# QUAD TUBE 150M
## PROGRAMMABLE COMBO GUITAR AMPLIFIER

# OWNER'S MANUAL

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## PACKAGE CONTENTS

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| 1 | Vinyl Cover |
| 4 | Swivel Casters |
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| 1 | Warranty Registration Card |
| 1 | Extended Warranty Application |
| 1 | Rack Holster |
| 4 | Rack mount screws & washers |

*IMPORTANT: Please check package contents to be certain that everything is included. Report any missing items to ADA CUSTOMER SERVICE: (510) 532-1152*

## ADA RACK HOLSTER APPLICATION NOTES

The RACK HOLSTER is designed to hold a single space rack device not weighing more than 20 lbs. The recommended depth of the equipment mounted in the RACK HOLSTER should be less than 12 inches. It is not recommended that the RACK HOLSTER be mounted during long transport of the combo amp to which it is attached.

To mount the RACK HOLSTER, position the RACK HOLSTER against the combo amp, aligning the round plastic clamps on the combo amp to the clamps on the RACK HOLSTER. With the palm of your hand rap the right hand side near the right edge of the RACK HOLSTER forcing the clamps to engage. Repeat this for the left side of the RACK HOLSTER. Once connected, the clamps are very strong and are not easily separated. There should be a slight gap between the combo amp rear surface and the RACK HOLSTER.

To remove the RACK HOLSTER, first unmount the rack mounted unit from the RACK HOLSTER. Pull the right side directly back (horizontally) by grabbing the RACK HOLSTER with both hands at the top and bottom edges at the right hand edge and quickly jerking it away from the combo amp. Be sure that the combo amp will not tip over. Repeat this for the other side of the RACK HOLSTER.

The RACK HOLSTER kit contains:

| | |
|---|---|
| 1 each | RACK HOLSTER chassis |
| | Length   19-1/2 inches |
| | Width    2 inches |
| | Depth    4 inches |
| 4 each | No. 10 x 1/2" screws    ADA P/N 581178 |
| 4 each | No. 10 black plastic washers    ADA P/N 582419 |

VariCab Cabinet Emulator — Mode — Low Boost — Hi Cut

VariCab Cabinet Emulator — Mode — Low Boost — Hi Cut

Stereo Output Level Knob

Stereo Room EQ Knob

Preamp Output Left

Preamp Output Right

Power Amp Insert Left

Power Amp Insert Right

Power Amps

Left Speaker

Right Speaker

Studio Outputs

Studio Outputs

Single-ended Output Left

Single-ended Output Right

Balanced Output Left

Balanced Output Right

Recording Outputs

Tone Controls — Bass — Mid — Treble — Presence

Graphic EQ — 100 170 280 470 800 1.3K 2.2K 3.8K 6.3K

Noise Reduction Gate/Fader Threshold

Bypass

Stereo Chorus

Rate — Depth — Rock — Jazz

Effects Loop Left

Effects Loop Right

Mix Left

Mix Right

Global Stereo Volume

Bypass

In/Out

Input Sensitivity Switch High/Low

Compressor — Ratio — Threshold — Gain

Bypass

Four stage 12AX7A class A amplifier — Voicing — Drive — Overdrive

Master Level

Tremolo — Rate — Depth — Waveform

Bypass

**ADA**

Flow Chart
Quad Tube 150M

# CHAPTER 1 INTRODUCTION

Thank you for purchasing the **ADA QUADTUBE 150M** MIDI Programmable Tube Combo Guitar Amplifier. The **QUAD TUBE 150M** is the latest generation of ADA's guitar amplification technology, and contains more gain, tube voicings, processing options, MIDI functions, and professional features than any other combo amplifier currently available.

> *IMPORTANT: Please take the time to fill out and return the enclosed warranty card so that we may provide you with information on future software updates.*

This manual provides complete information on the **QUAD TUBE 150M's** features and the procedures for using them. Despite its easy, intuitive operation, making full use of a sophisticated programmable device like the **QUAD TUBE 150M** requires spending some time studying the manual. If the manual appears somewhat daunting, it is only because of the sheer volume of the **QUAD TUBE 150M's** features, but you will find the time studying the manual well spent as you discover the extent of the **QUAD TUBE 150M's** considerable facilities. Further, the factory default values and Programs can always be reloaded if you mix things up too badly, so you should have no fear of experimenting when first learning the **QUAD TUBE 150M.**

> *NOTE: Information crucial to understanding the **QUAD TUBE 150M** is always encased in a box such as this one. Always read this information.*

## ABOUT THIS MANUAL

The body of the manual is divided into five chapters:

| | |
|---|---|
| **1. Introduction** | this part describes the manual and lists the **QUAD TUBE 150M's** features. |
| **2. Quick Start** | gives a brief procedure for immediate use of the **QUAD TUBE 150M.** If you need to jump right into using the **QUAD TUBE 150M** without first reading the entire manual, turn to the Quick Start chapter which immediately follows this introduction. |
| **3. Getting Started** | explains all of the **QUAD TUBE 150M's** controls and connections. |
| **4. Tutorial** | gives a guided tour of the **QUAD TUBE 150M's** basic functions in a series of lessons. Read this chapter to familiarize yourself with operating the **QUAD TUBE 150M.** The first time a new term is introduced in the Tutorial it appears in bold and underline: **<u>new term.</u>** |
| **5. Reference** | contains detailed explanations of every **QUAD TUBE 150M** function. Use this chapter when you are trying to get information on a specific feature. |

There are also a number of **Appendices,** found at the end of the manual, which give helpful information and further explanations on a number of topics relating to using the **QUAD TUBE 150M**.

**Flow Chart
Quad Tube 150M**

ADA

Input

Input Sensitivity Switch High/Low

Compressor — Ratio, Threshold, Gain

Bypass

Four stage 12AX7A class A amplifier — Voicing, Drive, Overdrive

Master Level

Tremolo — Rate, Depth, Waveform

Bypass

Tone Controls — Bass, Mid, Treble, Presence

Graphic EQ — 100, 170, 280, 470, 800, 1.3K, 2.2K, 3.8K, 6.3K

Noise Reduction — Gate/Fader Threshold

Bypass

Stereo Chorus — Rate, Depth, Rock, Jazz

Bypass

Effects Loop Left — Mix Left

Effects Loop Right — Mix Right

Global Stereo Volume

VariCab Cabinet Emulator — Mode, Low Boost, Hi Cut

Stereo Output Level Knob

Stereo Regen EQ Knob

Preamp Output Left

Preamp Output Right

Power Amp Insert Left

Power Amp Insert Right

Power Amps

Left Speaker

Right Speaker

Studio Outputs

Recording Outputs

Single-ended Output Left

Balanced Output Left

Single-ended Output Right

Balanced Output Right

## QUAD TUBE 150M FEATURES

- ✓ Complete digital control of an all-analog signal path
- ✓ 128 User programs plus 39 factory Preset programs.
- ✓ Four low-noise 12AX7A tubes with 10 tube Voicing options and Overdrive.
- ✓ Onboard Compressor for maximum sustain and funk squeeze.
- ✓ Four-band Tone Controls for basic tone shaping.
- ✓ Nine-band Graphic Equalizer for detailed tone adjustments.
- ✓ Powerful effects, including Varicab (programmable cabinet emulation), Tremolo, and Stereo Chorus.
- ✓ Noise Reduction circuitry to reduce unwanted hum and noise.
- ✓ Stereo Effects Loop with programmable mix control. Side-chain design keeps dry signal within **QUAD TUBE 150M,** preserving dynamics and signal-to-noise ratio.
- ✓ Front panel Volume control and Room Compensation EQ.
- ✓ Cabinet-emulated, balanced XLR outputs with ground lift, as well as unbalanced 1/4" phone outputs for recording.
- ✓ Independent unbalanced 1/4" phone outputs for stage use.
- ✓ Complete MIDI implementation, including Real-Time MIDI for changing parameters "on the fly," and ADA System Exclusive.
- ✓ Highly responsive, low damping factor power amp with 12AX7 drivers delivering 75 watts per side.
- ✓ Internal phantom power supply provided for all ADA MIDI controllers (use the ADA 7-pin MIDI cable supplied with the unit).
- ✓ Two Celestion 75 watt 12" speakers.
- ✓ Convenient Rack Holster for mounting a single-space rack unit to the back of the **QUAD TUBE 150M,** allowing the user to keep the rack unit plugged into the Effects Loop of the **QUAD TUBE 150M** for fast set-up.
- ✓ High-quality amp cover with utility pouch to protect the unit and to hold accessories.
- ✓ ADA 4x4 MIDI Controller which provides instant single-button access to any four of 128 MIDI programs for fast on-stage control.
- ✓ Optional MIDI Controller Pedal Pack provides instant access to any program plus real-time MIDI continuous control.
- ✓ Casters for ease of mobility.
- ✓ Three-year transferable warranty.
- ✓ Optional 10 years transferable warranty.

# CHAPTER 2 QUICK START

So you can't wait to plug in your new **QUAD TUBE 150M** and get some sounds. That's perfectly understandable, so here is the way to jump right in and get started. Once you get that far, you'll probably want to explore further. The Tutorial takes you on a guided tour through the **QUAD TUBE 150M,** showing the most important features and giving you an idea how to work with the unit. As you become more experienced with the **QUAD TUBE 150M** you will probably need to use the Reference chapter to find out details about specific features.

1) Be sure Power and Standby switches are turned off.
2) Connect the **QUAD TUBE 150M** to AC power.
3) Connect your instrument to the **QUAD TUBE 150M**'s Input on the front panel.
4) Be sure the Volume control on the left of the front panel is turned all the way down (counter clockwise), and the Room EQ control is set to Normal (12 o'clock).
5) Turn on the **QUAD TUBE 150M**. When the **QUAD TUBE 150M** is first turned on, it will take a few moments for the tubes to warm up. After warming up, the **QUAD TUBE 150M** will enter Play mode running User program 1. Now turn the Standby switch to ON.
6) Slowly raise the Volume control and play. Adjust the Volume control to a comfortable listening level.
7) Use the Up and Down arrow keys to recall programs. The first 39 User programs are the same as the factory Preset programs.

# CHAPTER 3 GETTING STARTED

*IMPORTANT: The **QUAD TUBE 150M** is designed to operate only at the voltage printed on the back panel. It is not possible to change over or adapt the **QUAD TUBE 150M** to operate at any other voltage. Please use an appropriate external voltage converter when attempting to operate the **QUAD TUBE 150M** in a country with a different AC line voltage.*

## ABOUT TUBES AND THE QUAD TUBE 150M
The incomparable sound of tube amplification comes with the need for a small amount of simple maintenance to accommodate the nature of tubes.

*NOTE: To preserve tube life, allow time for the tubes to cool after shutting down the **QUAD TUBE 150M** before moving. Tube elements are more fragile when hot.*

Tubes have a limited life span; it is recommended that the **QUAD TUBE 150M**'s tubes be replaced about once every 2 years, or if they show signs of wearing out. Some signs of degrading tube life are:
✓ Excess noise on high gain programs
✓ "Ringing", squealing or feedback
✓ Microphonic effects (tapping on the **QUAD TUBE 150M** causes audible thumps through speakers).
✓ Lack of punch and power, "weak" distortion, or sputtering.

Replace the **QUAD TUBE 150M's** tubes only with high-quality, low-noise 12AX7A-7025 tubes. If desired, these can be purchased from ADA (ADA part # 220020). There are a total of four tubes in the **QUAD TUBE 150M;** two in the preamp and one in each power amp channel.

QUAD TUBE 150M

FRONT PANEL

REAR PANEL
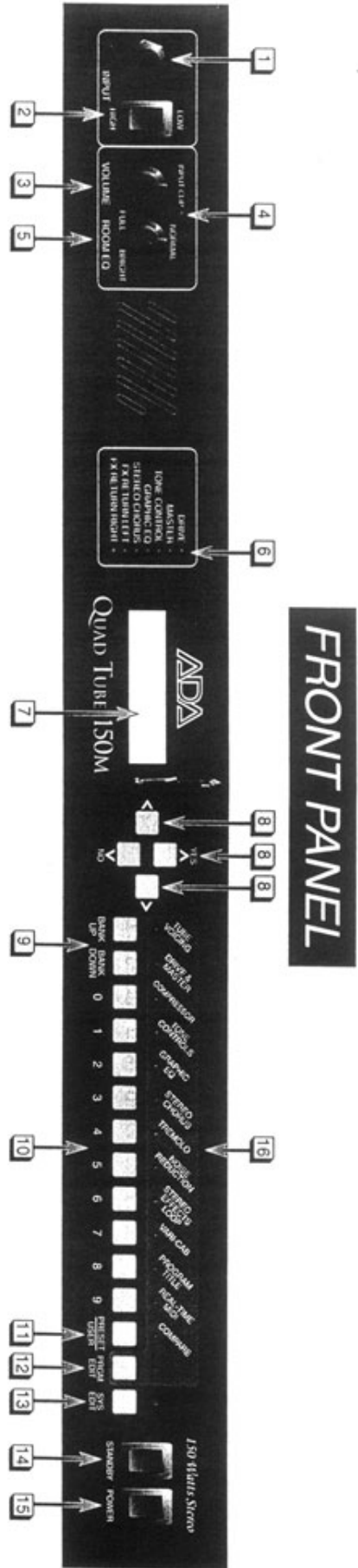
## CONTROLS AND CONNECTORS
**Front Panel (L to R, see diagram on page 9.)**

| | |
|---|---|
| [1] Input | Accepts unbalanced 1/4" phone instrument inputs. Maximum level: +12.2 dBV (3.4 volts RMS). |
| [2] Input Sensitivity Switch | Sets the input sensitivity of the **QUAD TUBE 150M.** If you see the Input Clip LED coming on when you play hard, then switch to LOW. |
| [3] Volume control | Final adjustment of output level. Follows all software level controls. |
| [4] Input Clip LED | Indicates overload of input stage. Switch the Input Sensitivity to LOW if LED is lighting. |
| [5] Room EQ control | Applies tone shaping to compensate for the acoustic effects of different performing venues. Normal setting is straight up (12 o'clock). |
| [6] Signal LEDs | When glowing green: indicates the signal present in that section is 30 dB below clip level. When glowing red, indicates signal present in that section in 3 dB below clip level. |

*NOTE: The Signal LEDs will illuminate regardless of that section's Status (i.e. switched in or out.)*

| | |
|---|---|
| [7] Character display | 2-rows by 16-characters LCD. Shows status and error messages. Local Panel Mode: shows either "USER:" or "PRESET:" register, name, bank and number of current program. Controller Panel Mode: shows mapping of MIDI program change number to **QUAD TUBE 150M** User program number. Program and System Edit modes: shows editing information. |
| [8] Arrow buttons | Left/Right arrows: "<" and ">" used to move cursor between parameters and screens in Program and System Edit modes. Up (Yes)/Down (No) arrows: "▲" and "▼" used to adjust the value of the currently selected parameter, execute a function, or answer a query. |
| [9] Bank Select buttons | In Play mode, increases (Bank Up) or decreases (Bank Down) the bank number from which a program may be called. |
| [10] Number buttons (0-9) | In Play mode, selects which program in a bank will be recalled. |
| [11] Preset/User button | In Play mode, switches between factory Preset program banks and User program banks. |
| [12] Program Edit button | Enters and exits Program Edit mode. Initiates Store function when exiting Program Edit mode. LED is lit when in Program Edit mode. |
| [13] System Edit button | Enters and exits System Edit mode. LED is lit when in System Edit mode. |
| [14] Standby Switch | Puts the power amp on standby while the tubes warm up. |
| [15] Power Switch | Switches **QUAD TUBE 150M** on and off. |
| [16] Edit functions | When in Program Edit mode, the Bank Select, Number, and Preset/User buttons select the |

parameter sections indicated in the blue field above them.

