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INTRODUCTION

Thank you and congratulations on your new ART purchase. The MULTIVERB ALPHA 2.0 is the first dazzling result of the new ART digital VLSI technology offering a level of processing resolution with the sound quality of processors that used to cost thousands of dollars. This new technology boasts 24 bit architecture and an amazingly easy user interface. Some of the spectacular features of the ALPHA 2.0 are listed next.

FEATURES:

- * 20KHz bandwidth
- * New ASIC 24 bit digital integrated effects system
- * Over 50 effects to choose from
- * Built in Guitar/Bass tuner
- * Better than 90 dB signal to noise ratio
- * Multi-function rotary encoder
- * Over two octaves of pitch transposing
- * Multi interval pitch shifting
- * 200 memory locations
- * Pitch Transposer and Reverb combination
- * Sampling capabilities
- * Direct interface capability with the ART X-15 ULTRAFOOT
- * Full programmability of all parameters
- * Programmable mix and level
- * Digital contour
- * Stereo inputs and outputs
- * Phaser
- * Two assignable remote jacks
- * Power supply contained in unit
- * 9 volt DC output jack
- * Full MIDI system exclusive codes
- * Random access keypad
- * MIDI data monitor
- * Programmable 7 band equalizer

The MULTIVERB ALPHA 2.0 has the capability of providing you with a virtually endless number of sounds and effects. ART designed a combination of powerful processing and ease of use into the MULTIVERB ALPHA 2.0. We strongly suggest you read and refer to this manual while getting used to your new processor.

Record for your reference:

DATE OF PURCHASE _____

PURCHASED FROM _____

SERIAL NUMBER _____

SOFTWARE VERSION _____

471-5004-100

GETTING STARTED

We have included this section for those of you who can't wait to experience the sounds of your new ALPHA 2.0. Follow the hookup directions for the setup you use and then start playing. When you want to get to know your ALPHA 2.0 better, refer to the rest of this manual for details, hints, and examples. Till later.....

Additional information to get you started can be found in Appendix A.

A hookup diagram can be found on page 42.

For all hookup combinations:

1) Center the slider controls.

2) The first 30 presets in the MULTIVERB ALPHA 2.0 show off some of the many capabilities of the device. These patches include general purpose reverbs, reverb for mixdown, an automatic tuner, multiple pitch effects, vocal delay, enhancers, and sampling, chorus, flange, phasing and other special effects. After that you will find variations for different type sounds and effects. Some presets are set up for instant use with the ART X-15 ULTRAFOOT MIDI Controller. Use the X-15 to control certain parameters in the preset. We encourage you to take the time to listen to all the presets just so you can get a feel for the sounds and effects your MULTIVERB ALPHA 2.0 is capable of producing.

INSTRUMENT & GUITAR AMP

Plug your instrument into the Left Input jack located on the rear panel. Connect a cable from your instrument amp input to the Left Output jack. Turn the ALPHA 2.0 on first and then turn on your guitar amp. **TURN DOWN THE LEVEL OF YOUR AMP before you play!** Adjust your levels accordingly. If you are clipping your amp, back off on the Output Level of the ALPHA 2.0 with the Output slider.

INSTRUMENT & STEREO POWER AMP

Plug your instrument into the Left Input jack located on the rear panel. Connect a two cables from your power amp to the Left and Right Outputs. If your power amp is mono, connect the left input of the amp to the Left Output jacks. Turn the ALPHA 2.0 on first then turn on your power amp. Adjust the level with the Level control.

INSTALLATION

The MULTIVERB ALPHA 2.0 may be used in a variety of setups including: mixing consoles with effect send and return facilities, in the effects loop of an amplifier, directly in line between a musical instrument and amplifier or mixer and in the tape loop of a home receiver. It is not recommended to use the device as a preamp.

Self contained in an all steel single high 19" rack mount case, the MULTIVERB ALPHA 2.0 is designed for continuous professional use. For touring rack applications, care should be taken to support the units rear if the rack might be subjected to mechanical shock. NOTE: The front panel may bend if no rear support is provided. Mounting location is not critical, but for greater reliability we recommend that you not place the unit on top of power amps, tube equipment, or other sources of heat.

CONNECTIONS

POWER

This device is AC powered via a standard 3 conductor grounded power cable. Plug into any standard AC receptacle. We recommend the use of a surge protector to decrease the chance of equipment damage due to voltage surges or spikes on the line. For your own safety as well as the safety of others, do not remove the ground pin of the cable. Refer to the rear panel or the specifications for proper operating voltages.

All audio connections to the MULTIVERB ALPHA 2.0 are made at the rear of the unit via professional 1/4" mono phone jacks. The MIDI connections are accomplished via five pin "DIN" jacks on the rear panel. A 2.1mm female connector is the intended plug to access the 9 volt DC output.

INPUT

The Left and Right inputs are single ended (unbalanced) with an impedance of 1M ohm. True stereo processing is accomplished by using both inputs in a left/right application. If only one input is used, the signal is automatically routed to both channels.

OUTPUT

The Left and Right outputs are single ended (unbalanced) with a source impedance of 1.0K ohm, and can provide a stereo or mono output. When a true stereo signal is applied to the inputs, the resulting output is true stereo (dry signal only). If both outputs are used with a mono input signal, a stereo image is produced. Using one output with a mono or stereo source provides a mono signal combining the information from both outputs. If you do not want both output signals combined (such as only one delay time required), plug a dummy plug (an open 1/4" plug) into the unused output.

NOTE: The effect output is a processed combination of both the left and right input signals.

A variety of input/output combinations may be used with the MULTIVERB ALPHA 2.0. One in one out (mono), one in two out (stereo image), two in one out (summed mono), and two in two out (true stereo) may be achieved.

NOTES:

1) When using the MULTIVERB ALPHA 2.0 in the true stereo mode, only the dry signal will remain totally left and right orientated at the outputs. The processed signal will be a mix of the inputs with its own individual stereo image imposed by the algorithm used. This imitates the occurrence of natural reverberation in a normal room.

2) When you use one of the inverted type Flanger algorithms or the Panner, make sure you are using both outputs (stereo out), if you're using only one output you'll get NO SOUND! This is because since the two outputs are opposite and the ALPHA 2.0 sums the outputs, the signals cancel each other.

MIDI IN

This jack receives the MIDI signal containing the MIDI messages. It enables you to "talk" to the ALPHA 2.0 from an external source such as an X-15 ULTRAFOOT, a computer equipped with MIDI ports and associated software or a sequencer. Any MIDI information sent to the MIDI In jack is echoed to the MIDI Thru jack. When using the ALPHA 2.0 with an X-15 ULTRAFOOT, connect the MIDI cable to the 5 pin MIDI OUT jack on the X-15.

MIDI OUT

The MIDI output jack is used to transmit all MIDI control information from the MULTIVERB ALPHA 2.0 to whichever MIDI device is next in the chain. When using the ALPHA 2.0 with an X-15 ULTRAFOOT, connect the MIDI cable to the 5 pin MIDI IN jack on the X-15.

MIDI THRU

A MIDI Thru jack is provided on the ALPHA 2.0 allowing you to continue a chain of MIDI devices and let MIDI information pass "thru" the unit to the next one. Information leaving the Thru jack is a direct copy of the MIDI messages received at the MIDI In jack. The information is buffered so the integrity of the signal is not degraded when passing thru.

All MIDI Jacks are standard 5 pin DIN connectors utilizing standard MIDI connections. No phantom power is present on the unused terminals. ART recommends these unused terminals remain unused.

PWR OUT

The Power Output jack located at the rear panel provides an **OUTPUT** voltage of (+)9 Volts DC. Use this jack to power external devices requiring a wall mount adapter. The ART X-11 and X-15 can be powered with this power jack. The jack will accept a female connector with an inside diameter of 2.1mm. **Do not plug in any external power supply such as a wall mount adapter to this jack.** Doing this may cause serious damage to your ALPHA 2.0 or quite possibly yourself!

CONTROLS AND OPERATION

INPUT LEVEL INDICATORS

Three front panel LED's indicate signal at all times. They are labeled: PRES, NOM, and CLIP. These LED's display the status of the input signal after it has passed the Input level control and the seven band equalizer. The bottom LED (PRES) is green and lights when a small amount of signal is seen by the ALPHA 2.0. When you are operating with a nominal amount of signal the middle yellow LED (NOM) lights. Clipping is indicated by the top red LED (CLIP).

Adjust the amount of input level to operate the ALPHA 2.0 with the NOM LED lit the majority of the time. Allow for transients to light the CLIP LED

occasionally. If you find you are clipping the unit so the signal is distorted, simply reduce the signal level being sent to the MULTIVERB ALPHA 2.0 or decrease the Input slide control slightly.

Be sure you are not causing the ALPHA 2.0 to clip with the equalizer. For proper adjustment of level, review the Input Level Control section.

INPUT LEVEL CONTROL

The Input Level Control is located on the top right side of the front panel. This slide control adjusts the input signal to accommodate for a wide range of devices. Source inputs may range from musical instruments such as guitars and keyboards, mixing consoles or effects loops in preamps and amplifiers. Whatever the source, adjust the Input Level Control to light the NOM LED for the majority of the time and allow for transients to light the CLIP LED occasionally.

With line level devices (mixers, some keyboards, effects loops) center the slider and control the signal level from the effects send. Adjust the output level of the device sending the signal to the MULTIVERB ALPHA 2.0 so the CLIP LED is occasionally lit on soft peaks. Use the Input Level control to compensate for minor level adjustments.

If the Input Level Control is not adjusted properly or the input source has a low output level, noise and distortion will be heard at the output of the MULTIVERB ALPHA 2.0.

OUTPUT LEVEL CONTROL

The Output Level Control adjusts the final output level of the MULTIVERB ALPHA 2.0. With the slider fully to the left, there is no output signal present at the output jacks (0%). As you move the slider to the right the output signal level of the unit increases. When the slider is fully to the right, 100% output is achieved. Your output level most probably will be bumped a little up or down to compensate for small increases or decreases in the processed signal level.

SEVEN SEGMENT DISPLAY

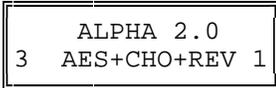
(Red Numeric Display)

The Seven Segment Display keeps you constantly informed of your Preset Number. Preset numbers are displayed from 001 to 200. When a preset is active the display is stable. A flashing display indicates you are in Edit Mode and a preset is ready to be recalled. The right decimal point will light to warn you your internal lithium battery is low and needs replacing. When using the Tuner, this display will become your tuning meter.

LIQUID CRYSTAL DISPLAY (LCD)

All information relative to a preset indicated by the Seven Segment Display is displayed in the LCD. Backlighting of the display is provided for ease of use in low light situations. The upper sixteen characters mainly display the Preset Title (name). If no title has been assigned, the display will read "<blank title>". In some cases other information will be displayed here. The lower sixteen characters display mainly the number and abbreviated description of effects stored, effects to be selected or deleted in the preset, and effect parameter information. Other information may appear here also. The view angle may be adjusted and is covered in the following section under the UTILITY function.

A user or factory preset would be displayed in the LCD like the following representation.

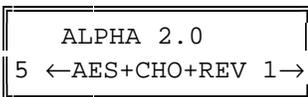


The title appears in the top half of the display. It may be up to sixteen characters long.

In the center of the bottom half of the display, three letter abbreviations of the effects in the preset appear.

The number displayed at the bottom left side of the LCD indicates how many effects are present in the preset. A number at the far right of the bottom half of the display indicates how many MIDI controllers are assigned to the preset when Performance MIDI is engaged.

A left or right arrow indicates more information is available for viewing. To view the information, press the Value button and turn the Encoder left or right.



ENCODER

The rotary Encoder enables you to make fast and accurate changes to presets, parameters, and values accessible in each preset or function. You will notice the encoder will turn continuously in either direction. When adjusting values, you may notice they sometimes "wrap" around to the beginning or end of their range. Other times when you reach a range end you will find you must go in the opposite direction to return to the beginning. Each click of the Encoder will change the parameter value one step.

CONTROL BUTTONS

The buttons on the front panel engage or select the different functions of the ALPHA 2.0. Modes of operation are indicated by LED's. When the LED is lit the function is active.

Ten of the control buttons serve a dual purpose. The split functions are set apart by color. While you are in the PRESET MODE (standard operating mode), all buttons labeled in purple are active. When the EDIT MODE is engaged, the numbered keypad entry buttons are used for preset effects control and utilities to be accessed. These functions are labeled in grey.

FUNCTION BUTTONS

The function buttons are those which select a particular function or feature to be executed or entered for modification. Status of the function button being in an active or inactive state is displayed by an LED next to the button identification. The function is active when the LED is lit.

PRESET

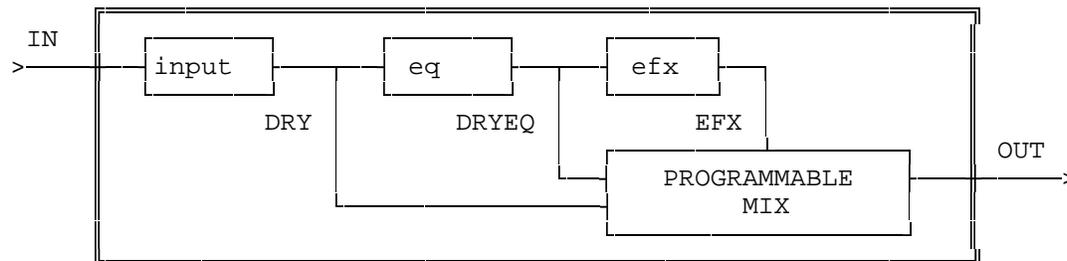
The PRESET button, when pressed, engages Preset Mode. Once this button is pressed, all 200 presets may be accessed by either the keypad or rotary encoder. When the ALPHA 2.0 is first powered on, you are automatically in Preset Mode. Audio is being processed constantly while you are scrolling through the presets with the encoder.

Two methods of Preset selection are used, scanning (with the ENCODER) and keypad entry. Selecting a preset with the encoder is easy. Scroll through the presets by turning the knob clockwise to go forward and counterclockwise to go backwards, the preset will instantly be recalled when you stop. Each click of the encoder will change the preset value by one.

For instantaneous recall of the preset using the keypad buttons, select the exact preset number. For example; if you want preset 196, locate the buttons shown on the front panel labeled 0 through 9 (the numbers are reversed image in purple), enter 1-9-6, instantly you will see the LCD read title and preset information. If you have audio hooked up you will notice the preset has been instantly recalled. If you enter two digits, there will be a slight pause before the preset is recalled. Entering only one digit will not recall a preset.

MIX

Think of the MIX control as a three channel mixer just before the output of the ALPHA 2.0. To set the MIX you must access and change each parameter individually. Press the MIX button until the parameter you wish to adjust is highlighted in brackets i.e.[EFX] then change the value with the Encoder.



When the MIX button is pressed it engages the programmable mix function and allows you to set the level of the DRY, DIGITAL EFFECT and PRE-DIGITAL EQ signals present at the output. The three Mix parameters are displayed as DRY, EFX and DRYEQ. They control the amount of level present at the output of the ALPHA 2.0. For example, when the Dry value is set at 100%, and the Effect and Eq values are 0%, the full dry signal and nothing else is present at the output(s). A fifty/fifty mix is achieved when both the DRY and FX values are equal to each other. DRYEQ allows you to bring out the EQ'd sound to the final output before it is processed digitally. This could be helpful in making the signal more pronounced.

You do not need to engage the PARAM button to change the Mix parameters. To disengage the MIX button, press either the Preset, Param or Value button.

DEFAULT VALUES: When you select a blank preset, the DRY and EFX levels are set at 75%, and the DRYEQ is set at 0%.

The programmed Mix parameters may be stored as part of the preset. To save the values in each preset, press the STORE button.

You may also control the Mix parameters with an external MIDI controller such as the ART X-15 ULTRAFOOT using the ALPHA 2.0's Performance MIDI.

CAUTION: If you have an Equalizer active in the preset its individual frequency levels will have an impact on the mix setting by raising or lowering the level of the effect signal.

NOTE: Presets may have varying output levels due to a level control as one of their parameters. You may vary the individual effect output Level parameter to directly change the apparent mix of the effect in the preset.

