

# DX PATCH LIBRARY MANUAL

Firmware Version 2.03

## CONNECTIONS

Connect the DXPL as follows:

### USB POWER

If using the USB cord for power, connect to an appropriate USB compliant (5V) power source. This could be a USB powerbank for cordless operation.

### POWER

If using the standard power port, connect to a 9V, center-positive adapter.

### SYNTH MIDI

You will need 2 standard MIDI cables.

Connect the DXPL Synth OUT port to your synthesizer's MIDI IN port.

Connect the DXPL Synth IN port to your synthesizer's MIDI OUT port.

**Remember: OUT to IN, IN to OUT.**

### EXTERNAL MIDI

The DXPL MIDI OUT and IN port now take the place of your synthesizer's MIDI OUT and IN ports. Connect these to outside MIDI devices as necessary.

**Remember: OUT to IN, IN to OUT**

## PRE FLIGHT CHECKS

Prepare your Synth to send and receive data from the DX Patch Library. This depends on model, and in some cases, must be done each time you power on your synthesizer:

### DX7

1. Press the Memory Protect (Internal) button.
2. Use the Data entry controls to switch Memory Protect Internal to OFF.
3. Press the FUNCTION button.
4. Press 8. The display reads MIDI CH. Change this to 1 using the data entry slider or YES button.
5. Press 8. The display reads SYS INFO. Change this to SYS INFO AVAIL with the YES button.

**Note that this must be done each time the synth is powered on.**

### DX7 II

1. Press Edit.
2. Press 14.
3. Use the <> keys to select INT.
4. Use the Data Entry keys to switch Memory Protect INT to OFF.

**Note that this must be done each time the synth is powered on.**

## POWER

The DXPL will turn on when power is applied at either power connection. To turn the DXPL off, disconnect the power source.

## MIDI PASSTHROUGH

When powered on, the DXPL will pass all MIDI messages received on the MIDI IN port on to the Synth synthesizer's MIDI IN port. All messages from the Synth synthesizer's MIDI OUT port will be passed through to the MIDI OUT port on the DXPL. When the DXPL is loading or saving a patch, this passthrough is disabled while the patch is being loaded or saved.

MIDI Note On messages from the DX keyboard can be remapped from their default range of 0-100 to 0-127 for compatibility with other equipment. See the Velocity Compensation Setting section for instructions.

## KEYPAD

While some modes of operation will assign different functions to the keypad, in general, the keypad buttons are used as follows:

