backed memory (Performance Memories, MIDI Sets, and Chord Sequence) before hitting the road. There is absolutely no excuse for not being able to perform because you forgot to save your internal settings to disk. After backing up your internal settings to disk, you should make a backup of that floppy.

See to it that you have all settings you need on at least two floppy disks that are stored in different locations. If one of these disks becomes corrupted, immediately back up the other one.

Sorry for being so patronizing but we have been there... A glass of beer, a helping hand that put the one-and-only floppy too close to a speaker... In a way, the data on disk are your capital and as such deserve to be protected.

Disk management

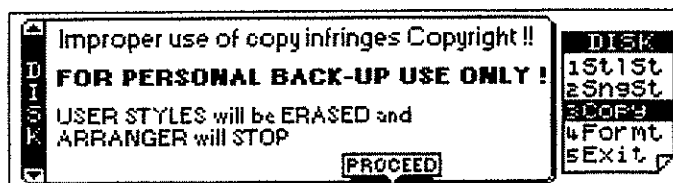
There are no hard-and-fast rules for which data to save to which floppy but we recommend that you work with at least two disk sets: one for your Recorder songs and another one for all the settings (Performance Memories, MIDI Sets, User Styles, Chord Sequences).

14.2 Disk copy (backups)

WARNING: The Disk Copy function takes advantage of the User Style RAM memory and erases all User Styles that reside in the RA-800's internal memory. Before using Disk Copy, save all User Styles to disk if you haven't already done so.

Disk Copy copies all files of the Source disk (see below) to the Destination disk.

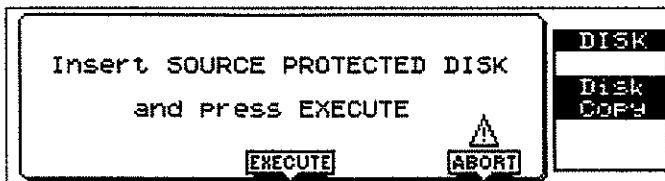
- (1) On the Master page, press [F5] (Disk).
- (2) Hold down [SHIFT] while pressing [F3] (Copy).
- (3) Press [PAGE] ▼ to select the Disk level.



Note: The RA-800 also provides a Song Copy function that allows you to copy Standard MIDI Files or Recorder songs to another disk. To copy songs, select the Disk\Song\COPY level.

As stated above, you will lose all User Styles that are currently in the internal memory.

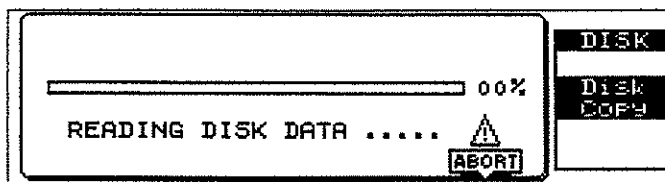
- (4) Press Part Select [UPPER2] (Proceed) to select the following page:



This message asks you to insert the original (or Source) disk into the drive. Before doing so, you should write-protect it.

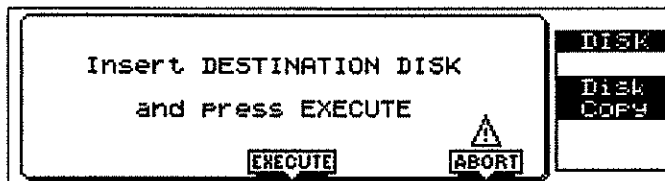
- (5) Insert the original (Source) disk into the drive.
 (6) Press Part Select [LOWER] to load the first data block from the Source disk.

If you change your mind about copying disks, press [UPPER1] (Abort) instead. If you press Part Select [LOWER], the display now looks like this:



In other words, the RA-800 is loading the first part of the data. Depending on the number of files on disk, you may encounter this message several times.

When the first part is loaded, the display switches to:

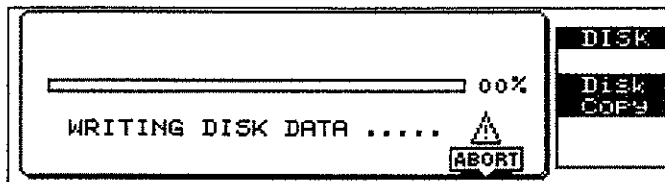


The message asks you to insert a blank disk into the disk drive. That disk will contain a copy of the original data and is therefore called Destination Disk. If the disk isn't formatted, you are given the opportunity to do so now.

Note: Always use a blank Destination disk because all data on the Destination disk will be erased.

- (7) Remove the Source disk from the drive and insert the Destination disk.
 (8) Press Part Select [LOWER] (Execute) to copy the data to the Destination disk.

If you change your mind about copying disks, press [UPPER1] (Abort) instead. If you press Part Select [LOWER], the display now looks like this:



As stated above, the Insert Source Disk message may be displayed again. If so...

- (9) Remove the Destination disk from the drive and proceed with step 5 until the display tells you:



The display now returns to the Disk\Copy level.

- (10) Press [F5] (Exit) to return to the Master page.

Note: You can go on playing while the Disk Copy function is in progress.

14.3 Renaming files on disk

The RA-800 provides a Rename function that allows you to change the name of a User Style, User Style Set, MIDI Set, or Song you have already saved to disk. That may be necessary if you find that the current name doesn't tell you anything about the file's contents, or to make room for another file that has the same name but different data.

- (1) Insert the floppy disk containing the file you wish to rename into the drive.
If the copy protect tab is set to PROTECT, set it to the WRITE position.
- (2) On the Master page, press [F5] (Disk).
- (3) Press [F3] (Rname).
- (4) Use the [PAGE] ▲▼ buttons to select the file type to be renamed: User Style, User Style Set, Performance Set, MIDI Set, Chord Sequence, Song, or Song Set.
- (5) Use the [ACCOMP/GROUP] knob to select the file you wish to rename.
Place the cursor on the file's name so that it is displayed white-on-blue.
If you select a Music Style or a Song for renaming, you must press Part Select [UPPER2] (Proceed) after selecting it before being able to change its name.
- (6) Use the [LOWER/NUMBER] knob to select a character position and the [UPPER/VARIATION] knob to select a character for that position.

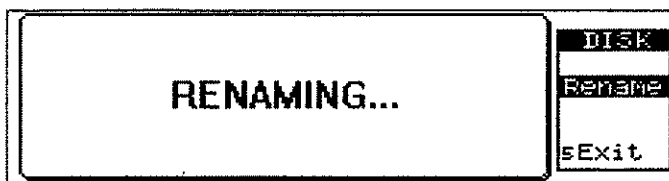
For User Styles and Songs, you can specify two names: the Style/Song Name, and the File Name. The File Name is the one that you will see if you use the dir function on an MS-DOS® computer (all RA-800 disks are MS-DOS® compatible), while the Style/Song Name is the name that you will see on the respective display pages. The latter are called "meta-text events" that can only be read by the RA-800. The File Name is more important than the Style/Song Name because the File Name is the one that is written to disk – but it can only be 8 characters in length.

- (7) Press [M.DRUMS] (Execute) to rename the selected file or set.
If the new name already exists on disk, the display will warn you:



You can keep your name but doing so means that the file of the same name on the disk will be erased. If that is what you wish to do, press [M.DRUMS] (Replace). Otherwise, press Part Select [UPPER2] (Exit) to specify a different name.

If the name doesn't yet exist on the current disk, the display will execute the Rename function:

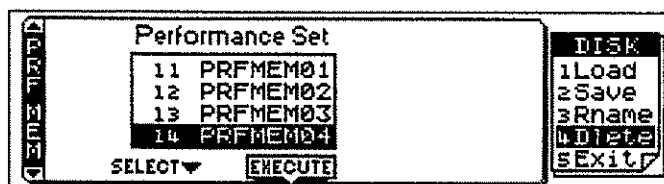


- (8) As always, you can press [F5] (Exit) to return to the Master page while the RA-800 completes the Rename operation.

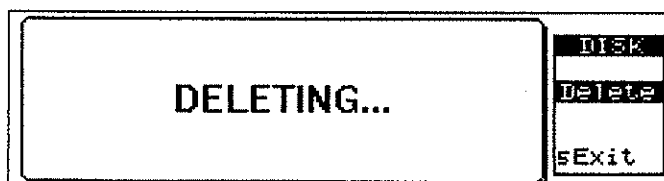
14.4 Deleting files on disk

Deleting disk files means that they will no longer be on that disk. You should exercise great caution when using this function because there is no Undo or Recall function. Deleting files on disk can, however, be useful to make room for new files. Be sure to have at least one backup of the file or set you are about to delete because you never know...

- (1) Insert the floppy disk containing the file you wish to delete into the drive.
If the disk's copy protect tab is set to PROTECT, set it to the WRITE position.
- (2) On the Master page, press [F5] (Disk).
- (3) Press [F4] (Delete).



- (4) Use the [PAGE] ▲▼ buttons to select the file type to be deleted: User Style, User Style Set, Performance Set, MIDI Set, Chord Sequence, Song or Song Set.
- (5) Use the [ACCOMP/GROUP] knob to select the file you wish to delete.
Place the cursor on the file's name so that it is displayed white-on-blue.
- (6) Press Part Select [LOWER] (Execute) to delete the selected file or set:



- (7) As always, you can press [F5] (Exit) to return to the Master page while the RA-800 completes the Delete operation.