PARAM

When you engage the PARAM button, effect parameters within the current preset may be viewed. The ALPHA 2.0 automatically enters you into the EDIT mode when you select the PARAM button. Selection of the parameters may be done with the Encoder or by pressing the Param button repeatedly.

When you are in MIDI or UTILITY mode, pressing the Param button will allow you to select the available parameters with the Encoder knob or by pressing the Param button repeatedly.

While you are editing a preset, the Param button may be used as a cursor left key. Each time you press the button, the parameter value will scroll to the left.

VALUE

Every displayed parameter value in the ALPHA 2.0 may be changed. When the VALUE button is engaged, you automatically enter EDIT mode and are allowed to change the parameter value using the Encoder. Press the STORE button to save any changes you make.

While you are editing a preset, the Value button may be used as a cursor right key. Each time you press the button, the parameter values will scroll to the right.

Press the Value button and turn the Encoder left or right to view effects contained in a preset. A diagonal left or right arrow in the LCD indicates more information is available for viewing.

PROGRAMMING HINT: Press the Value button to change and view the parameters then use the Encoder to set the value. This way you don't have to switch between the Param and Value buttons to edit values.

BYPASS

Engaging the BYPASS button kills the effect's signal and "zeroes" (sets the bands flat) the EQ in the mix passing only dry signal to the outputs. When you first press the BYPASS button in either operating mode with a preset listed in the LCD, the display will first read [**** BYPASS ****], then it will list the preset name. The LED associated with the button will flash to indicate you are in the bypass mode. Pressing BYPASS again returns the unit to the ACTIVE mode indicated by the display [****ACTIVE****] for about two seconds and then just displaying the preset name and effects. Bypass level is determined by the Bypass Level parameter discussed in the Utility section.

NOTES:

1) If the MIX parameters are programmed DRY = 0% and EFX = >0% and the Bypass Level Utility parameter is set to =MIX DRY LEVEL and BYPASS is initiated, no signal will be present at the outputs.

2) If the DRYEQ is set at any level greater than 0% and Bypass is engaged, the EQ is "zeroed" and a "flat" signal is present at the outputs. This holds true even if DRY is set to 0%.

EDIT MODE

EDIT MODE is engaged when you press the EDIT MODE button. All creation of presets or preset parameter editing is done while in this mode. Titles, MIDI parameters, and Utilities are all accessed in Edit Mode. When in Edit Mode, all buttons associated with white lettering are active. All the control buttons work as well.

You may access all two hundred presets for modification or use while in Edit Mode. Edit Mode is automatically entered when you press either the PARAM or VALUE buttons.

Previewing Presets

You may preview presets while in Edit Mode by engaging the PRESET button. Use the Encoder to scan through the presets. Only the titles of the presets are shown, so it is helpful to know the contents. The processed output signal is not affected. To recall the preset when you are ready, press the RECALL button. Signal is being processed through the last active preset. The reason for this is so you can set up for the next preset change when you want it to happen. When you stop scanning, the preset number in the Seven Segment Display will be flashing. If RECALL is pressed, the display will stop flashing indicating the preset is now active.

EDIT MODE CONTROL BUTTONS

ENTER

Use the ENTER button when you want to complete an action such as adding an effect to a preset. When adding an effect there is a [?] after the name, press enter if you wish to insert this effect into your chain. A prompt (i.e. [ADD EQUALIZER?]) will appear in the LCD when it is necessary to press Enter to complete a task.

RECALL

The RECALL button is used to Recall presets while you are in Edit Mode. To Recall a preset (the Seven Segment Display will be flashing a Preset number), select the proper Preset and press the RECALL button. If you have been editing the parameters in a preset and wish to return them all to the original settings, press the Recall button.

ADD EFFECT

Pressing the ADD EFFECT button once opens the Add Effect function.

To add an effect to a preset, press this button and use the Encoder to select the effect you want to add to the chain. Turn the Encoder left or right to scan through your selections. Finalize the ADD EFFECT command (add the effect to the chain) by pressing the ENTER button. Doing this inserts the effect temporarily in memory. If audio is passing through the ALPHA 2.0, you will hear the effect when you press the ENTER button. To make the effect permanent, press the STORE button.

To close the Add Effect function and escape to Edit Mode, press the button once or press the Edit Mode button.

The Add Effect button is also used in the TITLE EDIT Mode to add characters and spaces to the title.

You can preview the effects you may add to an effect. **MAKE SURE YOU ARE IN THE EDIT MODE**, press the ADD EFFECT button once, notice the lower half of the LCD shows an available effect. The effects displayed as you turn the Encoder are those available to be added to the effects chain.

It doesn't stop there! There are many sub variables of each effect to be explored. Right now let's just worry about operation and not the effects themselves. To simplify matters let's step through an example depicting the selection of four effects. We will use some of the buttons not yet explained but doing it this way will make the understanding of the programming much easier. The control buttons we use now will be defined in detail later in the manual.

Adding Effects to a Preset

When you see text within the [] brackets, it is describing the text as it appears in the LCD.

- Enter EDIT MODE (press the Grey button).
- Using the Encoder, GOTO preset 151 (the Preset LED should be lit).
- Press the RECALL button [<blank title>, <no effects>].
- Press the ADD EFFECT button once, [ADD:EQUALIZER?].
- Press ENTER (you have just entered the eq into the chain), bottom display reads [1 EQL].
- Press ADD EFFECT and turn the Encoder 8 clicks, [ADD:REVERB-1?].
- Press ENTER (now the reverb algorithm is entered into the chain, display reads [2 EQL+REV].
- Press ADD EFFECT again, select the ACU-ENV-SIM, enter it into the chain. (you pressed the ADD EFFECT button once and then pressed the ENTER button), display should read [3 EQL+AES+REV].
- Press the ADD EFFECT button one more time and find then add REGEN-DDL-L! (After you press the ADD EFFECT button once, use the Encoder).
- *Display reads [4 EQL+AES+DDL→]
- *IF YOU WISH TO SAVE THIS CHAIN OF EFFECTS AS A PRESET YOU MUST PRESS STORE NOW.
- Press STORE.
- *The effects you have selected are now stored in preset 151.

You may have noticed a not equals sign at the bottom left hand side of the LCD. The not equals sign indicates the changes have been made to the original values of the preset. When Store is pressed this character disappears.

REMINDER: You have not set any parameters as of yet. Don't worry, we have preselected a nominal value for each of the parameters associated with an effect as a starting point. This provides a user reference to a sound instead of starting at point zero. We feel it is useful to hear a descriptive set of parameters so that you may tailor them to your own specific sound requirements. We'll look at these in just a moment as well as making a title for this preset. First, the DELETE key will be explained.

DELETE EFFECT

Pressing the DELETE EFFECT button once opens the Delete Effect function.

To delete an effect from a preset, press this button and use the Encoder to select the effect you want deleted. Turn the Encoder left or right to scan through your selections. Finalize the DELETE EFFECT command (delete the effect from the chain) by pressing the ENTER button. Doing this deletes the effect temporarily from memory. If audio is passing through the ALPHA 2.0, you will hear the change when you press the ENTER button. Press the STORE button to make the change permanent.

To close the Delete Effect function and escape to Edit Mode, press the button once or press the Edit Mode button.

The DELETE EFFECT button is also used in TITLE EDIT Mode to subtract characters and spaces from the title.

Deleting Effects From a Preset

When you see text within the [] brackets, it is describing the text as it appears in the LCD.

Recall preset 151, Press the EDIT MODE button, turn the encoder one click to the right and press STORE. You have just copied preset 151 into preset 152 so as not to lose preset 151 which we will use periodically through this manual.

-Press the DELETE EFFECT once. [DEL:EQUALIZER?]
*Do you want to delete the equalizer? NO.
-Turn the Encoder knob once click. [DEL:ACU-ENV-SIM?]
*Let's delete this effect.
-Press ENTER, [3 EQL+DDL+REV].
*The effect has been eliminated but not permanently. You will audibly hear the sound change when the effect is deleted.
*Press STORE to make this change permanent.
-Press STORE now.

With the elimination of an effect, you open up a space to insert another effect or leave things as they are.

If you press the DELETE EFFECT button and there are no effects in the preset, the display will read [DEL:NO FX TO DEL].

STORE

Any time you wish to permanently save parameter values in a preset, press the STORE button. All parameter values you have chosen will be stored into the preset as well as TITLE and MIX information. When you press the STORE button the LCD will display [PRESET STORED]. If the phrase [LOCKED/SELECT LOCATION 111-200] appears don't panic, presets 1 through 110 are factory presets and though the parameters may be changed, the new values cannot be stored without first UNLOCKING the presets (see UTILITY section).

TO DELETE A STORED PRESET, thereby releasing its memory to be used again, you must store a null preset at the preset number you wish to delete. A null preset consists of a blank title (all spaces, displayed as <blank title>) and no effects (displayed as <no effects>). Factory Preset 100 is programmed blank to make it easy to delete stored presets. Presets 111 through 200 are null when you receive your unit or after a factory reset.

REC/ARM

**YOU MUST BE USING A PRESET SET UP
FOR SAMPLING AND IN THE EDIT MODE FOR THIS FUNCTION TO OPERATE**

While you are using any of the Sampler algorithms you will need to "reset" the record parameter to be ready to record another sample. The REC/ARM button allows you to return the Sampler to Record-Ready status. Pressing this button wipes out the existing sample and resets the length to the original stored preset value.

To reset the MULTIVERB ALPHA 2.0 to record a new sample, press the REC/ARM button.

TRIGGER

**YOU MUST BE USING A PRESET SET UP
FOR SAMPLING AND IN THE EDIT MODE FOR THIS FUNCTION TO OPERATE**

This button accesses two parameters for the Sampler algorithm. It allows you to either record a sample of the program material or play back that portion (sample) of material you recorded.

When you first recall a Sampler preset it is usually geared up and ready to record a sample. Most of the Factory Presets using the Sampler in the ALPHA 2.0 are "record/ready". When the preset is recalled and signal is present to the ALPHA 2.0, the record is automatically triggered. All you need to do is press the TRIGGER button to playback the sample.

Now you may replay this sample as recorded at any time by pressing the button again. If the PLAY parameter is set in the SINGLE position and you hit the button quickly and repeatedly, you will get that stuttering "rap" effect. The sampled sound can be played back by hitting the button, MIDI, or using a footswitch connected to a properly programmed REMOTE jack.

You may determine the length of the sample time regardless of what the Length parameter is set for in the Preset with this button. Say your Length is set for 1.50 seconds and you feel the length should end at a specific point less than 1.5 seconds. All you need to do is press the TRIGGER button once when you feel the sample should stop. This automatically sets the Length parameter for that amount of time.

NOTES:

1) You will have to reset the LENGTH parameter back to its original value if the full length is required. To do this simply hit the RECALL button, doing this will restore the LENGTH parameter to its original value. (It is assumed the preset has been STORED)

2) You cannot store the audio sample in the ALPHA 2.0 or dump them through MIDI.

TITLE EDIT

One of the displays to appear in the upper portion of the LCD is the title of the preset. There is a total of sixteen spaces with the complete ASCII character set available to use in naming presets.

To either edit the title or create a new one you must first enter the Edit Mode.
-Press the Edit Mode button.
-Press the Title Edit button.
*[Title Edit] appears in the top half of the display and a cursor appears in the bottom half.

-Press the Value button and use the Encoder to select characters. If the Param button is pressed, you may move the cursor left and right with the Encoder to position it for the next character.
*Pressing the Value or Param buttons will move the cursor right or left one space at a time.
-Press the Store button to save your title.

The title will appear in the upper half of the LCD and any selected effects are in the lower half. If you wish to change the title, enter the Title Edit Mode and make the appropriate changes. Don't forget to STORE the new title.

If there are characters you wish to delete in the display use the Encoder to move the cursor and then press the ADD or DELETE EFFECT button. If you wish to delete all sixteen characters press the DELETE EFFECT or ADD EFFECT buttons sixteen times. By doing this you will eliminate any characters and have a blank display to start with.

The ADD EFFECT button can be used to add spaces to the title, the DELETE EFFECT button may be used to remove characters or spaces.

To exit or escape from the Title Edit mode, press the TITLE EDIT button once to escape to EDIT Mode or press the EDIT MODE button.

NOTE: When naming presets, try using descriptive titles relative to the preset. What the preset does, what sounds it makes, or what to use the preset for all will make preset selections easier to locate and use.

UTILITY

The Utility button allows you to access the user programmable utilities available in the ALPHA 2.0 and view system information. Listed in this section is information regarding the variable utility parameters with their default value settings and ALPHA 2.0 system data.

To change Utilities, first enter Edit Mode then press the Utility button. Once you are in Utility Mode you may change values by selecting the parameter and then changing the value. To do this select the parameter you wish to modify with either the Param or Value buttons. Use the Encoder to change the parameter value. (Make sure the Value LED is lit)

To view system data, press the Param or Value button until the information you're looking for appears in the display. Remember the Param and Value buttons act as a left and right cursor when they are pressed repeatedly.

You do not need to press the STORE button to save Utility parameters, it is done automatically when you exit Utility Mode.

To exit Utility Mode, press the Utility button to return to Edit Mode.

PROGRAMMING HINT: Press the Value button to change and view the parameters then use the Encoder to set the value. This way you don't have to switch between the Param and Value buttons to edit values.

BYPASS LEVEL [100%]

[0 to 100%] or [= MIX DRY LEVEL]

You may globally control the level of the signal of the Bypass signal when you bypass the ALPHA 2.0. The Bypass Level Utility parameter overrides whatever "DRY" level of the Mix set in each preset. Every time you Bypass the ALPHA 2.0, the through signal level will be whatever this value is set to. The initial default setting is 75%.

When the value is set to [= MIX DRY LEVEL], the DRY level setting (from the Programmable Mix) of the individual preset will be the signal level when the ALPHA 2.0 is bypassed. Set your Bypass Level to avoid wild jumps in volume when kicking the ALPHA 2.0 in and out.

REMOTE SWITCH 1 & 2

[= BYPASS ON/OFF]

The REMOTE jacks may be programmed to either Bypass the ALPHA 2.0, access the Increment or Decrement Preset mode, and Re-Arm or Trigger the Sampler. A footswitch and any two conductor cable is intended to be used with these jacks. If you are using an ART X-15 ULTRAFOOT, you can use the Bypass Jack feature on the X-15 to control one of the ALPHA 2.0's Remote Jacks. A momentary (normally open) switch should be used in applications other than the X-15's bypass feature.

Use the following chart to determine how the Remote Jacks may be programmed.

#	REMOTE 1	REMOTE 2
0	BYPASS ON/OFF	BYPASS ON/OFF
1	SAMPLE-TRIGGER	SAMPLE-TRIGGER
2	INCR PROGS 2	SAMPLER-ARM
3	N/A (no value)	DECR PROGS

Either jack may be programmed for the Bypass feature, each time the footswitch is activated (hot connected to ground) the BYPASS function is accessed and acts like the Bypass button on the front panel.

The jacks may also be programmed to allow a footswitch to be used for accessing either the Trigger or Re-Arm function when using the Sampler program. Either Remote 1 or Remote 2 can be assigned as the Trigger and Remote 2 may be assigned as the Re-Arm.

These jacks may also be programmed to increment and decrement through a set of presets. Remote 1 may be set for incrementing up and Remote 2 may be set for decrementing down. For decrement program to work, you must program Remote 1 for increment. You can not program the Remote 2 jack for decrement alone.

AUTO PM DISPLAY [ALWAYS DISPLAYED]

OFF, PRESET ONLY, ALWAYS DISPLAYED

This utility let's you set when the LCD displays Performance MIDI messages. When set to OFF, no message is displayed when the ALPHA 2.0 receives Performance MIDI messages. Preset Only allows messages to be displayed when in Preset Mode or when editing a preset. Always Displayed means the MIDI message will be displayed whenever the ALPHA 2.0 receives a (Performance) MIDI message.

NOTE: The ALPHA 2.0 always receives MIDI messages and responds to them. Only the display is affected when setting this value.

