25-key USB Mobile MIDI Controller

KeyControl 25 XL

User's Guide

ESI

ESI - Copyright © 2008

Revision 1, August 2008

INDEX

1. Introduction

Thank you for purchasing KeyControl 25 XL.

KeyControl 25 XL is a compact 25-key keyboard, perfect for live usage on stage and in studios. The new versatile MIDI controller can be used immediately after it has been connected to a sound device or to a computer. You can connect KeyControl 25 XL to your Macintosh or PC via a simple USB connection. No additional power supply is required, no drivers have to be installed.

KeyControl 25 XL offers numerous controllers: it has a pitch bend and modulation wheel, 4 knobs, a fader and various buttons. The 4 knobs can even be assigned twice, just switch between the two banks by pushing a button. Of course all controllers work in real time. If you are looking for a small and affordable controller keyboard and you don't need more than 25 keys, KeyControl 25 XL is the solution for you.

Please note that this document covers the basics of the KeyControl 25 XL installation as well as the usage of the various built-in functions. However, this manual is not intended to explain the basics about MIDI, MIDI controller messages, MIDI programs, MIDI channels or anything about typical audio-/MIDI sequencing software. If you need to get more information about MIDI (i.e. you don't know what a MIDI controller actually is for example), a good start is usually the manual of your notation or sequencing software (i.e. the included Cubase LE 4.0). In addition there are a lot of details about MIDI on the Internet. A good technical resource and great starting point is www.midi.org, some details are typically also provided in various forums about audio / MIDI and home recording.

Note: the manual from time to time refers to preset numbers (always in `Courier` font). **Chapter 5** contains a reference table in **section 5.1** with various MIDI controllers and other parameters that can be assigned to controller knobs, the slider, modulation wheel and data buttons. Every time you see a number or reference in `Courier`, it refers to that table.

2. Description of KeyControl 25 XL

2.1 Front Panel

(1)   EDIT button, used to assign / change parameters. When the edit functionality is enabled, the LED next to it will be switched on.

(2)   data buttons (up / down), by default used to move the octave of the keyboard up / down (preset #154 – Octave). The octave position is indicated by the LEDs next to the buttons.

(3)   SWITCH button, used to switch the controller knobs between R1~R4 and R5~R8 parameters. The LEDS indicate the selected group.

(4)   data slider, an assignable controller that by default controls the master volume (preset #147 – master volume).

(5)   PITCH BEND wheel, an assignable controller that by default controls the pitch bend (preset #146 – pitch bend).

(6)   MODULATION wheel, an assignable controller that by default controls the modulation value (preset #148 – modulation).

(7)   R1~R8 knobs, each are assignable rotary controllers that can control various functions. By default, R1 to R4 are assigned to preset #7 – channel volume, R5 is assigned to preset #152 – program change, R6 is assigned to preset #153 – channel, R7 is assigned to preset #156 – tempo, R8 is assigned to preset #157 – velocity curve. The SWITCH button allows you to switch between R1~R4 and R5~R8 groups.

(8)   additional control functions, when the edit function is enabled via the EDIT button, the functions printed above the keyboard are assigned to each key.

(9)   LED display, shows the current parameters and status.

2.2 Rear Panel

(1)   MIDI OUT, connector for the MIDI out signals.

(2)   PEDAL connector, an input for a switching or continuous pedal controller that by default controls sustain (preset #64 – sustain).

(3)   USB connector, connects to your PC or Mac.

(4)   DC 9V connector, connects to an optional power supply (not included) with 9V and DC current.

(5)   OFF/ON switch, turns KeyControl 25 XL on or off.
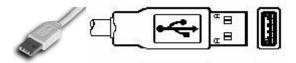
3. Installation

3.1 Hardware Installation

Before driver installation, please locate your original Windows CD (if you are using Windows), as you may need it during installation. Please also make sure to install the chipset drivers for your motherboard if you have not done so already.

Find the USB port on your computer. A sample USB port is pictured below. It is typically located next to the PS/2 or serial ports on the back of your computer.

Plug the KeyControl 25 XL USB cable (Series A plug type) into the USB port of your computer. The other end of the cable will be connected with KeyControl 25 XL.