A – Access the Main Menu

B – Cancel an operation

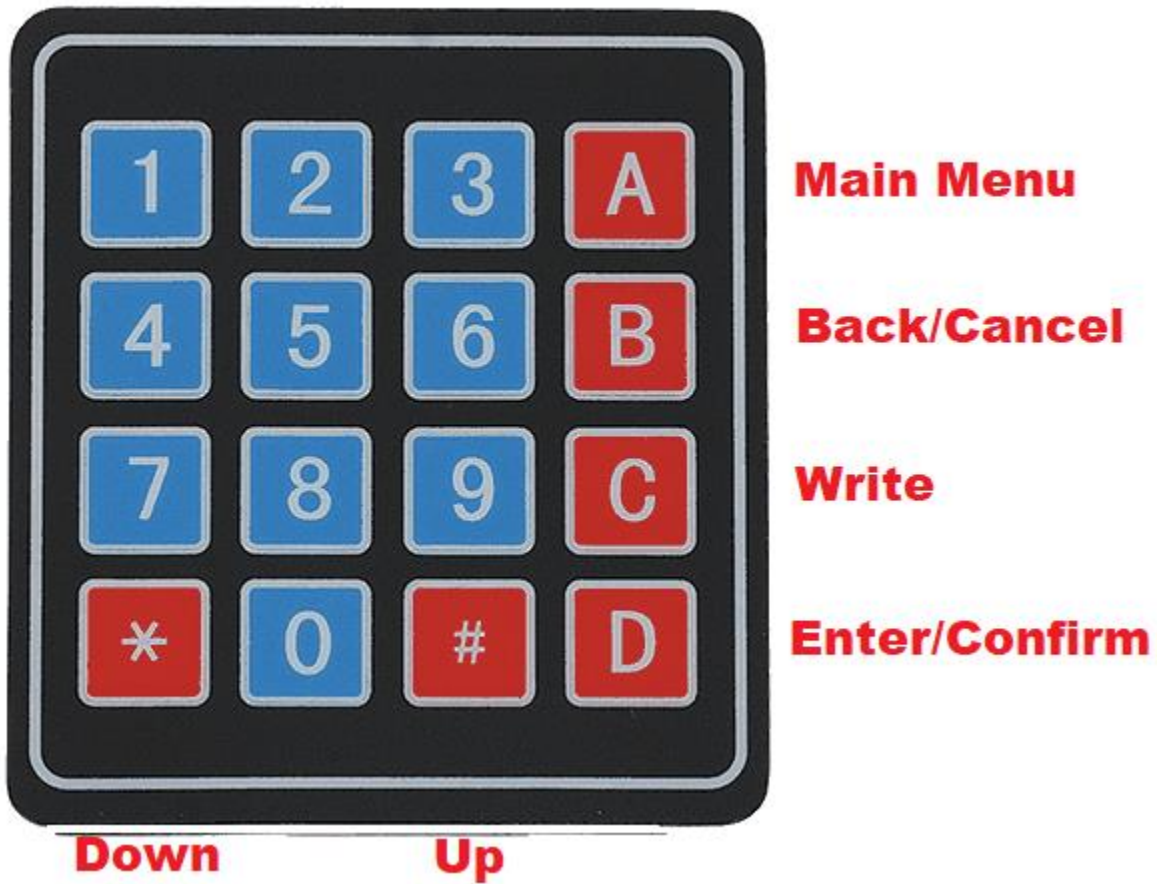
C – Initiate a Write operation to save data to the DX Patch Library

D – Enter/Yes/Confirm an operation

Numeric keys – Enter values or select options

\*, # keys – Increase or decrease values or option selections

### 0-9 Numeric Entry



## MAIN MENU

The DXPL starts in Main Menu Mode. You can return to the Main Menu at any time by pressing A. There are 5 main modes, which you can access by entering the number with the keypad, or pressing the \*,# keys.

These modes are:

1. PRST (Preset) – Load one of the DXPL's 2,186 built-in presets.
2. USER (User) – Load or save a patch to one of the DXPL's 10,000 available user memory slots.
3. BANK (Bank) – Load or save an entire bank of 16, 32 or 64 patches (depending on model) to the synth.
4. ARPG (Arpeggiator) – Use an arpeggiator with the synth.
5. SETT (Settings) – Adjust DXPL settings.

To select a mode, use the numeric keys, or \*/# keys, then press D (Enter) to enter that mode

### 1 – PRESET MODE

Here you can load one of 5,026 built in preset banks.

NOTE: These banks are drawn from the thousands of banks freely available on the Web. It is entirely possible that some may not be loadable on every synthesizer. For a full, printable list of banks please visit the website for the DXPL.

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#### SELECT A PRESET

Use the numeric keypad to enter the number of the preset you want to load. The display flashes slowly, indicating that the bank you have selected has not yet been loaded.

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#### LOAD A PRESET

Once you have entered the desired bank, press the D (Enter) button to load the patch to the synth. Your synth should indicate that MIDI data is being received. The display stops flashing, indicating that the selected patch has been loaded to the Synth.

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#### SCROLL THROUGH PRESETS

You can use the \* and # keys to move up and down through the presets.

## 2 – USER PATCH MODE

Here you can load patches that you have stored in one of 10,000 memory slots.

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### SELECT A USER PATCH

Use the numeric keypad to enter the number of the slot containing the patch you want to load. The display will display the slot number, and if the slot contains data, the : symbol.

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#### : IS NOT DISPLAYED

This indicates that the slot you selected does not contain a patch, and cannot be loaded.

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#### : IS DISPLAYED

This indicates that the slot you selected **does** contain a patch.