LCD View Angle [6]

Allows the viewing angle of the LCD Display to be adjusted. You may change the LCD view angle for the best visibility. The angle may be adjusted to maximize readability of the characters from top, front or under viewing angles. When viewing from the top, use a higher number. If you are viewing the display directly from the front, use the middle numbers. Viewing the LCD when the ALPHA 2.0 is above you, adjust the view angle to the lower numbers.

Software Version Level

Displays the software revision level currently installed in the MULTIVERB ALPHA 2.0. The current version as well as the date will be displayed in the LCD. The MULTIVERB ALPHA 2.0's software is contained in a socketed EPROM and is field replaceable. This software controls the MULTIVERB ALPHA 2.0's functions as well as its sounds. For your convenience write the software version in the space provided on the Introduction page at the beginning of the manual.

Preset Memory Allocation

MEMORY USED= ##
AVAILABLE= ####

Displays how much user memory has been used and how much user memory is available for further storage.

This utility informs you how much User Preset Memory has been used or how much memory there is available for storing presets. When you first access user memory there are approximately 5500 bytes (5.5 Kbytes) of space available. Each time you store a preset more space is used up. If the display will inform you that there is space available, but you are not allowed to store any more information, don't worry. You have probably stored, deleted, edited or moved presets and information thousands of times. The memory must be purged and reallocated. Save your presets to a MIDI storage device and perform a factory reset then reload your presets. Previous unavailable memory space is now free for storing information.

Recall Factory Preset

Allows you to recall any factory preset for comparison or editing purposes.

RECALLING A FACTORY PRESET

- Make sure you are in the EDIT Mode. (Press EDIT button if not)
- Press the UTILITY button.
- Use the Encoder or Param and Value buttons to select screen reading [HIT RECALL FOR ART PRESET #]
- Make sure the Value LED is lit.
- Use the Encoder to select the preset you want to recall, i.e. Preset 96.
- Press the RECALL button.

*Even though the title is not displayed in the LCD, the factory preset is now active, but, **IT IS NOT PERMANENT**. If you wish to make the preset permanent, you must **STORE** it. To store the preset in the first 110 locations, you must first unlock the existing preset. (See the next section about unlocking a preset) If you are copying to a location above 110, press the STORE button now.
-Press STORE, the preset is now stored into the location you selected.

Preset 1-115 Locked/Unlocked

Protects the first 115 presets from being overwritten.

The factory presets may be unlocked for editing. When you set the value for Unlocked, all factory presets are unlocked and ready to edit. To relock the presets, select the Locked value when you are done editing. At first you may not want to overwrite the factory presets, so increment up to a user preset and store the new preset.

UNLOCKING THE FACTORY PRESETS

- Make sure you are in the EDIT Mode. (Press EDIT button if not)
 - Press the UTILITY button.
 - Press the Param button.
 - Use the Encoder to select the screen displaying [PRESET1...115 = LOCKED].
 - Change the Value to UNLOCKED.
- *All presets are now unlocked.** If you wish to store new information in the Factory Presets, press the STORE button.

NOTE:Remember, when you unlock a preset, ALL presets are unlocked. To prevent overwriting presets, re-lock the presets following the directions to unlock a preset, only selecting the "LOCKED" value.

MIDI

You may gain access to all MIDI parameters and their values by pressing this button. Shown here are the variable MIDI parameters and their default value settings.

Once you are in MIDI Mode you may change values by first selecting the parameter and then changing the value. To do this first press the PARAM button and select the parameter you wish to change with the Encoder. Next press the VALUE button and use the Encoder to select a new value. You do not need to press the STORE button to save the changes with one exception, it is done automatically when you exit MIDI Mode. You need to press the Store button if you edit the On/Off status of an effect. To exit MIDI Mode, press the MIDI button to return to Edit Mode or the Edit button.

PROGRAMMING HINT: Press the Value button to change and view the parameters then use the Encoder to set the value. This way you don't have to switch between the Param and Value buttons to edit values.

MIDI Enable

PM= ON, OFF [ON]

PROG= ON, OFF [ON]

Allows you to turn on or off **Performance MIDI** and the Program change function independently. If you wish to use **PM** and not change presets, set PROG to = OFF.

MIDI Channel

OFF-16 [1]

Sets MIDI send and receive channel number.

OMNI Mode

ON, OFF [ON]

Sets MIDI OMNI mode on or off.

The MULTIVERB ALPHA 2.0 is shipped from the factory in OMNI mode, allowing it to receive MIDI PROGRAM numbers on any MIDI channel.

MIDI Program Table

[PROG= #]

[PRESET= #]

Allows you to edit the Midi Program Table (MPT).

Refer to APPENDIX B for examples of editing the MPT and further documentation.

FX ON/OFF ENABLE (USING X-15)

ON, OFF [ON]

When the MULTIVERB ALPHA 2.0 is used with an ART X-15 ULTRAFOOT, the two devices "talk" to each other. In order for the two devices to talk, Enable must be ON. The ALPHA 2.0 enables commands to be received from the X-15 to turn the effects in the preset on or off.

NOTES:

- 1) You must use two MIDI cables to communicate between the two units.
- 2) If you are not using the ALPHA 2.0 with an X-15, set the Enable to OFF.

'ENTER' TO EDIT ON/OFF CONTROLLERS

The purpose of being able to edit the ON/OFF controllers is to allow you to change effect status without an X-15 ULTRAFOOT. You may also change the MIDI controller number assigned to the effect.

Press the Enter button to set up the On/Off status of an effect in a preset. The effect status defaults to On when you first add the effect to the preset.

If you edit the On/Off status **YOU MUST PRESS STORE TO SAVE YOUR CHANGES.**

If you do not want an effect to be active instantly when a preset is recalled set the Status to Off and press Store. When the preset is next selected, the effect will be off. Access the EFFECT MODE of the X-15 and press the associated activator pad to turn on the effect.

SWITCH #	PAD	STATUS *	MIDI CONTROLLER
0	BYPASS	OFF	MC 84:MIDI CNTLR
1	EXCITER	ON	MC 70:MIDI CNTLR
2	COMPRESSOR	ON	MC 71:MIDI CNTLR
3	DISTORTION	ON	MC 72:MIDI CNTLR
4	EQUALIZER	ON	MC 73:MIDI CNTLR
5	EXPANDER/NOISE GATE	ON	MC 74:MIDI CNTLR
6	REVERB	ON	MC 75:MIDI CNTLR
7	DELAY	ON	MC 76:MIDI CNTLR
8	PITCH TRANSPOSER	ON	MC 77:MIDI CNTLR
9	FLANGE/CHORUS	ON	MC 78:MIDI CNTLR
10	SPECIAL EFFECTS	ON	MC 79:MIDI CNTLR

*The default status is On when the effect is selected.

MIDI Event data Monitoring Mode

When you select this Mode, MIDI information is displayed in either easy to read and understand or technical terms. The LCD displays certain MIDI events as they occur, regardless of which MIDI channel is selected. Information displayed is the MIDI event itself, its attributes with a choice of display formats (in either decimal or hexadecimal base 16).

For detailed information, please refer to the MIDI DATA MONITOR section.

PRESS ENTER TO:

SEND A PRESET

Dump a single preset via MIDI to another MULTIVERB ALPHA 2.0 or MIDI storage device.

Sending a Preset

Transferring a **single preset** to another MULTIVERB ALPHA 2.0 or a suitable MIDI device is accomplished by selecting the SEND A PRESET value and pressing the Enter button.

SEND ENTIRE MIDI PROGRAM TABLE

Dump entire MPT via MIDI to another MULTIVERB ALPHA 2.0 or MIDI storage device.

Sending MPT Information

Transferring the **entire MPT** to another MULTIVERB ALPHA 2.0 or a suitable MIDI device is accomplished by selecting the SEND ENTIRE MPT value and pressing the Enter button.

SEND ALL PRESETS

Dump all presets via MIDI to another MULTIVERB ALPHA 2.0 or MIDI storage device.

Sending all Preset Information

Transferring **all presets** to another MULTIVERB ALPHA 2.0 or a suitable MIDI device is accomplished by selecting the SEND ALL PRESETS value and pressing the Enter button.

IMPORTANT NOTE For:

RECEIVING Preset and MPT Information

To dump MIDI data into the MULTIVERB ALPHA 2.0 from either another MULTIVERB ALPHA 2.0 or an external MIDI device you must make sure that the MIDI channels match or OMNI mode is used. **The MULTIVERB ALPHA 2.0 will accept MIDI data at all times regardless of what operating mode it is in.**

PERFORMANCE MIDI [PM]

Performance Midi allows the MULTIVERB ALPHA 2.0 to have up to eight of its parameters per preset controlled simultaneously via MIDI. Selection of the parameter to be controlled, the actual MIDI controller, the Scale of the adjustment ratio and the starting Center Point of the Scale may be programmed from the front panel.

When you are in Preset or Edit Mode, the LCD will inform you of either Performance MIDI or FX ON/OFF information being received and what is being changed.

There is also a means to monitor MIDI information being sent to the MULTIVERB ALPHA 2.0. While you are in the PM Mode you can select the MIDI Monitor utility

and verify MIDI data being sent to the device. Refer to the MIDI DataMONITOR section for additional information.

A table of MIDI controllers can be found in Appendix E, Tables and Charts.

Presets in the ALPHA 2.0 are set up to be controlled by Performance MIDI via the ART X-15 ULTRAFOOT. See the section Operating the Multiverb ALPHA 2.0 with the X-15 ULTRAFOOT further on in this manual for more information. Don't let MIDI scare you, using Performance MIDI in an ART device is easy. In most cases (especially with an X-15) you virtually plug in and play. But, if you want to program, we've made that easy too.

Modification to select the specific values and ranges you want the parameter to cover is done by normal editing. The number displayed in the upper left corner represents the MIDI Controller you are working with.

Performance MIDI has four levels of programming information associated with it broken up into 4 screens. The first screen displays the information to define what parameter the assigned MIDI controller will control.

The second screen shows which MIDI controller is being used. The LCD will display the MIDI control number and its description (i.e. MC 4 FOOT CTRL). Incidentally, the default value is MC 4 which happens to be the Left Foot Controller on the X-15. The MIDI DataMONITOR may be selected for use in this screen to display MIDI data being sent.

The third screen displays the LOW value (minimum value) of the parameter's range. The fourth screen displays the HIGH value (maximum value) of the parameter's range. High and Low values refer to MIDI controller values. These parameters may be "swapped" to make the value change in a reverse or opposite direction.

While you are in the first screen you may also view MIDI data. Change the value until the bottom of the screen displays MIDI DataMONITOR. (turn the Encoder counterclockwise) You are allowed to change between MIDI controllers on the device you are sending MIDI data from (keyboards, X-15, etc.) and view the corresponding data in this screen. The top half of the display will show the numerical value of the MIDI data being received by the MULTIVERB ALPHA 2.0. Displayed in the bottom half is the actual MIDI controller being used. Use the Value Up or Down key to change the MIDI controller. When you change the controller, its MIDI data will be displayed in the top half of the LCD.

Screen 1

```
#1 IS CONTROLLING  
MIX:DRY = 0%
```

Screen 2

```
#1 CONTROLLER IS  
MC 4:FOOT CTRL.
```

Screen 3

```
#1 LOW VALUE:  
MIX:DRY = 0%
```

Screen 4

```
#1 HIGH VALUE:  
MIX:DRY = 100%
```

DESCRIPTION OF ALGORITHMS

The MULTIVERB ALPHA 2.0 offers over sixty effects selections for you to choose from. Each effect may have several types to select for specifically narrowing down the particular sound you are looking for. The algorithms are listed in five categories in the manual. These are: Signal Frequency Shaping, Swept or Modulated Effect, Natural Reverberation, Gated Reverberation, Delay Algorithms and Utilities.

There are some digital categories that cannot be combined together. Rather than tell you which effects cannot be combined, the MULTIVERB ALPHA 2.0 automatically selects (or defaults) to which algorithms may be combined and displays them in the LCD when you are "ADDING an EFFECT".

The algorithm name and abbreviation are shown in brackets [] under the effect title i.e. [EQUALIZER], [EQL]. Default settings for each parameter are shown in bold brackets [] at the beginning of the Parameter Values i.e. [0].

NOTE: When setting up your own presets, select the digital effect you want most in your effects chain first. By doing this, you are able to determine what other effects may be combined with the selected effect.

SIGNAL FREQUENCY SHAPING ALGORITHMS

EQUALIZER (SEVEN BAND EQUALIZER) [EQUALIZER],[EQL]

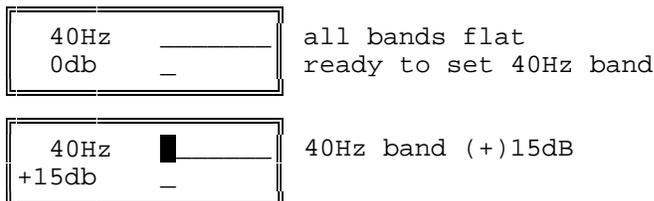
Parameters:

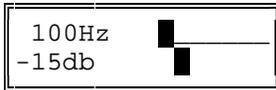
40Hz [0dB] (+/-) 2,4,6,9,12,15 dB
100Hz [0dB] (+/-) 2,4,6,9,12,15 dB
250Hz [0dB] (+/-) 2,4,6,9,12,15 dB
640Hz [0dB] (+/-) 2,4,6,9,12,15 dB
1.6KHz [0dB] (+/-) 2,4,6,9,12,15 dB
4KHz [0dB] (+/-) 2,4,6,9,12,15 dB
10KHz [0dB] (+/-) 2,4,6,9,12,15 dB

The Seven band Equalizer is located directly after the Digital Processor Input slide control. Each band may be adjusted plus or minus 15dB in twelve steps. Use the Equalizer to EQ the signal before it is sent to the digital effects.

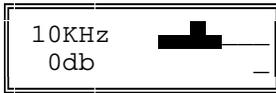
Levels of the bands are displayed in the LCD both by a complete bar graph display of all bands and the actual frequency with level setting. The LCD will display information like the following diagrams.

EQUALIZER GRAPHICS DISPLAY





40Hz band (+)15dB, 100Hz band (-)15dB
ready to set 100Hz band



40Hz,100Hz,640Hz band (+)6dB, 250Hz (+)15dB
ready to set 10Khz band

ACOUSTIC ENVIRONMENT SIMULATOR

[ACU-ENV-SIM], [AES]

Parameter:

[**OFF**] OFF, DEAD ROOM, HEAVY CARPET, WOOD/RUG MIX, DRAPE/CARPET,
WOOD + TILE, PEWS/PEOPLE, WOOD BAFFLES, LT FLOOR RUG, CEILING DRAPE, STONE
CEILING, WALL DRAPES, NATURAL WOOD, OPEN AMBNCCE

The Acoustic Environment Simulator (AES) allows you to simulate adding in baffles or sound absorption materials to alter the high end response of your signal. Of course this is a logical as well as necessary option, the NIGHTBASS reproduces sound to 20KHz, well above normal natural ambiance.

Better than an equalizer, the AES program actually knocks out frequencies over the entire spectrum, simulating real world acoustics. AES lets you warm up a room or hall, deaden drums, soften a vocal, sizzle your ears off with presence, or just make your material sound natural.

NOTE: When using AES alone, be sure to control its output level in the Mix with the ANFX parameter. If you are only using AES and no digital effects you must use this parameter to bring out the simulations at the output.

LOW PASS FILTER

[LOW-PASS], [LPF]

Parameter:

HF-CUT: = [**THRU**] THRU, 17.8K, 15.8K, 14.1K, 12.6K, 11.2K, 10.0K, 8.91K, 7.94K,
7.08K, 6.31K, 5.62K, 5.01K, 4.47K, 3.98K, 3.55K, 3.16K, 2.82K, 2.51K, 2.24K,
2.00K, 1.78K, 1.58K, 1.41K, 1.26K, 1.12K, 1.00K, 891Hz, 794Hz, 708Hz, 630Hz.

There is one algorithm defining the Low Pass Filter. This effect will always be placed at the front of the digital effects chain so as to tailor the frequency response of the effect and not the final product which should be further modified at the board. Thirty possible selections of roll-off frequencies are provided.

