YAMAHA

GENERAL MIDI INSTRUMENT

TONE GENERATOR

TG300

Owner's Manual 2

REFERENCE GUIDE

FCC INFORMATION (U.S.A.)

1. **IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!**
   This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.
2. **IMPORTANT:** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.
3. **NOTE:** This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

   Relocate either this product or the device that is being affected by the interference.

   Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

   In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

   If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA 90620

   The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA.

Dette apparat overholder det gaeldende EF-direktiv vedrørende radiostøj.

Cet appareil est conforme aux prescriptions de la directive communautaire 87/308/CEE.

Diese Geräte entsprechen der EG-Richtlinie 82/499/EWG und/oder 87/308/EWG.

This product complies with the radio frequency interference requirements of the Council Directive 82/499/EEC and/or 87/308/EEC.

Questo apparecchio è conforme al D.M.13 aprile 1989 (Direttiva CEE/87/308) sulla soppressione dei radiodisturbi.

Este producto está de acuerdo con los requisitos sobre interferencias de radio frecuencia dados por el Consejo Directivo 87/308/CEE.

YAMAHA CORPORATION

IMPORTANT NOTICE FOR THE UNITED KINGDOM

Connecting the Plug and Cord

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.

Making sure that neither core is connected to the earth terminal of the three pin plug.

* This applies only to products distributed by YAMAHA - KEMBLE MUSIC (U.K.) LTD.

CANADA

THIS DIGITAL APPARATUS DOES NOT EXCEED THE "CLASS B" LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS SET OUT IN THE RADIO INTERFERENCE REGULATION OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS.

LE PRESENT APPAREIL NUMERIQUE N'EMET PAS DE BRUITS RADIOELECTRIQUES DEPASSANT LES LIMITES APPLICABLES AUX APPAREILS NUMERIQUES DE LA "CLASSE B" PRESCRITES DANS LE REGLEMENT SUR LE BROUILLAGE RADIOELECTRIQUE EDICTE PAR LE MINISTERE DES COMMUNICATIONS DU CANADA.

* This applies only to products distributed by YAMAHA CANADA MUSIC LTD.

SPECIAL MESSAGE SECTION

This product utilizes batteries or an external power supply (adapter). DO NOT connect this product to any power supply or adapter other than one described in the manual, on the name plate, or specifically recommended by Yamaha.

WARNING: Do not place this product in a position where anyone could walk on, trip over, or roll anything over power or connecting cords of any kind. The use of an extension cord is not recommended! If you must use an extension cord, the minimum wire size for a 25' cord (or 1 cm) is I8 AWG. NOTE: The smaller the AWG number, the larger the current handling capacity. For longer extension cords, consult a local electrician.

This product should be used only with the components supplied MMM a cart, rack, or stand that is recommended by Yamaha. If a cart, etc., is used, please observe all safety markings and instructions that accompany the accessory product.

SPECIFICATIONS SUBJECT TO CHANGE: The information contained in this manual is believed to be correct at the time of printing. However, Yamaha reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

Do not attempt to service this product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

This product, either alone or in combination with an amplifier and headphones or speaker/s, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for long periods 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. IMPORTANT: The louder the sound, the shorter the time period before damage occurs.

Some Yamaha products may have benches and/or accessory mounting fixtures that are either supplied with the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that benches are stable and any optional fixtures (where applicable) are well MMM BEFORE using. Benches supplied by Yamaha are designed for MMM only. No other uses are recommended.

NOTICE: Service charges incurred due to lack of knowledge relating to how a function or effect works (when the unit is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owners responsibility. Please study this manual carefully and consult your dealer before requesting service.

ENVIRONMENTAL ISSUES: Yamaha strives to produce products that are both user safe and environmentally friendly. We sincerely believe that our products and the production methods used to produce them, meet these goals. In keeping with both the letter and the spirit of the law, we want you to be aware of the following:

Battery Notice: This product MAY contain a small non-rechargeable battery which (if applicable) is soldered in place. The average life span of this type of battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

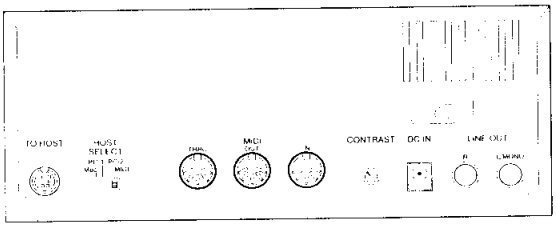
This product may also use "household" type batteries. Some of these may be rechargeable, Make sure that the battery being charged is a rechargeable type and that the charger is intended for the battery being charged.

When installing batteries, do not mix old batteries with new, or with batteries of a different type. Batteries MUST be installed correctly. Mismatches or incorrect installation may result in overheating and battery case rupture.

Warning: Do not attempt to disassemble, or incinerate any battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by the laws in your area. Note: Check with any retailer of household type batteries in your area for battery disposal information.

Disposal Notice: Should this product become damaged beyond repair, or for some reason its useful life is considered to be at an end, please observe all local, state, and federal regulations that relate to the disposal of products that contain lead, batteries, plastics, etc. If your dealer is unable to assist you, please contact Yamaha directly.

NAME PLATE LOCATION: The graphic below indicates the location of the name plate for this model. The model number, serial number, power requirements, etc., are located on this plate. You should record the model number, serial number, and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.



Model _____

Serial No. _____

Purchase Date _____

PLEASE KEEP THIS MANUAL

Table of Contents

What is the TG300?

The TG300 is a 16-part multi-timbral 32-note polyphonic tone generator, with 16-bit PCM sound elements, digital filters, and a Digital Signal Processor (DSP) for up to three simultaneous digital effects.

Features

- *Advanced Wave Memory (AWM2) sound sampling technology*
- *16-bit linear Pulse Code Modulation (PCM) sound elements*
- *High-performance Digital Signal Processor (DSP)*
- *Reverb, Chorus, and Variation effects*
- *32 preset effect programs and 16 internal effect programs*
- *Digital Filters*
- *32-note polyphony*
- *Dynamic Voice Allocation (DVA)*
- *16-part multi-timbral*
- *195 waves*
- *6MB ROM wave storage*
- *456 preset voices & 128 editable internal voices*
- *Up to 2 elements per voice*
- *Memory backup for internal voices and internal effect programs*
- *Conforms to General MIDI Level 1*
- *Semi-compatible with C/M software*
- *Single mode and GM-A, GM-B, & C/M multi modes*
- *Stereo Audio In facility*
- *Built-in MIDI interface*
- *Voice banks can be selected using MIDI Bank Select messages*
- *Backlit 21-character 8-line LCD*
- *Graphical User Interface (GUI)*
- *3 demo songs*

TG300 Sound Structure

Advanced Wave Memory (AWM2)

The TG300 uses Yamaha's proprietary Advanced Wave Memory (AWM2) processing technique for digitally sampling and reproducing sounds.

Waves

These are the basic sound building blocks. They are created using Yamaha's Advanced Wave Memory (AWM2) processing. The TG300 contains 195 waves in 6MB of ROM.

Elements

Waves are assigned to elements. An element consists of a pitch envelope generator (PEG), filter envelope generator (FEG), and an amplitude envelope generator (AEG).

Voices

Voices are formed using one or two elements. The TG300 contains 456 preset voices and 128 editable internal voices.

Parts

The TG300 is a multi-timbral device, which means that it can produce up to 16 different parts simultaneously. Each part is assigned a voice, MIDI Channel, volume level, pan setting, etc.

Drum Kits

The TG300 contains the following drum kits: Standard, Room, Power, Electronic, Analog, Brush, Orchestra, SFX, and C/M. In multi modes, drum kits are typically assigned to Part10, however, you can assign a kit to any part. Part parameters can be used to control the overall sound of a drum kit, and parameters such as pitch, level, filter, and envelope generator (EG) can be set for individual drums within a kit.

Polyphony

The TG300 is 32-note polyphonic, which means that up to 32 notes can sound at once (1-element voices). This is reduced to 16 for 2-element voices.

Dynamic Voice Allocation (DVA)

Notes are allocated to voice parts using Dynamic Voice Allocation (DVA). This system ensures that new notes always sound. If all 32 notes are currently sounding when a new note message is received, the TG300 will steal notes from other parts, starting with part16, then part15, and so on in descending order of parts. Part10 (drums) is not affected, and always has note priority.

Parts also have an Element Reserve parameter that allows you to reserve notes. In this case, the specified number of notes will always be available to a part regardless of Dynamic Voice Allocation (DVA).

General MIDI (GM)

The TG300's GM-A multi mode provides compatibility with General MIDI Level One software. Among other things, the GM standard states that a GM compatible tone generator must be at least 24-note polyphonic, have 16 parts, and 128 specific preset voices. The TG300 provides all this and more, so song data recorded using a different GM compatible tone generator should playback correctly on the TG300.

The GM standard does not specify sound generation processes and effect types, so songs recorded with one GM tone generator will not sound exactly the same when played on another. However, GM provides good compatibility for exchanging MIDI song data, and it is popular with MIDI musicians and multimedia users alike.

Sound Module Modes

Single Mode:

In Single mode, the TG300 performs as a single part tone generator, with only Part1 being active. This mode can be used to expand the available voice library of a MIDI keyboard, electric piano, etc. There are 128 editable internal voices available, and each can be assigned a preset effect program or an internal effect program.

When the TG300 is first powered on or initialized, preset voices 1 to 128 are copied into the internal voice bank. They can then be edited and assigned effects programs. Internal voices are stored when the TG300 is powered off.

Multi Modes:

In a multi mode, the TG300 performs as a multi-timbral tone generator that can play up to 16 parts simultaneously. The TG300 has three multi modes: GM-A, GM-B, and C/M. These multi modes provide compatibility with various music software.

GM-A: This multi mode is compatible with the General MIDI Level One standard. It also provides some extra features specific to Yamaha General MIDI equipment.

GM-B: This multi mode provides compatibility with other GM music software.

C/M: This multi mode provides semi-compatibility with computer music software.

Effects

The TG300 contains a high-performance Digital Signal Processor (DSP) that can provide up to three digital effects simultaneously: Reverb, Chorus, and Variation. However, the Reverb and Variation effects are two-stage effects, so there are five effect stages in all.

Effect settings are saved as effect programs, and there are 32 preset effect programs and 16 editable internal effect programs.

Reverb: consists of two stages: PrRev (Pre-Reverb) and Rev (Reverb). The PrRev stage offers distortion, EQ, chorus, flanger, etc., type effects. The Rev stage offers hall, room, plate, etc., type reverb effects.

Chorus: this single stage effect offers mainly modulation type effects, such as chorus, flanger, and tremolo. The output of the Chorus effect can be fed into the Reverb effect.

Variation: consists of two stages: PrVar (Pre-Variation) and Var (Variation). The PrVar stage offers EQ, chorus, flanger, etc., type effects. The Var stage offers chorus, flanger, etc., modulation type effects, pitch changer, exciter, compressor, and various reverb programs. The output of the Variation effect can be fed into the Reverb effect, Chorus effect, or both.

Audio In

The Audio In connection, with level control and peak indicator, allows sounds from another instrument, CD-ROM player, CD player, tape recorder, computer, etc., to be mixed and output with those of the TG300 via the LINE OUT and PHONES connections.

TO HOST

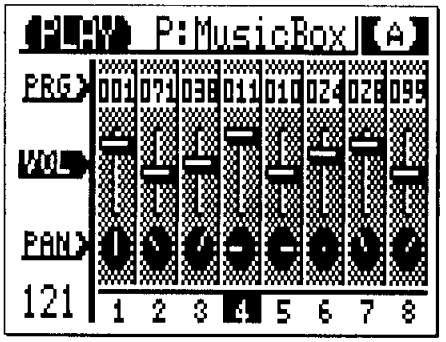
The TG300 TO HOST facility allows direct connection to a computer that does not have any MIDI connections or a MIDI interface. When this connection is used, the TG300 works as the MIDI interface, and other MIDI devices communicate with the computer via the TG300.

The TG300 also has the standard MIDI IN, OUT, and THRU connections, so it can easily be connected to a computer with a MIDI interface, and to other MIDI devices.

See "Connecting to a Computer" on page 82 for more details.

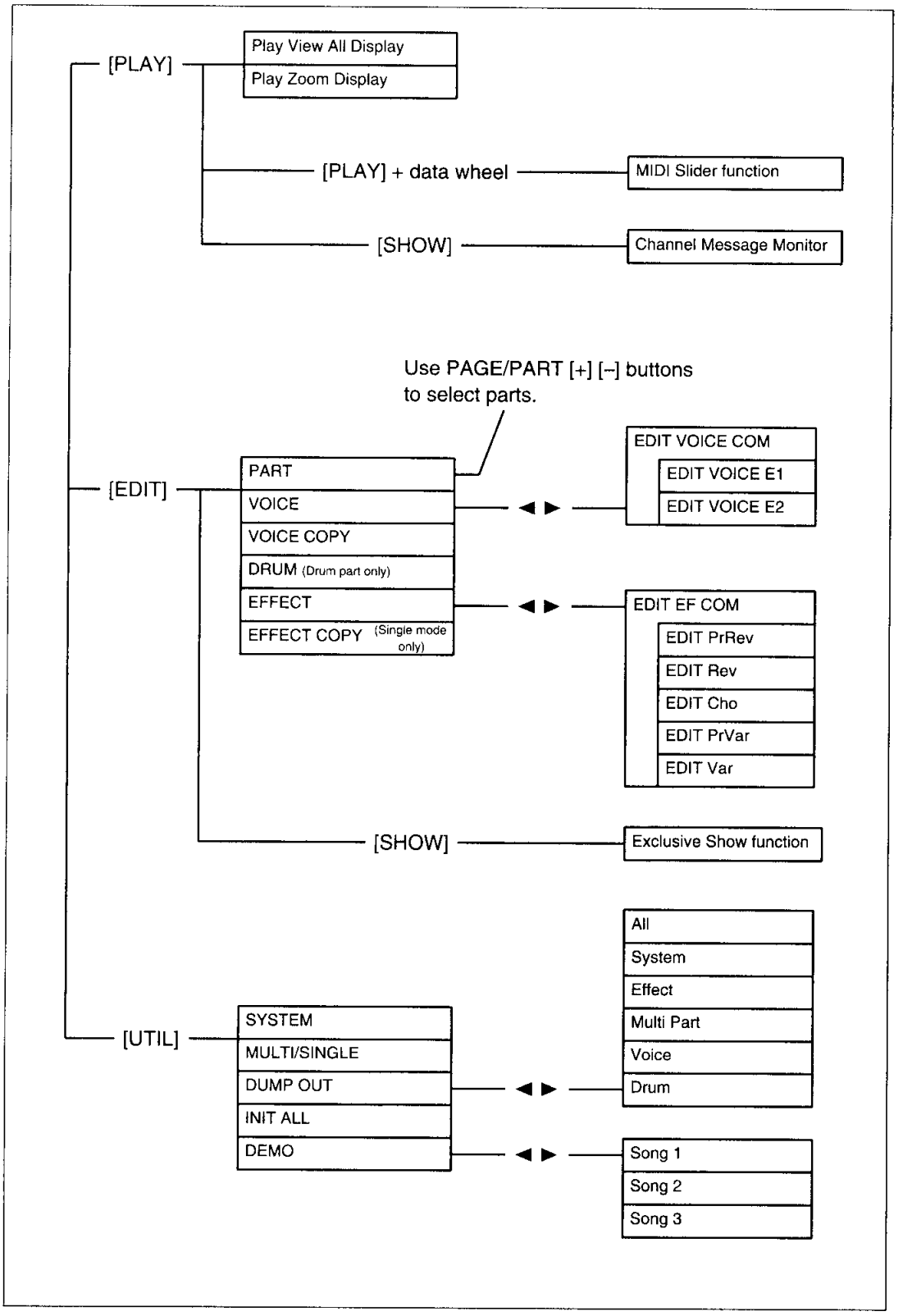
Graphical User Interface (GUI)

The TG300 uses a Graphical User Interface (GUI) to communicate with users. GUI interfaces are very popular on some personal computers, and provide a user-friendly working environment. The TG300 uses a backlit 21-character 8-line LCD to display on-screen graphics of level faders, level meters, and rotary controls. The following is a typical TG300 GUI display:



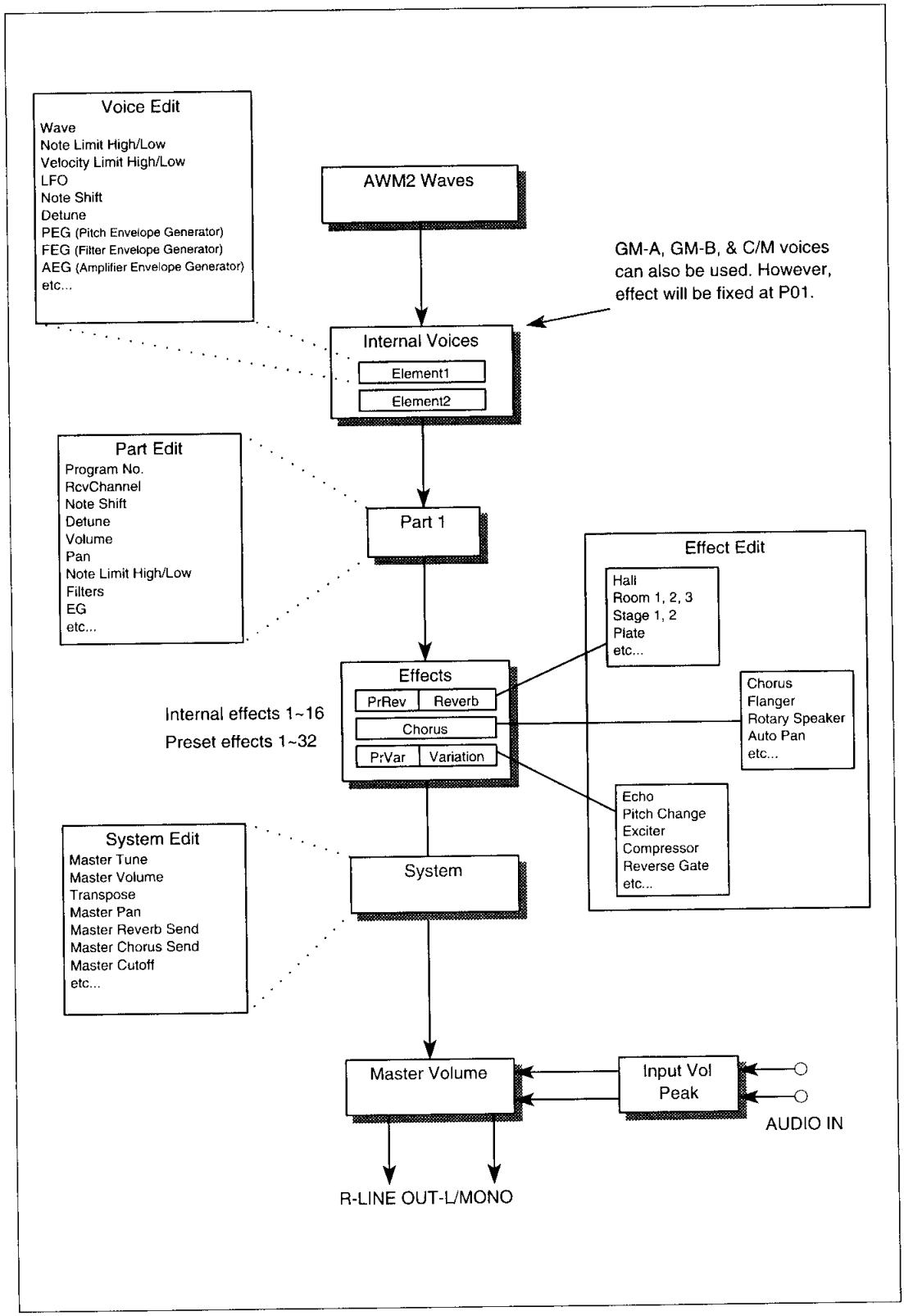
Menu Organization

The following diagram shows how TG300 functions and parameter menus are organized.



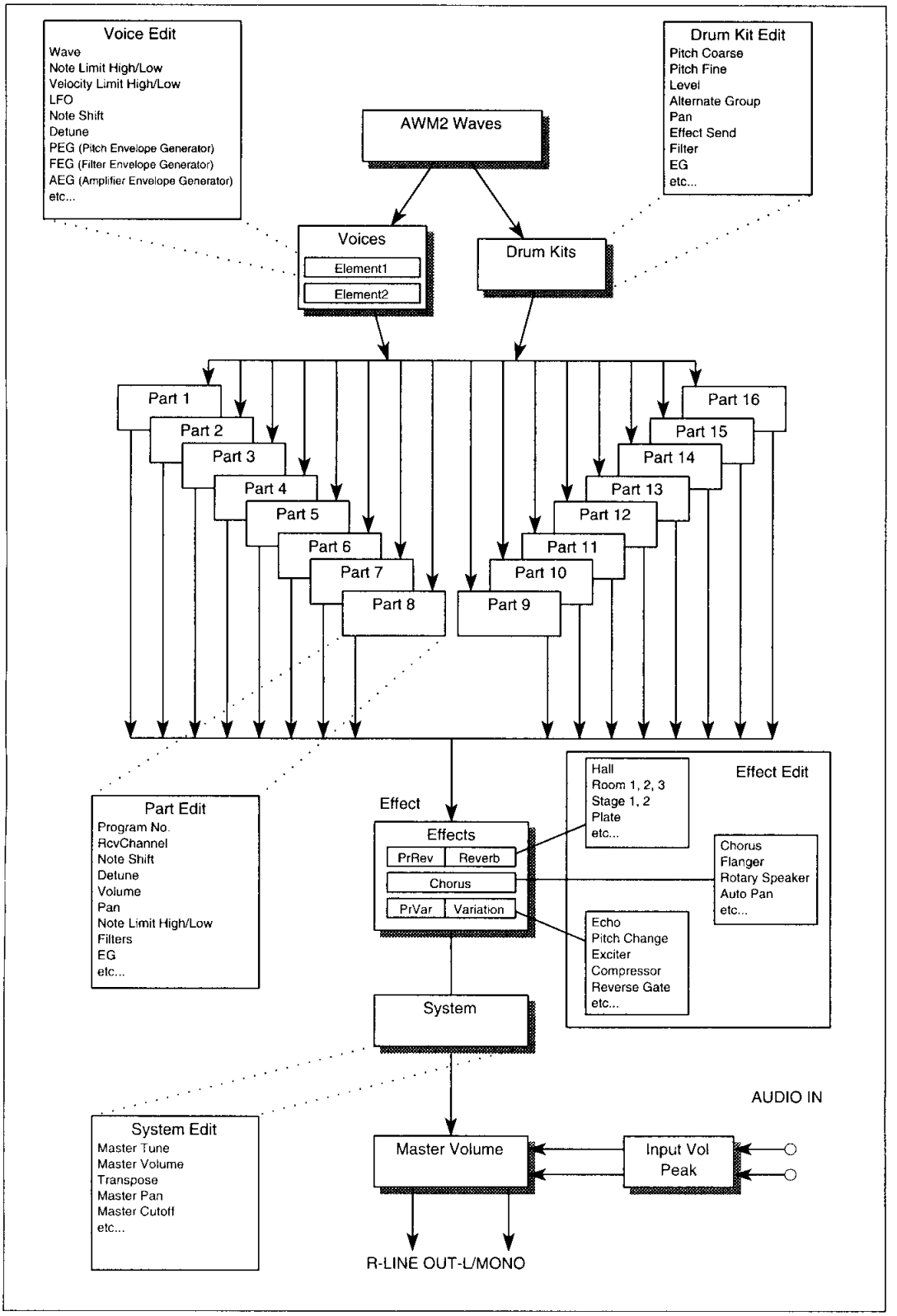
TG300 Single Mode

The following diagram shows what's in Single mode.



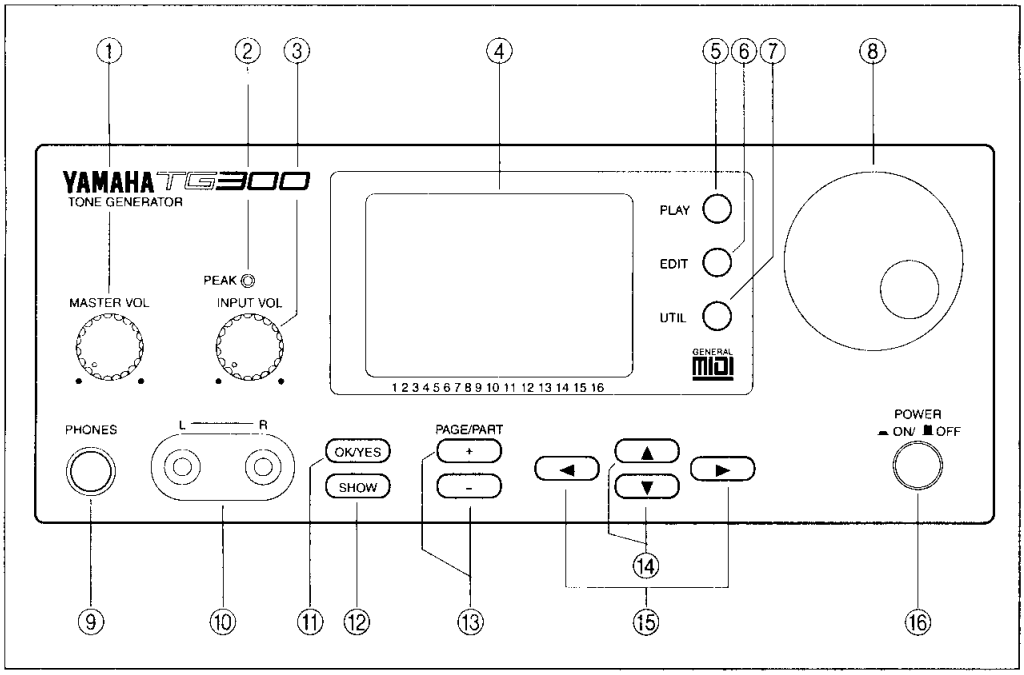
TG300 Multi Modes

The following diagram shows what's in the GM-A, GM-B, and C/M multi modes.