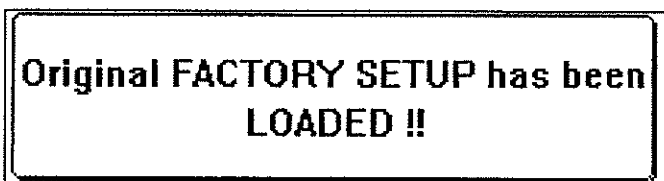
14.5 Initializing your RA-800 (Load Factory Setup)

After working extensively with your RA-800, you may want to recall the original factory settings. This is not indispensable because you could work with the factory Performance Memory (00 FreePanl) instead. Initializing your RA-800 means that all Performance Memory, Chord Sequence, MIDI Set, and User Style settings will be replaced with the original settings – except for the User Styles that will be empty after initializing your RA-800.

Here is how to initialize your RA-800:

- (1) Power off your RA-800.
- (2) Hold down the [WRITE] button while turning your RA-800 back on again.

After loading the original factory settings, the display will read:



14.6 Compatibility

The RA-800 is a Realtime Arranger featuring 689 sounds and 25 Drum Sets that can be freely selected and are used by the 128 on-board Music Styles.

The RA-800 was designed to be compatible with earlier models, so that it can read all music data related to Roland Style disks: MSA (Atelier and KR series), MSD (E-96, E-86, E-66, and RA-95), and MSE (RA-800 and subsequent models). It also reads both format 0 and format 1 Standard MIDI Files.

Seeing that the RA-800 contains sounds (or Tones) that are not supported by the GM or GS mode, certain songs recorded with the RA-800 may not sound the way you expect them to when played back using an external sequencer and GM/GS compatible sound module. Therefore, if you wish to share your Standard MIDI Files with colleagues and/or friends, be sure to only select Tones supported by the GM standard or GS format. That is also true of the Tones the Arranger parts use. In some cases, they may indeed select a RA-800 Tone, so that the selection messages for those Tones cannot be carried out by another GM or GS compatible sound module. See the Tone List at the end of this manual for the "compatible" Tones you can select.

As you know by now, your RA-800 can read and write the following data types: Song data, Style data, Performance Memory (User Programs) data, MIDI Set data, Song Set data, Style Set data, and Chord Sequencer data. Your RA-800 also accepts Lyrics data in Karaoke Type 0 format (used by Tune 1000 for example), and even Harmony data (MIDI data used to control devices that add harmony voices to what you are singing).

Song data that can be read

Disk Type	DD/HD
Format	DOS/Atari
Song Format	SMF/ISM
SMF Format	0 Lyrics/Harmony (MIDI Ch 5), tracks 1-16
Tones (program changes and bank select)	GM, GS, E-86, E-96, E-66, RA-95, RA-800, G-800

Song Write

Disk Type	DD/HD
Format	DOS
Song Format	SMF
SMF Format	0
Tones	GM, GS, G-800, RA-800

Writing GM/GS compatible Standard MIDI Files

Here is what you should bear in mind when using the Recorder to write GM compatible Standard MIDI Files. Failure to do so will result in Standard MIDI Files that will not be played back as expected on a GM module. Therefore use only the following:

Disk Type	Only DD
Format	DOS
Tones	Only GM sounds (see the Tone chart)

If you wish to record your song as GS compatible Standard MIDI File, use the above media and disk format but only select GS Tones.

Note: If an RA800 Style is used as backing during recording, this Style must only use Tones which are included in the GM/GS sound tables. Since the RA800 also contains Tones that are not part of the GM or GS formats (the 35 additional sounds), you should replace those Tones with equivalent or similar GM/GS Tones before recording.

User Styles that can be loaded

Disk Type	DD/HD
Format	DOS/Atari
Style Format	MSA (KR, Atelier), MSD (E-86, E-96, E-66, RA-95), MSE (G-800, RA-800)

RA-800 Style format

Disk Type	DD/HD
Format	DOS
Style Format	MSE (G-800, RA-800), cannot be loaded with older models, except E-96

Performance Memories that can be loaded

Disk Type	DD/HD
Format	DOS/Atari
Data Format	E-86 User Programs, E-96/G-800/RA-800 Performance Memories

RA-800 Performance Memory format

Disk Type	DD/HD
Format	DOS/Atari
Data Format	Only E-96/G-800/RA-800 Performance Memories

MIDI Sets that can be loaded

Disk Type	DD/HD
Format	DOS/Atari
Data Format	E-86 & E-96 type MIDI Sets, G-800 & RA-800 type MIDI Sets

RA-800 MIDI Set format

Disk Type	DD/HD
Format	DOS/Atari
Data Format	Only E-96/G-800/RA-800 type MIDI Sets

Song Sets that can be loaded

Disk Type	DD/HD
Format	DOS/Atari
Data Format	E-86/E-96 type Song Sets, G-800/RA-800 type Song Sets

RA-800 Song Set format

Disk Type	DD/HD
Format	DOS
Data Format	Only E-96/G-800/RA-800 type Song Sets

Style Sets that can be loaded

Disk Type	DD/HD
Format	DOS/Atari
Data Format	E-86/E-96 type Style Set, G-800/RA-800 type Style Sets

RA-800 Style Set format

Disk Type	DD/HD
Format	DOS
Data Format	Only E-96/G-800/RA-800 type Style Sets

Chord Sequencer format (read and write)

Disk Type	DD/HD
Format	DOS
Data Format	Only E-96/G-800/RA-800 type Chord Sequencer data

So much for the Player's Guide. We do hope you now have an idea about what your RA-800 is capable of. Use the index to locate the functions you want to know more about, and be sure to read the explanations in the Reference Manual for full details about the RA-800's functions. Have fun!

SC-55 Tone Map (Banks C & D)

