A.R.T. X-12 MIDI MASTER CONTROL

Introduction

Thank you for purchasing an X-12 MIDI MASTER CONTROLLER —and congratulations: You now own a sophisticated, easy to use MIDI program recall device available today. Offering rugged construction and minimal programming, the X-12 uses specially designed integrated circuits and a straightforward user interface that quickly and easily gives you access to all of its features. Intense research and ergonomic design has been combined to produce a MIDI controller that is easy to use and will stand up to the abuses of live performance.

The ART X-12 MIDI MASTER CONTROL is a MIDI foot controller capable of sending MIDI Program Message Changes to any MIDI controlled device. MIDI Program Message numbers 0 thru 127 are sent in ascending order. To access presets above 127, the X-12 uses the MMA/JMSC bank select protocol. Program numbers are displayed as preset (or patch) numbers 1 thru 128 (200 or 255). Midi Program Message 0 is represented by preset (patch) number 1.

The X-12 is a simple device to use extending the flexibility of any MIDI controlled device. For instructions on how to implement and use the X-12 in your system, please read and refer to the rest of this manual.

Features

- Select 128, 200 or 255 MIDI programs
- Optional MIDI real time controller input
- Large easy read graphics
- Molded rubber switch pads
- Rugged steel enclosure
- Designed and manufactured in the United States of America

Fill in the following information for your reference:

Date of purchase: _____

Purchased from: _____

Serial number: 512-_____

512-5004-101

Quick Start Instructions

You've unpacked your X-12 and you're in a hurry to get it up and running. You probably would rather play with it than read the manual (at least, right now). Fair enough. But check out the basics, outlined here, just to get your X-12 on line. It should take only a couple of minutes for you to read through them, and then you'll be ready to fire up your X-12. Refer to this section if you have any difficulty. And later, when you want to get into more of the details of your X-12, check out the rest of the manual.

REAR PANEL VIEW

Quick Setup

Insert the supplied AC adapter's plug into the input labeled POWER IN on The X-12's back panel.

Connect a MIDI cord between your MIDI controlled device (MIDI IN) and the X-12's MIDI OUTPUT.

Plug the X-12's AC adapter into the wall socket (the X-12 is now powered up). Now turn on your system.

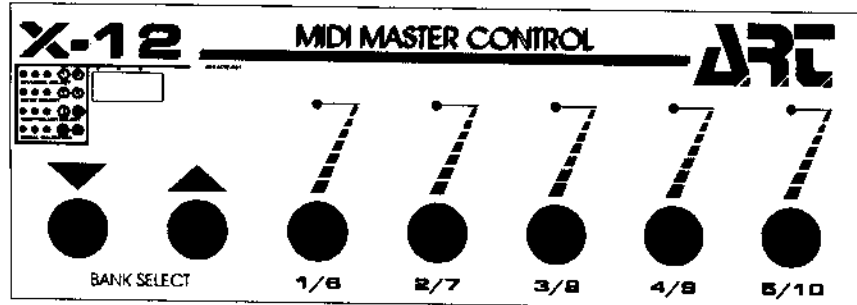Select program patches with the preset pads.

X-12 OPERATION

Powering The X-12

The X-12 is powered by an external AC adapter. Always make sure that its output jack is securely plugged into the rear of the X-12, and that the adapter is held firmly in an electrical outlet. Never operate the X-12 or AC adapter in the rain or in wet locations. If the AC adapter's cord is ever cut, discontinue using it and replace the adapter with a new one. To prolong its life, unplug the adapter when the X-12 is not in use. Alternatively, if the X-12 is mounted in a rack, plug the adapter into a switched power strip so that you can

conveniently turn it off with your other gear. Refer to the label on the adapter for proper operating voltages.

When power is first applied to the X-12, it runs through an auto-test sequence turning on everything that lights up for about a second. This allows the user to be sure that all display elements are working and that displayed information will be accurate.