PITCH TRANSPOSER

[PITCH-TRANS], [PTr]

Parameters:

:TYPE= [**SMOOTH**] OFF, SMOOTH, NORMAL, QUICK
:PITCH = [**0**] (-)12 to (+)12 half steps in 1 half step increments
:FINE = [**0.00**] (-)4.00 to (+)4.00 half steps in 0.06 (six cents) increments
:BASE KEY = [**OFF**] OFF, 1 through 127 (key note on)
:REGENeration = [**0%**] 0 to 100 percent in % increments
:LEVEL = [**100%**] 0 to 100 percent level in % increments

DUAL PITCH TRANSPOSER

[DUAL PTR], [2PT]

Parameters:

:TYPE= [SMOOTH] OFF, SMOOTH, NORMAL, QUICK
:PITCH 1 = [0] (-)12 to (+)12 half steps in 1 half step increments
:FINE 2 = [0.00] (-)4.00 to (+)4.00 half steps in 0.06 (six cents) increments
:PITCH 2 = [0] (-)12 to (+)12 half steps in 1 half step increments
:FINE 2 = [0.00] (-)4.00 to (+)4.00 half steps in 0.06 (six cents) increments
:REG-FD = [PRE] PRE, POST
:LEVEL = [100%] 0 to 100 percent level in % increments
:POSTN1 = [31] 0 to 63 in on step intervals
:POSTN2 = [31] 0 to 63 in on step intervals

Pitch Transposing or pitch shifting can be used to develop helpful second harmonies or other effects for vocals, instruments and even mixed material.

There are three "types" of pitch transposing to choose from in the NIGHTBASS, Smooth, Normal and Quick. Smooth relates directly to processing and splicing the signal more slowly, resulting in a cleaner more precise sound. Use the Smooth setting when you are shifting pitch more than a fifth with lower frequency inputs such as the low strings on a guitar. Normal should be used for virtually all other applications of pitch shifting. There is a little less delay than the Smooth setting and qualitative processing is achieved. When you select the Quick setting, a shorter delay time is used causing faster splicing.

Generally you should use the Normal Type for most applications. If you encounter problems relating to delay time, use the Quick Type and if detuning becomes a problem, use the Smooth Type.

The PITCH control lets you set the range of pitch change in half steps. The FINE parameter lets you adjust the pitch in 6 cent intervals. Use the fine tune parameter to create or adjust micro pitch shifting or fat chorusing effects.

REGENERation is useful when you stack the Pitch Transposer with the MONO DDL algorithm. Each time a repeat is done it is shifted up or down by the pitch selected.

The Base Key parameter should be used when triggering the Pitch Transposer from a MIDI keyboard. The amount of pitch shift may be set by MIDI Note On messages. The values selected in the Base Key parameter correspond to the MIDI Key Number. Example: BASE KEY = 60, (= middle C) if a D above middle C is played, the shift amount will be set to (2). If base key is set to OFF, Note On messages will not affect pitch.

The Dual Pitch Transposer allows you to assign two separate intervals of pitch shifting at once. Interesting pitch combinations like a fifth combined with an octave (7 and 12 half-steps), really fat chorusing (+0.12 and -0.12 half-step), and chorusing with pitch shifting (+0.18 and any half-step interval) can be accomplished with this algorithm.

The parameters of the Dual Pitch Transposer algorithm are pretty much the same as the normal Pitch Transposer. Additional Pitch and Fine parameters have been added for the second interval. The Pitch and Fine parameter are denoted by a 1 and 2 (i.e. Pitch1, Fine 2).

A new parameter, Regeneration Feed ([RGN-FD]) controls where the digital delay's (if used) regeneration comes from. The insert point is either before (PRE) or after (POST) the first voice. When the Stereo Digital Delay is used with the Dual Pitch Transposer and the RGN-FD is set to POST, the glissando effect of the normal Pitch Transposer is the result. Use the PRE setting, for a simple predelay before the pitch shift occurs. Only the Short Stereo Delay is available for use with the Dual Pitch Transposer.

The Position ([POSTN1 and 2]) parameter lets you set where in the sound field each individual pitch is heard. The default setting is center field. When the value is 0, the signal appears full right. A value of 63 is full left.

SWEPT OR MODULATED EFFECT ALGORITHMS

FLANGER

[FLANGER], [FLA]

Parameters:

:TYPE= [**POST REVERB**] FLANGER OFF, POST; REVERB, INV L, INV R, INV L+R,
PRE; REVERB, INV L, INV R, INV L+R
:WIDTH= [**71%**] 0 to 100 percent in % increments
:SPEED= [**0.84Hz**] 0.04Hz to 27.3Hz
:REGENERation= [**76%**] 0 to 100 percent in % increments
:LEVEL= [**100%**] 0 to 100 percent in % increments

A wide range of flanging effects may be created with the MULTIVERB ALPHA 2.0. Normal and inverted flanging is available to you. An inverted flanger type reverses (inverts) one output from the other. The inverted types are listed as INV L and R, where L and R are Left and Right.

NOTE: When you use one of these inverted types, make sure you are using both outputs (stereo out), if you're using only one output you'll get NO SOUND! This is because since the two outputs are opposite and the ALPHA 2.0 sums the outputs, the signals cancel each other.

The base delay of the Flanger is set and the sweep WIDTH and SPEED is user controlled. REGENERation may be adjusted to vary the "strength" of the processed signal. The output level of the FLANGER may be adjusted to control it's "depth" in the preset. When the Flanger TYPE= POST the flanger is positioned last in the chain. This is to assure that maximum effect and presence is maintained in all effects combinations. Using Flanger TYPE= PRE positions the FLANGER in parallel with any Reverb or DDL effect. By positioning the Flanger like this, the processed signal is not delayed or reverberated and then flanged.

CHORUS

[CHORUS], [CHO]

Parameters:

:TYPE= [**POST**] OFF, POST, PRE,
:WIDTH= [**34%**] 0 to 100 percent in % increments
:SPEED= [**0.84Hz**] 0.04Hz to 27.3Hz
:DELAY= [**30ms**] 0 to 47ms in 1 ms increments
:LEVEL= [**100%**] 0 to 100 percent in % increments

Chorus may be used to thicken or sweeten the final processed sound. It is created by sweeping a comb filter through a base delay time and generally using between a 30 to 60 percent mix between the dry and wet signal. The base delay time plays

an important role in the perception of the effect. Longer base delays are more preferable to give a deep rich sound to vocals and guitars, while shorter base delays are used for more delicate enhancement purposes. The width plays an important role in the range of perceived effect and is best used in conjunction with the speed parameter. Like the FLANGER, the effect type may either be POST or PRE located in relation to reverb or delay. The output level of the CHORUS may be adjusted to control it's "depth" in the preset.

PANNER

[PANNER], [PAN]

Parameters:

:MOD % = [100%] 0 to 100 percent in % increments

:SPEED= [2.16Hz] 0.04Hz to 27.3Hz

MIDI-PAN

[MPN]

Parameter:

POSITN = [64] 0 to 127 in 1 step increments

Panning automatically pans the audio image from the left to the right in the stereo sound field. By varying the MODulation, you adjust the "depth" into the stereo field (how far left and right you go). The SPEED merely controls the rate at which you do so.

When you choose the Panner, the signal is automatically panned by the ALPHA 2.0 from left to right at a depth and speed you have set. Choosing the MIDI-PAN allows you to assign a MIDI Controller to change the signal's position with an Expression Pedal or other MIDI device.

NOTES:

- 1) When using the panner, you should always set your MIX DRY level to 0%. This ensures complete signal panning from left to right (full right-full signal... no signal left and vice versa).
- 2) When you use the Panner, make sure you are using both outputs, if you're using only one output you'll get NO EFFECT! This is because the two outputs are summed and the signals cancel each other.

TREMOLO

[TREMOLO], [TRM]

Parameters:

:MOD % = [100%] 0 to 100 percent in % increments

:SPEED= [2.16Hz] 0.04Hz to 27.3Hz

Tremolo creates an amplitude modulating effect at the output. The actual output signal level is being cut in and out at a certain rate. Use the MOD parameter to control the depth of the Tremolo. Re-create the effect found on vintage as well as current guitar amplifiers.

PHASER

[PHASER], [PSR]

Parameters:

TYPE= [POST] OFF, POST, PRE
WIDTH= [65%] 0 to 100% in % increments
SPEED= [0.84Hz] 0.04Hz to 27.3Hz
REGEN= [50%] 0 to 100% in % increments
DEPTH= [100%] 0 to 100% in % increments

The Phaser algorithm recreates classic phaser sounds from the past. A three notch design is used to develop stunning effects, killer sounds, and of course, pure sonic destruction!

The sweep WIDTH and SPEED is user controlled. REGENERation may be adjusted to vary the "strength" of the processed signal. The DEPTH parameter controls the intensity of the effect in the preset. When the TYPE= POST the phaser is positioned last in the chain. This is to assure that maximum effect and presence is maintained in all effects combinations. Using TYPE= PRE positions the Phaser in parallel with any Reverb or DDL effect. By positioning the Phaser like this, the processed signal is not delayed or reverberated and then phased.

NATURAL REVERBERATION ALGORITHMS

REVERB-1

[REVERB-1], [REV]

Parameters:

:TYPE= [HALL-1] HALL-1, ROOM-1, PLATE-1, VOCAL-1, OFF
:IN = [PRE DDL] PRE DDL, POST DDL
:DECAY = [2.4s] 0 to 25 seconds in varying increments
:HFDAMP = [14%] 0 to 50 percent in % increments
:POSITN= [83%] FRONT to REAR in % increments
:LEVEL = [100%] 0 to 100 percent in % increments

REVERB-2

[REVERB-2], [REV]

Parameters:

:TYPE= [HALL-2] HALL-2, ROOM-2, PLATE-2, VOCAL-2, OFF (REVERB-1 TYPES are also available)
:IN = [PRE DDL] PRE DDL, POST DDL
:DECAY = [2.4s] 0 to 25 seconds in varying increments
:HFDAMP= [14%] 0 to 50 percent in % increments
:POSITN= [83%] FRONT to REAR in % increments
:LEVEL = [100%] 0 to 100 percent in % increments

REVERB-3

[REVERB-3], [REV]

Parameters:

:TYPE= [**HALL-3**] HALL-3, ROOM-3, PLATE-3, VOCAL-3, OFF
(REVERB-1 and REVERB-2 TYPES are also available)
:IN = [**PRE DDL**] PRE DDL, POST DDL
:DECAY = [**2.4s**] 0 to 25 seconds in varying increments
:HFDAMP= [**14%**] 0 to 50 percent in % increments
:POSITN= [**67%**] FRONT to REAR in % increments
:DIFFUS= [**100%**] 40 to 100 percent in four % increments
:LEVEL = [**100%**] 0 to 100 percent in % increments

REVERB-1 algorithms are best used when you are using multiple effects. They have less density and are more suited to effects where the reverb is not the main effect but is used for presence.

REVERB-2 algorithms use more delay and have a higher complexity than the REVERB-1. REVERB-3 algorithms are the most complex and dense. Always use REVERB-3 when building "reverb only" programs.

The TYPES of reverb are what make up the reverberant space. The smallest space is the Plate. Generally this reverberant sound is used for tight and harsh sounding reverb. Room and Vocal types are the next size spaces. They tend to be a little looser allowing the sound to "bounce" around more adding color to the sound. The Hall types are the largest allowing you to fill in the spaces with reflections and build up density.

Once you decide what type of space is required, the length of DECAY is selected. Generally the size of the space is proportional to the time it takes the signal to decay. The larger the space, the longer the decay. Don't stick to this rule! Many quality sounds are made by bending the rules and allowing for creativity.

Since reverberant spaces tend to boost high frequencies the High Frequency Damping (HFDAMP) parameter allows you to damp out frequencies as natural damping would in a reverberant space. Putting up baffles, carpeting, drapes or wood in the space is what this parameter simulates. The higher the value, the more damping.

Position (POSITN) puts you as a listener where you would hear the sound if you were in the space. Front positions you closest to the initial signal so you here more 1st reflections and the reverberant decay is in the background. As you position yourself more towards the Rear, you "mix" the initial sound to reverberant sound ratio. At the Rear of the space, you hear the signal decay with all the reflections and very little initial sound.

Diffusion (DIFFUS) is how much the sound bounces around in the space. The lower diffusion % is looser and the smoothest at 100%.

LEVEL adjusts the effect level of the preset.

GATED REVERBERATION ALGORITHMS

GATE-VERB-1

[GATE-VERB-1], [GAT]

Gated Reverb

Parameters:

:TYPE= [**SLOPE-1**] SLOPE-1, FLAT-1, RVRS-1A, RVRS-1B, OFF
:IN = [**PRE DEL**] PRE DDL, POST DDL
:DECAY = [**0.25s**] 0 to 0.25 seconds in :DECAY = 0.05 to 0.25 ms in 5 ms increments
:DIFFUS= [**100%**] 60 to 100 percent in four increments of 20%
:LEVEL = [**100%**] 0 to 100 percent in % increments

GATE-VERB-2

[GATE-VERB-2], [GAT]

Gated Reverb

Parameters:

:TYPE= [**SLOPE-2**] SLOPE-2, FLAT-2, RVRS-2A, RVRS-2B, OFF
:IN = [**PRE DDL**] PRE DDL, POST DDL
:DECAY = [**0.40s**] 0.05 to 0.40 seconds in 5 ms increments
:DIFFUS= [**100%**] 60 to 100 percent in four increments of 20%
:LEVEL = [**100%**] 0 to 100 percent in % increments

GATE-VERB-3

[GATE-VERB-3], [GAT]

Gated Reverb

Parameters:

:TYPE= [**SLOPE-3**] SLOPE-3, FLAT-3, RVRS-3A, RVRS-3B
:DECAY = [**0.40s**] 0.05 to 0.40 seconds in 5 ms increments
:DIFFUS= [**100%**] 60 to 100 percent in four increments of 20%
:LEVEL = [**100%**] 0 to 100 percent in % increments

Both GATE-VERB-1 and GATE-VERB-2 have forward and reverse gated reverb algorithms which are not quite as dense or complex as those found in the GATE-VERB-3 algorithms. For an equal decay, GATE-VERB-1 is denser than GATE-VERB-2. The decay times found in GATE-VERB-2 are longer. When used in a stack of effects these gated sounds will fill in nicely. If you choose to use these effects alone, they will be loose and moderately sparse. By varying the amount of diffusion you directly affect the tightness (or looseness) of the sound. High diffusion equates to a tighter effect.

GATE-VERB-3 algorithms are the most complex and dense. Always use GATE-VERB-3 when building "reverb only" programs. The difference between normal reverb decays and decays when a gated program is the normal decay gradually fades into nothing while the gated decay ends in an abrupt manner. The most interesting gated program is the flat setting. Here there is no decay but the equivalent of a short burst of sound.

DELAY ALGORITHMS

TAP'D-DDL-S

[TAP'D-DDL-S], [DDL]

Tapped Digital Delay - Short

Parameters:

:TYPE:= [**FLAT1m**] FLAT-1m, FLAT-1s, RVRS-1m, RVRS-1s, SLOPE1m, SLOPE1s, (E)
FLAT-2m, FLAT-2s, RVRS-2m, RVRS-2s, SLOPE2m, SLOPE2s, (S)
FLAT-3m, FLAT-3s, RVRS-3m, RVRS-3s, SLOPE3m, SLOPE3s (L)
:TAPS= [**2**] 1 to 7 in one step increments
:DELAY* = [**100ms**] 0 to 960ms increments:5ms;0-350, 10ms;350-700
20ms;700-960
D-FINE* = [**0ms**] 0 to 50ms in 1ms increments
:REGENeration = [**76%**] 0 to 100 percent in % increments
:LEVEL= [**100%**] 0 to 100 percent in % increments
*Total delay possible is 1010ms.

