KENTON PRO-KADI Professional Multi Mode MIDI Trigger Unit Instruction Manual

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FCC Statement for PRO-KADI

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Information on Disposal for Users of WEEE

This symbol on the product and / or accompanying documents means that used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge.

Alternatively, in some countries, you may be able to return your products to your local retailer upon purchase of an equivalent new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

For disposal in countries outside of the European Union
This symbol is only valid in the European Union (EU). If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

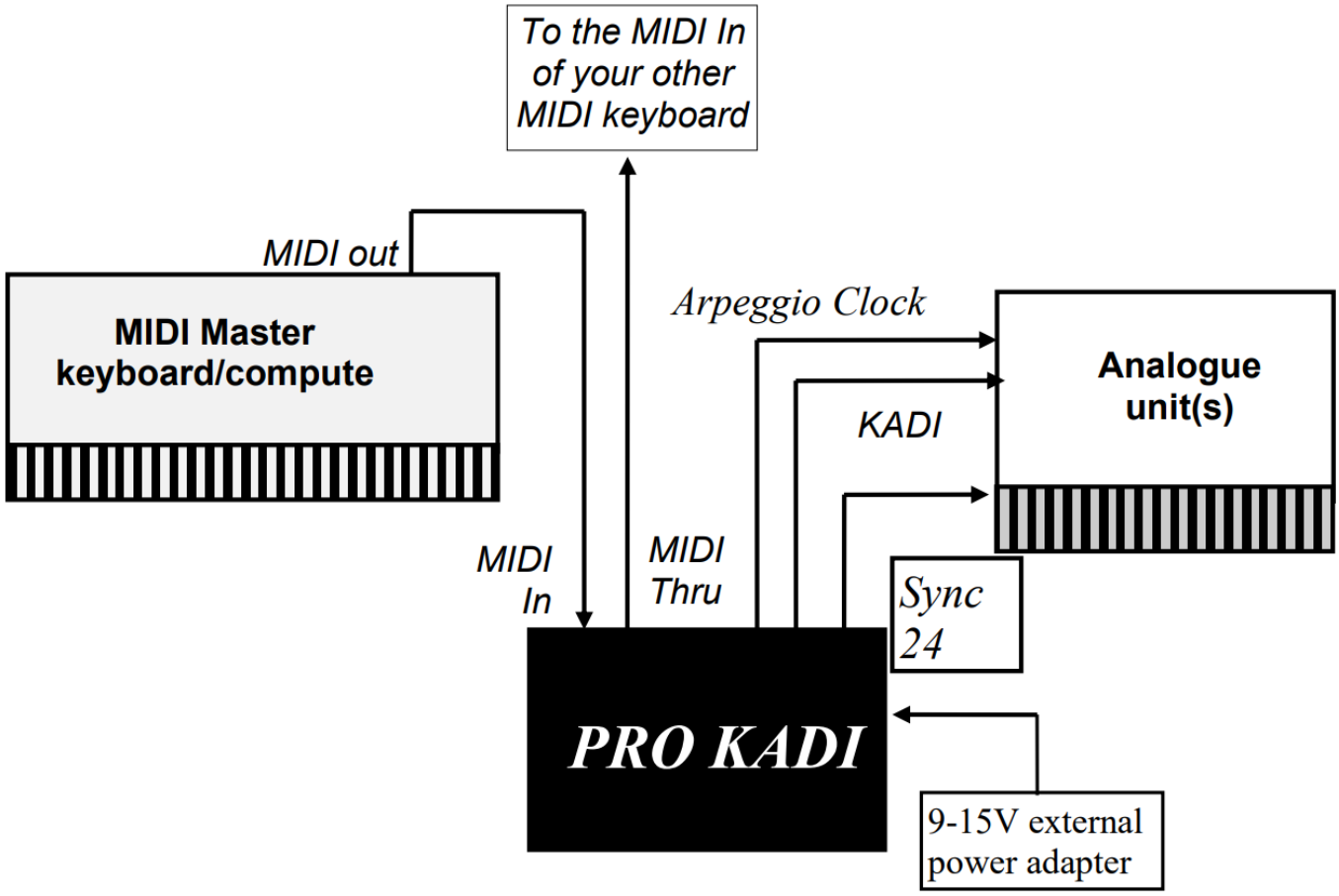
Contents

INTRODUCTION

Congratulations on your purchase. The PRO KADI is a high specification, fully configurable MIDI data to trigger

unit, capable of outputting up to 13 TTL triggers. This gives it a wide range of uses, not all of which can be detailed here. However please take some time out to read through all the manual to avoid any operational difficulties.