## Rear Panel

### Effects Loops

| | |
|---|---|
| [17] Mono Effects Loop | (non-programmable insert) |
| Level Switch | This switch sets both the signal level from the Send and the level expected at the Return for the Mono Effects Loop. |
| Send | Carries the mono signal following the Graphic EQ. |
| Return (Insert) | Carries return from external effects units. The mix of this loop is NOT controllable via software. |
| [18] Left Effects Loop | |
| Level Switch | This switch sets both the level from the Send and expected at the Return for Left Effects Loop. |
| Send | Carries left channel of signal following Stereo Chorus. |
| Return (Insert) | Carries return from external effects units. Must be switched on in software to be active. Mix is adjustable in software. |
| [19] Right Effects Loop | |
| Level Switch | This switch sets both the signal level from the Send and the level expected at the Return for Right Effects Loop. |
| Send | Carries right channel of signal following Stereo Chorus. |
| Return (Insert) | Carries return from external effects units. Must be switched on in software to be active. Mix is adjustable in software. |

### Pre/Power Amp Inserts

| | |
|---|---|
| [20] Preamp Outputs | Unbalanced 1/4" phone outputs. Intended for use as outputs to external power amps for powering other speaker cabinets. Plugging into these outputs does not mute the internal speakers. Maximum output level:+17.1 dBV |
| [21] Power Amp Inputs | Unbalanced 1/4" phone inputs. This interrupts the internal preamp signal and inserts a signal directly into the power amp. Power amp input sensitivity: 1.1VRMS |

### Studio Outputs

| | |
|---|---|
| [22] 1/4" Unbalanced Outputs | Unbalanced 1/4" phone outputs which are tailored to go straight into a recording console or full frequency PA system. Maximum output level: +17.1 dBV |
| [23] XLR Level Switch | Sets the output level from the (Line/Mic) balanced (XLR) outputs. |
| [24] Balanced Outputs | Balanced XLR outputs which are tailored to go straight into a recording console or full frequency PA system. The signal from these outputs is identical to the Unbalanced Studio Outputs. Maximum output level is determined by position |

|  |  |
|---|---|
|  | of XLR Level switch: +12 dBV (Line), -16 dBV (Mic). |
| [25] Pin 1 (Ground) | Used to eliminate hum from Lift switch grounding problems when connecting to mixing consoles, etc. In the GND (normal) position, pin 1 of the balanced outputs is connected to circuit ground. In the LIFT position, pin 1 of the balanced outputs is disconnected from circuit ground. |

## MIDI Connectors

|  |  |
|---|---|
| [26] MIDI In | When connected with a standard MIDI cable, receives data from a MIDI controller. By using an ADA 7-pin DIN phantom power cable from this jack to an ADA MIDI foot-controller, power is supplied from this jack to the controller through the cable. |
| [27] MIDI Out | Carries MIDI data output by the QUAD TUBE 150M. |
| [28] MIDI Thru | Carries an exact copy of data received at MIDI In. |

## AC Connections

|  |  |
|---|---|
| [29] AC power cord | Plugs into a normal wall outlet. |
| [30] Fuse | Use a 4 Amp (for 117V US models) or 2 Amp (for 230V export models) Slo-Blo type fuse. |
| [31] Courtesy Outlet | Unswitched AC outlet. |

# CONNECTING
## The QUAD TUBE 150M

### Audio
**Input**
- Use a shielded guitar cable to connect the guitar to the **QUAD TUBE 150M's** front panel input jack. If you are using a tuner for your instrument, plug the guitar into the tuner and connect the tuner's output to the **QUAD TUBE 150M's** input.

**Output (optional):**
- Connect the unbalanced Studio Outputs to the mixing console or recorder's unbalanced 1/4" phone Line inputs.
- Connect the preamp outs to the inputs of external power amps to power additional speaker cabinets.

**— Or —**
- Connect the balanced Studio Outputs to the mixing console or recorder's balanced XLR Mic or Line inputs. Use the XLR Level switch on the rear panel to set optimum level range.
- If there is a ground loop causing AC hum in the signal use the GROUND LIFT switch to disconnect the cable ground shield from the **QUAD TUBE 150M's** local ground.

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*NOTE; The QUAD TUBE 150M's outputs are independently buffered. They may all be used simultaneously, if so desired.*

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## Effects Loops

- Connect Left and Right Effects Loop Sends to the unbalanced 1/4" phone inputs of any reverb, effects device, or other signal processor. Use the Mono Effects Loop for devices that have only a single (mono) input and output. The Mono Effects Loop is not controllable via software. The Stereo Effects Loop has a software programmable Status and independent Mix control for each side.
- Connect Left and Right Effects Loop Returns to the unbalanced 1/4" phone outputs of the reverb, effects device, or other signal processor. When using the Stereo Effects Loop, set output mix of the signal processor to 100% "wet", since this is a side-chained effects loop, where the wet/dry mix is controlled in the **QUAD TUBE 150M.**
- Use the Effects Loop Level switches to set optimum Send and Return levels to match the external device.

> **NOTE:** *Status for the Effects Loop must be set to "In" and the Wet Mix parameter set greater than 0% for the Stereo Effects Returns to be heard.*

## MIDI

The **QUAD TUBE 150M** is capable of responding to MIDI program change and continuous controller messages. The **QUAD TUBE 150M** comes standard with the ADA 4x4 programmable MIDI footswitch for program changes. See the 4x4 section on page 17 for an explanation of its features. ADA also offers the MIDI controller pedal pack (800218) for real time MIDI control of the **QUAD TUBE 150M.**

- Connect MIDI In to MIDI Out of ADA 4x4 or other MIDI controller. Any ADA MIDI foot-controller can be remotely powered using an ADA 7-pin MIDI cable. The **QUAD TUBE 150M** features an internal phantom MIDI supply for powering all ADA foot-controllers.
- Connect MIDI Thru to MIDI In of other devices you wish to receive the same data from your MIDI controller which the **QUAD TUBE 150M** receives, such as MIDI-controlled effects processors.
- Connect MIDI Out to MIDI In of other MIDI devices you wish to control from the **QUAD TUBE 150M** front panel.

## Sending and Receiving Libraries and Programs

The **QUAD TUBE 150M** can send or receive one or all of its User programs to another **QUAD TUBE 150M** or a personal computer running an appropriate librarian or sequencing program. This information is sent over MIDI as System Exclusive Data.

**Connections for sending/receiving a library or program to/from another QUAD TUBE 150M:**
- Connect MIDI Out from the **QUAD TUBE 150M** that is sending the data to MIDI In of the **QUAD TUBE 150M** that is receiving.

**Connections for sending a library or program to a personal computer:**
- Connect the **QUAD TUBE 150M's** MIDI Out to MIDI In of the computer's MIDI interface.

**Connections for receiving a library or program from a personal computer:**
- Connect the **QUAD TUBE 150M's** MIDI In to MIDI Out of the computer's MIDI interface.

> **NOTE:** *Some librarian programs may require two-way communication with the **QUAD TUBE 150M.** In this case it is necessary to connect both the **QUAD TUBE 150M's** MIDI Out to the computer's MIDI In and the computer's MIDI Out to the **QUAD TUBE 150M's** MIDI In. When you do so, make sure MIDI THRU or the MIDI ECHO function is turned OFF on the MIDI card/adapter.*

*See page 45 to execute MIDI send & receive functions listed here.*

## USING THE 4x4 MIDI PROGRAM CHANGER

The 4x4 is a universal MIDI controller included with the **QUAD TUBE 150M** combo amp. The pedal features an ergonomic design for easy, consistent foot-switching in a compact package, using four buttons that can each be programmed to send any MIDI Program number to the **QUAD TUBE 150M.** There are 4 GROUPS to choose from, allowing a different set of 4 MIDI Program numbers for each GROUP. The 4x4 sends MIDI Program changes on any one of 16 MIDI Channels.

## SET-UP

1) Before powering up the 4x4, connect one end of the 7 pin Phantom power MIDI cable into the MIDI jack of the 4x4, and the other end into the MIDI IN jack of the **QUAD TUBE 150M.**
2) Turn on the **QUAD TUBE 150M.** The 4x4 will display the number "8" on the screen, then the MIDI channel number ("c0l" for channel 1), then the GROUP number ("b-1" for GROUP 1, "b-2" for GROUP 2, etc.), then the program number ("01" for program number 1).
3) Make sure that the 4x4 and the **QUAD TUBE 150M** are on the same MIDI Channel. There are 16 MIDI Channels, and the factory default for the 4x4 and the **QUAD TUBE 150M** is Channel 1. Set the dip switches according to the instructions of the rear panel to channel 1
4) Hit a few buttons on the 4x4 and the **QUAD TUBE 150M** should display the program numbers as they change. If not, see "Checking the MIDI Channel," and "Setting the MIDI Channel."

The 4x4 sends MIDI Program numbers from 1 to 128. There are four buttons and a four position GROUP SELECT switch on the 4x4 to allow four quick program changes within any GROUP for a total of 16 preselected programs of the 128 programs available in a MIDI system. In setting up a rig for a performance, the 4x4 should be set up so that the switch GROUPS do not have to be changed in the middle of a song.

## CHANGING GROUPS

To change GROUPS, simply slide the GROUP SELECT SWITCH to a number (1-4). The display will not change and no new MIDI messages will be sent until one of the buttons is pressed.

## PROGRAMMING THE BUTTONS

Programming the 4x4 (changing the MIDI Program number for a button) is about as easy as it gets. The changes are automatically stored in the permanent memory of the 4x4, and will not be lost when the power is turned off.

To program a button to send a different MIDI Program number, press and hold down that button. The display will immediately show the number that is currently stored for that button (" 01" for program number 1), Keep holding the button down for a few seconds, and the display will begin to scroll (" 02", " 03", etc. — after it has scrolled through 10 numbers, the scroll speed will increase). When the display gets to the desired MIDI Program number, simply release the button. The 4x4 will automatically store the new MIDI Program number in its permanent memory and send out a MIDI Program change message of that new number. Keep in mind that the programming is for the GROUP that is currently selected by the GROUP switch.

## CHECKING THE MIDI CHANNEL

To display the current MIDI Channel, simply press Buttons A & D at the same time. For example, the display will show "c01" for MIDI Channel 1. Checking the MIDI Channel does not cause the unit to send any MIDI messages. Pressing any button gets out of the MIDI Channel display mode.

## SETTING THE MIDI CHANNEL

To send the MIDI Program changes on a different MIDI Channel, press and hold down buttons A & D. The display will immediately show the current MIDI Channel ("c01", for channel 1). Keep holding buttons A & D down for a few seconds, and the display will begin to scroll ("c02", "c03", etc.). Release the buttons at the desired MIDI Channel. The 4x4 automatically stores the new MIDI Channel in its permanent memory.

## RESETTING TO DEFAULT VALUES

To reset the unit to the default values that it originally came with, unplug power from the 7-pin MIDI cable at the 4x4 pedal while the Quad Tube 150M is on.. Press and hold buttons A & D down while reconnecting the MIDI cable. The display will flash r, S, t, for reset, instead of 8, 8, 8 when powered up. The default MIDI Channel is 1. The buttons have the following defaults:

| GRP#> | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| BUTTON | PRGM | PRGM | PRGM | PRGM |
| A | 1 | 5 | 9 | 13 |
| B | 2 | 6 | 10 | 14 |
| C | 3 | 7 | 11 | 15 |
| D | 4 | 8 | 12 | 16 |

# CHAPTER 4 TUTORIAL

This chapter will introduce you to the basics of using the **QUAD TUBE 150M** and lead you step by step through its most important functions. Once you have completed the Tutorial, you will be able to create and store your own programs, as well as use the factory Preset programs, and use MIDI to control the **QUAD TUBE 150M.**
The **QUAD TUBE 150M** has more features than this Tutorial will touch on. The Reference chapter gives detailed descriptions of every setting and will answer any questions you may have left after completing the Tutorial.

## Basics of the QUAD TUBE 150M

### Programs

**The QUAD TUBE 150M** has two different kinds of settings that can be adjusted and stored: those that affect individual sounds, and those that affect the whole **QUAD TUBE 150M** and don't change when a program is changed. All of the settings that define an individual sound are stored collectively as a **program.** Programs can be recalled from the front panel or by MIDI messages from a MIDI controller such as the ADA 4x4. Programs are edited in Program Edit mode. Settings that affect the whole **QUAD TUBE 150M** are not stored as part of a program, but as **global** settings and edited in System Edit mode. Global settings, most notably the MIDI functions in System Edit, are in effect all the time, regardless of what the current program is.

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**NOTE:** The Stereo **Volume** and **Tuner Mute** Controllers are both global Real Time MIDI settings.

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In Program Edit mode, all of the settings (also called **parameters)** for that a program can be adjusted. The **QUAD TUBE 150M** is in Program Edit mode when the PRGM EDIT button is lit. (See page 45 in Chapter 5, **REFERENCE,** under PROGRAM EDIT MODE.)
In System Edit, parameters that affect the entire **QUAD TUBE 150M** (and are not stored as part of a program) are adjusted. There is only one location for these settings, so they are not stored and recalled as programs are. System Edit mode also contains utilities that allow copying and swapping of programs between locations and other useful functions. The **QUAD TUBE 150M** is in System Edit mode when the SYSTEM EDIT button is lit. (See page 71 inside Chapter 5, **REFERENCE,** see SYSTEM EDIT MODE.)

**QUAD TUBE 150M DISPLAY**
The **QUAD TUBE 150M** conveys messages, questions, and parameter information through the display.