1 Controls & Connections

Front Panel



① MASTER VOL control

This control adjusts the overall volume level of the R, L/MONO LINE OUT signals. It also adjusts the headphone volume.

② PEAK indicator

This LED indicator lights up when the Audio In signal is too loud. Set the INPUT VOL control so that this indicator does not light.

③ INPUT VOL control

This control adjusts the volume level of the Audio In signal. Set it so that the PEAK indicator does not light.

④ LCD

This is a backlit 21-character 8-line Liquid Crystal Display (LCD). It displays the Graphical User Interface (GUI). The LCD contrast can be adjusted using the CONTRAST control on the rear panel. See "CONTRAST control" on page 11.

⑤ [PLAY] button

This button selects the Play View All Display and the Play Zoom Display.

⑥ [EDIT] button

This button selects the EDIT menu.

⑦ [UTIL] button

This button selects the UTIL menu.

⑧ Data wheel

This control is used to increase and decrease the currently selected parameter. Turning it clockwise increases a value, counterclockwise decreases it. Turning the data wheel while pressing the [OK/YES] button changes parameter values rapidly.

⑨ PHONES connector

This is used to connect a stereo pair of headphones. The headphone volume level is adjusted using the MASTER VOL control.

⑩ Audio In connectors

These are used to input stereo line level signals from another instrument. These signals are mixed with the TG300 signals, and output to the LINE OUT connectors.

⑪ [OK/YES] button

This button is used for the following:

Confirm Yes or No? type display prompts.

Mute and solo parts when a play display is shown.

Group parts for the MIDI Slider function.

Cancel the MIDI Channel Message Monitor and Exclusive Show function.

Execute DUMP OUT functions.

⑫ [SHOW] button

This button selects the MIDI Channel Message Monitor when a Play display is shown, and the Exclusive Show function when an Edit display is shown.

⑬ PAGE/PART [+] & PAGE/PART [–] buttons

These buttons are used for the following:

Select parts on the Play View All Display and for the MIDI Slider function. Holding down a button selects parts quickly. Holding down a button and pressing any other button selects parts even quicker.

Scroll the Play Zoom Display to the left and right.

Select parts in the EDIT MENU and EDIT PART menu.

Select the VOICE E1 and VOICE E2 menus when editing voices.

Select the PrRev, Rev, Cho, PrVar, and Var effect stages when editing effects.

Switch the MIDI IN on and off when editing drum kits ([+] button only).

⑭ [▲] [▼] cursor buttons

These buttons are used for the following:

Scroll the Play Zoom Display up and down.

Scroll through the MIDI Channel Message monitor.

Select items in the EDIT and UTIL menus.

Select parameters for the MIDI Slider function.

Finish voice name editing ([▲] button only).

Select items in the DUMP OUT menu.

Select songs from the DEMO PLAY menu.

Holding down a button moves the cursor quickly. Holding down a button and pressing any other button moves the cursor even quicker.

⑮ [◄] [►] cursor buttons

These buttons are used for the following:

Select parts on the Play Zoom Display and Play View All Display.

[►] button: enter PART, VOICE, DRUM, VOICE COPY, EFFECT, or EFFECT COPY from the EDIT menu.

[►] button: enter SYSTEM, MULTI/SINGLE, DUMP OUT, INIT ALL, or DEMO from the UTIL menu.

[◄] button: exit from the functions and menus listed above.

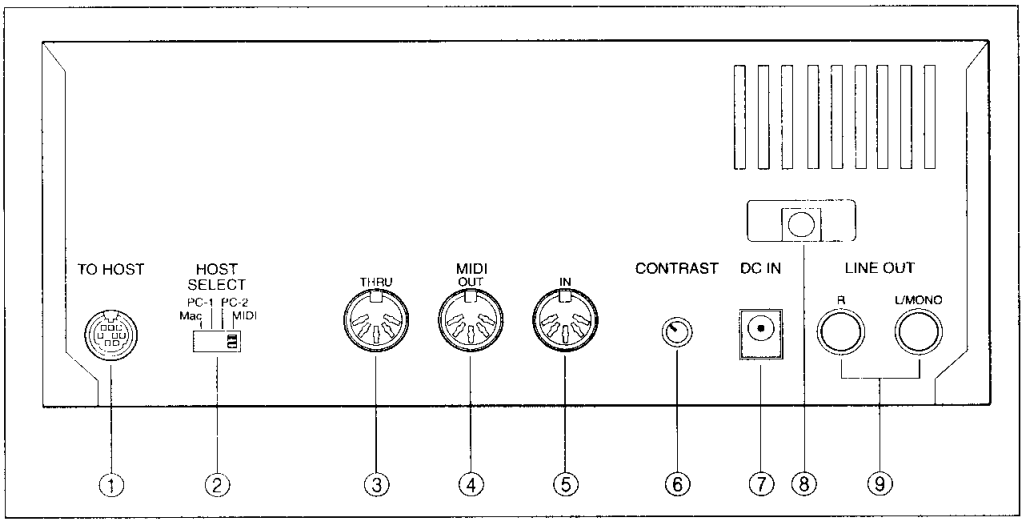
Position the cursor when editing voice names.

Holding down a button moves the cursor quickly. Holding down a button and pressing any other button moves the cursor even quicker.

⑯ POWER ON/OFF switch

This switch is used to power the TG300 on and off.

Rear Panel



① **TO HOST connector**
This is used to connect the TG300 to a computer that does not have a MIDI interface.

② **HOST SELECT switch**
This switch is used to select the type of host computer.

③ **MIDI THRU**
This connector outputs MIDI data received at the MIDI IN.

④ **MIDI OUT**
This connector outputs TG300 MIDI data and MIDI data received from the host computer via the TO HOST connection. It is usually connected to the MIDI IN of a synthesizer, MIDI computer sequencer, MIDI data recorder (MDR), etc.

⑤ **MIDI IN**
This connector receives MIDI data. It is usually connected to the MIDI OUT of a MIDI keyboard, synthesizer, MIDI sequencer, etc.

⑥ **CONTRAST control**
This control adjusts the contrast of the LCD.

⑦ **DC IN connector**
This is used to connect the supplied power supply adaptor to the TG300.

⑧ **Cable clip**
Wrap the power supply adaptor cable around this clip to prevent accidental disconnection.

⑨ **R & L/MONO LINE OUT connectors**
These are used to connect the TG300 to an amplifier, mixer, cassette multitrack, etc. If you are using a mono amplifier, use the L/MONO connector only.

2 Getting Around the TG300

In this chapter, we explain the power on and off procedure and how to get around parameter menus.

Power On

Warning: *The TG300 power supply adaptor should be connected to an AC receptacle of the voltage type marked on the adaptor.*

Presuming that you have setup the TG300 (see the *Getting Started Guide* for setup examples), press the [POWER] switch.

After the Welcome display, the Play Zoom Display will appear. See "Play Displays" on page 13 for more details about the Play Zoom Display.

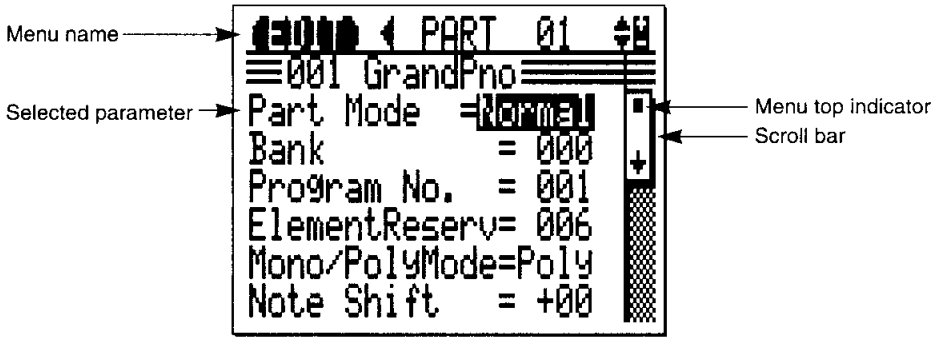
Power Off

Press the [POWER] switch.

All variable parameter settings, the 128 internal voices, and the 16 internal effect programs are stored when the TG300 is powered off.

Parameter Menus

TG300 parameters are organized into menus such as UTIL SYSTEM, EDIT PART, and UTIL DEMO PLAY. The EDIT PART menu is shown below:



The following points will help you to navigate TG300 menus. These are all features of a Graphical User Interface (GUI).

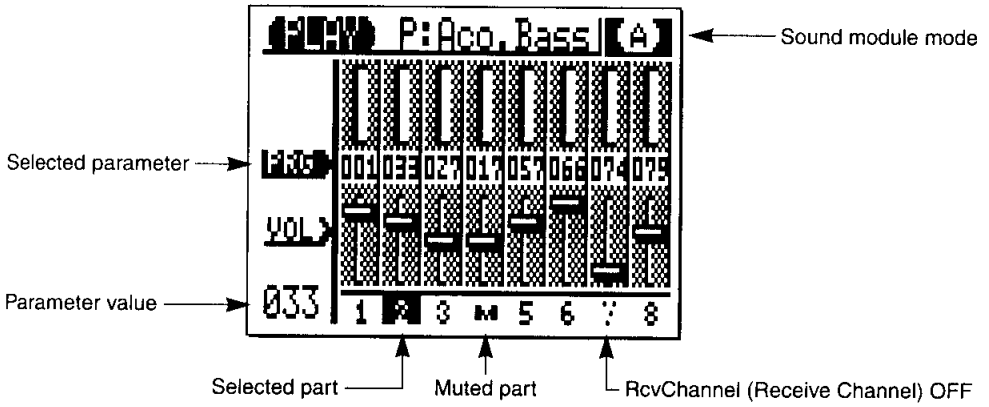
- When a parameter is selected, its value is highlighted.
- Use the [▲] and [▼] cursor buttons to select menu parameters.
- When the top or bottom parameter of those currently visible is selected, the menu will automatically scroll up or down.
- The scroll bar on the right-hand side of the display indicates the position within a menu:

3 Play Displays

In this chapter, we explain the Play Zoom Display and Play View All Display. Play displays can be switched by pressing the [PLAY] button.

Play Zoom Display

The Play Zoom Display shows a zoomed view of eight parts.



Part numbers are shown at the bottom of the display. The number of the currently selected part is highlighted. The letter M indicates that a part is muted. Dimmed part numbers indicate parts whose RcvChannel parameter is set to OFF. See "MIDI Receive Channel (RcvChannel)" on page 26.

The current sound module mode is shown in the top right-hand corner of the display. Sound module modes are as follows:

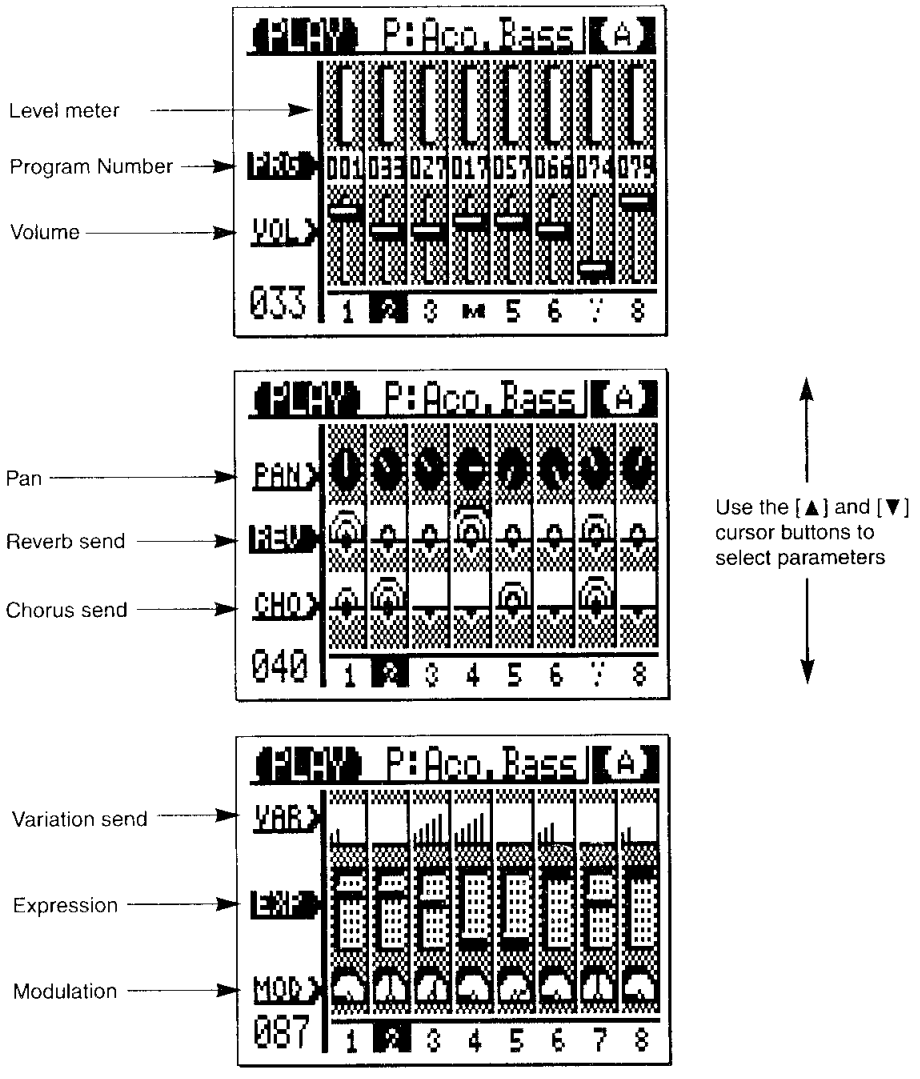
A	GM-A
B	GM-B
C	C/M
S	Single

The sound module mode can be set in the UTIL SYSTEM menu. See "Multi/Single (Sound Module Mode)" on page 72.

When MIDI System Exclusive data is received, the sound module mode indicator is replaced by the abbreviation shown below for about 1 second:

EX	System Exclusive data receive

The graphic objects on the Play Zoom Display correspond to the following parameter controls and indicators. Three rows of parameters can be seen at once, and the name of the currently selected parameter is highlighted:



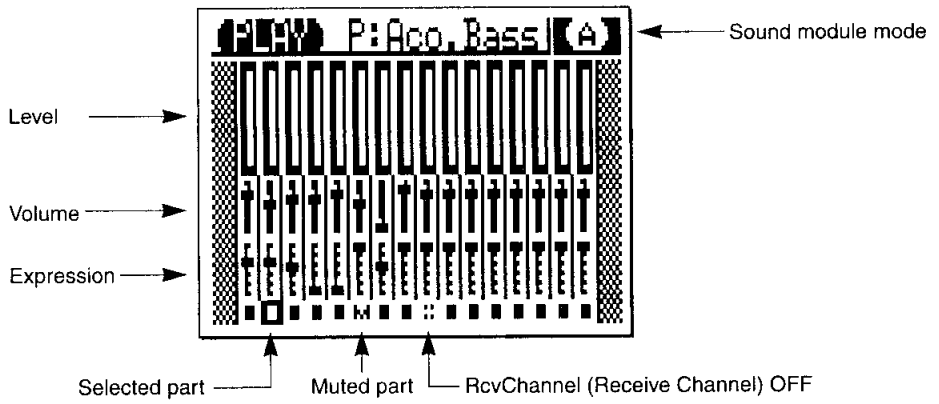
The graphic indicators and controls move when the corresponding parameter is adjusted using the data wheel and when the corresponding MIDI data is received.

Control Operation

- Use the [▲] and [▼] cursor buttons to select parameters.
- Use the [◄] and [►] cursor buttons to select parts.
- Use the PAGE/PART [+] [–] buttons to show parts 1 to 8 or parts 9 to 16.
- Use the data wheel to adjust the selected parameter for the currently selected part.
- Press the [OK/YES] button to mute a part. Once more to solo it. Then again to cancel.
- Press the [SHOW] button for the MIDI Channel Message Monitor.
- Press the [PLAY] button for the Play View All Display.
- Press the [EDIT] button for the EDIT MENU.
- Press the [UTIL] button for the UTIL MENU.

Play View All Display

The Play Zoom Display and Play View All Display are switched by pressing the [PLAY] button. The Play View All Display shows all 16 parts.



The status of each part is shown at the bottom of the display. The graphic indicators move when the corresponding MIDI data is received.

Control Operation

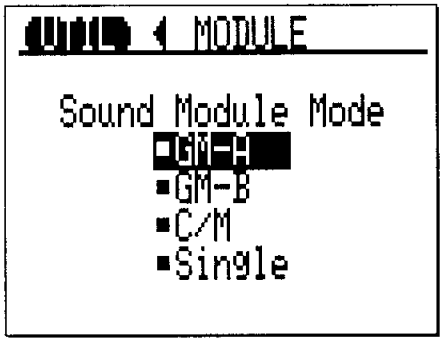
- Use the PAGE/PART [+] [–] buttons to select parts.
- Use the [◄] and [►] cursor buttons to select parts.
- Press the [OK/YES] button to mute a part. Once more to solo it. Then again to cancel.
- Press the [SHOW] button for the MIDI Channel Message Monitor.
- Press the [PLAY] button for the Play Zoom Display.
- Press the [EDIT] button for the EDIT MENU.
- Press the [UTIL] button for the UTIL MENU.

4 Single Mode

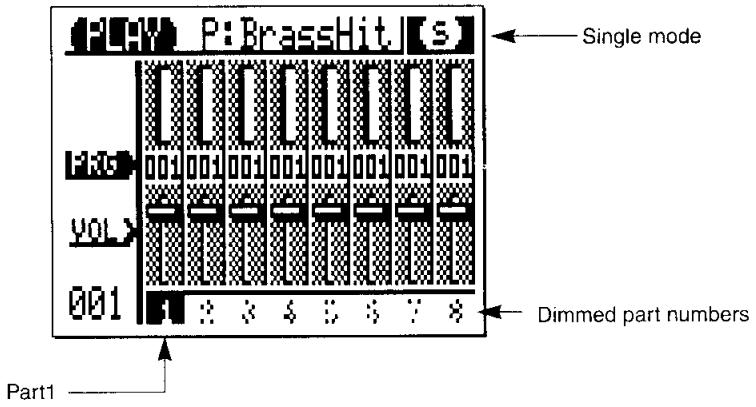
In this chapter, we explain how to select Single mode, select voices, and mute Part1. The diagram "TG300 Single Mode" on page 6 shows what Single mode consists of.

Selecting Single Mode

1. **Press the [UTIL] button.**
   The UTIL MENU will appear.
2. **Use the [▲] and [▼] cursor buttons to select MULTI/SINGLE.**
3. **Press the [►] cursor button.**
   The UTIL MODULE display shown below will appear:



4. **Use the [▼] cursor button to select Single.**
5. **Press the [PLAY] button.**
   The Play Zoom Display will appear.



In Single mode, only Part1 is active, other parts cannot be used. This is indicated by the dimmed part numbers along the bottom of the display.

Selecting Voices

In Single mode, voices can be selected using:

- the Play Zoom Display
- the EDIT PART menu
- MIDI Program Change messages

Play Zoom Display

1. **Press the [PLAY] button to select the Play Zoom Display.**
2. **Press the [▲] cursor button repeatedly to select the PRG parameter shown on the left-hand side of the display.**
3. **Use the data wheel to select voices.**

EDIT PART Menu

1. **Press the [EDIT] button. The EDIT menu will appear.**
2. **Use the [▲] cursor button to select PART.**
3. **Press the [►] cursor button. The EDIT PART menu will appear.**
4. **Use the [▲] and [▼] cursor buttons to select the Program No. parameter.**
5. **Use the data wheel to select a Program number (voice).**
   You can also select voices from other banks using the Bank parameter. See "Bank" on page 22 for more details.

MIDI Program Change Messages

To select voices using MIDI Program Change messages, you must use a MIDI device that is capable of sending them, such as a MIDI keyboard or MIDI sequencer. The *Getting Started Guide* shows how to connect the TG300 to a MIDI keyboard and MIDI sequencer.

MIDI Program Change messages must be sent on the MIDI Channel being used by Part1. To set the MIDI Channel for Part1, see "MIDI Receive Channel (RcvChannel)" on page 26. In addition, the Pgm Change parameter in the UTIL SYSTEM menu must be set to ON. Otherwise, the TG300 will ignore MIDI Program Change messages.

Refer to the operating manuals supplied with your MIDI keyboard or sequencer for details about sending MIDI Program Change messages.

Single Voice Table

When the TG300 is first powered on or initialized, 32 voices for Single mode are copied repeatedly into the internal voice bank as follows: 1~32, 33~64, 65~96, 97~128.

Muting Part1

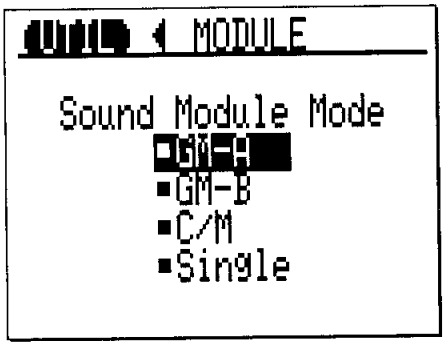
1. **Press the [OK/YES] button.**
   The  at the bottom of the display will change to an  , and part1 will not sound.
2. **Press the [OK/YES] button again to un-mute part1.**

5 Multi Modes

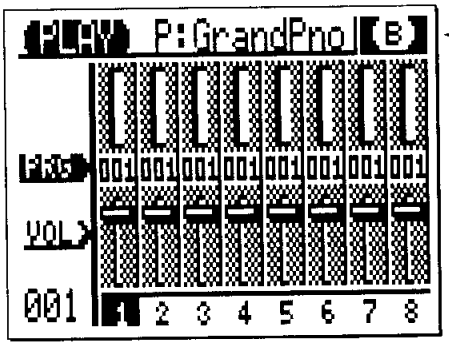
In this chapter, we explain how to select multi modes, select voices and drum kits, and mute and solo Parts. The diagram "TG300 Multi Modes" on page 7 shows what multi modes consist of.

Selecting Multi Modes

1. **Press the [UTIL] button.**
   The UTIL MENU will appear.
2. **Use the [▲] and [▼] cursor buttons to select MULTI/SINGLE.**
3. **Press the [►] cursor button.**
   The UTIL MODULE display shown below will appear:



4. **Use the [▲] and [▼] cursor buttons to select GM-A, GM-B, or C/M.**
5. **Press the [PLAY] button.**
   The Play Zoom Display will appear:



A, B, and C indicate Multi mode

Selecting Voices

In multi modes, voices can be selected using:

- the Play Zoom Display
- the EDIT PART menu
- MIDI Program Change messages

For the C/M voice bank, different voices are available for parts 1 to 9 and parts 11 to 16.

Play Zoom Display

1. **Press the [PLAY] button to select the Play Zoom Display.**
2. **Use the [◄] and [►] cursor buttons to select a part.**
3. **Press the [▲] cursor button repeatedly to select the PRG parameter shown on the left-hand side of the display.**
4. **Use the data wheel to select voices.**

EDIT PART Menu

1. **Press the [EDIT] button.**
   The EDIT menu will appear.
2. **Use the [▲] cursor button to select PART.**
3. **Press the [►] cursor button.**
   The EDIT PART menu will appear.
4. **Use the [▲] and [▼] cursor buttons to select the Program No. parameter.**
5. **Use the data wheel to select a Program number (voice).**
   You can also select voices from other banks using the Bank parameter. See "Bank" on page 22 for more details.

MIDI Program Change Messages

To select voices using MIDI Program Change messages, you must use a MIDI device that is capable of sending them, such as a MIDI keyboard or MIDI sequencer. The *Getting Started Guide* shows how to connect the TG300 to a MIDI keyboard and MIDI sequencer.

MIDI Program Change messages must be sent on the corresponding part's MIDI Channel. To set MIDI Channels, see "MIDI Receive Channel (RcvChannel)" on page 26. In addition, the Pgm Change parameter in the UTIL SYSTEM menu must be set to ON. Otherwise, the TG300 will ignore MIDI Program Change messages.

Refer to the operating manuals supplied with your MIDI keyboard or sequencer for details about sending MIDI Program Change messages. For MIDI songs that conform to the GM Standard, MIDI Program Change messages are automatically sent when playback is started.