CONNECTIONS



MIDI In
Plug your MIDI keyboard or sequencer`s MIDI Out into here.

MIDI Thru
Plug this into the MIDI In of another piece of your MIDI equipment should it be necessary.

SYNC 24
Plug this into the Sync 24 input of any analogue device (synthesizer or drum machine) with that capability.

KADI/TRIG Output
Plug this into the appropriate input on your analogue unit (either a Kenton KADI port or similar socket). This transmits trigger/note information.

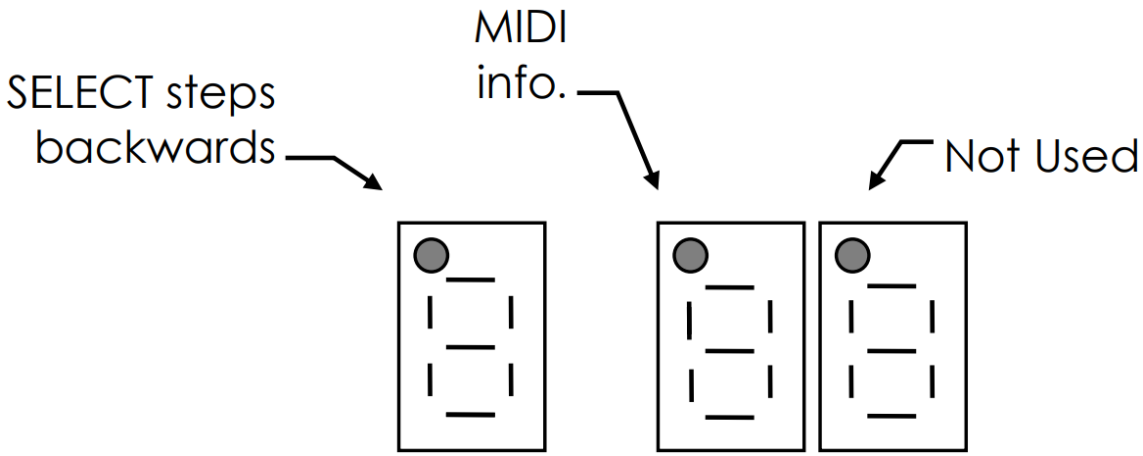
CLOCK Out
Plug this into your synth`s input marked ARP CLOCK, this controls the speed of the arpeggio clock, and syncs it to MIDI clock. This can also be used to sync drum machines which have a clock input.

9-15V DC
Plug your power adaptor (not supplied) into here. The converter will take an adapter with a range of 9-15V. We recommend the Kenton power supply which is made especially for the PRO-KADI but any plug-top supply can be used as long as the output is regulated and is in this voltage range. Do not use any adaptor which has an output voltage of higher than 15v. The PRO-KADI must not share a power adaptor with any other device of any kind as this may damage your unit.

EDITING THE PRO KADI

Switching On
When the PRO KADI is switched on, the words KENTON PRO KADI scroll across the display.

The Display
There are 3 digits on the 7-segment display. The 1st digit shows which parameter is ready for editing.
The right-hand, 2nd & 3rd digits will then display what the value of the parameter is.
There are also 2 red dots which you may see appear. The 1st dot when lit indicates the **SELECT** button is in reverse operation (see below), the right dot when MIDI, information is being received on the selected channel. The dot on the far right is not utilised by this unit.



Stepping through parameters
Each parameter is accessed using the **SELECT** button. There are 14 parameters in the menu, listed in the next section `Parameters`.
Press the **SELECT** button to get to the parameter in question, then use the INCrement (+) and DECrement (-) buttons to edit the value.
If you press and hold the **SELECT** button for more than 1 second, you can step through the parameters in the opposite direction. A red **LED** dot will light up to indicate this. If the **SELECT** button is pressed and held for 1 second again, the direction will return to normal and the red **LED** dot will disappear.

