AXiS64

User Manual 4.1

www.c-thru-music.com

The following statement is provided to comply with FCC regulations in the U.S.A., and the precautions and corrective measures are applicable world-wide:

> "WARNING - This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense."

The AXiS and its accessories have been tested to exceed the requirements of the above FCC rules, however this does not guarantee that interference will not occur, especially if connected to other devices that do not comply with these rules. If interference is experienced after installation of this equipment turn it off to determine whether it is the source. If interference is still experienced try to correct the situation by one or more of the following measures:

- Relocate either the AXiS and its associated equipment and cabling or the equipment affected by the interference.

- Utilise different mains power outlets. Try installing a filter in the mains of the other equipment.

- In the case of radio interference where 300 ohm ribbon antennas are used, try changing to 75 ohm coaxial cable.

If for any reason you should need additional information relating to radio and TV interference, you may find a booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio/TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock #004-000-00345-4.

This product is fully compliant with the European EMC Directive 89/336/EEC which applies to apparatus which is "liable to cause electromagnetic disturbance or is itself liable to be affected by such disturbance".

Test performed and passed are:
       EN50082-1 : 2002
       EN55022 : 2002 Class B

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All other manufacturers' trademarks are acknowledged.

MIDI refers to the Musical Instrument Digital Interface published by the MIDI Manufacturer's Association

Contents

Introduction

The AXiS 64 is a MIDI controller Music Interface. It uses the Harmonic Table musical note layout which provides a geometric overview of musical notes and their harmonies. This makes the AXiS easy and fun to use.

The Harmonic Table Note Map
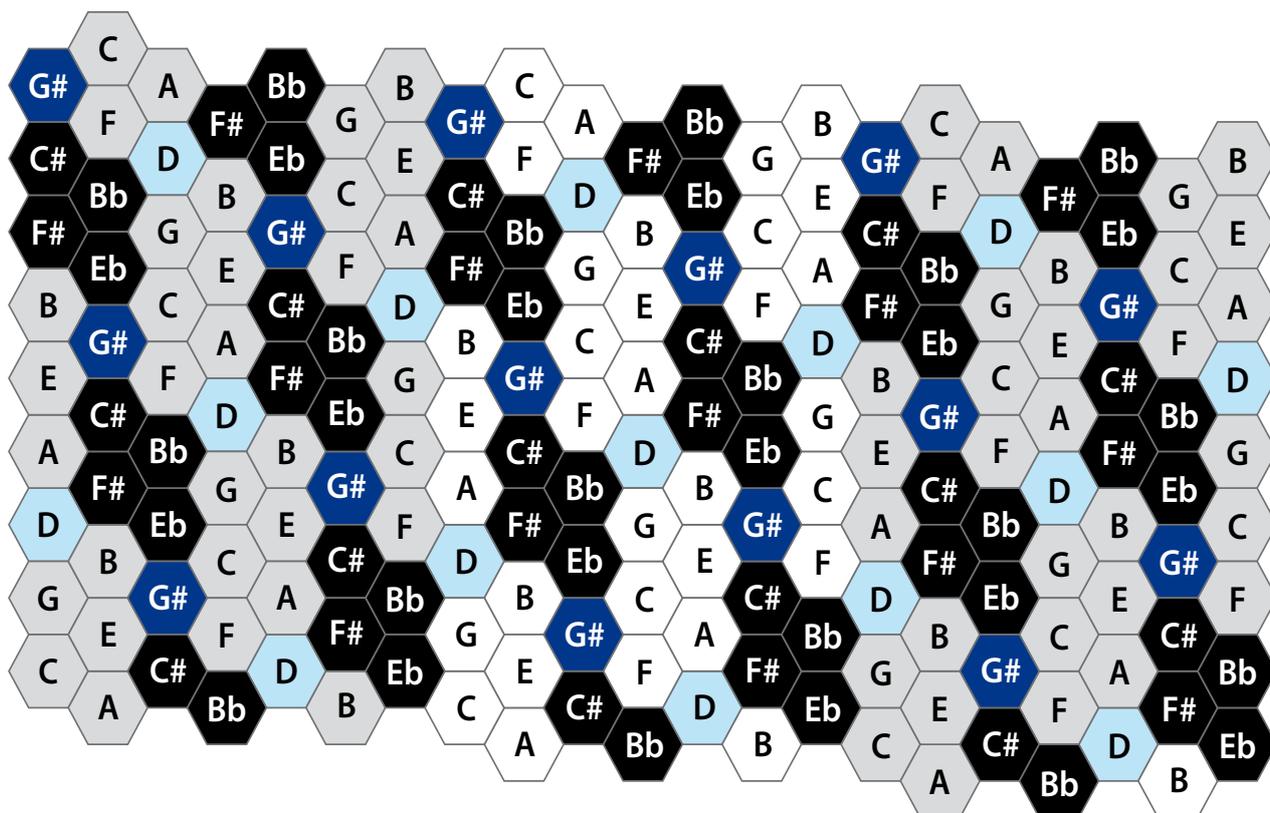
Notes on the Harmonic Table increase in pitch going up (5ths) and going to the right (semitones). As you can see there is more than one instance of each note. To clarify, see the octave map on the next page.