Selecting Drums Kits

When a multi mode is first selected, part10 is set to Drum mode. The General MIDI Standard states that part10 be used for drums and percussion. However, you can assign drum kits to other parts by setting the Part mode to Drum. See "Part Mode" on page 21.

When a part is set to Drum mode, drum kits can be selected the same way as voices using:

- the Play Zoom Display
- the EDIT PART menu
- MIDI Program Change messages

Muting & Soloing Parts

Muting allows you to turn off individual parts, and soloing allows you listen to individual parts. Both functions can be used with the Play Zoom Display and Play View All Display.

1. **Use the [◄] and [►] cursor buttons to select a part.**

2. **Press the [OK/YES] button to mute the part.**
   The corresponding part number at the bottom of the display will change to M, and the part will not sound.

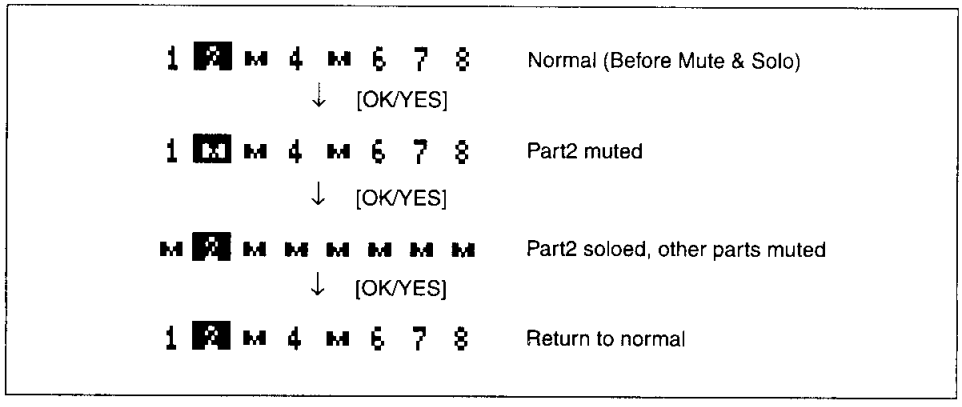
   To mute other parts, use the [◄] and [►] cursor buttons to select them, then press the [OK/YES] button.

3. **To solo the selected part, press the [OK/YES] button again.**
   The M for the corresponding part will return to a number, and all other parts will be muted.

   To solo other parts, use the [◄] and [►] cursor buttons to select them, then press the [OK/YES] button.

4. **Press the [OK/YES] button again to return to normal.**
   Solo is cancelled, and all parts return to normal.

   The following illustrated example shows how the mute and solo functions work. Part2 is currently selected:



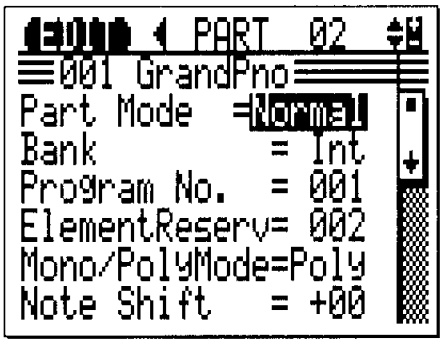
6 Editing Parts

In this chapter, we explain how to edit part parameters. These parameters appear on the EDIT PART menu. This menu can be shown in short form or in full. The Short Menu parameter in the UTIL SYSTEM menu is used to select short menu or full menu. In multi modes you can edit all 16 parts. In Single mode you can edit Part1 only.

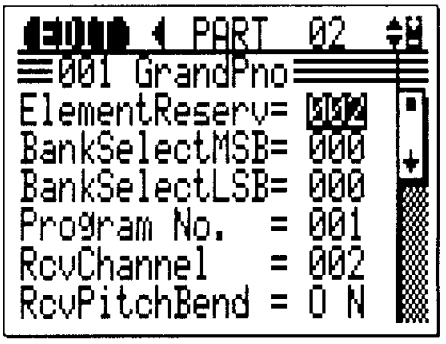
Selecting the EDIT PART Menu

1. **Press the [EDIT] button.**
   The EDIT menu will appear.
2. **Use the [▲] cursor button to select PART.**
   At this point, you can select parts using the PAGE/PART [+] [–] buttons.
3. **Press the [►] cursor button.**
   The EDIT PART menu will appear.

   The top few parameters of the short and full EDIT PART menus are shown below.



Short EDIT PART menu
("Short Menu" in UTIL SYSTEM is ON)



Full EDIT PART menu
("Short Menu" in UTIL SYSTEM is OFF)

See "Short Menu" on page 70 for details about selecting the short and full menus.

Control Operation

- Use the PAGE/PART [+] [–] buttons to select parts.
- Use the [▲] and [▼] cursor buttons to select parameters.
- Use the data wheel to adjust parameter values.
- Press the [EDIT] button or [◄] cursor button to return to the EDIT MENU.
- Press the [UTIL] button for the UTIL MENU.
- Press the [PLAY] button for the Play View All Display and Play Zoom Display.

EDIT PART Short Menu Parameters

Part Mode

This parameter allows you to set up a part for use with normal voices or drum kits.

Range: Normal, Drum

In Single mode, this parameter is fixed at Normal. In C/M multi mode, part10 is fixed at Drum.

Bank

This parameter allows you to select voice banks.

Available voice banks depend on the sound module mode.

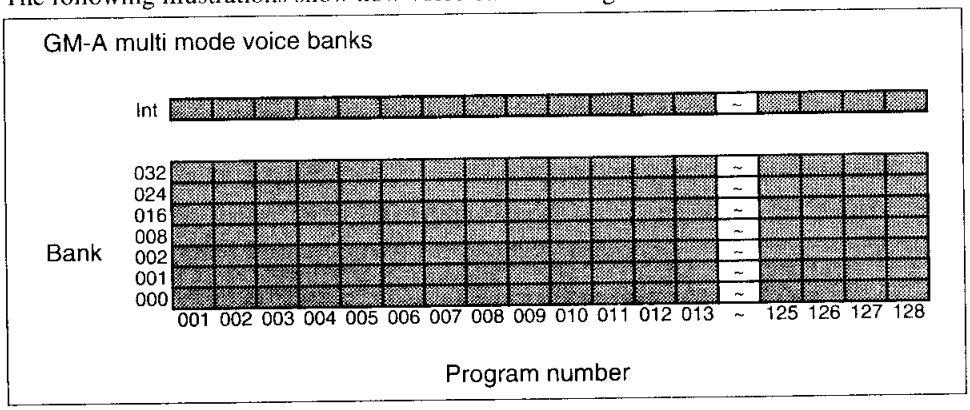
GM-A: 0, 1, 2, 8, 16, 24, 32, Int

GM-B and Single: 0 ~ 9, 16, 24, 32, Int, Pre, 126, 127

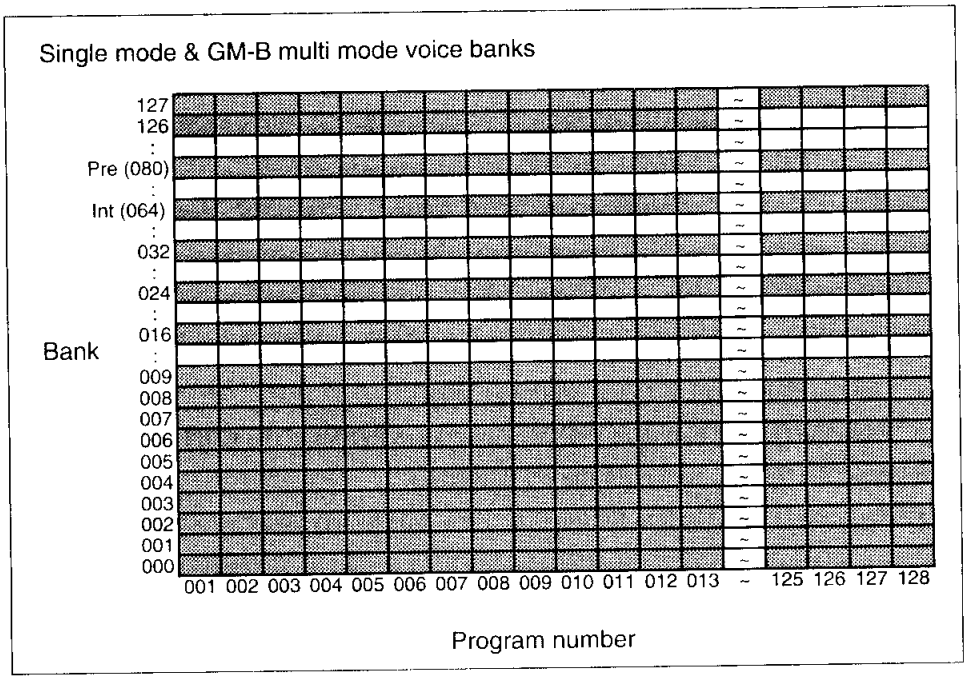
C/M: Fix (voice bank cannot be changed). Drum kit is fixed to C/M kit.

Int and Pre refer to the internal and single preset voice banks, respectively.

The following illustrations show how voice banks are organized.



In GM-A mode, if you select Int, internal voice effect numbers are ignored.



In GM-B mode, if you select Pre or Int, the preset or internal voice effect numbers are ignored.

In Single mode, when a bank other than Pre or Int is selected, effect P01 is used.

In bank 126, the highest voice is 65.

Program Number (Program No.)

This parameter allows you to select voices.

Range: 1 to 128

To select voices in Single mode, see "Selecting Voices" on page 17. To select voices in multi modes, see "Selecting Voices" on page 18.

Element Reserve (ElementReserv)

This parameter allows you to reserve elements for parts.

Range: 0 to 32

Thirty-two is the total number of elements available for all 16 parts.

Normally, elements are dynamically allocated to parts. However, you may want to reserve some elements for particularly important parts. This is useful for complex compositions.

Mono/Poly Mode

This parameter allows you to set up a part as monophonic or polyphonic.

Range: Mono, Poly

This parameter cannot be used when the Part mode is Drum.

Note Shift

This parameter allows you to note shift a part.

Range: –24 to +24 semitone

Volume

This parameter allows you to set the volume level of a part.

Range: 0 to 127

Pan

This parameter allows you to pan a part.

Range: Rnd, L63...C...R63 (Random, left...center...right)

For a setting of Rnd, a part will be panned randomly between the left and right outputs.

Voices can be panned relative to this parameter. See "Pan" on page 47.

Velocity Sense Depth (Vel SensDepth)

This parameter determines how sensitive a part is to note velocity.

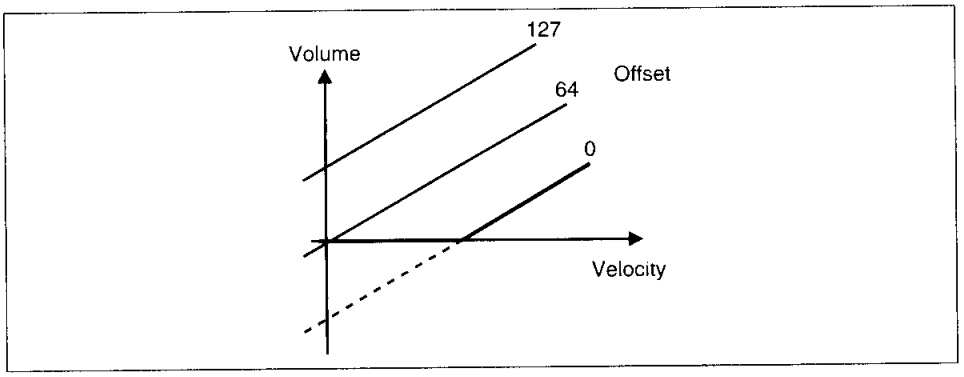
Range: 0 to 127

The higher the value, the greater the volume change.

Velocity Sense Offset (Vel SensOffst)

This parameter determines the volume range in which note velocity has most effect.

Range: 0 to 127



Dry Level

This parameter allows you to set the dry signal volume level.

Range: 0 to 127 (all effect to dry signal only)

Reverb Send Level (Rev Send)

This parameter allows you to set the level of a part sent to the Reverb effect.

Range: 0 to 127

Chorus Send Level (Cho Send)

This parameter allows you to set the level of a part sent to the Chorus effect.

Range: 0 to 127

Variation Send Level (Var Send)

This parameter allows you to set the level of a part sent to the Variation effect.

Range: 0 to 127

Filter Cutoff Frequency (Cutoff Freq)

This parameter allows you to set a part filter's cutoff frequency.

Range: –64 to +63

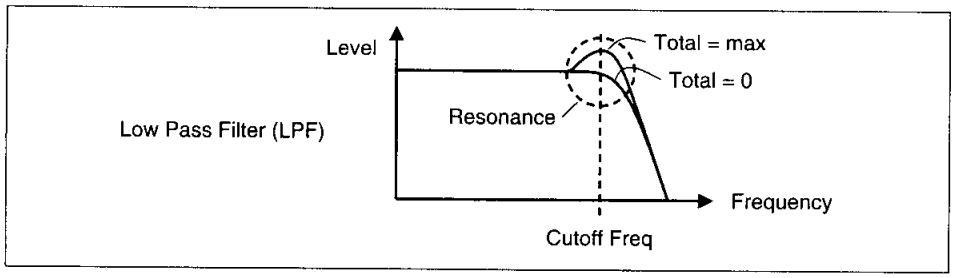
Filter Resonance (Resonance)

This parameter allows you to set a part filter's resonance. This causes a level boosting of frequencies around the cutoff frequency.

Range: –64 to +63

This parameter works in conjunction with the Resonance parameter in the EDIT VOICE menu. The actual resonance value is the total of both parameters. If the total is less than 0, resonance will be 0.

The following illustration shows the LPF response:



EG Attack Time (EG Attack Tm)

This parameter allows you to set the part EG attack time.

Range: –64 to +63

EG Decay Time (EG Decay Tm)

This parameter allows you to set the part EG decay time.

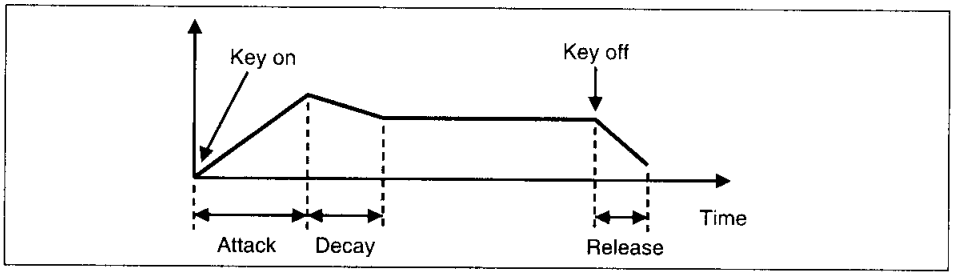
Range: –64 to +63

EG Release Time (EG Release Tm)

This parameter allows you to set the part EG release time.

Range: –64 to +63

The following illustration shows the EG Attack, Decay, and Release parameters:



Vibrato Rate

This parameter allows you to set the vibrato speed.

Range: –64 to +63

Vibrato Depth

This parameter allows you to set the vibrato depth.

Range: –64 to +63

Vibrato Delay

This parameter determines the rate at which vibrato starts.

Range: –64 to +63

MIDI Receive Channel (RcvChannel)

This parameter allows you to assign a MIDI Channel to a part.

Range: 1 to 16, OFF

A part will receive MIDI data on the assigned MIDI Channel. For a setting of OFF, the part will ignore MIDI data.

Program Change Receive On/Off (RcvPgmChange)

This parameter determines whether a part responds to MIDI Program Change messages.

Range: OFF, ON

MIDI Volume Controller Receive On/Off (RcvVolume)

This parameter determines whether a part responds to MIDI Volume Controller messages.

Range: OFF, ON

Note Limit Low (Note Limit Lo)

This parameter allows you to set the lowest note that will play a part.

Range: C–2 to G8

Note Limit High (Note Limit Hi)

This parameter allows you to set the highest note that will play a part.

Range: C–2 to G8

Bend Pitch Control (Bnd Pit Ctrl)

This parameter allows you to set the pitch bend range for a part.

Range: –24 to +24 semitone

Modulation Wheel LFO PM Depth (MW LFO PMod)

This parameter allows you to set the depth of the modulation LFO.

This parameter determines how the MIDI Modulation Controller affects a part's LFO pitch modulation depth.

Range: 0 to 127

EDIT PART Full Menu Parameters

These parameters are available only when the Short Menu parameter in the UTIL SYSTEM menu is set to OFF. See "Short Menu" on page 70.

Bank Select MSB (BankSelectMSB)

This parameter allows you to select voice banks. Use it in conjunction with the Bank Select LSB parameter.

The parameter range depends on the sound module mode:

GM-A: 0, Int

GM-B and Single: 0 ~ 9, 16, 24, 32, Int, Pre, 126, 127

C/M: Fix. Drum kit is fixed to C/M kit.

Bank Select LSB (BankSelectLSB)

This parameter allows you to select voice banks. Use it in conjunction with the Bank Select MSB parameter.

The parameter range depends on the sound module mode:

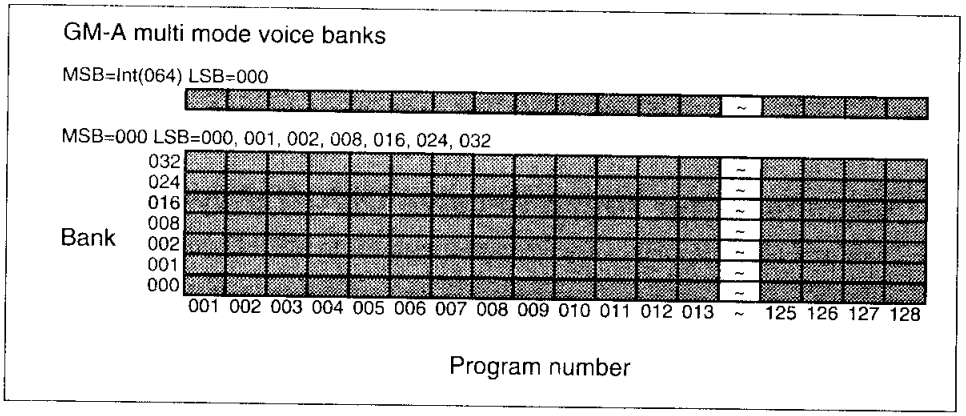
GM-A: 0, 1, 2, 8, 16, 24, 32

GM-B and Single: Fix

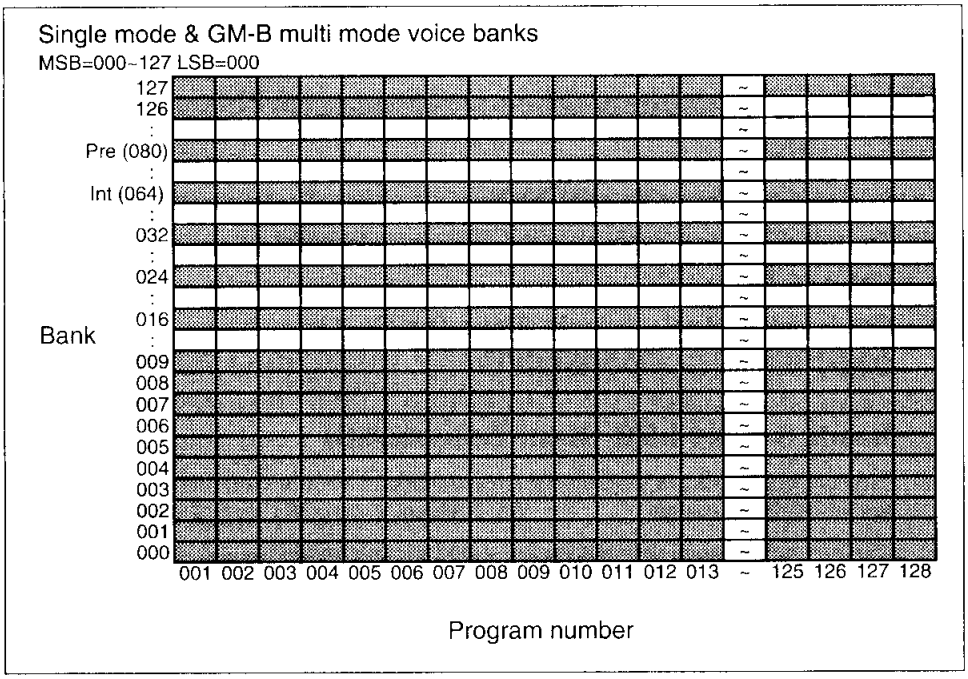
C/M: Fix. Drum kit is fixed to C/M kit.

Note: *In the short EDIT PART menu, the Bank Select MSB and Bank Select LSB parameters are handled together as the Bank parameter.*

The following illustrations show how voice banks are organized. Similar illustrations are shown on page 22 for the short EDIT PART menu Bank parameter.



In GM-A mode, if you select Int, internal voice effect numbers are ignored.



In GM-B mode, if you select Pre or Int, the preset or internal voice effect numbers are ignored.

In Single mode, when a bank other than Pre or Int is selected, effect P01 is used.

In bank 126, the highest voice is 65.

Pitch Bend Receive On/Off (RcvPitchBend)

This parameter determines whether a part responds to MIDI Pitch Bend messages.

Range: OFF, ON

Channel After Touch Receive On/Off (RcvChAftTch)

This parameter determines whether a part responds to MIDI Channel After Touch messages.

Range: OFF, ON

Controller Receive On/Off (RcvCtrlChange)

This parameter determines whether a part responds to MIDI Controller messages.

Range: OFF, ON

Polyphonic After Touch Receive On/Off (RcvPolyAftTch)

This parameter determines whether a part responds to MIDI Polyphonic After Touch messages.

Range: OFF, ON

Note Message Receive On/Off (RcvNoteMesage)

This parameter determines whether a part responds to MIDI Note messages.

Range: OFF, ON

RPN Receive On/Off (RcvRPN)

This parameter determines whether a part responds to MIDI RPN (Registered Parameter Number) messages. The TG300 responds to the following RPNs: Pitch Bend Sensitivity, Master Fine Tuning, and Master Coarse Tuning.

Range: OFF, ON

NRPN Receive On/Off (RcvNRPN)

This parameter determines whether a part responds to MIDI NRPN (Non-Registered Parameter Number) messages.

Range: OFF, ON

Modulation Receive On/Off (RcvModulation)

This parameter determines whether a part responds to the MIDI Modulation Controller.

Range: OFF, ON

Volume Receive On/Off (RcvVolume)

This parameter determines whether a part responds to the MIDI Volume Controller.

Range: OFF, ON

Panpot Receive On/Off (RcvPan)

This parameter determines whether a part responds to the MIDI Panpot Controller.

Range: OFF, ON

Expression Receive On/Off (RcvExpression)

This parameter determines whether a part responds to the MIDI Expression Controller.

Range: OFF, ON

Hold1 Receive On/Off (RcvHold1)

This parameter determines whether a part responds to the MIDI Hold1 Controller.

Range: OFF, ON

Portamento Receive On/Off (RcvPortamento)

This parameter determines whether a part responds to the MIDI Portamento Controller.

Range: OFF, ON

Sostenuto Receive On/Off (RcvSostenuto)

This parameter determines whether a part responds to the MIDI Sostenuto Controller.

Range: OFF, ON

Soft Pedal Receive On/Off (RcvSoftPedal)

This parameter determines whether a part responds to the MIDI Soft Pedal Controller.

Range: OFF, ON

Same Note Number Key On Assign (Key Assign)

This parameter determines how new notes affect notes with the same note number that are already sounding.

The parameter range depends on the part mode.

Drum mode: Sngl, Mult, Inst

Normal mode: Sngl, Mult

For a setting of Sngl, a new note of the same note number will stop the sounding note.

For a setting of Mult, a new note of the same note number will not stop the sounding note.

For a Drum mode part, when Inst is selected, this setting is determined by the EDIT DRUM menu Key Assign parameter. See "Same Note Number Key On Assign (Key Assign)" on page 54.

Detune

This parameter allows you to detune a part.

Range: –12.8 to +12.7 Hz

Assignable Controller1 Number (AC1 Ctrl No.)

This parameter allows you to assign a MIDI Controller to Assignable Controller1.

Range: 0 to 95

Assignable Controller2 Number (AC2 Ctrl No.)

This parameter allows you to assign a MIDI Controller to Assignable Controller2.

Range: 0 to 95

Scale Tuning C ~ B

This and the following Scale Tuning parameters allow you to fine-tune each note. This allows you to make up your own tunings. This is sometimes called micro tuning.

Range: –64 to +63 cent

Modulation Wheel Pitch Control (MW Pit Ctrl)

This parameter determines how the MIDI Modulation Controller affects a part's pitch.

Range: –24 to +24 semitone

Modulation Wheel Filter Control (MW Flt Ctrl)

This parameter determines how the MIDI Modulation Controller affects a part's cutoff frequency.

Range: –9600 to +9450 cent

Modulation Wheel Amplitude Control (MW Amp Ctrl)

This parameter determines how the MIDI Modulation Controller affects a part's volume.