TAP'D-DDL-L

[TAP'D-DDL-L], [DDL]

Tapped Digital Delay - Long

Parameters:

:TYPE:= [**FLAT-1m**] FLAT-1m, FLAT-1s, RVRS-1m, RVRS-1s, SLOPE1m, SLOPE1s, (E)
FLAT-2m, FLAT-2s, RVRS-2m, RVRS-2s, SLOPE2m, SLOPE2s, (S)
FLAT-3m, FLAT-3s, RVRS-3m, RVRS-3s, SLOPE3m, SLOPE3s (L)
:TAPS= [**3**] 1 to 7 in one step increments
:DELAY* = [**240ms**] 0 to 1100ms increments:5ms;0-350, 10ms;350-700
20ms;700-1000, 50ms;1000-1100
D-FINE* = [**0ms**] 0 to 50ms in 1ms increments
:REGENeration = [**76%**] 0 to 100 percent in % increments
:LEVEL= [**100%**] 0 to 100 percent in % increments
*Total delay possible is 1150ms

There are three levels of tapped delays in the MULTIVERB ALPHA 2.0. These are what we call Even (E), Shortened (S), and Lengthened (L). (1's are Even, 2's are Shortened, 3's are Lengthened) Even means that the delay taps are at evenly spaced intervals. Shortened means that as the taps approach the set delay, the intervals are closer together. As the taps approach the set delay in the Lengthened mode they are farther apart.

In the types you will see an [m] and an [s], the [m] means mono and the [s] signifies stereo. The mono tapped delay has its left and right taps at the same delay points where the stereo taps are staggered. When using the stereo tapped delays the first right tap is half the delay time before the first left tap.

There also are three slopes used in the tapped delays, Flat, Reverse and Forward. Flat has a flat linear response. Reverse increases in amplitude exponentially as the signal approaches the end. Forward exponentially decreases in amplitude as the signal approaches its end point.

TYPE 3 taps are dense and full. Use the longer tapped delay programs to add some expansiveness to short reverb patches. Use the longer tapped delays especially the Sloped algorithms to create a fundamental front end reverb.

REGEN-DDL-S

[REGEN-DDL-S], [DDL]

Regenerated Digital Delay - Short

Parameters:

:DELAY* = [100ms] 0 to 960ms increments:5ms;0-350, 10ms;350-700
20ms;700-960

D-FINE* = [0ms] 0 to 50ms in 1ms increments

:REGENeration = [76%] 0 to 100 percent in % increments

:LEVEL= [100%] 0 to 100 percent in % increments

*Total delay possible is 1010ms.

Since this delay algorithm has the characteristic of being in parallel with a reverb program if used with one, it can be used to add a small amount of depth, or wrap-around effect to the sound. A "hard reverb" effect may be achieved by using longer delay and a moderate amount of regeneration. Tonal sounding drones may be found using short delay and large amounts of regeneration.

REGEN-DDL-L

[REGEN-DDL-L], [DDL]

Regenerated Digital Delay - Long

Parameters:

:DELAY*= [200ms] 0 to 1100ms increments:5ms;0-350, 10ms;350-700
20ms;700-1000, 50ms;1000-1100

D-FINE* = [0ms] 0 to 50ms in 1ms increments

:REGENeration = [50%] 0 to 100 percent in % increments

:LEVEL= [100%] 0 to 100 percent in % increments

*Total delay possible is 1150ms

Use this algorithm for the same reasons and applications as the short Regen-DDL, only using longer delay times.

STEREO-DDL-S

[STEREO-DDL-S], [DDL]

Stereo Digital Delay - Short

Parameters:

:DLY-L* = [80ms] 0 to 1100ms, increments:5ms;0-350, 10ms;350-700 20ms;700-1000,
50ms;1000-1100

:L-FINE* = [0ms] 0 to 50ms in 1ms increments

:DLY-R* = [110ms] 0 to 1100ms, increments:5ms;0-350, 10ms;350-700 20ms;700-1000,
50ms;1000-1100

:R-FINE* = [0ms] 0 to 50ms in 1ms increments

:REGEN = [76%] 0 to 100 percent in % increments

:HFDAMP = [0%] 0 to 100 percent in % increments

:LEVEL= [100%] 0 to 100 percent in % increments

*Total possible delay is 1150ms

STEREO-DDL-L

[STEREO-DDL-L], [DDL]
Stereo Digital Delay - Long

Parameters:

:DLY-L=* [250ms] 0 to 1300ms, increments:5ms;0-350, 10ms;350-700 20ms;700-1000,
50ms;1000-1300
:L-FINE* = [0ms] 0 to 50 ms in 1 ms increments
:DLY-R* = [125ms] 0 to 1300ms, increments:5ms;0-350, 10ms;350-700 20ms;700-1000,
50ms;1000-1300
:R-FINE* = [0ms] 0 to 50ms in 1ms increments
:REGEN= [45%] 0 to 100 percent in % increments
:HFDAMP= [0%] 0 to 100 percent in % increments
:LEVEL= [100%] 0 to 100 percent in % increments
*Total possible delay is 1350ms

You can split image or create alternating regenerative patterns between the left and right outputs using Stereo Digital Delay. The ability to set separate delay times for each channel enables you to do this. When used in conjunction with the Flanger, Chorus or Panner, spatial effects are the result. Regeneration is derived from the left channel.

When longer delay times are needed, use the STREO-DDL-L algorithm. Set both Left and Right Delay times at 1300 ms for maximum delay output with no separation. You may also operate this effect in mono.

SAMPLER-S

[SAMPLER-S], [SMP]
Sampler-Short

Parameters:

STAT= [REC-RDY] REC-RDY, PLAY, IDLE
RECORD= [AUTO] AUTO, MANUL, MIDI
PLAY= [SINGLE] SINGLE, PUNCHIN, MIDI, REPEAT, AUDIO
LENGTH= [1.3s] 0.02 to 1.30 seconds in 20ms increments
START= [5ms] 0 to 100ms in 1ms increments
LEVEL= [100%] 0 to 100 percent in % increments

SAMPLER-L

[SAMPLER-L], SMP
Sampler-Long

Parameters:

STAT= [REC-RDY] REC-RDY, PLAY, IDLE
RECORD= [AUTO] AUTO, MANUL, MIDI
PLAY= [SINGLE] SINGLE, PUNCHIN, MIDI, REPEAT, AUDIO
LENGTH= [1.58s] 0.02 to 1.58 seconds in 20ms increments
START= [5ms] 0 to 100ms
LEVEL= [100%] 0 to 100 percent in % increments

SAMPLER+Ptr

[SAMPLER+PTR], [SPT]

Sampler Plus Pitch Transposer

Parameters:

STAT= **[REC-RDY]** REC-RDY, PLAY, IDLE

RECORD= **[AUTO]** AUTO, MANUL, MIDI

PLAY= **[SINGLE]** SINGLE, PUNCHIN, MIDI, REPEAT, AUDIO

LENGTH= **[1.25s]** 0.02s to 1.25 in 20 ms increments

START= **[5ms]** 0 to 100ms

PITCH= **[0]** (-)12 to (+)12 half steps in 1 half step increments

FINE= **[0.00]** (-)4.00 to (+)4.00 half steps in 0.06 cent increments

BASE KEY= **[OFF]** OFF, 1 through 127 (key note on)

LEVEL= **[100%]** 0 to 100 percent in % increments

Status always informs you of the state the Sampler is in. After a sample has been taken, status is Idle waiting either to be Re-Armed or played.

Record lets you choose how you want to sample the sound. Auto is signal activated, the sampler will start recording as soon as signal is applied to the ALPHA 2.0 and the GREEN LED is lit. Manual is operator activated, the sampler will start recording when you press the trigger button or use a footswitch with the Remote jack. MIDI is MIDI activated, the Sampler will start recording when the ALPHA 2.0 receives any Note On message.

Play lets you select how the sample is played back when triggered. Single plays back one per trigger, Repeat keeps repeating the sample until triggered again, and MIDI plays back when any Note On message is received. Punchin lets you insert a sample into the current signal stream. When you trigger the sample, the current signal is cut out and only the sample is heard. If you have a preset set up with the Punchin value, set your Dry level in the Mix to 0%. Audio triggers the Sampler to playback when the YELLOW LED is lit. To reset the trigger the YELLOW LED must go out.

Length is the amount of time you have to record (and playback) a sample. If you find you've recorded too much, you may eliminate the unwanted end signal by reducing the Length parameter.

Start allows you to trim the beginning of the sample removing annoying clicks, unwanted sample material or dead space.

Level sets the amount of signal level coming out of the Sampler.

Use the Short Sampler, [SAMPLER-S] when you want to combine a sampled sound with reverb. The algorithms from reverb groups one and two are available. Every time the sample is played back it will be subjected to the reverb parameters you have set.

The Long Sampler [SAMPLER-L] should be used when you require one and a half seconds of sampling time.

You should use the Sampler with Pitch Transposer [SAMPLER+Ptr] algorithm when you want to shift the pitch of the sample during playback. Each time the sample is played back it will be subjected to the pitch parameters set.

NOTES:

- 1) The Low Pass filter [LPF] acts as a high frequency rolloff to the signal before it is sampled and may be added to all three algorithm choices.
- 2) You may program the Remote Jacks to access the Trigger and Re-Arm feature.
- 3) BASE KEY in the SAMPLER + PTR algorithm has no effect on triggering samples.
- 4) You cannot store an audio sample.
- 5) See APPENDIX A, for more information regarding the SAMPLER.

SPECIAL FUNCTION

TUNER

[TUNER], [TNR]

Parameters:

TYPE = [GUITAR] GUITAR, BASS

REFRNC (guitar) = [OFF] OFF, E 82, A 110, D 147, G 196, B 247, E 330, A 440, AUTO

(bass) = [OFF] OFF, B 31, E 41, A 55, D 73, G 98, C 131, A 440, AUTO

DETUNE = [0.00] (-)2.00 to (+)2.00 in 0.04 (four cent) intervals

LEVEL = [0%] 0 to 100% in 2% increments

Type allows you to choose what instrument you are going to tune. There are two choices, Bass and Guitar. When you choose an instrument, the Reference frequency (Refrnc) parameter defaults to either Guitar or Bass tuning frequencies. The strings start low and go high. The frequency A 440 is included for tuning keyboards, or checking the intonation of your neck. When you select Refrnc to equal Off, it allows you to access the preset and display the preset number instead of [- - -]. The Tuner at this point is inactive, you must change the Refrnc parameter to a string value to activate the Tuner. When you set the Refrnc parameter to Auto, tuning is simplified even more. Auto enables the ALPHA 2.0 to know which string you are trying to tune and automatically switch the Reference parameter to the correct string/frequency. The Auto range has a frequency window of 2.5 halfsteps.

The Tuner has a reference oscillator. For each frequency you tune to, a reference tone is generated. Use the Level parameter to control the volume of the reference tone.

Detune will let you change the reference frequency A 440 plus or minus 2 half steps. This allows you to detune up to 50Hz. As a rule of thumb 4 cents, displayed as [0.04] equals 1Hz. So, to detune A440 to A435 you would set the Detune parameter to [-0.20]. To detune a full half step, set the Detune parameter to = [1.00] (plus or minus). Level sets the signal output level of the Tuner in a preset.

NOTES:

- 1) If you do not wish anyone to hear you tune up when you realize you're out of tune, set the Tuner Level and the ANFX level of the Mix to [0%] in the preset.
- 2) If you want signal to pass through the tuner, set the Tuner Level and the ANFX Level to the desired output level. The tuner is designed to respond to open string tuning only, no harmonics. For best results, tune your guitar in the position you will be playing in. Plucking the string at or near the 12th fret will help the tuner lock on to the signal.
- 3) Accuracy of the ALPHA 2.0 Tuner is better than .5 cents!
- 4) 100 cents = 1 semitone = 1 halfstep.
- 5) Instrument level is controlled exclusively by the MIX DRY parameter.

Select preset 005 [DIG.GUITAR TUNER] for quick tuning while on stage. This preset is set up to auto detect which string you want tuned.

How to use the Tuner:

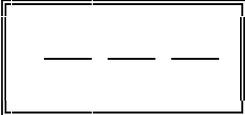
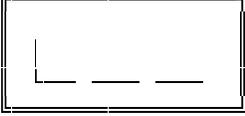
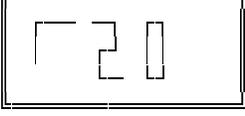
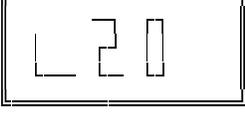
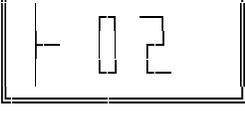
Watch the LED window display: With the REFRNC parameter set to the string you wish to tune, pluck the string. Give the unit a chance to "lock-on" to the signal, the unit will make frequency measurements as long as the green Pres LED is lit. After each pluck of the string, allow the unit to lock-on to the signal before attempting continued tuning. The most accurate tuning will be obtained by adjusting the string after it has "sung" for some time while dying out.

If insufficient audio level prevents the unit from making measurements the LED window will look like Display 1 .

When you are more than a half step (100 cents) sharp or flat the LED window will look like Display 2 or 3.

Within 100 cents of the correct pitch, the LED window displays the number of cents sharp or flat in the rightmost 2 digits. See Display 4 and 5.

When you are within 2 cents (sharp or flat) of the correct pitch, your LED window will look like Display 6. The two digits may be 00, 01, or 02 and you'll be in tune. As long as the | is displayed, you're in tune.

DISPLAY 1:		INSUFFICIENT INPUT SIGNAL
DISPLAY 2:		MORE THAN A HALF STEP SHARP
DISPLAY 3:		MORE THAN A HALF STEP FLAT
DISPLAY 4:		SHARP 20 CENTS
DISPLAY 5:		FLAT 20 CENTS
DISPLAY 6:		IN TUNE

MIDI DATA MONITOR

The MULTIVERB ALPHA 2.0 has 2 MIDI features collectively called "MIDI DATA MONITORing". These include the Performance MIDI(tm) Data Monitor, referred to as [DM] and the MIDI EVENT MONITOR, referred to as [MEM].

PERFORMANCE MIDI Data Monitor [DM]

This Data Monitor allows a user, while viewing a Performance MIDI (PM) controller's definition under Edit Mode, to see the data associated with the MIDI event selected to control an effect's parameter unaltered. A user having selected MOD WHEEL to control reverb decay time can optionally see the MOD WHEEL values themselves without having it affect reverb decay time. This feature serves as a MIDI setup debugging tool. You can determine if the MOD WHEEL is in fact being seen by the unit.

Enter DM Mode while in Edit Mode, press the Param button and go to the screen displaying [#1 IS CONTROLLING] in the top half. Press the Value button, and turn the Encoder left until the display reads [MIDI dataMONITOR] on the bottom. Press the Param button and move the Encoder one click to the right, the screen defines the MIDI controller used in the preset. Move the Encoder one click to the right, [#n DATA IS] is displayed. This line will show the actual data value associated with the selected MIDI event, as they are received. The space after "DATA IS" stays blank until the unit receives the selected event. The bottom line is identical to the 2nd window bottom line and you are able to select MIDI events in this window by using the Value button and the Encoder, without having to go back to the 2nd window. Whenever a new MIDI event is selected under DM, the portion of the window that displays the actual value is blanked until the new MIDI event data is received.

Example of PERFORMANCE MIDI Controller Definition Screens

Screen #1	Screen #2	Screen #3
<pre>#1 IS CONTROLLING MIDI DataMONITOR</pre>	<pre>#1 CONTROLLER IS MC 4:FOOT CTLR</pre>	<pre>#1 DATA IS MC 4:FOOT CTLR</pre>

MIDI EVENT MONITOR [MEM]

The MIDI EVENT data MONITORING MODE (MEM) feature is one of the parameters available while in MIDI Mode. This mode shows the user an "English-ed" version of certain MIDI events as they occur, regardless of MIDI channel. The information displayed shows the type of MIDI event and its attributes with a choice of display formats, called "English-ed" or "Raw Data". Each of these formats offers a choice of display numeric info in either decimal or hexadecimal (base 16, the format for experienced MIDI users).

To select the Event Monitor, enter Edit Mode then MIDI Mode. Press the Param button and use the Encoder to select [MIDI EVENT data MONITORING MODE].

```
MIDI EVENT data
MONITORING MODE
```

The unit is now ready to display the following of MIDI Events:

MIDI CONTROLLERS:

All, 0 thru 120 (MOD WHEEL, MIDI CONTROLLER #001 etc).