PC	CC00	Instrument	Voices	Remark	PC	CC00	Instrument	Voices	Remark	PC	CC00	Instrument	Voices	Remark
<i>Piano</i>					<i>Rubber Bass</i>					<i>Synth SFX</i>				
001	000	Piano 1	1		016	000	Rubber Bass	2		097	000	Ice Rain	2	
	008	Piano 1w	1		<i>Strings / Orchestra</i>					098	000	Soundtrack	2	
	016	Piano 1d	1		041	000	Violin	1		099	000	Crystal	2	
002	000	Piano 2	1			008	Slow Violin	1		001	000	Syn Mallet	1	
	008	Piano 2w	1		042	000	Viola	1		100	000	Atmosphere	2	
003	000	Piano 3	1		043	000	Cello	1		101	000	Brightness	2	
	008	Piano 3w	1		044	000	Contrabass	1		102	000	Goblin	2	
004	000	Honky-tonk	2		045	000	Tremolo Str	1		103	000	Echo Drops	1	
	008	HonkyTonk w	2		046	000	Pizzicato	1		001	000	Echo Bell	2	
005	000	E.Piano 1	1		047	000	Harp	1		002	000	Echo Pan	2	
	008	Detuned EP1	2		048	000	Timpani	1		104	000	Star Theme	2	
	016	E.Piano 1v	2		<i>Ensemble</i>					<i>Ethnic, etc.</i>				
	024	60s E.Piano	1		049	000	Strings	1		105	000	Sitar	1	
006	000	E.Piano 2	1			008	Orchestra	2		001	000	Sitar 2	2	
	008	Detuned EP2	2		050	000	SlowStrings	1		106	000	Banjo	1	
	016	E.Piano 2v	2		051	000	SynStrings1	1		107	000	Shamisen	1	
007	000	Harpichord	1			008	SynStrings3	2		108	000	Koto	1	
	008	Coupled Hps	2		052	000	SynStrings2	2		008	000	Taiko Koto	2	
	016	Harpis.w	1		053	000	Choir Aah	1		109	000	Kalimba	1	
	024	Harpis.o	2			032	Choir Aahs2	1		110	000	Bagpipe	1	
008	000	Clav.	1		054	000	Voice Oohs	1		111	000	Fiddle	1	
					055	000	SynVox	1		112	000	Shani	1	
					056	000	Orchest.Hit	2		<i>Percussive</i>				
<i>Chromatic percussion</i>					<i>Brass</i>					<i>SFX</i>				
009	000	Celesta	1		057	000	Trumpet	1		113	000	Tinkle Bell	1	
010	000	Glockenspl	1		058	000	Trombone	1		114	000	Agogo	1	
011	000	Music Box	1			001	Trombone 2	2		115	000	Steel Drums	1	
012	000	Vibraphone	1		059	000	Tuba	1		116	000	Woodblock	1	
	008	Vib.w	1		060	000	MuteTrumpet	1		008	000	Castanets	1	
013	000	Marimba	1		061	000	French Horn	2		117	000	Taiko	1	
	008	Marimba w	1			001	Fr.Horn 2	2		008	000	Concert BD	1	
014	000	Xylophone	1		062	000	Brass 1	1		118	000	Melo. Tom 1	1	
015	000	Tubularbell	1			008	Brass 2	2		008	000	Melo. Tom 2	1	
	008	Church Bell	1		063	000	Syn.Brass 1	2		119	000	Synth Drum	1	
	009	Carillon	1			008	Syn.Brass 3	2		008	000	808 Tom	1	
016	000	Santur	1		064	000	Syn.Brass 2	2		009	000	Elec Perc	1	
						016	Analog Brs1	2		120	000	Reverse Cym	1	
<i>Organ</i>						008	Syn.Brass 4	1		<i>SFX</i>				
017	000	Organ 1	1			016	Analog Brs2	2		121	000	Gt.FretNoiz	1	
	008	Detuned Org1	2		<i>Reed</i>					001	000	Gt.CutNoise	1	
	016	60's Organ1	1		065	000	Soprano Sax	1		002	000	String Slap	1	
	032	Organ 4	2		066	000	Alto Sax	1		122	000	BreathNoise	1	
018	000	Organ 2	1		067	000	Tenor Sax	1		001	000	Fr.KeyClick	1	
	008	Detuned Org2	2		068	000	BaritoneSax	1		123	000	Seashore	1	
	032	Organ 5	2		069	000	Oboe	1		001	000	Rain	1	
019	000	Organ 3	1		070	000	EnglishHorn	1		002	000	Thunder	1	
020	000	Church Org1	2		071	000	Bassoon	1		003	000	Wind	1	
	008	Church Org2	2		072	000	Clarinet	1		004	000	Stream	2	
	016	Church Org3	2		<i>Pipe</i>					005	000	Bubbie	2	
021	000	Reed Organ	1		073	000	Piccolo	1		124	000	Bird	2	
022	000	Accordion F	2			001	Flute	1		001	000	Dog	1	
	008	Accordion 1	2		074	000	Flute	1		002	000	HorseGallop	1	
023	000	Harmonica	1		075	000	Recorder	1		003	000	Bird 2	1	
024	000	Bandoneon	2		076	000	Pan Flute	1		125	000	Telephone 1	1	
					077	000	Bottle Blow	2		001	000	Telephone 2	1	
<i>Guitar</i>					078	000	Shakuhachi	2		002	000	Creaking	1	
025	000	Nylon Gt.	1		079	000	Whistle	1		003	000	Door	1	
	008	Ukulele	1		080	000	Ocarina	1		004	000	Scratch	1	
	016	Nylon Gt.o	2		<i>Synth lead</i>					005	000	Wind Chimes	2	
	032	Nylon Gt.2	1		081	000	Square Wave	2		126	000	Helicopter	1	
026	000	Steel Gt.	1			001	Square	1		001	000	Car-Engine	1	
	008	12-str.Gt	2			008	Sine Wave	1		002	000	Car-Stop	1	
	016	Mandolin	1		082	000	Saw Wave	2		003	000	Car-Pass	1	
027	000	Jazz Gt.	1			001	Saw	1		004	000	Car-Crash	2	
	008	Hawaiian Gt	1			008	Doctor Solo	2		005	000	Siren	1	
028	000	Clean Gt.	1		083	000	SynCalliope	2		006	000	Train	1	
	008	Chorus Gt.	2			008	ChifferLead	2		007	000	Jetplane	2	
029	000	Muted Gt.	1		084	000	Charang	2		008	000	Starship	2	
	008	Funk Gt.	1		085	000	Solo Vox	2		009	000	Burst Noise	2	
	016	Funk Gt.2	1		086	000	5th Saw	2		127	000	Applause	2	
030	000	OverdriveGt	1		087	000	Bass & Lead	2		001	000	Laughing	1	
031	000	Dist.Gt.	1		088	000	Synth Pad, etc.			002	000	Screaming	1	
	008	Feedback Gt	2			001	Fantasia	2		003	000	Punch	1	
032	000	Gt.Harmonix	1			008	Warm Pad	1		004	000	Heart Beat	1	
	008	Gt.Feedback	1			001	Polysynth	2		005	000	Footsteps	1	
<i>Bass</i>						008	Space Voice	2		128	000	Gun Shot	1	
033	000	Acoustic Bs	1			008	Bowed Glass	2		001	000	Machine Gun	1	
034	000	Fingered Bs	1			008	Metal Pad	2		002	000	Lasergun	1	
035	000	Picked Bass	1			008	Halo Pad	2		003	000	Explosion	2	
036	000	Fretless Bs	1			008	Sweep Pad	1						
037	000	Slap Bass 1	1											
038	000	Slap Bass 2	1											
039	000	Syn.Bass 1	1											
	001	Syn.Bass101	1											
	008	Syn.Bass 3	1											
040	000	Syn.Bass 2	2											
	008	Syn.Bass 4	2											

SC-55 Map (CM-64 Tones)

PC	CC00	Instrument	Voices	Remark	PC	CC00	Instrument	Voices	Remark	PC	CC00	Instrument	Voices	Remark
001	126	Piano 2	1		023	127	Celesta 1	1		111	127	Bouleblow	2	
002	126	Piano 2	1		024	127	Celesta 2	1		112	127	Breathpipe	1	
003	126	Piano 2	1		025	127	Syn Brass 1	2		113	127	Timpani	1	
004	126	Honky-tonk	2		026	127	Syn Brass 2	2		114	127	Melodic Tom	1	
005	126	Piano 1	1		027	127	Syn Brass 3	2		115	127	Deep Snare	1	
006	126	Piano 2	1		028	127	Syn Brass 4	2		116	127	Elec Perc 1	1	
007	126	Piano 2	1		029	127	Syn Bass 1	1		117	127	Elec Perc 2	1	
008	126	E.Piano 1	1		030	127	Syn Bass 2	2		118	127	Taiko	1	
009	126	Detuned EP1	2		031	127	Syn Bass 3	2		119	127	Taiko Rim	1	
010	126	E.Piano 2	1		032	127	Syn Bass 4	1		120	127	Cymbal	1	
011	126	Steel Kit	1		033	127	Fantasy	2		121	127	Castanets	1	
012	126	Steel Gt.	1		034	127	Harmo Pan	2		122	127	Triangle	1	
013	126	12-str.Gt	2		035	127	Chorale	1		123	127	Orche Hit	1	
014	126	Funk Gt.	1		036	127	Glasses	2		124	127	Telephone	1	
015	126	Muted Gt.	1		037	127	Soundtrack	2		125	127	Bird Tweet	1	
016	126	Slap Bass 1	1		038	127	Atmosphere	2		126	127	OneNote Jam	1	
017	126	Slap Bass 1	1		039	127	Warm Bell	1		127	127	Water Bell	2	
018	126	Slap Bass 1	1		040	127	Funny Vox	2		128	127	Jungle Tune	2	
019	126	Slap Bass 1	1		041	127	Echo Bell	2						
020	126	Slap Bass 2	1		042	127	Ice Rain	2						
021	126	Slap Bass 2	1		043	127	Oboe 2001	2						
022	126	Slap Bass 2	1		044	127	Echo Pan	2						
023	126	Slap Bass 2	1		045	127	Doctor Solo	2						
024	126	Fingered Bs	1		046	127	School Daze	1						
025	126	Fingered Bs	1		047	127	Bellsinger	1						
026	126	Picked Bass	1		048	127	Square Wave	2						
027	126	Picked Bass	1		049	127	Str Sect 1	1						
028	126	Fretless Bs	1		050	127	Str Sect 2	1						
029	126	Acoustic Bs	1		051	127	Str Sect 3	1						
030	126	Choir Aahs	1		052	127	Pizzicato	1						
031	126	Choir Aahs	1		053	127	Violin 1	1						
032	126	Choir Aahs	1		054	127	Violin 2	1						
033	126	Choir Aahs	1		055	127	Cello 1	1						
034	126	SlowStrings	1		056	127	Cello 2	1						
035	126	Strings	1		057	127	Contrabass	1						
036	126	SynStrings3	2		058	127	Harp 1	1						
037	126	SynStrings3	2		059	127	Harp 2	1						
038	126	Organ 1	1		060	127	Guitar 1	1						
039	126	Organ 1	1		061	127	Guitar 2	1						
040	126	Organ 1	1		062	127	Elec Gtr 1	1						
041	126	Organ 2	1		063	127	Elec Gtr 2	1						
042	126	Organ 1	1		064	127	Sitar	2						
043	126	Organ 1	1		065	127	Accou Bass 1	1						
044	126	Organ 2	1		066	127	Accou Bass 2	1						
045	126	Organ 2	1		067	127	Elec Bass 1	1						
046	126	Organ 2	1		068	127	Elec Bass 2	1						
047	126	Trumpet	1		069	127	Slap Bass 1	1						
048	126	Trumpet	1		070	127	Slap Bass 2	1						
049	126	Trombone	1		071	127	Fretless 1	1						
050	126	Trombone	1		072	127	Fretless 2	1						
051	126	Trombone	1		073	127	Flute 1	1						
052	126	Trombone	1		074	127	Flute 2	1						
053	126	Trombone	1		075	127	Piccolo 1	1						
054	126	Trombone	1		076	127	Piccolo 2	2						
055	126	Alto Sax	1		077	127	Recorder	1						
056	126	Tenor Sax	1		078	127	Pan Pipes	1						
057	126	BaritoneSax	1		079	127	Sax 1	1						
058	126	Alto Sax	1		080	127	Sax 2	1						
059	126	Brass 1	1		081	127	Sax 3	1						
060	126	Brass 1	1		082	127	Sax 4	1						
061	126	Brass 2	2		083	127	Clarinet 1	1						
062	126	Brass 2	2		084	127	Clarinet 2	1						
063	126	Brass 1	1		085	127	Oboe	1						
064	126	Orchest.Hit	2		086	127	Engl Horn	1						
					087	127	Bassoon	1						
					088	127	Harmonica	1						
001	127	Acou Piano1	1		089	127	Trumpet 1	1						
002	127	Acou Piano2	1		090	127	Trumpet 2	1						
003	127	Acou Piano3	1		091	127	Trombone 1	2						
004	127	Elec Piano1	1		092	127	Trombone 2	2						
005	127	Elec Piano2	1		093	127	Fr Horn 1	2						
006	127	Elec Piano3	1		094	127	Fr Horn 2	2						
007	127	Elec Piano4	1		095	127	Tuba	1						
008	127	Honkytonk	2		096	127	Brs Sect 1	1						
009	127	Elec Org 1	1		097	127	Brs Sect 2	2						
010	127	Elec Org 2	2		098	127	Vibe 1	1						
011	127	Elec Org 3	1		099	127	Vibe 2	1						
012	127	Elec Org 4	1		100	127	Syn Mallet	1						
013	127	Pipe Org 1	2		101	127	Windbell	2						
014	127	Pipe Org 2	2		102	127	Glock	1						
015	127	Pipe Org 3	2		103	127	Tube Bell	1						
016	127	Accordion	2		104	127	Xylophone	1						
017	127	Harpsi 1	1		105	127	Marimba	1						
018	127	Harpsi 2	2		106	127	Koto	1						
019	127	Harpsi 3	1		107	127	Sho	2						
020	127	Clavi 1	1		108	127	Shakuhachi	2						
021	127	Clavi 2	1		109	127	Whistle 1	2						
022	127	Clavi 3	1		110	127	Whistle 2	1						