Range: –64 to +63

Modulation Wheel LFO Filter Mod Depth (MW LFO FMod)

This parameter determines how the MIDI Modulation Controller affects a part's LFO filter modulation depth. It is active only when the LFO Func parameter in the EDIT VOICE menu is set to Filter. See "LFO Function (LFO Func)" on page 38.

Range: 0 to 127

Bend Filter Control (Bnd Flt Ctrl)

This parameter determines how MIDI Pitch Bend affects a part's cutoff frequency.

Range: –9600 to +9450 cent

Bend Amplitude Control (Bnd Amp Ctrl)

This parameter determines how MIDI Pitch Bend affects a part's volume.

Range: –64 to +63

Bend LFO PM Depth (Bnd LFO PMod)

This parameter determines how MIDI Pitch Bend affects a part's LFO pitch modulation depth.

Range: 0 to 127

Bend LFO Filter Mod Depth (Bnd LFO FMod)

This parameter determines how MIDI Pitch Bend affects a part's LFO filter modulation depth. It is active only when the LFO Func parameter in the EDIT VOICE menu is set to Filter. See "LFO Function (LFO Func)" on page 38.

Range: 0 to 127

Channel After Touch Pitch Control (CAT Pit Ctrl)

This parameter determines how MIDI Channel After Touch affects a part's pitch.

Range: –24 to +24 semitone

Channel After Touch Filter Control (CAT Flt Ctrl)

This parameter determines how MIDI Channel After Touch affects a part's cutoff frequency.

Range: –9600 to +9450 cent

Channel After Touch Amplitude Control (CAT Amp Ctrl)

This parameter determines how MIDI Channel After Touch affects a part's volume.

Range: –64 to +63

Channel After Touch LFO PM Depth (CAT LFO PMod)

This parameter determines how MIDI Channel After Touch affects a part's LFO pitch modulation depth.

Range: 0 to 127

Channel After Touch LFO Filter Mod Depth (CAT LFO FMod)

This parameter determines how MIDI Channel After Touch affects a part's LFO filter modulation depth. It is active only when the LFO Func parameter in the EDIT VOICE menu is set to Filter. See "LFO Function (LFO Func)" on page 38.

Range: 0 to 127

Polyphonic After Touch Pitch Control (PAT Pit Ctrl)

This parameter determines how MIDI Polyphonic After Touch affects a part's pitch.

Range: –24 to +24 semitone

Polyphonic After Touch Filter Control (PAT Flt Ctrl)

This parameter determines how MIDI Polyphonic After Touch affects a part's cutoff frequency.

Range: –9600 to +9450 cent

Polyphonic After Touch Amplitude Control (PAT Amp Ctrl)

This parameter determines how MIDI Polyphonic After Touch affects a part's volume.

Range: –64 to +63

Polyphonic After Touch LFO PM Depth (PAT LFO PMod)

This parameter determines how MIDI Polyphonic After Touch affects a part's LFO pitch modulation depth.

Range: 0 to 127

Polyphonic After Touch LFO Filter Mod Depth (PAT LFO FMod)

This parameter determines how MIDI Polyphonic After Touch affects a part's LFO filter modulation depth. It is active only when the LFO Func parameter in the EDIT VOICE menu is set to Filter. See "LFO Function (LFO Func)" on page 38.

Range: 0 to 127

Assignable Controller1 Pitch Control (AC1 Pit Ctrl)

This parameter determines how the Assignable Controller1 affects a part's pitch.

Range: –24 to +24 semitone

Assignable Controller1 Filter Control (AC1 Flt Ctrl)

This parameter determines how the Assignable Controller1 affects a part's cutoff frequency.

Range: –9600 to +9450 cent

Assignable Controller1 Amplitude Control (AC1 Amp Ctrl)

This parameter determines how the Assignable Controller1 affects a part's volume.

Range: –64 to +63

Assignable Controller1 LFO PM Depth (AC1 LFO PMod)

This parameter determines how the Assignable Controller1 affects a part's LFO pitch modulation depth.

Range: 0 to 127

Assignable Controller1 LFO Filter Mod Depth (AC1 LFO FMod)

This parameter determines how the Assignable Controller1 affects a part's LFO filter modulation depth. It is active only when the LFO Func parameter in the EDIT VOICE menu is set to Filter. See "LFO Function (LFO Func)" on page 38.

Range: 0 to 127

Assignable Controller2 Pitch Control (AC2 Pit Ctrl)

This parameter determines how the Assignable Controller2 affects a part's pitch.

Range: –24 to +24 semitone

Assignable Controller2 Filter Control (AC2 Flt Ctrl)

This parameter determines how the Assignable Controller2 affects a part's cutoff frequency.

Range: –9600 to +9450 cent

Assignable Controller2 Amplitude Control (AC2 Amp Ctrl)

This parameter determines how the Assignable Controller2 affects a part's volume.

Range: –64 to +63

Assignable Controller2 LFO PM Depth (AC2 LFO PMod)

This parameter determines how the Assignable Controller2 affects a part's LFO pitch modulation depth.

Range: 0 to 127

Assignable Controller2 LFO Filter Mod Depth (AC2 LFO FMod)

This parameter determines how the Assignable Controller2 affects a part's LFO filter modulation depth. It is active only when the LFO Func parameter in the EDIT VOICE menu is set to Filter. See "LFO Function (LFO Func)" on page 38.

Range: 0 to 127

Portamento Switch (Portamento Sw)

This parameter allows you to turn portamento ON and OFF. Portamento creates a smooth pitch glide from one note to the next.

Range: OFF, ON

Portamento Time (Portamento Tm)

This parameter allows you to set the time of pitch change between notes.

Range: 0 to 127

The higher the value, the longer the time.

7 Editing Voices

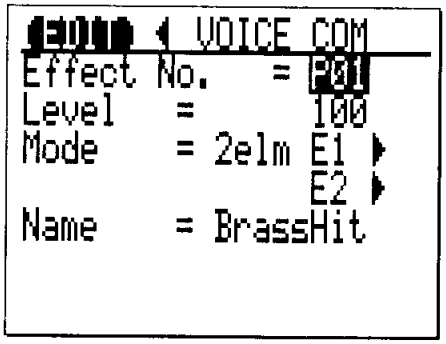
In this chapter, we explain how to edit voices. You can edit voices in the following sound module modes: GM-A, GM-B, and Single.

Selecting the EDIT VOICE COM Menu

The EDIT VOICE COM menu contains parameters that are common to both elements.

1. **Press the [EDIT] button.**
   The EDIT menu will appear.
2. **Use the [▲] and [▼] cursor buttons to select VOICE.**
3. **Press the [►] cursor button.**
   If the voice assigned to the currently selected part is a preset voice, the VOICE COPY function will appear automatically. Since you can edit only internal voices, a preset voice must be copied before editing. See "Copying Voices" on page 50.

   The EDIT VOICE COM menu will appear.



Note: The Effect No. parameter does not appear in multi modes.

Note: When 1element mode is selected, E2 is not displayed.

Control Operation

- Use the [▲] and [▼] cursor buttons to select parameters.
- Use the data wheel to adjust parameter values.
- Press the [SHOW] button to access the Exclusive Show function.
- Press the [EDIT] button or [◄] cursor button to return to the EDIT MENU.
- Press the [UTIL] button for the UTIL MENU.
- Press the [PLAY] button for the Play View All Display and Play Zoom Display.

EDIT VOICE COM Menu Parameters

Effect No.

This parameter is available in Single mode only.

This parameter allows you to select an effect program for a voice.

Range: P01 to P32 and I01 to I16 (presets 1 to 32 and internals 1 to 16)

Level

This parameter allows you to set the volume level of a voice.

Range: 0 to 127

Mode

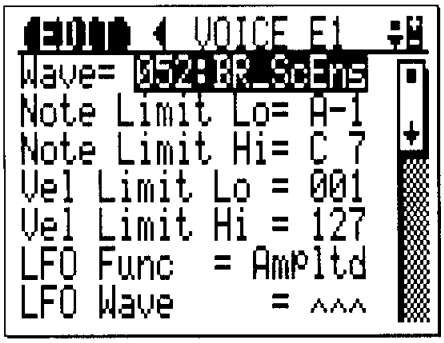
This parameter allows you to specify the number of elements in a voice.

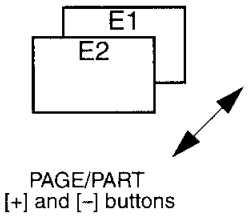
Range: 1elm, 2elm

When 2elm is selected, the parameter E2 appears.

You can access the EDIT VOICE E1 and E2 menus directly from this parameter:

1. **Select Mode E1 or E2.**
2. **Press the [►] cursor button.**
   A display similar to the one shown below will appear:





3. **Use the PAGE/PART [+] and [–] buttons to select the EDIT VOICE E1 and EDIT VOICE E2 Menus.**
   If the Mode parameter is set to 1elm, you cannot select EDIT VOICE E2 menu.

Control Operation

- Use the PAGE/PART [+] [–] buttons to select the EDIT VOICE E1 and E2 menus.
- Use the [▲] and [▼] cursor buttons to select parameters.
- Use the data wheel to adjust parameter values.
- Press the [SHOW] button to access the Exclusive Show function.
- Press the [◄] cursor button to return to the EDIT VOICE COM menu.
- Press the [EDIT] button to return to the EDIT MENU.
- Press the [UTIL] button for the UTIL MENU.
- Press the [PLAY] button for the Play View All Display and Play Zoom Display.

Element parameters are explained on page 37.

Name

This parameter allows you to name voices. Voice names can be up to eight character long. Use the [◄] and [►] cursor buttons to position the cursor within a name, and the data wheel to select characters. Press the [▲] cursor button when finished.

Range:

space	!	"	#	$	%	&	'	(	)	*	+	,	−	.	/
0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
p	q	r	s	t	u	v	w	x	y	z	{	¦	}	~	space

EDIT VOICE Element1 Menu Parameters

Wave

This parameter allows you to select a wave.

Range: 1 to 195

Note Limit Low (Note Limit Lo)

This parameter allows you to set the lowest note that will play an element.

Range: C–2 to G8

If a note higher than that set for the Note Limit High parameter is selected, that parameter will be set the same.

Note Limit High (Note Limit Hi)

This parameter allows you to set the highest note that will play an element.

Range: C–2 to G8

If a note lower than that set for the Note Limit Low parameter is selected, that parameter will be set the same.

Velocity Limit Low (Vel Limit Lo)

This parameter allows you to set the lowest note velocity that will play an element.

Range: 1 to 127

If a velocity value higher than that set for the Velocity Limit High parameter is selected, that parameter will be set the same.

Velocity Limit High (Vel Limit Hi)

This parameter allows you to set the highest note velocity that will play an element.

Range: 1 to 127

If a velocity value lower than that set for the Velocity Limit Low parameter is selected, that parameter will be set the same.

LFO Function (LFO Func)

This parameter allows you to assign the LFO to element amplitude or element filter.

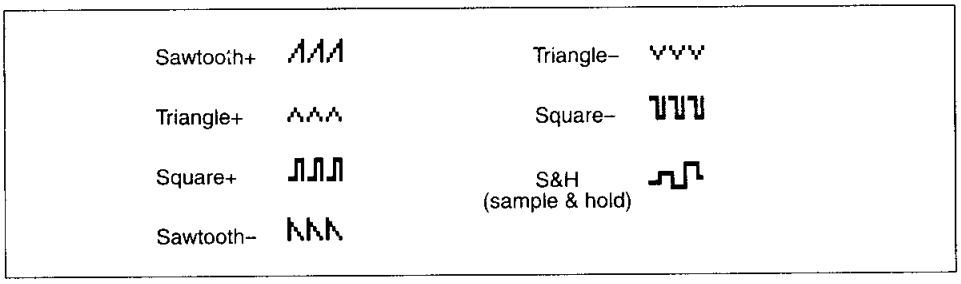
Range: Ampltd, Filter

See also "LFO Pitch Depth (LFO Pitch Dep)" on page 39 and "LFO Amplitude Depth (LFO Amp Dep)" on page 39.

LFO Waveform Select (LFO Wave)

This parameter allows you to select an LFO waveform.

Range: See below.



* For Amplitude Modulation and Filter Modulation, the waves are reversed.

LFO Phase Initialize (LFO PhaseInit)

This parameter determines whether the LFO is initialized (restarted) each time a key is pressed.

Range: OFF, ON

LFO Speed

This parameter allows you to set the LFO speed.

Range: 0 to 63 (slow to fast)

LFO Delay

This parameter allows you to set the LFO delay for the Pitch LFO only.

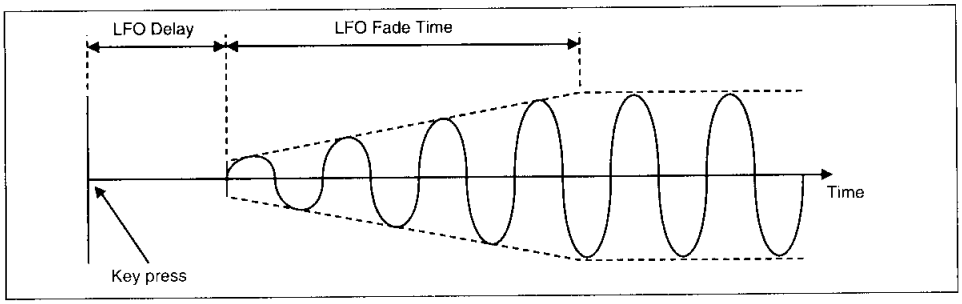
Range: 0 to 127 (short to long)

LFO Fade Time

This parameter determines the rate at which the LFO is applied (Pitch LFO only).

Range: 0 to 127 (instant to gradual)

The following illustration shows the LFO Delay and Fade Time parameters:



LFO Pitch Depth (LFO Pitch Dep)

This parameter determines how much the LFO affects the pitch.

Range: 0 to 15 (no effect to full effect)

LFO Filter Depth (LFO Filtr Dep)

This parameter determines how much the LFO affects the filter. It is active when the LFO Func parameter is set to Filter.

Range: 0 to 15 (no effect to full effect)

LFO Amplitude Depth (LFO Amp Dep)

This parameter allows you to set the LFO amplitude depth. It is active when the LFO Func parameter is set to Ampltd.

Range: 0 to 15 (no effect to full effect)

Note Shift

This parameter allows you to note shift an element.

Range: –32 to +32 semitone

Detune

This parameter allows you to detune an element.

Range: –50 to +50 cent

Pitch Scaling (Pitch Scaling)

This parameter determines pitch scaling.

Range: 100%, 50%, 20%, 10%, 5%, 0%

100% is the standard setting, and provides 12 semitones per octave.

A setting of 50% provides 6 semitones per octave.

Pitch Scaling Center Note (PitScl Center)

This parameter allows you to set the center note around which the pitch is scaled.

Range: C–2 to G8

Pitch EG Depth (PEG Depth)

This parameter determines the amount of pitch change when the Pitch EG level is at maximum. The pitch EG determines how an element's pitch changes over time.

Range: 0.5, 1, 2, 4 octave

Velocity Pitch EG Level Sensitivity (Vel PEG Level)

This parameter determines the Pitch EG sensitivity to note velocity.

Range: –7 to +7

For a setting of –7, the lower the note velocity, the greater the pitch change interval.

For a setting of +7, the higher the note velocity, the greater the pitch change interval.

Velocity Pitch EG Rate Sensitivity (Vel PEG Rate)

This parameter determines how sensitive the Pitch EG Rate parameters are to note velocity.

Range: –7 to +7

For a setting of –7, the lower the note velocity, the quicker the Pitch EG rate.

For a setting of +7, the higher the note velocity, the quicker the Pitch EG rate.

Pitch EG Rate Scaling (PEG RateScale)

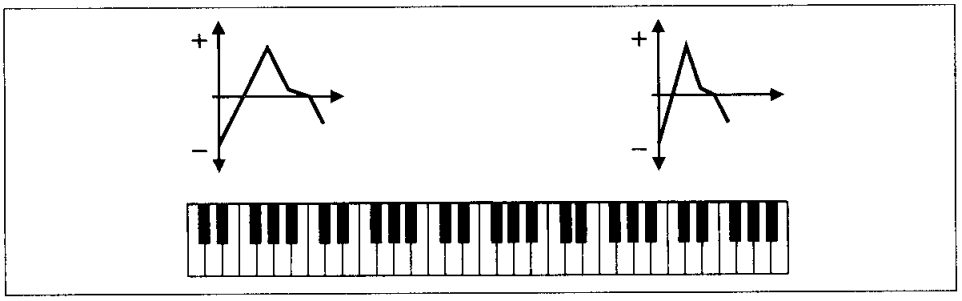
This parameter determines how sensitive the Pitch EG Rate parameters are to note value.

Range: –7 to +7

For a setting of –7, the lower the note, the quicker the Pitch EG rate.

For a setting of +7, the higher the note, the quicker the Pitch EG rate.

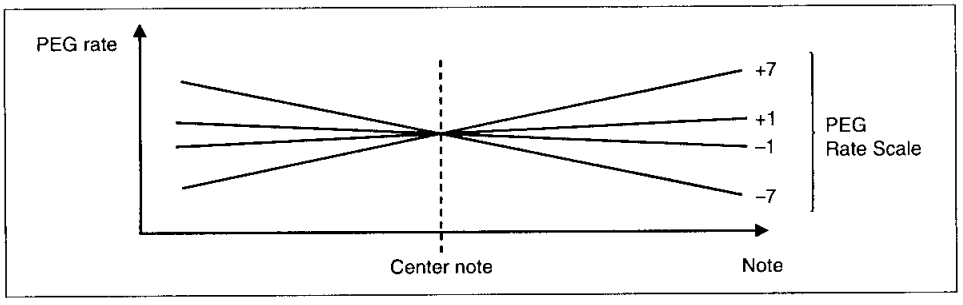
The following illustration shows how the Pitch EG Rate is affected by note value. A positive value has been set, so the Pitch EG Rate increases as higher notes are played.



Pitch EG Rate Scaling Center Note (PEG CentrNote)

This parameter allows you to specify the Pitch EG Rate Scaling center note. It works in conjunction with the Pitch EG Rate Scaling (PEG RateScale) parameter. At the center note, the Pitch EG Rate parameters are not affected.

Range: C–2 to G8



Pitch EG Rate 1 (PEG Rate 1)

This parameter allows you to set the Pitch EG Rate1.

Range: 0 to 63

Pitch EG Rate 2 (PEG Rate 2)

This parameter allows you to set the Pitch EG Rate2.

Range: 0 to 63

Pitch EG Rate 3 (PEG Rate 3)

This parameter allows you to set the Pitch EG Rate3.

Range: 0 to 63

Pitch EG Rate 4 (PEG Rate 4)

This parameter allows you to set the Pitch EG Rate4 (release).

Range: 0 to 63

Pitch EG Level 0 (PEG Level 0)

This parameter allows you to set the Pitch EG Level0.

Range: –64 to +63

Pitch EG Level 1 (PEG Level 1)

This parameter allows you to set the Pitch EG Level1.

Range: –64 to +63

Pitch EG Level 2 (PEG Level 2)

This parameter allows you to set the Pitch EG Level2.

Range: –64 to +63

Pitch EG Level 3 (PEG Level 3)

This parameter allows you to set the Pitch EG Level3.

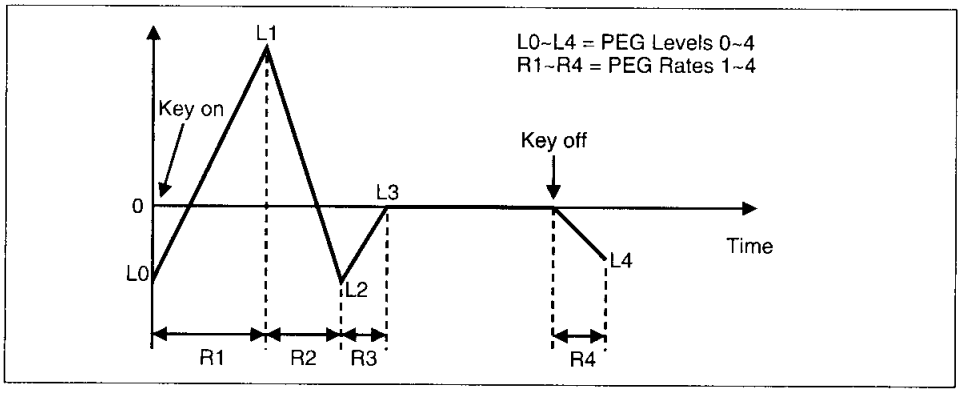
Range: –64 to +63

Pitch EG Level 4 (PEG Level 4)

This parameter allows you to set the Pitch EG Level4 (release).

Range: –64 to +63

The following illustration shows Pitch EG Rates 1 ~ 4 and Pitch EG Levels 0 ~ 4:



Filter Resonance (Resonance)

This parameter allows you to set the filter resonance. This causes a level boosting of frequencies around the cutoff frequency.

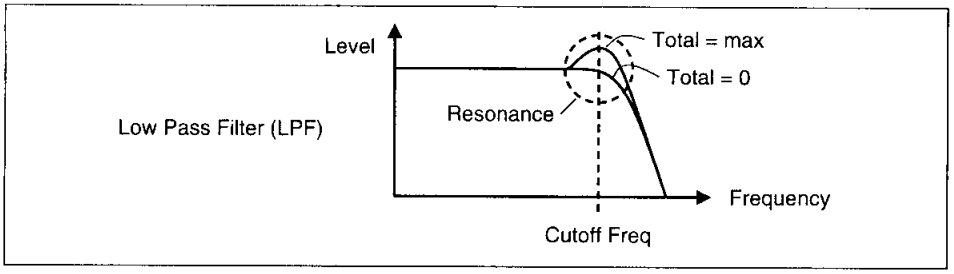
Range: 0 to 63

Filter Cutoff Frequency (Cutoff Freq)

This parameter allows you to set the filter cutoff frequency.

Range: 0 to 127

The following illustration shows the LPF response:



Cutoff Scaling Break Point 1 (Cutoff SclBP1)

This parameter allows you to set the note position of Cutoff Scaling Break Point1.

Range: C–2 to G8

Cutoff Scaling Break Point 2 (Cutoff SclBP2)

This parameter allows you to set the note position of Cutoff Scaling Break Point2.

Range: C–2 to G8

Cutoff Scaling Break Point 3 (Cutoff SclBP3)

This parameter allows you to set the note position of Cutoff Scaling Break Point3.

Range: C–2 to G8

Cutoff Scaling Break Point 4 (Cutoff SclBP4)

This parameter allows you to set the note position of Cutoff Scaling Break Point4.

Range: C–2 to G8

Cutoff Scaling Offset1 (Cutoff SclOf1)

This parameter allows you to set the cutoff frequency offset at Cutoff Scaling Break Point1.

Range: –64 to +63

Cutoff Scaling Offset2 (Cutoff SclOf2)

This parameter allows you to set the cutoff frequency offset at Cutoff Scaling Break Point2.

Range: –64 to +63

Cutoff Scaling Offset3 (Cutoff SclOf3)

This parameter allows you to set the cutoff frequency offset at Cutoff Scaling Break Point3.

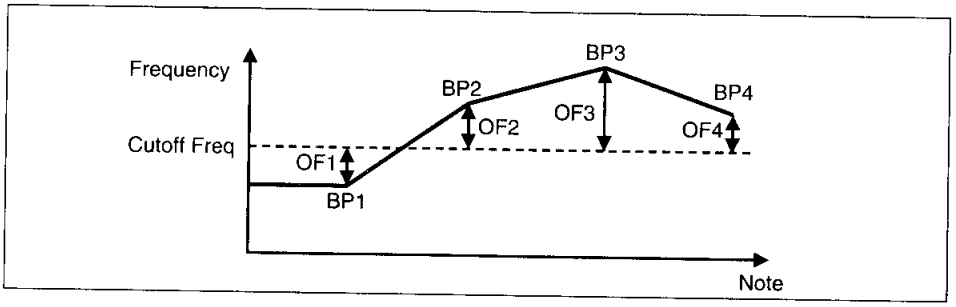
Range: –64 to +63

Cutoff Scaling Offset4 (Cutoff SclOf4)

This parameter allows you to set the cutoff frequency offset at Cutoff Scaling Break Point4.

Range: –64 to +63

The following illustration shows Cutoff Scaling Break Points 1 ~ 4 and Cutoff Scaling Offsets 1 ~ 4. Break points and offsets allow you to vary an element's cutoff frequency across the keyboard. A break point is the note a which the cutoff frequency breaks away from the Filter Cutoff Frequency parameter setting, and the offset specifies the amount of change at the break point.



Velocity Filter EG Level Sensitivity (Vel FEG Level)

This parameter determines the Filter EG sensitivity to note velocity. The velocity filter EG determines how the filter changes over time.

Range: –7 to +7

For a setting of –7, the lower the note velocity, the greater the cutoff frequency change.

For a setting of +7, the higher the note velocity, the greater the cutoff frequency change.

Velocity Filter EG Rate Sensitivity (Vel FEG Rate)

This parameter determines how sensitive the Filter EG Rate parameters are to note velocity.

Range: –7 to +7

For a setting of –7, the lower the note velocity, the quicker the Filter EG Rate.

For a setting of +7, the higher the note velocity, the quicker the Filter EG Rate.