Displaying values above 99
When displaying values from 0 to 99, you will see the digits as you would expect.
When displaying values above 99, the following format is used:-
a dash " – " at the bottom of the left-hand display = 100+
a dash " – " in the middle of the left-hand display = 110+
a dash " – " at the top of the left-hand display = 120+
No values above 129 are used.

Speeding up editing
If you press and hold the INC key, then also hold the DEC key, the value will increase faster. If you press and hold the DEC key then also hold the INC key, the value will decrease faster.

Storing Set-ups
The set-ups can be stored in non-volatile memory. To do this, press & hold the SELECT button (for approx. 6 seconds) till the display reads `st`(store).

PARAMETERS

Below is a list of parameters available to edit. The letters in square brackets show (where relevant) what will be displayed in the parameter 7-segment LED.

Menu
number Parameter (default)
0 MIDI receive channel (default: 1)
Range 1 to 16 (and off)
– Sets the MIDI receive channel.

Options 1 through D assign the Midi Note numbers to their respective voices.

Range 1 to 127 (and off)

defaults are as follows:

1. Note Number Voice #1 (default 36)
2. Note Number Voice #2 (default 37)
3. Note Number Voice #3 (default 38)
4. Note Number Voice #4 (default 39)
5. Note Number Voice #5 (default 40)
6. Note Number Voice #6 (default 41)
7. Note Number Voice #7 (default 42)
8. Note Number Voice #8 (default 43)
9. Note Number Voice #9 (default 44)

a Note Number Voice #10 (default 45)
b Note Number Voice #11 (default 46)
C Note Number Voice #12 (default 47)
D Note Number Voice #13 (default 48)

E Accent Threshold (default: 70)

- range 0 to 127
- sets the velocity threshold for accent on/off.

F Trigger Pulse Length (default: 8ms)

- range 1 to 129
- sets the length of the trigger pulse in milliseconds.
  setting the unit to 129 gives a pulse of 250ms.

G Mode Select (default: Kadi)

– selects the operation mode for the unit, options are:
Kadi [kA] – for use with Kenton Kadi modified drum machines.
Wasp [W] – for EDP wasp, (lead available from Kenton).
Note [nt] – Sends a trigger which remains on while the note is depressed.
Inv. Note [n-] – Sends a trigger as above, which is high when off and ground when on.
Trig [tr] – Sends a trigger pulse, the length of which is defined by parameter 'f'.
Inv. Trig [t-] – Sends a trigger as above, which is high when off and ground when on.
Prog [pg] – As note mode but responds to program changes rather than note numbers.
Matrix [M] – Legacy mode for a specific past application, please ignore.
Servo [Sn] – Servo motor mode – notes
Servo [Sc] – Servo motor mode – controllers

H Clock Pulse Divide Ratio (values d2, d4 & 2 to 24, default:2)
– sets the ratio of MIDI clocks to output pulses from the clock pulse output.
d2 – special drum machine mode – outputs 24 cpqn – used for many drum machines

d4 – special drum machine mode – outputs 48 cpqn – for Linn & Oberheim drum machines
N.B. Some drum machines use other values e.g. the Roland CR78 uses 12 cpqn (div ratio 2)
If set to 2, there will 12 pulses from the clock pulse output for every 24 MIDI clocks = 12 cpqn
If set to 24, there will be 1 pulse from the clock pulse output for every 24 MIDI clocks = 1 cpqn
(Note there are 24 MIDI clocks per quarter note)
Below is a table of values you can set the divide ratio to in order to obtain a clock pulse at various musical time intervals: –

Note type Divide ratio CPQN (clocks per quarter note)

Crotchets (quarter notes) 24 1
Crotchet triplets 16
Quavers (eighth notes) 12 2
Quaver triplets 8
Semiquavers (sixteenths) 6 4
Semiquaver triplets 4 6
Demisemiquavers 3 8
Demisemiquaver triplets 2 12

