SEQUENCER

SEQUENCER

SEQUENCER BACKGROUND

To activate the sequencer module, press **SEQUENCER SELECT**. The green LED above the word sequencer and below the Emax II logo should light to indicate you are ready to sequence.

The **Sequencer Setup** module handles chores as you create a sequence. **Sequencer Manage** covers more general sequencer functions. After using the Setup or Manage modules, make sure you press **SELECT** before you attempt recording.

Here's how **Record**, **Play**, and **Stop** work:

Play starts the sequence playing. The sequence will repeat (loop) until you press **Stop** (see below). The lower display line will show the playback tempo; this may be varied in real time with the data slider. You may also change track status or the current preset while playing. If you don't change the track status, you can re-record the same track over and over again. The actual erase of the current track occurs when you press **Record**, which neatly segues us into...

Record then **Play** puts the sequencer in record ready mode; Play a key to actually start the recording process (it is not necessary to hold down record as you press play). The lower display line will show the tempo at which are recording. This may be varied in real time with the data slider. Yes, you can slow down tempo for the hard parts, and speed up for the easy ones! If you wish to start recording before any notes are played(For example:To begin with a rest) press **ENTER.**

Stop has two options. If you press it once while the sequence is playing, the sequence will stop at its end. If you press **Stop** twice while the sequence is playing, it will stop immediately.

SEQUENCE LENGTH

The Emax II sequencer uses the same memory used to store samples. Therefore, if you run out of sequencer memory you can free up more by erasing an unused voice. Naturally, sequences take far less memory than do samples, so that deleting even a short sound will free up quite a bit of memory. How much? A "Note-on" plus a "Note-off" uses 3 Emax II samples. Erasing a .5 second sampled sound taken at the 27 kHz sampling rate would "free-up" another 4629 notes of sequencer time. $(27{,}000 \times .5) \div 3 = 4629$.

If you have a hard disk for your Emax II, you can create and save sequences up to the limit of your memory (over a million notes with no samples). The limit for saving sequences to floppy disk is 85,333 notes (512 kBytes) for all sequences (ie. a lot of music). Trying to save more than this to floppy can cause lost data. Moral of story: Anyone creating long sequences *(especially if over a million notes)* should use a hard disk for storage.

SEQUENCER MANAGE

SEQUENCER SELECT   *SELECT SEQUENCE*

SELECT activates the sequencer module and also allows you to choose a sequence for recording or playback.

1. To enter the sequencer module, press **SELECT**.

2. Move the slider or use the cursor keys to catalog the already-recorded sequences. To select an empty sequence for recording, key in a number with the numeric keypad. The chosen sequence becomes the current sequence.

Note: Pressing **Select Sequence** while a sequence is playing will return the display to the preset select mode allowing you to change presets while a sequence is playing. Pressing play returns to tempo display.

SEQUENCER MANAGE 1   *TEMPO*

This sets the tempo for Emax II's internal clock.

1. With the sequence module active, press **MANAGE** then select **1**.
The display says:

```
Tempo: ♩=120.00
(040/240)/Slider
```

Use the data slider or the numeric keypad to adjust the tempo through the range from 40-240 Beats Per Minute. Press the right cursor key to to do fine adjustment to the tempo. Use the data slider or the numeric keypad to adjust the tempo through the range from .00-.99 Beats Per Minute.

If you have selected a clock other than the internal clock, (see **SEQUENCER MAN-AGE 2**), the sequencer will follow and display this clock rather than the internal clock.

SEQUENCER MANAGE

SEQUENCER MANAGE 2   CLOCK SOURCE

You can drive the Emax II sequencer from the internal clock, MIDI, or three different flavors of pulse signals.

1. With the Sequencer module active, select **2**. The display says:

```
Clock: internal
Use Data Slider
```

2. Use the data slider to choose the desired clock option. Your choices are:

● **internal** = Emax II's sequencer syncs to the internal clock at the tempo chosen in **SEQUENCER MANAGE 1**.

● **MIDI** = Emax II's sequencer syncs to MIDI clock signals coming in over the MIDI IN port

● **click 24** = Emax II's sequencer syncs to 24 pulses-per-quarter-note signals appearing at the Clock Input jack.

● **click 48** = Emax II's sequencer syncs to 48 pulses-per-quarter-note signals appearing at the Clock Input jack.

● **click 96** = Emax II's sequencer syncs to 96 pulses-per-quarter-note signals appearing at the Clock Input jack.

3. Press **ENTER** when you've made your selection; Emax II returns to the module identifier.

SEQUENCER MANAGE 3   LOAD SEQUENCE

Use this function to load a sequence from disk into Emax II's memory.