**Play Mode**

In Play mode, the display shows whether the **QUAD TUBE 150M** is running a User or Preset program, the program bank and number, and its name.
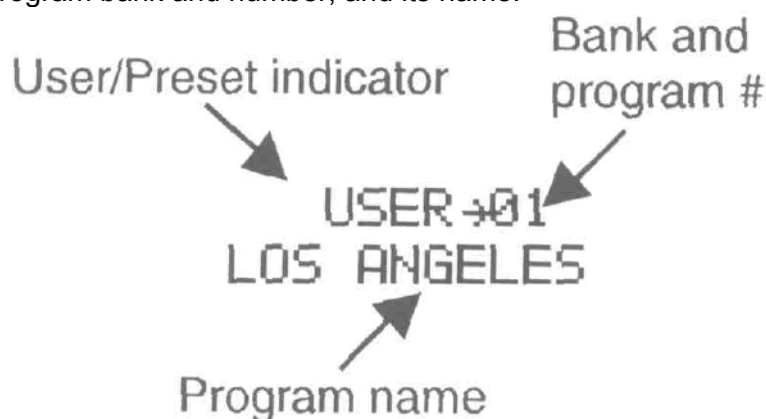


**Program Edit Mode**
In Program Edit mode, the display shows one or more parameters in the currently selected section along with their values. Arrows in the upper left and/or lower right comers indicate that there are other parameter screens in that section. Parameter screens are explained on page 27 in the Editing Basics discussion.
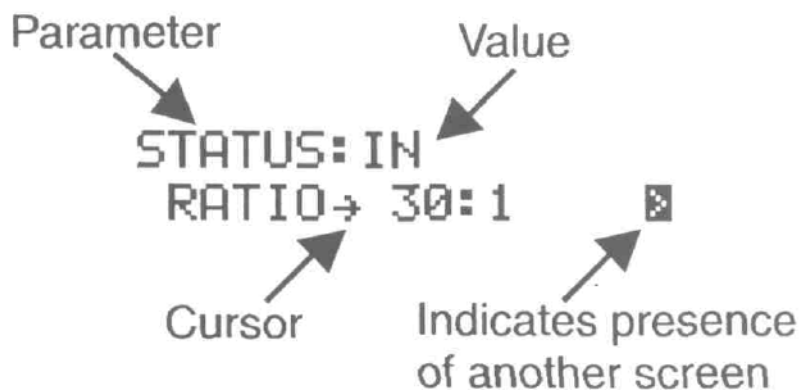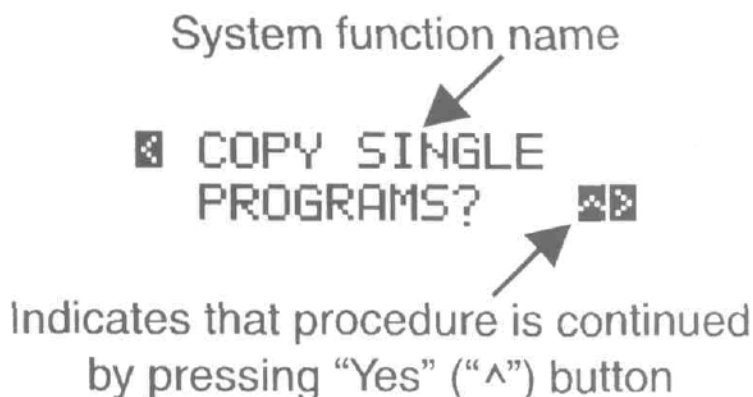


**System Edit Mode**
The System Edit mode display is essentially the same as the Program Edit mode display, but in many cases the parameters take the form of a question, asking if you wish to execute the

named System function. These questions are answered by pressing the "▲" ("Yes") or "▼" ("No") button, indicated by an arrow pointing up. These up-facing arrows also sometimes indicate submenus or steps in a procedure.

System function name

    █ COPY SINGLE
    PROGRAMS?    ██

Indicates that procedure is continued
by pressing "Yes" ("^") button

**Powering Up**

- After connecting the **QUAD TUBE 150M** as described in the Getting Started chapter, turn on the power switch on the front panel. Be sure the Volume control is turned all the way down and the Room EQ control is set to Normal.

When switched on, the **QUAD TUBE 150M** will first display a screen with ADA's name, then a screen identifying the unit as a **QUAD TUBE 150M** and showing the software version installed:

Software Version #

    QUADTUBE: V1.00
    COPYRIGHT 1994

**The QUAD TUBE 150M** has 4 vacuum tubes and they take a few moments to warm up when they are first switched on. During this period, the **QUAD TUBE 150M's** display will show this message:

    STAND BY...
    Tubes Warming Up
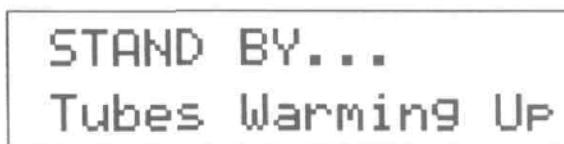
- After this message, turn the Standby switch to ON, and slowly raise the Volume control until the volume is comfortable.

## Play Mode

After the tubes have warmed up, the display will say something like this:

```
USER →01
LOS ANGELES
```

Notice that the PRGM EDIT and SYSTEM EDIT buttons are both unlit. The **QUAD TUBE 150M** is now in Play mode. The top line indicates that the **QUAD TUBE 150M** is currently running User program 1, while the bottom line is the program's name.
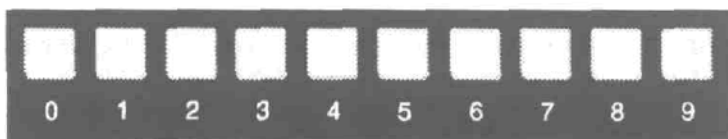
## Recalling Programs



1. Select User or Preset programs.



2. Select the desired bank.



3. Chose the desired program in the selected bank.

Recalling programs in Play mode is as simple as could be:

### To step through programs:

- Press the "▲" or "▼" (up and down arrow) buttons to increment and decrement the program number. When the arrow button is released, the new program is recalled.
- Try pressing the "▲" button a few times and watch the User program number increase.

Play through a few of the User programs to see that the programs are actually changing.

- Press the "▼" button until you reach User program 1, then press it one more time.

Note that the **QUAD TUBE 150M** "wraps around" to the highest number, User 128.

```
USER →128
DEFAULT PROGRAM
```
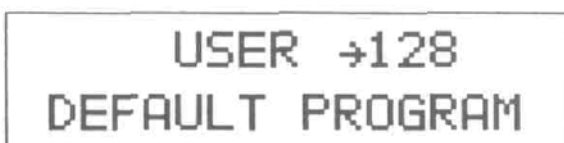
Right now, the first 39 User programs contain the same settings as the 39 Preset programs. Of course, these User programs can be replaced at any time with modified versions, or other programs that have been copied to them or swapped with them. The Preset programs can be altered while they are running, but the Preset program locations cannot be stored to, so they always remain unchanged.

### To switch between User and Preset Programs

* Press the PRESET/USER button on the right side of the front panel.

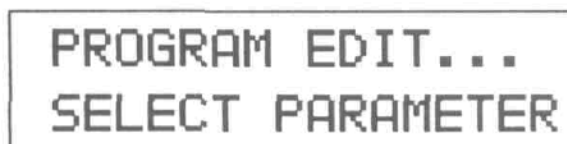The **QUAD TUBE 150M** switches to Preset program 1.

```
 _____
|                           |
|    PRESET  →01            |
|    LOS ANGELES            |
|_____|
```

* Use the "▲" or "▼" buttons to step through the Preset programs.

### Program Edit mode

* Press the PRGM EDIT button to enter Program Edit mode.
The button will go light and the display will say:

```
 _____
|                           |
|    PROGRAM EDIT...        |
|    SELECT PARAMETER       |
|_____|
```

### Editing Basics

When an instrument is plugged into the **QUAD TUBE 150M,** its signal passes through a number of different **sections,** each of which has a different function. The sections are indicated in the blue field above the Bank Select, Number, and Preset/User buttons.
Each section has several parameters that can be adjusted. A program is simply a stored complete set of all the parameters in all the sections. The **cursor** always indicates which parameter is currently selected for editing.
Some sections have more parameters than can fit in the display at one time. In that case, there may be more than one **screen** of parameters. The presence of additional screens is indicated by an arrow symbol in the lower right corner of the display (meaning there is one or more following screens) or the upper left corner (meaning there is one or more preceding screens).

### To select a parameter for editing:
* Use the "◄" and "►" buttons (left and right arrow) to move the cursor from parameter to parameter.
The parameter that is currently selected for editing is always indicated by the **cursor,** which is an arrow symbol ( → ) found between the parameter name and its value on each screen.

### To move between parameter screens:

* Press the "►" button repeatedly to reach a following screen; after stepping through all the parameters on the current screen, the next button press will step to the next

screen.
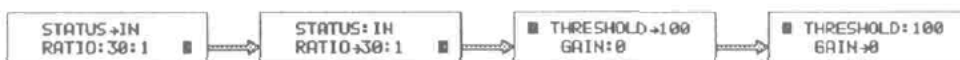


- Similarly, the left arrow button is pressed repeatedly to reach preceding screens.



## To adjust the value of the selected parameter:

- Use the "▲" or "▼" buttons (up and down arrow) to modify the value of the selected parameter.

Each time one of these buttons is pressed, the value is increased or decreased by one. If the parameter is not a number but a **toggle,** or switch-type of setting that only has two values, the up and down arrow buttons are used to change from one value to the other. These buttons are also used to answer Yes/No questions the **QUAD TUBE 150M** sometimes displays.

- Hold down either button to cause the selected parameter to **scroll,** or automatically count, up or down through its entire range of available values.

---

*NOTE: Pressing the* "▲" *or* "▼" *buttons simultaneously sets the selected parameter to the factory default value.*

---

## To edit a program in Program Edit mode:
1) Press the button of the section you wish to edit. The button will illuminate
2) Use the "◄" and "►" (left and right arrow) buttons to move the cursor to the parameter to be adjusted.
3) Use the and (up and down arrow) buttons to change the value of the parameter. Changes made to a parameter are heard immediately.
4) Repeat steps 1 through 3 until all parameters have been adjusted as desired.
5) Store the program by pressing the PRGM EDIT button to exit Program Edit mode. Follow the screen prompts to store the program.

## Selecting and Editing Parameters
- Press the Tube Voicing button to select the Tube Voicing section. The button will light up and the display will show:
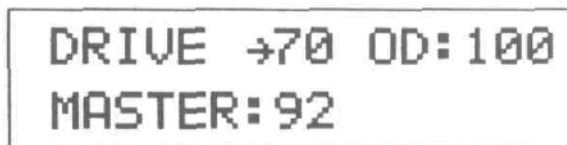
```
VOICE →9
ULTIMATE HI GAIN
```

There are no arrows in the upper left or lower right corner; the **Tube Voicing** section has only one screen of parameters.

- Press the "▼" button twice to change the Tube Voicing value. The display shows:

```
VOICE →7
WARM HI GAIN
```

- Press the Drive & Master Level button to select the Drive & Master Level section. Now the display shows:

```
DRIVE →70 OD:100
MASTER:92
```

- Press the "►" button once to select the Overdrive parameter.
- Press and hold the "▼" button. The Overdrive value will decrease. Set its value to 75.

Because the value will scroll quickly, it is difficult to stop at precisely the right value. Lift your finger from the arrow button when the value is close to the desired setting, then use individual button presses to step it to the exact desired value.

- Press the Stereo Chorus button to select the Stereo Chorus section.
- Notice the arrow indicating a following screen:

```
STATUS →IN
MODE:ROCK I       ▓
```
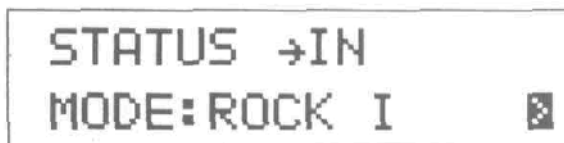
- Press the "►" button twice to step to the next screen of parameters.
- Press the "►" button one more time to move the cursor to the Rate parameter.
- Press the "▲" button three times to increase the Rate to 0.5 Hz.

```
▓ DEPTH:34 %
      RATE →0.5  Hz
```
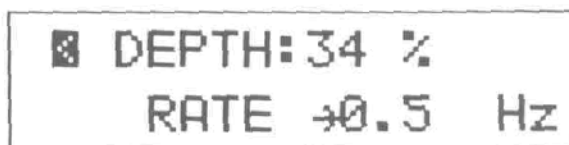
**Editing the Graphic EQ**

The Graphic EQ display is a little different from most of the other sections. Instead of using letters or numbers to show the value of a parameter, the Graphic EQ gives a simple visual plot that clearly indicates the whole equalization curve.

- Press the Graphic EQ button to select the Graphic EQ section.

```
=_        _ 100Hz
    =     +10dB
```
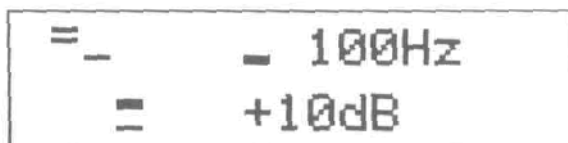
The horizontal lines represent the boost/cut settings of each of the nine bands of the Graphic EQ, with the band currently selected having a double line (in this case, on the far left). (Bands set to 0 dB of boost/cut also have double lines, but the lines are more widely spaced and easily distinguished from the selected band.) On the right side of the display, the frequency of the currently selected band is shown on top, and the amount of boost/cut applied on the bottom.

The "◄" and "►" buttons move the cursor to the band to be adjusted, and the "▲" and "▼" buttons change the amount of boost/cut applied at that band in two dB steps up to ±12 db.

- Press the ">" button until the upper right corner of the display shows "2.2KHz."

- Press the "▲" button three times to change the amount of boost/cut to +2 dB.

```
=       =_ 2.2KHz
=  -  +2dB
```
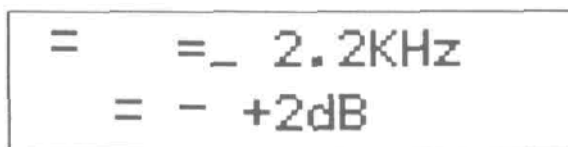
## Comparing Edited Programs to Stored Versions

When editing a program it is desirable to be able to compare the current version with the original, stored version without leaving the edit mode.

- Press the COMPARE button to engage the Compare function. The display will tell you that you are now listening to the stored version:

```
INITIAL
SETTINGS
```

- Press the COMPARE button again and the QUAD TUBE **150M** toggles back to the edited version:

```
MODIFIED
SETTINGS
```

Each press of this button causes the QUAD TUBE **150M** to toggle between these two screens.

## Naming User Programs

At this point, it would be good to give this program a different name to distinguish it from the Preset it started out as.

- Press the PROGRAM TITLE button to select the Program Title section.

Editing in this section can be thought of in the same way as in other sections if you consider each character in the name as a parameter, the underline at the bottom as the cursor, and the choice of letters, numbers, and symbols as the available values.

The "◄" and "►" buttons move the cursor from character to character in the name, while the "▲" and " " buttons choose the desired letter, number, or symbol for the selected character. Pressing the "▲" and "▼" buttons at the same time clears the entire name.

- Press the "►" button until the underline is in the last space in the right corner.
- Hold the "▲" button down and scroll through until the number "2" comes up. (The numbers follow the lower case letters, which are after the upper case letters.)

```
┌─────────────────────────────┐
│  PROGRAM TITLE              │
│  LOS ANGELES2               │
└─────────────────────────────┘
```

## Storing Programs

Since enough changes have been made at this point that it would be annoying to lose them, our modified and renamed program should now be stored before continuing. The QUAD TUBE 150M asks if you wish to store whenever you attempt to exit Program Edit mode after having altered any of a program's parameters.

- Press the PRGM EDIT button to exit Program Edit mode. The display will briefly show:

```
┌─────────────────────────────┐
│  PROGRAM DATA HAS           │
│  BEEN MODIFIED              │
└─────────────────────────────┘
```

then change to:

```
┌─────────────────────────────┐
│  STORE IN USER              │
│  PROGRAM →128?Y/N           │
└─────────────────────────────┘
```

The User program value shown is the last User program used by the **QUAD TUBE 150M.** Note that only User programs are available for storing.

**To store a program in the User program shown:**

- Press the "▲" button to answer "Yes."

**To select a different User program in which to store a program:**
- Use the BANK UP, BANK DOWN, and number buttons in the same fashion as recalling a program in Play mode to select the desired User program.
- Press the "▲" button to answer "Yes."

After answering "Yes" the **QUAD TUBE 150M** will ask for confirmation:

```
┌─────────────────────────────┐
│  ARE YOU SURE?              │
│  PROGRAM:128 Y/N            │
└─────────────────────────────┘
```

- Press the "▲" button again to answer "Yes" and complete the store.

**To abort the store process and return to editing:**
- Press the PRGM EDIT button to re-enter Program Edit mode. Select a section and continue editing. All parameters will be as they were when you first attempted to exit Program Edit mode.