KeyControl 25 XL gets the power from the computer via USB cable by default when connected to a computer and after you have switched it on. The LEDs of KeyControl 25 XL will be turned on once the unit is powered and connected to your PC.

MIDI connection

If you are not using the USB connection to your computer, you can also use the MIDI out port with a standard MIDI cable. This will be connected to the MIDI input of your MIDI interface or soundcard for example.

3.2 Software Installation

After KeyControl 25 XL has been connected to your computer, you can immediately start using it. Under Windows, a new MIDI input device called USB Audio Device will be available in all your MIDI compatible applications. Under Mac OS X, a new device called KeyControl 25 XL will be available.

This device can be selected as MIDI input source in all MIDI compatible applications. How this is done, varies from application to application, so please consult the manual for your audio/MIDI or notation software for more details.

4. Controls & Functions

4.1 Assigning of Parameter Presets

To assign parameter presets (check the table in **section 5.1** for reference) to any wheel, knob or slider, you need to press the EDIT button to enter the edit mode which will be indicated by the LED next to it. Then press the ASSIGN key to enter the preset assignment mode. The LED display will show CHO. Now move the controller that you want to assign a preset to (for example, if you want to assign something to R1, move the R1 knob). The LED will show the number of the currently assigned preset. Enter the desired number with the numeric keys on the keyboard (for example, if you want assign preset #147 – master volume, you would enter 147) and once finished, press ENTER to confirm.

4.2 Program Change

By default, R5 is assigned to preset #152 – program change. However, as explained in **section 4.1**, any other controller can be used as well if previously assigned to the preset.

The program can also be changed by pressing the EDIT button to enter the edit mode, which will be indicated by the LED next to it and then pressing the PROGRAM key. After that, input the program number with the numeric keys and press ENTER to confirm.

4.3 MIDI Channel

By default, R6 is assigned to preset #153 – channel. However, as explained in **section 4.1**, any other controller can be used as well if previously assigned to the preset.

The MIDI channel can also be changed by pressing the EDIT button to enter the edit mode, which will be indicated by the LED next to it and then pressing the CHANNEL key. After that, input the channel number with the numeric keys and press ENTER to confirm.

4.4 Bank Select MSB/LSB

The LSB/MSB bank value can be changed by pressing the EDIT button to enter the edit mode, which will be indicated by the LED next to it and then pressing the BANK MSB or BANK LSB key. After that, input the bank number with the numeric keys and press ENTER to confirm.

4.5 Transpose

Hold EDIT and use the data up and down buttons to adjust transpose. Adjustment range is +/- 12 semitones. Hold EDIT and both data up and down at the same time to set transpose to initial 0.

4.6 Octave

By default, the data up and down buttons are assigned to preset #154 - octave. Press both data up and down at the same time to set octave to initial 0.

4.7 Dual

Press EDIT button to enter the edit mode, which will be indicated by the LED next to it, and then press the DUAL key to enable / disable the dual function in which two notes can be sent out simultaneously.

4.8 MTC

Press EDIT button to enter the edit mode, which will be indicated by the LED next to it, and then press the MTC key to enable / disable the sending of MTC messages.

4.9 Mute

Press EDIT button to enter the edit mode, which will be indicated by the LED next to it, and then press the MUTE key to enable / disable the mute function. If enabled, no messages will be transmitted.

4.10 Snapshot

Press EDIT button to enter the edit mode, which will be indicated by the LED next to it, and then press the SNAPSHOT key to transmit the values of all controls (R1~R8, sliders, wheels, …) at one time.

4.11 Upload & Download

KeyControl 25 XL can send and receive all configuration data in form of SysEx strings. To make use of that, a SysEx-compatible sequencing software like Cubase. Make sure in MIDI filter settings in your software that SysEx data is not filtered out.

To transfer the data from the keyboard to your computer, start recording in your software. Then press the EDIT button to enter the edit mode, which will be indicated by the LED next to it, and after that press UPLOAD to transmit the data at one time.

To transfer the data back from the computer to KeyControl 25 XL, make sure that the data is ready for transfer in your software. Press the EDIT button to enter the edit mode, which will be indicated

by the LED next to it, and after that press DOWNLOAD to start receiving of the data. Now start the transfer / playback of the data from your software.