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### LOAD A USER PATCH

Once you have entered the desired patch, press the D button to load the patch to the synth. The display stops flashing, indicating that the selected patch has been loaded.

Individual patches are loaded to the DX Edit Buffer. To save patches to a DX memory location, use the synth's functions to save the Edit buffer to a memory location.

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### SCROLL THROUGH USER PATCHES

You can use the \* and # keys to move up and down through the user patches. When scrolling through presets this way, the new preset is automatically loaded, and you do not have to press the D (Enter) key. Note that if you scroll to a slot that does not contain a patch, nothing will be loaded to the Synth.

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### SAVE A PATCH FROM THE SYNTH TO THE DXPL

You can save the contents of the currently selected synth patch location to the DXPL. You can do this in any of the following modes:

1. Preset Mode
2. User Mode

Press C (Write) to access the Save User Patch Mode. Here you can save the contents of the currently selected Synth patch location to the DXPL. **Please note that not all DX-compatibles (such as the TX series) support saving patches.**

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### SELECT A SAVE SLOT

Use the numeric keypad, or the \* and # buttons, to enter the number of the slot where you want to save the patch. The display will flash quickly, and the : symbol will be displayed if the slot already contains a patch:

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#### : SHOWN

This indicates that the slot you selected **contains patch data, and if you confirm, you will overwrite the patch data in this slot.**

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: NOT SHOWN

This indicates that the slot you selected does not contain patch data, and is free for saving.

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## SAVE A USER PATCH

Once you have entered the desired slot number:

1. Press the D (Enter) button.
2. The display flashes "LSTN", indicating that the DXPL is listening for data from the synth.
3. Send the patch from the DX to the DXPL:
  - a. DX7:
    - i. Press FUNCTION.
    - ii. Press 8. The display should read SYS INFO AVAIL.
    - iii. Press INTERNAL.
    - iv. Press the voice number for the patch you wish to send.
    - v. The DXPL display will alternate between LSTN and RCVG, indicating that the DXPL is receiving the patch data.
    - vi. When the DXPL display shows only LSTN again, press the D (Enter) button to complete the save operation.
  - b. DX7 II:
    - i. Press EDIT
    - ii. Press 32 until the display shows MIDI out Voice
    - iii. Select Edit Buf with the <> keys. The display should read "Transmit edit buffer data?"
    - iv. Press Yes
    - v. Press Yes again to confirm
    - vi. The DXPL display will alternate between LSTN and RCVG, indicating that the DXPL is receiving the patch data.
    - vii. When the DXPL display shows only LSTN again, press the D (Enter) button to complete the save operation.

## 3 – BANK MODE

In Bank Mode, you can store and recall all patches in your synthesizer's internal memory. The synthesizer presets and cartridge patches (if any) cannot be saved or altered.

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## SAVE A BANK

Set up your synthesizer with the patches that you want to save to the bank.

Select the bank number you wish to save to with the numeric keypad or the #/\* keys.

Press C (Write/Save). The display will flash quickly, and the : symbol will be displayed if the slot already contains bank data.

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## : SHOWN

This indicates that the slot you selected **contains bank data, and if you confirm, you will overwrite the bank data in this slot.**

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## : NOT SHOWN

This indicates that the slot you selected does not contain bank data, and is free for saving.

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## TO SAVE THE ENTIRE BANK

1. Press the D (Enter) button.
2. The display flashes "LSTN", indicating that the DXPL is listening for data from the synth.
3. Send the bank from the DX to the DXPL:
  - a. DX7:
    - i. Press FUNCTION.
    - ii. Press 8. The display should read SYS INFO AVAIL.
    - iii. Press 8 again. The display should read MIDI TRANSMIT ?
    - iv. Press YES.
    - v. The DXPL display will alternate between LSTN and RCVG, indicating that the DXPL is receiving the patch data.
    - vi. When the DXPL display shows only LSTN again, press the D (Enter) button to complete the save operation.
  - b. DX7 II:
    - i. Press EDIT
    - ii. Press 32 until the display shows MIDI out Voice
    - iii. Select 1-32 or 33-64 with the <> keys. The display should read "Transmit 1-32(33-64) data?"
    - iv. Press Yes.
    - v. Press Yes again to confirm.
    - vi. The DXPL display will alternate between LSTN and RCVG, indicating that the DXPL is receiving the patch data.
    - vii. When the DXPL display shows only LSTN again, press the D (Enter) button to complete the save operation.