Filter EG Rate Scaling (FEG RateScale)

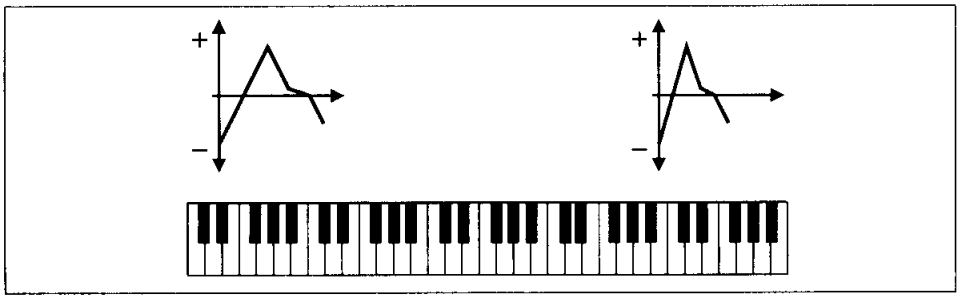
This parameter determines how sensitive the Filter EG Rate parameters are to note value.

Range: –7 to +7

For a setting of –7, the lower the note, the quicker the Filter EG Rate.

For a setting of +7, the higher the note, the quicker the Filter EG Rate.

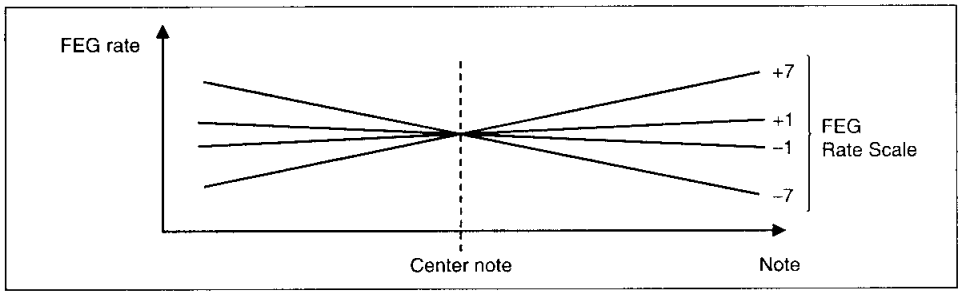
The following illustration shows how the Filter EG Rate is affected by note value. A positive value has been set, so the Filter EG Rate increases as higher notes are played.



Filter EG Rate Scaling Center Note (FRS CentrNote)

This parameter allows you to specify the Filter EG Rate Scaling center note. It works in conjunction with the Filter EG Rate Scaling (FEG RateScale) parameter. At the center note, the Filter EG Rate parameters are not affected.

Range: C–2 to G8



Filter EG Rate 1 (FEG Rate 1)

This parameter allows you to set the Filter EG Rate1.

Range: 0 to 63

Filter EG Rate 2 (FEG Rate 2)

This parameter allows you to set the Filter EG Rate2.

Range: 0 to 63

Filter EG Rate 3 (FEG Rate 3)

This parameter allows you to set the Filter EG Rate3.

Range: 0 to 63

Filter EG Rate 4 (FEG Rate 4)

This parameter allows you to set the Filter EG Rate4 (release).

Range: 0 to 63

Filter EG Level 0 (FEG Level 0)

This parameter allows you to set the Filter EG Level0.

Range: –64 to +63

Filter EG Level 1 (FEG Level 1)

This parameter allows you to set the Filter EG Level1.

Range: –64 to +63

Filter EG Level 2 (FEG Level 2)

This parameter allows you to set the Filter EG Level2.

Range: –64 to +63

Filter EG Level 3 (FEG Level 3)

This parameter allows you to set the Filter EG Level3.

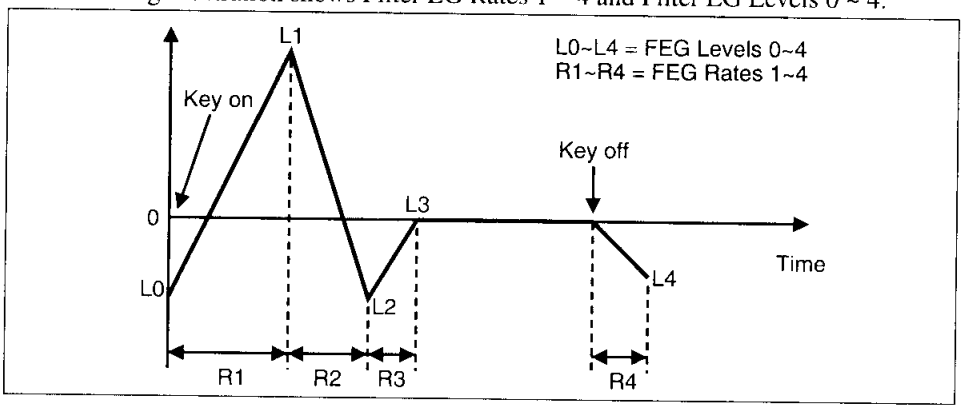
Range: –64 to +63

Filter EG Level 4 (FEG Level 4)

This parameter allows you to set the Filter EG Level4 (release).

Range: –64 to +63

The following illustration shows Filter EG Rates 1 ~ 4 and Filter EG Levels 0 ~ 4:



Element Level (Element Lv)

This parameter allows you to set the volume level of an element.

Range: 0 to 127

Level Scaling Break Point 1 (Level SclBP1)

This parameter allows you to set the note position of Level Scaling Break Point1.

Range: C–2 to G8

Level Scaling Break Point 2 (Level SclBP2)

This parameter allows you to set the note position of Level Scaling Break Point2.

Range: C–2 to G8

Level Scaling Break Point 3 (Level SclBP3)

This parameter allows you to set the note position of Level Scaling Break Point3.

Range: C–2 to G8

Level Scaling Break Point 4 (Level SclBP4)

This parameter allows you to set the note position of Level Scaling Break Point4.

Range: C–2 to G8

Level Scaling Offset1 (Level SclOf1)

This parameter allows you to set the volume level offset at Level Scaling Break Point1.

Range: –64 to +63

Level Scaling Offset2 (Level SclOf2)

This parameter allows you to set the volume level offset at Level Scaling Break Point2.

Range: –64 to +63

Level Scaling Offset3 (Level SclOf3)

This parameter allows you to set the volume level offset at Level Scaling Break Point3.

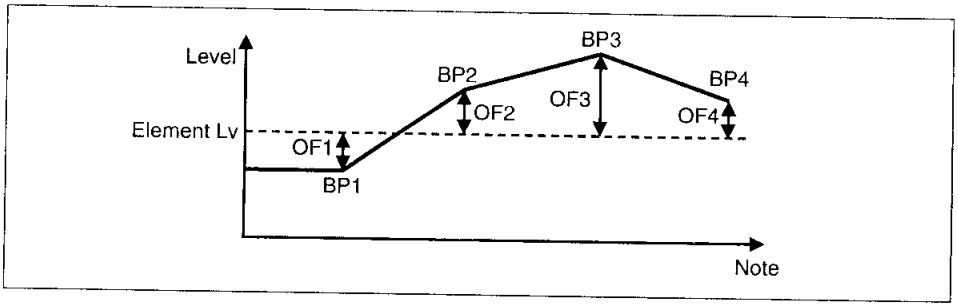
Range: –64 to +63

Level Scaling Offset4 (Level SclOf4)

This parameter allows you to set the volume level offset at Level Scaling Break Point4.

Range: –64 to +63

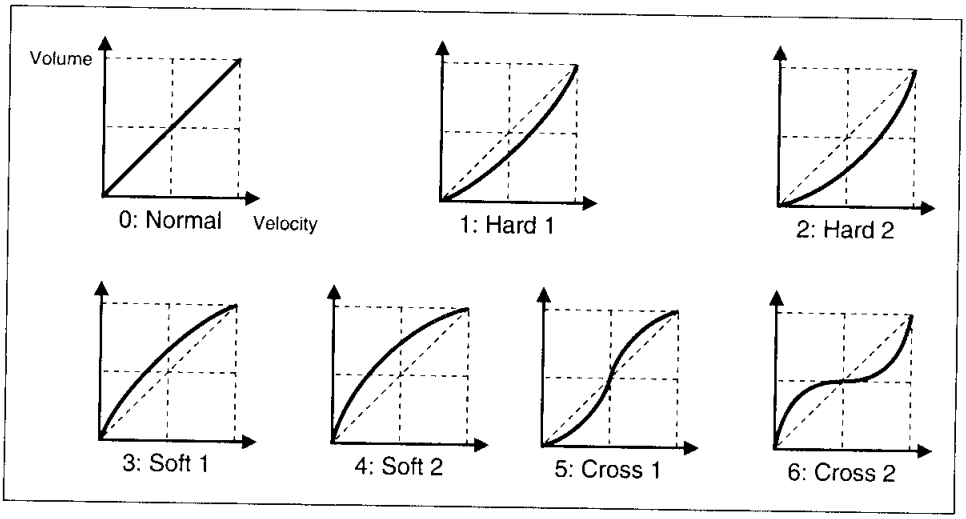
The following illustration shows Level Scaling Break Points 1 ~ 4 and Level Scaling Offsets 1 ~ 4. Break points and offsets allow you to vary an element's volume level across the keyboard. A break point is the note a which the level breaks away from the Element Level parameter setting, and the offset specifies the amount of level change at the break point.



Velocity Curve (Vel Curve)

This parameter allows you to select a velocity curve. This determines how an element responds to note velocity.

Range: 0 to 6



Pan

This parameter allows you to pan an element.

Range: L07 to R07, Scl (left to right, scaling)

For a setting of Scl, notes to the left of middle C will be louder through the left output, and notes to the right of middle C will be louder through the right output.

Amplitude EG Rate Scaling (AEG RateScale)

This parameter determines how sensitive the Amplitude EG Attack, Decay, and Release Rate parameters are to note value. The amplitude EG determines how an element's amplitude changes over time.

Range: –7 to +7

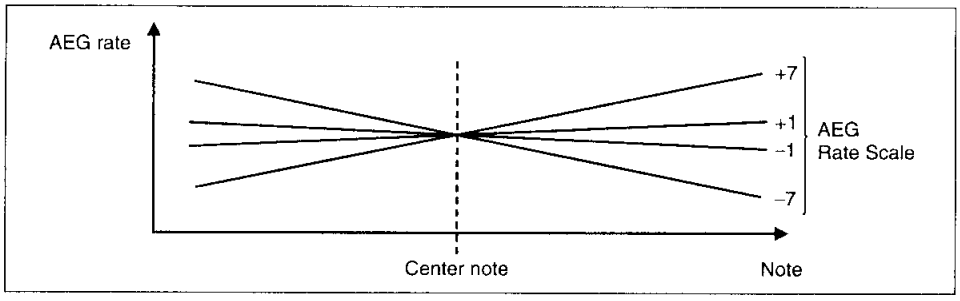
For a setting of –7, the lower the note, the quicker the Amplitude EG rate.

For a setting of +7, the higher the note, the quicker the Amplitude EG rate.

Amplitude EG Rate Scaling Center Note (ARS CentrNote)

This parameter allows you to specify the Amplitude EG Rate Scaling center note. It works in conjunction with the Amplitude EG Rate Scaling (AEG RateScale) parameter. At the center note, the Amplitude EG Rate parameters are not affected.

Range: C–2 to G8



Amplitude EG Key On Delay (AEG Key Delay)

This parameter determines how soon a sound is produced when a key is pressed.

Range: 0 to 15 (immediate to delayed)

Amplitude EG Attack Rate (AEG AtackRate)

This parameter determines the attack rate of the Amplitude EG.

Range: 0 to 63

Amplitude EG Decay1 Rate (AEG Decy1Rate)

This parameter determines the decay1 rate of the Amplitude EG.

Range: 0 to 63

Amplitude EG Decay 2 Rate (AEG Decy2Rate)

This parameter determines the decay2 rate of the Amplitude EG.

Range: 0 to 63

Amplitude EG Release Rate (AEG RelesRate)

This parameter determines the release rate of the Amplitude EG.

Range: 0 to 63

Amplitude EG Decay1 Level (AEG Decy1 Lv)

This parameter determines the level that the Amplitude EG changes to at Decay1 Rate.

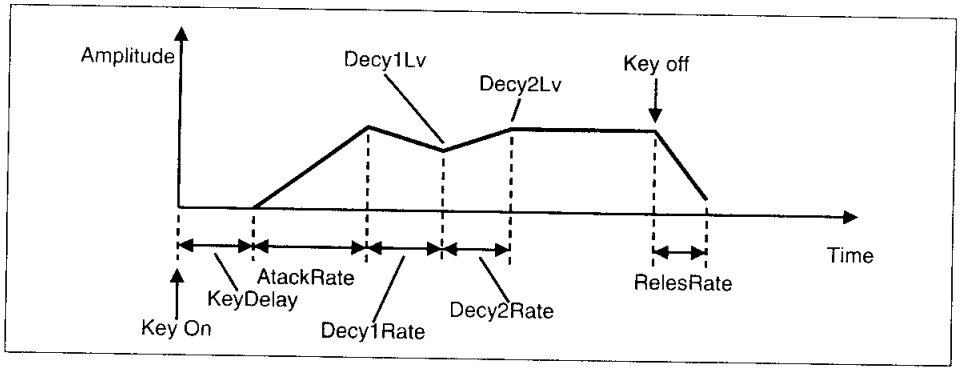
Range: 0 to 127

Amplitude EG Decay2 Level (AEG Decy2 Lv)

This parameter determines the level that the Amplitude EG changes to at Decay2 Rate.

Range: 0 to 127

The following illustration shows Amplitude EG Rates and Levels:



EDIT VOICE Element2 Menu Parameters

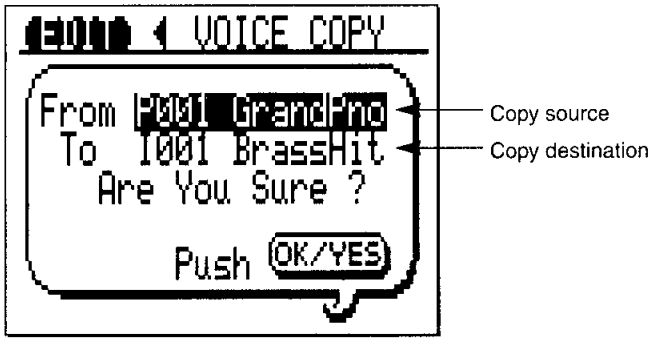
See "Mode" on page 36 for details about selecting the EDIT VOICE E2 menu.

The parameters for the EDIT VOICE E2 menu are the same as those for EDIT VOICE E1 menu. See "EDIT VOICE Element1 Menu Parameters" on page 37.

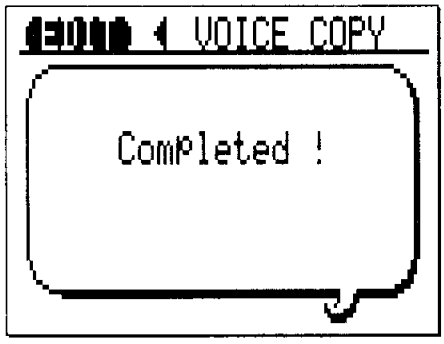
Copying Voices

This function allows you to copy internal voices.

1. **Press the [EDIT] button.**
   The EDIT menu will appear.
2. **Use the [▲] and [▼] cursor buttons to select VOICE COPY.**
3. **Press the [►] cursor button or the [OK/YES] button.**
   The following dialog box will appear:



4. **Use the [▲] and [▼] cursor buttons to select the From and To parameters, and the data wheel to set them.**
5. **Press the [OK/YES] button to copy the selected voice.**
   The following message will appear when the copy is complete:



After this message, the EDIT MENU will be selected.

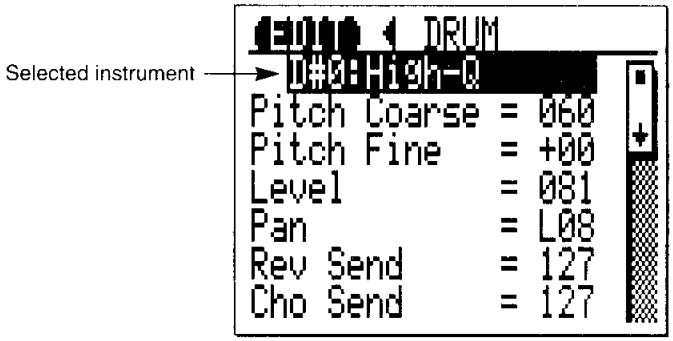
8 Editing Drums (Multi Modes Only)

In this chapter, we explain how to edit a part's drum setup. To edit a drum setup you must first select a part whose Part mode parameter is set to Drum. You can then edit the individual drums within the kit using the EDIT DRUM menu parameters. Drum setups are stored in each part, so you can, for example, use the Standard kit in two parts and edit them as individual kits. The name of the currently selected drum is highlighted at the top of the EDIT DRUM menu. Many of the available drums are in fact percussion sounds, however, for simplicity we refer to them as instruments.

Note: *A part's drum setup is stored even when the TG300 is powered off. However, when a different drum kit is selected, the drum setup is initialized.*

Selecting the EDIT DRUM Menu

1. **Press the [EDIT] button to select the EDIT MENU.**
2. **Use the PAGE/PART [+] and [–] buttons to select a drum part.**
   When a part that is set to Drum mode is selected, DRUM appears on the EDIT MENU. Drum mode is set in the EDIT PART menu. See "Part Mode" on page 21. Drum kits are assigned to Drum mode parts in the EDIT PART menu.
3. **Use the [▲] and [▼] cursor buttons to select DRUM.**
4. **Press the [►] cursor button or the [OK/YES] button.**
   The EDIT DRUM menu shown below will appear.



Selecting Instruments in a Kit

Individual drums can be selected in two ways: using the data wheel or a MIDI keyboard.

Data Wheel

1. **Press the [▲] cursor button repeatedly so that the name of the currently selected instrument is highlighted.**
2. **Use the data wheel to select instruments.**

MIDI Keyboard

1. **Press the PAGE/PART [+] button.**
   MIDI will appear on the top line of the display.
2. **Play the corresponding note on a MIDI keyboard.**
3. **Press the PAGE/PART [+] button again to cancel this function.**
   MIDI will disappear from the display.

   This function will be cancelled automatically upon leaving the EDIT MENU.

Control Operation

- Use the [▲] and [▼] cursor buttons to select parameters.
- Use the data wheel to adjust parameter values.
- Use the PAGE/PART [+] button to toggle the MIDI IN connection on and off.
- Press the [SHOW] button to see the MIDI Exclusive data.
- Press the [EDIT] button or [◀] cursor button to return to the EDIT MENU.
- Press the [UTIL] button for the UTIL MENU.
- Press the [PLAY] button for the Play View All Display and Play Zoom Display.

EDIT DRUM Menu Parameters

Pitch Coarse

This parameter allows you to tune a drum.

Range: 0 to 127

Pitch Fine

This parameter allows you to fine-tune a drum.

Range: –64 to +63 cent

Level

This parameter allows you to set the volume level of a drum.

Range: 0 to 127

Pan

This parameter allows you to pan a drum.

Range: Rnd, L63 to R63 (Random, Left to Right)

For a setting of Rnd, a drum will be panned randomly between the left and right outputs.

Reverb Send Level (Rev Send)

This parameter allows you to set the level of a drum sent to the Reverb effect.

Range: 0 to 127

Chorus Send Level (Cho Send)

This parameter allows you to set the level of a drum sent to the Chorus effect.

Range: 0 to 127

Variation Send Level (Var Send)

This parameter allows you to set the level of a drum sent to the Variation effect.

Range: 0 to 127

Filter Cutoff Frequency (Cutoff Freq)

This parameter allows you to set a drum filter's cutoff frequency.

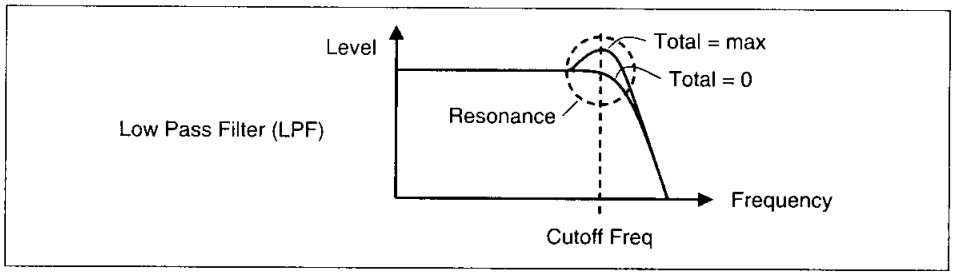
Range: 0 to 127

Filter Resonance (Resonance)

This parameter allows you to set a drum filter's resonance. This causes a level boosting of frequencies around the cutoff frequency.

Range: 0 to 127

The following illustration shows the LPF response:



Alternate Group (Alternate Grp)

This parameter allows you to assign a drum to a group.

Range: OFF, 1 to 127

Drums in the same group can be played alternately, never together. If, while one drum is sounding, a MIDI Note On message corresponding to another drum in the same group is received, the sounding drum will stop and the new drum will sound. This can be used, for example, to create realistic sounding hi-hats. By assigning an open hi-hat and a closed hi-hat to the same group, the open hi-hat sound can be stopped by playing the closed hi-hat. Just like pressing the pedal of a real pair of hi-hats.

Same Note Number Key On Assign (Key Assign)

This parameter determines how new notes affect notes with the same note number that are already sounding. This parameter is active only when the Key On Assign parameter in the EDIT PART menu is set to Inst (see page 30). Unlike that parameter, which affects a whole drum kit (Multi), this parameter allows you to set the key assign for individual drums.

Range: Sngl, Mult (Single, Multi)

For a setting of Sngl, a new note of the same note number will stop the sounding note.

For a setting of Mult, a new note of the same note number will not stop the sounding note.

Receive Note On (Rcv Note On)

This parameter determines how a drum responds to MIDI Note On messages.

Range: OFF, ON

When set to OFF, a drum will not sound when the corresponding MIDI Note On message is received.

Receive Note Off (Rcv Note Off)

This parameter determines how a drum responds to MIDI Note Off messages.

Range: OFF, ON

When set to ON, a MIDI Note Off message will stop a sounding drum sound.

EG Attack

This parameter allows you to set the attack rate for a drum's EG. The EG determines how drum level changes over time.

Range: 0 to 127

EG Decay1

This parameter allows you to set the decay rate 1 for a drum's EG.

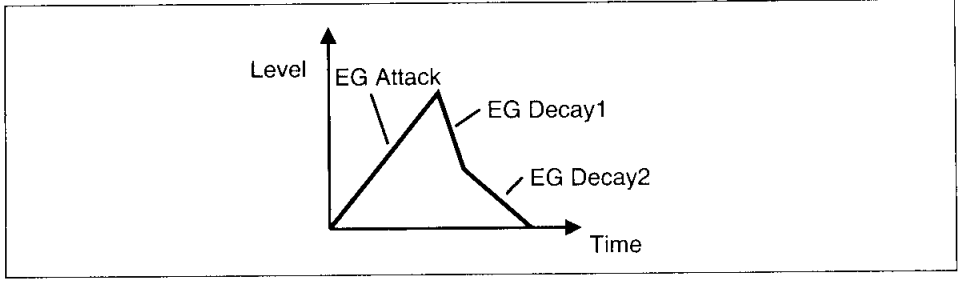
Range: 0 to 127

EG Decay2

This parameter allows you to set the decay rate 2 for a drum's EG.

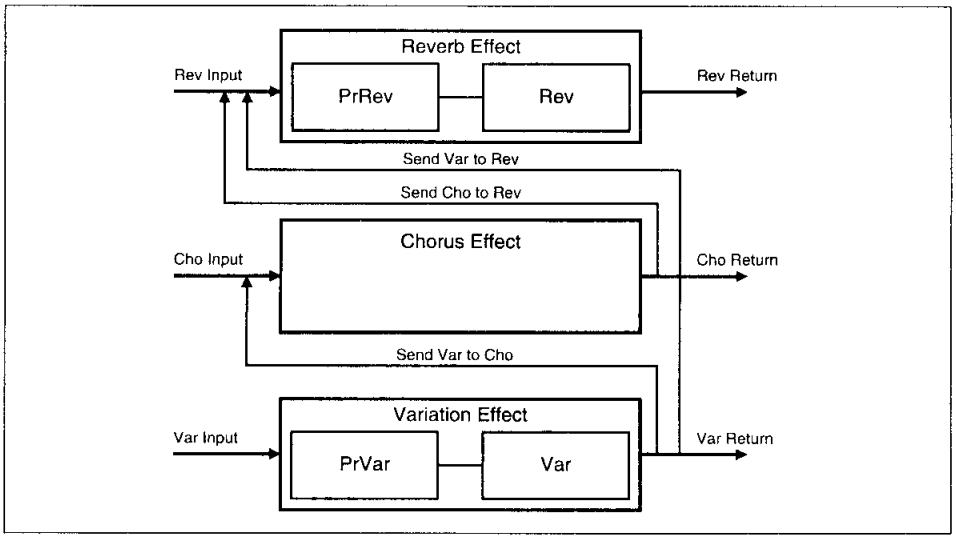
Range: 0 to 127

The following illustration shows the EG Attack and Decay rates:



9 Editing Effects

In this chapter, we explain how to edit effects. The TG300 can provide up to three digital effects simultaneously: Reverb, Chorus, and Variation. However, the Reverb and Variation effects are two-stage effects. So there are five effect stages in all. The following Diagram shows how they are configured:



Reverb: consists of two stages: PrRev (Pre-Reverb) and Rev (Reverb). The PrRev stage offers distortion, EQ, chorus, flanger, delay, etc., type effects. The Rev stage offers hall, room, plate, etc., type reverb effects.

