MASTER

MASTER

MASTER 1 MASTER TUNE

MASTER TUNE lets you tune the Emax II to other instruments.

1. Activate **MASTER 1**. The display says:

```
Tuning YXX Cents
Use Data Slider
```

... where XX is a two-digit number and Y indicates plus or minus.

2. Vary the data slider to change tuning. The display indicates, in cents, the amount sharp (+) or flat (-) compared to the normal keyboard pitch (+45 cents to -48 cents).

Note: The tunings of individual voices can also be varied (see **DYNAMIC PROCESSING 11**).

3. Press **ENTER** to return to the module identifier, or de-activate the module to return to **Select Preset**.

MASTER 2 MEMORY REMAINING

How close are you to filling up the Emax II memory with samples and presets? This command puts a dipstick in the memory to find out.

1. Activate **MASTER 2**. With an empty memory bank, the display says:

```
Sample: 524288
Preset: 028144
```

The sample memory shows the number of remaining 16-bit *samples* and preset memory shows the amount of remaining preset memory in 8-bit *bytes*.

2. Press **ENTER** to return to the module identifier, or de-activate the module to return to **Select Preset.**

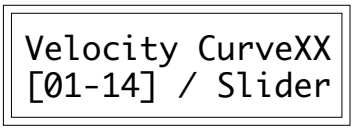
MASTER

MASTER 3 VELOCITY CURVE

Emax II provides 14 different velocity curves (See Appendix) to provide different types of dynamics in response to your playing.

The Velocity Curves do not affect incoming MIDI data and therefore this function has no purpose on a rack mount Emax II.

1. Activate **MASTER 3**. The display says:



... where XX will be a number from 01 to 14. Use the data slider or the numeric keypad to select the desired velocity curve.

2. As you play a key, the lower line will display the MIDI velocity value (with 127 being the highest possible value). This helps you see how each velocity curve reacts to the dynamics of your playing.

3. Press **ENTER** to return to the module identifier, or de-activate the module to return to **Select Preset**.

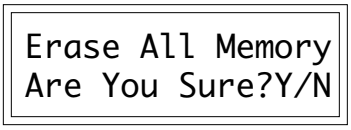
Note: The velocity curve is stored as part of the preset.

MASTER 4 ERASE ALL MEMORY

This procedure clears out Emax II's entire RAM memory— Presets, Voices, Samples and Sequences.

Application: Provides maximum amount of memory for sampling.

1. Activate **MASTER 4**. The display says:



2. Press **YES** to erase, **NO** to exit without erasing.

MASTER 5 FORMAT DISK

FLOPPY DISK

Before a floppy diskette can record (store) any data, it first must be told how to record this data (called *formatting* the disk). Run the following formatting procedure on *any* new disk, or on "recycled" disks previously used with other systems (such as home computers) since these will not be formatted correctly for the Emax II.

Formatting a disk that already contains data will "bulk erase" any data on the disk being formatted. Always check that disks are either blank, or contain nothing you want to save, before formatting. A disk need only be formatted once unless you want to use the "bulk erase" aspect of formatting.

Use 3.5" double-sided, double-density (DSDD) disks. Avoid bargain disks.

HARD DISK

Just as a floppy disk must be formatted in order to receive Emax II data, so must the hard disk. Formatting, which erases any existing hard disk data, occurs for one of two reasons:

▼ The hard disk has never been used previously and must be prepared for operation.

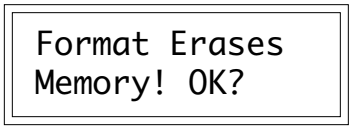
▼ The hard disk has developed one or more "Disk Read Errors" making one or more banks unavailable.

Formatting will re-initialize the hard disk and erase any existing banks. Hard disk crashes are not frequent occurrences, which may lull you into a false sense of security. However, Murphy's Law dictates that a crash will occur when you have sampled fantastic, unique new sounds that aren't backed up, so *ALWAYS* maintain floppy disk backups of any banks stored on the hard disk.

On either a hard disk or floppy disk, formatting not only formats the disk, but also writes Emax II's operating system (the software that tells the system how to operate). Emax II writes the software that the machine was initially booted up with onto the disk to be formatted. Note: Emax II will not boot from a removable media hard disk.

■ *If a new hard disk does not seem to be working correctly, it may not have been formatted for the Emax II.*

1. Activate **MASTER 5**. (If you do not have a hard disk, make sure you have a formatted disk already in the drive.) The display says:



MASTER

If you don't want to lose what you have in the bank, save it to disk first (see **PRESET MANAGEMENT 2**). Otherwise, press **YES**.