**To abort the store process and discard the changes to the program:**
- Press the "▼" button when the "Store in User Program 128? Y/N" message appears to answer "No."

```
ABANDON EDITS?
             Y/N
```

- Press the "▲" button to answer "Yes" when the above message appears.

```
ABANDONING EDIT
SESSION
```

After the above message appears, the **QUAD TUBE 150M** will be in Play mode.
Pressing the "▼ " button to answer "No" to the abandon message will return you to the store message.

## Memory Protection
The **QUAD TUBE 150M** has a memory protection feature in the System Edit mode (discussed later) which prevents any User program from being stored to. The factory default setting for this feature is "Off," however, should memory protection be turned on, it adds an additional confirmation message to the store process.
After responding "Yes" to the confirmation ("Are You Sure?") message, the **QUAD TUBE 150M** , when Memory Protect is set to "On," will briefly show this message:

```
MEMORY PROTECT
      IS ON
```
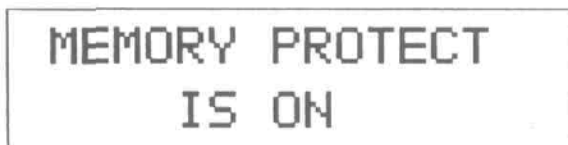
then offer the chance to turn off memory protection:

```
DISABLE PROTECT
AND STORE?
```

- Press the "▲" button to answer "Yes" and turn off memory protection. The display will return to the confirmation message, only now it will allow the store to be completed.

> **NOTE:** Once Memory Protect has been disabled in this fashion, it is no longer active unless re-enabled in the System Edit mode.

- Pressing the "▼" button to answer "No" to the disable message returns you to the abandon message.

## Setting Input and Output Levels
The **QUAD TUBE 150M** contains a number of level controls that serve different purposes. Getting the best sound requires that the **QUAD TUBE 150M's** input and output levels be properly adjusted. Here are a few hints:

1. Modifying an existing preset is the best way to optimize the signal-to-noise ratio
2. Use the signal indicators on the front panel to insure that the **QUAD TUBE 150M** is being driven with an adequate amount of signal, and not overloaded undesirably. Try

to set signal level so that the LEDs are lighting green on a regular basis. Remember that too little signal degrades the signal-to-noise ratio.

3. Avoid clipping the **QUAD TUBE 150M's** internal circuitry; watch for signal LEDs that are frequently lighting red or for frequent lighting of the Input Clip LED. Some common causes of internal overload are large amounts of boost in the EQ sections, Master Level set too high, or excessive Gain in the Compressor section.

4. The Drive parameter in the Drive and Master Level section controls the amount of gain applied by the tube preamp. High gain Tube Voicings also have an Overdrive parameter in this section for even more gain.

5. The Master parameter in the Drive and Master Level section controls the amount of signal fed from the tube preamp to the rest of the **QUAD TUBE 150M.** It is useful for balancing relative volume between your User programs.

6. The overall level ("room volume") is controlled by the front panel Volume control.

## Using the Stereo Effects Loop

The **QUAD TUBE 150M's** Stereo Effects Loop provides a way to use the **QUAD TUBE 150M** with additional effects without requiring an external mixer. The side-chain design keeps the original ("dry") signal within the **QUAD TUBE 150M,** and each channel has the capability of mixing the Effects Return ("wet") signal with the original.

- Connect Left Effects Loop Send to the left input of an external signal processor, and the output of the processor to Left Effects Loop Return.

- Connect Right Effects Loop Send to the right input of an external signal processor, and the output of the processor to Right Effects Loop Return.

- Set up a reverb or some other easily distinguishable effect on the external signal processor and set its mix to 100% Wet.

- Enter Program Edit mode and press the Stereo Effects Loop button to select the Stereo Effects Loop section. The Status parameter should be set to "In."

```
STATUS →IN
                          ▓
```
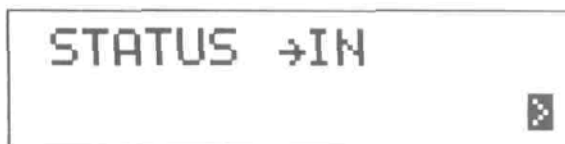
- Press the "►" button to step to the next screen.
- Hold down the "▲" button until Mix L is set to 75%

```
▓ MIX L →75 %WET
  MIX R:25 % WET
```
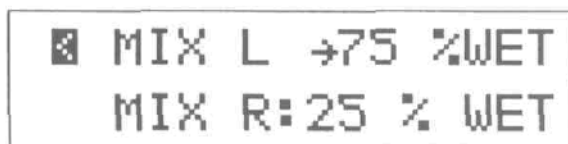
This should make the effects very noticeable on the left channel.

- Press the "◄" to step back to the first screen,
- Press the "▼" button to change the Status to "Out" The effects should disappear, as the effects return is disconnected.
- Press the PRGM EDIT button to exit Program Edit mode and store the program if you wish.

### System Edit Mode

- Press the SYSTEM EDIT button to enter System Edit [1] mode. The display will show:

```
▨ MIDI FUNCTION
        MENU?    ▨▨
```

You must be in Play Mode in order to enter System Edit Mode. System Edit mode contains all the **QUAD TUBE 150M's** MIDI functions (except Real-Time MIDI) and system utilities such as the **Copy** and **Swap Program** features, **Memory Protect, Program Change Speed,** and **Panel Mode.**
It is organized as a main menu which is navigated in the same way as the parameter screens in Program Edit mode. Some menu selections have submenus or additional screens.

### Copying Programs

It is useful to copy programs when you want to modify an existing program and store the edited version, especially if the original is a Preset which cannot be stored into its original location. Programs can only be copied to User locations.

- Press the "►" button twice until this display shows:

```
▨ COPY SINGLE
   PROGRAMS?    ▨▨
```
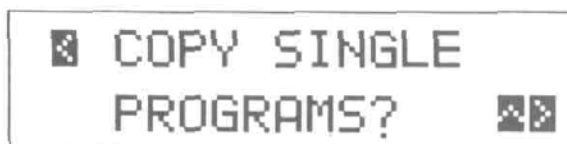
Notice that there are three arrows. This indicates that there are both preceding and following menu selections, as well as additional screens.

- Press the "▲" "Yes" button once to get to the 2nd screen.

```
▨ COPY →01PRESET
        TO:128 USER▨
```

Note that there is still an up arrow in the lower right corner, indicating that a confirmation is necessary to execute the Copy command.
The source and destination locations are selected just as if they were being recalled in Play mode: using the BANK UP, BANK DOWN, and number buttons.

- Press the BANK UP button and then the "2" button to select Preset 12 as the source location.

```
▨ COPY →12 PRESET
        TO:128 USER ▨
```
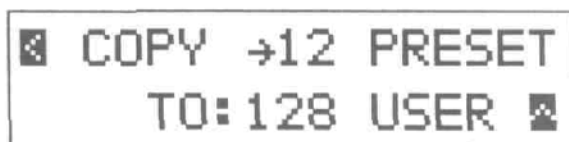
- Press the "►" button to move the cursor to the bottom row.
- Press the BANK UP button and then the "5" button to select User 5 as the destination location.

```
▨ COPY:12 PRESET
    TO →05 USER ▨
```
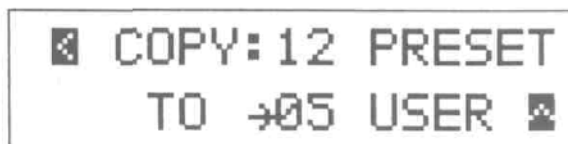
- Press the "▲" button to continue the copy operation. The display will show a confirmation message:

```
ARE YOU SURE?
              Y/N
```

- Press the "▲" button to answer "Yes."

```
DONE!
```
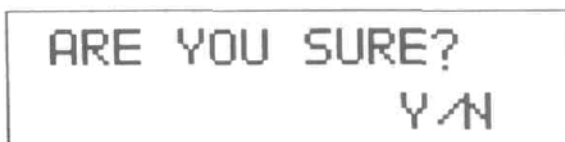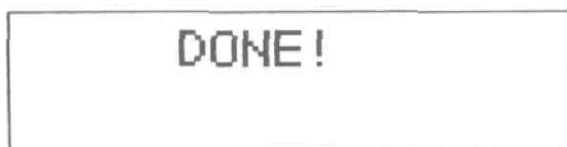
Preset program 12 has now been copied into User program 5.

## MIDI Parameters Setting the MIDI Channel

The most basic MIDI parameter is the channel over which the **QUAD TUBE 150M** will send and receive MIDI data.

- Press the "◄" button twice (or press the System Edit button twice) so that the display shows:

```
▨ MIDI FUNCTION
      MENU?    ▨▨
```

- Press the "▲" button to access the MIDI Function submenu. The display will show:

```
▨ SET MIDI
    CHANNEL →1    ▨
```

- Pressing "▲" or "▼" buttons changes the MIDI channel. For now, leave it on channel 1.

## Making a MIDI Program Change Map

The **QUAD TUBE 150M's** MIDI Program Change Map lets any User program be recalled by any MIDI program change message. The map is simply a list of MIDI program change numbers, with each one assigned to an **QUAD TUBE 150M** User program.

- Press the "►" button once so that the display shows:

```
 ▨   EDIT MIDI
      MAPPING?      ▨▨
```

- Press the "▲" "Yes" button to access the MIDI Program Change Map.
- Press the "▲" or "▼" button (whichever is appropriate) until MIDI program number 10 is selected.

As you step through the map, notice that the mapped User program is shown for each MIDI program change number.

```
 ▨     MIDI IN →10
 MAP TO USER:10 ▨
```
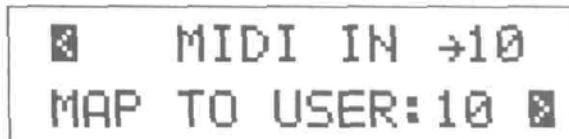
- Press the "►" button to move the cursor to the bottom line.
- Press the "▼" button until User program 6 is selected.

```
 ▨     MIDI IN:10
 MAP TO USER →06 ▨
```

- Press the System Edit button to exit. There is no store procedure. Now try sending program change #10 from a MIDI pedal. User Program 6 will be recalled.

## The Next Step

Now that you have completed the **QUAD TUBE 150M** Tutorial, you should be able to plug in and get great sounds. But there is much more yet to discover. See the Reference chapter for complete descriptions of all the **QUAD TUBE 150M's** features, and feel free to experiment to find out for yourself how the **QUAD TUBE 150M** can work for you. For a Tutorial on the Real Time MIDI functions of the **QUAD TUBE 150M,** see **Appendix D** on page 94.

# CHAPTER 5 REFERENCE

## Play Mode

In Play mode Preset and User programs can be recalled, and real-time MIDI control is active.

To select a Preset program:
- Be sure the LEDs in all panel buttons are off. If the PRGM EDIT or SYSTEM EDIT buttons are lit, press the button to exit the edit mode and extinguish the LED.
- If the top line of the display says "USER," press the PRESET/USER button to make it say "PRESET."
- Use the BANK UP or BANK DOWN button to select the desired bank (0-3).
- Press one of the number buttons (0-9) to select the Preset program within the selected bank.
- The available range of numbers is 01-39.

OR

- Use the "▲" or "▼" (up and down arrow) buttons to step through the Preset programs.

To select a User program:

- Be sure the LEDs in all panel buttons are off. If the PRGM EDIT or SYSTEM EDIT buttons are lit, press the button to exit the edit mode and extinguish the LED.
- If the top line of the display says "PRESET," press the PRESET/USER button to make it say "USER."
- Use the BANK UP and BANK DOWN buttons to select the desired bank (0-12).
- Press one of the number buttons to select the User program within the selected bank (0-9).
- The available range of numbers is 01-128.

OR

- Use the "▲" or "▼" (up and down arrow) buttons to step through the User programs.

Real-Time MIDI (RTM) lets the user have dynamic, realtime control of up to sixteen **QUAD TUBE 150M** parameters for every User program (plus global stereo volume and tuner mute under system edit). The assignment of MIDI controllers to parameters is done in the Real-Time MIDI section in Program Edit mode. After programming is finished, RTM is operated in Play mode.

> ***Note:*** *To activate a MIDI controller's link to a parameter, the controller must be moved past the position that corresponds to the current value of the parameter. Moving the controller past this point "activates" the parameter. When there are multiple parameters assigned to a single controller, the controller will usually need to be "swept", or moved through its entire range, to activate all parameters. (This is also true when using RTM Preview in Program Edit mode.)*

**Program Edit Mode**

In Program Edit mode,  all  sound parameters  and MIDI parameters that are specific to each program are set.

To enter Program Edit mode:

- Press the PRGM EDIT button. It will light.

To select and adjust a parameter:

- Press  the  button  corresponding  to  the  section containing the parameter to be adjusted (for example, Tube voicing, Graphic EQ, Stereo Effects Loop, etc.).
- Use the "◄" and "►"  (left and right arrow) buttons to move the cursor (indicated by "   →") to the parameter to be adjusted.
- Some  sections  have  more  than  one  screen  of parameters, indicated by an arrow in the lower right corner:
- After stepping through all parameters in a screen, pressing the "►" button will step the display to the following screen, if there is one.
- Similarly, previous screens are reached by pressing the "◄" button to reach the first parameter on a screen, then once more to step to the preceding screen.
- Once the desired parameter is selected, use the "▲" or "▼" (up and down arrow) buttons to adjust the value. Pressing the button once increments or decrements the value by one; holding the button down causes the value to scroll.

To exit Program Edit mode:

- Press the PRGM EDIT button. If any parameters have been  changed,  this initiates  the  Store  sequence described below. When that sequence is complete the Quad Tube 150M will be in Play mode.

# Storing, Abandoning, and Resuming Edits

The QUAD TUBE 150M asks if you wish to store whenever you attempt to exit Program Edit mode after having altered any of a program's parameters.

- Press the PRGM EDIT button to exit Program Edit mode. The display will briefly show:

```
PROGRAM DATA HAS
BEEN MODIFIED
```

then change to:

```
STORE IN USER
PROGRAM→128? Y/N
```

The User program value shown is the last User program used by the QUAD TUBE 150M. Note that only User program slots are available for storing.

- Use the BANK UP, BANK DOWN, and number buttons in the same fashion as recalling a program in Play mode to select a User program other than the one shown.
- When the desired User program is selected, press the "▲" button to answer "Yes" to the query. The QUAD TUBE 150M will ask for confirmation:

```
ARE YOU SURE?
PROGRAM:128   Y/N
```

- Press the "▲" button again to answer "Yes" and complete the store.

To abort the store process and return to editing:

- Press the PRGM EDIT button to reenter Program Edit mode. Select a section and continue editing. All parameters will be as they were when you first attempted to exit Program Edit mode.

To abort the store process and discard the changes to the program:

- Press the "▼" button when the "Store in User Program 128? Y/N" message appears to answer "No."

```
ABANDON EDITS?
             Y/N
```

- Press the "▲" button to answer "Yes" when the above message appears.

```
ABANDONING EDIT
SESSION
```

After the above message appears, the **QUAD TUBE 150M** will be in Play mode.
- Pressing the "▼" button to answer "No" to the abandon message will return you to the store message.

---

**NOTE:** *It may helpful to refer to the signal flow diagram at the front of the manual to understand the position of the following functions.*

---

> **NOTE:** *It may helpful to refer to the signal flow diagram at the front of the manual to understand the position of the following functions.*

## Tube Voicing

Selects basic character of tube sound by configuring the four tube stages and biasing them for the proper gain and interstage EQ. There are ten **Voicings** available:

**Table 1: Tube Voicings**

| | |
|---|---|
| 1 | Crystal Clean |
| 2 | Spanky Clean |
| 3 | Fat Clean |
| 4 | Vintage Brown |
| 5 | Warm Vintage |
| 6 | Dynamic Vintage |
| 7 | Warm Hi Gain |
| 8 | Dynamic Hi Gain |
| 9 | Ultimate Hi Gain |
| 10 | Fat Hi Gain |

### Drive & Master Level

Drive controls amount of signal fed to tube preamp. Use Master Level to balance relative volumes of different User programs.