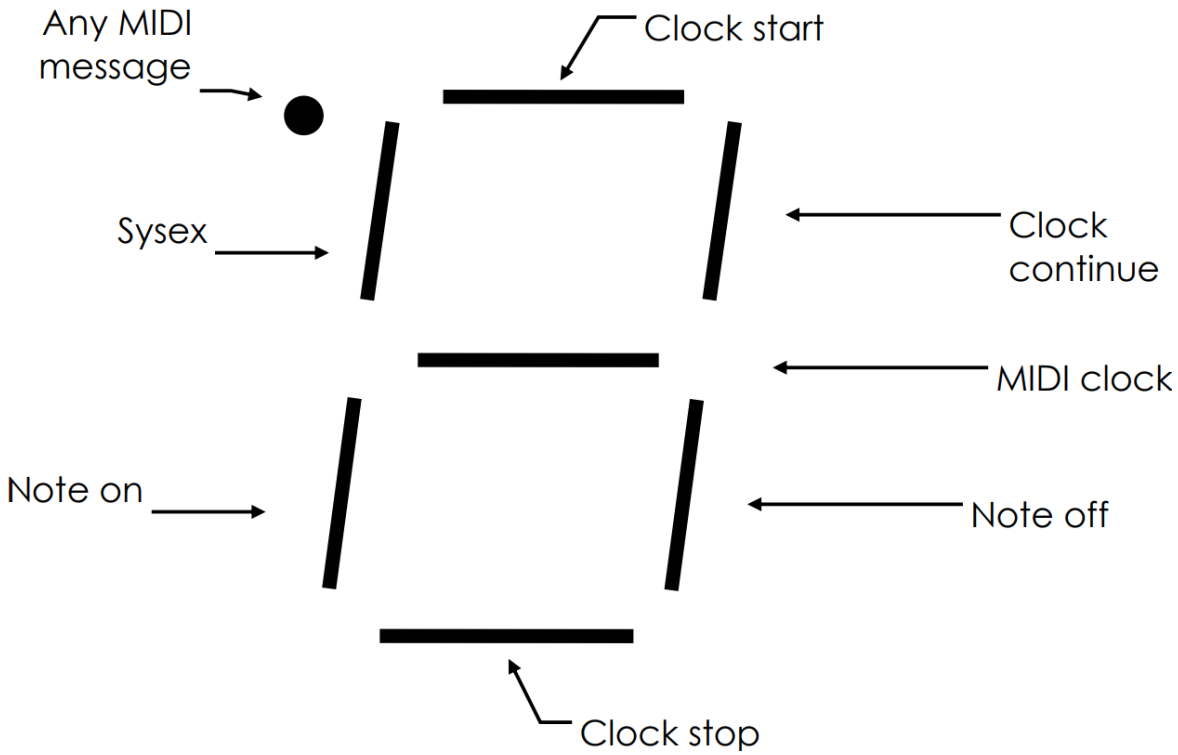
I Clock Polarity(values +ve / -ve, default: Positive)
– sets whether the clock pulse train starts with a positive going edge or a negative going edge.
Most synths / sequencers & drum machines will want the Positive edge, but a few require the
Negative edge instead. (e.g. Korg Monopoly)
J Continue = start – (values on, off, default = off)
– when set to off, MIDI continue messages are ignored. If set to on, then continue messages are treated as if they were MIDI start messages.

MIDI ANALYSER MODE

The PRO KADI also has a MIDI analyser function. This feature allows you to see what types of **MIDI** messages are being transmitted by your master keyboard/sequencer making the PRO **KADI** a useful diagnostic tool.
To enter analyser mode, you must power on the PRO KADI whilst holding the **SELECT** button. The display will then show ‘nt’. ‘nt’ means the display will show the **MIDI** note number of any notes it receives.
Using the **INC, DEC,** and **SELECT** buttons, different types of MIDI messages received may be displayed;

SELECT Short press [rC] Receive channel
Long press [PC] Program change
DEC Short press [nt] Note number
Long press [nv] Velocity
INC Short press [Cn] Controller number
Long press [Cv] Controller value

For whichever of the above selected, the PRO KADI will display the value it receives for the message selected.
Although pitch bend and after-touch are not controllers, when Controller number is selected, ‘pb’ will be displayed if pitchblende is received, & ‘af’ will be displayed if after-touch is received.
If Controller values is selected, and pitchblende or after-touch are received, their values will be displayed.
For values over 99 the usual method is employed for displaying large numbers.
The MENU 7-segment LED in this mode operates as a received MIDI message indicator. LED’s will flash when then following types of messages are received; Note on, Note off, Sysex, Timing clock (MIDI clock), Start, Stop, Continue.