2. If you booted from a floppy disk, Emax II will ask you to insert the source software disk. Check that a *formatted* Emax II disk with the latest software is in the drive. If not, insert one. To prevent any embarrassing errors, write-protect the disk (**GENERAL INSTRUCTIONS 4**). Press **ENTER**. There will be a short wait while Emax II loads the formatting software.

If you booted from a hard disk, Emax II will simply load the software into its memory from the hard disk. In either case, the display will say:

```
Format Disk
Select a Drive
```

FORMAT FLOPPY - Select **SCSI 0** in order to format a floppy disk, then press **ENTER**.

FORMAT HARD DISK - If you want to format a hard disk, select the correct SCSI ID number of the hard disk and press **ENTER**. When formatting a hard disk, disconnect any other HDs if possible, to avoid accidently formatting the wrong hard disk. Formatting a hard disk takes 15-20 minutes, so take a break.

If you are formatting a floppy, the display says:

```
Pls Insert Disk
To Be Formatted
```

4. Remove the source disk and insert the disk to be formatted, then press **ENTER**.

The display will say:

```
Formatting
```

Formatting a floppy takes about a minute and a half.

MASTER

After formatting is complete, the display asks:

```
Format Another
Disk? Y/N
```

To format another disk, remove the newly formatted disk from the drive, insert the next disk to be formatted in the drive, then press **YES**. Otherwise, press **NO**, whereupon the display returns to the module identifier.

MASTER 6 ERASE HD BANK

This function lets you erase an entire bank from a hard disk in order to make room for other sounds.

1. Activate **MASTER 6**. The display says:

```
Erase Disk Bank
BXX Name of Bank
```

...where "XX" is the bank number and "Name of Bank" is the name of the bank.

Note: The "Name of Bank" is simply the current preset at the time that the bank was saved.

2. Select the hard disk bank that you wish to erase and press **ENTER**.
The display says:

```
Erases HD Data
Are You Sure?Y/N
```

3. Press **YES** to erase the bank or **NO** to return to the module identifier.

MASTER

MASTER 7 BIRD RUN

This function aligns Emax II's internal stabilizers and prevents excessive gyro-cosmic relativation.

1. Activate **MASTER 7**.

2. Carefully observe the display for any signs of destabilization (eg. gravitational warps, apparent speeding up or slowing down of time, objects in mirrors appearing closer than they really are). If Emax II returns to the module identifier after a few seconds, all is well.

Note: Occasionally a small emu will get trapped within the Emax II and run across the screen during the stabilization scan process. This does not affect Emax II's normal functions.

MASTER 8 BACKUP/RESTORE

This module allows you to backup either a portion or the entire contents of the hard disk on 3.5" micro-floppy diskettes. These functions make backup so easy that you will have no excuse for not backing up all your hard disk banks! Remember, If you would hate to lose it, BACK IT UP.

Note: Please read through all of the Backup/Restore procedures and try them out as well. These very flexible routines are designed to fit almost any style of backup you may have.

1. Activate **MASTER 8**. The display says:

```
Backup/Restore
[0-9] / Slider]
```

Select the desired function using the data slider or keypad.

0) Define Custom
1) Copy HD To HD
2) New Banks Only
3) Selected Banks
4) Custom Backup
5) ContinueBackup
6) BackuptoFloppy
7) NewBanksToFlpy
8) SelectedTo Flpy
9) Floppy Restore

MASTER

■ 0 Define Custom

This function tells the Emax II to save the previous backup function as your custom backup. When you have chosen your preferred backup scheme, simply execute it once, then use this function and it will be permanantly saved. The next time you want to backup, use the *Custom Backup* function and the procedure will be performed automatically. See also *Custom Backup.*

■1 Copy HD To HD

This function allows the backup of an entire hard disk to another hard disk. The display shows:

```
Backup SCSI X
Needs  YYMB
```

... where X is the currently selected SCSI drive and YY is the amount of HD memory (on the destination drive) needed to back it up.

Press **ENTER** to continue and the display says:

```
SCSI X to SCSI _
```

Use the numeric keypad to enter the destination drive ID number, then press **ENTER**. The display will show the amount of memory avaialable on the destination drive in megabytes, and percentage of memory remaining.

The display now asks:

```
SCSI X to SCSI Y
Interactive? Y/N
```

If you select **YES** (Interactive), you will be asked to confirm the copying of each bank.

If you select **NO**, the backup will be performed on all banks without user intervention.

MASTER

The display will now ask for the Destination Mode.

Your choices are:

AddToEmpty Banks	Installs backup banks in the lowest empty banks on the destination drive and no data is lost.
CopyToSameNumber	Overwrites any existing bank with the same number.
Erase, Then Copy	Erases all data on the destination drive and provides an exact copy of the source disk.