Diagonal lines contain either augmented or diminished chords. See chord shapes on page 7.

Shape	Direction	Chord				
		Major Triad	Major 7th	Major 9th	Major 11th	Major 13th
		Minor Triad	Minor 7th	Minor 9th	Minor 11th	Minor 13th
			Dominant 7th	Dominant 9th	Dominant 11th	Dominant 13th
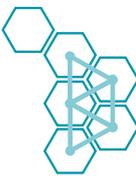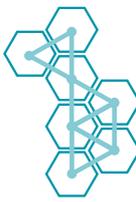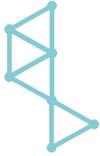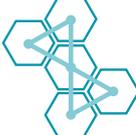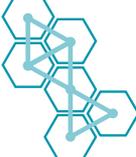
The AXiS can help you greatly expand your creativity, control and productivity in your live or studio MIDI set-up. Whether you are using one multi-timbral sound module or a rack full of them, the AXiS's Harmonic Table layout will help you expand your creative abilities.

Aside from its use of the Harmonic Table, the AXiS works in a similar way to other MIDI controllers. It can be used as a MIDI input device, playing notes and chords like a pianoforte style "master keyboard". It can also give you a central point of control over your slave modules in a given MIDI network.

The AXiS has very flexible and simple calibration routines so that a range of external controls can be accommodated.

Quick Start

1   *Plug the AXiS into the power supply using the Power Adapter provided.*

2   *Plug one end of a MIDI cable into the MIDI OUT socket on the AXiS, and the other end into the MIDI IN socket on a synthesizer, sound expander or other MIDI device.*

3   *Your AXiS is now ready to play.*

Installation

General

Please take the normal precautions for siting an electronic instrument, do not place on a source of direct heat, in direct sunlight or near another instrument that may cause or be subject to interference.

Connections

MIDI OUT   FOOT CONTROL 1   FOOT CONTROL 2   USB PORT   POWER INLET   EARTH
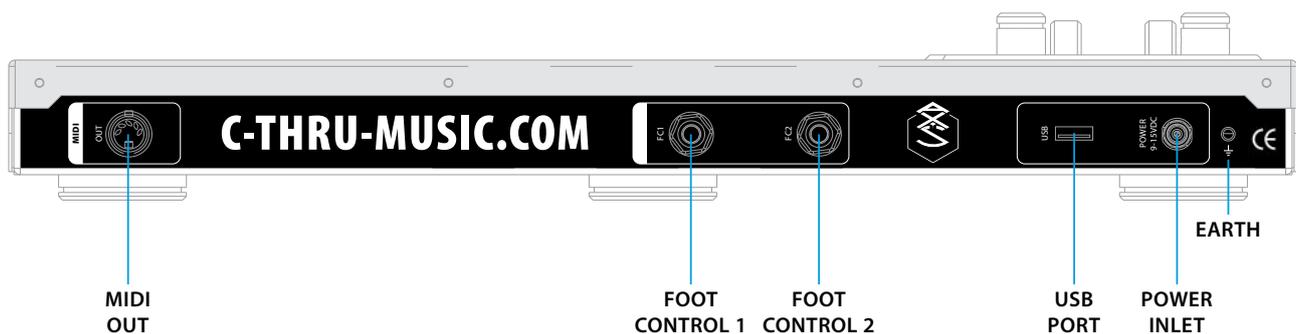
MIDI OUT	Connect to a MIDI IN of another device.
USB	May be connected to a computer via USB port for firmware upgrades.
FC1, FC2	Works with most available pedals and foot switches, and possibly some other controls.
Power Inlet	Always use the Power Adapter provided.
Earth Point	Use if required for your live or studio set-up.

Power

It is always best to use the Power Adapter provided with the original equipment.

The Power Adapter is a simple wall connector, which plugs directly into the power inlet on the back of the AXiS.