Chorus: this single stage effect offers chorus, flanger, tremolo, phaser, etc., effects. The output of the Chorus effect can be fed into the Reverb effect.

Variation: consists of two stages: PrVar (Pre-Variation) and Var (Variation). The PrVar stage offers distortion, EQ, chorus, flanger, etc., type effects. The Var stage offers chorus, flanger, etc., modulation type effects, pitch changer, exciter*, compressor, and various reverb programs. The output of the Variation effect can be fed into the Reverb effect, Chorus effect, or both.

Single Mode

In Single mode, there are 32 preset effect programs and 16 editable internal effect programs: P01 to P32 and I01 to I16 respectively. Effect programs are assigned to voices in the EDIT VOICE COM menu. Like internal voices, effect programs are stored when the TG300 is powered off. If a voice bank other than Pre or Int is selected, effect P01 is used.

Multi Modes

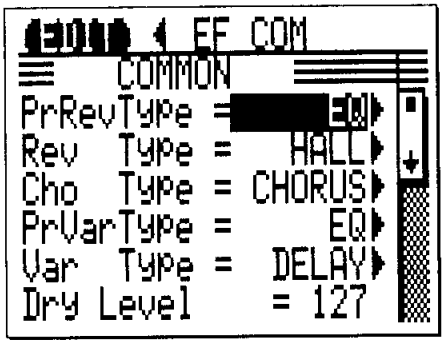
In multi modes, all parts use the same effect program, and the part effect Send parameters determine which effect stages are applied to each part. If you select a voice from the internal or preset voice bank, the effect assigned to that voice is ignored.

* This is an Aural Exciter®. Aural Exciter® is a registered trademark and is manufactured under licence from Aphex Systems, Ltd.

Selecting the EDIT EF COM Menu

The EDIT EF COM menu allows you to select effect types for the PrRev, Rev, Cho, PrVar, and Var effects. It also contains parameters that are common to all effects such as send and return levels.

1. **Press the [EDIT] button.**
   The EDIT menu will appear.
2. **Use the [▲] and [▼] cursor buttons to select EFFECT.**
3. **Press the [►] cursor button or the [OK/YES] button.**
   The EDIT EF COM menu will appear.



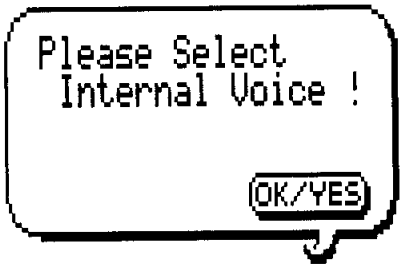
In Single mode, if you try to edit when a preset effect program is selected, the EFFECT COPY function appears. See "Copying an Effect Program (Single Mode Only)" on page 60.

For the PrRev, Rev, Cho, PrVar, and Var parameters, press the [►] cursor button to access the respective effect EDIT menu. See "Editing PrRev, Rev, Cho, PrVar, & Var Menu Parameters" on page 61.

Control Operation

- Use the [▲] and [▼] cursor buttons to select parameters.
- Use the data wheel to adjust parameter values.
- Press the [SHOW] button to see the MIDI Exclusive data.
- Press the [EDIT] button or [◄] cursor button to return to the EDIT MENU.
- Press the [UTIL] button for the UTIL MENU.
- Press the [PLAY] button for the Play View All Display and Play Zoom Display.

If the voice assigned to the currently selected part is not from the Int bank, the following message will appear:



In this case, either set the bank to Int or copy the voice to Int.

EDIT EF COM Menu Parameters

PrRev Type

This parameter allows you to select the type of effect for the PrRev effect stage, and select the PrRev menu.

Range:

THRU (Effect bypass)	CHORUS (mono)
DIST (Distortion)	FLANGER (mono)
EQ (3-band equalizer)	DELAY (mono)

Rev Type

This parameter allows you to select the type of effect for the Rev effect, and select the Rev menu.

Range:

THRU (Effect bypass)	STAGE2
HALL	PLATE
ROOM1	WH ROOM (White room)
ROOM2	TUNNEL
ROOM3	CANYON
STAGE1	BASEMENT

Cho Type

This parameter allows you to select the type of effect for the Chorus effect, and select the Cho menu.

Range:

THRU (Effect bypass)	ROT.SP (Rotary Speaker)
CHORUS	TREMOLO
FLANGER	AT PAN (Auto pan)
SYMPHO (Symphonic)	PHASER

PrVar Type

This parameter allows you to select the type of effect for the PrVar effect stage, and select the PrVar menu.

Range:

THRU (Effect bypass)	CHORUS (mono)
DIST (Distortion)	FLANGER (mono)
EQ (3-band equalizer)	

Var Type

This parameter allows you to select the type of effect for the Var effect stage, and select the Var menu.

Range:

THRU (Effect bypass)	ER2 (Early Reflection2)
CHORUS	GAT REV (Gated reverb)
FLANGER	REVERS (Reverse gate)
SYMPHO (Symphonic)	DELAY (Delay L. C. R.)
ROT.SP (Rotary Speaker)	ECHO
TREMOLO	CRS DLY (Cross delay)
AT PAN (Auto pan)	HALL (Reverb)
PHASER	ROOM1 (Reverb)
PIT CHG (Pitch Change)	ROOM2 (Reverb)
AT WAH (Auto Wah)	ROOM3 (Reverb)
EXCITER*	STAGE1 (Reverb)
COMP (Compressor)	STAGE2 (Reverb)
ER1 (Early Reflection1)	PLATE (Reverb)

* This is an Aural Exciter®. Aural Exciter® is a registered trademark and is manufactured under licence from Aphex Systems, Ltd.

Dry Level

This parameter allows you to set the dry signal level, that is, the signal that does not pass through any effects.

Range: 0 to 127

Rev Input

This parameter allows you to set the Reverb effect input level. That is, the PrRev and Rev effect stages.

Range: 0 to 127

Cho Input

This parameter allows you to set the Chorus effect input level.

Range: 0 to 127

Var Input

This parameter allows you to set the Variation effect input level. That is, the PrVar and Var effect stages.

Range: 0 to 127

Rev Return

This parameter allows you to set the return level of the Reverb effect. That is, the PrRev and Rev effect stages.

Range: 0 to 127

Cho Return

This parameter allows you to set the return level of the Chorus effect.

Range: 0 to 127

Var Return

This parameter allows you to set the return level of the Variation effect. That is, the PrVar and Var effect stages.

Range: 0 to 127

Variation to chorus send (Send VarToCho)

This parameter allows you to set the level of the Variation effect signal that is sent to the Chorus effect.

Range: 0 to 127

Variation to reverb send (Send VarToRev)

This parameter allows you to set the level of the Variation effect signal that is sent to the Reverb effect.

Range: 0 to 127

Chorus to reverb send (Send ChoToRev)

This parameter allows you to set the level of the Chorus effect signal that is sent to the Reverb effect.

Range: 0 to 127

Copying an Effect Program (Single Mode Only)

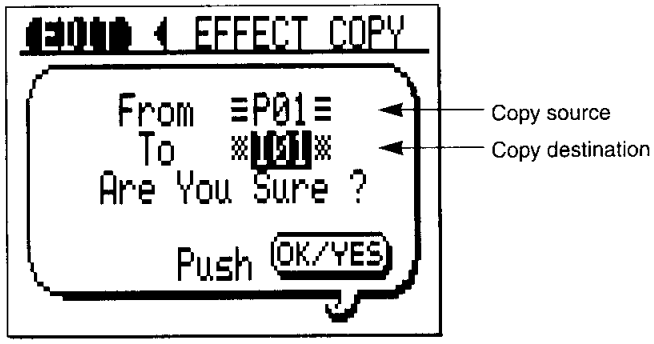
In Single mode, the EFFECT COPY function allows you to copy a preset effect program or an internal effect program to another internal effect program.

The effect program assigned to the voice that is assigned to the currently selected part is the effect program copy source. You can select the copy source and destination when the EFFECT COPY function appears.

If the effect program assigned to the voice that is assigned to the currently selected part is a preset effect program, **the EFFECT COPY function will appear automatically when you try to edit the effect program**. In this case, you can copy the preset effect program to an internal effect program, then edit it. This will usually be the case when the TG300 is first powered on or initialized. In this case, proceed from step 4.

To copy an effect program:

1. **Press the [EDIT] button.**
   The EDIT menu will appear.
2. **Use the [▼] cursor button to select EFFECT COPY.**
3. **Press the [►] cursor button or the [OK/YES] button.**
   The following dialog box will appear:

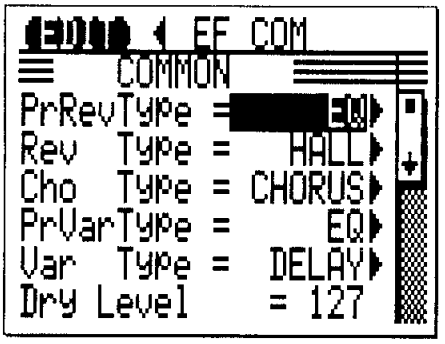


4. **Use the data wheel to select the copy source and destination.**
   The [▲] and [▼] cursor buttons can be used to switch between source and destination.
5. **Press the [OK/YES] button to copy, or the [◄] cursor button to cancel.**
   When the copy is complete, the EDIT menu will appear.

   If the EFFECT COPY function appeared automatically, the EDIT EF COM menu will appear, and the effect program assigned to the voice that is assigned to the currently selected part will be set to the specified copy destination.

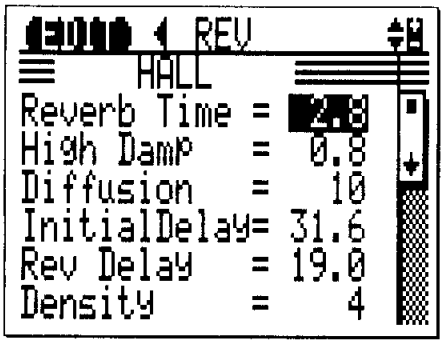
Editing PrRev, Rev, Cho, PrVar, & Var Menu Parameters

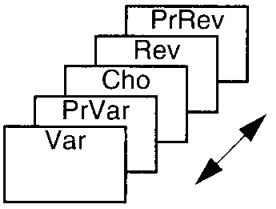
From the EDIT EF COM menu shown below:



1. **Select the PrRev, Rev, Cho, PrVar, or Var Type parameter.**

2. **Press the [►] cursor button.**
   A display similar to the one shown below will appear:





PAGE/PART
[+] and [–] buttons

3. **Use the PAGE/PART [+] and [–] buttons to select PrRev, Rev, Cho, PrVar, and Var Menus.**

> ***Note:*** *If the message "No Parameter" appears, it's because the effect is set to THRU on the EDIT EF COM menu. See "EDIT EF COM Menu Parameters" on page 57.*

Control Operation

- Use the [▲] and [▼] cursor buttons to select parameters.
- Use the data wheel to adjust parameter values.
- Press the [SHOW] button to see the MIDI Exclusive data.
- Press the [◄] cursor button to return to the EDIT EF COM menu.
- Press the [EDIT] button or [◄] cursor button to return to the EDIT MENU.
- Press the [UTIL] button for the UTIL MENU.
- Press the [PLAY] button for the Play View All Display and Play Zoom Display.

EDIT PrRev Menu

The parameters in the EDIT PrRev menu depend on the effect selected for the PrRev Type parameter in the EDIT EF COM menu. The following tables list the parameters for effects that can be selected for the PrRev effect.

DIST (Distortion)

Parameter	Range	Description
Drive	0 ~ 100%	Distortion drive
EQ Mid Freq	100 Hz ~ 10.0 kHz	Mid band frequency
EQ Mid Gain	–12 ~ +12 dB	Mid band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	–12 ~ +12 dB	High band gain
LPF CutoffFreq	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
Output Level	0 ~ 100	Distortion output level

EQ (3-band EQ)

Parameter	Range	Description
Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
Low Gain	–12 ~ +12 dB	Low band gain
Mid Freq	100 Hz ~ 10.0 kHz	Mid band frequency
Mid Gain	–12 ~ +12 dB	Mid band gain
High Freq	500 Hz ~ 16.0 kHz	High band frequency
High Gain	–12 ~ +12 dB	High band gain

CHORUS (Mono)

Parameter	Range	Description
LFO Freq	0 ~ 39.7 Hz	LFO frequency
LFO Depth	0 ~ 100%	LFO depth
Delay Offset	0 ~ 50.0 ms	Modulation delay offset
EQ Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
EQ Low Gain	–12 ~ +12 dB	Low band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	–12 ~ +12 dB	High band gain

FLANGER (Mono)

Parameter	Range	Description
LFO Freq	0 ~ 39.7 Hz	LFO frequency
LFO Depth	0 ~ 100%	LFO depth
FB Gain	–99 ~ +99%	Feedback gain
Delay Offset	0 ~ 15.5 ms	Modulation delay offset
EQ Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
EQ Low Gain	–12 ~ +12 dB	Low band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	–12 ~ +12 dB	High band gain

DELAY (Mono)

Parameter	Range	Description
Dly Time 1	0.1 ~ 400.0 ms	Delay1 time
Dly Level 1	0 ~ 100	Delay1 level
Dly Time 2	0.1 ~ 400.0 ms	Delay2 time
Dly Level 2	0 ~ 100	Delay2 level
FB Gain	–99 ~ +99%	Feedback gain
High Damp	0.1 ~ 1.0	High frequency damp
LPF Cutoff	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
HPF Cutoff	Thru, 32 Hz ~8.0 kHz	High pass filter cutoff frequency
Dry/Wet	0 ~ 100%	Dry/Wet balance

EDIT Rev Menu

The parameters in the EDIT Rev menu depend on the effect selected for the Rev Type parameter in the EDIT EF COM menu. The following tables list the parameters for effects that can be selected for the Rev effect:

HALL, ROOM1, ROOM2, ROOM3, STAGE1, STAGE2, & PLATE

Parameter	Range	Description
Reverb Time	0.3 ~ 30.0 sec	Reverb Time
High Damp	0.1 ~ 1.0	High frequency damp
Diffusion	0 ~ 10	Diffusion
InitialDelay	0.1 ~ 200.0 ms	Initial Delay
Rev Delay	0.1 ~ 200.0 ms	Reverb delay
Density	0 ~ 4	Density
Rev/ER Balance	0 ~ 100%	Early reflection and reverb balance
LPF Cutoff	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
HPF Cutoff	Thru, 32 Hz ~8.0 kHz	High pass filter cutoff frequency

WH ROOM, TUNNEL, CANYON, BASEMENT

Parameter	Range	Description
Reverb Time	0.3 ~ 30.0 sec	Reverb Time
High Damp	0.1 ~ 1.0	High frequency damp
Diffusion	0 ~ 10	Diffusion
InitialDelay	0.1 ~ 200.0 ms	Initial Delay
Width	0.5 ~ 30.2 m	Reverb space width
Height	0.5 ~ 30.2 m	Reverb space height
Depth	0.5 ~ 30.2 m	Reverb space depth
Wall Vary	0 ~ 30	Reverb space wall vary
LPF Cutoff	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
HPF Cutoff	Thru, 32 Hz ~8.0 kHz	High pass filter cutoff frequency

EDIT Cho Menu

The parameters in the EDIT Cho menu depend on the effect selected for the Cho Type parameter in the EDIT EF COM menu. The following tables list the parameters for effects that can be selected for the Cho effect:

CHORUS

Parameter	Range	Description
EQ Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
EQ Low Gain	-12 ~ +12 dB	Low band gain
EQ Mid Freq	100 Hz ~ 10.0 kHz	Mid band frequency
EQ Mid Gain	-12 ~ +12 dB	Mid band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	-12 ~ +12 dB	High band gain
LFO Freq	0 ~ 39.7 Hz	LFO frequency
LFO PM Depth	0 ~ 100%	LFO pitch modulation depth
LFO AM Depth	0 ~ 100%	LFO amplitude modulation depth
Delay Offset	0.0 ~ 50.0 ms	Modulation delay offset

FLANGER

Parameter	Range	Description
EQ Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
EQ Low Gain	-12 ~ +12 dB	Low band gain
EQ Mid Freq	100 Hz ~ 10.0 kHz	Mid band frequency
EQ Mid Gain	-12 ~ +12 dB	Mid band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	-12 ~ +12 dB	High band gain
LFO Freq	0 ~ 39.7 Hz	LFO frequency
LFO Depth	0 ~ 100%	LFO depth
FB Gain	-99 ~ +99%	Feedback gain
Delay Offset	0.0 ~ 15.5 ms	Modulation delay offset

SYMPHO (Symphonic)

Parameter	Range	Description
EQ Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
EQ Low Gain	-12 ~ +12 dB	Low band gain
EQ Mid Freq	100 Hz ~ 10.0 kHz	Mid band frequency
EQ Mid Gain	-12 ~ +12 dB	Mid band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	-12 ~ +12 dB	High band gain
LFO Freq	0 ~ 39.7 Hz	LFO frequency
LFO Depth	0 ~ 100%	LFO depth
Delay Offset	0 ~ 50.0 ms	Modulation delay offset

ROT.SP (Rotary Speaker)

Parameter	Range	Description
EQ Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
EQ Low Gain	–12 ~ +12 dB	Low band gain
EQ Mid Freq	100 Hz ~ 10.0 kHz	Mid band frequency
EQ Mid Gain	–12 ~ +12 dB	Mid band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	–12 ~ +12 dB	High band gain
LFO Freq	0 ~ 39.7 Hz	LFO frequency
LFO Depth	0 ~ 100%	LFO depth

TREMOLO

Parameter	Range	Description
EQ Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
EQ Low Gain	–12 ~ +12 dB	Low band gain
EQ Mid Freq	100 Hz ~ 10.0 kHz	Mid band frequency
EQ Mid Gain	–12 ~ +12 dB	Mid band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	–12 ~ +12 dB	High band gain
LFO Freq	0 Hz ~ 39.7 Hz	LFO frequency
AM Depth	0 ~ 100%	Amplitude modulation depth
PM Depth	0 ~ 100%	Pitch modulation depth

AT PAN (Auto Pan)

Parameter	Range	Description
EQ Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
EQ Low Gain	–12 ~ +12 dB	Low band gain
EQ Mid Freq	100 Hz ~ 10.0 kHz	Mid band frequency
EQ Mid Gain	–12 ~ +12 dB	Mid band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	–12 ~ +12 dB	High band gain
LFO Freq	0 Hz ~ 39.7 Hz	LFO frequency
L/R Depth	0 ~ 100%	Left and right depth
F/R Depth	0 ~ 100%	Front and rear depth
PAN Dir	L->R, R->L, L<->R, Lturn, Rturn	Auto pan direction

PHASER

Parameter	Range	Description
LFO Depth	0 ~ 100%	LFO depth
LFO Freq	0 ~ 39.7 Hz	LFO frequency
PhaseShftOfst	0 ~ 100	Phase shift offset
FB Gain	-99 ~ +99%	Feedback gain
Stage	4, 6, 8	Number of phase stages
Diffusion	Stereo, Mono	Diffusion
EQ Low Freq	32 Hz ~ 2.0 kHz	Low band frequency
EQ Low Gain	-12 ~ +12 dB	Low band gain
EQ High Freq	500 Hz ~ 16.0 kHz	High band frequency
EQ High Gain	-12 ~ +12 dB	High band gain

EDIT PrVar Menu

The parameters in the EDIT PrVar menu depend on the effect selected for the PrVar Type parameter in the EDIT EF COM menu. The following effects can be selected: DIST, EQ, CHORUS, and FLANGER. Effect parameters are the same as those for the PrRev menu. See "EDIT PrRev Menu" on page 62.

EDIT Var Menu

The parameters in the EDIT Var menu depend on the effect selected for the Var Type parameter in the EDIT EF COM menu. The following tables list the parameters for effects that can be selected for the Var effect except CHORUS, FLANGER, SYMPHO, ROT.SP, TREMOLO, and AT PAN whose parameters are the same as those for the Cho effect. See "EDIT Cho Menu" on page 64.

PIT CHG (Pitch Change)

Parameter	Range	Description
Pitch	-24 ~ +24	Pitch change
Initial Delay	0.1 ~ 400.0 ms	Feedback delay
Fine 1	-50 ~ +50	Pitch change1 fine
Pan 1	L100 ~ R100	Pitch change1 pan
Output Level1	-100 ~ 100	Pitch change1 output level
Fine 2	-50 ~ +50	Pitch change2 fine
Pan 2	L100 ~ R100	Pitch change2 pan
Output Level2	-100 ~ 100	Pitch change2 output level
FB Gain	-99% ~ +99%	Feedback gain

AT WAH (Auto Wah)

Parameter	Range	Description
Sensitive	0 ~ 100	Sensitivity
CutoffFreqOfst	20 Hz ~ 14.0 kHz	Cutoff frequency offset
Resonance	1.0 ~ 10.0	Resonance
Mix Level	0 ~ 100%	Mix Level

EXCITER*

Parameter	Range	Description
HPF Cutoff	500 Hz ~ 16.0 kHz	High pass filter cutoff frequency
Drive	0 ~ 100%	Drive level
Mix Level	0 ~ 100%	Mix level

COMP (Compressor)

Parameter	Range	Description
Attack	1 ~ 40 ms	Attack rate
Release	10 ~ 680 ms	Release rate
Threshold	–48 dB ~ –6 dB	Threshold level
Ratio	1.0 ~ 20.0	Compression ratio

ER1 (Early Reflection1) & ER2 (Early Reflection2)

Parameter	Range	Description
Type	S-Hall, L-Hall, Random, Reverse, Plate, Spring	Early reflection reverb type
Room Size	0.1 ~ 20.0	Room Size
Liveness	0 ~ 10	Liveliness
Diffusion	0 ~ 10	Diffusion
InitialDly	0.1 ~ 400.0 ms	Initial delay
FB Gain	-99 ~ +99%	Feedback gain
LPF Cutoff	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
HPF Cutoff	Thru, 32 Hz ~8.0 kHz	High pass filter cutoff frequency
Density	0 ~ 3	Density (ER2 only)
Dry/Wet	0 ~ 100%	Dry/Wet balance

GAT REV (Gated Reverb) & REVERS (Reverse Gate)

Parameter	Range	Description
Type	Type A, Type B	Early reflection reverb type
Room Size	1 ~ 20.0	Room Size
Liveness	0 ~ 10	Liveliness
Diffusion	0 ~ 10	Diffusion
InitialDly	0.1 ~ 400.0 ms	Initial delay
FB Gain	-99 ~ +99%	Feedback gain
LPF Cutoff	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
HPF Cutoff	Thru, 32 Hz ~8.0 kHz	High pass filter cutoff frequency
Density	0 ~ 3	Reverb density
Dry/Wet	0 ~ 100%	Dry/Wet balance

* This is an Aural Exciter®. Aural Exciter® is a registered trademark and is manufactured under licence from Aphex Systems, Ltd.

DELAY

Parameter	Range	Description
Lch Delay	0.1 ~ 1040.0 ms	Left channel delay time
Rch Delay	0.1 ~ 1040.0 ms	Right channel delay time
Cch Delay	0.1 ~ 1040.0 ms	Center channel delay time
Cch Level	0 ~ 100	Center channel output level
FB Delay	0.1 ~ 1040.0 ms	Feedback delay
FB Level	-99 ~ +99%	Feedback level
High Damp	0.1 ~ 1.0	High frequency damp
LPF Cutoff	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
HPF Cutoff	Thru, 32 Hz ~8.0 kHz	High pass filter cutoff frequency
Dry/Wet	0 ~ 100%	Dry/Wet balance

ECHO

Parameter	Range	Description
Lch Delay	0.1 ~ 510.0 ms	Left channel delay time
Lch FB Gain	-99 ~ +99%	Left channel feedback gain
Rch Delay	0.1 ~ 510.0 ms	Right channel delay time
Rch FB Gain	-99 ~ +99%	Right channel feedback gain
High Damp	0.1 ~ 1.0	High frequency damp
LPF Cutoff	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
HPF Cutoff	Thru, 32 Hz ~8.0 kHz	High pass filter cutoff frequency
Dry/Wet	0 ~ 100%	Dry/Wet balance

CRS DLY (Cross Delay)

Parameter	Range	Description
Lch Delay	0.1 ~ 510.0 ms	Left channel delay time
Rch Delay	0.1 ~ 510.0 ms	Right channel delay time
Lch send	0 ~ 100%	Left channel send
Rch send	0 ~ 100%	Right channel send
FB Gain	-99 ~ +99%	Feedback gain
High Damp	0.1 ~ 1.0	High frequency damp
LPF Cutoff	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
HPF Cutoff	Thru, 32 Hz ~8.0 kHz	High pass filter cutoff frequency
Dry/Wet	0 ~ 100%	Dry/Wet balance

HALL, ROOM1, ROOM2, ROOM3, STAGE1, STAGE2, & PLATE

Parameter	Range	Description
Reverb Time	0.3 ~ 30.0 sec	Reverb Time
High Damp	0.1 ~ 1.0	High frequency damp
Diffusion	0 ~ 10	Diffusion
InitialDly	0.1 ~ 200.0 ms	Initial delay
LPF Cutoff	1.0 ~ 16.0 kHz, Thru	Low pass filter cutoff frequency
HPF Cutoff	Thru, 32 Hz ~8.0 kHz	High pass filter cutoff frequency
Dry/Wet	0 ~ 100%	Dry/Wet balance

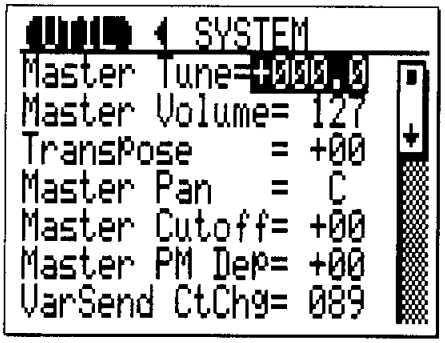
10 UTIL MENU Functions

In this chapter, we explain the UTIL MENU functions.