If Interactive Mode has been chosen, the display will ask your permission before copying each bank. Use the **YES** and **NO** buttons to acknowledge.

■ 2 New Banks Only

This function works exactly like *Copy HD to HD* except that the only banks eligible to be copied are those that have been changed or added to since a previous backup.

■ 3 Selected Banks

This mode allows you to select a range of banks to be copied. The copy mode can either be interactive or automatic. After the standard backup prompts are complete, the display will say:

```
Select Low Bank
BXX Name of Bank
```

... where XX is the bank number and "Name of Bank" is the name of the bank.

Use the data slider to select the lowest bank to be backed up, then press **ENTER**.

MASTER

The display now says:

```
Select High Bank
BXX Name of Bank
```

Select the highest bank to be backed up, then press **ENTER**. The backup process will continue.

■ 4 Custom Backup

Custom Backup allows you to use a custom backup procedure that you defined using function *O-Define Custom*. When you *Define Custom*, the Emax II simply saves the previously used backup function as your custom backup. If you backup regularly, *Custom Backup* will be your main routine and will save you many keystrokes. As an example, this is what the screen would show for an automatic backup of selected banks 7-10 from SCSI 1 to SCSI 4.

```
Backup=07-10Auto
SCSI1->Same# OK?
```

■ 5 Continue Backup

This function is used when backing up to a removable media device or to a series of disks from a larger disk. If the destination HD become filled and cannot receive the entire backup, Emax II remembers which banks have *not* been backed up and allows you to change the removable media or switch SCSI ID numbers. The *Continue Backup* function allows you to continue backing up from where you left off. If a previous backup (which left any of the banks unsaved) has *not* been performed, the error message, "Cannot Continue Backup", will be displayed.

■ 6 Backup to Floppy

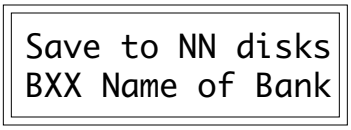
This mode is used if you want to backup the entire contents of a HD to floppy disk. The display shows:

```
Backup SCSI X
Need YY Floppys
```

... where X is the cuurently selected HD, and YY is the number of floppy disks needed.

MASTER

After the source drive is selected, you will be prompted as to the number of disks needed for each bank. Press **YES** to backup a particular bank, or **NO** to skip to the next bank.



... where NN is the number of floppy disks required, XX is the bank number, and "Name of Bank" is the name of the bank.

If **YES** is selected, the display says:

Continue to feed Emax II floppy disks as directed until the backup process is complete. *This will take awhile.*

■ 7 New Banks to Floppy

This function is identical to a normal backup to floppy, except that only banks that have been changed or added to since the last backup are eligible to be backed up.

■ 8 Selected to Floppy

This function allows you to choose a range of banks to be backed up. You select the starting and ending bank numbers of the banks you want backed up.

■ 9 Floppy Restore

This function is simply an automated load and save bank function, which could be used to restore the HD in the event of a hard disk failure. Insert a backup disk, then press **ENTER**. The disk will be loaded and you will be asked to which bank it should be saved. Choose the destination, and press **ENTER**. This process is repeated infinitely.

MASTER

MASTER 9 SPECIAL

This module holds some seldom-used, but extremely useful, functions.

1. Activate **MASTER 9**. The display says:

```
    Special
[1-8] / Slider
```

2. Select the desired special function using the data slider or keypad.

1 Copy Software
2 MIDI Master
3 Recalibrate
4 Audition Note
5 MIDI Analyzer
6 SCSI Boot ID
7 Headroom
8 Install Disk

■ *1 Copy Software*

The Emax II operating system deals with such tasks as disk transfers, memory management, and so on. Occasionally E-mu enhances the operating system. Each version of the operating system is numbered, as indicated when you move the data slider all the way to the top while in Special. As newer versions are introduced, use this function to copy the new software on to disks containing the old software. Everything else on the old disk—samples, presets, sequences, and so on — remain unchanged.

1. Upon selecting Copy Software, the display says:

```
Copy Sftw - Will
Erase Memory OK?
```

If it's not okay to erase memory, press **NO** and copy the bank contents to disk. Otherwise, press **YES**.

MASTER

The display now says:

```
Copy Sftwre from
SCSI X:DriveName
```

... where X is the SCSI ID number and "DriveName" is the name of the drive.

Use the data slider to select the SCSI drive that you wish to copy ***from***.

2. Insert the Source disk (the one with the new software) in the drive if you are copying from floppy.

3. Press **ENTER** to select the source drive. This clears the bank and loads the operating system software into the Emax II. The display will say "Just A Moment... ".