The AXiS runs on 9 – 15 VDC and draws a current of 300mA.

Power Up & Self Test

Plug the Power Adapter into the power inlet of the AXiS. Plug the Power Adapter into the A/C mains supply.

The red PWR light glows reassuringly. If not...

- *Check that the light on the provided Power Adapter is on, if not:*
- *Check mains is switched on and the cable is fully plugged in*
- *Check the fuse in the mains plug if it has one*
- *Check the DC cable & connector for damage*

On power up, the AXiS goes through the following sequence:

- *shows a start-up page on the display with software version number*
- *self-test*
- *puts the AXiS in PLAY mode*

When this sequence is complete the LCD is lit.
If the red PWR light is on and the LCD is lit but the unit is not working, contact C Thru Music at +44 (0)845 260 5556 or email support@c-thru-music.com.

Note: When the AXiS is sending MIDI data, the green SND light flickers – if you're sending but not receiving MIDI data, check MIDI settings on the receiving device(s) and other related equipment.

Shutdown

The current state of the AXiS will be retained when powered down, which means it will return to the way it was when last played.

Hold down 'PLAY' and press 'UTIL'.
Press + to confirm, or - to cancel.

Memory storage without power

Memory is retained for approx 10 years without power.

If memory is lost,

- *Self test on power up will recognise this and restore the unit to factory settings.*
- *You must re-calibrate all controls. (See Calibrate under UTIL pages).*

Operation

4 PANIC BUTTON

5 PRESET SELECT BUTTONS

1 LCD DISPLAY

2 EDIT BUTTONS

3 PAGE SELECT BUTTONS

9 CONTROL KNOBS 1 & 2

6

7 PITCH BEND WHEEL

MODULATION WHEEL 8

C-THRU-MUSIC.COM
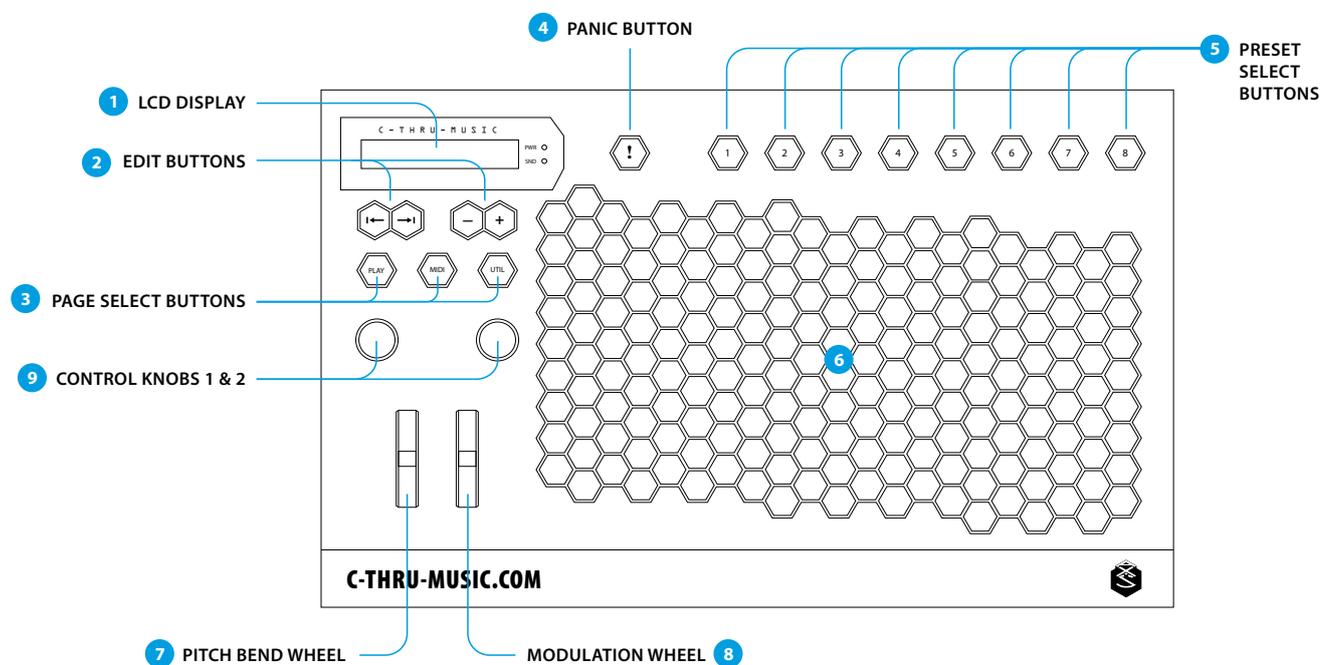
On the front panel:

1   *LCD display. Displays a series of pages that can be used to modify settings.*

2   *Edit Buttons. Use these to move the cursor and change values.*

3   *Page Select Buttons. Three buttons used to select the Play, MIDI and Utility pages.*

4   *Panic Button. Sends '`All Notes Off`',*
    '`Reset All Controllers`', '`Clear`' or a '`Panic`' MIDI sequence.

