

Rumour **MANGLER**

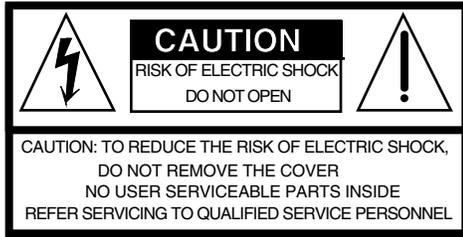
user's guide

KURZWEIL
Music Systems

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Part Number: 910382 Rev. A



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



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

IMPORTANT SAFETY & INSTALLATION INSTRUCTIONS

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

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

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with a dry cloth.
- 7) Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.



- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15) Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.

- 16) **WARNING:** To reduce the risk of fire or electric shock do not expose this apparatus to rain or moisture.

SAVE THESE INSTRUCTIONS

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RADIO AND TELEVISION INTERFERENCE

Warning: Changes or modifications to this instrument not expressly approved by Young Chang could void your authority to operate the instrument.

Important: When connecting this product to accessories and/or other equipment use only high quality shielded cables.

Note: This instrument has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This instrument generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this instrument does cause harmful interference to radio or television reception, which can be determined by turning the instrument off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the instrument and the receiver.
- Connect the instrument into an outlet on a circuit other than the one to which the receiver is connected.
- If necessary consult your dealer or an experienced radio/television technician for additional suggestions.

NOTICE

This apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

AVIS

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la class A prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

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Chapter 1

Getting to Know Rumour & Mangler

Overview

Rumour and Mangler are based on the effects found in the KSP8, Kurzweil's flagship multi-channel effects processor, and offer easy-to-use effect presets for any environment. Both models are single rack space units featuring 192 effects presets, 64 locations for user-created presets, balanced stereo analog inputs and outputs, S/PDIF digital I/O, and pre-effect EQ.

Each product offers its own unique palette of effects:

Rumour features a comprehensive set of Kurzweil's finest reverbs and reverb variations, including gated, reverse, and reverb/compression combinations, along with Kurzweil's unique LaserVerb®, and chorus/flange+delay+reverb combinations.

Mangler focuses on effects other than, but not excluding, reverb. These include chorus, flanger, phaser, tremolo, rotary speaker, panner, delay, filters, LaserVerb, Pitcher®, synth trigger, ring modulation, distortion, and compression effects, and many combinations.

Quick Start

Take your new Rumour or Mangler out of the box and plug it into a wall socket with the included power supply. The LED in the TAP button will blink to show the current System Tempo. If you don't want this blinking at you, change the setting of the Tap Tempo LED Master parameter, as described on page 3-13.

Turn the INPUT LEVEL and OUTPUT LEVEL knobs on the far left side of the front panel all the way down (fully counterclockwise, that is).

Make your digital or analog cable connections on the back panel of the device. Refer to "Audio Inputs and Outputs" on page 2-1 if you have questions at this point. If you are using the analog outputs, be sure to read the section on page 2-2 about the -10 dBV / +4 dBU switch on the back panel.

Setting Levels

After making audio cable connections to the unit, send audio from your source device to the Rumour or Mangler. Set input source on the Master menu:

1. Press the MASTER button on the front panel of your unit.
2. Turn the SELECT knob until the screen displays “Input Source”.

**Input Source:
Analog**

Use the VALUE knob to select “Analog” or “Digital”, depending on your input source. If your input source is analog, the Digital Clock parameter (described on page 3-5) should be set to one of the internal clock settings (which it will be by default). For digital inputs, you may need to change the setting of the Digital Clock parameter, depending on your configuration.

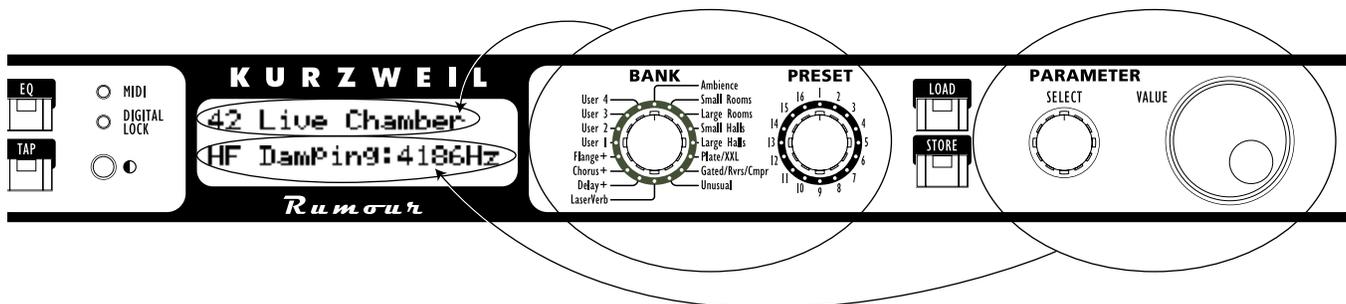
For analog input sources, turn the INPUT LEVEL knob until the peaks in the signal cause the yellow LED over the INPUT LEVEL knob to light. Remember to calibrate the input level with the loudest source material that you plan to send to the unit. Also, to get the best signal-to-noise ratio with an analog input, the signal should be as hot as possible (without clipping).

3. After setting the input level, turn the OUTPUT LEVEL knob clockwise to set a useful level for the audio coming out of the Rumour or Mangler (digital and analog). As you turn the knob, the screen will display the output level. A good starting level is 0.0 dB (unity gain). You will, of course, need to coordinate this level with the input level on the receiving device.

The CLIP LED above the OUTPUT LEVEL knob will light to alert you of excessive signal levels.

Choosing Effects

You can access all of the effects in your Rumour or Mangler using the BANK and PRESET knobs on the front panel. Turn the BANK knob to select the general type of effect, for example Small Rooms on the Rumour, or Distortion on the Mangler. Then turn the PRESET knob to display the 16 different effects in the current bank. Appendix A provides a list of the effects included with each unit.



When you start customizing effects, you’ll be able to store them in the banks labeled User 1 through User 4. Like the other banks, each of the User banks can store 16 different effects.

The banks provided with each unit are listed on page 3-15.

Editing Effects

Each of the 192 effects provided with your Rumour or Mangler sounds great right out of the box, and is ready to handle whatever live or studio application you throw at it. However, since each effect is based on Kurzweil's highly-regarded KDFX algorithms (which you may know from the K2500, K2600, or KSP8), you also can control a huge variety of editable parameters for each effect. These parameters are shown on the second line of your unit's display, underneath the name of the current effect. The Concert Hall reverb on the Rumour, for example, has Wet/Dry as its first parameter (set to a level of 50%, which basically means that the effect level is turned up halfway):

```
065 Concert Hall  
Wet/Dry :50%wet
```

Use the SELECT knob to scroll through parameters, and the VALUE knob to change parameter values.

To keep things manageable, we've taken the most commonly tweaked parameters for each effect (up to 16 per) and put them right at your fingertips as "Basic" FX Parameters. This means that they are the first parameters you will see as you scroll through the list for each effect. These parameters are also directly controllable using MIDI Continuous Controllers (CCs) 1-16. (To see the full range of parameters for your unit's effects, set Show FX Parameters to "Extended" in the Master menu, as described on page 3-7).

The algorithm number for each preset is listed in Appendix A of this manual. You can download the complete (and hefty) documentation for all KDFX algorithms and their parameters from the www.kurzweilmusicsystems.com web site.

Using Equalization

The Rumour and Mangler offer pre-effect EQ that you can set globally for your unit. Press the EQ button on the front panel to access the first EQ screen, then use the SELECT knob to move between parameters and the VALUE knob to change the settings of the parameters. When you make EQ changes, they take place immediately.

Equalization is explained in greater detail on page 3-12.

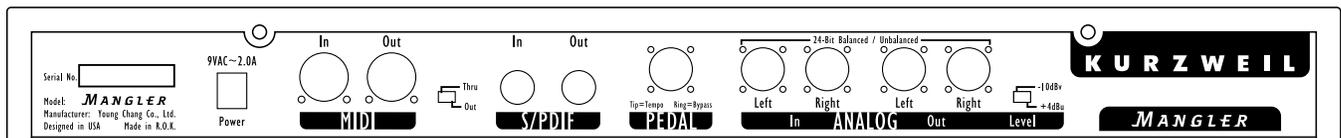
Chapter 2

Making Connections

This chapter explains how to make all power, audio, MIDI, and pedal connections on the rear panel of your Rumour or Mangler. Both devices offer the same I/O options, described in detail in this chapter.