To exit MIDI analyser mode, the PRO KADI must be powered off then on again.

USING THE UNIT IN WASP MODE

The Wasp responds to 3 octaves of notes only – on a DX7 or other 61 note keyboard, this corresponds to bottom C# to C three octaves above. The Wasp does not respond to pitchblende – or indeed any other controls except sustain pedal, which will hold the current note. The above limitations are design limitations of the Wasp itself.
NB The Pro-KADI can also be used with the Wasp Deluxe and Gnat synthesizers.

CHECK LIST FOR SETTING UP THE PRO KADI

1. Make sure all cable connections have been made.
2. Set MIDI receive channel you wish to use.
3. Make sure you have set the Mode Select parameter correctly assigned (see parameter section page 5)
4. Make sure that if you are using Sync 24, that you are not using MIDI cables, but 5 pin DIN cables, with all pins connected
5. If you are still having problems, put the PRO-KADI into MIDI analyser mode, to make sure that the unit is receiving all the right data

PROBLEMS YOU MAY ENCOUNTER WHEN USING MIDI CLOCK

When using the MIDI clock in conjunction with the PRO-KADI please note the following. The Kenton clock outputs cannot sync if it is not actually receiving the MIDI clock this is not as silly as it sounds, there are a few points to watch for: –
Some MIDI mergers & patch bays actually remove MIDI clock information from the MIDI data stream or you may have to enable it for the port you are using.
Users of CUBASE note that the default for MIDI clock is for it NOT to be sent, you will have to go into MIDI Synchronization page and select MIDI Clock to transmit.
Users of UNITOR/EXPORT on an Atari note that the MIDI clock will only come out of port A, (that is the Atari's own MIDI port), unless you can re-assign it.

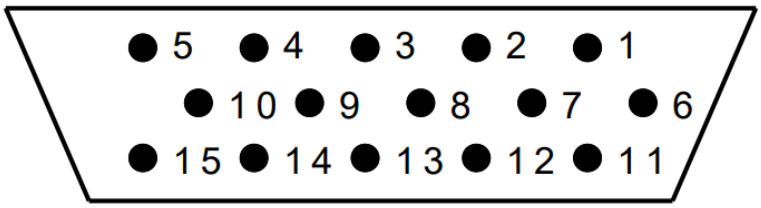
SPECIAL REQUIREMENTS

There are many possible uses for the Pro-KADI, not all of which are detailed in this manual. However, if you have a particular requirement please contact us. Alternative software configurations are available for this unit, and we may be able to help you.

PIN OUTS FOR WASP AND KADI CABLES

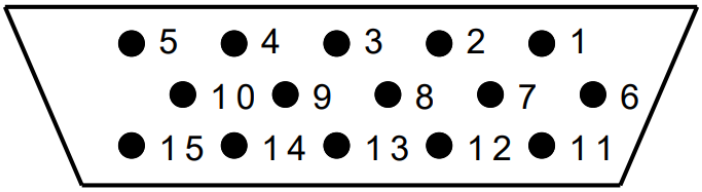
Wasp/KADI Output – connector (Pro-KADI)

15 way high density D socket



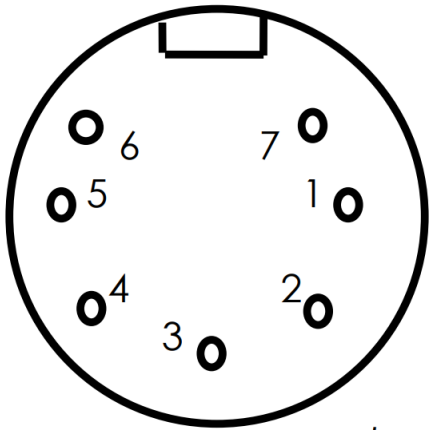
1. Trigger 1
2. Trigger 2
3. Trigger 3
4. Trigger 4
5. Trigger 5
6. Trigger 6
7. Trigger 7
8. Trigger 8
9. Trigger 9
10. Trigger 10
11. 11- Trigger 11
12. Trigger 12
13. – Trigger
14. – +5 volts
15. Ground

Wasp connector (Synth)



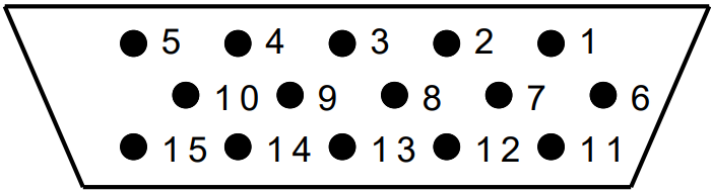
7 pin DIN plug (viewed from terminals).