G-800 Drum Set program change map

1	STANDARD 1
2	STANDARD 2
9	ROOM
17	POWER
25	ELECTRONIC
26	TR-808/909
27	DANCE
33	JAZZ
41	BRUSH
49	ORCHESTRA
50	ETHNIC
51	KICK & SNARE
52	ARABIC
57	SFX
58	RHYTHM FX

SC-55 Drum Set program change map

1	STANDARD
9	ROOM
17	POWER
25	ELECTRONIC
26	TR-808
33	JAZZ
41	BRUSH
49	ORCHESTRA
57	SFX

GM Tones

TONES and VARIATIONS / DRUM SETS

Piano			
Tone #	Pgr	CC#	Tone Name
A11	1	00	Piano 1
A12	2	08	Piano 2
A13	3	00	Piano 3
A14	4	00	Honky-tonk
A15	5	08	E.Piano 1
A16	6	00	E.Piano 2
A17	7	00	Harpsichord
A18	8	00	Clav.

Chr Perc.			
Tone #	Pgr	CC#	Tone Name
A21	9	00	Celeste
A22	10	00	DiscoHarplnd
A23	11	00	Music Box
A24	12	00	Vibraphone
A25	13	00	Marimba
A26	14	00	Xylophone
A27	15	08	Tubular-bell
A28	16	08	Santur

Organ			
Tone #	Pgr	CC#	Tone Name
A31	17	00	Organ 1
A32	18	00	Organ 2
A33	19	00	Organ 3
A34	20	08	Church Org.1
A35	21	08	Reed Org.
A36	22	00	Accordion Fr
A37	23	00	Harmonica
A38	24	00	Sanderson

Guitar			
Tone #	Pgr	CC#	Tone Name
A41	25	00	Nylon-str.Gt
A42	26	00	Steel-str.Gt
A43	27	00	Jazz Gt.
A44	28	08	Clear Gt
A45	29	00	Muted Gt.
A46	30	00	Overdrive Gt1
A47	31	00	DistortionGt1
A48	32	00	GLHarmonics

Bass			
Tone #	Pgr	CC#	Tone Name
A51	33	00	Acoustic Ba.
A52	34	00	Fingered Ba.
A53	35	00	Picked Ba.
A54	36	00	Fretless Ba.
A55	37	00	Slap Bass 1
A56	38	00	Slap Bass 2
A57	39	00	Synth Bass 1
A58	40	00	Synth Bass 2

Strings			
Tone #	Pgr	CC#	Tone Name
A61	41	00	Violin
A62	42	00	Viola
A63	43	00	Cello
A64	44	00	Contrabass
A65	45	00	Tremolo Str
A66	46	00	PizzicatoStr
A67	47	00	Harp
A68	48	00	Timpani

Ensemble			
Tone #	Pgr	CC#	Tone Name
A71	49	00	Strings
A72	50	00	Slow Strings
A73	51	00	Syn.Strings1
A74	52	00	Syn.Strings2
A75	53	00	Choir Asks
A76	54	00	Voice Choe
A77	55	00	SynVox
A78	56	00	OrchestraHit

Brass			
Tone #	Pgr	CC#	Tone Name
A81	57	00	Trumpet
A82	58	00	Trumpet2
A83	59	00	Tuba
A84	60	00	MutedTrumpet
A85	61	00	French Horn
A86	62	00	Brass 1
A87	63	00	Synth Brass1
A88	64	00	Synth Brass2

Reed			
Tone #	Pgr	CC#	Tone Name
B11	65	00	Soprano Sax
B12	66	00	Alto Sax
B13	67	00	Tenor Sax
B14	68	00	Bariitone Sax
B15	69	00	Oboe
B16	70	00	English Horn
B17	71	00	Bassoon
B18	72	00	Clarinet

Pipe			
Tone #	Pgr	CC#	Tone Name
B21	73	00	Piccolo
B22	74	00	Flute
B23	75	00	Recorder
B24	76	00	Pan Flute
B25	77	00	Bottle Blow
B26	78	00	Shakuhachi
B27	79	00	Whistle
B28	80	00	Ocarina

Synth Lead			
Tone #	Pgr	CC#	Tone Name
B31	81	00	Square Wave
B32	82	00	Saw Wave
B33	83	00	Syn.Catloope
B34	84	00	Chiffar Lead
B35	85	00	Charming
B36	86	00	Solo Vox
B37	87	00	Str Saw Wave
B38	88	00	Bass & Lead

Synth Pad			
Tone #	Pgr	CC#	Tone Name
B41	89	00	Fantasim
B42	90	00	Warm Pad
B43	91	00	PolySynth
B44	92	00	Space Voice
B45	93	00	Bowed Glass
B46	94	00	Metal Pad
B47	95	00	Halo Pad
B48	96	00	Sweep Pad

Synth Sfx			
Tone #	Pgr	CC#	Tone Name
B51	97	00	Ice Rain
B52	98	00	Soundtrack
B53	99	00	Crystal
B54	100	00	Atmosphere
B55	101	00	Brightness
B56	102	00	Goblin
B57	103	00	Echo Drops
B58	104	00	Star Theme

Ethnic Misc			
Tone #	Pgr	CC#	Tone Name
B61	105	00	Star
B62	106	00	Berjo
B63	107	00	Shamisen
B64	108	00	Koto
B65	109	00	Kalimba
B66	110	00	Bag Pipe
B67	111	00	Fiddle
B68	112	00	Shanai

Percussive			
Tone #	Pgr	CC#	Tone Name
B71	113	00	Tinkle Bell
B72	114	00	Agogo
B73	115	00	Steel Drums
B74	116	00	Woodblock
B75	117	00	Talka
B76	118	00	Metal Tom 1
B77	119	00	Synth Drum
B78	120	00	Reverse Cym.

Sfx			
Tone #	Pgr	CC#	Tone Name
B81	121	00	GLFretNoise
B82	122	00	Brush Noise
B83	123	00	Seashore
B84	124	00	Bird
B85	125	00	Telephone 1
B86	126	00	Helicopter
B87	127	00	Applause
B88	128	00	Gun Shot

DRUM SETS			
Drum Set#	Pgr	CC#	Set Name
1	1	00	Standard
2	2	08	Room
3	3	17	Power
4	4	25	Electronic
5	5	26	TR-608
6	6	41	Brush
7	7	49	Orchestra
8	8	57	SFX
9	9	33	Jazz

Tone# = Group / Bank / Number / Variation

Pgr = MIDI Program Change Number (1-128)

CC# = MIDI Control Change 0, value (0-127)

GS Tones

TONES and VARIATIONS / DRUM SETS

Piano			
Tone #	Pgr	CC0#	Tone Name
A11	1	00	Piano 1
A111	00		Piano 1w
A112	10		Piano 1d
A12	2	00	Piano 2
A121	00		Piano 2w
A13	3	00	Piano 3
A131	00		Piano 3w
A14	4	00	Honky-tonk
A141	00		Honky-tonk w
A15	5	00	E.Piano 1
A151	00		Detuned EP 1
A152	10		E.Piano 1v
A154	24		Ed's E.Piano
A16	6	00	E.Piano 2
A161	00		Detuned EP 2
A162	10		E.Piano 2v
A17	7	00	Harpsichord
A171	00		Coupled Hps.
A172	10		Harps.w
A173	24		Harps.a
A18	8	00	Clav.