The Rear Panel

Below is a picture of the Mangler's rear panel. The Rumour offers all of the same connectors.



Power

The power supply is a standard 9V AC 2-amp external supply. There is no power switch; your Rumour or Mangler will be ready to use as soon as you plug it in.

Audio

You can attach both analog and digital input cables to the unit, although you can use only one type of input at a time. Set the Input Source parameter on the Master menu (see page 3-5) to tell the unit which inputs it should use.

Also, you may want to check the setting of the Wet/Dry Mode parameter (see page 3-4), depending on whether you've connected the unit to your mixer as a direct insert or as a send/return (bus) effect.

Analog and Digital outputs are always available, so that you can use both at the same time.

Analog Inputs and Outputs

Stereo analog inputs and outputs are balanced 1/4" jacks that will accept either balanced TRS (tip-ring-sleeve) or unbalanced TS (tip-sleeve) connectors, as shown below:

1/4" TRS plug for balanced connections



1/4" TS plug for unbalanced connections



When you plug a single cable (i.e., a mono signal) into either analog input, the unit sends that signal to both input channels (provided that Input Source is set to Analog, of course).

Set the analog input level using the knob on the front panel of the unit (see page 3-1).

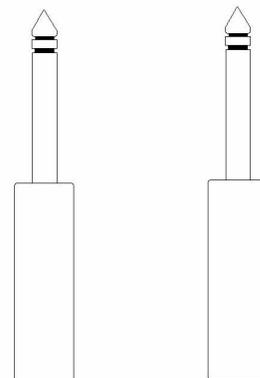
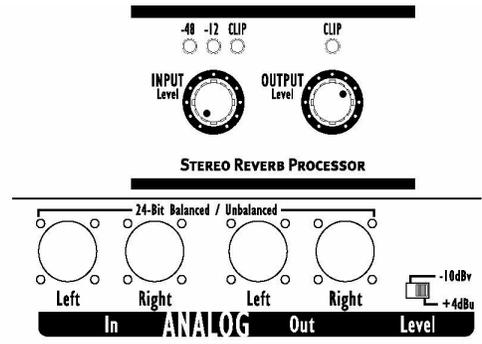
Setting Levels for Analog Outputs

The **-10 dBV / +4 dBu** switch on the rear panel selects between pro (+4 dBu Balanced) and consumer (-10 dBV Unbalanced) signal levels for the analog outputs. When you set this switch to -10dBV, the unit gives unity gain with an unbalanced output (with a -10dBV input and level settings). Setting the switch to +4 dBu gives unity gain with a balanced output (given a +4dBu input and level settings).

Here are two examples of how to set Rumour or Mangler for unity gain with analog inputs and outputs:

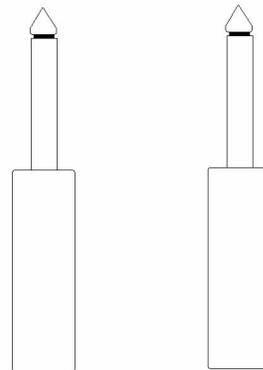
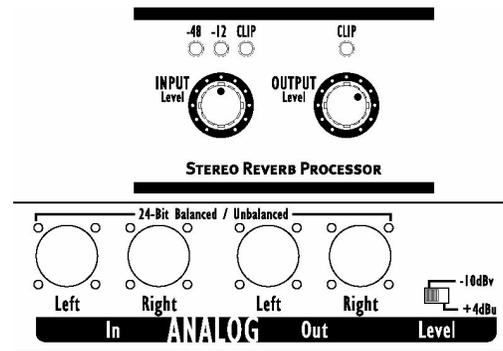
For +4 dBu balanced analog input and output:

- Use balanced audio input (TRS cables).
- Set Input Level to minimum.
- Set Output Level set to 0dB.
- Set Output Level switch set to +4dBu.
- Use balanced audio output (TRS cables).



For -10dBV unbalanced analog input and output:

- Use unbalanced audio input (TS cables).
- Set Input level to approximately half way.
- Set Output level set to 0dB.
- Set Output level switch to -10dBV.
- Use Unbalanced audio output (TS cables).



Digital Inputs and Outputs

Make S/PDIF Digital input and output connections with the RCA-style jacks on the back panel.

For digital signals, set the level by adjusting the output level on the sending device. The setting of the EQ gain parameter (see page 3-12) will also have a bearing on the digital signal level coming into the effects section of the unit.

You can set Digital Clock to an internal or an external source (see page 3-5).

Footpedal

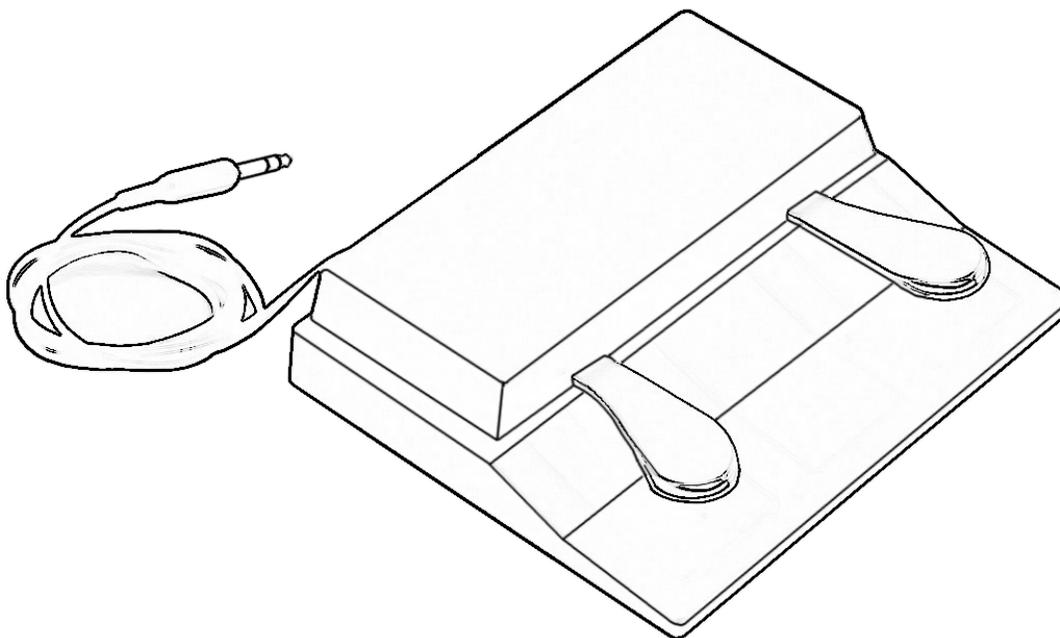
Plug either a single or double pedal into your Rumour or Mangler's Pedal jack for a convenient way to tap in a system tempo and perform effects bypass.

To use a pedal for tapping a tempo, you must first press the TAP button on the front panel.

With a single pedal you can tap a system tempo for use by time-based effects (see page 3-13 for information on Tap Tempo). If you plug the pedal halfway in, it works just like the BYPASS button on the front panel of your unit (see page 3-3).

With two footpedals (either a double pedal with a single TRS plug – such as the KFP-2S available from Kurzweil, or two regular pedals and a Y-cable with jacks for each pedal and a TRS plug) you will have bypass and tap tempo pedals available. The connector on the back panel of your unit is wired as follows:

- Tip = Tempo
- Ring = Bypass



MIDI

There are two MIDI jacks: MIDI In and MIDI Out. The MIDI Out jack also doubles as MIDI Thru; use the Thru/Out switch on the rear panel to change the setting of this jack. When you set this switch to MIDI THRU, however, you need to keep in mind that MIDI data generated by your Rumour or Mangler (such as program change commands, MIDI clock, and SysEx) will not be merged with the external MIDI data being passed through. In this case, only the external MIDI data will be sent out the MIDI Out/Thru port.

If you ever need to update your unit's software, you'll do this using MIDI, as described on page 3-11.

You can also use MIDI for SysEx storage of any presets you create. See page 3-8.

Chapter 3

Using Your Rumour or Mangler

The Front Panel

Let's examine the front panels of the Rumour and Mangler, from left to right:



Input Level Knob & Input Meters

On the far left is the INPUT LEVEL knob, which controls the analog input gain. The range of the input control has a range of 18dB, allowing for signal levels from +4dBu to +22dBu, and is wide enough to support +4 dBu or -10 dBV operation. Being an analog input level, this knob does not affect the digital input.