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## LOAD A BANK

Select the bank number you wish to load using the numeric keypad or the #/\* keys.

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## TO LOAD THE ENTIRE BANK

Press D (Enter/Confirm). You will receive a confirmation prompt (SURE), and when you press Enter/Confirm, the patches will be loaded to the synthesizer.

## 4 – ARPEGGIATOR MODE

The arpeggiator mode functions quite differently from the other modes. Please see the Arpeggiator section at the end of the manual.

## 5 – SETTINGS MODE

In settings mode you can move through the available settings using the #/\* keys. Press D (Enter) to adjust the settings for:

- MODL (Model)
- CLOC (Internal/External Clock)
- ATRG (Internal/External Arpeggiator Trigger)
- ACHN (Arpeggiator MIDI Channel)
- ACUT (Arpeggiator Key Cutoff)
- BNCH (External Bank/Program Change Enable/Disable)
- VELO (Velocity Compensation)
- BFDL (Buffer Delay)
- FSDL (F7 Delay)

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## MODEL (MODL)

Display the currently connected Synth model. Cycle through the options by pressing the #/\* buttons, then press D again to select a different model. The model is retained when the DXPL is powered off. Currently there is only a single model (DX7) available.

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## INTERNAL/EXTERNAL CLOCK (CLOC)

The arpeggiator runs from an internal clock, but can be changed to listen for incoming MIDI Start/Stop/Song Position Reset and Clock messages on the MIDI IN port.

The current clock location (INTL or EXTL) is shown. To switch between states, use the #/\* keys. Press D to confirm.

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## ARPEGGIATOR TRIGGER SOURCE (ATRG)

The notes that trigger the arpeggiator can come from either the Synth synth, or a MIDI controller that is connected to the DXPL MIDI IN port.

- INTG – the arpeggiator notes are triggered by the Synth keyboard. Notes that come from an external MIDI controller are passed through and played as normal.



- EXTG – the arpeggiator notes are triggered by the external controller. Notes that are played on the Synth keyboard are played normally.

To switch between states, use the #/\* keys. Press D to exit.

This allows you to essentially play 2 parts, an arpeggiated part and a lead part, at the same time.

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### ARPEGGIATOR CHANNEL (ACHN)

By default, the arpeggiator sends its notes to the Synth on channel 1

Use the numeric keypad to enter the channel you want to use. Press D (Enter) to confirm.

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### ARPEGGIATOR CUTOFF (ACUT)

You can split the keyboard such that the arpeggiator “listens” for notes only on the bottom half of the Synth keyboard, and ignores notes played on the upper half. This lets you play an arpeggiated part with the left hand and a solo/lead part with the right.

Note that the cutoff is only applicable when using the arpeggiator with the Synth’s built in keyboard.

The display shows the current cutoff note. To change the cutoff note, press a note on the Synth keyboard. Notes to the left of this note will trigger the arpeggiator, while notes to the right will be played unchanged.

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### EXTERNAL BANK/PROGRAM CHANGE (BNCH)

**External Bank / Program change is EXPERIMENTAL at this time.**

By default the DXPL passes bank/program changes that it receives from the outside world on to the Synth synthesizer. You can change this so that the DXPL receives bank and program changes, and sends different presets and user patches to the Synth in response to these change requests.

- BCDS – External bank/program change is disabled. Incoming program changes are sent to the Synth.
- BCEN – External bank/program change is enabled. Incoming bank and program changes are interpreted by the DXPL as follows:
  - Banks 1-17 – Presets
  - Banks 18+ - User Patches

The DXPL expects bank changes to be signaled using CC #0 (MSB). When using external bank change, disable program change on your Synth. (PRG=DIS).