1. Insert the disk containing the sequence you want to load into the bank. With the Sequencer Manage module active, select **3**.

SEQUENCER MANAGE

The display says:

```
Load Seq from XX
XX Name of Bank
```

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

Use the data slider or the increment/decrement buttons to select the bank you want to load the sequence from, then press **ENTER**. The display now says:

```
Load SXX
Select Sequence
```

...where XX is a two-digit number. Use the data slider or numeric keypad to select the sequence you want to load, then press **ENTER**.

2. The display now says:

```
Load SXX To SYY
Select Sequence
```

...where XX is the sequence number selected in the previous step (source sequence), and YY is the sequence number the loaded sequence will have in the Emax II's bank (destination sequence; this defaults to the first available empty sequence). Use the slider or numeric keypad to select one of the 50 sequences in the Emax II.

3. Press **ENTER** after choosing the desired sequence, and the sequence will be loaded. If you haven chosen to load into a non-empty sequence, the display will prompt you with:

```
Load SXX to SYY
Overwrite Y/N
```

Press **YES** to overwrite, **NO** to select a different destination sequence.

SEQUENCER MANAGE

4. Once the sequence has been loaded, you have the option to rename it:

```
Rename Sequence
SXX (seq. name)
```

Press **ENTER** if you don't want to rename; this returns you to the module identifier. Otherwise, name the sequence as described in **SEQUENCER MANAGE 6**.
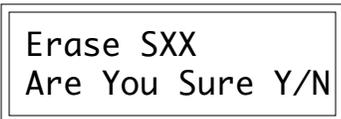
SEQUENCER MANAGE 4   *ERASE SEQUENCE*

This function erases a sequence in the Emax II memory. It does not erase a sequence from disk. To erase a sequence from disk, you must first load the disk, erase the sequence, then save the bank to disk (PRESET MANAGEMENT 2).

1. With the Sequencer Manage module active, select **4**.

2. The display says:

```
Erase SXX
Select Sequence
```

…where XX is a two-digit sequence number. Use the slider, or numeric keypad to select the sequences in memory. After selecting the sequence to be erased, press **ENTER**. The display says:

```
Erase SXX
Are You Sure Y/N
```

3. Press **YES** to erase and return to the module identifier, or if you change your mind, press **NO** (Emax II still returns to the module identifier).

SEQUENCER MANAGE

SEQUENCER MANAGE 5   COPY SEQUENCE

This function copies one sequence to another in the Emax II memory.

1. With the Sequencer Manage module active, select **5**.

2. The display says:

```
Copy SXX
Select Sequence
```

...where XX is a two-digit sequence number. Use the slider, or numeric keypad to select the sequences in memory available for copying. After selecting the sequence to be copied, press **ENTER**. The display says:

■ *Use the Copy Sequence function to backup your work in memory, allowing you to experiment without affecting the original sequence.*

```
Copy SXX to SYY
Select Sequence
```

...where XX is the sequence number selected in the previous step (source sequence), and YY is the sequence number the copied sequence will have in Emax II's bank (destination sequence; this defaults to the first available empty sequence). Use the slider, or numeric keypad to select one of the 50 sequences in Emax II.

3. Press **ENTER** after choosing the desired sequence, and the sequence will be copied. If you have chosen to copy into a non-empty sequence, the display will prompt you with:

■ *Use the Append Sequence function to build songs from short segments.*

```
AppendSXX to SYY
Select Sequence
```

Press **ENTER** to append SXX to the end of SYY. SYY now = SYY+SXX. SXX remains unchanged.

4. Once the sequence has been copied or appended, you have the option to rename it:

```
Rename Sequence
SXX (seq. name)
```

SEQUENCER MANAGE

Press **ENTER** if you don't want to rename; this returns you to the module identifier. Otherwise, name the sequence as described in **SEQUENCER MANAGE 6**.

SEQUENCER MANAGE 6   *RENAME SEQUENCE*

**This function lets you rename a sequence in the Emax II memory.**

1. With the Sequencer Manage module active, select **6**.

2. The display says:

```
Rename SXX
Select Sequence
```

...where XX is a two-digit sequence number. Use the slider, increment buttons, or numeric keypad to select the sequences in memory available for naming.

3. After selecting the sequence to be renamed, press **ENTER**. The display says:
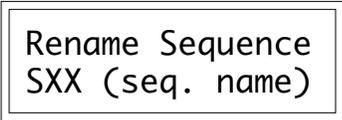
```
Rename Sequence
SXX (seq. name)
```

Use the cursor buttons to select the character to be changed. Select the character itself with either the data slider (moving the slider all the way to the bottom of its travel produces a space),the increment buttons,or the keyboard keys. You can also use the numeric keypad to enter any numbers that are part of the name.