Turn the knob all the way to the left (counterclockwise) to set the input gain to the minimum level; this is a good place to start for +4dBu “pro” level signals. (Note that turning the input level knob all the way “down” in this way does not turn off the input.) For -10dBV level signals, turn the knob clockwise and use the LEDs, as described below.

Input Level LEDs

The three LEDs (green, yellow, red) above the INPUT LEVEL knob measure the analog or digital input signal.

The **green** light comes on for signal levels from -48dB up to -12dB.

The **yellow** light comes on for signals between -12dB and 0dB.

The **red** light comes on for signals 0 dB or greater. This means the incoming signal is too loud, and has digital distortion in the form of “clipping,” which may not have a pleasant effect on the sound.

A good, nominal input signal level for the device is about -10dB. The rule of thumb is that mostly green with flashes of yellow for peaks is ideal. (Or in the case of purposeful, consistently loud levels mostly yellow with some green is OK too.)



You must set the input signal level carefully, especially with the Mangler. We recommend that you try to set the level as close to -10 dBV as possible. Otherwise, scrolling through effects may cause volume jumps from effect to effect (due to the differing amounts of compression used on effects).

Output Level Knob

Next to the INPUT LEVEL knob is the OUTPUT LEVEL knob, which controls the master output level. This output control has a range of 98dB, and allows a boost of up to 18dB and a potential cut of -79.5dB.

Like the input level control, the range of the output level control is wide enough to support +4 dBU and -10 dBV operation. Use the -10 dBV / +4 dBU switch on the back panel to match levels with your mixer to yield the best resolution.

The red LED above the OUTPUT LEVEL knob indicates that the output signal is clipping, just like the red LED above the INPUT LEVEL knob does the input signal.

When you turn the knob, the display briefly shows the value of the Master Output Level parameter:

```
Master Output Level:  
-6.0dB
```

If you find you cannot turn the level up anymore before the top end of the knob's physical range, you are most likely programming your user effects too hot and running the input to your mixer (effect return) too soft. In this case, factory programs should appear too quiet at the same master output level. You should pay attention to the Out Gain parameter in each individual effect, and make sure that if you change a parameter which adds gain to the overall effect, that you compensate by lowering that effect's Out Gain parameter. Match the levels of your own effects more closely with the factory effects, and turn up the return level on your mixer.

The output level knob controls both the analog and digital output levels of the device. The -10 dBV / +4 dBU switch on the rear panel, however, only affects the analog output.

Bypass Button

The BYPASS button lets you bypass both the active effect and the EQ section.

Press the BYPASS button once to engage bypass; the red LED in the button will light up, and the display will briefly show this message:

Effect & EQ bypassed

Press the button again to disengage the bypass, and the light goes out. This message will briefly display:

Effect & EQ enabled

The Bypass Mode master parameter (described on page 3-7) determines whether the EQ is bypassed or not. A setting of "Effect & EQ" (this is the default) means that the effect and EQ are bypassed together. A setting of "Effect only" means that the EQ remains active while the effect is toggled on and off. When the Bypass Mode is Effect only, the two messages shown above will be different, as shown below:

Effect bypassed

Effect enabled

Master Button

Pressing the MASTER button displays the first Master menu parameter. The red LED in the MASTER button will be on when you are in the Master menu. Use the SELECT knob to select a master parameter to change, then use the VALUE knob to change the value of that parameter. Master menu settings are saved across power cycles.

For example, to change Bypass Mode from “Effect & EQ” to “Effect only”:

1. Press the MASTER button. Note that the red LED in the button lights.
2. Turn the Select knob until the Bypass Mode parameter displays on the screen, as shown below:

```
BYPass Mode:  
Effect & EQ
```

3. Turn the Value knob one click to the right to change Effect & EQ to Effect only:

```
BYPass Mode:  
Effect only
```

Some menu items will indicate that a button press is required to make your choice. For example, the Soft Reset screen says “Load=Yes”, telling you that you should press the LOAD button to proceed with the Soft Reset. If you do not want to perform the Soft Reset, all you need to do is turn one of your unit’s knobs or press any button other than LOAD.

Rumour and Mangler are designed to allow you to work quickly, so it’s usually possible to move directly from one part of the interface to another simply by performing a different function (e.g., using the BANK and PRESET knobs to select a preset will immediately take you out of the Master menu). You can also press the MASTER button at any time to exit the Master menu. The LED in the MASTER button will go out when you leave the Master menu.

The items on the Master menu are described below:

Wet/Dry Mode

```
Wet/Dry Mode:  
Insert, Send/Return
```

When set to “Insert,” the wet/dry value of the effect is that of the saved preset; use this setting when your Rumour or Mangler is directly connected as a channel insert.

“Send/Return” sets the preset’s Wet/Dry parameter to 100% Wet. You’ll usually use this setting when you have the unit connected to an auxiliary bus and effect returns on your mixer. In this case you will adjust effect levels with the bus sends on your mixer. You can still temporarily change the wet/dry value of a preset, but the value will revert to 100% on save. The changed wet/dry value will be remembered, however, and will be the wet/dry value if you change Wet/Dry Mode back to “Insert.”

Although most effects have a Wet/Dry parameter, some (like compressors) do not. The setting of Wet/Dry Mode, therefore, is not applicable to these effects.

Input Source

Input Source:
Analog, Digital

Selects between the analog inputs and the S/PDIF digital input.

You can connect a single analog input to either the left or the right analog input. The unit will automatically detect the mono signal and sum it to both channels equally so that stereo effects are available.

Digital Clock

Digital Clock:
44.1kHz Internal, 48kHz Internal, External

When you connect your Rumour or Mangler to other digital devices through S/PDIF, you need to choose which device will generate the master clock (to which other devices will “slave”). This parameter sets the Rumour/Mangler digital clock source to Internal or External, and sets the clock frequency when Internal is selected. If you are using only analog inputs and outputs, you must keep this parameter set to one of the internal clocks. When you set Digital Clock to External, then your Rumour or Mangler will slave to the clock sent by another digital device attached to the S/PDIF input.

The DIGITAL LOCK LED lights to indicate that the device has sensed and locked to an external digital clock. It flashes if lock has not been achieved or if lock has been lost.



Since connected devices may respond unexpectedly when you switch digital clock source, **make sure you turn audio down before switching the clock.**

Digital Word Length

Dig Word Length:
16 bits, 20 bits, 24 bits

Sets the bit depth of the digital output. The default is “24 bits.” Lower bit depths will include dithering for best-sounding results.

MIDI Channel

MIDI Channel:
None, 1-16

Sets the MIDI channel on which the unit will receive and transmit MIDI data. MIDI data can include program change commands or any of the 16 MIDI continuous controllers that let you remotely edit effect parameters. The default is Channel 1. None turns MIDI transmission and reception off.

Program Change Receive

Prog Chg Receive:
On, Off

Selects whether or not the unit will respond to incoming MIDI program change commands. Rumour and Mangler respond to MIDI Bank Select Controller 32; see page 3-14 for more information on using MIDI.

Program Change Transmit

Prog Chg Transmit:
On, Off

Selects whether or not the unit will transmit MIDI program change commands when you move the BANK and PRESET knobs. The MIDI OUT/THRU switch must be set to OUT for program changes to be transmitted.

If Effect Cuing is enabled (see the Change Effect parameter on page 3-7) you will also have to press the LOAD button in order to transmit the program change message. The default is "Off."

System Tempo

System Tempo: System Tempo:
120 BPM (Internal) 152 BPM (External)

The behavior of this parameter depends on whether the MIDI Clock Source parameter is set to Internal or External. When MIDI Clock Source is Internal, use either the VALUE knob to set the system tempo, from 1-255 BPM, or use the TAP button (see page 3-13) to enter a tempo. The value changes whenever a new tempo is calculated. When MIDI Clock Source (described below) is set to "External," the calculated incoming tempo (as set on the external device) is displayed here, and neither the VALUE knob nor the TAP button change the value.

MIDI Clock Source

MIDI Clock Source:
Internal, External

Selects whether the system tempo is set internally by System Tempo (see above) or externally, by locking to an incoming MIDI clock source.

Transmit MIDI Clock

Transmit MIDI Clock:
On, Off

Selects whether or not MIDI Sync messages generated by the Rumour/Mangler are transmitted out the MIDI OUT port.