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### VELOCITY COMPENSATION (VELO)

The DX7 models do not transmit note velocity all the way up to 127. The DXPL can compensate for this by remapping the note velocities it receives.

The display shows the current top velocity. Any velocities that are received at or above this value will be transmitted as 127, while velocities below are remapped accordingly.

LOWER numbers result in HIGHER velocities being sent out. So, if you want no remapping at all, set the value to 127, whereas if you want a very “light” touch on the keyboard to result in high velocities, set the number to a number of 90 or below. This will result in the outgoing velocities being substantially “amplified”.

Use the #/\* keys to adjust this value. Press D (Enter) to confirm.

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#### BUFFER DELAY (BFDL)

If you experience problems with your synthesizer receiving data from the DXPL, try adjusting this value. This is the amount of delay between buffers. The default value is 100 milliseconds, and it can be adjusted between 10-255 milliseconds.

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#### F7 DELAY (BFDL)

If you experience problems with your synthesizer receiving data from the DXPL, try adjusting this value. This is the amount of delay between individual patches in a bank. The default value is 100 milliseconds, and it can be adjusted between 10-255 milliseconds.

### SD CARD

The SD card is standard FAT32 format, and can be read by any computer. It contains the following folders:

#### CONFIG

Stores a CONFIG file with the DXPL settings. This file should not be removed or edited.

#### PRESET

Contains the 5026 SysEx files corresponding to the presets on the device.

#### SNAP

Stores the SysEx files corresponding to the banks stored on the device. Banks are numbered 0000 to 0999.

#### USER

Contains the SysEx files corresponding to the user patches on the device. Patches are numbered 0000 to 9999.

## TROUBLESHOOTING

### PATCHES DO NOT LOAD

- Make sure the DXPL Synth OUT port is connected to the Synth synth MIDI IN port.
- Make sure the DXPL Synth IN port is connected to the Synth synth MIDI OUT port.
- Follow all of the “pre-flight checks” items at the beginning of the manual each time the synth is powered on.
- Try adjusting the Buffer Delay and F7 Delay settings to a higher number to give your synthesizer more time to process incoming data.

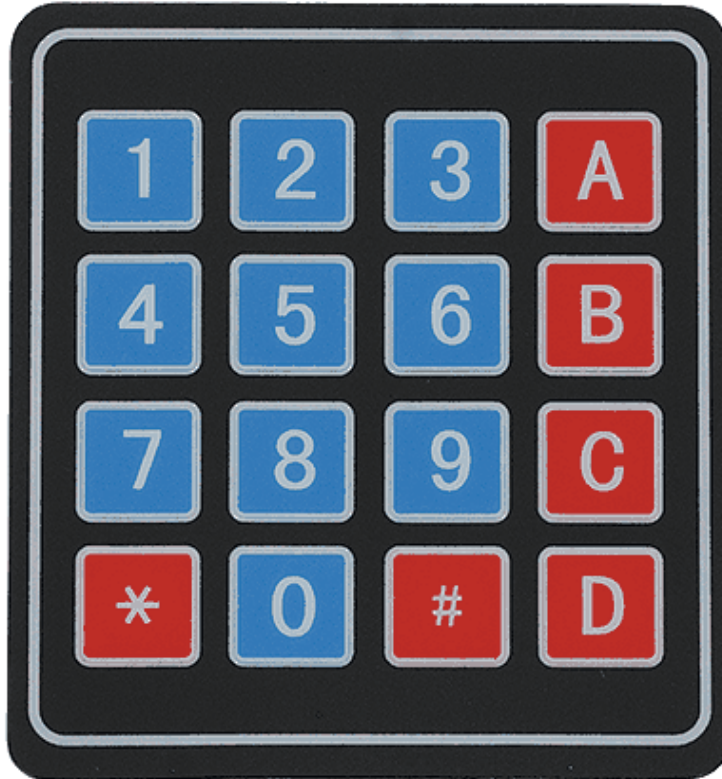
## ARPEGGIATOR

In arpeggiator mode, the keypad functions are:

**1-4 Octave**

**6-9 Pattern**

**5 Pause    0 Rest**



**Main Menu**

**Tempo/Div**

**Mute Steps**

**Enter/Confirm**

**Latch**

**Follow**

The DXPL arpeggiator offers 4 patterns:

- Up
- Down
- Up/Down
- Random

And can play these patterns across 1 to 4 octaves.