4. After the software has been loaded, the display says:

```
Copy Sftwre to
SCSI X:DriveName
```

... where X is the SCSI ID number and "DriveName" is the name of the drive.

Use the data slider to select the SCSI drive that you wish to copy ***to***.

Insert the destination floppy disk (if applicable) and press **ENTER** to initiate the transfer. After copying the software to a floppy, you have the option of copying the software onto another disk (insert the disk then press **YES**) or exit back to the module identifier (press **NO**).

■ 2 MIDI Master

This contains three functions. **Channel** (Chan) allows you to set the MIDI channel of the Emax II and ignore the programmable channels in each preset. **Overflow** (Ovfl) is used to turn overflow mode on or off. Overflow mode transmits notes over MIDI only when the Emax II runs out of channels. **HD Load** allows you to load a hard disk bank via a MIDI program change. HD load is set to a preset that is used to tell the Emax II that the next preset change command will change the hard disk bank number. If an invalid bank number is sent, the Emax II will return to normal preset mode.

Note: Be careful when using the HD load function to prevent the accidental loading of seemingly random HD banks.

MASTER

```
Chnl Ovfl HDBank
 off  off   off
```

■ 3 Recalibrate

With this function you can select minimum and maximum values for the left wheel, right wheel, foot pedal, data slider, and volume slider. You can also select a center value for the left wheel as well as the footswitch polarities and LCD contrast. Select the controller to be re-calibrated with the data slider. The Emax II controls should be recalibrated periodically in order to compensate for normal wear and tear on the controls themselves or if the controls ever behave strangely.

With the exception of the left wheel, LCD contrast and the footswitches, you will first set the minimum value and press **ENTER**, then the maximum value and press **ENTER**. For the left wheel, you can also set the center value. After making your choices, the display will ask if you want to save results. If so, press **YES;** otherwise, press **NO.** The wheels and sliders should be calibrated so that the "Post" setting ranges from 0-255.

The recalibrate footswitch function allows the Emax II to use either of two types of footswitches (normally open or normally closed). If your footswitch seems to work backwards, try changing the setting of the footswitch select from **Footswitch On=Closed** to **Footswitch On=Open**.

The LCD contrast control allows you to adjust the LCD viewing angle for easy reading. On the rack mount Emax II, the LCD angle is ajusted from the front panel and not from the recalibrate menu.

■ 4 Audition Note

This function is included for use on the Emax II rack at times when a MIDI keyboard is not connected. This function allows you to play the Emax II without a keyboard. Select **Special 5** and the display says:

```
Audition Note:C3
(0-9) / Slider
```

Moving the slider will select which note is played and buttons 0-9 play the sound.

MASTER

■ 5 MIDI Analyzer

The MIDI Analyzer is a useful function designed to help you solve MIDI interconnection problems.

Select **Special 6** and the display says:

```
MIDI Data: In
Use Data Slider
```

Moving the data slider changes the analyzer from analyzing MIDI IN to analyzing MIDI OUT. Press **ENTER** to select.

The display now says:

```
Waiting for
MIDI Data
```

When MIDI data is received (or sent), the data will be displayed. The analyzer recognizes most MIDI messages, but does not display System Exclusive or Active Sensing messages.

■ 6 SCSI Boot ID

This function allows you to select which SCSI drive (0=floppy, 1-7=HD) Emax II will scan on initial power up for its operating software. Note: Emax II will always boot from floppy if a formatted floppy disk resides in the drive on power up.

The display says:

```
Preferred Boot
Drive: SCSI X
```

... where "X" is the preferred SCSI ID number.

Use the data slider to select the preferred boot drive, then press **ENTER**.

Note: You MUST press **ENTER** in order to store this setting in the Emax II.

MASTER

■ 7 Headroom

Headroom is the amount of dynamic range remaining before clipping will occur. The amount of headroom on the Emax II is adjustable from 0 dB to 15 dB in 1 dB increments with the front panel volume control set to maximum. A headroom setting of 0 dB, for example, will provide the hottest output level, (and the highest S/N ratio) but may cause "clipping" if too many notes are played at once. The default headroom setting is 6 dB, which is a good compromise between a good signal to noise ratio and having a bit of remaining headroom. If you hear clipping from the Emax II, raise the amount of headroom. The headroom setting *is* retained when power is switched off.

■ 8 Install Disk

The Install Disk utility allows you install new features (memory expansion, etc.) into the Emax II as they become available. Detailed instructions concerning this function will be supplied with the update kits.

■ Software Revision

This shows the operating system version number in the display.