You can get an external MIDI clock to pass through the Rumour or Mangler by changing the switch on the back panel from MIDI "OUT" to MIDI "THRU." If you do this, however, MIDI events generated by your Rumour or Mangler will not be sent out the MIDI OUT/THRU port.

Tap Tempo LED

Tap Tempo LED:
Blink Tempo, Don't blink

Selects whether or not the Tap Tempo LED blinks in time with the system tempo.

Change Effect

Change Effect:
Load automatically, Cue next effect

Change Effect lets you “cue” effects, which means that you can select the next effect to load before you actually change to that effect. This offers a smooth way to move between effects without scrolling through the list of effects.

The default is “Load automatically” (i.e., cuing is off), which means that when you turn the BANK and PRESET knobs the current effect will change as you turn the knobs. The name of the newly-chosen effect will be displayed on the screen, just as you would expect. If you're in “Load automatically” mode, pressing the LOAD button resets the current preset to its unedited settings.



When cuing is on (“Cue next effect”), you use the BANK and PRESET knobs to select an effect to cue. The unit will briefly display the name of the cued effect, then will resume displaying the name of the current effect. Press the LOAD button (which blinks when an effect is cued) to engage the selected effect. See page 3-16 for more information about cuing effects.

Program Change commands received through MIDI are ignored when Change Effect is set to “Cue next effect.”

Bypass Mode

BYPASS Mode:
Effect & EQ, Effect only

Selects whether or not the EQ is bypassed along with the effect when the BYPASS button is pressed. The default is “Effect & EQ,” which means that the EQ is bypassed with the effect. “Effect only” means that the EQ remains active and only the effect is bypassed. You can still bypass the EQ when Bypass Mode is set to “Effect only”, however, by using the EQ In/Out parameter (see page 3-12).

Show FX Parameters

Show FX Parameters:
Basic, Extended

Controls the number of effect parameters that you can edit. In “Basic” mode, only the first 16 parameters appear. In “Extended” mode, all the algorithm parameters for the selected preset, up to 44 of them, are shown.

SysEx ID

```
SysEx ID:  
0,1,2...
```

Sets the SysEx ID of the unit. Valid values are 0–127. When you dump objects, the SysEx ID is sent as part of the dump message. Only units with the same SysEx ID will receive the dump. The exception is ID 127, which will “broadcast” to all units.

SysEx Object Dump?

```
SysEx Object Dump?  
User1-4 Load=Dump
```

This offers a way to back up your presets, by dumping them via SysEx to an external MIDI sequencer. Select this master parameter, then use the VALUE knob to select between the following options to specify what is to be dumped:

- User1-4
- User1
- User2
- User3
- User4

When you press the LOAD button the unit will dump the presets, displaying a screen like this for a few seconds:

```
Bank(s) User1-4  
have been dumped
```

See page 3-19 for more information about backing up and restoring your presets.

Erase User Banks?

```
Erase User Banks?  
User1-4 Load=Erase
```

Use this option to delete the contents of the user banks. You can erase all four banks in one fell swoop, or you can choose to erase individual banks. You cannot, however, delete a single preset (although you can overwrite it with a new one). The VALUE knob lets you select between the following options to specify what is to be erased:

- User1-4
- User1
- User2
- User3
- User4

Press the LOAD button to bring up the confirm dialog:

```
Erase User1-4! OK?  
Tap=OK Store=No
```

At this point, press TAP to erase the selected bank(s). A screen such as the one shown below will display for a few seconds. Press STORE to return to the Erase User Banks master parameter page.

```
Bank(s) User1-4  
have been erased.
```

Soft Reset?

```
Soft Reset?  
Load=Yes
```

This master parameter is for soft-resetting the unit. A soft reset initializes your device without erasing your presets or master parameter settings. If your Rumour or Mangler seems to have gotten into an unexpected state, you can always soft reset without losing any data.

Press LOAD to bring up this confirm dialog:

```
Soft Reset! OK?  
Tap=OK      Store=No
```

Pressing TAP executes the soft reset; pressing STORE cancels back to the Soft Reset master parameter page.

Hard Reset?

```
Hard Reset?  
Load=Yes
```



When you hard-reset your unit, all master parameters are restored to their default settings, and **all user banks are erased** (so be careful!). Press LOAD to bring up this confirm dialog:

```
Hard Reset! OK?  
Tap=OK      Store=No
```

Press TAP to execute the hard reset, or STORE to cancel.

Enter bootblock?

```
Enter bootblock?  
Load=Yes
```

This is where you access your unit's Boot Block, the place you'll go if you ever need to update the operating system or other software. Software updates of this sort are posted on the www.kurzweilmusicsystems.com website as MIDI files that you "play" on a MIDI sequencer into your unit.

We recommend that you use SysEx to backup any presets you've created before updating your Rumour or Mangler software. See page 3-19 for more information about backing up and restoring your presets.

Pressing LOAD brings up a confirm dialog:

```
Enter bootblock! OK?  
Tap=OK      Store=No
```

Press TAP to enter the Boot Block. Press STORE to cancel the operation. The first option you will see when you enter the Boot Block looks like this:

```
Install FlashROM  
via MIDI      Load=Yes
```

When this screen is displayed on your unit, you're ready to install FlashROM (which means the unit's operating system, effects objects, or Boot Block software). First connect the MIDI OUT of your sequencer to the MIDI IN of the Rumour or Mangler. Press the LOAD button to make your unit ready to receive the new software, then "play" the new software (which is provided as a .MID file) on your sequencer. While you are loading the new software, you should not use the unit, or send any MIDI to it other than the software being loaded.

After you've loaded new software, click the SELECT knob to the right until it says, "Exit MIDI install." Then press LOAD. You will be returned to the "Install FlashROM via MIDI" screen. Turn the Select knob clockwise to display the "Exit bootblock" option, then press LOAD to resume normal operations.

There are other options in the Boot Block intended only for service technicians; therefore these options are not documented here.

The Boot Block's Back Door

Under normal circumstances you should always be able to access the Boot Block through the Master Menu. If your software is not functioning properly, however, hold down both the LOAD and STORE buttons as you restart your unit (i.e., unplug it then plug it back in). This will take you straight to the Boot Block, allowing you to reload your unit's software using the procedure described above.

EQ Button

The EQ button accesses your Rumour or Mangler's dedicated 3-band equalization. The EQ is performed on the signal before it goes to the effect. Also, when you set the EQ on your unit, that setting is used "globally"; it will not change when you select a different effect, and it will be saved across power cycles.

Press the EQ button. The LED comes on, and the display shows the EQ parameters, two at a time, one on the top line, and one on the bottom. Use the SELECT knob to select the parameter and the VALUE knob to change the value of the selected parameter. If you add gain in the EQ, you should probably use the EQ Gain parameter to compensate for the overall level boost.

Balance and Width controls are also in the EQ menu. Press the EQ button a second time to exit the EQ menu.

The EQ parameter list (with default values) is shown below:

```
Bass Gain: 0.0dB
Bass Freq: 262Hz

Mid Gain : 0.0dB
Mid Freq : 1109Hz

Treb Gain: 0.0dB
Treb Freq: 4186Hz

EQ Gain  : 0.0dB
```

EQ Gain lets you boost or cut the signal as it leaves the EQ section of the device. Here's a useful tip: You can use EQ Gain to adjust the level of digital signals coming from a device that lacks its own external level control.

```
EQ In/Out: In, Out
```

Use EQ In/Out to add or remove equalization from the signal path. If Bypass Mode is set to "Effects only", then this parameter serves as the manual EQ bypass.

```
Balance/Pan : 0%
```

The "Balance/Pan" parameter functions as a balance control when there is a stereo input and as a pan control when there is a mono input. Since the unit's S/PDIF inputs are always stereo, only an analog input can be mono. An analog input will be mono when you connect a single input cable to the unit.

Either Balance or Pan can be set to a level from -100% (Left) to 100% (Right). Balance changes the relative volume of the left and right output channels, and works in conjunction with the Width parameter. Pan allows you to move the sound image from side to side within the stereo field.

```
Stereo Width: 100%
```

Stereo Width works with the Balance control and has no effect on Pan. A width of 100% is the normal stereo image; 0% collapses the image to mono; -100% reverses the left and right inputs.