4. Press **ENTER** after naming the sequence; Emax II returns to the module identifier.

SEQUENCER SETUP

SEQUENCER SETUP 1   *TRACK STATUS*

Emax II's sequencer has 16 tracks. If the track is unrecorded, its status can be set to Record. If it is recorded, its status can be set to Play, Mute, or Record (to re-record).

1. Select the current sequence (see **SEQUENCER SELECT**).

2. With the Sequencer Setup module active, select **1**. If the sequence is unrecorded, the display shows:

```
TXX     R——— ————
Status:———— ————
```

...where XX is the track number whose status can be changed, and the dashes represent the 16 available tracks. The cursor will flash under the selected track; use the cursor buttons to select a different track.

With an already-recorded sequence, tracks that have been recorded will show .

3. Use the **ON/YES** and **OFF/NO** buttons to select the track status— "R" (record), "P" (playback) or "M" (mute).

4. Track status mode can also be entered while a sequence is playing by pressing the **SEQUENCER SETUP** button while in play mode. This is convenient for muting tracks on playback. Please note that record is not active in the play mode. Pressing the play button returns Emax II to the tempo display.

SEQUENCER SETUP 2   *TRACK PRESET*

You can re-assign any track to any preset using this function.

1. With the Sequencer Setup module active, select 2. The display says:

```
Track XX
Select Track
```

...where XX is the track number to be re-assigned. Use the slider or numeric keypad to select the track number, then press **ENTER**. If you select an unrecorded track, the lower display line will say "Empty Track."

SEQUENCER SETUP

2. The display now says:

```
Track XX –> PYY
Select A Preset
```

■ *Use the Track->Preset function in SuperMode to assign presets to MIDI channels.*

...where XX is the track number to be re-assigned and YY is the preset number currently assigned to the track.

3. Select the new preset number with the the data slider, increment buttons, or numeric keypad, then press **ENTER**.

4. Exit the setup module to exit this mode.

SEQUENCER SETUP 3   AUTO EXTEND

Auto Extend lets you extend the length of a previously recorded sequence. Care should be used with this function to prevent confusion!

1. Select the current sequence you want to extend.

2. With the Sequencer Setup module active, select **3**. The display shows:

```
Auto Extend: off
Select on/off
```

Use **ON** to select Auto Extend, **OFF** to de-select. After making your choice, press **ENTER**.

3. Assuming that you have selected Auto Extend, you are now ready to extend your sequence. Press **Record** then **Play** to put the sequencer into record mode. Let the sequence play for as long as desired; to end the sequence, press **Stop**.

4. Once you have extended the sequence, remember to turn Auto Extend off! Otherwise, next time you go into record you will extend the sequence even further unless you remember to hit Stop at the exact right moment.

5. If you want to record a track as you extend the sequence, no problem. Just put a track into record mode before you start.

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SEQUENCER SETUP 4   ERASE TRACK

Okay, so that 32nd note bass track wasn't so cool after all. Here's how to get rid of it.

1. Select the current sequence whose track you want to erase.

2. With the Sequencer Setup module active, select **4**. The display shows:

```
Erase Track XX
Select Track
```

...where XX is the track number that's about to be erased. Select the track to be erased with the data slider or keypad; the display's lower line will show its associated preset. Press **ENTER**. Emax II, which always does what it can to help you prevent embarrassing mistakes, asks "Are You Sure Y/N." If yes, press **YES**, otherwise press **NO**.

SEQUENCER SETUP 5   BOUNCE TRACK

You may bounce a track to any other sequencer track, or even bounce several tracks, one at a time, into a composite track

1. Select the current sequence whose track you want to bounce.

2. With the Sequencer Setup module active, select **5**. The display shows:

```
Bnce TXX
Select Track
```

...where XX is the track number that's about to be bounced (source track). Select the source track (data slider, increment buttons or keypad), then press **ENTER**.

3. The display now shows:

```
Bnce TXX To TYY
Select Track
```

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...where XX is the source track number and YY is the destination track number. Select the destination track number (data slider or keypad) and press **ENTER**. The source track will be erased, its data will now be in the destination track, and Emax II will return to the module identifier.

4. To mix several tracks to one track, repeat steps 2 and 3 and specify the same destination track for each bounce.

SEQUENCER SETUP 6   SUPERMODE

The Emax II sequencer does not include some of the features of fancy sequencers (step editing, autocorrection, etc.). However, you can work out sequences on a full-function sequencer and download the tracks en masse using the Super Mode function. Super Mode also allows Emax II to read all sixteen MIDI channels at once and to route each channel to a different preset. This is called Super Mode Mapping.