Drive (0/100):  Determines the amount of gain in the tube preamp.

Master (0/100):  Sets output level from tube preamp into other sections.

OD [Overdrive] (0/100):  Available only when Hi Gain tube Voicings (7-10, see above) are selected. Determines how extreme distortion generated in the preamp is.

## Compressor

The Compressor is the first stage a signal reaches from the input jack, preceding the tube preamp.

| | |
|---|---|
| Status (In/Out): | Switches **Compressor** in and out of the signal path. |
| Ratio (1.5:1/30:1): | Sets compression ratio (increase in output for a given increase in input). Available values are: 1.5:1, 2:1, 3:1, 4:1, 6:1, 8:1, 10:1, 15:1, and 30:1. The higher the compression ratio, the more "squeeze" (gain reduction) is applied to the signal. |
| Threshold (0/100): | <u>Found on screen 2.</u> The **Compressor** reduces gain (squeezes) signals exceeding the Threshold value, and increases gain (amplifies) signals below the **Threshold.** |
| Volume (0/100): | <u>Found on screen 2.</u> Sets the amount of gain applied to the compressor output to make up for level lost as a side effect of compression. Lower **Thresholds** and higher **Ratios** will generally necessitate higher **Volume** settings. It is |

recommended that **Volume** be adjusted until the basic signal level does not appear to change when the **Compressor** is switched in and out.

## Tone Controls

The **Tone** controls give fast access to tonal shaping. Use the **Tone** controls to get a basic tonal sound and the **Graphic EQ** for more specific shaping needs. The actual frequencies affected by the **Tone** controls sometimes change with different tube **Voicings** to give the best sound.

> **NOTE:** *Simultaneously pressing the "$^A$ " and "$^y$ " buttons resets the **Tone Controls** to flat response (all bands to 0 dB).*

| | |
|---|---|
| Lo(+12/-12): | Shapes the amount of low (bass) frequencies in the signal in 2 dB |
| steps. Mid (+12/-12): | Shapes the amount of midrange frequencies in the signal in 2 dB |
| steps. Hi (+127-12): | Shapes the amount of hi (treble) frequencies in the signal in 2 dB |
| steps. Presence (+127-12): | Shapes the amount of presence (upper mid) range frequencies in the signal in 2 dB steps. |

## Graphic EQ

**Graphic EQ** provides fine tonal shaping by allowing adjustment of nine specific frequencies. Up to 12 dB of boost or cut can be applied in two dB steps at any of the frequencies. The display gives a graphic indication of the frequency currently selected and the complete EQ curve. The upper right corner of the display always shows the frequency currently being edited, with the amount of boost or cut at that frequency shown directly below it.

> **NOTE:** *Simultaneously pressing the "$^A$ " and "$^v$ " buttons resets the **Graphic EQ** to flat response (all bands to 0 dB).*

The frequencies are:

**Table 2: EQ Frequency Centers**

| | | | | |
|---|---|---|---|---|
| 100 Hz | 170 Hz | 280 Hz | 470 Hz | 800 Hz |
| 1.3kHz | 2.2kHz | 3.8kHz | 6.3KhZ | |

## Stereo Chorus
**The Stereo Chorus** is the point at which the input signal first becomes stereo.

| | |
|---|---|
| Status (In/Out): | Switches the Stereo Chorus in and out of the signal path. |
| Mode: | Selects the chorus mode from the list below: |

| Mode | Left | Right |
|---|---|---|
| Rockl | Dry + Wet | Dry - Wet |
| Jazz I | Wet | Dry |

| Rock II | Dry + Wet* | Dry - Wet* |
| Jazz II | Wet* | Dry |
| Rock III | Dry + Wet** | Dry - Wet** |
| Jazz III | Wet** | Dry |

The Jazz modes have a large stereo field, and in general, sound best with clean sounds. In contrast, the Rock modes are more tightly focused and work better for distorted sounds.

* The chorus rate is slightly modulated by the guitar input (i.e. the harder you play, the faster the chorus LFO). This makes for a chorus effect that is very dynamic and alive.

** Same as above, but with twice the modulation amount.

Depth (0%-100%):                Found on screen 2. Sets the intensity of the Chorus effect.

Rate(0Hz-10Hz):                 Found on screen 2. Adjusts the rate of the Chorus effect in 1/10 Hz steps

## Tremolo

**Tremolo** is a pulsating volume effect controlled by an onboard sweep oscillator.
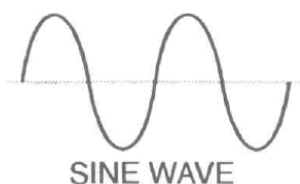
Status (In/Out):                Switches Tremolo in and out of the signal path.

Waveform (Sin/Tri/Surf):        Selects a sine, triangle, or "surf" shape for the LFO that modulates the signal to create the tremolo effect. (See illustration of LFO waveshapes .)

**LFO WAVESHAPES**



SINE WAVE          TRIANGLE WAVE          SURF WAVEFORM

Depth (0%-100%):                Found on screen 2. Sets the intensity of the tremolo effect.
Rate (0 Hz-10 Hz):              Found on screen 2. Adjusts the rate of the tremolo effect in 1/10 Hz steps.

## Noise Reduction

Some amount of noise is unavoidable in guitar amplification, especially when applying high gain, but it is usually only noticeable when nothing is being played. The **Noise Reduction** section offers tools to eliminate noise when there is no signal. The **Fader** mode fades sound slowly when the signal falls below the **Threshold,** while the **Gate** mode turns the signal off

instantly and completely. In general, **Fader** mode is recommended for lower gain programs, and **Gate** mode for high gain programs.

Status (In/Out):                           Switches **Noise Reduction** in and out of the signal path.

Mode (Fader/Gate):                    Selects the **Noise Reduction** operating mode.

Threshold (0-100):                      Found on screen 2. Signals exceeding the **Threshold** are heard unaltered, while signals below the **Threshold** are faded or gated to silence. In general, the more noise you have in the program, the higher you need to set the **Threshold.**

## Stereo Effects Loop

Following the Chorus, each channel of the signal feeds the **Stereo Effects Loop.** The loops are in a send/return configuration and both the Sends and Returns are only active when Effects Loop Status is set to In.

Status (In/Out):                           Switches the **Effects Loop** Sends and Returns in and out of the signal path.

Mix L (0-100%):                          <u>Found on screen 2, active only when Status is set to "In."</u> Adjusts the mix of "wet" signal from **Left Effects Loop** Return with "dry" (original) left signal. The higher the percentage, the more effects will be heard.

Mix R (0-100%):                          Found on screen 2, active only when Status is set to "In." Adjusts the mix of "wet" signal from **Right Effects Loop** Return with "dry" (original) right signal. The higher the percentage, the more effects will be heard.

## VariCAB

The VariCAB circuit follows the Stereo Effects Loop and provides a miked-cabinet emulation to all of the outputs using a simulated close-miked SM57 microphone as a reference. The purpose of the VariCAB is to emulate the complex physical and psycho acoustic effects of much larger cabinets by adding the subtle comb-filter effects of soundwaves arriving from multiple sources. This allows the compact 2x12 configuration of the QUAD TUBE Combo to have all the complexity and "depth" of a large, multiple-speaker "stack" set-up. Having fewer speakers yields a more directional and tightly focused sound, and the more speakers you add, the richer and more ambient the sound. This effect is much more prominent with sound having a complex harmonic structure, like a heavily distorted tone. The nature of the emulation is much like that in the ADA MicroCAB, but in addition, the VariCAB is programmable. It has the following parameters:

Status (In/Out):                           Switches VariCAB in and out of the signal path.

L-mode, R-mode:                        Selects the emulation mode for the Right and Left channels from the following:

- Bypass—no cabinet emulation.
- 2x12 Vintage—2x12 cabinet loaded with vintage 12" speakers.
- 2x12 Bright—2x12 cabinet loaded with more modern-voiced 12" speakers.
- 4x12 Vintage—4x12 cabinet loaded with vintage 12" speakers

- 4x12 Bright—4x 12 cabinet loaded with more modern-voiced 12" speakers.

  The two channels are independent and can be set to different emulation modes. This means that the left speaker can be emulating a Bright 4x12 cabinet while the right speaker a Vintage 2x12.

Lo Boost L, R (In/Out):      Sets the lo-boost function in or out for each channel. This emulates the "thump" of a close-miked guitar cabinet. This is especially useful when playing at low-volume.

Hi Cut L, R (In/Out):      Sets the hi-cut function in or out for each channel. This emulates the angle of miking (on-axis vs. off-axis). When the hi-cut is in, the mike is off-axis (less highs).

## Program Title

This is where the user can create his/her own name for a program before storing it. Upper and lowercase letters, numbers 1 through 0, and various symbols are available for naming. A name can have up to 16 characters or spaces.

The "◄" and "►" buttons move the cursor from character to character, while the "▲" or "▼" buttons select the letter, number or symbol. The blank space character can be found between the "?" and "A" characters.

> **NOTE:** Simultaneously pressing the "▲" or "▼" buttons clears the **Program Title** (all characters blank).

The name is kept as long as the **QUAD TUBE 150M** is in Program Edit mode, but is not permanent until the program is stored.

## Real-Time MIDI (RTM)

In this section, MIDI continuous controller messages received by the **QUAD TUBE 150M** can be assigned to control parameters in real time. To use this feature, a MIDI continuous controller pedal such as the ADA MXC with a CCP foot pedal is needed. Up to sixteen assignments (sometimes called "mappings") can be made; each assignment is called a "slot." A single controller can be mapped to control a number of different parameters, but each parameter can be only be mapped to one controller. For this reason, once a parameter has been mapped to a controller, it disappears from the picklist of parameters which can be controlled. The complete picklist follows on the next page.

| Table 3: RTM Parameter Picklist | | |
|---|---|---|
| Unassigned | Graphic: Band 5 | Right Lo-Boost |
| Drive | Graphic: Band 6 | Left Hi-Cut |
| OD (Overdrive) | Graphic: Band 7 | Right Hi-Cut |
| Master | Graphic: Band 8 | Chorus Status |
| Comp. (Compressor) Status | Graphic: Band 9 | Chorus Depth |

| Tone: Lo (Bass) | N-R (Noise Reduction) Status | Chorus Rate |
|---|---|---|
| Tone: Mid | Gate Threshold | Loop Status |
| Tone: Hi (Treble) | Fader Threshold | Loop L Mix |
| Tone: Pres (Presence) | Tremolo Status | Loop R Mix |
| Graphic: Band 1 | Tremolo Depth | V-Curve* |
| Graphic: Band 2 | Tremolo Rate | Grind* |
| Graphic: Band 3 | Varicab Status | Stereo FX Mix* |
| Graphic: Band 4 | Left Lo-Boost | Sustained |
| | | Modulation* |

*Note; Macros (indicated with an asterisk) are only available in Quick Mode. In Quick mode, the picklist contains only switch functions or pedal functions, depending on the MIDI*

Real-Time MIDI (RTM) is edited in this section using either of two modes, Quick or Expert, and used in Play mode. (Which edit mode is used has no effect on RTM operation in Play mode.) In Quick mode, assignment of MIDI controllers to QUAD TUBE 150M parameters is simplified to make the process as fast and easy as possible, allowing only the parameter being controlled to be set. Expert mode involves a few extra steps which allow direct selection and viewing of slot number, controller number, controller sense and minimum and maximum parameter values.

**The Real-Time MIDI Preview** feature enables the effect of RTM assignments to be auditioned without leaving the RTM section or Program Edit mode.

**NOTE:** Be sure a MIDI controller is properly connected to and set up to communicate with the **QUAD TUBE 150M** before attempting to work with RTM.

RTM Edit Mode:               Sets edit level for programming
(Quick/Expert):               RTM. This is a global setting. See **Appendix D** for a Tutorial on Real Time MIDI in Quick Mode.

## Macros

In Quick mode, five additional entries appear in the parameter picklist for continuous controllers. These are **Macros,** factory-programmed groups of parameters that are all changed simultaneously by the controller assigned to that slot. Macros use up multiple slots. Table 4 is a list of Macros and descriptions:

**Table 4: Macro Descriptions**

V-CURVE               Goes from mid-rangy EQ to extreme V-shaped curve with only a slight level change.
GRIND               Goes from barely distorted (pedal back) to heavy grind (pedal forward). Tweaked for use with high gain voices.
STEREO FX MIX               Controls both Left and Right Effects Loop Mixes at the same time.

| | |
|---|---|
| SUSTAINER | Great for going from rhythm to lead, but continuously variable. Brings in more gain, fat mids, and overall volume, while taking out the noise gate for infinite sustain with no gate "chatter". Designed for high-gain voices. |
| MODULATION | An organ modulation sound. Tremolo Status and Chorus Status must both be set to "On" in the program. |

Macros may be examined and altered in Expert mode, and the resulting, altered RTM assignments may be stored, but user-altered-or -created assignments are not stored as Macros, that is, they cannot be titled and do not appear in the picklist. Once a macro has been altered in Expert Mode, it is no longer recognized as a macro in Quick Mode, therefore, it cannot be <u>unassigned</u> in Quick Mode.

To examine the components of a Macro:

- Set RTM Edit Mode to "Expert".
- Use the Slot parameter to view the parameter assigned to any slot.
- Move the cursor to the Parameter setting. The display will briefly show the message, "THIS SLOT IS PART OF A MACRO" if it is a component of the macro. After the message disappears, the **QUAD TUBE 150M** will allow editing of the setting as usual.
- Repeat steps 2 and 3 for each slot.

## Real-Time MIDI Preview

This feature, available in Quick and Expert modes, lets you evaluate the effect of an RTM assignment without leaving the RTM section. This not only simplifies auditioning, but also makes it is not necessary to store the program before hearing the effect of the assignment. Here are a few notes about **RTM Preview:**

1)  To activate the MIDI controller's link to a parameter, the controller pedal must be moved past the position that corresponds to the current value of the parameter. Moving the controller past this point "activates" the parameter.  When  there  are multiple  parameters assigned to  a single  controller,  the  controller  will usually need to be "swept", or moved through its entire range, to capture all parameters. (This is also true when using RTM in Play mode.)

    The exceptions to this are the two Global audio parameters, **Stereo Volume Controller,** and **Tuner Mute,** which do not need to be captured.

2)  The **Compare** function operates in RTM Preview. "INITIAL   SETTINGS"   resets the   parameter   in question to the stored value. The controller will need to be swept to hear the difference in the effect.

## Making RTM Assignments in Quick Mode

| | |
|---|---|
| Parameter: | Found on  screen 2.  Selects  the parameter for real-time control. The parameter name will be shown on the bottom line of the display. See above for the list of parameters which can be controlled. |
| Real Time MIDI Preview: | Found on  screen 3;  active  only when Parameter is not "Unassigned". Allows operation of an RTM assignment to be checked without having to leave Program Edit mode and store the program by moving controller and listening |

to the result.

## General procedure for making RTM Assignments in Quick mode:

This is an abbreviated version of the procedure given in the RTM Tutorial in the appendix, reproduced here for convenience.