FRONT PANEL VIEW

Seven Segment Display
The Seven Segment Display keeps you constantly informed of your Preset Number or Operation Mode. When programming the X-12, all information is shown using this display.

Pad LEDs
Each preset pad has an indicator LED to show which preset number is active. When you select a preset, the associated LED will light.

Selecting a Preset With the Pedal
Pads on the pedal are labeled Bank Select Arrow Up and Arrow Down, 1/6, 2/7, 3/8, 4/9 and 5/0. Pressing a numbered pad causes a MIDI program change message to be sent. The selected preset number is displayed in the window, and the foot pad's associated LED is lit to indicate the pad hit. Pressing the UP or DOWN pads moves you into the next higher or lower group of 5 presets. The display will show the lowest numbered preset available in this bank and the foot pad LED's are extinguished to indicate that the display has nothing to do with the last preset selected. The last preset selected remains active when these pads are being engaged. Pressing and

holding the UP or DOWN pedals causes the display to automatically scan banks until the foot pad is released. You can scroll through the last bank allowing you to start at the beginning numbers.

Optional External Pedal
You may hook up an external pedal such as the A.R.T. Power Pedal to act as an optional MIDI Controller Pedal. The AP-1 In Jack will accept information from an analog pedal. The X-12 will convert the analog information into a MIDI message for use in controlling MIDI assigned parameters in effects devices, keyboards, preamps or any other MIDI controllable device. You may use any analog pedal to access this function.

Use a standard guitar cable to connect the external pedal to the X-12. The connection is made from the Output of the pedal to the AP-1 IN jack of the X-12. When first using the external pedal, it is necessary to calibrate the pedal for optimum performance. See the section **Pedal Calibrate and Check Modes** later in this manual for instructions to calibrate your pedal.

Factory Reset:
A factory reset will restore all programmable parameters to their initial (factory) values.
To reset the unit, press the UP, 2, and 5 pads simultaneously.

Programmable Parameters which are reset by a factory reset are:
NOTE: default values are in parenthesis

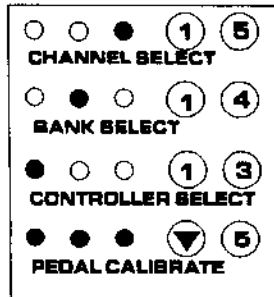|	
* Midi Channel Number	(channel 1)
* Bank Select protocol Mode	(mode 0, Program change only)
* Midi Controller Number	(MC4)
* Midi Inter message delay	(0)
* Pedal Offset	(0)
* Pedal Scale factor	(na)

PROGRAMMING THE X-12

Chances are you won't ever reprogram your X-12! If you do need to change something, refer to this section on how to do it. The chart silk screened on the chassis of the X-12 next to the seven segment display shows you which pads

to press to get into the correct programming mode. When you enter one of these programming modes, an edit indicator will light in the seven segment display. One of these edit indicators will light when you are changing MIDI Channel #, preset bank or MIDI Controller #. When all three indicators are lit, you are in pedal calibrate mode.

Whenever you reprogram the X-12, the new information is stored automatically when you leave edit mode.

EDIT INDICATOR PAD

Press pads 1 and 5 to change the MIDI Channel #.

Press pads 1 and 4 to change the preset bank select.

Press pads 1 and 3 to change the MIDI Controller #

Press pads (Arrow) Down and 5 to calibrate an external volume pedal.

Follow the directions in each of the following sections to reprogram your X-12

Channel Select:
To set the channel to something other than 1: Press both 1 and 5 pad simultaneously. In Channel Mode the Decimal point just to the left of the ones digit is illuminated; All the pad LEDs are illuminated as well during any set-up mode. The display will read *1-1*6 (i.e. channel 1 is displayed as "*1"). The * is the edit indicator. Up pad increases the channel number, Down decreases it, any number pad returns to normal ("preset") mode and the information is automatically saved.