It is important to remember that each Emax II Track corresponds to a particular MIDI channel. In other words, Emax II Track 5 downloads on MIDI channel 5.

SUPERMODE MAPPING

Create the SUPERMODE MAP.

(This may already be done for you. Check your sequences.)

1. Select a new sequence and record a short blank sequence of any length (Don't play any notes). Since each track listens on the corresponding MIDI channel, repeat this process on all tracks you wish to use.

2. Assign each track to the desired preset using **SEQUENCER SETUP 2 (Track Preset)**. Assign unneeded tracks to a blank preset which is created by not assigning any voices to a new preset. This will prevent these unneeded tracks from sounding. That's it! You now have a SuperMode Map that you can copy to other sequencer locations and disks. By simply changing sequences, you can call up a new map!

Using the SUPERMODE MAP

3. Check that the Emax II MIDI IN connects to the external sequencer's MIDI OUT.

4. Activate the **SEQUENCER SETUP** module and select **6**.

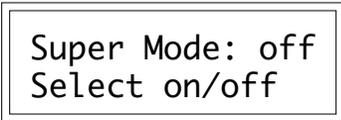## SEQUENCER SETUP

The display shows:

```
Super Mode: off
Select on/off
```

Press **ON** to enable SuperMode. Remember to make sure SuperMode is off (press **OFF** button) when you've finished with SuperMode. Emax II will now respond to multiple MIDI channels and route them to the preset specified in the map.

SUPER MODE DOWNLOAD

1. Check that the Emax II MIDI IN connects to the external sequencer's MIDI OUT.

2. Activate **SEQUENCER MANAGE 2** and select MIDI as the clock source.

3. Activate **SEQUENCER SELECT** and select the current sequence into which you will download the tracks.

4. Activate the **SEQUENCER SETUP** module and select **6**.

The display shows:

```
Super Mode: off
Select on/off
```

Press **ON** to enable SuperMode. Remember to make sure SuperMode is off (press **OFF** button) when you've finished downloading!

5. Select the tracks you want to download and put them in record mode according to the instructions in **SEQUENCER SETUP 1**. For example, if you want to download five tracks (MIDI channels), place the five Emax II tracks corresponding to each of the MIDI channels into record.

6. Press **RECORD** then **PLAY** on Emax II, then put your fancy sequencer into Play mode. The sequencer will start Emax II and send its MIDI data through the MIDI OUT into the Emax II MIDI IN. Emax II should be set for MIDI clock in. Either stop Emax II manually to terminate the downloading process, or stop the sequencer.

7. Assign the tracks to presets as desired—preset MIDI channel information is ignored—(**SEQUENCER SETUP 2**), change to Internal Clock (**SEQUENCER MANAGE 2**), and

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play the sequence to make sure all is well. If it is, call up **SEQUENCER SETUP 6**, turn off SuperMode, press **ENTER**, and Emax II will return to the module identifier.

IN BRIEF:

To access multiple presets thru MIDI

      1) Turn SuperMode on (Setup 6)
      2) Select SuperMode Map
      3) Enter Track Preset (Setup 2)
      4) Since track numbers = MIDI channel numbers, assign proper presets to
         desired tracks

To download sequences into Emax II via MIDI:

      1) Copy SuperMode Map with proper track/preset assignments to another
         sequence location (Manage 5)
      2) Turn Auto Extend on (Setup 3)
      3) Turn MIDI Start/Stop on for the current preset (Preset Def. 7)
      4) Choose MIDI clock (Manage 2)
      5) Hit "Play" on source sequencer
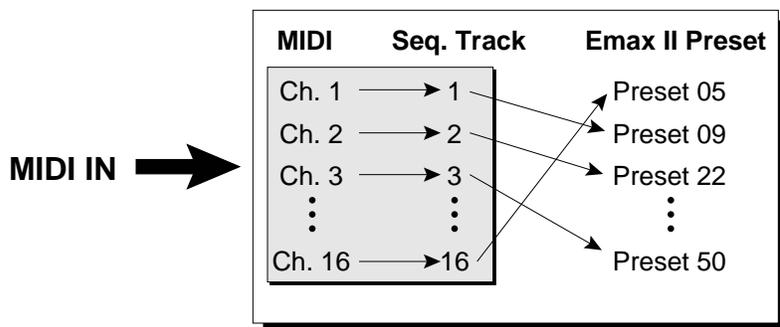
MIDI Channels are always routed to the same numbered Track.
The Supermode Map directs a Track to the appropriate Preset.