- Press the REAL-TIME MIDI button to enter the section if it is not already selected.
- Set the RTM Edit Mode to "Quick".
- Press the "►" button to step to the next screen.

```
▨  MOVE PEDAL OR
   PRESS SWITCH
```
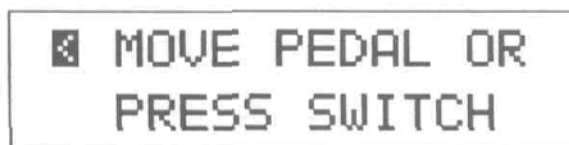
- Move the MIDI controller slightly. The QUAD TUBE **150M** will detect the MIDI controller number and whether it is a switch-type or continuous controller, then assign it to the slot. The display will then show the parameter, if any, currently assigned to that controller.

```
▨   PARAMETER  →
    UNASSIGNED
```

- Choose the parameter you wish to control from the picklist of available choices. Notice that only toggle parameters are available when a switch-type controller is detected, and only variable parameters are available when a continuous controller is detected.
- Press the "►" arrow once to step to the next screen, which is the RTM Preview function.

```
▨  REAL TIME MIDI
   PREVIEW
```

- Operate the controller and check that the effect is satisfactory.
- Press the "◄" button when you are finished previewing and the display will return to the "Move Pedal or Press Switch" message. You are ready to make your next assignment.

## Making RTM Assignments in Expert Mode

> **NOTE: Real-Time MIDI** control of parameters does not function in Program Edit mode, except in Real-Time MIDI Preview. Also, remote parameter editing through MIDI does not function when the **Real-Time MIDI** section is active.

| | |
|---|---|
| Slot (1-16): | Found on screen 2. Chooses one of the sixteen slots for editing. The slot number is simply a designation which makes no functional difference. Simultaneously pressing the "▲" and "▼" buttons clears all RTM slots at once. |
| Parameter: | Found on screen 2. Selects the parameter for real-time control. The parameter name will be shown on the bottom line of the display. See above table 3 for the list of parameters which can be controlled. |
| Controller#(0-127): | Found on screen 3; active only when Parameter is not "Unassigned". Selects the MIDI controller number that will affect the selected parameter. The controller number can be selected using the and buttons or by operating the controller while it is connected to the **QUAD TUBE 150M** and this parameter is selected. When the controller is operated, its number will appear in the parameter value. |

> **NOTE;** If the controller is operated and its number does not appear next to the Controller # check MIDI connections and verify that the controller and the **QUAD TUBE 150M** are set to the same channel.
> The MIDI Monitor function found later in this chapter is very helpful for this type of troubleshooting.

| | |
|---|---|
| Sense (Forward/Reverse): | Found on screen 3; active only when Parameter is not "Unassigned" and controller is continuous (not switch). When set to Forward, the selected parameter increases in value when the incoming MIDI controller values increase (pedal is pushed down) and decrease as the controller values decrease (pedal is pulled back). When set to Reverse, the parameter value decreases when the controller value increases (pedal is pushed down), and increases as the controller values decrease (pedal is pulled back). |
| Minimum Value: | Found on screen 4; active only when Parameter is not "Unassigned" and controller is continuous (not switch). Sets the value of the selected parameter when the controller is at its minimum value. |
| Maximum Value: | Found on screen 4; active only when Parameter is not "Unassigned" and controller is continuous (not switch). Sets the value of the |

|  |  |
|---|---|
|  | selected parameter when the controller is at its maximum value. |
| Real Time MIDI Preview: | Found on screen 5; active only when Parameter is not "Unassigned". Allows operation of RTM assignment to be checked by moving controller and listening to the result. |

---

### *NOTES on Real-Time MIDI:*

1) The range and units of the **Minimum** or **Maximum** value will depend on the parameter. For example, when **Drive** is the selected parameter, **Minimum** can vary from 0 to 100, but when **Graphic EQ Band 1 (100 Hz)** is selected, the minimum can vary from -12 dB to +12dB.
2) When **Sense** is set to "Reverse", the relationship between controller value and parameter value is inverted, that is, the lowest controller value (pedal pulled ,all the way back) will set the parameter to **Maximum,** and the highest controller value (pedal pushed all the way down) will set the parameter to **Minimum.**
3) The **Min** and **Max** values can never exceed the existing value of the parameter. If, for example, the **Drive** parameter is set to 30, any attempt to set Min higher or Max lower than 30 will result in the error message, "MIN. (or MAX) IS NOW EQUAL TO PARAM. VALUE."
4) Min, Max, *and Sense are not available for Status parameters, as these are switches with only two values (In and Out).*

---

General procedure for making RTM assignments in Expert Mode:

- Press the REAL-TIME MIDI button to enter the section if it is not already selected.
- Set RTM Edit Mode to "Expert".

```
SELECT RTM EDIT
MODE →EXPERT    ▨
```

- Select Slot to be programmed (generally, scroll through the slots until an "unassigned" slot is found).
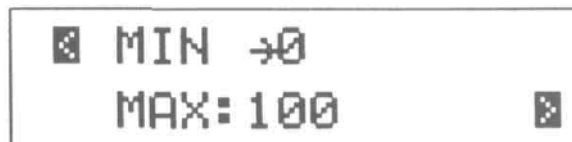
```
▨ SLOT →1  PARAM:
TREMOLO STATUS ▨
```
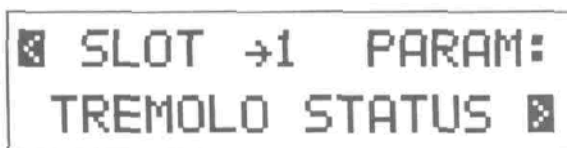
- Select Parameter to be controlled.

```
▨ SLOT:1  PARAM →
      DRIVE    ▨
```
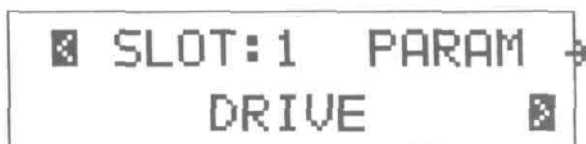
- Select MIDI Controller number.
- Set the controller Sense.

```
█CONTROLLER#  →65
SENSE:FORWARD  █
```

- Set the Minimum and Maximum allowable values for the parameter under control.

```
█  MIN →0
MAX:100          █
```

- Check the operation of the mapping in Real-Time MIDI Preview.

## Compare

This feature allows comparison, without leaving Program Edit mode, between an edited (Modified) version of a program and the stored version (Initial). Each time the Compare button is pressed, the **QUAD TUBE 150M** switches between the versions, allowing each to be heard. The display indicates whether it is switching to the edited version ("MODIFIED SETTINGS") or the stored version ("INITIAL SETTINGS").

## System Edit Mode
Utility functions and MIDI parameters which are global (in effect for all programs) are found in System Edit mode. Many functions in this mode have procedures of several steps which are entered with the up arrow.

## MIDI Function Menu
**The QUAD TUBE 150M's** basic MIDI functions, as well as some of its most advanced ones, are accessed through the MIDI function menu. Unlike the other selections in the System Edit mode, the MIDI Function menu is not a single function, but a submenu of a number of functions.
The **QUAD TUBE 150M** can send and receive the following kinds of MIDI messages: Program Change (which can also be remapped), Continuous Controller (used for both Global and RTM functions), and System Exclusive (which can contain the settings for a single program or all User programs).

To access the MIDI Function menu:

- Press the "▲ " button when the display  shows the message "MIDI FUNCTION MENU?"
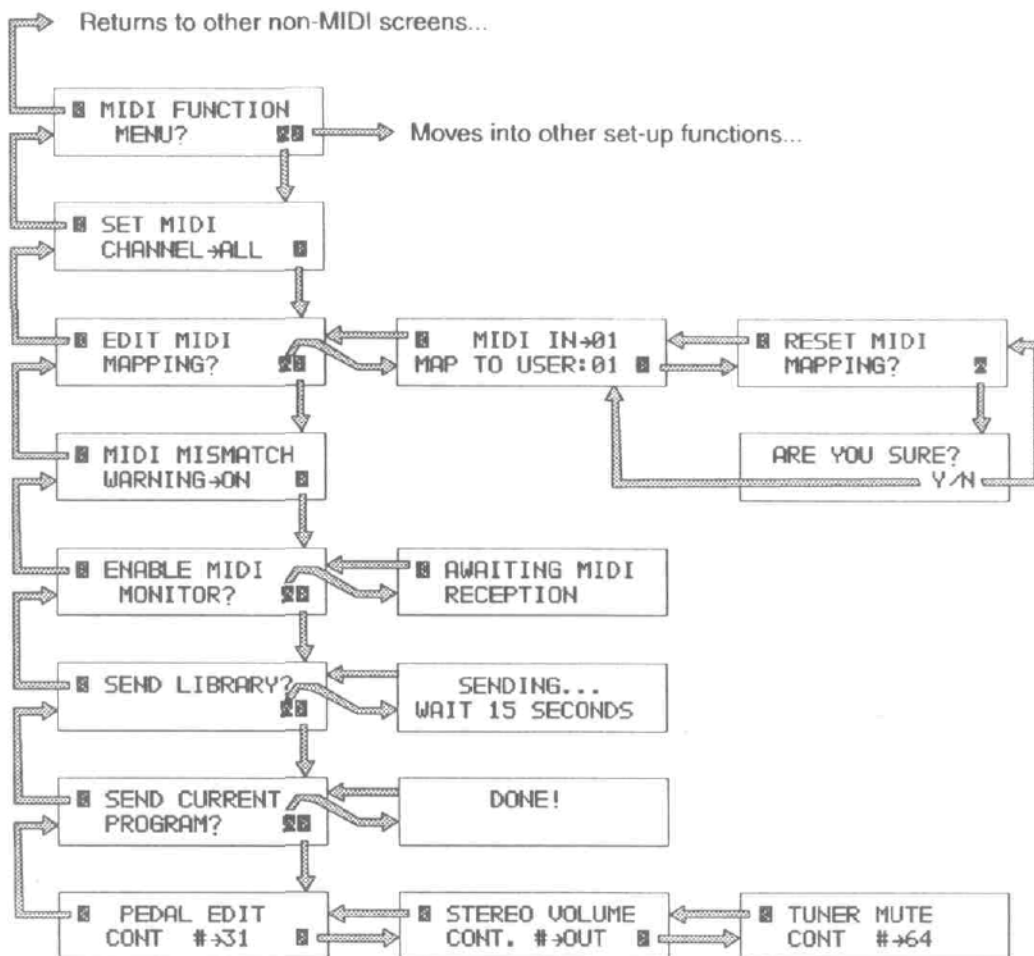
To move through the MIDI Function menu:

- Press the "►" button from any main menu entry to step to the next entry. Many entries have additional screens. It is usually necessary to use the "◄" button to "back out" of these screens and return to the main menu.

To exit the MIDI Function menu:

- Press  the  "◄"  until  the  display  again  shows  the message "MIDI FUNCTION MENU?"

# MIDI Function Menu Chart

Returns to other non-MIDI screens...

```
▣ MIDI FUNCTION
   MENU?        ▣▣      ──→  Moves into other set-up functions...

▣ SET MIDI
   CHANNEL→ALL  ▣

▣ EDIT MIDI          ▣   MIDI IN→01          ▣ RESET MIDI
   MAPPING?  ▣▣         MAP TO USER:01 ▣        MAPPING?        ▣

                                                  ARE YOU SURE?
▣ MIDI MISMATCH                                                Y/N
   WARNING→ON  ▣

▣ ENABLE MIDI        ▣ AWAITING MIDI
   MONITOR?  ▣▣          RECEPTION

▣ SEND LIBRARY?          SENDING...
              ▣▣      WAIT 15 SECONDS

▣ SEND CURRENT           DONE!
   PROGRAM?  ▣▣

▣   PEDAL EDIT       ▣ STEREO VOLUME       ▣ TUNER MUTE
    CONT  #→31 ▣        CONT. #→OUT ▣         CONT  #→64
```

## About Global MIDI Parameters

Global parameters are settings that apply no matter what program is running. The MIDI channel and program map, for example, do not change when the program is changed. Nor do the **Pedal Edit Controller, Stereo Volume Controller, or Tuner Mute.**

This is most important for the last two. The fact that the **Stereo Volume Controller** is Global means that it can be set to achieve a good mix level that blends with the band, which is <u>maintained</u> when a new program is recalled. And if you step on a program change footswitch while tuning with the **Tuner Mute** engaged, the outputs will **stay muted** when the new program is recalled.

## Set MIDI Channel

This parameter sets the MIDI channel over which the **QUAD TUBE 150M** will transmit and receive. It can be set to any of the 16 MIDI channels, ALL for Omni mode (responds to MIDI information arriving on any channel), or OFF to disable MIDI reception.

> **NOTE:** When the **QUAD TUBE 150M's** MIDI Channel is set to "All" or "Off", program changes are transmitted on channel 1.

## Edit MIDI Mapping

**The QUAD TUBE 150M** can map (assign) each incoming MIDI program change number to recall any User program. A single User program may be mapped to many MIDI program change numbers.

---

*NOTE: Preset programs can be recalled only from the front panel, not through MIDI.*

---

To create a MIDI Program Change map:

- Press the "▲ " button when the display shows the message "EDIT MIDI MAPPING?" to access the map.
- Use the "▲" , "▼", Bank Up, Bank Down, or 0-9 buttons to select the MIDI program change number you wish to map.
- Press the "►" button to move the cursor to the User program value.
- Use the "▲", "▼", Bank Up, Bank Down, or 0-9 buttons to select the User program you want recalled when the selected MIDI program change number is received.
- • Press the "◄" button to move the cursor back up to the MIDI program change value and repeat steps 2-5 as many times as necessary until program changes have been mapped as desired.
- It is not necessary to map every program change; the default mapping will call the User program with the same number as the MIDI program change.
- When mapping is complete, press the "◄" button to return to the MIDI Function menu. There is no "STORE" function for MIDI mapping.

To restore the default map (1 to 1 mapping, User program # = MIDI program #):

- Press the "►" button while in the mapping screen until the display shows the message "RESET MIDI MAPPING?"
- Press the "▲" ("Yes") button to continue. The display will ask for confirmation.
- Press the "▲" ("Yes") button to restore the default map.

To abandon restoring the default map:

- When the display asks for confirmation, press the "▼" ("No") button. The display will return to the Reset screen.
- Press the left arrow to exit the Reset function and return to the mapping screen.

### MIDI Mismatch Warning (On/Off)
The most common cause of MIDI problems is not having the MIDI controller and the MIDI "slave" device (in this case, the **QUAD TUBE 150M)** set to the same channel. When MIDI Mismatch Warning is set to "On," the **QUAD TUBE 150M** will warn you if it receives MIDI messages on a channel other than the one to which it is set.

On: **The QUAD TUBE 150M** will display the messages, "MIDI CHANNEL MISMATCH," "CHECK MIDI SETTINGS" if it receives MIDI messages on a different channel than its own.

Off: No warning messages are given.

## Enable MIDI Monitor

When troubleshooting MIDI problems it is often helpful to be able to see what MIDI messages the **QUAD TUBE 150M** is receiving. This ability can also be useful simply to see what kinds of messages another MIDI device is transmitting. The MIDI monitor displays, in real time, all MIDI controller and program change messages being received by the **QUAD TUBE 150M.**

To enable MIDI monitoring:

- Press the "▲" button when the display shows the "ENABLE MIDI MONITOR?" message.

To exit MIDI monitoring:

- Press the "◄" button to return to the MIDI Function menu.