System Parameters

System parameters affect the overall performance of the TG300.

1. **Press the [UTIL] button.**
   The UTIL MENU will appear.
2. **Use the [▲] cursor button to select SYSTEM.**
3. **Press the [►] cursor button.**
   The UTIL SYSTEM menu shown below will appear.



Control Operation

- Use the [▲] and [▼] cursor buttons to select parameters.
- Use the data wheel to adjust parameter values.
- Press the [UTIL] button or [◄] cursor button to return to the UTIL MENU.
- Press the [EDIT] button for the EDIT MENU.
- Press the [PLAY] button for the Play View All Display and Play Zoom Display.

UTIL SYSTEM Menu Parameters

Master Tune

This parameter allows you to fine-tune the overall sound of the TG300.

Range: –102.4 to 102.3 cent

Master Volume

This parameter allows you to adjust the overall volume level of the TG300.

Range: 0 to 127

Transpose

This parameter allows you to transpose the overall sound of the TG300.

Range: –24 to +24 (±2 octaves)

Master Pan

This parameter allows you to pan the overall sound of the TG300.

Range: L63...C...R63 (Left ...center...Right)

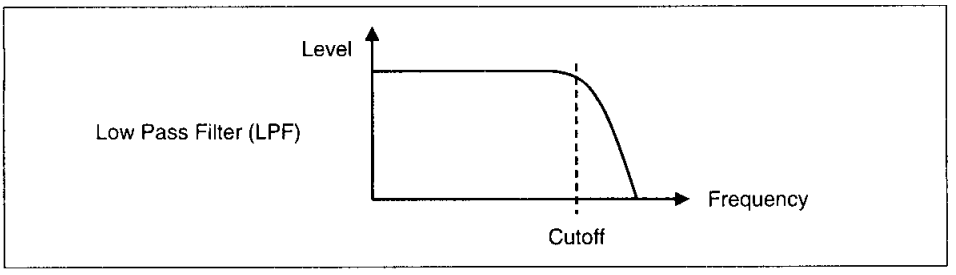
Pan settings for parts and voices are made relative to this setting.

Master Cutoff Frequency (Master Cutoff)

This parameter allows you to set the overall cutoff frequency.

Range: –64 to +63

Cutoff frequency settings for parts and voices are made relative to this setting.



Master Pitch Modulation Depth (Master PM Dep)

This parameter allows you to set the overall pitch modulation depth.

Range: –64 to +63

Variation Effect Send Control Change Number (VarSend CtChg)

This parameter allows you to assign a MIDI Controller to the Variation Effect Send.

Range: 0 to 95

Mute Lock

This parameter allows you to prevent parts from being un-muted even when a MIDI GM Mode On message is received.

Range: OFF, ON

Display Mode (Disp Mode)

This parameter determines the direction of the level meters on the Play View All Display and Play Zoom Display.

Range: Norm, Vert (Normal, Vertical)

When set to Norm, the level meters will move from bottom to top.

When set to Vert, they will move from top to bottom.

Short Menu

This parameter determines whether the short or full EDIT PART menu is displayed.

Range: OFF, ON

Hexadecimal

This parameter determines whether parameter values are displayed as decimal or hexadecimal values.

Range: OFF, ON (decimal, hexadecimal)

GM Exclusive Receive On/Off (Rcv GMExcl)

This parameter determines whether the TG300 responds to GMEX (General MIDI System Exclusive messages).

Range: OFF, ON

Exclusive Receive On/Off (Rcv SysExcl)

This parameter determines whether the TG300 responds to MIDI System Exclusive messages.

Range: OFF, ON

Program Change On/Off (Pgm Change)

This parameter determines whether the TG300 responds to received MIDI Program Change messages.

Range: OFF, ON

Device Number

This parameter allows you to set the MIDI device number. If you are using only one TG300, this parameter can be left set to All. If you are using more than one TG300, you should assign a different Device Number to each TG300 so that Bulk Dump data is sent and received by the correct unit only. The Device Number is actually the MIDI Channel used for sending and receiving MIDI Bulk Dump data.

Range: 1 to 16, All

When set to All, the TG300 will send MIDI Bulk Dump data on MIDI Channel 1, and respond to MIDI System Exclusive messages from devices numbered from 1 to 16.

Bank Select Receive On/Off (RcvBankSelect)

This parameter determines whether the TG300 responds to MIDI Bank Select messages. When set to OFF, only Program Change messages are used.

Range: OFF, ON

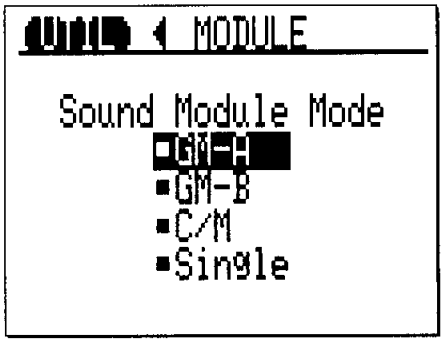
Multi/Single (Sound Module Mode)

This function allows you to select a sound module mode.

1. **Press the [UTIL] button.**
   The UTIL MENU will appear.

2. **Use the [▲] and [▼] cursor buttons to select MULTI/SINGLE.**

3. **Press the [►] cursor button.**
   A display similar to the one shown below will appear:



4. **Use the [▲] and [▼] cursor buttons or the data wheel to select a sound module mode.**
   Range: GM-A, GM-B, C/M, Single

   See "Single Mode" on page 16 and "Multi Modes" on page 18 for details about using sound module modes.

   The following table shows how MIDI Channels are assigned to parts when a sound module mode is first selected:

Part	GM-A	GM-B	C/M	Single
	MIDI Channel			
Part1	1	1	OFF	1
Part2	2	2	2	OFF
Part3	3	3	3	OFF
Part4	4	4	4	OFF
Part5	5	5	5	OFF
Part6	6	6	6	OFF
Part7	7	7	7	OFF
Part8	8	8	8	OFF
Part9	9	9	9	OFF
Part10	10	10	10	OFF
Part11	11	11	11	OFF
Part12	12	12	12	OFF
Part13	13	13	13	OFF
Part14	14	14	14	OFF
Part15	15	15	15	OFF
Part16	16	16	16	OFF

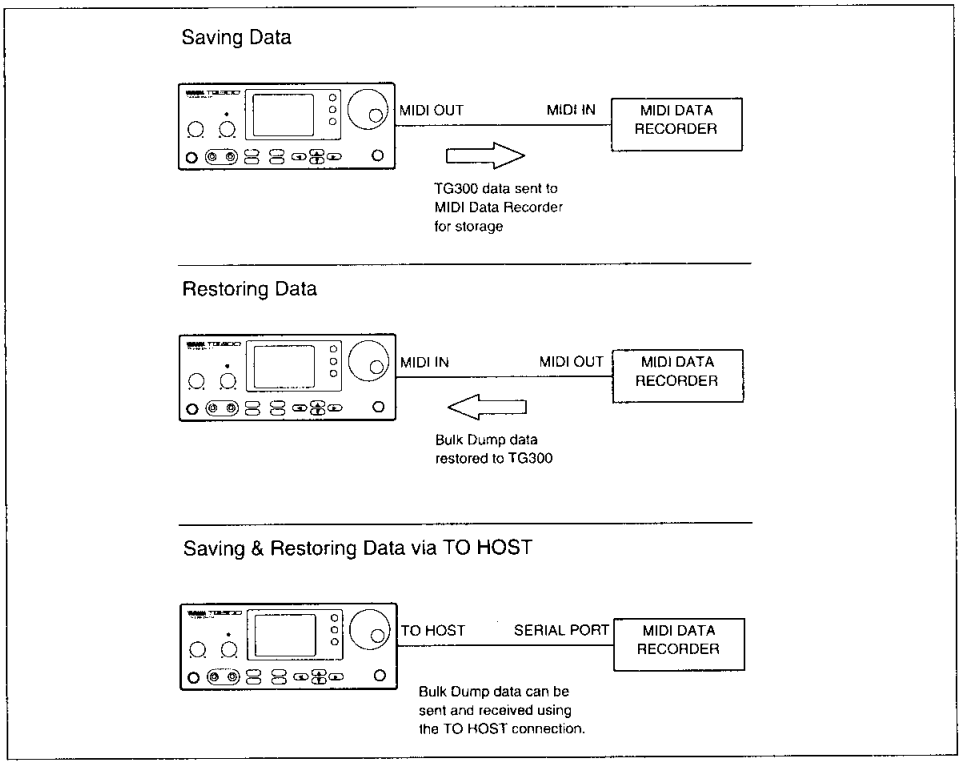
The following table shows how MIDI Program Change numbers are assigned to parts when a sound module mode is first selected. Look in the respective voice table to see which voices correspond to the Program Change numbers.

Part	GM-A	GM-B	C/M	Single
	Program Change			
Part1	1	1	1	1
Part2	1	1	69	OFF
Part3	1	1	49	OFF
Part4	1	1	96	OFF
Part5	1	1	79	OFF
Part6	1	1	42	OFF
Part7	1	1	4	OFF
Part8	1	1	111	OFF
Part9	1	1	123	OFF
Part10	1	1	128 (fixed)	OFF
Part11	1	1	28	OFF
Part12	1	1	30	OFF
Part13	1	1	1	OFF
Part14	1	1	39	OFF
Part15	1	1	14	OFF
Part16	1	1	47	OFF

MIDI Bulk Dump

The MIDI Bulk Dump function allows you to save TG300 voice, part, system data, etc., to a MIDI data recorder such as the Yamaha MDF2. Alternatively, the MIDI data recorder could be a MIDI librarian program, MIDI sequencer, or a synthesizer with a built-in MIDI data recorder such as the Yamaha SY99.

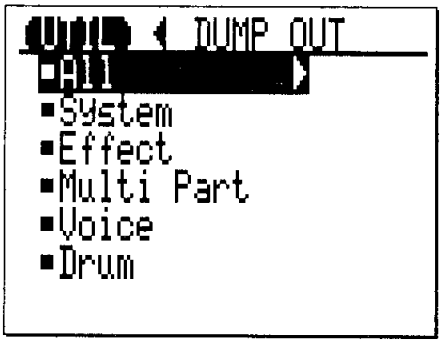
The following illustration shows how MIDI Bulk Dump works using MIDI connections and the TO HOST connection:



Note: If you are using more than one TG300, you need to assign a MIDI Device Number to each TG300 so that Bulk Dump data is sent and received by the correct TG300 only. See "Device Number" on page 71. If you have only one TG300, the device number can be left set to ALL. In this case, the TG300 sends MIDI Bulk Dump data on MIDI Channel 1.

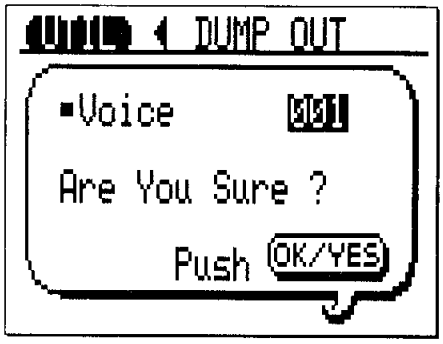
1. **Press the [UTIL] button.**
2. **Use the [▲] and [▼] cursor buttons to select DUMP OUT.**
3. **Press the [►] cursor button or the [OK/YES] button.**

The following display will appear:



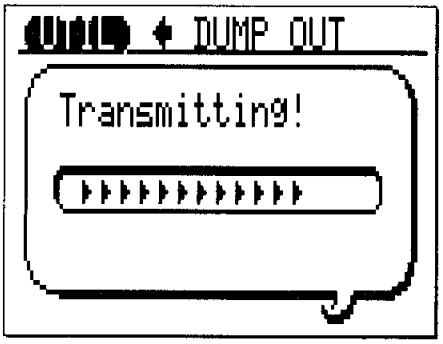
4. **Use the [▲] and [▼] cursor buttons to select the type of data that you want to Bulk Dump.**

5. **Press the [►] cursor button.**
A dialog box will appear. Shown below is the VOICE dialog box:



For some data types you just need to press the [OK/YES] button. For others you need to make a selection, then press the [OK/YES] button. Data types are explained on page 76.

6. **Press the [OK/YES] button to start the Bulk Dump, or the [◄] cursor button to cancel.**
While a Bulk Dump is in progress, the following display is shown:



Bulk Dump progress is indicated by the horizontal bargraph. Once started, Bulk Dump cannot be stopped. When the Bulk Dump has finished, the UTIL DUMP OUT menu will appear.

If the HOST SELECT switch is set to MIDI, the Bulk Dump data is sent to the MIDI OUT connection. If it is set to Mac, PC1, or PC2, it is sent to the TO HOST connection.

See the separate MIDI Data booklet for full details about the contents of the following Bulk Dump data types.

All

All allows you to Bulk Dump the system, effect, multi part, internal voice, and drum data.

See the *Sound Lists & MIDI Data* booklet for full details.

System

System allows you to Bulk Dump the system data only.

See the *Sound Lists & MIDI Data* booklet for full details.

Effect

Effect allows you to Bulk Dump effect program data. Mlt corresponds to the effect used for multi modes. You can Bulk Dump internal effect programs individually or all together.

Range: Mlt, Internal effect programs 1 to 16, or All

Use the data wheel to select effect programs.

Multi Part

Multi Part allows you to Bulk Dump part data. You can Bulk Dump parts individually or all together.

Range: Parts 1 to 16, or All

Use the data wheel to select a part.

Voice

Voice allows you to Bulk Dump internal voice data. You can Bulk Dump voices individually or all together.

Range: Internal voices 1 to 128, or All

Use the data wheel to select internal voices.

Drum

Drum allows you to Bulk Dump drum setup data. You can Bulk Dump drum setups individually or all together.

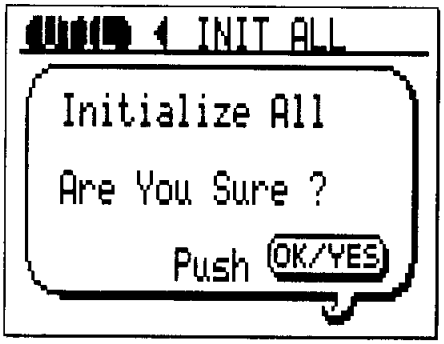
Range: Drum parts 1 to 16, or All

Use the data wheel to select drum kits.

Initialize All (INIT ALL)

The Initialize All function resets all TG300 parameters to their initial factory values.

1. **Press the [UTIL] button.**
   The UTIL menu will appear.
2. **Use the [▲] and [▼] cursor buttons to select INIT ALL.**
3. **Press the [►] cursor button or the [OK/YES] button.**
   The following dialog box will appear.



4. **Press the [OK/YES] button to initialize, or the [◄] button to cancel.**
   When the Initialize All function has finished, the Play Zoom Display will appear.

Demo Songs (DEMO)

See "Playing the Demo Songs" on page 13 of the *Getting Started Guide* for full details about playing demo songs.

11 Other Functions

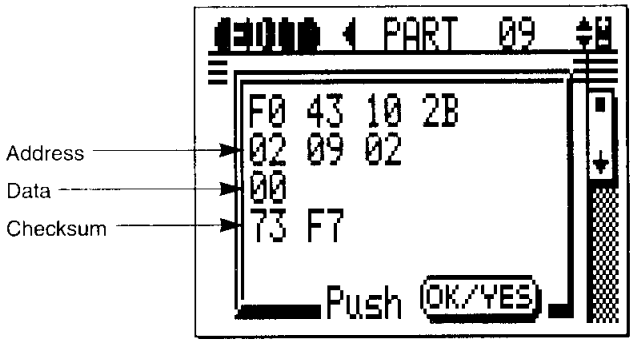
In this chapter, we explain the Exclusive Show, MIDI Channel Message Monitor, and MIDI Slider functions.

Exclusive Show Function

The Exclusive Show function displays the value of the currently selected parameter. It can be used when the following edit menus are shown:

UTIL SYSTEM, EDIT PART, EDIT VOICE COM, EDIT VOICE E1, EDIT VOICE E2, EDIT DRUM, EDIT EF COM, EDIT PrREV, EDIT REV, EDIT CHO, EDIT PrVAR, EDIT VAR.

1. **Press the [SHOW] button while one of the edit menus previously listed is displayed.**
   A dialog box similar to the following will appear:

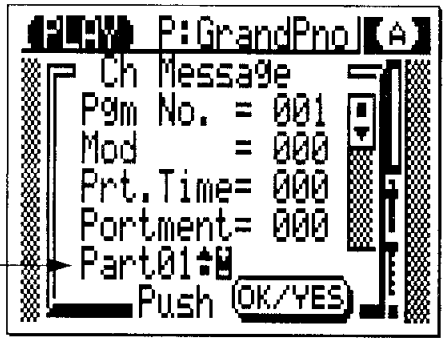


2. **Press the [OK/YES] button to cancel the Exclusive Show function and return to the previous edit menu.**

MIDI Channel Message Monitor

The MIDI Channel Message Monitor displays decimal parameter values for the currently selected part. It can be used with the Play View All Display or Play Zoom Display. Parameter values can be viewed, but not edited.

1. **Press the [SHOW] button.**
   A dialog box similar to the following will appear:



- Use the [▲] and [▼] cursor buttons to scroll through the parameters.
- Use the PAGE/PART [+] [–] buttons to select parts.

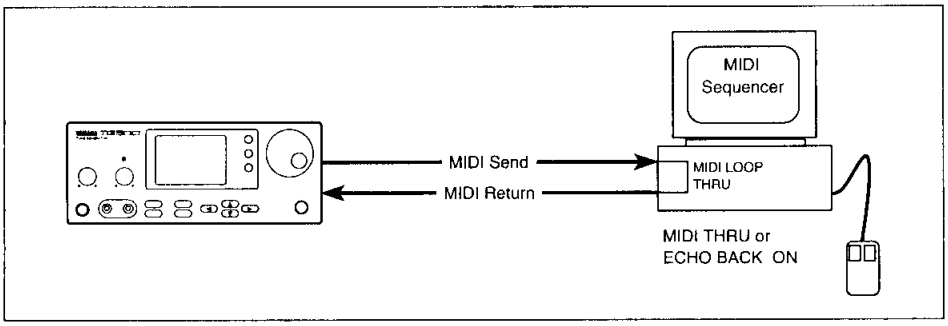
2. **Press the [OK/YES] button to cancel the MIDI Channel Message Monitor.**
   The MIDI Channel Message Monitor displays the following parameters:

Pgm No. (program number)	RPN LSB
Mod (modulation)	Data MSB (data entry)
Prt.Time (portamento time)	Data LSB (data entry)
Portment (portamento)	Bank MSB (bank select MSB)
Vol (volume)	Bank LSB (bank select LSB)
Exp (expression)	Soft (soft pedal)
Pan	MonoPoly (mono/poly)
Rev Send (reverb)	CAT (channel after touch)
Cho Send (chorus)	Bnd MSB (pitch bend MSB)
Var Send	Bnd LSB (pitch bend LSB)
RPN MSB	Data MSB (data entry)

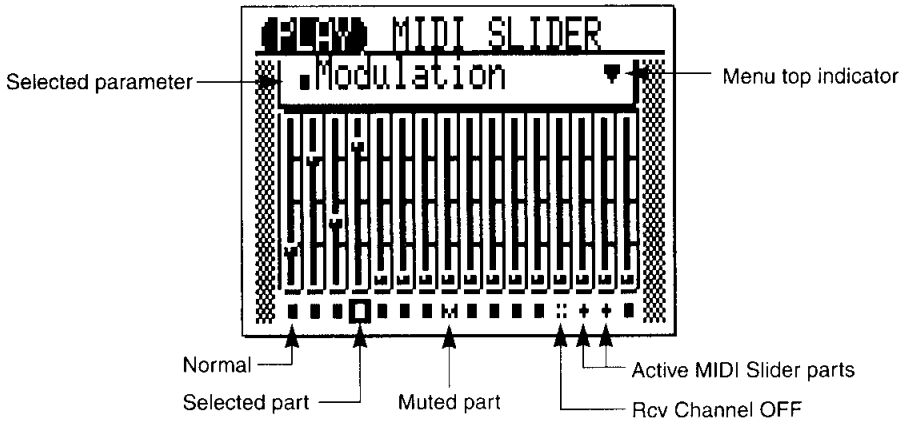
MIDI Slider

The MIDI Slider function allows you to adjust parameter values using the data wheel. You can adjust one part or a group of parts. Parameter values are graphically displayed using sliders. This function can be used with the Play View All Display or Play Zoom Display.

When the data wheel is turned, MIDI Controller data corresponding to the current parameter is output. This MIDI data must be fed back into the TG300 to effect the parameter adjustment. This can be achieved by turning on a MIDI sequencer's MIDI THRU or ECHO BACK function. The following illustration shows how the MIDI Controller data is output by the TG300, sent to the host computer, then returned to the TG300.



While holding down the [PLAY] button, turn the data wheel. A display similar to the following will appear:



Activating Parts

Before parts can be adjusting they must be activated:

1. **Use the PAGE/PART [+] [–] or [◄] and [►] cursor buttons to select a part.**
2. **Press the [OK/YES] button.**
   ■ will appear at the bottom of the corresponding part's slider.
3. **Use the PAGE/PART [+] [–] buttons to select other parts, and the [OK/YES] button to add them to the group.**

4. **Use the data wheel to adjust the current parameter.**
   Sliders will continue moving up or down until all sliders in a group have reached the maximum or minimum level respectively.

5. **To remove a part from a group, use the PAGE/PART [+] [–] buttons to select it, then press the [OK/YES] button.**

Control Operation

- Use the PAGE/PART [+] [–] or [◄] and [►] cursor buttons to select parts.
- Press the [OK/YES] button to group and un-group parts.
- Use the [▲] and [▼] cursor buttons to select parameters.
- Use the data wheel to adjust the selected parameter for the selected part or group of parts.

The following parameters can be selected:

Modulation	Chorus Send
Portamento Time	Variation Send
Volume	Cutoff Frequency
Pan	Resonance
Expression	EG Attack time
Reverb Send	EG Release Time

The name of the currently selected parameter is displayed above the sliders. The status of each part is shown at the bottom of the display.

A Slider's last position is indicated by a small dot. Whenever a slider is adjusted, the dot will move to indicate the new last position.

Display Letter & Display Bitmap

If, while either the Play View All Display or the Play Zoom Display is shown, the TG300 receives Display Letter data or Display Bitmap data in a MIDI System Exclusive message, it will appear on the display.

Display Letter data may contain up to 32 ASCII characters. It will be displayed for 3 seconds only.

Display Bitmap data will be displayed for 3 seconds only. See the *Sound Lists & MIDI Data* booklet for details about the data format. A display for this purpose is likely to be introduced in the future.

This data will not be displayed while the MIDI Channel Message Monitor is being used.

12 Connecting to a Computer

In this chapter, we explain how to connect the TG300 to various types of computers. The computer that is used to control the TG300 is called the *host computer*.

Computers that have built-in MIDI connectors, a MIDI adapter card, or an external MIDI interface can be connected to the TG300 MIDI connectors. Computers without any MIDI connectors can be connected directly to the TG300 via its TO HOST connection. In this case, the TG300 works as the MIDI interface, and other MIDI devices communicate with the host computer through the TG300.

