

SHIFT Button Functionality

The **SHIFT** button functionality has been enhanced to differentiate between accessing shift mode parameters such as the global settings and secondary functions of patch-specific parameters.

- To toggle into shift mode, press and release the **SHIFT** button.
- To access the secondary function of a patch-specific parameter (e.g. **HPF** cutoff frequency, **DRIFT** or **DELAY HOLD**), press and hold the **SHIFT** button while moving the according control. In this case shift mode will be exited upon releasing the **SHIFT** button.

Binaural Pulse Width Modulation

DDS 2's pulse wave can now be modulated binaurally. Binaural pulse width modulation allows you to create timbral variations that move across the stereo image as well as lush pads with an enhanced sense of spatiality.

Follow the steps below to enable binaural pulse width modulation:

1. Load the init patch by pressing the **SHIFT** and **MANUAL** buttons.
2. Turn the **MIX** rotary control fully clockwise so that only the audio signal of DDS 2 can be heard.
3. Set **PWM** to about 50% in the DDS Modulator section.
4. Experiment with different **LR PHASE** settings in the LFO 1 section. Toggle LFO 1 to **ONCE** mode, engage both high frequency modes (**HF** and **HF TRK**) and add varying amounts of **PWM** and **PW**.

Polyphonic LFO 2

LFO 2 now contains twelve individual LFO modules that can be polyphonically modulated to have different rates per voice in both binaural and non-binaural modes. If, for example, you use ENV 1 to modulate the rate of LFO 2 using the direct parameter control mapping method, the rate of LFO 2 will be modulated according to the envelope's settings upon each key press.

The phase of the twelve LFO modules can be synchronised by toggling the LFO 2 **MODE** switch on the keyboard model or by pressing the LFO 2 **MODE** button on the desktop model.

Delay Freeze


The Super 6 now features a delay freeze mode that allows you to create sound on sound loops while you are performing. Follow the steps below to access this feature:

1. Turn off the Super 6.
2. Connect a dual foot switch to the sustain pedal input or use a stereo splitter (tip = sustain, ring = freeze) to add delay freeze. Alternatively, connect a sustain pedal “one click” into the sustain pedal input.
3. Power cycle the Super 6. The connected foot switch will auto-calibrate for polarity when the instrument is switched on.

To add notes or chords to the delay loop, release the foot switch while playing. Once you press and hold the footswitch, new notes won't be added to the delay loop any longer while its current contents will be looped indefinitely.

In delay freeze mode, use the **LEVEL** control to adjust the overall level of the delay loop, the **TIME** control to set the length of the delay loop and the **FEEDBACK** control to ensure the looped notes are repeated at a constant level. The delay freeze mode works best with long delay time settings and moderate levels of delay feedback.

You can also control the delay freeze parameter via MIDI. It sends and receives MIDI Continuous Controller message on CC# 69.

 *When using either either a stereo splitter for two foot switches or one dual foot switch, the right pedal will be assigned to the delay freeze function while the left pedal will operate as a regular sustain pedal.*


External MIDI Clock Settings


Once you press **SHIFT** and **SYNC** you will be able to define how the Super 6 is going to respond to an external MIDI clock source, whether the arpeggiator and sequencer will output MIDI notes and how the Super 6 will respond to MIDI Start/Stop messages. The available options are saved as part of the global settings. You can enable the following options:


- **PATCH SELECT BUTTON 1:** With this option enabled (LED solidly lit), MIDI clock signals will be sent.
- **PATCH SELECT BUTTON 2:** With this option enabled (LED solidly lit), MIDI clock signals will be received. On top of that, the Super 6 will respond to MIDI Start and MIDI Stop messages.
- **PATCH SELECT BUTTON 3:** With this option enabled (LED solidly lit), the arpeggiator and sequencer will output MIDI notes during playback. Please note that local control has to be enabled for this option.
- **PATCH SELECT BUTTON 4:** With this option enabled (LED solidly lit), the **HOLD** button “arms” the sequencer while the latter will wait for a MIDI Start message to start playback. In this mode, the sequencer will stop playback when a MIDI Stop message is received, even if the external MIDI clock is still running.

When this option is disabled (LED flashing), the **HOLD** button starts and stops the sequencer asynchronously. A MIDI Start message will “snap” the sequence back into the correct timing, but a MIDI Stop message will be ignored if the external MIDI clock is still running.

In both modes transport control is achieved by using Note On/Off messages. This not only allows you to easily determine when a sequence should start and stop, but also to transpose a sequence.