Tap (Tempo) Button

Tap Tempo allows you to enter a system tempo by repeatedly pressing the TAP button. When you press the TAP button, the display shows a System Tempo page, as in the Master menu:

```
System Tempo:
120 BPM (Internal)
```

```
System Tempo:
152 BPM (External)
```

When the MIDI Clock Source parameter is set to Internal, you can tap the button four or more times to set a System Tempo. The system averages your tapping speed and the calculated tempo becomes the System Tempo. You can also use the VALUE knob or an attached footpedal (see page 2-4) to change the System Tempo.

When the MIDI Clock Source parameter is set to External, pressing the TAP button will still display this page, but the tempo remains fixed at the incoming tempo (i.e., Tapping will not change the tempo). Effects with tempo parameters set to "System" will sync to the System Tempo. ("System" is the default for most presets, although you can set the tempo specifically for an effect if you want, disregarding the System Tempo). The TAP button LED will flash at the current tempo, unless the Tap Tempo LED parameter in Master menu is set to "Don't Blink."

Setting Durations in Beats-Per-Minute (BPM)

Tempo is expressed in beats-per-minute. MIDI Sync and Kurzweil's BPM-based algorithms use units of 24ths of a beat, since we don't know what you are calling "a beat."

So what are the corresponding standard musical durations in 24ths of a beat? Assuming the 'beat' is a quarter note, then:

4 beat (bts) = whole note

2 bts = half note

1 bts = quarter note

12/24 bts = (1/2 of a quarter note) = eighth note

6/24 bts = (1/4 of a quarter note) = sixteenth note

3/24 bts = (1/8 of a quarter note) = thirty-second note

16/24, 1 8/24, 2 bts = (1/3, 2/3, 3/3 of a half note) = quarter-note triplets

8/24, 16/24, 1 bts = (1/3, 2/3, 3/3 of a quarter note) = eighth-note triplets

4/24, 8/24, 12/24, 16/24, 20/24, 1 bts
 = (1/6, 2/6, 3/6, etc., of a quarter note)
 = sixteenth note triplets ("six-tuplets")

MIDI

The red MIDI LED, to the left of the display, flashes to indicate that the device is receiving MIDI data.

To change presets remotely, send your Rumour or Mangler program change information on the MIDI channel specified in the Master menu. The Rumour or Mangler display will show the name of any remotely selected presets; the position of the BANK and PRESET knobs, however, will not change to reflect the bank and preset number. Program Change commands received through MIDI are ignored when Change Effect is set to “Cue next effect.”

Although Rumour and Mangler organize their presets into “banks” of 16 effects each, for MIDI purposes presets are organized into banks of 100 objects each. These groupings are based strictly on preset numbers, and do not group the effects by type. The 100’s bank, for example, comprises the presets numbered 100 through 199, with preset number 199 being object 99 in the 100’s bank.

For bank selection via MIDI, the Rumour and Mangler respond to MIDI Bank Select Controller 32 (followed by a program change). For example, to remotely select preset 143, send controller 32 with a value of 1, followed by a program change with a value of 43.

The devices also respond, on the specified channel, to 16 MIDI controller numbers, CC#s 1 – 16 as a way to remotely change the value of the 16 “Basic” effect parameters. You must be in the Preset menu of the Rumour or Mangler to use this feature. You will also need to keep in mind that the “entry value” when you send continuous controller information to the Rumour or Mangler will be whatever value your controller is sending (a slider pulled all the way down, for example, will send a value of 0). So you should be prepared for the parameter’s setting to jump from its current setting to a new value being sent from your controller.



After sending a program change to Rumour or Mangler, you should wait 500 milliseconds before sending any of the CCs. This allows the preset time to start. If your sequencer is set to 120 BPM, for example, one beat equals 500 milliseconds.

Digital Lock

The green DIGITAL LOCK LED, below the MIDI LED, comes on steady to indicate that the device has sensed and locked to an external digital clock, at either 44.1 or 48 kHz sampling rate. It flashes if lock has not been achieved or if lock has been lost.

Contrast Knob

Turn the contrast knob to adjust the appearance of your Rumour or Mangler’s display. Different viewing angles may require you to adjust the display contrast for optimal readability.

If your device’s display doesn’t seem to be working, you may just need to turn the contrast knob to change the contrast setting.

Bank Knob

The BANK knob lets you choose the bank for the type of effect you wish to use. Use it in conjunction with the PRESET knob to quickly get to any of the 256 possible effects in the device. When you turn the BANK knob, the name of the current bank will be shown briefly on the top line of the display.

There are 16 banks of 16 effects each. The first 12 banks are known as ROM banks, since they are stored in the device's Read-Only Memory and you cannot change them. The four remaining banks are reserved for the presets that you create, so they are called User banks. All in all, there are 192 ROM effects and 64 user effects. The 16 banks for each device are:

Rumour	Mangler
1. Ambience	1. Chorus
2. Small Rooms	2. Flange
3. Large Rooms	3. Phase/Tremolo
4. Small Halls	4. Rotary/Panner
5. Large Halls	5. Delay
6. Plate/XXL	6. LaserVerb
7. Gated/Rvrs/Cmpr	7. Filters
8. Unusual	8. Pitcher/Synth
9. LaserVerb	9. Freq Shifters
10. Delay+	10. Distortion
11. Chorus+	11. Distortion+
12. Flange+	12. Compression
13. User 1	13. User 1
14. User 2	14. User 2
15. User 3	15. User 3
16. User 4	16. User 4

Preset Knob

The PRESET knob selects among the 16 presets (effects) in each bank. Appendix A of this manual provides complete lists of the presets included with Rumour and Mangler. Unoccupied user locations have < user bank x/y > as the effect name, where x is the user bank number and y is the preset number within that bank.

There are two ways to select effects with the BANK and PRESET knobs. If the Change Effect master parameter is set to "Load automatically," the effect selected by moving the BANK and/or PRESET knob loads immediately. When you set the Change Effect master parameter to "Cue next effect," you can take advantage of the cuing feature, as described in the following section.

Cuing Effects

Rumour and Mangler have a cuing feature that lets you select an effect before you actually load it. This can be useful for studio or stage applications where you want to change to a pre-selected (cued) effect with a single button press.

Set the Change Effect master parameter to "Cue next effect" to enable cuing. Now, when you turn the BANK and/or PRESET knob to select a new effect, the current effect remains running and the newly selected effect is cued. The LOAD LED blinks to indicate that there is an effect cued up (that is, selected but not loaded). After a few seconds, the display will again show the name of the active effect. Press the LOAD button when you are ready to change to the cued effect.

Since you use the BANK and PRESET knobs to cue an effect, keep in mind that the position of the knobs while an effect is cued does not reflect the currently active effect. Instead, the knobs are actually indicating the bank and preset number of the cued effect. To re-display the name of the cued effect, turn the PRESET knob one click to the right or left then back to its original position. The name of the cued effect will briefly appear on the display.

If you reselect the current effect with the BANK and/or PRESET knobs, the LED stops blinking and the previously selected effect is no longer cued.

Load Button

If the Change Effect master parameter is set to "Load automatically," (the default) the effect selected by moving the BANK and/or PRESET knob will load immediately; you do not need to press the LOAD button. If you press the LOAD button while you are editing a preset, however, the current preset will be re-loaded, throwing away any edits that you may have made.

If the Change Effect master parameter is set to "Cue next effect," the current effect remains active as you cue up a new effect with the BANK and/or PRESET knob. Press the LOAD button to engage the cued effect. When either the BANK or the PRESET knob is moved, the load LED blinks to indicate that you must press it to engage the new effect.

You can also use the LOAD button to re-engage the current preset to its un-edited settings. LOAD works this way if you're in "Load Automatically" mode, and also in "Cue next effect" mode if another effect is not currently cued.

Store Button

The LED in the STORE button will light any time you change an effect parameter. If you are editing one of the ROM effects (Banks 1–12), pressing the lighted STORE button lets you save the edited effect to one of the four User banks (User1–User4). If the preset you are editing is already in one of the User banks, pressing STORE lets you either replace the effect with the newly-edited version or save the newly-edited effect to a new User bank location.

The store dialog guides you through selecting a User bank and an effect slot, naming the effect, and finally confirming the store function.

The first screen looks like this:

```
Choose a User Bank/#
Select/Value=Rename
```

(Pressing LOAD at this point cancels the operation.)