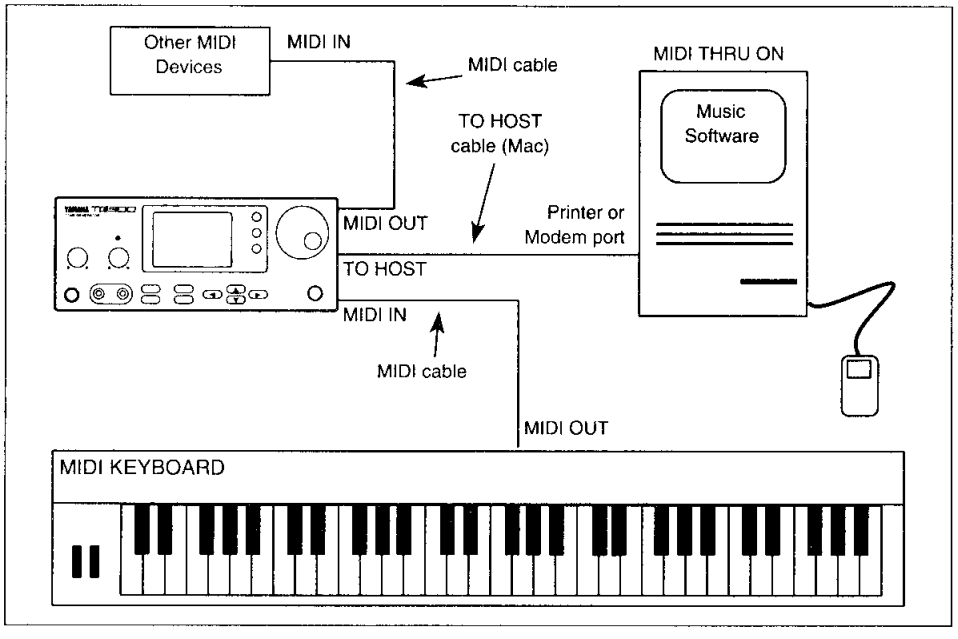
There are four host computer settings available: Mac, PC1, PC2, MIDI.

Mac

This setting is for use with Apple Macintosh computers that do not have an external MIDI interface. The TG300 is connected directly to the Modem or Printer port (RS-422).

1. **Set the HOST SELECT switch to Mac.**
2. **Connect the host computer as shown in the following illustration.**
   The TO HOST (Mac) cable is a standard Macintosh cable (M0197). See "Mac" on page 90.
3. **Power on the TG300, then the host computer.**
4. **Start up your music software.**
5. **In the music software's MIDI options, set the MIDI interface type to "Standard MIDI Interface". If there is a "MIDI Time Piece", option turn it off. If you have to specify the data rate, set it to 1 MHz. Turn on the MIDI THRU or ECHO ON option.**
   Refer to your music software's operating manuals for more information.

   If the host computer is not powered on, or the music software is not running, the message "HOST is OffLine" will appear on the TG300.



The following table shows how MIDI signals are routed through the TG300 when the HOST SELECT switch is set to Mac. Unlike MIDI connections, the TO HOST connection carries data in both directions: send and receive.

Connection		Function	Details
TO HOST	RECEIVE	MIDI data received from host is processed, then sent to MIDI OUT.	Synchronized. Data format: 8 bit, 1 stop bit, no parity. 1MHz clock from TG300 to serial port's HSKi data pin.
	SEND	MIDI data received at MIDI IN and System Exclusive data are output.	When the TG300 is transmitting its Bulk Dump data to the host computer, data received at the MIDI IN port is not sent to the host computer, it is ignored.
MIDI IN		Received MIDI data is output to the TO HOST SEND.	The TG300 does not respond to MIDI data received at MIDI IN, but to MIDI data from TO HOST RECEIVE.
MIDI OUT		MIDI data received at TO HOST RECEIVE is output.	
MIDI THRU		MIDI data received at MIDI IN is output	

PC1

This setting is for use with PC-9800 type computers that are not fitted with a MIDI adapter card. The PC-9800 is a popular computer in Japan. Operation is the same as for the PC2 setting. The only difference between PC1 and PC2 is the communication baud rate and the HOST SELECT switch setting.

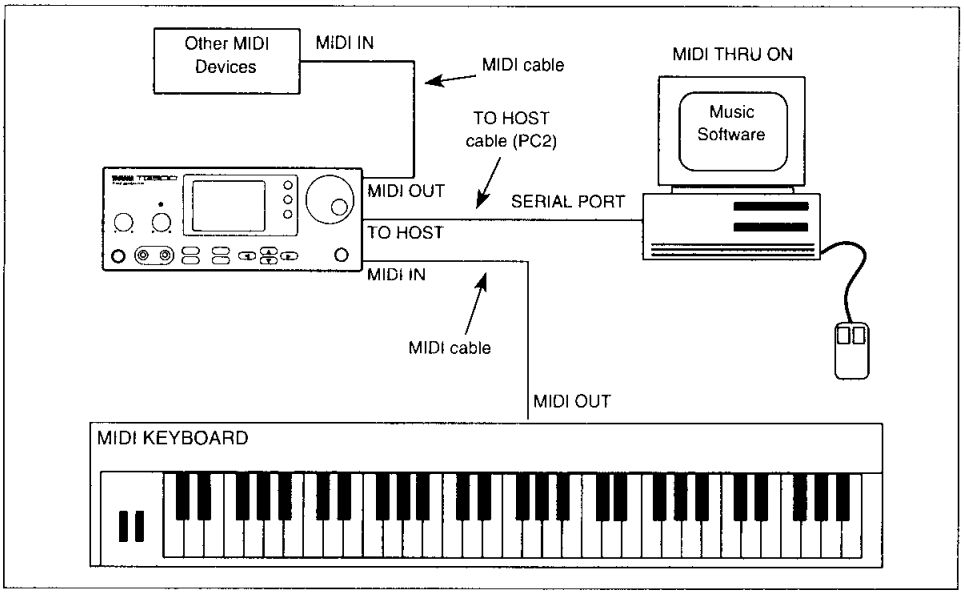
PC2

This setting is for use with IBM PC/AT, PC/AT compatibles, IBM PS/1, PS/2, PS/55, and PS/55note computers that are not fitted with a MIDI adapter card. The TG300 is connected directly to one of the computer's serial ports: COM 1 or COM 2 (RS-232C).

Your music software must be able support the TG300 TO HOST connection. Please consult your Yamaha dealer for more details. If your software does not support the TO HOST connection, the TG300 can still be connected to this type of computer by installing a MIDI interface card in the computer or by using an external MIDI interface.

1. **Set the HOST SELECT switch to PC2.**
2. **Connect the host computer as shown in the following illustration.**
   Details of the TO HOST (PC2) cable are given on page 90.
3. **Power on the TG300, then the host computer.**
4. **Start up your music software.**
5. **In the music software's MIDI options, turn on the MIDI THRU or ECHO ON option.**
   Refer to your music software's operating manuals for more information.

   If the host computer is not powered on, or the music software is not running, the message "HOST is OffLine" will appear on the TG300.



The following table shows how MIDI signals are routed through the TG300 when the HOST SELECT switch is set to PC2 (and PC1). Unlike the MIDI connections, the TO HOST connection carries data in both directions: send and receive.

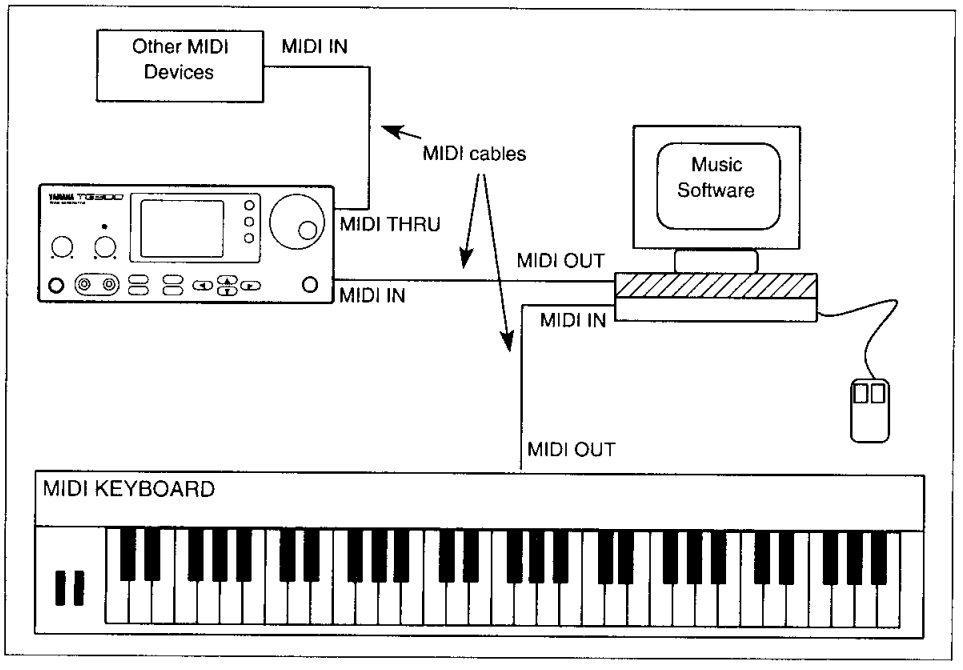
Connection		Function	Details
TO HOST	RECEIVE	MIDI data received from host is processed, then sent to MIDI OUT.	Synchronized. Data format: 8 bit, 1 stop bit, no parity.
	SEND	MIDI data received at MIDI IN and System Exclusive data are output.	When the TG300 is transmitting its Bulk Dump data to the host computer, data received at MIDI IN is not sent to the host computer, it is ignored.
MIDI IN		Received MIDI data is output to the TO HOST SEND.	The TG300 does not respond to MIDI data received at MIDI IN, but to MIDI data from TO HOST RECEIVE.
MIDI OUT		MIDI data received at TO HOST RECEIVE is output.	
MIDI THRU		MIDI data received at MIDI IN is output	

MIDI

This setting is for use with Atari ST, TT, STE, and Falcon computers that have built-in MIDI connectors, IBM PC/AT and compatible computers with a MIDI adapter card, and Apple Macintosh computers with an external MIDI interface. Most music software can be used with this type of connection.

1. **Set the HOST SELECT switch to MIDI.**

2. **Connect the host computer as shown in the following illustration.**



3. **Power on the TG300, then the host computer.**

4. **Start up your music software.**
   Refer to your music software's operating manuals for more information.

   The following table shows how MIDI signals are routed through the TG300 when the HOST SELECT switch is set to MIDI.

Connection		Function
TO HOST	RECEIVE	No function.
	SEND	No function.
MIDI IN		Received MIDI data is processed.
MIDI OUT		System Exclusive data is output.
MIDI THRU		Data received at MIDI IN is output.

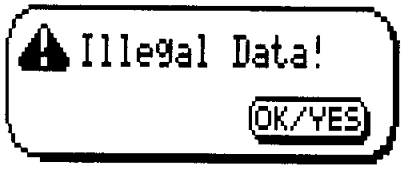
Troubleshooting

Symptom	What to Do
The TG300 cannot be powered up.	Make sure that the power supply adaptor is connected to the TG300.
	Make sure that the power supply adaptor is connected to a suitable AC receptacle.
	Make sure that the TG300 POWER switch is set to ON.
No sound is produced.	Make sure that all the necessary equipment is powered on.
	Check the audio and MIDI cables and connections.
	Make sure that the TG300 MASTER VOL control is turned up.
	Make sure that the connected amplifier's input selector, volume control, speaker selector, etc., are set correctly.
	Make sure that the MIDI keyboard or sequencer is sending MIDI data on the same MIDI Channel that the TG300 is set to.
	Make sure that the HOST SELECT switch is set correctly.
	Make sure that the host computer is setup correctly.
Sound is produced from one speaker only.	Check the audio cables and connections.
	Check the Master Pan setting. See "Master Pan" on page 70.
	Check the part pan setting. See "Pan" on page 23.
	Check the voice pan setting. See "Pan" on page 47.
Two or more parts are sounding together.	Check whether the parts are set to the same MIDI Channel.
MIDI Program Change messages do not select voices as expected.	The voice selected by a MIDI Program Change message depends on the current sound module mode.
The pitch seems wrong.	Check the Master Tuning. See "Master Tune" on page 69.
	Check the Transpose. See "Transpose" on page 69.

Appendix

Error Messages

If an error occurs, a dialog box similar to the following will appear:



Press the [OK/YES] button to clear the dialog box.

The following error messages are possible:

Battery Low!	The memory backup battery is low.
Illegal Data!	Data error while receiving MIDI data.
MIDI Buf Full!	Excessive MIDI data, cannot process.
HOST is OffLine!	Host computer off-line
SysEx Adrs ERROR!	Received exclusive data address is incorrect
SysEx Data ERROR!	Received exclusive data is incorrect.
SysEx Size ERROR!	Received exclusive data size is incorrect.
Check Sum ERROR!	Received exclusive data checksum is incorrect.

The Battery Low error message appears only when the TG300 is powered on.

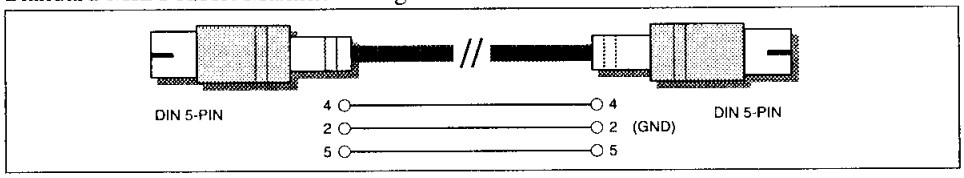
Specifications

Sound Sampling technique		Advanced Wave Memory 2 (AWM2)
		16-bit linear PCM
Polyphony		1 Element — 32 note 2 Element — 16 note (dynamically allocated)
Multi-timbral		16 part
Waveform ROM		6MB
Waves		195
Voices	**Preset**	456
	Internal	128
Effects	**Preset**	32
	Internal	16
Demo songs		3
Controls		MASTER VOL, INPUT VOL, data wheel, CONTRAST, POWER
Buttons		[PLAY], [EDIT], [UTIL], [OK/YES], [SHOW], PAGE/PART [+] [–], [◄] [►] [▲] [▼] cursors
Indicators		Audio In PEAK LED
Display		Backlit 21-character 8-line LCD
Audio connections	**R, L/MONO LINE OUT**	1/4 inch phone jack
	AUDIO IN	RCA pin-jack
	PHONES	1/4 inch stereo phone jack
MIDI connections	**IN, THRU, OUT**	5-pin DIN
TO HOST connection	**Connector**	8-pin mini DIN
	Host computer selection and data rate	MIDI – 31,250 bps
		Mac – 31,250 bps
		PC-1 – 31,250 bps
		PC-2 – 38,400 bps
Power supply voltage		12 V, 700 mA
DC IN connection		2.1 mm mini power type
Dimensions (W x D x H)		220 x 257.2 x 91.6 mm (8.7 x 10.1 x 3.6 inch)
Weight		1.9 kg (4.2 lb)

Host Computer Connecting Cables

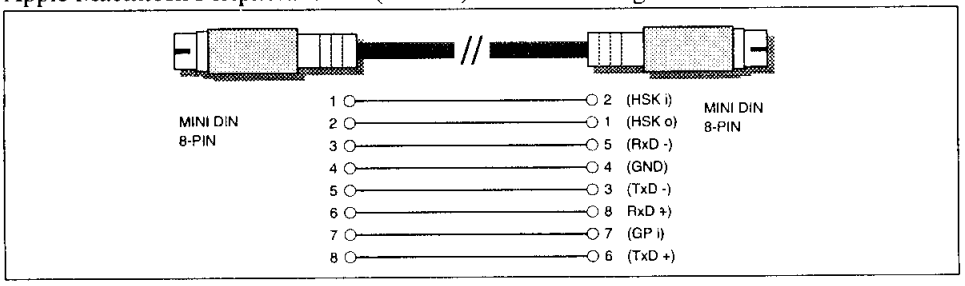
MIDI

Standard MIDI cable. Maximum length 15 meters.



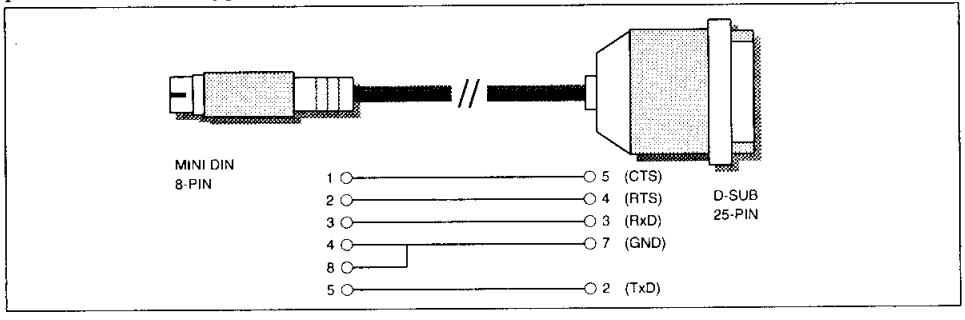
Mac

Apple Macintosh Peripheral cable (M0197). Maximum length 2 meters.



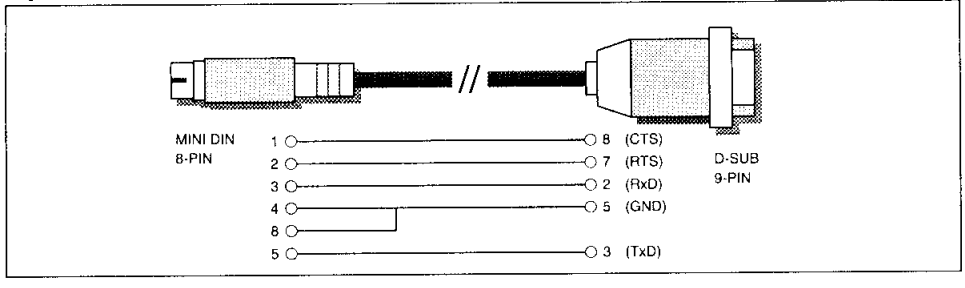
PC-1

8-pin MINI DIN to D-SUB 25-pin cable. If your PC-1 type computer has a 9-pin serial port, use the PC-2 type cable. Maximum length 1.8 meters.



PC-2

8-pin MINI DIN to D-SUB 9-pin cable. Maximum length 1.8 meters.



Glossary

AEG (Amplitude Envelope Generator): A type of envelope generator that determines how amplitude changes over time, that is, from the time a key is pressed. TG300 voices may use two AEGs, one for each element.

After Touch: The ability to control a parameter by applying extra pressure to held keys. On the TG300 after touch can be used to control pitch, cutoff frequency, amplitude, LFO PM depth, and LFO FMOD depth. *See also* Channel After Touch and Polyphonic After Touch.

AM: An abbreviation for Amplitude Modulation.

AWM2 (Advanced Wave Memory 2): A Yamaha proprietary process used to create the TG300 waveforms. AWM is similar to AWM2, but without the digital filter.

BP (Break Point): a note position at which a parameter value changes relative to the overall value. The amount of change is determined by an offset parameter. *See also* Cutoff Scale BP and Level Scale BP.

Bulk Dump: A function that allows TG300 System, Effect, Part, Voice, and Drum setup data to be sent to and received from a MIDI storage device. Data is transmitted as MIDI System Exclusive messages.

CAT: An abbreviation for Channel After Touch. *See* Channel After Touch.

Channel After Touch: A type of after touch that affects all currently held notes on the same MIDI Channel equally even though pressure may be applied to only one key. Compare with Polyphonic After Touch.

C/M: A TG300 multi mode that provides semi-compatibility with C/M software. C/M was popular for computer music applications before GM was established.

Controller: a type of MIDI message that offers real-time control. Typical Controllers include modulation, volume, pan, and portamento.

Cutoff frequency: The frequency at which the attenuation of a filter starts to take effect. TG300 element filters are Low Pass Filters (LPF), so they attenuate frequencies above the cutoff frequency.

Cutoff Scale BP: A note position at which an element filter's cutoff frequency changes relative to the overall cutoff frequency setting. The amount of change is determined by a cutoff scaling offset parameter. The TG300 provides four cutoff scale break points.

Device Number: An identity number assigned to a MIDI device for transmitting System Exclusive messages.

DSP (Digital Signal Processor): A type of IC designed specifically for processing large amounts of data at high speed in real time. The TG300 uses a high-performance DSP to produce its multi effects.

DVA (Dynamic Voice Allocation): The technique used by the TG300 to allocate notes to individual parts as and when required.

EG (Envelope Generator): An electronic circuit that allows provides signal control over time. Typical envelope generators consist of attack, decay, sustain, and release parameters. Sometimes called an ADSR.

Element: An element consists of a pitch envelope generator (PEG), filter envelope generator (FEG), and an amplitude envelope generator (AEG). Waveforms are assigned to elements, and elements are used to form voices.

FEG (Filter Envelope Generator): A type of envelope generator that determines how a filter's cutoff frequency changes over time, that is, from the time a key is pressed. TG300 voices may use two FEGs, one for each element.

FMOD: An abbreviation for Filter Modulation.

GM (General MIDI): An extension to the MIDI Standard which, among other things, states that a GM compatible tone generator must be at least 24-note polyphonic, have 16 parts, and 128 specific preset voices. The TG300 provides all this and more.

GM-A: A TG300 multi mode that provides compatibility with General MIDI software. It is also suitable for use with the Yamaha Clavinova, portable keyboards, and so on.

GM-B: A TG300 multi mode that provides compatibility with GM software.

GUI (Graphical User Interface): pronounced "gooey", a type of user interface in which items are displayed as graphic objects.

HOST Connection: A connection that allows the TG300 to be connected directly to a computer that does not have a MIDI interface. When this connection is used, the TG300 acts as a MIDI interface, and other MIDI devices communicate with the host computer through the TG300.

Internal voice: An editable TG300 voice. *Contrast with* preset voice.

Level Scale BP: A note position at which an element volume level changes relative to the overall element volume level. The amount of change is determined by a level scaling offset parameter. The TG300 provides four level scale break points.

LFO (Low Frequency Oscillator): A type of oscillator that generates low frequency signals. LFOs are often used to modulate other signals. Chorus, flanger, tremolo, vibrato, wah, and other modulation type effects use LFOs.

LSB (Least Significant Byte): The byte in a digital word that represents the lowest value. Usually, the rightward byte. *Contrast with* MSB.

MIDI: An acronym for Musical Instrument Digital Interface. Basically it allows electronic musical instruments to communicate with each other.

MSB (Most Significant Byte): The byte in a digital word that represents the highest value. Usually, the leftward byte. *Contrast with* LSB

Multi-timbral: A musical instrument that can produce multiple timbres simultaneously. The TG300 is a 16-part multi-timbral tone generator.

NRPN (Non-Registered Parameter Number): A type of MIDI Controller message that may consist of two bytes: MSB and LSB. Unlike RPN Controllers, NRPN Controllers are not defined in the MIDI Standard, and manufactures' may assign parameters to them as they like. The TG300 Reverb Send Controller is an NRPN. *Contrast with* RPN.

Part: TG300 voices are assigned to parts, and up to 16 parts can sound simultaneously. Parts are analogous to the various parts of a musical composition. For example, a bass guitar part, keyboard part, drum part, etc.

PAT: an abbreviation for Polyphonic After Touch. *See* Polyphonic After Touch.

PEG (Pitch Envelope Generator): A type of envelope generator that determines how pitch changes over time, that is, from the time a key is pressed. TG300 voices may use two PEGs, one for each element.

PM: An abbreviation for Pitch Modulation.

Polyphonic After Touch: A type of after touch that allows control of individually held notes by applying pressure to the corresponding keys. Compare with Channel After Touch.

Preset voice: An non-editable TG300 voice. *Contrast with* internal voice.

Program Change message: A type of MIDI message that is used select voices.

RAM (Random Access Memory): A type of memory IC that stores data that can be edited, but requires a continuous electrical charge. TG300 internal voices and internal effect programs are stored in RAM. An internal backup battery provides the continuous charge. *Contrast with* ROM.

ROM (Read Only Memory): A type of memory IC that stores data that cannot be edited, but does not require a continuous electrical charge. TG300 waveforms and operating system are stored in ROM. *Contrast with* RAM.

RPN (Registered Parameter Number): A type of MIDI Controller message defined in the MIDI Standard that may consist of two bytes: MSB and LSB. The following TG300 parameters are examples of parameters controlled using this type of Controller: Pitch Bend Sensitivity, Master Fine tuning, and Master Coarse tuning. *Contrast with* NRPN.

Sound module mode: The TG300 has four sound module modes. One Single mode and three multi modes: GM-A, GM-B, C/M. See "Sound Module Modes" on page 3.

System Exclusive message: A type of MIDI message that is used to transmit data between MIDI devices exclusively.

Velocity: The speed at which at keyboard key is struck. Normally, the faster a key is struck, the louder the sound produced. A MIDI keyboard can produce velocity values from 1 to 127, usually on a logarithmic scale from *ppp* to *fff*.

Voice: TG300 voices are formed using one or two elements. The TG300 contains 456 preset voices for use with the multi modes, and 128 editable internal voices and 32 preset voices for use with Single mode.

Wave: A sound building block created using Yamaha's Advanced Wave Memory (AWM) processing. The TG300 contains 195 *waves* in 6MB of ROM.

Further Reading

The following books are recommended for those who want to know more about MIDI.

"THE MIDI BOOK", Steve DeFuria with Joe Scacciaferro, Hal Leonard Books. A good introduction for anyone new to MIDI.

"THE MIDI RESOURCE BOOK", Steve DeFuria with Joe Scacciaferro, Hal Leonard Books, 1988. Following on from THE MIDI BOOK, this one looks at the real nuts and bolts of MIDI including the MIDI specification and how to read MIDI Implementation Charts.

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