Chr Perc.			
Tone #	Pgr	CC0#	Tone Name
A21	9	00	Celeste
A22	10	00	Glockenspiel
A23	11	00	Music Box
A24	12	00	Vibraphone
A241	00		Vib.w
A25	13	00	Martins
A251	00		Martins w
A26	14	00	Xylophone
A27	15	00	Tubular-bell
A271	00		Church Bell
A272	00		Carillon
A28	16	00	Banjo

Organ			
Tone #	Pgr	CC0#	Tone Name
A31	17	00	Organ 1
A311	00		Detuned Or-1
A312	10		Soft Organ 1
A313	20		Organ 4
A32	18	00	Organ 2
A321	00		Detuned Org.2
A322	32		Organ 3
A33	19	00	Organ 3
A34	20	00	Church Org.1
A341	00		Church Org.2
A342	10		Church Org.3
A35	21	00	Reed Organ
A36	22	00	Accordion Fr
A361	00		Accordion R
A37	23	00	Harmonica
A38	24	00	Banjo-organ

Guitar			
Tone #	Pgr	CC0#	Tone Name
A41	25	00	Hybrid-str.GI
A411	00		Ukulele
A412	10		Hybrid GLB
A414	20		Hybrid GL2
A42	26	00	Steel-str.GI
A421	00		12 str GI
A423	10		Mandolin
A43	27	00	Jazz GI
A431	00		Harmon GI
A44	28	00	Glean GI
A441	00		Chorus GI
A45	29	00	Muted GI
A451	00		Funk GI 1
A452	10		Funk GI 2
A46	30	00	Overdrive GI1
A47	31	00	DistortionGI1
A471	00		Feedback GI
A48	32	00	GI.Harmonica
A481	00		GI.Feedback

Bass			
Tone #	Pgr	CC0#	Tone Name
A51	33	00	Acoustic Ba.
A52	34	00	Fingered Ba.
A53	35	00	Picked Ba.
A54	36	00	Fretless Ba.
A55	37	00	Step Bass 1
A56	38	00	Step Bass 2
A57	39	00	Synth Bass 1
A571	01		SynthBass1D1
A572	00		Synth Bass 3
A58	40	00	Synth Bass 2
A582	00		Synth Bass 4
A583	10		Rubber Bass

Strings			
Tone #	Pgr	CC0#	Tone Name
A61	41	00	Violin
A611	00		Slow Violin
A62	42	00	Viola
A63	43	00	Cello
A64	44	00	Contrabass
A65	45	00	Tramelo Str
A66	46	00	PizzicatoStr
A67	47	00	Harp
A68	48	00	Timpani

Ensemble			
Tone #	Pgr	CC0#	Tone Name
A71	49	00	Strings
A711	00		Orchestra
A72	50	00	Slow Strings
A73	51	00	Syn.Strings1
A731	00		Syn.Strings2
A74	52	00	Choir Aahs
A75	53	00	Choir Aahs 2
A751	00		Voices Chorus
A76	54	00	SynVox
A77	55	00	OrchestraHit

Brass			
Tone #	Pgr	CC0#	Tone Name
A81	57	00	Trumpet
A82	58	00	Trombone
A821	01		Trombone 2
A83	59	00	Tuba
A84	60	00	Muted Trumpet
A85	01		French Horn
A851	01		French Horn 2
A86	62	00	Brass 1
A861	00		Brass 2
A87	63	00	Synth Brass1
A871	00		Synth Brass3
A872	10		AnalogBrass1
A88	64	00	Synth Brass2
A881	00		Synth Brass4

Reed			
Tone #	Pgr	CC0#	Tone Name
B11	65	00	Soprano Sax
B12	66	00	Alto Sax
B13	67	00	Tenor Sax
B14	68	00	Baritone Sax
B15	69	00	Oboe
B16	70	00	English Horn
B17	71	00	Bassoon
B18	72	00	Clarinet

Pipe			
Tone #	Pgr	CC0#	Tone Name
B21	73	00	Piccolo
B22	74	00	Flute
B23	75	00	Recorder
B24	76	00	Pan Flute
B25	77	00	Boatle Blow
B26	78	00	Shakuhachi
B27	79	00	Whistle
B28	80	00	Ocarina

Synth Lead			
Tone #	Pgr	CC0#	Tone Name
B31	81	00	Square Wave
B311	01		Square
B312	00		Saw Wave
B32	82	00	Saw Wave
B33	01		Saw
B332	00		Double Saw
B333	83	00	Syn.Catellope
B34	84	00	Chiller Lead
B35	85	00	Charming
B36	86	00	Solo Vox
B37	87	00	5th Saw Wave
B38	88	00	Base & Lead

Synth Pad			
Tone #	Pgr	CC0#	Tone Name
B41	89	00	Panflute
B42	90	00	Warm Pad
B43	91	00	PolySynth
B44	92	00	Space Voice
B45	93	00	Burred Glass
B46	94	00	Metal Pad
B47	95	00	Half Pad
B48	96	00	Sweep Pad

Synth Sfx			
Tone #	Pgr	CC0#	Tone Name
B51	97	00	Ice Rain
B52	98	00	Soundtrack
B53	99	00	Crystal
B531	01		Syn.Mallet
B54	100	00	Atmosphere
B55	101	00	Brightness
B56	102	00	Goblin
B57	103	00	Echo Drope
B571	01		Echo Bat
B572	02		Echo Pan
B58	104	00	Star Theme

Ethnic Misc			
Tone #	Pgr	CC0#	Tone Name
B61	105	00	Star
B611	01		Star 2
B62	106	00	Banjo
B63	107	00	Shamisen
B64	108	00	Koto
B641	00		Taiko Koto
B65	109	00	Kalimba
B66	110	00	Bag Pipe
B67	111	00	Fiddle
B68	112	00	Shawl

Percussive			
Tone #	Pgr	CC0#	Tone Name
B71	113	00	Trinkle Bell
B72	114	00	Agogo
B73	115	00	Steel Drums
B74	116	00	Woodblock
B75	117	00	Castanets
B76	117	00	Talka
B761	00		Concort BD
B76	118	00	Melo. Tom 1
B761	00		Melo. Tom 2
B77	119	00	Synth Drum
B771	00		508 Tom
B772	00		508 Perc
B78	120	00	Reverse Cym.

Sfx			
Tone #	Pgr	CC0#	Tone Name
B81	121	00	GLFris/Noise
B811	01		GL.Cut Noise
B812	00		String Slat
B82	122	00	Shack Noise
B821	01		R.Navy Clock
B83	123	00	Seashore
B831	01		Rain
B832	02		Thunder
B833	03		Wind
B834	05		Subtle
B84	124	00	Bird
B841	01		Dog
B842	02		Horse-Gallop
B843	03		Bird 2
B84	125	00	Telephone 1
B841	01		Telephone 2
B842	02		DoorCreaking
B843	03		Door
B844	04		Scratch
B85	126	00	Helicopter
B851	01		Car-Engine
B852	02		Car-Stop
B853	03		Car-Pass
B854	04		Car-Crash
B855	05		Siren
B856	06		Train
B857	07		Japanese
B858	08		Stairup
B859	09		Burnt Nose
B87	127	00	Applesaw
B871	02		Screaming
B872	03		Punch
B873	04		Heart Beat
B874	05		Footsteps
B88	128	00	Gun Shot
B881	01		Machine Gun
B882	02		Lasergun
B883	03		Explosion

DRUM SETS			
Drum Set#	Pgr	CC0#	Set Name
1	1	00	Standard
2	9	00	Room
3	17	00	Power
4	25	00	Electronic
5	28	00	TR-808
6	41	00	Break
7	48	00	Orchestra
8	57	00	8FX
9*	53	00	Jazz

Tone# = Group / Bank / Number / Variation
Belt: Capital Tones

Pgr# = MIDI Program Change Number (1-128)

CC0# = MIDI Control Change 0, value (0-127)

* (Only via MIDI)

Preset MIDI Sets

MIDI SET 1: Acoustic Piano

This MIDI Set allows you to control the RA-800 with a Roland KP-24 Acoustic Keyboard Pickup. Connect the pickup to the RRC socket.

Using this MIDI Set you can control the RA-800's Arranger with the two leftmost octaves of your Acoustic Piano.

IMPORTANT: The MIDI IN A/RRC switch must be set to the "RRC" position.

All notes received via the RRC socket will be used to control the RA-800's Arranger.

The MIDI IN B socket receives note messages on all MIDI channels so that you can play any of the 16 parts assigned to MIDI INput B using a second external MIDI controller or a sequencer/computer with sequencer software.

MIDI SET 2: Digital Piano & Synth

This MIDI Set allows you to connect a digital piano or synth to the RA-800.

IMPORTANT: The MIDI IN A/RRC switch must be set to the "MIDI A" position.

- During power up, or each time this MIDI Set is recalled, the RA-800 sends 'Local OFF' messages from its MIDI OUT A connector. These messages set the external controller in 'Local OFF' mode.
- The *Basic MIDI Channel* is set to "1" and allows you to access all Realtime parts of your RA-800.
- All notes and messages received on the Basic MIDI Channel via MIDI IN A are used to control the RA-800. Note messages are re-transmitted to the RA-800's MIDI Out according to the EXT KBD Cancel setting (Solo Zone or Chord Zone). That way, you can also control the built-in tone generator of your external controller (Roland piano or synthesizer).
- The "Solo Zone Cancel" and "Chord Zone Cancel" settings can be used to mute certain notes of the controller's tone generator (the "Solo" or "Chord" zone respectively).