Move the BANK knob to select one of the User banks (labeled User1–User4), then use the PRESET knob to select a storage location in the selected User bank. The display changes to reflect the appropriate numbers and name. The top line will say either “Store” or “Replace,” depending on whether or not a preset is already stored at the location. Press STORE to choose this location.

```
Store at User1/13?
205 Classic Chapel
```

If the chosen location already has a preset stored, the name of the stored preset will be displayed, giving you a chance to reconsider before replacing that preset:

```
Replace User1/13?
205 Oval Office
```

At this point you can press STORE to replace the preset at the selected location, use the BANK and STORE knobs to choose a different User bank location, or press LOAD to cancel.

Renaming Presets

You don't have to rename the presets you store in the User banks, since they are stored with unique bank and preset numbers. If you'd like, however, you can use the SELECT and VALUE knobs to rename your presets. You can even do this before choosing User bank locations. During the store operation, the bottom line of the display shows the object name; use the SELECT knob to move the cursor and the VALUE knob to change characters.

```
Choose a User Bank/#
Plastic Chapel
```

If you decide to name the preset before storing it, the STORE LED will continue to blink, reminding you that you still need to select a location and save the preset.

Parameter Knobs: Select and Value

The two knobs in the parameter section, SELECT and VALUE, are used for a number of purposes in the device. Already discussed are the Master menu parameter selections, EQ menu parameter selections, and character selection in the naming dialog. Their main function is to adjust effect parameters and their values. So when you're looking at a preset, moving the SELECT knob will scroll through the list of its parameters.



Turn the VALUE knob to change the value of the currently shown parameter. When a value is changed, the STORE LED lights to indicate that a change has been made. As described in the previous section, you can press the STORE button at this point to save the preset with the changes you've made.

The first 16 parameters you'll see as you scroll through each preset's parameter list are the "Basic" FX parameters. By default, these are the only parameters that will be displayed. To scroll through ALL of the algorithm parameters (up to 44) of the active effect, set Show FX Parameters on the Master menu to "Extended," (see page 3-7). Complete documentation for every parameter of every effect is available at the www.kurzweilmusicsystems.com web site.

Backing Up Your Presets using MIDI SysEx

To make backup copies of the presets you've created and stored in User Banks 1–4, you'll need to have a MIDI sequencer attached via MIDI to your Rumour or Mangler. Here's what you need to do:

- Connect a MIDI cable from the MIDI OUT port on your Rumour or Mangler to the MIDI IN port of your sequencer.
- Make sure that the THRU/OUT switch on the back of your Rumour or Mangler is set to OUT.
- Your sequencer may have a special "Capture Dump" option for SysEx dumps. You can either use the "Capture Dump" feature (if available) or set your sequencer to record. When you are ready, select "SysEx Object Dump?" from the Rumour or Mangler Master menu and select the bank(s) to dump. Make sure your sequencer is recording, then press the LOAD button on the Rumour or Mangler, as prompted on the screen.
- The MIDI LED on your Rumour or Mangler will blink while the SysEx dump is taking place. When it has completed, give the dump a descriptive name, then save the MIDI file on your sequencer. This is the backup of your user presets. Instructions for restoring your presets from a SysEx dump are provided in the next section.

Restoring Your Presets



Before you restore presets to your Rumour or Mangler, make sure that you do not need the contents of the bank(s) to which you will be restoring. **The presets you restore to the Rumour or Mangler will overwrite the presets currently in the bank(s).**

To restore User Bank presets that you've previously backed up (as described in "Backing Up Your Presets using MIDI SysEx," above):

- Connect a MIDI cable from the MIDI OUT port on your sequencer to the MIDI IN port of your Rumour or Mangler.
- Set the BANK knob on your Rumour or Mangler to one of the ROM banks (i.e., any bank that does not begin with the word "User"). It doesn't matter which bank you select, so long as it is not one of the user banks.
- Your sequencer may have a special "Send Dump" option for SysEx dumps. You can either use the "Send Dump" feature (if available) or set your sequencer to play the MIDI file that contains your backup. Your Rumour or Mangler will be ready to receive the SysEx as soon as you play the file on your sequencer; you do not need to put the Rumour or Mangler into a special receive mode.
- The MIDI LED on the Rumour or Mangler will flash while it is receiving SysEx, and messages on the display will indicate which bank is being restored. When the LED stops flashing, your previously saved presets are restored.

Troubleshooting

This section describes a few things to check when your Rumour or Mangler doesn't do what you think it should.

First of all, you may want to re-initialize your unit with a soft or hard reset (described on page 3-10). Remember that a hard reset will expunge any presets you have created, so you should back up any presets in the User banks that you want to save (see page 3-19).

Here are a few other things to check:

- **There is no sound at output when using analog**
Check that the Digital Clock parameter is set to "Internal." See page 3-5.
- **MIDI not transmitted** (e.g., program changes, SysEx)
Check the position of the MIDI OUT/THRU switch on back panel. MIDI generated by Rumour or Mangler will only be sent out the MIDI port if the switch is set to OUT. See page 2-4.
- **Software installation fails** (e.g., OS upgrade)
Make sure no other MIDI events are being sent to unit while you are installing the new software.
- **Wet/Dry level reverts to 100%**
Check setting of Wet/Dry Mode parameter. See page 3-4.
- **Effects don't change automatically**
Check setting of Change Effect parameter. See page 3-7.
- **BANK/PRESET knobs and display are out of sync** (i.e., the preset indicated by the knob settings is not the preset shown on the display screen)
This can happen during effect cuing, when the unit receives a program change command via MIDI, or if you cancel a Store operation after changing knob positions. The BANK/PRESET knobs and display will get back in sync after you move either knob.
- **Something doesn't sound right / image collapses to mono / panning is wrong**
Check settings on EQ menu. See page 3-12.
- **There is audible clipping, but the clip LEDs do not light**
The input LEDs show actual input level, not post-EQ, so gain added in the EQ section could result in audible clipping without any clip LEDs showing.
- **MIDI CC commands don't seem to be getting to the unit**
 - 1) Make sure you are in the Preset menu of the Rumour or Mangler (i.e., a preset name is shown on the display screen, not a Master menu item or other item).
 - 2) Make sure you are waiting a sufficient amount of time after sending a program change. You should wait at least 500 milliseconds after sending a program change before sending any of the CCs. See page 3-14.

Appendix A

Effects Tables

This appendix lists the preset effects available in each bank of the Rumour and Mangler. Each preset includes the number of the algorithm on which it is based. You can download the complete algorithm reference manual at <http://www.kurzweilmusicsystems.com>. There you will find complete descriptions of the parameters in each algorithm.

Effects Tables

Rumour Effects

Rumour Effects

Ambience			Small Rooms			Large Rooms		
1	Small Closet	alg 10	17	BrightSmallRoom	alg 1	33	Brt Empty Room	alg 7
2	Tight Ambience	alg 6	18	Small Drum Room	alg 1	34	In The Studio	alg 4
3	Add More Air	alg 10	19	SmallStudioRoom	alg 4	35	Tabla Room	alg 12
4	Add Ambience	alg 1	20	Drum Room	alg 12	36	Brass Chamber	alg 1
5	Small Wood Booth	alg 4	21	Bassy Room	alg 1	37	Sax Chamber	alg 1
6	Standard Booth	alg 8	22	Thick Room	alg 5	38	Live Chamber	alg 11
7	Natural Room	alg 5	23	Sun Room	alg 5	39	My Garage	alg 4
8	NiceLittleBooth	alg 1	24	The Real Room	alg 5	40	Bigger Perc Room	alg 7
9	With A Mic	alg 4	25	Bathroom	alg 5	41	Plebe Chamber	alg 1
10	PrettySmallPlace	alg 4	26	Utility Room	alg 5	42	Med Large Room	alg 12
11	Viewing Booth	alg 1	27	Spitty Drum Room	alg 7	43	ClassicalChamber	alg 7
12	Small Dark Room	alg 12	28	Genuine Room	alg 5	44	Large Room	alg 7
13	Intimate Room	alg 7	29	Green Room	alg 7	45	Sizzly Drum Room	alg 5
14	White Room	alg 5	30	Percussive Room	alg 1	46	JudgeJudyChamber	alg 7
15	Live Place	alg 8	31	The Comfy Club	alg 9	47	Bloom Chamber	alg 7
16	A Distance Away	alg 6	32	Stall One	alg 7	48	Real Big Room	alg 5