CHANNEL VOICE events:

NOTE ON, NOTE OFF: Actual note names and accidental (Sharp only) shown.
POLYPHONIC AFTERTOUCH (Note names and accidental).
CHANNEL PRESSURE AFTER TOUCH
PITCH BEND CHANGE

Other MIDI events monitored:

PROGRAM CHANGE

MEM does NOT monitor:

System Exclusive messages
Channel Mode messages (All Notes Off etc.)
Real Time messages (Timing Clock)
System Common messages (MIDI Time Code)

Each MIDI event is displayed depending on which display mode is active. The default display mode is "English-ed" decimal. Using the VALUE Up/Down keys will move through the two display modes (with two numeric formats each). The latest event is reformatted accordingly. In the case of NOTE ON/OFF and POLYPHONIC AFTERTOUCH events, the musical note associated with the event has its note name displayed next to the numeric value of the note.

Examples of Screen Displays for MIDI CONTROLLER #4 FOOT CONTROLLER

"ENGLISHed" Mode

Decimal

```
MIDICTL=176 CH01  
FOOTCTLR=004:127
```

"RAW DATA" Mode

Decimal

```
176 004 127  
FOOTCTLR=004:127
```

Hexadecimal

```
MIDICTL=B0h CH01  
FOOTCTLR=04h:7Fh
```

Hexadecimal

```
B0h 04h 7Fh  
FOOTCTLR=04h:7Fh
```

Examples of Screen Displays for MIDI EVENT PITCH BEND

"ENGLISHed" Mode

Decimal

```
PTCHBND=225 CH02  
LSB=000 MSB=064
```

"RAW DATA" Mode

Decimal

```
225 000 064  
LSB=000 MSB=064
```

Hexadecimal

```
PTCHBND=E1h CH02  
LSB=00h MSB=40h
```

Hexadecimal

```
E1h 00h 40h  
LSB=00h MSB=40h
```

Examples of Screen Displays for MIDI EVENT PROGRAM CHANGE

"ENGLISHed" Mode

"RAW DATA" Mode

Decimal

Decimal

```
PGMCHNG=192 CH01
PROGRAM #069
```

```
192 069
PROGRAM #069
```

Hexadecimal

Hexadecimal

```
PGMCHNG=C0h CH01
PROGRAM #45h
```

```
C0h 45h
PROGRAM #45H
```

DISPLAYED TEXT	ACTUAL NAME	MIDI CONTROLLER #
-----	-----	-----
MODWHEEL	Modulation Wheel	001
BREATH	Breath Controller	002
FOOTCTLR	Foot Controller	004
PORTAtim	Portamento Time	005
DATA msb	Data Entry MSB	006
MAIN VOL	Main Volume	007
BALANCE	Balance	008
PAN	Pan	010/0Ah
EXP CTLR	Expression Controller	011/0Bh
GENERAL1	General Purpose #1	016/20h
GENERAL2	General Purpose #2	017/11h
GENERAL3	General Purpose #3	018/12h
GENERAL4	General Purpose #4	019/13h
DAMP PED	Damper Pedal	064/40h
PORTAMEN	Portamento	065/41h
SOSTENUT	Sostenuto	066/42h
SOFTPEDL	Soft Pedal	067/43h
HOLD 2	Hold 2	069/45h
GENERAL5	General Purpose #5	080/50h
GENERAL6	General Purpose #6	081/51h
GENERAL7	General Purpose #7	082/52h
GENERAL8	General Purpose #8	083/53h
ExtFXdpt	External Effects Depth	091/5Bh
TREM dpt	Tremolo Depth	092/5Ch
CHOR dpt	Chorus Depth	093/5Dh
CELESdpt	Celeste Depth	094/5Eh
PHASEdpt	Phaser Depth	095/5Fh

NOTES:

- 1) The only accidental displayed is the sharp, "#".
- 2) PROGRAM CHANGE events: The actual program number specified in the event is a 0-origin number and will be displayed as such, consistent with the unit's display of program numbers under the MIDI PROGRAM TABLE MIDI menu item. A MIDI program change event to program #5 is actually a message to go to (excluding mapping via MIDI PROGRAM TABLE) to program #6!

3) MIDI CHANNEL#s: The display "CHnn" (where "nn" is the channel# associated with a particular MIDI event) shows the channel# as a 1-origin number. A MIDI event with a channel# value of 2 will display as "CH03"!

4) If, while in MEM mode, the unit is enabled to respond to PROGRAM CHANGE events (and those events occur on the same channel on which the unit is listening) and such an event occurs which causes the unit to switch to a preset that has the SAMPLER effect, a message may display for a few moments indicating that the SAMPLER is RECORD-READY. When this message (or others) is finished, the display will return to the most recent event and display mode.

MISCELLANEOUS INFORMATION

About the Presets

The first 30 presets in the MULTIVERB ALPHA 2.0 show off some of the many capabilities of the device. These patches include general purpose reverbs, reverb for mixdown, an automatic tuner, multiple pitch effects, vocal delay, enhancers, and sampling, chorus, flange, phasing and other special effects. After that you will find variations for different type sounds and effects. Some presets are set up for instant use with the ART X-15 ULTRAFoot MIDI Controller. Use the X-15 to control certain parameters in the preset. We encourage you to take the time to listen to all the presets just so you can get a feel for the sounds and effects your MULTIVERB ALPHA 2.0 is capable of producing.

Battery Backup

When power is terminated to the MULTIVERB ALPHA 2.0, the edited MPT as well as the last preset used and the MIDI Channel will be active when the unit is next powered up. Memory retention is expected to last four years. Should you encounter memory loss, contact our service department.

Low Battery Indicator

The life of the internal lithium battery is approximately four years. If you see the right decimal point illuminated in the seven segment display, it is indicating the voltage of the lithium battery is low.

Software Revision Level

There is a way to correctly identify the software version residing in the unit. While in Edit Mode, press the Utility button, then press the Param button. Turn the Encoder until the current version as well as the date is displayed in the LCD. The MULTIVERB ALPHA 2.0's software is contained in a socketed EPROM and is field replaceable. This software controls the MULTIVERB ALPHA 2.0's functions as well as its sounds.

User Registration Card

Be sure to fill out the USER REGISTRATION CARD with this manual and send it in to our Customer Service Department. Doing this will insure that you are notified of important information regarding your MULTIVERB ALPHA 2.0. Please be sure to write in your serial number. If you do not wish to mutilate your manual, you may send a copy of the registration form.

Factory Reset

There is a Factory Reset sequence which will reinitialize the MULTIVERB ALPHA 2.0 to ALL of its original values. Be sure you have either downloaded or kept a written record of the Presets since they will be eliminated. To perform a Factory Reset, press and hold the **PRESET, 0/ENTER, and 4/MIDI** buttons simultaneously.

Other Means of Bypassing the ALPHA 2.0

Another means of bypass is attained by programming the either REMOTE jack on the rear panel for the bypass function described under the UTILITY button and referred to as REMOTE SWITCH. Refer to the REMOTE JACK section for additional information. Bypassing the unit via MIDI may be done by easily. Since the MULTIVERB ALPHA 2.0 has the capability of MIDI BYPASS, all you need to send is an on/off control message. The MULTIVERB ALPHA 2.0 bypass default setting is MIDI Controller # 84.

X-15

If you are using your MULTIVERB ALPHA 2.0 with the ART X-15 ULTRAFOOT, refer to the X-15 manual for any detailed information you may need.

Contact Information

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215 Tremont Street
Rochester, New York 14608
USA

(716) 436-2720
(716) 436-3942 (FAX)
Telex: 4949793 ARTROC

Customer Service

You may contact ART's Customer Service Department between the hours of 9:00 AM and 4:00 PM Eastern Time Monday through Friday.

The Customer Service Department will answer technical questions about ART products and provide information concerning service (in the unlikely event you need it).

APPENDIX A APPLICATIONS

LEVEL

It is not suggested to use a microphone plugged directly into the MULTIVERB ALPHA 2.0. Even though the device will function properly with some types of microphones you may encounter level mismatch or level problems. Some type of preamplifier is required since the input sensitivity of most microphones is less than -40dB.

NOTE: Presets may have varying output levels. Output level may be programmed in a preset by using an algorithm such as REVERB or DELAY. Algorithms such as these have a LEVEL parameter which may be set to vary the presets output level. We recommend that you set the front panel sliders for optimum dynamic range and vary the output level of the presets by programming the LEVEL parameter.

For the effects that have the LEVEL control parameter, use this control to adjust for depth, apparent mix level, volume adjustment for each preset as well as normal output level. By adjusting level in this manner, you don't need to adjust the Output Level Control.

To control the overall output level of the ALPHA 2.0 via MIDI, assign an external MIDI controller to change the DRY and EFX parameters assignable in the programmable Mix. You are able to do this by adding two MIDI controllers to your preset and setting them accordingly. Set one controller to control both the MIX:DRY and MIX:EFX. Keep the LOW and HIGH Values at 0 and 100% respectively.

Signal level required to trigger the AUTO Record of the Sampler is to input enough signal to light the GREEN LED.

Signal level required to trigger the AUDIO Play of the Sampler is to input enough signal to light the YELLOW LED.

MEMORY

You now have a Utility that informs you how much User Preset Memory has been used or how much memory there is available for storing presets. When you first access user memory there are approximately 5500 bytes (5.5 Kbytes) of space available. Each time you store a preset more space is used up. As a rule of thumb, a preset uses approximately 30 to 50 bytes. Sometimes the display will inform you there is space available, but you are not allowed to store any more information.

TO DELETE A STORED PRESET, releasing its memory to be used again, you must store a null preset at the preset number you wish to delete. A null preset consists of a blank title and no effects. Presets 116 through 200 are null when you receive your unit or after a factory reset. Preset 100 is a Factory Preset set up to be blank and can be used for this purpose.

APPENDIX B
EXAMPLES

COPYING A PRESET

You may copy a preset from any location into another easily. (If you want to copy a factory preset into another factory preset location, you must first Unlock the destination preset.) To copy a factory preset into one of the 90 user presets follow these steps.

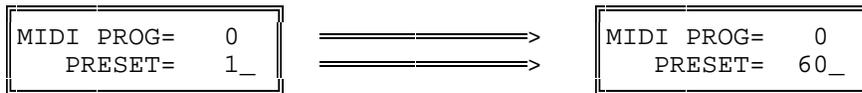
- Enter EDIT Mode.
- Select the preset you want copied by pressing the Preset button and using the Encoder to dial it up.
- Press the RECALL button.
- Use the Encoder to select the location you are copying to i.e. Preset 111.
- Press the STORE button.
- *The preset has now been copied and stored to the new location.

EXAMPLE 1:

Editing the MPT from the MULTIVERB ALPHA 2.0 front panel controls.

In this example, we will edit the MPT so when MIDI numbers 1 and 2 are received, MULTIVERB ALPHA 2.0 PRESETS 60 and 151 will be recalled. It is assumed that the MULTIVERB ALPHA 2.0's MPT has not been edited.

- Make sure you are in the EDIT Mode. (Press EDIT button if not)
- Press the MIDI button.
- Press the Param button.
- Turn the Encoder until you see in the LCD:



- Press the Value button and use the Encoder to change the number to 60.
- Press the param button twice, press the Value button and turn the Encoder 1 click.
- Press the Value button twice and use the Encoder to change the number to 151.



- Exit MIDI mode by pressing the MIDI button once.

You may assign any preset # to any program # including a preset to a multiple of program #'s. To test the reassigned numbers, use a MIDI device to recall the presets. Your reassigned presets should be recalled.

NOTE: Don't forget, many foot pedals are configured for their preset 1 to recall MIDI program 0. This example allows for this and preset 1 is recalled when the foot pedal preset 1 is recalled.

EXAMPLE 2:

Editing the MPT with a keyboard or external controller.

Using this method of editing, you select the desired patch on the keyboard or foot pedal, and then select the desired PRESET on the MULTIVERB ALPHA 2.0 for that sound. You can do this while you are listening to the MULTIVERB ALPHA 2.0.

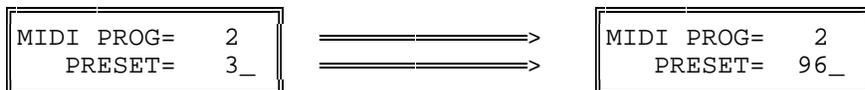
When used with a keyboard or other device which sends MIDI PROGRAM CHANGE messages, MPT editing is simplified. We will edit the MPT for MIDI numbers 2 and 3, to recall presets 96 and 1. Once again it is assumed the MULTIVERB ALPHA 2.0 has not had its MPT edited.

The keyboard/controller MIDI OUT must be connected to the MULTIVERB ALPHA 2.0's MIDI IN jack. The MIDI channel on the MULTIVERB ALPHA 2.0 must be set to the same channel of the sending device, or the MULTIVERB ALPHA 2.0's OMNI mode must be ON.

-Make sure you are in EDIT Mode. (Press EDIT button if not)

-Press the MIDI button.

-Turn the Encoder until you see in the LCD:



-Select a patch on the keyboard or MIDI foot pedal so [MIDI PROG= 2] is displayed (select either preset #1, 2 or 3). If the MPT has never been edited, [PRESET= 3_] should be in the lower half of the display.

*The patch that causes [MIDI PROG= 2] to appear in the display is usually the second or third patch of the lowest numbered bank if the keyboard has banks of patches.

-Use the Encoder to select preset 96.

-With the keyboard change the MIDI PROGRAM number to 3.

-Set the PRESET to = 1.



You may continue to program each of the keyboard's patches (say there are 64) in this manner assigning any preset # to the patch.

In the previous examples four of the MPT entries were edited. You may edit the entire MPT if desired.

INCREMENT PROGRAM

If you do not have access to a MIDI controller and you wish to change between PRESETs easily, you may want to edit the MPT for incrementing through a sequence of presets. Example 3 illustrates how this is done.

The sequence programmed in Example 3 may be accessed from the front panel. A more useful way of using a programmed sequence is to access the sequence using the REMOTE jack and a momentary footswitch. To access these presets we must program the REMOTE JACK to increment the programs. You can only increment up through the programs. Example 4 describes how program the REMOTE jack to sequence through the ten presets set up in Example 3 with a footswitch. Example five shows how to program the REMOTE jack for normal bypass operation.

EXAMPLE 3

Setting up a preset sequence including a bypass preset.

If you need to change between presets quickly without scanning or MIDI, this procedure will be to your advantage. As in the other examples, editing the MPT is the key. In this example we will edit the MPT to sequence through ten presets. Ten is not the limit. You may program a sequence of 127 presets if you wish. These presets will be in the order: 60, 151, 96, 1, 151, 35, 1, 69, 100 and 61. Notice that we repeated some presets and included preset 100 which is set up from the factory as a bypass preset (no effects stored in it). Remember you can assign

any preset to a MIDI number including using a preset at multiple locations. Using an empty preset as a bypass enables you to select no effect eliminating the need to bypass the unit from the front panel and then continuing on with an effect preset next in the chain. NOTE: If your Mix is set for only 100% EFX, no signal will pass through the MULTIVERB ALPHA 2.0.

- Make sure you are in EDIT Mode. (Press EDIT button if not)
- Press the MIDI button.
- Press the Value button, use the Encoder to change the display to:



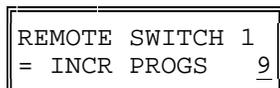
- change between the upper and lower lines, changing the values as needed.
- *MIDI program #'s will be 0 thru 9.
- *follow the procedure in Example 1 if you're stuck!

EXAMPLE 4

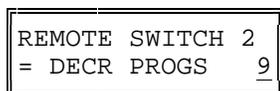
Programming the REMOTE jack for Incrementing Programs

Program the REMOTE 1 jack on the rear panel so you may use a footswitch to increment through a desired set of presets, operate as a normal bypass jack, or trigger the Sampler. Remember, you may only increment up when using a footswitch and the sequence cycles through to the beginning.