Note: When you control the RA-800 on its Basic MIDI channel, the dedicated buttons and controls located on its front panel can be used to split, select the chord recognition mode, the KBD mode, etc.

The MIDI IN B socket receives note messages on all MIDI channels so that you can play any of the 16 parts assigned to MIDI INput B using a second external MIDI controller or a sequencer/computer with sequencer software.

MIDI SET 3: Master Keyboard

Choose this MIDI Set to control the RA-800 using a controller capable of transmitting on several MIDI channels simultaneously.

IMPORTANT: The MIDI IN A/RRC switch must be set to the "MIDI A" position.

When transmitting on the Basic MIDI Channel, you can control all Realtime parts of your RA-800 even though you only use one MIDI channel.

- The Basic MIDI Channel is set to "1".
- All notes and messages received on the Basic MIDI Channel via MIDI IN A are used to control the RA-800 in accordance with the Keyboard Mode (KBD Mode) and Arranger Chord Mode (ARR CHORD) settings.

Note: When you control the RA-800 on its Basic MIDI Channel, the dedicated buttons and controls located on its front panel can be used to split, select the chord recognition mode, the KBD mode etc.

If you prefer not to use the Basic MIDI Channel, you can control each section on its individual MIDI channel.

In that case, transmit your MIDI note and control change messages to the following MIDI INput and on the indicated MIDI channels:

Upper	→ MIDI IN A, MIDI channel 4	Upper 2	→ MIDI IN A, MIDI channel 6
Lower	→ MIDI IN A, MIDI channel 11	Manual Bass	→ MIDI IN A, MIDI channel 12
Manual Drums	→ MIDI IN A, MIDI channel 16	Style selection	→ MIDI IN A, MIDI channel 10

The MIDI IN B socket receives note messages on all MIDI channels so that you can play any of the 16 parts assigned to MIDI INput B using a second external MIDI controller or a sequencer/computer with sequencer software.

MIDI SET 4: Accordion 1

This MIDI Set allows you to control the RA-800 by means of a MIDI accordion.

IMPORTANT: The MIDI IN A/RRC switch must be set to the "MIDI A" position.

Note and control change messages must be transmitted to the following MIDI INput and on the indicated MIDI channels:

Arranger→	MIDI IN A, MIDI channel 2 (Accordion left-hand Chord Section I)
Upper 1→	MIDI IN A, MIDI channel 1 (Accordion right-hand Kbd section I)
Upper 2→	MIDI IN A, MIDI channel 4 (Accordion right-hand Kbd section II)
Lower→	MIDI IN A, MIDI channel 5 (Accordion left-hand Chord section II)
Manual Bass→	MIDI IN A, MIDI channel 3 (Accordion left-hand Bass section)

You could "turn off" the RA-800's ABS (Accompaniment Bass) part and play the bass line yourself by controlling the MBS (Manual Bass) part with the "Accordion left-hand Bass Section".

Note: We suggest you activate the RA-800 "Chord Intelligence" function to avoid erroneous chord recognition.

The MIDI IN B socket receives note messages on all MIDI channels so that you can play any of the 16 parts assigned to MIDI INput B using a second external MIDI controller or a sequencer/computer with sequencer software.

MIDI SET 5: Accordion 2

This MIDI Set allows you to control the RA-800 by means of a MIDI accordion. The settings, however, differ from those of MIDI Set 4.

IMPORTANT: The MIDI IN A/RRC switch must be set to the "MIDI A" position.

Note and control change messages must be transmitted to the following MIDI INput and on the indicated MIDI channels:

Arranger→	MIDI IN A, MIDI channel 2 (Accordion left-hand Chord Section I)
	MIDI IN A, MIDI channel 3 (Accordion left-hand Bass Section)
Upper 1→	MIDI IN A, MIDI channel 1 (Accordion right-hand Kbd section I)
Upper 2→	MIDI IN A, MIDI channel 4 (Accordion right-hand Kbd section II)
Lower→	MIDI IN A, MIDI channel 5 (Accordion left-hand Chord Section II)

This MIDI Set has the advantage that the RA-800's chord recognition works very accurately because the Left Hand Chord and Bass sections assigned to the RA-800's NTA1 and NTA2 channels and therefore both control the Arranger. This MIDI Set circumvents problems related to erroneous chord recognition due to the fact that certain notes are not received by the RA-800. Furthermore, by activating the RA-800's Chord Inversion function, you can play chords with bass notes other than the root.

The MIDI IN B socket receives note messages on all MIDI channels so that you can play any of the 16 parts assigned to MIDI INput B using a second external MIDI controller or a sequencer/computer with sequencer software.

MIDI SET 6: MIDI Guitar

Select this MIDI Set to control your RA-800 with a MIDI guitar.

IMPORTANT: The MIDI IN A/RRC switch must be set to the "MIDI A" position.

- The Basic MIDI Channel is set to "1"

Via the Basic MIDI Channel, you can easily access all of the RA-800's Realtime parts. All notes and control change messages received on the Basic MIDI Channel via MIDI IN A are used to control the RA-800.

Note: When you control the RA-800 on its Basic MIDI Channel, the dedicated buttons and controls located on its front panel can be used to split, select the chord recognition mode, the KBD mode, etc.

- Control of the Realtime parts will be carried out in accordance with the KBD Mode settings, while Arranger control will be in accordance with the ARR Chord settings.

We suggest you assign the Foot Switch to the "Chord Recognition OFF" function. That will allow you to disable the RA-800's chord recognition whenever you do not need it. Here is how it works:

- Press and hold the Foot Switch assigned to "Chord Recognition Off" and, while keeping it pressed, play your melody with the MIDI guitar to control the desired Realtime parts (in accordance with your KBD Mode settings). Whenever you want the Arranger to play another chord, release the Foot Switch, play the new chord, and again press the foot switch to disable the Arranger's chord recognition.
- You can also use set Arr Chord to "Piano Style" if you prefer not to use a footswitch.

The MIDI IN B socket receives note messages on all MIDI channels so that you can play any of the 16 parts assigned to MIDI INput B using a second external MIDI controller or a sequencer/computer with sequencer software.

MIDI SET 7: Organ 1 (Roland)

This MIDI Set allows you to control the RA-800 using a MIDI organ (Roland Atelier series).

IMPORTANT: The MIDI IN A/RRC switch must be set to the "MIDI A" position.

Note and control change messages must be transmitted to the following MIDI INput and on the indicated MIDI channels

Arranger→ MIDI IN A, MIDI channel 12 (Lower Manual)
Upper 1→ MIDI IN A, MIDI channel 13 (Upper Manual)
Manual Bass→ MIDI IN A, MIDI channel 14 (Bass Pedals)

The MIDI IN B socket receives note messages on all MIDI channels so that you can play any of the 16 parts assigned to MIDI INput B using a second external MIDI controller or a sequencer/computer with sequencer software.

MIDI SET 8: Organ 2 (Other Brands)

This MIDI Set allows you to control the RA-800 using a (non-Roland) MIDI organ.

IMPORTANT: The MIDI IN A/RRC switch must be set to the "MIDI A" position.

Note and control change messages must be transmitted to the following MIDI INput and on the indicated MIDI channels

Arranger→ MIDI IN A, MIDI channel 2 (Lower Manual)
Upper 1→ MIDI IN A, MIDI channel 1 (Upper Manual)
Upper 2→ MIDI IN A, MIDI channel 4 (Reed)
Manual Bass→ MIDI IN A, MIDI channel 3 (Pedal)

The MIDI IN B socket receives note messages on all MIDI channels so that you can play any of the 16 parts assigned to MIDI INput B using a second external MIDI controller or a sequencer/computer with sequencer software..