Small Halls			Large Halls			Plate / XXL		
49	Small Hall	alg 5	65	Concert Hall	alg 9	81	Real Plate	alg 14
50	Real Niceverb	alg 5	66	Bob'sDiffuseHall	alg 9	82	Bright Plate	alg 14
51	Empty Stage	alg 7	67	Abbey Piano Hall	alg 7	83	Medm Warm Plate	alg 7
52	Medium Hall	alg 1	68	My Dreamy 481!	alg 9	84	Bloom Plate	alg 9
53	Elegant Hall	alg 1	69	The Long Haul	alg 7	85	Clean Plate	alg 9
54	Opera House	alg 5	70	Predelay Hall	alg 9	86	Plate Mail	alg 11
55	Mosque Room	alg 7	71	Sweeter Hall	alg 7	87	RealSmoothPlate	alg 9
56	Spacious Hall	alg 5	72	The Piano Hall	alg 7	88	Classic Plate	alg 5
57	Grandiose Hall	alg 1	73	Bloom Hall	alg 9	89	Weighty Platey	alg 5
58	Short Hall	alg 13	74	Recital Hall	alg 12	90	Platey Room	alg 14
59	Bright Hall	alg 1	75	Generic Hall	alg 12	91	Huge Tight Plate	alg 9
60	Classic Chapel	alg 5	76	Burst Space	alg 9	92	Immense Mosque	alg 7
61	Semisweet Hall	alg 5	77	Real Dense Hall	alg 7	93	Dreamverb	alg 10
62	Reflective Hall	alg 5	78	Pad Space	alg 11	94	Splendid Palace	alg 5
63	Smooth Hall	alg 5	79	Standing Ovation	alg 11	95	Big Gym	alg 11
64	Ballroom	alg 1	80	Flinty Hall	alg 7	96	Huge Batcave	alg 12

Gated / Rvrs / Cmpr			Unusual			LaserVerb		
97	Gated Snare Rvrb	alg 3	113	Non-Linear 1	alg 10	129	LaserVerb	alg 100
98	Gated Booth	alg 3	114	Non-Linear 2	alg 15	130	Laserwaves	alg 100
99	Tight Gated Rvrb	alg 3	115	Non-Linear 3	alg 6	131	Skinny LaserVerb	alg 101
100	Gate Plate	alg 3	116	Exponent Booth	alg 10	132	Gated LaserVerb	alg 104
101	Reverse Reverb 1	alg 15	117	Drum Latch 1	alg 10	133	LazerfazerEchoes	alg 102
102	Reverse Reverb 2	alg 15	118	Drum Latch 2	alg 10	134	Simple LaserVerb	alg 102
103	Reverse Reverb 3	alg 15	119	Diffuse Gate	alg 9	135	Crystallizer	alg 100
104	Vocal Room	alg 51	120	Acid Trip Room	alg 10	136	Spry Young Boy	alg 101
105	Vocal Stage	alg 51	121	ClassRoom	alg 5	137	Drum Neurezonate	alg 102
106	Room+Compression	alg 51	122	HighSchool Gym	alg 7	138	Growler	alg 104
107	Room+SlowCompres	alg 51	123	School Stairwell	alg 4	139	Ringy Drum Plate	alg 104
108	Chamber+Compress	alg 51	124	Cool Dark Place	alg 11	140	Oil Tank	alg 104
109	Drum Compr+Rvrb	alg 51	125	Pitcher Hall	alg 383	141	Wobbly Plate	alg 104
110	Snappy Drum Room	alg 51	126	DistantTVRoom	alg 383	142	Timbre Taps	alg 105
111	Roomitizer	alg 51	127	Shaper+Reverb	alg 322	143	LaserDelay+Rvrb1	alg 105
112	Live To Tape	alg 51	128	Cabinet in room	alg 285	144	LaserDelay+Rvrb2	alg 105

Delay+			Chorus+			Flange+		
145	Basic Delay 1/8	alg 150	161	Stereo Chorus	alg 408	177	Big Slow Flange	alg 458
146	Basic Delay 1/4	alg 150	162	Full Chorus	alg 408	178	Squeeze Flange	alg 458
147	Basic Dly 250ms	alg 190	163	Everyday Chorus	alg 408	179	Throaty Flange	alg 458
148	Simple Slap 60ms	alg 190	164	Dense Gtr Chorus	alg 408	180	PseudoAnaGtrFlng	alg 458
149	Wide Slapbk 76ms	alg 191	165	Wide Chorus	alg 408	181	Crystal Flange	alg 458
150	Dub Delay 240ms	alg 190	166	BasicChorusDelay	alg 408	182	Flange Echo	alg 458
151	4-Tap Delay BPM	alg 150	167	BroadRevSlapback	alg 408	183	Slapback Flange	alg 458
152	4-Tap Dly Pan ms	alg 151	168	Chorus Delay	alg 408	184	Flange Delay	alg 458
153	Room+Delay	alg 105	169	RichChorusDelay	alg 408	185	Flange Booth	alg 458
154	Big Hall Delay	alg 105	170	TheChorusCloset	alg 408	186	Pewter FlangeVrb	alg 458
155	Gunshot Verb	alg 105	171	Chorus HiCeiling	alg 408	187	Flange Room	alg 458
156	Mountain Echo ms	alg 106	172	Chorus Hall	alg 408	188	FlgDly LargeHall	alg 458
157	Sm Slap Room ms	alg 106	173	CathedralChorus	alg 408	189	SloFlangeDlyRoom	alg 458
158	ShortPreDly Room	alg 11	174	ChorDlyRvrb Lead	alg 408	190	Flange Dly Hall	alg 458
159	Long PreDly Hall	alg 11	175	SwishyChDlyHall	alg 408	191	Brite Rippleverb	alg 458
160	Furbelows	alg 9	176	DeepChorDlyRvrb	alg 408	192	Glacial Canyon	alg 458

Effects Tables

Mangler Effects

Mangler Effects

Chorus			Flange			Phase / Tremolo		
1	Stereo Chorus	alg 201	17	Big Slow Flange	alg 225	33	Slow Deep Phaser	alg 251
2	Dense Gtr Chorus	alg 201	18	PseudoAnaGtrFlng	alg 225	34	Saucepan Phaser	alg 253
3	Chorusier	alg 204	19	Ned Flangers	alg 225	35	Fast Phaser	alg 251
4	Everyday Chorus	alg 204	20	Analogue Flanger	alg 226	36	Circles	alg 250
5	Thick Chorus	alg 205	21	Wispy Flange	alg 225	37	Wawawa...wawa	alg 253
6	Wide Chorus	alg 205	22	Gulp Flange	alg 225	38	Fast&Slow Phaser	alg 250
7	Chorus Fastback	alg 405	23	TightSlapFlange	alg 455	39	Slow Swish Phase	alg 253
8	Chorused 4-Tap	alg 402	24	Flange 4-Tap	alg 452	40	Static Phaser 1	alg 255
9	Chorus Laserdly	alg 405	25	Laserflange	alg 455	41	Static Phaser 2	alg 255
10	Chorus Delay	alg 408	26	Flange Echo	alg 458	42	Hip Hop Aura	alg 256
11	Chorus Dly Rvrb	alg 408	27	FlangeDly LgHall	alg 458	43	Woodenize	alg 256
12	Chorus Hall	alg 408	28	Flange Hall	alg 458	44	Marimbafication	alg 256
13	Chorus HiCeiling	alg 408	29	Flange Plate	alg 458	45	Tremolo 1/8 BPM	alg 270
14	TheChorusCloset	alg 408	30	SyntheticRmFlang	alg 458	46	Fast Tremolo BPM	alg 270
15	Standrd Gtr Chor	alg 408	31	Throaty Flange	alg 458	47	Fast Sqr Trem Hz	alg 271
16	Full Chorus	alg 408	32	Squeeze Flange	alg 458	48	Tremolo Hz	alg 271