- Make sure you are in EDIT Mode. (press EDIT button if not)
- Press the UTILITY button. Change the display to read [REMOTE SWITCH 1] in the top half and [= BYPASS ON/OFF] in the bottom half.
- Press the Value button.
- Use the ENCODER to change the number to 9.
- *You have just programmed the MULTIVERB ALPHA 2.0 to sequence through the ten presets set in Example 3 when using a momentary footswitch plugged into the REMOTE 1 jack.



NOTE: To change this to decrement presets, program the REMOTE 2 jack for decrement following the above example.



EXAMPLE 5

Adding Performance MIDI to an existing preset.

In this example we are going to add **PM** to preset 79, NEW BLUES GTR. The effect parameter we will control is: CHO:WIDTH, the width of the chorus. The intended controller will be MC 4, Foot Controller. Now when the MIDI controller is used, the width control will change from 50% to 100%.

- Recall preset 79.

- Press the EDIT button.
- Press the Preset button and use the Encoder to select preset 120. -Press the Store button.
- *You've just copied #79 to location 120.
- Press the ADD EFFECT and turn the Encoder until you see [ADD:MIDI CONTRL?].
- Press the ENTER button.
- *You have just added a MIDI controller to the preset.
- Press the Param button four times.
- Press the Value button.
- Use the Encoder to select [CHO:LEVEL = 100%]
- Press the Value button again, DON'T CHANGE THIS VALUE.
- Press the Value button again.
- Use the Encoder to change the value to 50%.
- Press the Value button one more time!!!!
- DON'T CHANGE THE SETTING
- Press the STORE button.
- *Press the EDIT Mode button to exit Edit Mode.

You now have edited a Factory Preset 79 for **PM** control of the chorus width. When you use the left pedal on the X-15 your chorus level will change from 50% to 100%. You may edit any existing preset to be controlled by **PM**. Remember to UNLOCK the preset to STORE your changes and then re-lock the presets.

EXAMPLE 6

Controlling the Overall Level of an ALPHA 2.0 Preset.

To control the level on each preset, you must add the two MIDI controllers set up like this TO EACH PRESET and control the Dry and Efx parameters of the Mix with one foot controller.

We will use Factory Preset 79 again for this example. If you have completed Example 5, adding PM to a Factory Preset, copy Factory Preset 79 into location 121.

- Recall preset 79.
- Press the EDIT button.
- Press the Preset button and use the Encoder to select preset 121.
- Press the Store button.
- *You've just copied #79 to location 121.
- Press the ADD EFFECT button and then turn the Encoder until you see [ADD:MIDI CONTRL?].
- Press the ENTER button.
- Add another MIDI controller
- Press the Param button eight times.
- Press the Value button twice.
- Use the Encoder to select [MC 11:EXP. CTRL.]
- Press the Value button again, DON'T CHANGE THIS VALUE.
- Press the Value button again, DON'T CHANGE THIS VALUE EITHER.
- Press the Value button.
- Use the Encoder to select [MIX:EFX = 75%]
- Press the Value button once.
- Use the Encoder to select [MC 11:EXP. CTRL.]
- Press the Value button again, DON'T CHANGE THIS VALUE.
- Press the Value button again, DON'T CHANGE THE VALUE.
- Press the Value button.
- Press the STORE button.

Now, when the right pedal on the X-15 is used, the output volume of the ALPHA 2.0 changes from 0 to 100%. You may change the amount of minimum and maximum level the foot pedal controls by setting the Low and High Values (3rd and 4th screen) when adding the MIDI controller.

APPENDIX C
MULTIVERB ALPHA 2.0 MIDI MESSAGES

The MULTIVERB ALPHA 2.0 responds to the following messages:

Program change:

Cxh ddh

x = channel number 0h to Fh for channels 1 to 16

dd = program number 0h to 7Fh or 0 to 127

If the channel the MULTIVERB ALPHA 2.0 is set to is not off and the channel matches (either it is the same number or OMNI is on), then the unit will look up the preset in the MIDI Program Table (MPT) and recall the corresponding preset.

Channel Mode message for OMNI on/off

Bxh 7Ch 0h : OMNI Mode Off

Bxh 7Dh 0h : OMNI Mode On

x = channel number, 0h to Fh for channels 1 to 16

If the channel matches the units's channel number, it will set the OMNI mode accordingly. The current OMNI mode does not affect this message, the channel must match regardless of current OMNI mode.

SYSTEM EXCLUSIVE MESSAGES

message format:

general: <System Exclusive Status> <ART ID> <channel>
 <product ID> <message ID> <message...> <EOX>

in hex: F0h 1Ah 0xh 06h <message ID> <message...> F7h

F0h - System Exclusive status byte.

1Ah - ART manufacturer's ID number.

0xh - channel number, 0 to 0Fh.

11h - MULTIVERB ALPHA 2.0 product id code.

F7h - End Of exclusive status byte.

Message ID values >= 40h are requests. A request is a message that when received by the MULTIVERB ALPHA 2.0 causes a message to be sent by the MULTIVERB ALPHA 2.0.

0x is the channel number, 0 to 15 (00h to 0Fh). To the user, the channel number is displayed as 1 to 16.

Internally, presets are numbered 0 to 199. When a preset number is displayed, it is shown as 1 to 200. Any messages that refer to the MULTIVERB ALPHA 2.0 preset number refer to the internal number, 0..199. Preset numbers are referenced in message with 2 data bytes, least significant 7 bits, then most significant bit in the lsb of the next byte. Example: preset 1 on the LCD is referenced with 00h 00h, and preset 200 is referenced with 47h, 01h.

When channel number is OFF and a front panel command for a dump is processed, the MULTIVERB ALPHA 2.0 sends a message coded for channel 1 (the lowest channel number).

DETAILED DESCRIPTION OF MESSAGES

Set Bypass OFF: F0 1A 0x 11 03 00 00 F7

Set Bypass ON: F0 1A 0x 11 03 00 01 F7

This allows remotely setting the state of BYPASS in the MULTIVERB ALPHA 2.0 without affecting anything else in the unit.

Request DUMP all presets: F0 1A 0x 11 4B F7

LOAD all presets: F0 1A 0x 11 0B <many bytes> F7

Dumps all presets in preset number order. No compression of the data is done.

Request MPT table: F0 1A 0x 11 4C F7

Set MPT table: F0 1A 0x 11 0C <128 * 2 bytes> F7

For each MIDI program number there is a corresponding MULTIVERB ALPHA 2.0 preset number. Each entry (internally) is 0..199 and is sent as 2 bytes. First the least significant 7 bits, then the msb. This is done for each of the 128 MIDI program numbers.

When FX ON/OFF Enable is ON, you may use MIDI controller 84 to activate MIDI Bypass.

If you find you require additional MIDI technical information, please contact our Customer Service department at (716) 436-2720.

APPENDIX D

MIDI Implementation Chart

ART MULTIVERB ALPHA 2.0 model 471; Date: JANUARY 1992; VER 2.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Channel	X	1-16	note 1
	Channel	X	1-16	
Mode	Default Messages	X	Mode 1,3	note 1
	Altered	X	OMNI ON/OFF	
		X	0	
Note Number	True Voice	X	0	
		X	0	
Velocity	Note ON	X	0	
	Note OFF	X	0	
After Touch	Key's	X	0	
	Ch's	X	0	
Pitch Bender		X	0	
Control Change		0	0	effects on/off controllers send controller msgs when presets are recalled
Prog Change	True #	X	0-127	assignable to any preset
		X		
System Exclusive		0	0	See: manual
System Common	:Song Pos	X	X	
	:Song Sel	X	X	
	:tune	X	X	
System Real Time	:Clock	X	X	
	:Commands	X	X	
Aux Messages	:Local ON/OFF	X	X	
	:All Notes Off	X	X	
	:Active Sense	X	X	
	:Reset	X	0	

Notes:

1: Factory default is channel 1, OMNI ON. Current setting is maintained in non-volatile RAM and does not change when the MULTIVERB ALPHA 2.0 is powered on.
 Mode 1: OMNI ON, POLY Mode 2: OMNI ON, MONO O: Yes
 Mode 3: OMNI OFF, POLY Mode 3: OMNI OFF, MONO X: No

APPENDIX E
MIDI: CONTROLLERS & NUMBERS

CONTROLLER #	CONTROLLER DESCRIPTION
0	UNDEFINED
1	MOD WHEEL
2	BREATH CONTROLLER
3	UNDEFINED
4	FOOT CONTROLLER
5	PORTAMENTO TIME
6	DATA ENTRY (msb)
7	MAIN VOLUME
8	BALANCE
9	UNDEFINED
10	PAN
11	EXPRESSION CONTROLLER
12-15	UNDEFINED
16-19	GENERAL PURPOSE #'S 1-4
20-31	UNDEFINED
32-63	LSB FOR VALUES 0-31
64	DAMPER PEDAL (SUSTAIN)
65	PORTAMENTO
66	SOSTENUTO
67	SOFT PEDAL
68	UNDEFINED
69	HOLD 2
70-79	UNDEFINED (X-15 EFFECTS ON/OFF)
80-83	GENERAL PURPOSE #'S 5-8
84-90	UNDEFINED *84 DEFAULT BYPASS
91	EXTERNAL EFFECTS DEPTH
92	TREMOLO DEPTH
93	CHORUS DEPTH
94	CELESTE (DETUNE) DEPTH
95	PHASER DEPTH
96	DATA INCREMENT
97	DATA DECREMENT
98	NON-REGISTERED PARAMETER # LSB
99	NON-REGISTERED PARAMETER # MSB
100	REGISTERED PARAMETER # LSB
101	REGISTERED PARAMETER # MSB
102-120	UNDEFINED
121-127	RESERVED FOR CHANNEL MODE MESSAGES

CONTINUOUS CONTROLLERS:

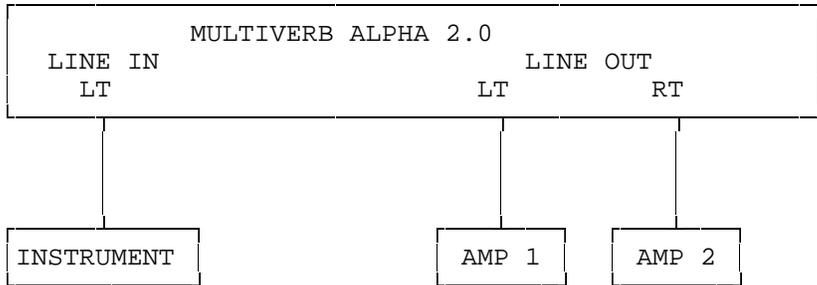
PITCH BEND WHEEL	CHANNEL PRESSURE	POLY AFTER TOUCH
NOTE ON VELOCITY	NOTE ON KEY #	NOTE OFF VELOCITY
NOTE OFF KEY #		

DEFAULT MIDI CONTROLLER NUMBERS

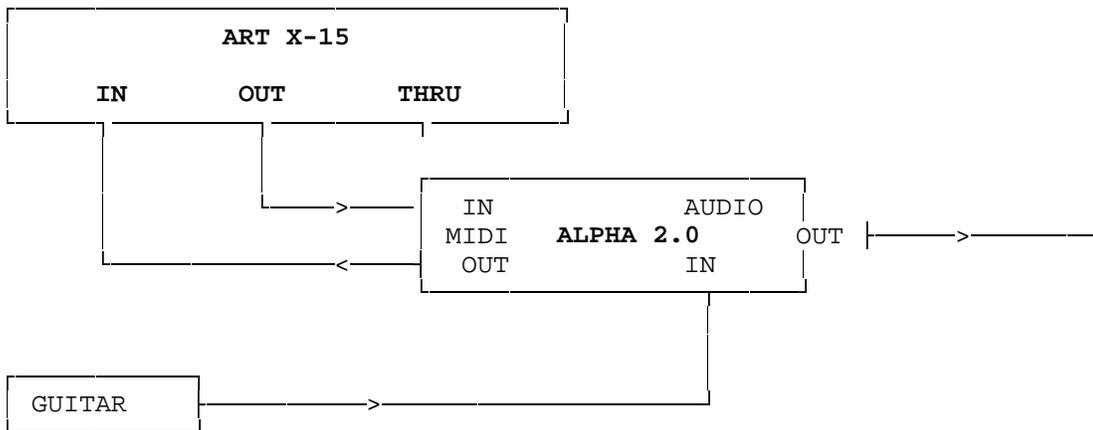
<u>X-15 PAD #</u>	<u>EFFECT</u>	<u>MIDI CONTROLLER #</u>
1	EXCITER	70
2	COMPRESSOR	71
3	DISTORTION	72
4	EQUALIZER	73
5	EXPANDER/NOISE GATE	74
6	REVERB	75
7	DELAY	76
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10	SPECIAL EFFECTS	79

**APPENDIX F
DIAGRAMS**

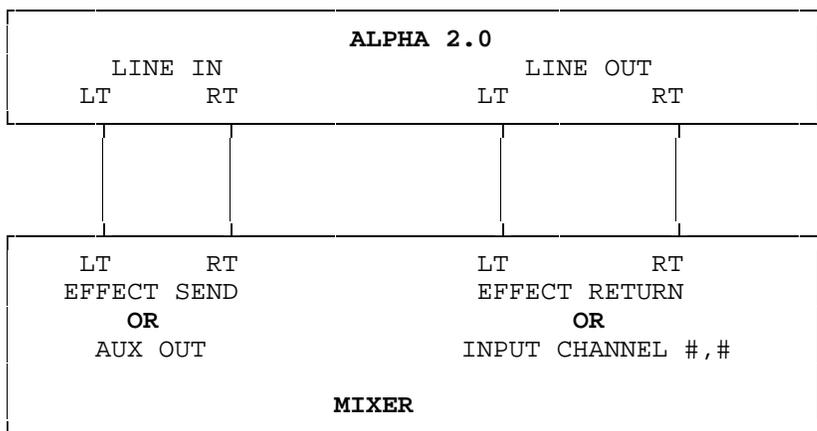
INSTRUMENT INTO MULTIVERB ALPHA 2.0 INTO TWO AMPLIFIERS



GUITAR INTO MULTIVERB ALPHA 2.0 CONTROLLED BY ART X-15



STEREO EFFECTS SEND AND RETURN WITH MULTIVERB ALPHA 2.0



APPENDIX G

USING THE MULTIVERB ALPHA 2.0 WITH AN X-15 ULTRAFOOT

When an ART X-15 ULTRAFOOT is used with the ALPHA 2.0, remote control of the parameters and the ability to turn on and off the effects themselves greatly extend the capabilities of the ALPHA 2.0. More than half of the ALPHA 2.0's factory presets are set up with MIDI controllers providing you instant access to the parameters with your X-15.

You do not need to reprogram the X-15 ULTRAFOOT for use with the ALPHA 2.0. All programming and setup is done with the ALPHA 2.0. Add a MIDI Controller to the ALPHA 2.0 preset and edit the parameters. The default settings allow for almost instantaneous use with both devices. Refer to the example in Appendix B, Adding Performance MIDI to an Existing Preset.

To correctly hook up the two devices, two MIDI cables should be used (see the hookup diagram on the preceding page). Both the ALPHA 2.0 and X-15 "talk" to each other keeping their status' up to date. When the X-15 is in Effect Mode, it will display which effects in the preset are active by lighting the associated pad's LED. If you add, delete, or change the status of an effect with the ALPHA 2.0, the X-15 will monitor and display (or not display if you remove or turn off an effect) the change.

All of the presets in the ALPHA 2.0 with MIDI controllers assigned to them are set to be controlled by MIDI Controllers (MC) 4 and 11. On the X-15, the left expression controller is MC 4 and the right pedal is MC 11. When adding a MIDI controller to a preset in the ALPHA 2.0 the default value for the MIDI controller (screen 2, CONTROLLER IS) is MC 4, Foot Controller. To select another MIDI controller, use the Encoder to change the Value while editing this screen.

Every time a message is sent from the X-15 to the ALPHA 2.0, the Alpha's LCD displays the message sent. Effects on and off messages and real time pedal values will be displayed, program change messages (preset changes) will not be displayed. For effects on and off messages to be displayed the X-15 must be in Effect Mode. Anytime either foot controller is moved, the ALPHA 2.0 displays the parameter name and value.