To start, enter ARPG mode by pressing the A (Main Menu) key, then 4., then D (Enter/Confirm).

The display will show Up 4, indicating the current arpeggiator pattern is Up, covering 4 octaves.

Hold down one or more keys on the Synth. You should hear these notes being played in a pattern

#### NOTE ORDER

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The order that notes are played depends on the order in which you play them on the keyboard. Even a difference of a fraction of a second will be picked up. This allows you to vary the pattern quite widely – pressing C,E,G will produce a purely rising set of tones, while pressing G,E,C will play a descending pattern, but then jump up an octave and play the descending pattern again, etc.

#### CHANGING OCTAVES

Numeric keys 1-4 select the span of the arpeggio to be played, from 1 to 4 octaves. Changes are applied immediately.

#### CHANGING PATTERNS

Numeric keys 6-9 select from the available patterns:

- 6 – Up
- 7 – Down
- 8 – Up/Down
- 9 – Random

#### LATCH MODE

Pressing the \* key activates the Latch feature. After you press \*, you can remove your hand from the keyboard and the arpeggio will keep playing. The colon will be displayed, for example, Up: 4 to indicate the arpeggio is latched in Up, 4-octave mode.

While in latch mode, you can continue to add notes to the pattern by playing them on the keyboard.

The pattern has a maximum length of 64 notes. You can also enter a rest into the pattern by pressing the 0 key on the numeric keypad.

Press \* again to Unlatch. Note that this will immediately “forget” any pattern that was playing.

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## ENTERING A SEQUENCE

You can use Latch mode as a simple monophonic 64 step sequencer:

1. Enter Latch mode by pressing the \* key.
2. Select 1-octave mode by pressing 1.
3. Select Up mode by pressing 6.
4. Pause the arpeggiator by pressing 5. The display flashes.
5. Enter your sequence by using the keyboard for notes and the 0 key on the DXPL for rests.
6. Unpause the arpeggiator by pressing 5. Your sequence plays.
7. You can now press the # (Follow) key if you want to transpose your sequence based on key input.
8. Press \* to unlatch and erase the sequence.

## FOLLOW MODE

From latch mode, you can lock the current pattern and enter Follow mode, where the arpeggiator will transpose the currently playing pattern based on key input from the synthesizer.

First enter latch mode by pressing the \* key. Enter follow mode by pressing the # key. The display adds an F to indicate the arpeggiator is in follow mode, for example Up:F4. Pressing keys on the synthesizer now transposes the currently playing pattern. For example, if the pattern as originally entered was C-E-G, pressing a D key will change the pattern to D-F#-A.

Press # to exit Follow mode.

## PAUSE/RESTART

To pause or restart a latched pattern, press the 5 key on the keypad. The display flashes when the pattern is paused and lights steadily when the pattern is playing.

## PATTERN STEP MUTE

By default, the arpeggio plays every note in the pattern. You can mute or unmute steps in the pattern:

Press the C key to enter pattern step mute.

The display changes to show the first 4 steps in the pattern along the top row, and the last 4 steps in the bottom row.

Press the numeric 1-8 keys to mute or unmute the steps.

Press the D key again to return to the main arpeggiator mode.

## TEMPO / DIV

Press B to adjust the tempo or note division, as follows:

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### INTERNAL CLOCK

When using the internal clock, the tempo can be adjusted from 20-500 BPM, using either the numeric keypad or the #/\* buttons to adjust. Press B to exit.

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### EXTERNAL CLOCK

When using an external clock signal, the divisor can be set to one of 8 options using the numeric keypad buttons 1-8. Options are:

1. Whole Note
2. Half Note
3. Quarter Note
4. 8th Note
5. Triplets
6. 16th Note
7. Sextuplets
8. 32<sup>nd</sup> Note

Press D to exit.