5   *Preset Select Buttons used for storing and recalling the AXiS configurations.*

6   *Main Keyboard. 192 keys divided into 3 repeating sections, each with a range of 64 notes.*

7   *Pitch Bend Wheel. Self-centering wheel normally assigned to the pitch bend control.*

8   *Modulation Wheel. Similar to the pitch bend wheel but not self- centering.*
    The default assignment is MIDI CC 001 (modulation).

9   *Control Knobs. A pair of rotary control knobs with the default assignments*
    of left knob = Volume and right knob = Aftertouch.

All panel control knobs, wheels and remote analogue inputs (foot controls etc.) may be assigned to any MIDI CC. See MIDI page section for more details.

Overview

The key surface in the main body of the instrument is set out according to the Harmonic Table note layout, details of which may be found on the Internet. Operating these keys transmits musical note information in the form of MIDI data for playing and controlling a connected MIDI device(s).

Additional on-board MIDI control is provided through two knobs, a pitch bend wheel, and modulation wheel. There are also two external foot control jacks on the back.

Edit Buttons are used to modify settings shown on the Display. These settings determine how the AXiS will behave. Pages shown on the Display are changed with the Page keys.

There is also a Panic button, and eight Preset buttons (1-8).

Lights

To the right of the Display there are two indicator lights;

PWR light	Red light indicating that the internal microprocessor is running
SND light	Green light indicating that MIDI messages are being sent

Edit Buttons

There are four Edit Buttons. From left to right:

Button	Name	Action
⬡ ⟸	Cursor Back/Left	Cursor to previous field
⬡ ⟹	Cursor Forward/Right	Cursor to next field
⬡ −	Minus	Decrement
⬡ +	Plus	Increment / Select

+ and - Buttons will repeat if held down.

- *Use the Cursor Buttons to move the flashing cursor between fields.*
- *Use the - and + Buttons to change a value.*

Page Buttons

The Display shows a single page at any given time, normally with a flashing cursor. There are three buttons to navigate between pages.

PLAY   MIDI   UTIL

PLAY puts the AXiS into normal playing mode.
The **MIDI** and **UTIL** buttons open pages for editing local and global AXiS functions.

See MIDI pages and UTIL pages below.

Preset Buttons

There are eight Preset buttons (1-8) along the top. These are used to store and recall the AXiS configuration parameters including MIDI CC assignments and program changes.

To store the current settings press the UTIL button (see UTIL pages).
To recall a set up press a Preset button (1-8).

1   2   3   4   5   6   7   8

Panic Button

The Panic button can be found to the right of the Display.
The action taken by the Panic button is set in a UTIL page.

!

Keyboard Modes

The AXiS can be set to one of 3 keyboard modes: Single, Split, and Layer, with each mode having its own MIDI channel, transposition, program number/s, and hardware control assignments. This mode can be changed in the PLAY page.

Single mode: The MIDI stream supplies a single channel and the three instances of the same note on the key surface, each produce the same result.

Split mode: The key surface is divided into equal thirds called zones. Each zone is seven columns of keys wide and has a total of 64 notes. Each zone has its own MIDI channel, hardware control assignments, transpose and MIDI program number. This allows you to have up to three different sounds (one per zone) mapped across the keyboard.

Layer mode: In this mode the AXiS MIDI stream outputs up to 3 individual channels simultaneously, each with its own transpose, hardware control assignments, and MIDI program change number. Pressing any key would send identical note information on all three MIDI channels, allowing up to three different sounds with the same key.