4.12 All Notes Off

Press EDIT button to enter the edit mode, which will be indicated by the LED next to it, and then press the ALL NOTE OFF key to send note off messages on all notes at one time.

4.13 Controller Reset

Press EDIT button to enter the edit mode, which will be indicated by the LED next to it, and then press the CTRL RESET key to transmit the reset all controller message.

4.14 GM/GS/XG On

Press EDIT button to enter the edit mode, which will be indicated by the LED next to it, and then press GM/GS/XG ON to transmit GM initialization message ("F0 7E 7F 09 01 F7"), GS initialization message ("F0 41 10 42 12 40 00 7F 00 41 F7"), and XG initialization message ("F0 43 10 4C 00 00 7E 00 F7") simultaneously.

5. Controller Assignments & Presets

The controller knobs, the slider, the modulation wheel, the data buttons, the pitch bend wheel and the parameter for the pedal connector can each be assigned to a certain controller preset. The following section lists them. To find the required preset value, browse through the **PARAMETER** column and then select the **PRESET NO.**; the previous chapter of the manual explains how to assign the presets.

5.1 Preset Table

PRESET NO.	PARAMETER	INITIAL VALUE	*VALUE RANGE*
0	Bank Select MSB	0	*0-127*
1	Modulation MSB	0	*0-127*
2	Breath MSB	127	*0-127*
3	Controller	0	*0-127*
4	Foot Controller MSB	127	*0-127*
5	Portamento Time MSB	0	*0-127*
6	Data Entry MSB	2	*0-127*
7	Channel Volume MSB	100	*0-127*
8	Balance MSB	64	*0-127*
9	Controller	0	*0-127*
10	Panpot MSB	64	*0-127*
11	Expression MSB	127	*0-127*

12	Effect Control 1 MSB	0	*0-127*
13	Effect Control 2 MSB	0	*0-127*
14-31	Controller	0	*0-127*
32	Bank Select LSB	0	*0-127*
33	Modulation LSB	0	*0-127*
34	Breath LSB	127	*0-127*
35	Controller	0	*0-127*
36	Foot Controller LSB	127	*0-127*
37	Portamento Time LSB	0	*0-127*
38	Data Entry LSB	0	*0-127*
39	Channel Volume LSB	127	*0-127*
40	Balance LSB	64	*0-127*
41	Controller	0	*0-127*
42	Panpot LSB	64	*0-127*
43	Expression LSB	127	*0-127*
44-63	Controller	0	*0-127*
64	Sustain	0	*0-127*
65	Portamento	0	*0-127*
66	Sostenuto	0	*0-127*
67	Soft Pedal	0	*0-127*
68	Legato FootSwitch	0	*0-127*
69	Hold 2	0	*0-127*
70	Sound Controller	64	*0-127*
71	Resonance	64	*0-127*
72	Release Time	64	*0-127*
73	Attack Time	64	*0-127*
74	Cutoff	64	*0-127*
75	Decay Time	0	*0-127*
76	Vibrato Depth	64	*0-127*
77	Vibrato Depth	64	*0-127*
78	Vibrato Depth	64	*0-127*
79	Sound Controller	64	*0-127*
80-83	Controller	0	*0-127*

84	Portamento Control	0	*0-127*
85-90	Controller	0	*0-127*
91	Reverb	40	*0-127*
92	Effects	0	*0-127*
93	Chorus	0	*0-127*
94	Effects	0	*0-127*
95	Effects	0	*0-127*
96	RPN Increment	0	*0-127*
97	RPN Decrement	0	*0-127*
98	NRPN LSB	0	*0-127*
99	NRPN MSB	0	*0-127*
100	RPN LSB	0	*0-127*
101	RPN MSB	0	*0-127*
102-119	Controller	0	*0-127*
120	All Sound Off	0	*0-127*
121	Reset All Controllers	0	*0-127*
122	Local Control	0	*0-127*
123	All Notes Off	0	*0-127*
124	OMNI Off	0	*0-127*
125	OMNI On	0	*0-127*
126	Mono	0	*0-127*
127	Poly	0	*0-127*
128	Pitch Bend Sensitivity（RPN）	2	*0-127*
129	Channel Fine Tuning（RPN）	64	*0-127*
130	Channel Coarse Tuning（RPN）	64	*0-127*
131	Modulation Depth Range（RPN）	64	*0-127*
132	Vibrato Rate（NRPN）	64	*0-127*
133	Vibrato Depth（NRPN）	64	*0-127*
134	Vibrato Delay（NRPN）	64	*0-127*
135	Filter Cutoff Frequency（NRPN）	64	*0-127*
136	Filter Resonance（NRPN）	64	*0-127*
137	EQ Low Gain（NRPN）	64	*0-127*

