

Function	CC # Dec/Hex	Value Interpretation (range used is always 0-127)
Mod wheel	01/01	0-127 Handled by original AX60 code
Volume	07/07	0-127 Handled by original AX60 code using VCA EG depth (range seems to be 0 to slider half way up!)
VCO Waveform	14/0E	0-31: Saw, 32-63: Tri, 64-95: Pulse, 96-127 Saw+Tri
VCO Octave	15/0F	0-24: 32', 25-49: 16', 50-74: 8', 75-99: 4', 100-127: 2'
VCO Pulse Width	16/10	0-127
VCO PW Mod Speed	17/11	0-127
VCO EG Depth	18/12	0-127
Noise on/off	19/13	0-63: Noise Off, 64-127: Noise On
Sampler Enable	20/14	0-63: Sampler not enabled, 64-127: Sampler Enabled
A/B Balance	21/15	0-127
VCF Key Follow	22/16	0-127 (Unison de-tune amt in Unison mode)
VCO Mod	23/17	0-127
HPF	24/18	0-127
VCF EG Polarity	25/19	0-63: Positive, 64-127: Negative
VCA Gate	26/1A	0-63: Not enabled, 64-127: Enabled
VCF Attack	27/1B	0-127
VCF Decay	28/1C	0-127
VCF Sustain	29/1D	0-127
VCF Release	30/1E	0-127
VCF EG Depth Level	31/1F	0-127
VCA Decay	32/20	0-127
VCA Sustain	33/21	0-127
VCA EG Depth Level	34/22	0-127
LFO destination	39/27	0-31: None, 32-63: VCO, 64-95: VCF, 96-127: VCA
LFO waveform	40/28	0-24: DnSaw, 25-49: UpSaw, 50-74: Tri, 75-99: Square, 100-127: Random
LFO depth	41/29	0-127
LFO speed	42/2A	0-127
LFO delay	43/2B	0-127
Chorus	44/2C	0-42: Chorus off, 43-85: Mode 1, 86-127: Mode 2
Sustain	64/40	0-127 Sustain pedal, handled by original AX60 code
VCF Resonance	71/47	0-127
VCA Release	72/48	0-127
VCA Attack	73/49	0-127
VCF Cutoff	74/4A	0-127
All notes off	123/7B	Value not used, handled by original AX60 code

Decimal	Hex Equivalent
00	00

32	20
64	40
96	60

When not in split mode, CC's should be on basic MIDI channel. In split mode, basic channel is for Upper voices and basic + 1 is for Lower voices. In split mode, Upper/Lower selection is changed to match any rec'd switch CC. This was necessary. Slider CC's do not do this.

User settings: (saved when power is off, memory protection must be off to change setting)

In MIDI channel set mode (MIDI channel flashing):

	Enable	Disable
Arp Up/Down doesn't repeat top or bottom notes	ARP Mode	ARP On/Off
LFO rate entire range slowed by a factor of two	LFO Select	LFO Waveform
Random Arp instead of Simultaneous mode	Octave	VCO Waveform
Resonance and ASDR sliders taper changed	Sampler	Noise
Resonance taper changed to raise oscillation point		
ADSR tapers changed to increase effect in lower part		
MIDI Arp clocking instead of internal or jack	VCF EG	VCA Gate
Unison mode (not split) detuning using Key Follow	Uni U/L/Off	Wheel U/L
Enable MIDI note velocity affecting VCA EG Depth	Split	Split Mode

When MIDI Arp clocking is enabled, Arpeggio rate slider controls clock divider:

- Slider at minimum: Slowest arp clock rate (half notes, 48 pulses per step)
- Slider between 1/4 and 1/2: "Normal" (quarter notes, 24 pulses per step)
- Slider between 1/2 and 3/4: Faster clock rate (eighth notes, 12 pulses per step)
- Slider at maximum: Fastest clock rate (sixteenth notes, 6 pulses per step)

Unison de-tune enabled in Unison but not split mode. Key follow is set to 1:1 (more or less), so that slider can be used to adjust de-tuning amount.

MIDI channel setting is now saved when power is off. Last preset selected is saved if memory not protected when it was selected. If you normally protect memory, you can un-protect it, select the preset you want as the default one, then protect memory. That preset will now be selected at power up.

To save all patches and splits as one MIDI sysex file, Press Tape, then Save, then either All, I, or II. All patches and splits will be sent out as MIDI sysex, then the selected tape operation will be performed. The sysex file should be 3445 bytes in length. To re-load the presets, with memory un-protected, simply send the MIDI sysex file to the AX60. Tape save and load work normally.

Arp Hold switch controls Hold/Sustain mode when Arp is off. Up and Dn LEDs will both be on in hold mode.

When enabled, MIDI note velocity value is added to the current VCA EG Depth parameter and the result is used as the VCA EG Depth value. So you get velocity control of note volume, with some adjustment using the slider. However, the calculated VCA EG depth value remains in effect until either the slider is moved (which will restore normal "slider only" control) or the next MIDI note arrives. So if you are mixing MIDI notes and notes played on the AX60 keybed, the local notes will have the volume calculated using the most recent MIDI velocity value. You can restore normal operation for local notes by simply changing the VCA EG Depth parameter using the slider.