## Send Library

The **QUAD TUBE 150M** can transmit or receive all User programs over MIDI (as System Exclusive messages) to a librarian or sequencer program or another **QUAD TUBE 150M.**

To send all User programs over MIDI:

- Connect MIDI Out of the **QUAD TUBE 150M** to MIDI In of another **QUAD TUBE 150M** or a MIDI interface connected to a computer running a librarian or sequencer program.
- Press the "▲" button when the display shows the "SEND LIBRARY?" message. The display will prompt you to wait 15 seconds. Do not push any buttons on either unit for 15 seconds while the transfer takes place. The receiving unit will acknowledge when the library transfer has finished.

> **NOTE:** In order to receive a program or other System Exclusive messages, the **QUAD TUBE 150M** must be in Play mode.

## Send Current Program

**The QUAD TUBE 150M** can transmit the contents of the program currently being edited over MIDI (as System Exclusive messages) to a librarian or sequencer program, or receive a program from another **QUAD TUBE 150M.**

To send the current program over MIDI:

- Connect MIDI Out of the **QUAD TUBE 150M** to MIDI In of another **QUAD TUBE 150M** or a MIDI interface hooked up to a computer running a librarian or sequencer program.
- Press the "▲" button when the display shows the "SEND CURRENT PROGRAM?" message. The display will verify that the operation has been completed.

> **NOTE:** In order to receive a program or other System Exclusive messages, the QUAD TUBE **150M** must be in Play mode.

## Pedal Edit Controller

It is possible to edit the **QUAD TUBE 150M's** parameters remotely from a MIDI continuous controller. The designated controller will vary the value of the <u>currently selected parameter</u> (where the cursor is) in Program Edit mode, making possible hands-free parameter editing. This should not be confused with real-time MIDI operation, which does not alter the value in the **QUAD TUBE 150M's** working memory and is only active in Play mode.

The controller number can be selected using the    and buttons or by operating the controller while it is connected to the **QUAD TUBE 150M** and this parameter is selected. When the controller is operated, the number will  appear in the parameter value.

---

***NOTES:***
1) *If the controller is operated and its number does not appear in the Controller # parameter value check MIDI connections and verify that the controller and the **QUAD TUBE 150M** are set to the same channel. The MIDI Monitor function is very helpful for this type of troubleshooting.*
2) *The Pedal Edit Controller does not function in the Real-Time MIDI section.*

---

## Stereo Volume Controller

In addition to any volume parameters under control of RTM, the **QUAD TUBE 150M** offers Global control of stereo volume through MIDI. This volume control follows everything else in the signal path except the front panel Volume pot.

The controller number can be selected using the "▲" and "▼" buttons or by operating the controller while it is connected to the **QUAD TUBE 150M** and this parameter is selected. When the controller is operated, the number will appear in the parameter value. When set to "Out", no MIDI volume control is enabled.

## Tuner Mute Control

If is often necessary to tune while in play, however, it is not desirable for the audience to always hear that process. The Tuner Mute, when activated by a selected MIDI controller, mutes the audio to all of the **QUAD TUBE 150M's** outputs, allowing a tuner, connected between the instrument and the **QUAD TUBE 150M,** to be used silently. It is a Global parameter which remains in effect regardless of the program running.

The controller number can be selected using the "▲" and "▼" buttons or by operating the controller while it is connected to the **QUAD TUBE 150M** and this parameter is selected. When the controller is operated, the number will appear in the parameter value. When set to "Out", no mute control is enabled.

# OTHER SYSTEM EDIT FUNCTIONS

## Copy Presets to User

The factory Preset programs can be reloaded into User programs at any time.

To reload Preset programs:

- Press the "▲" ("Yes") button when the display shows the message "COPY PRESETS TO USER?" The display will ask for confirmation.
- Press the "▲" button to reload the Preset programs or the down arrow to abandon the reload.

---

> **WARNING!** *Loading the Preset programs will overwrite the contents of User memories 1-39.*

---

## Copy Single Programs
Programs may be copied from any location, Preset or User, into any User program.

To copy a program:

- Press the "▲ " ("Yes") button to access the second screen.
- Use the BANK UP, BANK DOWN, and number (0-9) buttons to select the source location. The Bank buttons will step first through all User banks, then through the Preset banks.
- Use the right arrow to move the cursor to the destination (TO:) parameter.
- Use the BANK UP, BANK DOWN, and number (0-9) buttons to select the destination User location. Programs can only be stored in User memories.
- Press the up arrow when the source and destination memories have been selected. The display will ask for confirmation.
- Press the up arrow to complete the copy. The display will show the message, "DONE!" to verify that the procedure is complete.

To abandon a copy procedure:

- When the confirmation message appears, press the down arrow to abandon the copy. The display will return to the selection screen.
- Press the left arrow to exit the copy function or select new source and destination values and continue with the copy.

## Swap Programs

Programs may be swapped between any two User memories. To swap a program:
- Press the up arrow to access the second screen.
- Use the BANK UP, BANK DOWN, and number (0-9) buttons to select the source (SWAP:) location.
- Use the right arrow to move the cursor to the destination (WITH:) parameter.
- Use the BANK UP, BANK DOWN, and number (0-9) buttons to select the destination location.
- Press the up arrow when the source and destination memories have been selected. The display will ask for confirmation.
- Press the up arrow to complete the swap. The display will show the message, "DONE!" to verify that the procedure is complete.

To abandon a swap procedure:

- When the confirmation message appears, press the down arrow to abandon the copy. The display will return to the selection screen.
- Press the left arrow to exit the swap function or select new source and destination values and continue with the swap.

## Panel Mode

Panel Mode offers the ability to make the QUAD TUBE 150M's front panel act like a MIDI controller when recalling programs. This is useful if you are accustomed to using a MIDI controller and are more familiar with the MIDI program change numbers associated with a program than with the QUAD TUBE 150M User program number or if your MIDI program change footswitch fails onstage. (In that situation, you would simply move the cable plugged into MIDI Thru to MIDI Out and use the front panel to send program changes to the rest of your MIDI gear.)

| | |
|---|---|
| Local: | Normal operation. |
| Controller: | Front panel program selection in Play mode uses the MIDI Program Change Map; in other words, the front panel buttons act like a MIDI controller when recalling programs, including transmitting the number entered from the front panel as a MIDI Program Change message. When this mode is selected, the display in Play mode will show the MIDI program change number and the User program to which it is mapped, but the map is not editable from this screen. Editing of the map can only be done in the MIDI Function menu. |

## Program Change Speed

This parameter changes how fast the **QUAD TUBE 150M** changes its audio parameters when you send a program change from a MIDI footswitch or the front panel.

| | |
|---|---|
| Normal: | Changes programs with very little popping between sounds. There is a short delay to allow for the quiet switching. |
| Fast: | Changes programs very rapidly, but may cause a pop during the change. The amount of pop is dependent on the parameters of the programs you are switching between. It is not recommended <u>that a note be played through a program change so as to minimize popping.</u> |

## Restore System Defaults

The default values for the System parameters listed on the next page can be restored at any time:

| Table 5: System Default Values | |
|---|---|
| MEMORY PROTECT | Off |
| PANEL MODE | Local |
| PROGRAM CHANGE SPEED | Normal |
| MIDI CHANNEL | All (Omni) |
| MIDI MISMATCH WARNING | On |
| PEDAL EDIT CONTROLLER | #31 |
| STEREO VOLUME CONTROLLER | #31 |
| TUNER MUTE CONTROLLER | #64 |

Restoring the System defaults also resets (unmutes) the Tuner Mute, and resets the Stereo Volume to full on (100%).

To restore factory System default values:

- Press the up arrow when the display shows the "RESTORE SYSTEM DEFAULTS?" message. The display will verify that the operation has been completed.

## Memory Protect

The memory protect function, when engaged, disables the ability to store edited programs.

Off:                                     Normal operation; edited programs may be
                                         stored into User memories.
On:                                      Store function disabled. Protects memory   from
                                         being erased or overwritten.

## Appendix A SPECIFICATIONS

### Input
| | |
|---|---|
| Connectors: | Unbalanced (TS) 1/4" phone. Max. Input Level (before input clip): |
| High Sensitivity | 2.57V RMS |
| Low Sensitivity | 9.90V RMS |
| Input Impedance: | 390 kiloohms |

### Preamp Outputs
| | |
|---|---|
| Connectors: | Unbalanced (TS) 1/4" phone Max. |
| Output Level: | +11.1 dBV (3.6V RMS) into 600 ohms |
| | +17.1 dBV (7.2V RMS) into 50 kiloohms |
| Output Impedance: | 2300 ohms |

### Power Amp Inputs
| | |
|---|---|
| Connectors: | Unbalanced (TS) 1/4" phone |
| Input Sensitivity: | 1.1V RMS |

### Studio Outputs
| | |
|---|---|
| Frequency Response: | Bandwidth limited to approximately 50 Hz-3 kHz |
| Connectors: | Balanced 3-pin XLR (pin 3 hot) |
| | Unbalanced (TS) 1/4" phone |
| Max. Output Level: | |
| Unbalanced: | +11.1 dBV (3.6V RMS) into 600 ohms |
| | +17.1 dBV (7.2V RMS) into 50 kiloohms |
| Balanced (Line): | +12 dBV (4V RMS) into 600 ohms |
| Balanced (Mic): | -16 dBV (.15V RMS) into 200 ohms |
| Output Impedance: | 500 ohms |

### Effects Loops Sends
| | |
|---|---|
| Connectors: | Unbalanced (TS) 1/4" phone |
| Max. Output Level: | |
| Line: | +11.1 dBV (3.6V RMS) into 600 ohms |
| | +17.1 dBV (7.2V RMS) into 50 kiloohms |
| Instrument: | -8.9 dBV (.36V RMS) into 600 ohms |
| | -2.9 dBV (.72V RMS) into 50 kiloohms |

### Effects Loop Returns
| | |
|---|---|
| Connectors: | Unbalanced (TS) 1/4" phone |
| Max. Input Level: | |
| Line: | +20 dBV (10V RMS) |
| Instrument: | 0 dBV (1V RMS) |
| Input Impedance: | 10 kiloohms |
| Power Consumption: | 350 watts max |
| Size: | H = 20" W = 26-3/4" D = 15 maximum |
| Weight: | 67 lbs. |
| Shipping Weight: | 81 lbs. |

### 4x4 MIDI Program Changer
| | |
|---|---|
| Size: | 9" Lx 2-1/8" H x 3-7/8" D |
| Weight: | 1.22 lbs. |

## Appendix B

### MIDI and the Quad Tube 150M

A brief discussion of the MIDI specification and the portions of it used by the **QUAD TUBE 150M.**

MIDI (Musical Instrument Digital Interface) is the means by which computer-based electronic musical instruments, such as synthesizers and samplers, and other related equipment can exchange information. MIDI is a specification agreed upon by the manufacturers of this equipment, and consists mostly of the definition of a number of software messages that, taken collectively, comprise something that is part communications protocol, part computer language, part file format. Technically, it is a one-way serial interface operating at a speed of 31.25 kilobaud. (Two-way MIDI communication is possible, it just entails using two cables between the devices.)

MIDI messages convey information about a musical performance, though they do not actually carry sound. Think of the modern equivalent of a player piano: the holes are MIDI note messages (which specify which note was played and how hard), while the player piano actually producing the sound is a synthesizer or sampler. A sequencer is a recorder of MIDI data, like a tape recorder, except that it doesn't use tape and it records MIDI data, not sound. In other words, the sequencer is what takes an actual performance and makes a MIDI "piano roll."

In order to allow multiple devices to be simultaneously but independently addressed, MIDI uses a channel system similar in concept to television. When a device is set to one of the 16 MIDI channels, it will respond only to messages carrying that channel number.

Note messages are the most commonly used, but the **QUAD TUBE 150M** has no need of these. The next most common messages are program change messages. These tell the receiving device to recall a specific program, or collection of settings, from its memory. When the **QUAD TUBE 150M** receives a program change message, it recalls one of the User programs; it is also capable of transmitting a program change message when a program is selected from the front panel. MIDI is capable of specifying up to 128 different program change numbers. The **QUAD TUBE 150M's** MIDI Mapping feature lets you assign each MIDI program change number to call up any User program you desire.

The **QUAD TUBE 150M's** Panel Mode is a special feature that allows the **QUAD TUBE 150M's** front panel to act as if it were a MIDI controller plugged into MIDI In. In this case, you press the MIDI program number on the front panel, and the **QUAD TUBE 150M** recalls the current User program currently mapped to that MIDI number. It will also show that mapping.

Many MIDI systems consist of a number of components. In order to achieve the maximum flexibility with the least effort, it was necessary to devise a system wherein a single program change message from a source could call up desired programs in all the components simultaneously, without having to constantly shuffle programs around in memory to match a program change number. This is the purpose of the **QUAD TUBE 150M's** program change mapping capability.

Another common type of MIDI message is Continuous Control messages. These are generally used to gestural controllers like Modulation Wheel and Volume. Interestingly, switch-type controllers, like Sustain Pedal, are also in this category, even though they are not actually continuous. The MIDI specification originally defined 124 different controllers, but later enhancements to the spec allow many more to be defined. A few very important controllers, notably pitchbend and aftertouch, have their own messages defined and are not considered part of the Continuous Controller class. The **QUAD TUBE 150M** can use Continuous Controller messages to control virtually any of the parameters available in Program Edit mode, but it does not recognize pitchbend or aftertouch.

The last type of MIDI message used by the **QUAD TUBE 150M** is System Exclusive. This type of message was originally intended as a "trap door" to allow both expansion of the MIDI

spec and use by manufacturers of features unique to their devices. The definition of the basic System Exclusive is quite sparse and open-ended to give manufacturers the greatest latitude. Each manufacturer uses their own format for these messages, and only their devices or computer software specifically designed to work with those devices will recognize them. There have been several more structured additions to the MIDI spec that are defined as types of System Exclusive messages, but it is the original use that the **QUAD TUBE 150M** employs. It is the **QUAD TUBE 150M's** System Exclusive implementation that lets libraries or programs be sent and received by the **QUAD TUBE 150M.** Computer software programs called librarians store and retrieve this kind of information.

There are numerous other types of MIDI messages that are not covered in this extremely brief discussion because they are not appropriate to the job the **QUAD TUBE 150M** performs. For more information on MIDI, there are several magazines that focus heavily on MIDI and its applications, and a number of books on the subject.

# Appendix C

## Troubleshooting

Some hints to aid in correcting problems.

Problems happen, always at a critical moment when they can least be afforded. Fortunately, the overwhelming majority of problems are simple in nature and usually involve no more than finding and correcting some oversight.

## Troubleshooting Tips

The difference between quickly fixing a problem and becoming angry and frustrated lies mostly in the approach taken in troubleshooting. Here are a few rules that can be applied to any troubleshooting situation:

      1)   Stay calm!

It is easy to become upset when a problem crops up, especially in a high-pressure situation such as in the "heat of the battle" onstage, but panic tends to close the mind, making it more likely that the fault will be overlooked. It may take a lot of effort to remain calm, but this is the single most important troubleshooting technique.

2)   Be methodical.  Use the process  of elimination  to isolate the cause.

Time is frequently wasted in troubleshooting situations by attacking the problem randomly. The most potent technique for finding the cause of a problem is the process of elimination. The first thing to try is eliminating everything in the middle of a signal chain and see if the problem still exists. Use any indicators or meters in the signal chain to help isolate where the signal exists and where it does not. If you are getting no sound from the **QUAD TUBE 150M,** for example, try setting all Status parameters to "Out" and disabling the Stereo Volume Control. If there is still no sound, the problem is either elsewhere or a truly serious one that cannot be dealt with on the spot (which does happen on occasion). If the problem disappears, you have isolated the cause as being something to do with the sections you removed. The next step is to add them back in one at a time, testing as you add each stage. In this way, you will quickly identify the culprit, allowing you to then focus on that area in the same way and find the specific cause.
This may sound like a procedure too time-consuming for a performance situation, but, in fact, it can be done very quickly once the process is familiar, and it offers the best chance of actually finding and correcting the problem.