To control the output level of any ALPHA 2.0 preset, assign two MIDI controllers to the preset, use one pedal as the controller, and control the Dry and Efx parameters of the Mix. See Example 6 in Appendix B for setting up a preset for level control.

ART MULTIVERB ALPHA 2.0 SPECIFICATIONS

Presets..... 115

Memory Locations..... 90

Dynamic Range>90dB Typical

Equivalent Input Noise.....-107dBv

Operating Level.....+16dBV max

Input Impedance.....1M ohm

Output Impedance.....1K ohm

Mechanical.....1.75"H X 19"W X 10"D, all steel case

Power Requirements.....105-125 Volts AC, 60Hz, Internal Fuse
140ma @ 117VAC, 16.4W
(Export unit configured for destination country.)

MIDI Receive Channel.....1-16, OMNI (all), Off

MIDI Programs.....May be assigned to any Preset #

Connections.....Stereo In/Out 1/4" phone, MIDI IN, OUT,
.....THRU, 2.1mm (+)9 VDC OUTPUT

ART retains a policy of constant product improvement.
Specifications are subject to change without notice.

Designed and manufactured in the United States of America.

Applied Research & Technology, Inc.
215 Tremont Street
Rochester, New York 14608

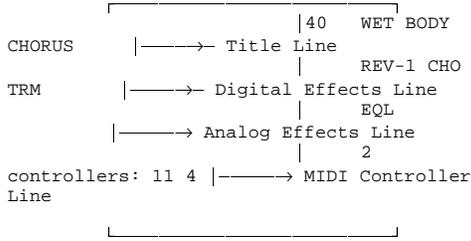
(716) 436-2720
(716) 436-3942 (FAX)
<http://www.artroch.com>

MULTIVERB ALPHA 2.0 PRESET LIST

1	OPEN CHAMBER REV LFF REV-3 EQL AES 1 controller: 4		27	SPATIAL CHORUS LFF CHO TRM AES 3 controllers: 11 4	
2	CARNEGIE HALL LFF R-DDL-S REV-3 EQL AES (no controllers)	17	TIGHT VOICE VERB REV-3 EQL (no controllers)	28	DOUBLE CANYONS S-DDL-S CHO PAN EQL 2 controllers: 11 4
3	HOTEL BALLROOM LFF REV-3 EQL AES (no controllers)	18	VOCAL CLOSE ROOM T-DDL-S REV-1 EQL (no controllers)	29	SWEPT CHORUS S-DDL-L FLA EQL AES 2 controllers: 11 4
4	AMBIENT TALK REV REV-1 EQL (no controllers)	19	VOCAL SHADOW DBL CHO GAT-1 EQL 2 controllers: 11 4	30	ASLEEP AT WHEEL T-DDL-S REV-2 EQL AES 2 controllers: 11 4
5	DIG.GUITAR TUNER TNR (no analog) (no controllers)	20	SAMPLE W/REVERB SMP-S REV-1 EQL 1 controller: 4	31	INFINITE CHORUS R-DDL-S REV-1 CHO EQL 2 controllers: 11 4
6	MULTI-SHIFTER S-DDL-S D-PTR (no analog) (no controllers)	21	DEEP GATED SNARE GAT-3 EQL AES (no controllers)	32	NITE DREAM FLANG R-DDL-S REV-1 FLA EQL 3 controllers: 11 4
7	ULTRAHARMONITAR D-PTR (no analog) (no controllers)	22	BIG HAIR GATE GAT-2 EQL AES (no controllers)	33	CHORAL DREAM R-DDL-S REV-1 FLA EQL 2 controllers: 11 4
8	STUNNING PHASER PSR EQL (no controllers)	23	CONCUSSION GATE R-DDL-S GAT-2 EQL (no controllers)	34	FIRE ON ICE FLA GAT-2 (no analog) 2 controllers: 11 4
9	TERMINAYTOR S-DDL-L PSR EQL 4 controllers: 11 4	24	RAPID GATE REV R-DDL-S GAT-3 EQL (no controllers)	35	ALIEN INVASION S-DDL-L FLA MPN EQL 3 controllers: 4 11
10	AMBIENT SPACE REV-3 EQL AES (no controllers)	25	CONCERT 12 STRNG LFF PTR REV-1 EQL 2 controllers: 11 4	36	DIAMOND CUTTER R-DDL-L REV-1 FLA EQL 2 controllers: 11 4
11	BIG CONCERT REV LFF REV-3 EQL 2 controllers: 11 4	26	MELLOW 12 STRING PTR REV-1 EQL AES 2 controllers: 11 4	37	ITS HAPPEN'N GTR LFF R-DDL-S REV-1 CHO AES 3 controllers: 11 4
12	BRGHT VOCAL ROOM REV-2 EQL (no controllers)			38	RABBIT FOOD GTR REV-1 FLA TRM AES 2 controllers: 11 4
13	SYMPHONY HALL LFF REV-3 EQL AES 1 controller: 4			39	CHAMPAGNE CHORUS R-DDL-L GAT-1 TRM EQL 2 controllers: 11 4
14	GLISTENING PLATE LFF REV-3 EQL AES (no controllers)				
15	VOICED DBL VERB LFF REV-3 EQL AES (no controllers)				
16	VOCAL CHOIR REV R-DDL-S REV-3				

40	WET BODY CHORUS REV-1 CHO TRM EQL 2 controllers: 11 4	54	X15 LO NOTE BEND PTR REV-1 (no analog) 1 controller: 11	68	DEEP DLY CHORUS S-DDL-S CHO EQL 2 controllers: 11 4
41	GROOVY FLANGE FLA GAT-1 AES 3 controllers: 11 4	55	X15 HI NOTE BEND PTR REV-1 (no analog) 1 controller: 11	69	STRAT COUNTRY S-DDL-S CHO TRM EQL 2 controllers: 11 4
42	INFINITE DREAM R-DDL-S REV-1 CHO EQL 2 controllers: 11 4	56	RED ROCKS S-DDL-S EQL 2 controllers: 11 4	70	HOME-FUNKY GTR R-DDL-S GAT-2 TRM EQL 2 controllers: 11 4
43	WATCHTOWER REV-1 CHO EQL AES 3 controllers: 11 4	57	SLICK BASS GTR FLA PAN EQL 2 controllers: 11 4	71	FULL FAT RHYTHM REV-1 CHO PAN EQL AES 2 controllers: 11 4
44	NIGHT VOYAGER R-DDL-S REV-1 FLA PAN EQL AES 2 controllers: 11 4	58	FROG BASS GTR S-DDL-S CHO PAN AES 2 controllers: 11 4	72	OVERDOSE CHORUS S-DDL-S CHO PAN AES 2 controllers: 11 4
45	SHADOW TONIGHT CHO GAT-1 EQL AES 1 controller: 4	59	SMOKEFILLED BASS REV-1 CHO EQL AES 2 controllers: 11 4	73	SWEEPING STRINGS S-DDL-S CHO EQL 2 controllers: 11 4
46	GHOST CHOIR S-DDL-S FLA EQL AES 2 controllers: 11 4	60	OMINOUS UNDRTONE R-DDL-L PTR (no analog) (no controllers)	74	CLEAN DRUM VERB LPF REV-1 EQL AES (no controllers)
47	CARBIDE CUTTER FLA GAT-1 EQL AES 2 controllers: 11 4	61	ORIENTAL DREAMS R-DDL-S PTR (no analog) (no controllers)	75	MEDIUM DRUM ROOM LPF REV-3 EQL AES (no controllers)
48	SPACE PHOBIA REV-2 FLA TRM (no analog) 2 controllers: 11 4	62	PITCH MICRO SPIN LPF R-DDL-S PTR (no analog) 2 controllers: 11 4	76	ROCK CONCERT KIT LPF REV-3 EQL AES (no controllers)
49	GRIND TO DEATH T-DDL-S REV-2 EQL AES 2 controllers: 11 4	63	WARPED STRINGS LPF R-DDL-L PTR (no analog) 1 controller: 4	77	PERC DECAY R-DDL-S PTR EQL AES 1 controller: 4
50	OCTAVE SWEEP X15 LPF PTR REV-1 EQL 2 controllers: 11	64	HYPER FLANGE GTR R-DDL-S FLA AES 2 controllers: 11 4	78	TOMS IN THE HALL REV-3 EQL (no controllers)
51	OCTAVE SWEEP DWN LPF PTR REV-1 EQL 1 controller: 11	65	BASSMENT THUNK REV-1 CHO EQL (no controllers)	79	NEW BLUES GTR REV-1 CHO EQL AES (no controllers)
52	PEDAL SWEEP 5TH LPF PTR REV-1 EQL 2 controllers: 4 11	66	TRAVERS TRY THIS S-DDL-L FLA TRM AES 2 controllers: 11 4	80	PURPLE GATE LPF FLA GAT-2 EQL 2 controllers: 11 4
53	PEDAL DELAY PAN S-DDL-L MPN EQL 1 controller: 11	67	FLANGED ALIVE R-DDL-S FLA GAT-2 EQL 2 controllers: 11 4	81	BOOM ROOM TOMB LPF REV-2 EQL AES (no controllers)
				82	PHIL's TOMS! LPF R-DDL-S GAT-3 EQL AES (no controllers)
				83	SNAREGATE REV LPF GAT-3 EQL AES (no controllers)
				84	SPOKEN WORD LPF REV-1

	EQL AES (no controllers)	93	THE EVIL ONES R-DDL-S CHO (no analog) (no controllers)	105	CALISTO FLANGE S-DDL-L FLA EQL (no controllers)
85	VOCAL PLATE R-DDL-S REV-3 AES (no controllers)	94	120 BPM SLAP DLY T-DDL-S REV-2 EQL AES 1 controller: 4	106	CRY BABY? LPF EQL 8 controllers: 11
86	WARM VOCAL ROOM REV-3 EQL AES (no controllers)	95	HORN/SAX BALLAD T-DDL-S REV-2 EQL AES 3 controllers: 4 11	107	SPATIAL FLANGE FLA EQL AES 2 controllers: 11 4
87	DOUBLE VOICE R-DDL-S PTR AES (no controllers)	96	INYOURFACE KICK T-DDL-S REV-2 EQL AES (no controllers)	108	NIGHT STALKER T-DDL-L REV-1 EQL AES 2 controllers: 11 4
88	CHORUS/DLY VOCAL CHO GAT-1 EQL AES (no controllers)	97	BOMBSCARE R-DDL-S PTR EQL AES 1 controller: 4	109	GITARAE FUGANT S-DDL-S D-PTR (no analog) (no controllers)
89	IN FLIGHT VOCAL LPF R-DDL-S REV-3 EQL AES (no controllers)	98	TUNNEL BOMB R-DDL-S PTR EQL AES (no controllers)	110	PHASED AGAIN S-DDL-S PSR EQL 2 controllers: 11 4
90	DEJA VU VOCAL GAT-3 EQL AES (no controllers)	99	SKIN TIGHTHEAD LPF REV-2 EQL AES (no controllers)	111	SPINNING PHASE PSR MIDIPAN EQL 1 controller: 4
91	CLOUD NINETEEN LPF R-DDL-S REV-3 EQL AES (no controllers)	100	<BLANK TITLE> (no digital) (no analog) (no controllers)	112	SHIMMERPHASE PSR TRM EQL 1 controller: 4
92	BREATH OF OXYGEN LPF R-DDL-S REV-3 EQL AES (no controllers)	101	BIG RAP KICK LPF REV-1 EQL AES (no controllers)	113	X-15 FOOT PHASE PSR EQL 2 controllers: 11 4
		102	COSMIC ARCHIVE R-DDL-S GAT-2 PAN EQL AES (no controllers)	114	OLD ORANGE PSR EQL 1 controller: 4
		103	VARIASPEED LESLIE FLA TRM AES 2 controllers: 11 4	115	ORIENTAL SWEEP D-PTR AES (no controllers)
		104	SYNTH STACCATO R-DDL-S CHO GAT-1 AES 1 controller: 4		



The first line of the preset description tells you the name and location of each Factory Preset on the first line. On the next line, which digital effects present in the preset are shown. Analog effects used for the preset are listed on the third line. How many and which MIDI controllers are listed on the last line.

Table of Effect Abbreviations:

First is the abbreviation found in the preset list. Next is the actual effect algorithm name. In brackets, how the algorithm name is displayed in the LCD. For a description of the algorithms and parameters, refer to the section "Description of Algorithms".

- AES = ACOUSTIC ENVIRONMENT SIMULATOR [ACU-ENV-SIM], [AES]
- CHO = CHORUS [CHORUS], [CHO]
- D-PTR = DUAL PITCH TRANSPOSER [DUAL PTR], [2PTR]
- EQL = EQUALIZER (SEVEN BAND EQUALIZER) [EQUALIZER], [EQL]
- FLA = FLANGER [FLANGER], [FLA]
- GAT-1 = GATED REVERB-1 [GATE-VERB-1], [GAT]
- GAT-2 = GATED REVERB-2 [GATE-VERB-2], [GAT]
- GAT-3 = GATED REVERB-3 [GATE-VERB-3], [GAT]
- LPF = LOW PASS FILTER [LOW-PASS], [LPF]
- MPN = MIDI-PAN [MPN]
- PAN = PANNER [PANNER], [PAN]
- PSR = PHASER [PHASER], [PSR]
- PTR = PITCH TRANSPOSER [PITCH-TRANS], [PTR]
- R-DDL-S = REGEN-DDL-SHORT [REGEN-DDL-S], [DDL]
- R-DDL-L = REGEN-DDL-LONG [REGEN-DDL-L], [DDL]
- REV-1 = REVERB-1 [REVERB-1], [REV]
- REV-2 = REVERB-2 [REVERB-2], [REV]
- REV-3 = REVERB-3 [REVERB-3], [REV]
- S-DDL-S = STEREO-DDL-SHORT [STREO-DDL-S], [DDL]
- S-DDL-L = STEREO-DDL-LONG [STREO-DDL-L], [DDL]
- SMP-S = SAMPLER-SHORT [SAMPLER-S], [SMP]
- SMP-L = SAMPLER-LONG [SAMPLER-L], [SMP]
- SMP+PTR = SAMPLER+PITCH TRANSPOSER [SAMPLER+PTR], [SPT]
- T-DDL-S = TAPPED-DDL-SHORT [TAP'D-DDL-S], [DDL]
- T-DDL-L = TAPPED-DDL-LONG [TAP'D-DDL-L], [DDL]
- TNR = GUITAR TUNER [TUNER], [TNR]
- TRM = TREMOLO [TREMOLO], [TRM]

LIMITED WARRANTY

Warranty service for this unit will be provided by Applied Research & Technology, Inc. in accordance with the following warrant statement.

Applied Research & Technology, Inc. warrants to the original purchaser that this product and the components thereof, will be free from defects in workmanship and materials for a period of one year from the date of purchase. Applied Research & Technology, Inc. (ART) will, without charge, repair or replace, at its option, defective product or component parts upon prepaid delivery to the factory service department or authorized service center, accompanied by proof of purchase date in the form of a valid sales receipt.

EXCLUSIONS: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. This warranty is void if the serial number is altered, defaced, or removed.

ART reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install the same on products previously manufactured.

ART shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights and you may also have other rights which vary from state to state.

For units purchased outside The United States, service will be provided by an authorized distributor of Applied Research & Technology, Inc.

SERVICE

The following information is provided for the unlikely event your unit requires service.

- 1) Be sure the unit is the cause of the problem. Check to make sure the unit has power supplied, all cables are connected correctly and the cables themselves are in working condition.
- 2) If you find the unit to be at fault, write down a description of the problem including how and when the problem occurs.
- 3) Call the factory for a Return Authorization (RA) number.
- 4) Pack the unit in it's original carton or a reasonable substitute. The packing box is not recommended for a shipping carton. Put the packaged unit in another box for shipping. Print the RA number clearly under the address.
- 5) Include with your unit: a return shipping address (We cannot ship to a P.O. Box), a copy of your purchase receipt, a daytime phone number, and the description of the problem.
- 6) Ship the unit to:

- 7) Contact our customer service department at (716) 436-2720 for your Return Authorization number or questions regarding repairs. Customer Service hours are 9:00 AM to 4:00 PM Eastern Time, Monday through Friday.