1. Kybd Data (least significant bit) (0)
2. Kybd Data (Next significant bit) (1)
3. Kybd Data (Next significant bit) (2)
4. Kybd Data (Next significant bit) (3)
5. Kybd Data (Next significant bit) (4)
6. Kybd Data (Most significant bit) (5)
7. Note on trigger



. screen all other wires number in brackets refers to pin # at PRO-KADI end of cable

KADI connector (Drum Machine)



15 way high density D plug (viewed from terminals).

1. Trigger 1
2. Trigger 2
3. Trigger 3
4. Trigger 4
5. Trigger 5
6. Trigger 6
7. Trigger 7
8. Trigger 8
9. Trigger 9
10. Trigger 10
11. 11- Trigger 11
12. Trigger 12
13. – Trigger
14. – +5 volts
15. Ground

CONTROLLER NUMBERS

Controller Number Control Function

Decimal Hex

1. 0 00H Bank switch MSB
   1 01H Modulation wheel/lever
   2 02H Breath controller

3 03H Undefined

4 04H Foot controller

5 05H Portamento time

6 06H Data entry MSB

7 07H Main volume

8 08H Balance

9 09H Undefined

10 0AH Pan

11 0BH Expression controller

12-15 0C-0FH Undefined

16-19 10-13H General purpose controllers (1-4)

20-31 14-1FH Undefined

32-63 20-3FH LSB for values 0-31

64 40H Damper pedal (sustain)

65 41H Portamento

66 42H Sostenuto

67 43H Soft pedal

68 44H Undefined

69 45H Hold 2

70-79 46-4FH Undefined

80-83 50-53H General purpose controllers (5-8)

84-90 54-5AH Undefined

91 5BH External effects depth

92 5CH Tremolo depth

93 5DH Chorus depth

94 5EH Celeste (detune) depth

95 5FH Phaser depth

96 60H Data increment

97 61H Data decrement

98 62H Non-registered parameter number LSB

99 63H Non-registered parameter number MSB

100 64H Registered parameter number LSB

101 65H Registered parameter number MSB

102-120 66-78H Undefined

121-127 79-7FH Reserved for channel mode messages

RESETTING THE PRO KADI TO FACTORY DEFAULTS

Turning the PRO KADI on whilst holding down all three push buttons will return the unit’s settings to default values. `Fd` will momentarily be displayed when this has been done.

DISPLAYING THE SOFTWARE VERSION

Power on the PRO KADI whilst holding the INC and DEC buttons pressed and the software revision [43xx] and build number [00xx] will be displayed. Releasing the buttons will revert to the normal operational mode.

SPECIFICATIONS

Power Input 9-15V DC (power adaptor supplied)
Power 100mA, 2.1mm plug (centre positive)
MIDI In, Thru
Digital output KADI / 13 Triggers
Analogue outputs Clock (0-5v)
Sync 24 on 5 pin DIN socket
Weight 600g
Dimensions 167 x 97 x 40 mm
Non-volatile memory EEPROM (no back-up battery required)

WARRANTY

Unit 3, Epsom Downs Metro Centre, Waterfield, Tadworth, KT20 5LR, UK
+44 (0)20 8544 9200 www.kenton.co.uk tech@kenton.co.uk
firmware rev# 2109 e. & o. e. © 22nd December 2023

Documents / Resources

	KENTON PRO-KADI Professional Multi Mode MIDI Trigger Unit [pdf] Instruction Manual PRO-KADI Professional Multi Mode MIDI Trigger Unit, PRO-KADI, Professional Multi Mode MIDI Trigger Unit, Multi Mode MIDI Trigger Unit, MIDI Trigger Unit, Trigger Unit

References

- Kenton Electronics - Welcome
- User Manual