Index

- 00 Free Pnl, 71
- Adv, 107, 110
- Advanced, 40, 47, 107
- All, 16, 38, 53, 62, 100, 111, 116, 149
- All Song Playback, 72
- Alteratr, 94
- Arabic Scaies, 99
- Arranger, 40
- Arranger Chord, 18
- Arranger Parts, 55
- Assignable footswitch, 38
- Attack, 89
- Auto Tempo, 54
- Autoload, 52
- Automated User Style, 63
- Bank Select, 136, 143
- Basic, 40
- Basic Channel, 14, 45, 125
- Blending, 99
- Bsc, 107
- Buss, 79
- Capital, 24, 34
- CC32, 77, 143
- Change, 35, 51, 67, 110, 127
- Change Gate Time, 130
- Chord Family Assign, 94
- Chord Inversion, 45
- Chord Recognition, 4, 41
- Chord Sequencer, 66
- Chord Symbol window, 24
- Chorus, 82, 122
- Clock, 93, 147
- Clock Pulse Time, 93
- Clone, 107, 114
- Coarse, 91
- Continue, 147
- Contrast, 21
- Control change, 76–77, 122
- Controller data, 120
- Copy, 101, 116–118, 150
- Copy mode, 118
- Copying existing Styles, 116
- CPT, 93
- Cutoff, 88
- Data types, 154
- Decay, 90
- Delay, 82, 112
- Delete, 127, 134
- Deleting a User Style, 134
- Demo songs, 16
- Destination, 58, 151
- Disk Copy, 150
- Disk Format, 69
- Disk mode, 52
- Disk Save, 148
- Display symbols, 34
- Division, 40
- Dotted box, 29
- Drum Set, 41, 121
- Drum Set Note, 121
- Drum Variation, 50
- Dynamic Arranger, 95
- Ed, 117
- Editing User Styles, 119
- Effect settings, 83
- Ending, 46
- Envelope, 89
- Equalizer, 82, 84
- Erase, 106, 128
- EV-5, 38
- Exit, 23
- Expression Pedal, 38, 99
- External Keyboard Cancel, 44
- Fade Out, 51
- Fader, 79
- Fast Forward, 73
- File name, 72, 152
- Fill In, 41, 48
- Fill in Half Bar, 48
- Fill in Rit, 48
- Fill Rit Value, 93
- Filter, 44, 88, 143
- Fine, 91
- Fo, 117
- Footswitch function, 96
- Formatting a Disk, 69
- Full, 95
- Function keys, 25
- Fv, 117
- Gate Time, 127
- GI-10, 126
- Graphic Chord display, 24
- Group, 26, 62
- Half Bar, 48
- Hold, 6, 31, 38, 46, 64–65, 130
- Insert, 129
- Int, 37, 116
- Intelligent, 43, 92
- Intelligent Melody, 92
- Interval, 37
- Into position, 119
- Intro, 46
- Karaoke, 72, 154
- KBD Mode, 16
- Key, 108
- Keyboard Pickup, 13
- Keyboard Scale, 99
- KP-24, 13
- Layer, 5, 82
- LCD Contrast, 21
- Limit, 45
- Link, 78
- Listen, 117
- Load, 52, 69, 149
- Loading User Styles, 52
- Local, 145
- Loop, 73
- Looped divisions, 104
- Lower Hold, 31
- Lyrics, 72, 154
- Main features, 3
- Major, 47, 94, 107
- Manual Drums Part, 31
- Mark, 111
- Marker, 73, 101
- Master page, 23
- Master Tune, 39
- Max, 96
- Melody Intelligence, 28, 50, 92
- Memory Protect, 60, 147
- Metronome, 39, 100, 115
- Metronome Out, 13
- Microscope, 129–130
- MIDI channels, 137
- MIDI data, 136
- MIDI parameters, 3, 135
- MIDI Set, 14, 147
- Min, 96, 117
- Minor, 47
- Minus One, 74
- Mix, 118
- Mixer mode, 81
- Modes, 4, 23
- Modulation, 36, 88, 112
- Monophonic, 97
- Move, 131
- Multiple, 5, 45
- Multiple channel control, 45
- Music Style, 40, 46
- Mute, 76, 114
- Naming your User Styles, 113
- Natural, 95
- New, 57, 77, 143
- Note To Arranger, 66
- NRPN, 90, 143
- NTA, 15, 66, 139
- Old, 77
- One Touch Program, 50
- One-shot divisions, 105
- Or, 3–7, 14–32, 34–41, 43–56, 58–64, 66–67, 69–101, 103–108, 110–147, 150–154, 168
- Page scroll bar, 24
- Panpot, 82, 85
- Part Balance, 79
- Part Select, 18
- Pattern, 41, 103
- Pattern Length, 110, 131
- Performance Memories, 59
- Performance Memory Hold, 64
- Performance Name, 61
- Piano Style, 43
- Pitch Bend, 36, 98
- Pitch Bend Range, 98
- Pitch-to-MIDI, 126
- Polyphonic, 97
- Portamento, 98
- Positive value, 26
- Precautions, 7
- Praset Tempo, 54, 123
- Program Change, 143
- Programming User Styles, 103
- Quantize, 109, 130
- Random, 82
- Range, 98
- Realtime display, 27
- Realtime Parts, 28
- Realtime Performance functions, 36
- Rear panel, 21
- Record mode, 107
- Recorder, 69
- Release, 90
- Remote, 147
- Rename, 152
- Replace, 118
- Reset, 51
- Resonance, 89
- Resume, 62
- Reverb, 82
- Reversed, 26
- Rewind, 73
- Rnd, 82
- Roll, 32, 97
- RPN, 143
- RRC, 13, 22
- RX Parts, 137
- Save, 52, 59, 148–149
- Saving User Styles to disk, 56
- Saving your Style to disk, 113
- Section balance, 80
- Selecting Performance Memories, 63
- Selecting Music Styles, 51
- Selecting User Styles, 53
- Setting up, 13
- Seventh, 47, 94
- Share, 111
- Shift, 25
- Singl, 111
- Single, 111
- Soft, 146
- Soft Thru, 146
- Solo, 75
- Song, 16, 37, 71
- Song Master Volume, 77
- Song Part volume, 76
- Song Playback, 71
- Song Position Pointer, 147
- Song Select, 17

Song Set, 101
Song Tempo, 74
Sostenuto, 143
Source, 62, 85, 90
Split, 5, 16, 30
Split point, 31
Standard, 4, 43
Starting a Music Style, 46
Status, 96, 114
Step time, 131
Stereo position, 82
Stopping a Music Style, 46
Style Change, 67
Style Division, 46
Style Name, 114
Style Set, 57
Sustain pedal, 38
Sync, 46, 124, 126
Synchronization, 147
SysEx, 123
System Exclusive, 123
Tap Tempo, 54
Tempo, 53
Tempo Acc, 54
Tempo Change, 93
Tempo Dial, 53
Tempo Lock, 54
Tempo Rit, 54
Timbre, 88
Time signature, 110
To level, 118
To Original, 41
To Variation, 41
Tone Change, 35, 77
Tone Edit, 90
Tone Selection, 34
Tones to the Arranger Parts, 55
Track Change Gate Time, 130
Track Copy, 117
Track Delete, 129
Track Erase, 128
Track Insert, 129
Track Microscope Edit, 133
Track Quantize, 130
Track Shift, 130
Track Transpose, 129
Track Velocity Change, 129
Tracks, 104
Transpose, 37
Trigger-to-MIDI, 126
TSign, 110
TVF, 88
Unpacking, 5
Upper2 split, 30
User Style Edit mode, 127
User Style mode, 106
User Style Sets, 56
User Style tracks, 117
Va, 107
Variation, 24, 47
Velo, 127, 146
Velocity Change, 129
Velocity Sensitivity, 95
Velocity Switching, 96
Vibrato, 88
Volume, 16, 24, 77, 79
W Left, 29
W Right, 29
Wrap, 95
Writing a Performance Memory,
61

Information

When you need repair service, call your local Roland Service Station or the authorized Roland distributor in your country as shown below.

ARGENTINA

Instrumentos Musicales S.A.
Florida 638
(1005) Buenos Aires
ARGENTINA
TEL: (01) 394 4029

BRAZIL

Roland Brasil Ltda.
R. Coronel Octaviano da Silveira
203 05522-010
Sao Paulo BRAZIL
TEL: (011) 843 9377

CANADA

Roland Canada Music Ltd.
(Head Office)
5480 Parkwood Way Richmond
B.C. V6V 2M4 CANADA
TEL: (604) 270 6626

Roland Canada Music Ltd.

(Toronto Office)
Unit 2, 109 Woodbine Downs
Blvd, Etobicoke, ON
M9W 6Y1 CANADA
TEL: (416) 213 9707

MEXICO

Casa Veerkamp, s.a. de c.v.
Av. Toluca No. 323 Col. Olivar de
los Padres 01780 Mexico D.F.
MEXICO
TEL: (525) 668 04 80

La Casa Wagner de
Guadalajara s.a. de c.v.
Av. Corona No. 202 S.J.
Guadalajara, Jalisco Mexico
C.P.44100 MEXICO
TEL: (03) 613 1414

PANAMA

Productos Superiores, S.A.
Apartado 655 - Panama 1
REP. DE PANAMA
TEL: 26 3322

U. S. A.

Roland Corporation U.S.
7200 Dominion Circle
Los Angeles, CA. 90040-3696,
U. S. A.
TEL: (0213) 685 5141

VENEZUELA

Musiland Digital C.A.
Av. Francisco de Miranda,
Centro Parque de Cristal, Nivel
C2 Local 20 Caracas
VENEZUELA
TEL: (02) 285 9218

AUSTRALIA

Roland Corporation
Australia Pty. Ltd.
38 Campbell Avenue
Dee Why West. NSW 2099
AUSTRALIA
TEL: (02) 982 8266

NEW ZEALAND

Roland Corporation (NZ) Ltd.
97 Mt. Eden Road, Mt. Eden,
Auckland 3, NEW ZEALAND
TEL: (09) 3098 715

HONG KONG

Tom Lee Music Co., Ltd.
Service Division
22-32 Pun Shan Street, Tsuen
Wan, New Territories,
HONG KONG
TEL: 2415 0911

INDONESIA

PT CITRARAMA
BELANTIKA
Kompleks Perkantoran Duta
Merlin Blok E No.6-7
Jl. Gajah Mada No.3-5, Jakarta
10130,
INDONESIA
TEL: (021) 3850073

KOREA

Cosmos Corporation
Service Station
261 2nd Floor Nak-Won Arcade
Jong-Ro ku, Seoul, KOREA
TEL: (02) 742 8844