Single mode

Split mode

A　　　　　　B　　　　　　C

Layer mode

A

B

C
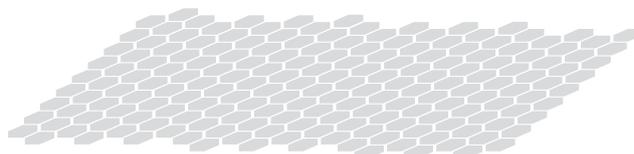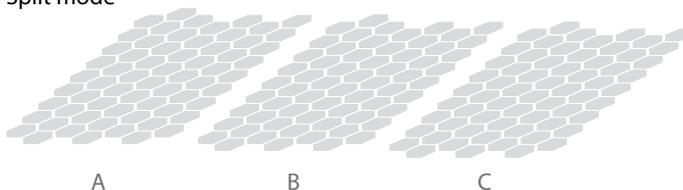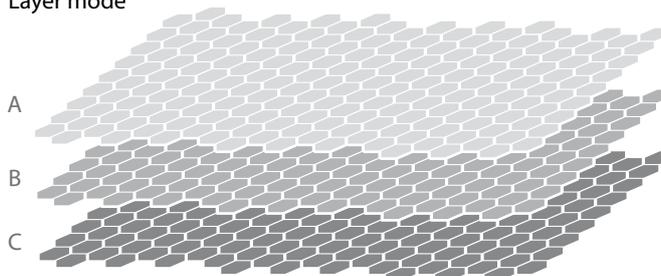
Play Page

Press PLAY to start the AXiS.

Pressing PLAY displays the PLAY page and ensures the AXiS is in performance mode and ready for use.

The AXiS does not send MIDI during calibration. Always press PLAY after calibration is complete.

A number (1-8) is displayed to the right of "PLAY" indicating the Preset last stored or recalled.

Keyboard Mode
Change modes between Single, Split, and Layer.

Program Changes
Displayed on the lower line, Program changes can be issued from the PLAY page.

> **!** *IMPORTANT: Changes made on the PLAY page to the keyboard mode and/or MIDI program changes will not be stored, or overwrite existing stored data. Changes made on the PLAY page are volatile, and will be lost if a different AXiS preset is selected. All volatile PLAY page changes are retained when the AXiS is powered down.*

Shutdown
Hold down 'PLAY' and press 'UTIL'.
Press + to confirm or – to cancel.

MIDI pages

A number (1-8) is displayed to the right of "MIDI" indicating the Preset last stored or recalled.

Channel

Sets MIDI out channel(s).

Range: 1 – 16

Single Mode: Set the MIDI channel for the entire keyboard.
Split Mode: Set the MIDI channel (or Off) for each of the three Split zones.
Layer Mode: Set the MIDI channel (or Off) for each of the three Layer zones.

Transpose

Sets the number of semitones by which to transpose the keyboard.

Range: ±36

Single Mode: Set the transpose value for the entire keyboard.
Split Mode: Set the transpose value for each of the three Split zones.
Layer Mode: Set the transpose value for each of the three Layer zones.

Program Number

Sends MIDI program/patch number whenever you change Mode or restore a Set Up (1-8). Range: 000 – 127, or Off

Single Mode: Set the MIDI program number to be sent for the entire keyboard.
Split Mode: Set the MIDI program number to be sent for each of the three Split zones.
Layer Mode: Set the MIDI program number to be sent for each of the three Layer zones.

> NOTE: Program Numbers here are not affected by program changes in the Play page. These values are the ones stored in the Presets. When you edit this page, the values are all reflected in the Play page.

MIDI Control Assign

Assigns MIDI CC to the AXiS hardware controls.

Values: Off, PitchBend (PB), AfterTouch (AT), or 000 - 127

Control	Default/Factory
PBendWheel	Pitch Bend
Mod Wheel	Modulation
FootCntr 1	Foot Pedal
FootCntr 2	Sustain
KnobCntr 1	Volume
KnobCntr 2	Aftertouch

For a full list of MIDI controllers see Appendix A (page 25).

Single Mode: Assign MIDI CC for each AXiS hardware control.
Split Mode: Assign MIDI CC for each AXiS hardware control for each Split zone.
Layer Mode: Assign MIDI CC for each AXiS hardware control for each Layer zone.

Inverting controls: A MIDI CC can be inverted by changing the ± sign to the left of the MIDI CC value displayed. Inverted operation may be useful if you have a control that works the opposite way to that which you prefer. Eg Volume controlled by a pedal may be set to be high when the foot is all the way back, or high when the foot is all the way forward.

Another use for inverting a MIDI CC is to crossfade between two sounds while in Layer mode. Using a rotary knob, assign MIDI CC 007 (volume) to two zones, inverting only one of the zones. As the knob is turned, one zone's MIDI volume is increased, while the other zone's volume is decreased.

Velocity Table

Select a velocity table from five available. These tables determine how velocity information is interpreted. Velocity is a global attribute of all keys. It is not affected by the Mode.