Bank Select

MODE	PRESET RANGE
0	001-128
1	001-200
2	001-255

Press both 1 and 4 pad simultaneously. In Bank Select Mode , the decimal point to the upper left of the tens digit is illuminated. All the pad LEDs are illuminated. Mode 0 sends only the program change message, and so can only access 128 presets. Note that in bank mode 0 the last bank of "switches" starts at 126. This means that the two far right switches would (if they could) send preset change for presets 129 and 130. This is impossible in this mode so the display shows "E-P" (Error: Preset") for these two locations. In Bank Mode 1, the maximum recallable preset is 200, and in bank mode 2, 255. In both these modes, there are no "erroneous" presets.

The bank select protocol when enabled is always used in its entirety. That is, we don't rely on "running status." When the mode is changed from a mode which had enable bank select protocol to the one that doesn't, a bank select protocol message is sent to return all those units that might be listening to "bank 0" (presets 1-128).

> MODE 1; Use for non-A.R.T. manufactured products and A.R.T. products not listed below.
> MODE 2; Use with A.R.T. SGX 2000 EXPRESS, SGX NIGHTBASS STUDIO EDITION, ALPHA 2.0 STUDIO EDITION, and DR-X 2100 STUDIO EDITION.
> MODE 3; Use with A.R.T. FXR SERIES signal processors.

Controller Select:
Press both 1 and 3 pad simultaneously. In controller number set-up mode, the decimal to the upper left of the hundreds digit is illuminated. All the pad LEDs are lit. Controller numbers range from 0 to 121. Factory default controller number is #4.

Pedal Calibrate and Check Modes:

Whenever you hook up a volume pedal such as the A.R.T. AP-1 Power Pedal, it is a good idea to run it through pedal calibrate mode. Doing this will ensure your external pedal information is interpreted correctly by the X-12.

NOTE: The X-12 is designed to work best with a volume pedal with a 100K Anti log taper pot as its volume control. Other values and expression pedals may work, but the 'feel' will be more sensitive.

Press both Down and 5 pad simultaneously. The display shows the digitized pedal value. All display decimal points are lit as are the pad leds in both the set-up and check modes. Run the pedal through the full normal range of operation. Press any number pad. Now you are in Check mode, the display jumps to the MIDI value scaled from the converted number range. In this mode the display should run from 0 (maybe 1) to 127. These are the numbers that would be sent as controller values in preset mode. No controller messages are sent in any mode other than preset mode. Touch a second number pad to return to preset mode and save the newly measured pedal parameters.

Midi Delay Select

Press both Down and 4 pad simultaneously. Display changes to "d##" where ## is the number required to elapse between controller messages. No Edit Indicators are lit; but all the pad LEDs are lit. The default value is 0; the max value is 15.

The MIDI Delay sets a delay time between controller messages so the MIDI system doesn't overload. Unless a device in your system reports a MIDI overflow, leave this set at 0. Increments are 4ms with a maximum MIDI message delay of 60ms.

TROUBLESHOOTING

If you have difficulty with your MIDI Pedal, you can check the following:

1. Make sure that the power supply is working correctly. (Use it with something else, like a cassette player or measure its voltage)

2. Make sure that the connection between the eliminator and the pedal is snug.

3. Make sure that the MIDI connections between the devices pedal is snug.

If you see EP in the display, contact the factory. The pedal may still work, even if the EP is displayed at power-up, but don't be surprised if some feature of the pedal does not work. If ever EP is displayed by your unit, please contact the factory.

Display Definitions

1: An 01 in the display window after power has been applied indicates that the unit has tested itself, found everything to be O.K., and is ready to go to work.

EC: An EC (Error Checksum) in the display window indicates that the unit has tested itself, found something incongruous to proper operating conditions, and should be returned for service.

EP: When operating in the 128 preset mode, in the last bank of presets there are only 3 valid preset switches: 126, 127, and 128. If the rightmost two switches are depressed in this bank, no MIDI message is sent and EP (Error Preset) appears in the display to indicate that no preset is associated with this pad in this bank.