3)   Don't overlook the obvious. Check simple mechanical things first.

When a problem occurs, don't immediately assume it is a complex MIDI mishap or some other arcane thing; most often it is the simplest possible explanation that is the right one. Did the unit become unplugged? Is it switched on? Are the connections correct and complete? (It is easy for a cable to be half-plugged in, which can cause very puzzling behavior.) Is there a bad cable?
Even once basic mechanical causes have been explored, continue thinking of the simplest explanation. If the **QUAD TUBE 150M** is not responding to MIDI, check the channel settings after checking the cabling connections.

## Audio Problems

Aside from the general suggestions given above, here are a few specific things to check for:

| Symptom | Possible Cause |
|---|---|
| Unit does not power up | Not plugged in |
| | Not switched on |
| | Fuse is blown in unit |
| | Wall power is bad |
| | |
| No sound, no signal LEDs | Problem with instrument |
| | Bad cable or connection going to **QUAD TUBE 150M** |
| | |
| No sound, some signal LEDs lighting | Some level parameter is set to zero. Check: **Master, Drive, OD, Standby switch** |
| | |
| No sound, LEDs lighting OK | Stereo Volume Controller is set to zero |
| | Gate Threshold is too high Volume control set to zero Tuner Mute is engaged Some level parameter is set to zero, (see list above) |
| | |
| Unwanted distortion/noise | Bad cable going to the **QUAD TUBE 150M** Problem in the instrument Effects Loop or XLR Level switches set incorrectly. Too much level within **QUAD TUBE 150M** (indicated by signal LEDs glowing red). Bad 12AX7 |
| | |
| Hum | Bad cable |
| | Problem in instrument or amplifier/monitor system Ground loop |

## MIDI Problems

| | |
|---|---|
| No response to controller | Incorrect or faulty MIDI cabling |
| | MIDI channel not set to match controller |
| | MIDI channel set to "Off" |
| | |
| No response to continuous controllers | Incorrect RTM assignment |
| | Parameters under control not "activated" |
| | |
| Incorrect program changes | MIDI map improperly set up |
| | |
| Does not receive library or program | Incorrect or faulty MIDI cabling. |
| | MIDI channel not set to match source. |
| | MIDI channel set to "Off." |
| | Memory protect "ON." |

The MIDI Monitor function found in System Edit mode displays incoming controller and program change messages. This can be very helpful in trying to isolate MIDI problems. The MIDI Mismatch Warning function, also found in System Edit mode, when enabled, displays a warning when the QUAD TUBE 150M receives MIDI messages on a different channel than that to which it is currently set. This, too, can be useful in troubleshooting.

# Appendix D

## Using a MIDI Continuous Controller for Remote Editing

> *NOTE: For the rest of the Tutorial, it is necessary to have a MIDI controller capable of sending program change and continuous controller messages connected to the **quad tube 150M.***

The **QUAD TUBE 150M** has the ability to be remotely programmed through MIDI. With the Pedal Edit feature, it is not necessary to be within reach of the **QUAD TUBE 150M** to adjust a parameter value in Program Edit mode; the pedal is used in place of .the "▲" and "▼" buttons. When in Program Edit mode, the controller assigned to Pedal Edit will change the value of whatever parameter is currently selected.

> *NOTE: When the Real-Time MIDI section of Program Edit mode is selected, the Pedal Edit feature is only active for the **Sense, Min** and **Max** parameters.*

- Press the "►" button until the display shows:
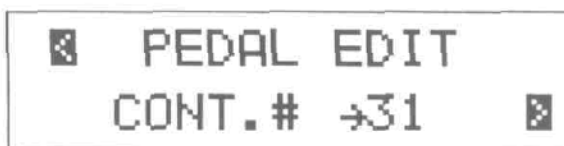
```
◪   PEDAL EDIT
    CONT.# →31    ◪
```

Connect a MIDI Continuous Controller, such as the ADA CCP/MXC combination, to the **QUAD TUBE 150M**'s MIDI In. Be sure that the controller is set to the same MIDI channel as the QUAD TUBE 150M.

> *NOTE: If the MIDI Mismatch Warning feature in System Edit is set to "ON," the QUAD TUBE 150M will display the error messages on the following page if it receives MIDI data on a channel other than its own.*

```
MIDI CHANNEL
  MISMATCH
```

```
CHECK MIDI
 SETTINGS
```

- Move the controller slightly. The QUAD TUBE 150M will detect the MIDI Continuous Controller number and change the Pedal Edit value to match it,
- The Pedal Edit value can also be set with the "▲" and "▼" buttons.

The assigned controller will now perform remote editing when the QUAD TUBE 150M is in Program Edit mode.

## Programming MIDI Control of Output Volume

The QUAD TUBE 150M's output volume can be controlled through MIDI. This is a global controller which affects all programs and does not change value when a program is changed. If, for example, Stereo Volume Controller is set to 50% and the program changed, the Stereo Volume Controller will remain at 50% regardless of any settings in the new program. This is useful for maintaining your overall balance level in a band situation.

- Press the "►" button once so that the display shows:
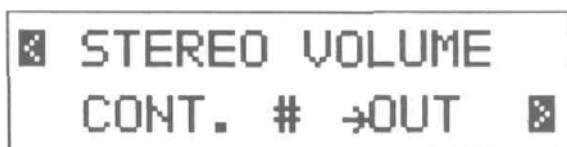
```
▨  STEREO VOLUME
   CONT.  #  →OUT    ▨
```

- Connect a MIDI continuous controller, such as the ADA CCP/MXC combination, to the **QUAD TUBE 150M's** MIDI In. Be sure that the controller is set to the same MIDI channel as the **QUAD TUBE 150M.**

*NOTE: If the MIDI Mismatch Warning feature in System Edit is set to "ON, " the **QUAD TUBE 150M** wilt display the previously shown error message if it receives MIDI data on a channel other than its own.*

- Move the controller slightly. The **QUAD TUBE 150M** will detect the MIDI continuous controller number and change the Stereo Volume Controller value to match it.

```
▨  STEREO VOLUME
   CONT.  #  →7      ▨
```

- The Stereo Volume Controller value can also be set with the "▲" and "▼" buttons.

Press the SYSTEM EDIT button to exit System Edit mode.

## Editing Real-Time MIDI (RTM) Parameters

Real-Time MIDI (RTM) allows control of virtually any **QUAD TUBE 150M** program parameter in performance through MIDI. The **QUAD TUBE 150M** can make up to sixteen assignments of MIDI controllers to **QUAD TUBE 150M** parameters for each program. Each assignment is called a **slot.** RTM assignments are made in Program Edit mode and used in Play mode. There are two modes for making RTM assignments: Quick and Expert. Expert mode allows more detailed programming at the expense of taking a little more time to do it. Quick mode is an extremely fast method of making assignments but does not allow them to be as finely tailored. See page 66 in the Reference chapter for complete information on programming RTM assignments in Expert mode.

## Mapping MIDI Controllers to Quad Tube 150M Parameters with RTM
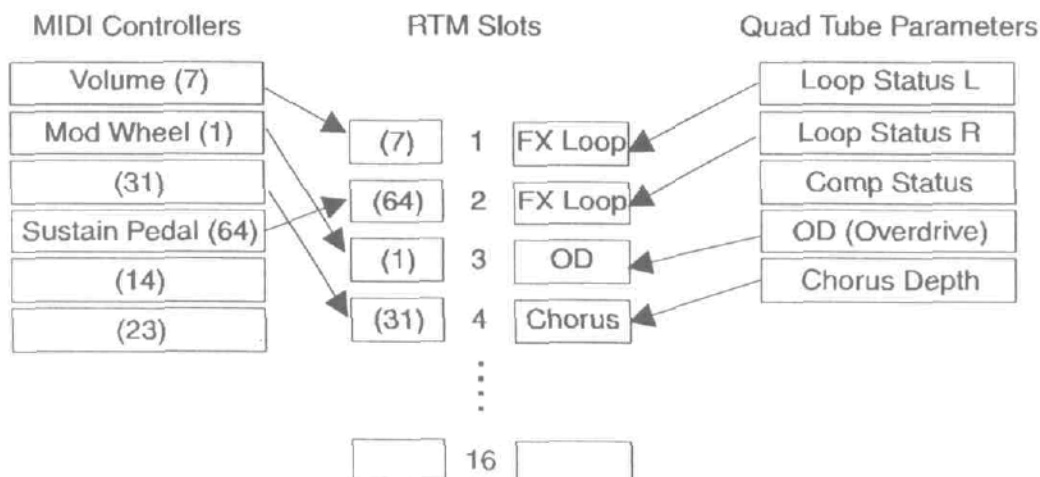


- Connect a MIDI continuous controller, such as the ADA CCP/MXC combination, to the QUAD TUBE **150M's** MIDI In. Be sure that the controller is set to the same MIDI channel as the **QUAD TUBE 150M.**

> **NOTE:** *If the MIDI Mismatch Warning feature in System Edit is set to "ON, " the **QUAD TUBE 150M** will display the error message previously shown in this chapter if it receives MIDI data on a channel other than its own.*
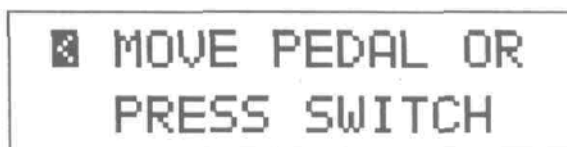
- Press the PRGM EDIT button to enter Program Edit mode.
- Press the "REAL-TIME MIDI" button to select the RTM section. The first screen sets the edit mode.

## Making RTM Assignments in Quick Mode

- If RTM Edit Mode is not set to "Quick", press the "▼" button once to toggle it from "Expert" to "Quick."
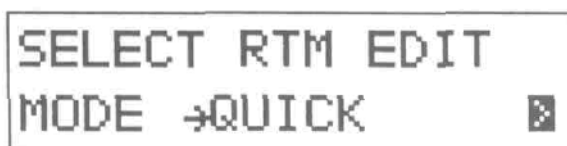
```
SELECT RTM EDIT
MODE →QUICK      ▨
```

- Press the "►" button to step to the next screen.

```
▨ MOVE PEDAL OR
  PRESS SWITCH
```

Move the controller slightly. The **QUAD TUBE 150M** will detect the MIDI controller number and whether it is a switch-type or continuous controller, then assign it to a slot, although it will not display the number. (Viewing controller number assignments can be done in Expert mode.)

- The display will show the parameter, if any, currently assigned to that controller. If there is no current assignment, the display will show:

```
▨    PARAMETER  →
        UNASSIGNED
```

- Use the "▲" and "▼" buttons to choose the parameter you wish to control from the picklist of available choices. Notice that only **toggle** parameters are available when a switch-type controller is detected, and only **variable** parameters are available when a continuous controller is detected.
- Press the "►" arrow once to step to the next screen. This is the RTM Preview function.

```
▨  REAL TIME MIDI
       PREVIEW
```

- Operate the controller and check that the effect is satisfactory.
- Press the "◄" button when you are finished previewing and the display will return to the "Move Pedal or Press Switch" message. You are ready to make your next assignment.

**Quad Tube 150M Program Chart** | Program # | Program Name | Author

**Voice** ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

**Drive and Master**

| Drive | OD | Master |
|---|---|---|

**Compressor** ☐ In  Ratio: ☐ 1.5:1 ☐ 2:1 ☐ 3:1 ☐ 4:1 ☐ 6:1 ☐ 8:1 ☐ 10:1 ☐ 15:1 ☐ 30:1

| Threshold | Gain |
|---|---|

**Tone Controls**

| Lo | Mid | Treble | Presence |
|---|---|---|---|

**Graphic EQ**

| 100 | 170 | 280 | 470 | 800 | 1.3K | 2.2K | 3.8K | 6.3K |
|---|---|---|---|---|---|---|---|---|

**Tremolo** ☐ In

| Depth | Rate | Hz | Waveform: ☐ Sin ☐ Tri ☐ Surf |
|---|---|---|---|

**Noise Reduction** ☐ In  Mode: ☐ Gate ☐ Fader

| Gate Threshold | Fader Threshold |
|---|---|

**Stereo Chorus** ☐ In  Mode: ☐ Rock I ☐ Jazz I ☐ Rock II ☐ Jazz II ☐ Rock III ☐ Jazz III

| Depth | Rate | Hz |
|---|---|---|

**Stereo FX Loop** ☐ In

| Mix Left | % | Mix Right | % |
|---|---|---|---|

**VariCAB** ☐ In

Mode ☐ Bypass ☐ 2x12 Vintg ☐ 2x12 Brite ☐ 4x12 Vintg ☐ 4x12 Brite ☐ Lo-Boost In ☐ Hi-Cut In

Right:

Mode Left: ☐ Bypass ☐ 2x12 Vintg ☐ 2x12 Brite ☐ 4x12 Vintg ☐ 4x12 Brite ☐ Lo-Boost In ☐ Hi-Cut In

| Quad Tube 150M Real Time MIDI Chart | | Program # | Program Name | | | Author |
|---|---|---|---|---|---|---|
| SLOT No. | PARAMETER | CONTROLLER No. | SENSE (forward or reverse) | MIN | MAX | |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

# *WARRANTY*

The ADA **QUAD** TUBE **150M** (excluding tubes and speakers) is warranted against defects in material and workmanship for a period of three years *(7,095* days) from date of purchase. Original factory-installed tubes are warranted against defects in material and workmanship for a period of ninety (90) days from date of purchase. Original factory-installed Celestion speakers are warranted against defects in material and workmanship for a period of one hundred and eighty (180) days from date of purchase. During the warranty period, ADA or its agent will, at its sole option, repair or replace defective pans and make necessary repairs to the product which is defective at no charge. If the failure is the result of misuse, abuse, accident or misapplication, ADA has no obligation to repair or replace the failed product. ADA retains the right to make such determination on the basis of factory inspection. ADA will not be responsible for any device damaged by the **QUAD TUBE 150M.** This warranty remains valid only if repairs are performed by ADA or its agent, and provided that the serial number on the unit has not been defaced, altered or removed. This warranty is expressly in lieu of all other expressed or implied. This warranty gives you specific rights. You may have other rights that vary from state to state.

## *OPTIONAL EXTENDED WARRANTY*

An optional ten-year warranty is available on the QUAD TUBE **150M** if the Extended Warranty protection policy is purchased within the first 90 days of original purchase. The warranty and covenants and restrictions are the same as the original three year warranty, only the term is increased an additional seven years. The Extended Warranty may be transferred one time only to a secondary owner if the Extended Warranty Transfer application is registered within 30 days of purchase. To purchase the Extended Warranty, fill out and return the enclosed application.* Extended Warranty purchase and Extended Warranty transfer application are the sole responsibility of the owner. Completion and mailing of applications do not constitute purchase or registration. Owners should call ADA Customer Service to make sure Extended Warranty applications and transfers have been received.

## *RETURNING UNITS FOR SERVICE*

If your QUAD TUBE 150M requires service, please call our Customer Service department at the number shown below for a Return Authorization (RA) number and shipping instructions. Do not ship repairs to ADA without an RA number.

### *ADA CUSTOMER SERVICE: (510) 532-1152*