Factory defaults are as follows:

Table	Use for
1	Normal
2	Sensitive
3	Less sensitive
4	Yamaha (always <100/127)
5	Disabled (always = 64/127)

Notes:
• Table 4 is set up to be useful on some equipment which expects the maximum level to be 100 rather than the full 127 possible MIDI values.
• Table 5 is set up for velocity insensitive operation and will make all notes have a MIDI value of 64 for velocity.

Active Sensing

On/Off When set On, a MIDI Active Sensing Clock (FEh) is automatically generated approximately every 90ms whenever no MIDI data is being transmitted.

This feature is essential for some MIDI devices that require Active Sensing and will shut down if not received within 300ms of the last MIDI byte received.

UTIL pages

Items under the UTIL pages are global and not affected by the Mode or by storing or recalling the Set Up.

Store Set Up

To store a Set Up, press a Preset Button (1-8).
Press + to confirm.

The state of the AXiS, including current keyboard mode and all associated parameters (MIDI channel, transposition, program number/s, and hardware control assignments) for all the modes will be stored for later recall.

To recall a Set Up, just press a Preset Button (1-8). When you recall a Set Up, the relevant MIDI Program Changes will be sent, and the PLAY page will be displayed.

LCD Backlight

The light on the Display is turned off after a period of inactivity. Set the delay between last activity and light off from the following values:

 On, 15secs, 30 secs, 1 min and Off

Panic Button assign

The Panic Button may be assigned to transmit one of the following:

- *Clear + Panic!*
- *Clear*
- *Panic!*
- *All Notes Off (on all MIDI channels)*
- *Reset All Controllers (on all MIDI channels)*
- *(Off)*

Details of Events and Clear/Panic sequences can be found in the Reference section.

Control Resolution

Set the number of bits of noise to ignore.
Min 4 bits / Max 13 bits

All the AXiS control inputs have an independent noise filter that defaults to 4 bits wide. Under certain electrically noisy conditions (Eg stage lighting interference being picked up by the foot control leads) it may be necessary to increase this value.

Calibrate

Choose a control and calibrate its centre, upper and lower limits.

N.B. The AXiS does NOT send MIDI while in this page.

Do this when;

- *The AXiS has lost its memory through long term disuse, or*
- *when you add a new external control, or*
- *when you change an external control for another, or*
- *a control is not working as you wish.*

*NOTE that for ALL variable controls, including the on-board wheels and knobs, you **MUST** define the centre. This is because with the AXiS it is possible to assign any of these to pitch-bend. It also means you can define MIDI-64 (centre) to be nearer one end of the range of the control than the other if you like.*

1 **Use Cursor Buttons to select the control you want to calibrate**

2 **Move the control to minimum and maximum positions (or operate your plugged in Sustain pedal etc)**

TIP: Don't force the wheels to the very end of their travel as if you do you may need the same force during operation to get 0 or 127.

3. **Either**

    If you are calibrating a Sustain pedal or switch, press - (minus) (Pressing - (minus) calculates the center as half way between the minimum and maximum).

    Or

    Move the control to where you want the center to be, then press + (plus) (Pressing + sets the center to the current position of the control).

NOTE: When calibrating a self-centering control such as the Pitch Bend wheel, let the control self-center, then press + Do NOT use minus.

TIP: If you want the control to operate evenly throughout the range, make the Ctr:xxx value half way between the Min:xxx and Max:xxx values shown. Unlike the Knobs, the Wheels will not show values from 0 to 127 at this stage since their travel is limited. Eg:

Before pressing +

UTILITY Mod Wheel
Min:057 Ctr:072 Max:086

After pressing +

UTILITY Mod Wheel
Min:000 Ctr:064 Max:127

After after you press + to confirm, the Ctr: value shows where you have defined the centre as a value between 000 (minimum) and 127 (maximum).

Calibrating Off-Centre

The MIDI-centre of a control can be set to a point off-centre on the physical control.