Rotary / Panner			Delay			LaserVerb		
49	CleanRotors fast	alg 290	65	Basic Delay 1/8	alg 152	81	LaserVerb	alg 100
50	CleanRotors slow	alg 290	66	Basic Dly 200ms	alg 153	82	Laserwaves	alg 100
51	CleanRotors Vb f	alg 290	67	Simple Slap 60ms	alg 190	83	Skinny LaserVerb	alg 101
52	CleanRotors Ch f	alg 290	68	Dub Delay 240ms	alg 190	84	LazerfazerEchoes	alg 102
53	SlightDstRotor f	alg 291	69	4Tap L>R Pan BPM	alg 152	85	Spry Young Boy	alg 101
54	Dirty Rotors f	alg 294	70	4Tap Rhythm BPM	alg 152	86	Crystallizer	alg 100
55	MoreDistRotor f	alg 293	71	Astral Taps BPM	alg 155	87	Gated LaserVerb	alg 104
56	MoreDistRotor s	alg 293	72	SpectraShapeTaps	alg 155	88	Growler	alg 104
57	HeavyDistRotor f	alg 294	73	Ecko Plecks BPM	alg 169	89	Drum Neurezonate	alg 102
58	Widespread	alg 280	74	Regen Echo ms	alg 168	90	Oil Tank	alg 104
59	Widener Mn->St	alg 281	75	Ducked Delay	alg 174	91	Wobbly Plate	alg 104
60	Cabinet in Room	alg 285	76	Drum+Bass Zapper	alg 174	92	Reverse Reverb	alg 15
61	SquarePanner 1/4	alg 279	77	3Band Drum Delay	alg 173	93	Tight Gated Rvrb	alg 3
62	Autopan BPM 1/8	alg 279	78	Delay Switcher	alg 172	94	Timbre Taps ms	alg 106
63	Square Panner Hz	alg 275	79	Sm Slap Room ms	alg 106	95	LaserDelay+Rvrb1	alg 105
64	Autopanner Hz	alg 275	80	Gunshot Dly Rvrb	alg 105	96	LaserDelay+Rvrb2	alg 105

Filters			Pitcher / Synth			Freq Shifters		
97	Envelope Filter	alg 360	113	Pitcher G3	alg 382	129	Ring Modulator1	alg 380
98	Bass Env Filter	alg 360	114	Pitcher C5	alg 382	130	Ring Modulator2	alg 380
99	Synth Env Filter	alg 360	115	Pitcher D & A	alg 382	131	Ring Modulator3	alg 380
100	LFO Sweep Filter	alg 362	116	Pitcher C maj	alg 382	132	Ring Modulator4	alg 380
101	Soft Pulse Filt	alg 362	117	Pitcher G maj	alg 382	133	Too Fast Panner	alg 275
102	Circle Bandsweep	alg 362	118	NonHarm Vox Ptch	alg 382	134	Frequency Shift	alg 385
103	Trip Filter	alg 362	119	HollowPolyPitchr	alg 382	135	Drum Loosener	alg 385
104	DoubleRiseFilter	alg 362	120	Pitcher Hall	alg 383	136	Drum Tightener	alg 385
105	Trig Env Filter	alg 361	121	DistantTVRoom	alg 383	137	Feathers McGraw	alg 385
106	Resonant Lowpass	alg 363	122	Flange->Pitcher	alg 384	138	LxR Vox Honker	alg 386
107	Resonant Hipass	alg 363	123	Pitcher+Chorus	alg 410	139	Lollipop Kid	alg 387
108	OddHarmSuppress	alg 374	124	Pitcher+Flange	alg 460	140	Drum Frightener	alg 387
109	Ring Linger	alg 390	125	Pitcher+Chor+Dly	alg 410	141	Fallout	alg 387
110	HiFreq Stimulate	alg 372	126	Pitcher+Flng+Dly	alg 460	142	Ascension	alg 387
111	2 Band Enhancer	alg 370	127	DeepSquare Synth	alg 393	143	4th Stacker	alg 387
112	3 Band Enhancer	alg 371	128	Sawtooth Synth	alg 393	144	Bad Trip Vox	alg 387

Distortion			Distortion+			Compression		
145	Classic Gtr Dist	alg 310	161	Chr->GtrDst->Chr	alg 323	177	HKCompressor 3:1	alg 330
146	Crunch Guitar	alg 310	162	ODriveGtrLd DICh	alg 323	178	Snare After-ring	alg 330
147	SaturatedGtrDist	alg 310	163	Krazy Gtr Comper	alg 323	179	Add Sustain	alg 331
148	Mean 70'sFunkGtr	alg 310	164	Flg->GtrDst->Chr	alg 325	180	SKCompressor 9:1	alg 331
149	Blown Speaker	alg 390	165	MildGtrOD+Dly+Fl	alg 326	181	SKComprs FB 12:1	alg 331
150	Synth Distortion	alg 303	166	LeadGtr Dly Flng	alg 324	182	De-esser	alg 332
151	Superphasulate	alg 169	167	Tube Dist+Reverb	alg 327	183	OptoCompressSCEQ	alg 334
152	Dist Cab EPiano	alg 301	168	Distortion+EQ	alg 304	184	Compress/Expand+	alg 342
153	Burnt Transistor	alg 304	169	Shaper->Flange	alg 321	185	Gate w/SC EQ	alg 345
154	A little dirty	alg 305	170	Flange->Shaper	alg 321	186	Mid Compressor	alg 335
155	SuperShaper	alg 306	171	Shaper->Reverb	alg 322	187	Rvrb+Compression	alg 51
156	Drum Shaper	alg 306	172	Reverb->Shaper	alg 322	188	BigRoom+Compress	alg 52
157	3 Band Shaper	alg 307	173	Quantize+Flange1	alg 309	189	Drum Compr+Rvrb	alg 51
158	New3BandShaper	alg 307	174	Quantize+Flange2	alg 309	190	Snappy Drum Room	alg 51
159	Quantizer	alg 309	175	Quantize+Alias1	alg 308	191	Roomitizer	alg 51
160	Aliaser	alg 308	176	Quantize+Alias2	alg 308	192	Live To Tape	alg 51

Effects Tables

Mangler Effects

Appendix B

Specifications

Dimensions

Height: 1.8 inches (45 mm)

Width: 19 inches (482 mm)

Depth: 8.1 inches (205 mm)

Weight: 5 lbs. (2.27 Kg)

Inputs

Analog

Two analog inputs, balanced / unbalanced using 1/4" Tip-Ring-Sleeve jacks

Input impedance: 20K ohms balanced, 10K ohms unbalanced

A/D converter: 24 bit, 128x oversampling

Maximum analog input level: +22 dBU balanced

Minimum analog input level for 0 dBFS: +4 dBU unbalanced

Frequency response: 20 Hz - 20 kHz \pm 0.1 dB

Dynamic range: > 106 dB unweighted @ 1 kHz from 22 dBU

THD+N: <0.001% @ 1 kHz, +19 dBU

Crosstalk: < -104 dB @ 1 kHz, +21 dBU

Digital

Stereo S/PDIF digital input (IEC 60958-3)

Synchronizes to S/PDIF input clock or generates 48 or 44.1 kHz

Lock range with external clock: 37 kHz to 49 kHz

Impedance: 75 ohms

Input word length: up to 24 bits

Outputs

Analog

Two analog outputs, balanced / unbalanced using 1/4" Tip-Ring-Sleeve jacks

D/A converter: 24 bit, 128x oversampling

Maximum analog output level: +22 dBU balanced

Minimum analog output level for 0 dBFS: +10 dBU unbalanced

Output impedance: 400 ohms balanced, 200 ohms unbalanced

Output level switchable from -10 dBV unbalanced to +4 dBU balanced

Frequency response: 20 Hz - 20 kHz \pm 0.1 dB

Dynamic range: > 112 dB unweighted @ 1 kHz from 22 dBU

THD+N: <0.003% @ 1 kHz, +19 dBU

Crosstalk: < -111 dB @ 1 kHz, +21 dBU

Digital

Stereo S/PDIF digital output (IEC 60958-3)

Impedance: 75 ohms

Output word length: 16, 20, or 24 bits

MIDI

In and Out (switchable between Out/Thru)

Power Supply

9.5 Volt AC, 2 Amp

Appendix C

MIDI Implementation Chart

Model: Rumour/Mangler

Manufacturer:
Young Chang

Date: 5/13/03
Version 1.0

Effects Processor

Function	Transmitted	Recognized	Remarks
Basic Channel	Default	1	1
	Changed	1 - 16	1 - 16
Mode	Default		
	Messages	X	X
	Altered		
Note Number		X	X
	True Voice	X	X
Velocity	Note ON	X	X
	Note OFF	X	X
After Touch	Keys	X	X
	Channels	X	X
Pitch Bend		X	X
Control Change	32	1 - 16, 32	1 - 16 Effects Controllers 32 Bank Select
Program Change		0	0
	True #	0 - 99	0 - 127
System Exclusive		0	0
System Common	Song Pos.	X	X
	Song Sel.	X	X
	Tune	X	X
System Real Time	Clock	0	0
	Messages	X	X
Aux Messages	Local Control	X	X
	All Notes Off	X	X
	Active Sense	X	X
	Reset	X	X
Notes			

O = yes
X = no

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