 *Please note that you can either activate option 1 or option 2. Once you enable one of these options, the other one will be automatically disabled.*


 *Keep in mind that when you enable MIDI clock receive, the arpeggiator or sequencer won't respond for as long as no MIDI clock signal is being received.*

 *The Super 6 automatically switches to MIDI clock receive if it detects one. You can disable this setting after it's detected, or choose not to send MIDI clock signals from an external sequencer or a DAW to the Super 6 to enable arpeggiator or sequencer playback regardless of external clock signals.*

MPE Settings

Once you press **SHIFT** and **MPE** you will be able to determine the Super 6's MIDI Polyphonic Expression (MPE) settings. You can enable and combine the following options:

- **PATCH SELECT BUTTON 1:** With this option enabled (lit LED), the Super 6 will respond to incoming MIDI messages sent by an MPE controller via an individual MIDI channel per note.
- **PATCH SELECT BUTTON 2:** With this option enabled (lit LED), a dead zone for polyphonic aftertouch will be active. The latter defines a starting value from which polyphonic aftertouch will impact a sound. This allows you to play a key without initially triggering polyphonic aftertouch on MPE controllers that don't natively provide a dead zone setting for polyphonic aftertouch. Enabling this option is recommended for use with ROLI controllers.
- **PATCH SELECT BUTTON 3:** With this option enabled (lit LED), the sensitivity to Y-axis movement (assigned to CC# 74) will be reduced. This essentially limits the modulation scope controlled by front/back movements in case this gestural dimension turns out to be too sensitive in relation to the fully available modulation range. Enabling this option is recommended for use with the LinnStrument.

 Please note that MPE settings are stored on a per patch basis, allowing you to tailor them to the sounds you'd like to perform on an MPE controller.

Recommended Settings for ROLI Controllers and the Linnstrument

- Set Z-axis to Channel Pressure or Poly Pressure (ROLI and LinnStrument).
- Set Y-axis mode (CC# 74) to "Relative" (ROLI and LinnStrument).
- Choose a bend range of +/-48 semitones (LinnStrument).

Polyphonic Aftertouch

The Super 6 now responds to polyphonic aftertouch sent from capable MIDI controllers. The default mapping is the same as for channel pressure or monophonic aftertouch, meaning that polyphonic aftertouch will either control the amount of LFO 2 or the amount of upwards pitch bending (when LFO 2 is set to be permanently 'on').

To allow polyphonic aftertouch to be mapped through the modulation matrix only, set LFO 2 to be permanently 'on' by toggling the leftmost switch in the keyboard model's performance control section to **ON (AT->BEND)** or by pressing the desktop model's LFO 2 **MODE** button until both of its LEDs are unlit (options **MW** and **AT** deselected).

Direct Modulation Wheel Assignment (Desktop Only)

A modulation wheel (CC# 1) can now be directly mapped to various parameters, rather than being limited to control the amount of LFO 2 modulation.

Follow the steps below to map the modulation wheel of your MIDI controller to a modulation destination:

1. Press and hold the LFO 2 **MODE** button to enter panel assign mode for the modulation wheel. The **MW** LED will start flashing.
2. Whilst holding down the **MODE** button, move a fader or rotary control on the front panel. The patch and bank select buttons' LEDs will briefly light up from the right to the left to indicate a mapping lock.
3. Turn the **MOD AMOUNT** encoder to dial in the modulation depth. The LEDs of the patch and bank select buttons will indicate your setting.
4. Release the LFO 2 **MODE** button to return to where you were.



*This feature is most useful when LFO 2 is set to be permanently 'on' (**MW** and **AT** LEDs off). In this mode, LFO 2 will be triggered independently of a modulation wheel and can be conveniently assigned to a modulation destination by using the **I DDS II**, **VCF** and **VCA** buttons.*

Modulation Matrix Clear Convenience Function (Desktop Only)

The **MOD AMOUNT** encoder's push function now allows you to instantly clear modulation mappings in three different ways:

- Push the **MOD AMOUNT** encoder when in **MOD ASSIGN** mode to clear all modulation mappings.
- Push the **MOD AMOUNT** encoder when a modulation source is highlighted to clear only modulations controlled by this particular modulation source.
- Push the **MOD AMOUNT** encoder when a modulation destination is highlighted to clear only the modulation of this particular modulation destination.



This function is particularly useful for quickly clearing any panel modulations controlled by a particular modulation source.