The diagrams below show how a control will behave when it is calibrated with MIDI-centre at centre, below centre, and above centre.
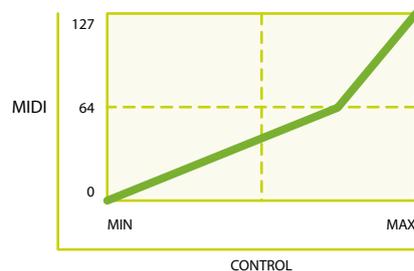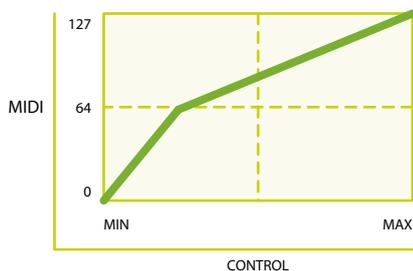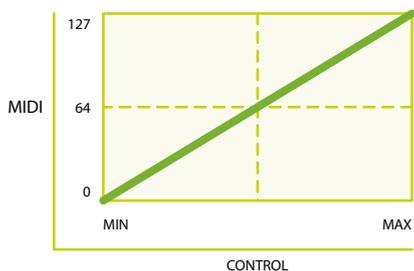
*NOTE: If you make the centre very near one end, you will get a very steep slope to the graph near that end. If you make the centre **at** the maximum, the control will only give 000-063. If you make the centre **at** the minimum, the control will only give 064-127.*

Tip: Normally it's a good idea to set the control's centre at, or near, the physical centre to experience normal linear behaviour.

An off-centre calibration may be particularly useful when using a pedal to control volume. The centre might be set high so that the lower range of the pedal is less sensitive to change, allowing for smoother fade-ins at lower volumes.

4   **Calibration complete. Select another control to calibrate, or press PLAY.**

Serial Number

This page shows the version number of the firmware in use on the top line, and the unit's serial number on the second line.

Default all settings?

You should not normally need this page.

If the unit has lost its memory, for whatever reason, self-test on power up will automatically default all settings.

> **!** *WARNING: You **cannot** undo this. When you default all settings, all parameters including the Velocity Tables will be reset to factory defaults, overwriting existing values. All the settings in all eight Presets will be lost.*

If you really want to reset all settings to factory defaults, press +

The display changes to " - to Default". Press -

The display changes to " + to Default". Press +

The unit will then be reset to its factory default settings.

Reference

Online Resources

AXiS support page   www.c-thru-music.com/support

MIDI Manufacturers Association   www.midi.org

User-Servicable Parts

There are no user-servicable parts. Contact C Thru Music for advice.

Clear and Panic!

'**Clear**' and '**Panic!**' are sequences of MIDI data which may be sent by using the Panic Button.

```
Off                           Key does nothing
All Notes Off        send     [All Notes Off] for each channel
Reset all Controllers  send   [Reset all Controllers] for each channel
Clear                send     [All Notes Off]
                              and [Reset All Controllers] for each channel
Panic!               send     [All notes off}
                              [Reset All Controllers]
                              [All sound Off]
                              [Centre Pitch Bend]
                              [Zero Modulation]
                              [Sustain Off}
                              [Volume on]
                              [individually turn off each note for each
                              channel]
                              [Active Sensing]
```

Note: The Clear and Panic! sequences are sent as a series of blocks, with "Block delays" between them. This is to ensure the MIDI output buffer does not overflow. Since Panic! is very thorough, it takes a noticeable time to complete.

Appendix A Controller Numbers

The following MIDI controllers may be assigned to any of the analogue controls in the MIDI assign page.

0-63	High resolution continuous controllers (0-31 = MSB; 32-63 = LSB)		44	Effect Control 1
			45	Effect Control 2
64-69	Switches		48	General Purpose Controller 1
70-119	Low resolution continuous controllers		49	General Purpose Controller 2
			50	General Purpose Controller 3
120-127	Channel Mode messages		51	General Purpose Controller 4

High resolution continuous controllers (MSB)

0	Bank Select (Not assignable)
1	Modulation Wheel
2	Breath Controller
4	Foot Controller
5	Portamento Time
6	Data Entry
7	Channel Volume
8	Balance
10	Pan
11	Expression Controller
12	Effect Control 1
13	Effect Control 2
16	General Purpose Controller 1
17	General Purpose Controller 2
18	General Purpose Controller 3
19	General Purpose Controller 4

High resolution continuous controllers (LSB)

32	Bank Select (Not assignable)
33	Modulation Wheel
34	Breath Controller
36	Foot Controller
37	Portamento Time
38	Data Entry
39	Channel Volume
40	Balance
42	Pan
43	Expression Controller

Switches

64	Sustain On/Off
65	Portamento On/Off
66	Sostenuto On/Off
67	Soft Pedal On/Off
68	Legato On/Off
69	Hold 2 On/Off

Low resolution continuous controllers

70	Sound Controller 1
71	Sound Controller 2
72	Sound Controller 3
73	Sound Controller 4
74	Sound Controller 5
75	Sound Controller 6
76	Sound Controller 7
77	Sound Controller 8
78	Sound Controller 9
79	Sound Controller 10
80	General Purpose Controller 5
81	General Purpose Controller 6
82	General Purpose Controller 7
83	General Purpose Controller 8
84	Portamento Control
91	Ext. Effects Depth
92	Tremelo Depth
93	Chorus Depth
94	Celeste Depth
95	Phaser Depth