MALAYSIA

Bentley Music SDN BHD
No.142, Jalan Bukit Bintang 55100
Kuala Lumpur, MALAYSIA
TEL: (03) 2443333

PHILIPPINES

G.A. Yupangco & Co. Inc.
339 Gil J. Puyat Avenue
Makati, Metro Manila 1200,
PHILIPPINES
TEL: (02) 899 9801

SINGAPORE

Swee Lee Company
BLOCK 231, Bain Street #03-23
Bras Basah Complex,
SINGAPORE 0718
TEL: 3367886

CRISTOFORI MUSIC PTE LTD

335, Joo Chiat Road SINGAPORE
1542
TEL: 3450435

TAIWAN

Siruba Enterprise (Taiwan)
Co., LTD.
Room. 5, 9th. No. 112 Chung Shan
N.Road Sec.2 Taipei, TAIWAN,
R.O.C.
TEL: (02) 561 3339

THAILAND

Theera Music Co., Ltd.
330 Verng Nakorn Kasem, Soi 2,
Bangkok 10100, THAILAND
TEL: (02) 2248821

BAHRAIN

Moon Stores
Bad Al Bahrain Road,
P.O.Box 20077
State of BAHRAIN
TEL: 211 005

IRAN

TARADIS
Mir Enad Ave. No. 15, 10th street
P. O. Box 15875/4171 Teheran,
IRAN
TEL: (021) 875 6524

ISRAEL

Haiilit P. Greenspoon &
Sons Ltd.
8 Retziz Ha'aliya Hashnya St.
Tel-Aviv-Yafo ISRAEL
TEL: (03) 6823666

JORDAN

AMMAN Trading Agency
Prince Mohammed St. P. O. Box
825 Amman 11118 JORDAN
TEL: (06) 641200

KUWAIT

Easa Husain Al-Yousifi
P.O. Box 126 Safat 13002
KUWAIT
TEL: 5719499

LEBANON

A. Chahine & Fils
P.O. Box 16-5857 Gergi Zeidan St.
Chahine Building, Achrafieh
Beirut, LEBANON
TEL: (01) 335799

OMAN

OHI Electronics & Trading
Co. LLC
P. O. Box 689 Muscat
Sultanate of OMAN
TEL: 706 010

QATAR

Badie Studio & Stores
P.O.Box 62,
DOHA QATAR
TEL: 423554

SAUDI ARABIA

SAF Music Center
AL-Khobar 31952, P. O. Box 1366
SAUDIARABIA
TEL: (03) 898 3311

Abdul Latif S. Al-Ghamdi
Trading Establishment
Middle East Commercial Center
Al-Khobar Dharan Highway
W/hamood st.
P. O. Box 3631 Al-Khobar
31952 SAUDIARABIA
TEL: (03) 898 2332

SYRIA

Technical Light & Sound
Center
Khaled Ebn Al Walid St.
P.O.Box 13520
Damascus - SYRIA
TEL: (011) 2235 384

TURKEY

Barkat Sanayi ve Ticaret
Siraselvier Cad. Guney ishani No.
86/6 Taksim, Istanbul TURKEY
TEL: (0212) 2499324

U.A.E

Zak Electronics & Musical
Instruments Co.
Zabeel Road, Al Sherooq Bldg.,
No. 14, Grand Floor DUBAI
U.A.E.
P.O. Box 8050DUBAI, U.A.E
TEL: (04) 360715

EGYPT

Al Fanny Trading Office
9, Ebn Hagar Al Askalany Street,
Ard El Golf, Heliopolis, Cairo,
11341 EGYPT
TEL: (02) 4171828
(02) 4185531

MAURITIUS

Philanne Music Center
4th. Floor Noll, Happy World
House Sir William Newton Street
Port Luis MAURITIUS
TEL: 242 2986

REUNION

FO - YAM Marcel
25 Rue Jules Mermet
Chaudron - BP79 97491
Ste Clotilde REUNION
TEL: 28 29 16

SOUTH AFRICA

That Other Music Shop
(PTY) Ltd.
11 Melle Street (Cnr Melle and
Juta Street)
Braamfontein 2001
Republic of SOUTH AFRICA
TEL: (011) 403 4105

Paul Bothner (PTY) Ltd.
17 Werdmuller Centre Claremont
7700
Republic of SOUTH AFRICA
TEL: (021) 64 4030

AUSTRIA

E. Dematte & Co.
Neu-Rum Siemens-Strasse 4
A-6040 Innsbruck P.O.Box 83
AUSTRIA
TEL: (0512) 26 44 260

BELGIUM/HOLLAND/ LUXEMBOURG

Roland Benelux N. V.
Houstraat 1 B-2260 Oevel-
Westerlo BELGIUM
TEL: (014) 575811

BELORUSSIA

TUSHE
UL. Mogilovskaja 4/4/145
220001 MINSK
TEL: (0172) 252-059

CYPRUS

Radex Sound Equipment Ltd.
17 Diagonou St., P.O.Box 2046,
Nicosia CYPRUS
TEL: (02) 453 426
(02) 466 423

DENMARK

Roland Scandinavia A/S
Langebrogade 6 Post Box 1937
DK-1023 Copenhagen K.
DENMARK
TEL: 32 95 3111

FRANCE

Guillard Musiques Roland
ZAC de Rosarge Les Echets 01700
MIRIBEL FRANCE
TEL: 7226 5060

Guillard Musiques Roland

(Paris Office)
1923 rue Léon Geoffroy 94400
VITRY-SUR-SEINE FRANCE
TEL: (1) 4680 86 62

FINLAND

Roland Scandinavia As,
Fillial Finland
Lauttasaarentie 54 B
Fin-00201 Helsinki, FINLAND
P. O. Box No. 109
TEL: (0) 682 4020

GERMANY

Roland Elektronische
Musikinstrumente
Handelsgesellschaft mbH.
Oststrasse 96, 22844 Norderstedt,
GERMANY
TEL: (040) 52 60090

GREECE

V. Dimitriadis & Co. Ltd.
20, Alexandras St. & Bouboulinas
54 St. 106 82 Athens, GREECE
TEL: (01) 8232415

HUNGARY

Intermusica Ltd.
Warehouse Area 'DEPO' Pf.83
H-2046 Torokbalint, HUNGARY
TEL: (23) 338 041

IRELAND

The Dublin Service Centre
Audio Maintenance Limited
11 Brunswick Place Dublin 2
Republic of IRELAND
TEL: (01) 677322

ITALY

Roland Italy S. p. A.
Viale delle Industrie, 8
20020 Arese Milano, ITALY
TEL: (02) 93581311

NORWAY

Roland Scandinavia Avd.
Kontor Norge
Lilleakerveien 2 Postboks 95
Lilleaker N-0216 Oslo
NORWAY
TEL: 273 0074

POLAND

P. P. H. Brzostowicz Marian
Ul. Blokowa 32, 03624 Warszawa
POLAND
TEL: (022) 679 44 19

PORTUGAL

Caius - Tecnologias Audio e
Musica, Lda.
Rue de Catarina 131
4000 Porto, PORTUGAL
TEL: (02) 38 4456

RUSSIA

PETROSHOP Ltd.
11 Sayanskaya Street Moscow
11531, RUSSIA
TEL: 095 901 0892

SPAIN

Roland Electronics
de España, S. A.
Calle Bolivia 239 08020 Barcelona,
SPAIN
TEL: (93) 308 1000

SWEDEN

Roland Scandinavia A/S
Danvik Center 28 A, 2 tr.
S-131 30 Nacka SWEDEN
TEL: (08) 702 0020

SWITZERLAND

Roland (Switzerland) AG
Misonronic AG
Gerberstrasse 5, CH-4410 Liestal,
SWITZERLAND
TEL: (061) 921 1615

UKRAINE

TIC-TAC
Mira Str. 19/108
P.O.Box 180
295400 Munkachevo, UKRAINE
TEL: (03131) 414-40

UNITED KINGDOM

Roland (U.K.) Ltd., Swansea
Office
Atlantic Close, Swansea,
Enterprise Park SWANSEA
West Glamorgan SA7 9FJ,
UNITED KINGDOM
TEL: (01792) 702701

For Nordic Countries

Apparatus containing Lithium batteries

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VARNING!

Eksplosionsfare ved fejlagtigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!

Lithiumbatteri - Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VAROITUS!

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For E.C. Countries

This product complies with EC directives

- LOW VOLTAGE 73/23
- EMC 89/336*

Dieses instrument entspricht folgenden EG-Verordnungen:

- NIEDRIGE SPANNUNG 73/23
- EMC 89/336*

Cet instrument est conforme aux directives CE suivantes:

- BASSE TENSION 73/23
- EMC 89/336*



Questo prodotto è conforme alle seguenti direttive CEE

- BASSA TENSIONE 73/23
- EMC 89/336*

Dit instrument beantwoordt aan de volgende EG richtlijnen:

- LAGE SPANNING 73/23
- EMC 89/336*

Este producto cumple con las siguientes directrices de la CE

- BAJO VOLTAJE 73/23
- EMC 89/336*

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

CLASS B This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

AVIS

CLASSE B Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Règlement des signaux parasites par le ministère canadien des Communications.

Roland®

K6018231

UPC

K6018231



:899:

Roland®