138	EQ High Gain（NRPN）	64	*0-127*
139	EQ Low Frequency（NRPN）	64	*0-127*
140	EQ High Frequency（NRPN）	64	*0-127*
141	EG Attack Time（NRPN）	64	*0-127*
142	EG Decay Time（NRPN）	64	*0-127*
143	EG Release Time（NRPN）	64	*0-127*
144	Polyphonic Key Pressure	100	*0-127*
145	Aftertouch	100	*0-127*
146	Pitch Bend	64	*0-127*
147	Master Volume	100	*0-127*
148	Start（MTC）	-	-
149	Continue（MTC）	-	-
150	Stop（MTC）	-	-
151	Reset（MTC）	-	-
152	Program	0	*0-127*
153	Global Channel	0	*0-15*
154	Octave	0	*-3~3*
155	Transpose	0	*-12~12*
156	Tempo	100	*20-250*
157	Keyboard Curve	0	*0-4*
158	Pedal Curve	64	*1-127*

The default preset assignments of each function are described in **Chapter 2**.

5.2 LED Display Status

This section contains an overview of the various display possibilities of the 3-digit LED display.

NO.	STATUS	DEFINITION
1	xxx	3 Digit Display
2	xx	Upper Transpose Value
3	-xx	Lower Transpose Value
4	x	Upper Octave Value
5	-x	Lower Octave Value
6	CHO	Indicates the preset to be assigned in preset assignment mode.

7	ON / OFF	Certain function On/Off, or pedal polarity positive/negative.
8	don	A certain function has been done.
9	Err	Operation Error.
10	SEu	Parameters have been uploaded.
11	SEd	Parameters have been downloaded.

6. General Information

Trademarks

ESI, KeyControl and KeyControl 25 XL are trademarks of EGOSYS, Inc. and ESI Audiotechnik GmbH. Windows is a trademark of Microsoft Corporation. Other product and brand names are trademarks or registered trademarks of their respective companies.

The FCC Regulation Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Caution : Any changes or modifications in construction of this device with are not expressly approved by the party responsible for compliance, could void the user's authority to operate equipment.

Note: 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 the 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 his own expense. If necessary, consult an experienced radio/television technician for additional suggestions.

Correspondence

For technical support inquiries, contact ESI support online at www.esi-audio.com.

Disclaimer

All features and specifications subject to change without notice.

Parts of this manual are continually being updated. Please check our web site www.esi-audio.com occasionally for the most recent update information.

Declaration of Conformity (for the European Union)

The product described in this manual is manufactured in China by **ESI Audiotechnik GmbH, Brennerstraße 48, D-71229 Leonberg, Germany**. The product is labelled with the CE mark and conform to the protection requirements of the European Electromagnetic Compatibility Standards

and Directives. The product is designed and constructed such that electromagnetic disturbances generated do not exceed levels allowing radio and telecommunications equipment and other equipment to operate as intended, and, the product has an adequate level of intrinsic immunity to electromagnetic disturbance to enable operation as specified and intended.

The product is marketed as **ESI KeyControl 25 XL** controller keyboard.

With reference to regulations in the directives 73/23/EEC, 89/336/EEC, the equipment listed above is covered by this certificate and labelled with the CE mark conforms to the following standards:

EN55103-1 & EN55103-2   Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use.

This declaration is made by Claus Riethmüller (Managing Director).

Leonberg, Germany	21.08.2008	
City	Date	Signature