Channel Mode messages

120	All Sound Off
121	Reset All Controllers
122	Local Control On/Off
123	All Notes Off
124	Omni Mode Off (also causes ANO)
125	Omni Mode On (also causes ANO)
126	Mono Mode On (Poly Off; also causes ANO)
127	Poly Mode On (Mono Off; also causes ANO)

Appendix B. Program Change (Instrument) Assignment Bank 1

This chart shows the numbers and names of all 128 General MIDI Instruments which you are likely to find in your MIDI sound equipment. These are arranged into sixteen "families" of eight instruments.

PIANO		CHROMATIC PERCUSSION		ENSEMBLE		BRASS	
1	Acoustic Grand	9	Celesta	49	String Ensemble 1	57	Trumpet
2	Bright Acoustic	10	Glockenspiel	50	String Ensemble 2	58	Trombone
3	Electric Grand	11	Music Box	51	SynthStrings 1	59	Tuba
4	Honky-Tonk	12	Vibraphone	52	SynthStrings 2	60	Muted Trumpet
5	Electric Piano 1	13	Marimba	53	Choir Aahs	61	French Horn
6	Electric Piano 2	14	Xylophone	54	Voice Oohs	62	Brass Section
7	Harpsichord	15	Tubular Bells	55	Synth Voice	63	SynthBrass 1
8	Clavinet	16	Dulcimer	56	Orchestra Hit	64	SynthBrass 2

ORGAN		GUITAR		REED		PIPE	
17	Drawbar Organ	25	Nylon String Guitar	65	Soprano Sax	73	Piccolo
18	Percussive Organ	26	Steel String Guitar	66	Alto Sax	74	Flute
19	Rock Organ	27	Electric Jazz Guitar	67	Tenor Sax	75	Recorder
20	Church Organ	28	Electric Clean Guitar	68	Baritone Sax	76	Pan Flute
21	Reed Organ	29	Electric Muted Guitar	69	Oboe	77	Blown Bottle
22	Accoridan	30	Overdriven Guitar	70	English Horn	78	Skakuhachi
23	Harmonica	31	Distortion Guitar	71	Bassoon	79	Whistle
24	Tango Accordian	32	Guitar Harmonics	72	Clarinet	80	Ocarina

BASS		SOLO STRINGS		SYNTH LEAD		SYNTH PAD	
33	Acoustic Bass	41	Violin	81	Lead 1 (square)	89	Pad 1 (new age)
34	Electric Bass(finger)	42	Viola	82	Lead 2 (sawtooth)	90	Pad 2 (warm)
35	Electric Bass(pick)	43	Cello	83	Lead 3 (calliope)	91	Pad 3 (polysynth)
36	Fretless Bass	44	Contrabass	84	Lead 4 (chiff)	92	Pad 4 (choir)
37	Slap Bass 1	45	Tremolo Strings	85	Lead 5 (charang)	93	Pad 5 (bowed)
38	Slap Bass 2	46	Pizzicato Strings	86	Lead 6 (voice)	94	Pad 6 (metallic)
39	Synth Bass 1	47	Orchestral Strings	87	Lead 7 (fifths)	95	Pad 7 (halo)
40	Synth Bass 2	48	Timpani	88	Lead 8 (bass+lead)	96	Pad 8 (sweep)

SYNTH EFFECTS

97   FX 1 (rain)
98   FX 2 (soundtrack)
99   FX 3 (crystal)
100 FX 4 (atmosphere)
101 FX 5 (brightness)
102 FX 6 (goblins)
103 FX 7 (echoes)
104 FX 8 (sci-fi)

ETHNIC

105 Sitar
106 Banjo
107 Shamisen
108 Koto
109 Kalimba
110 Bagpipe
111 Fiddle
112 Shanai

PERCUSSIVE

113 Tinkle Bell
114 Agogo
115 Steel Drums
116 Woodblock
117 Taiko Drum
118 Melodic Tom
119 Synth Drum
120 Reverse Cymbal

SOUND EFFECTS

121 Guitar Fret Noise
122 Breath Noise
123 Seashore
124 Bird Tweet
125 Telephone Ring
126 Helicopter
127 Applause
128 Gunshot

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