USER MANUAL
ENERGY

CONTENTS :

IES International Electronics Service
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CAUTION!

To prevent fire or shock hazard, do not expose the unit in rain or moisture.
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

WARRANTY

We warranty each of our products to be free from defects in material and workmanship.
Our obligation under this warranty is to repair or replace any instrument or part thereof, which,
within two years after shipment, proves defective upon examination.
External influences are excluded. To exercise this warranty, write or cal IES representative, or
contact the IES service department. You will be given prompt assistance and if necessary shipping
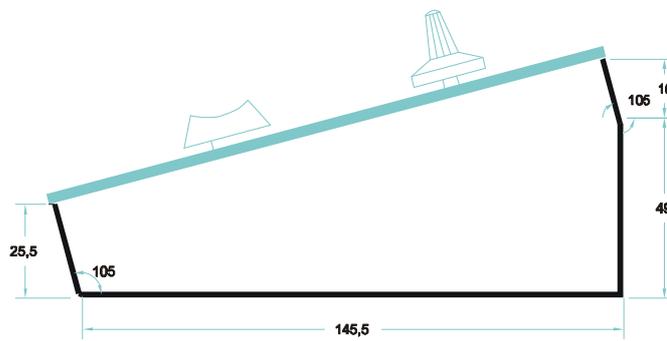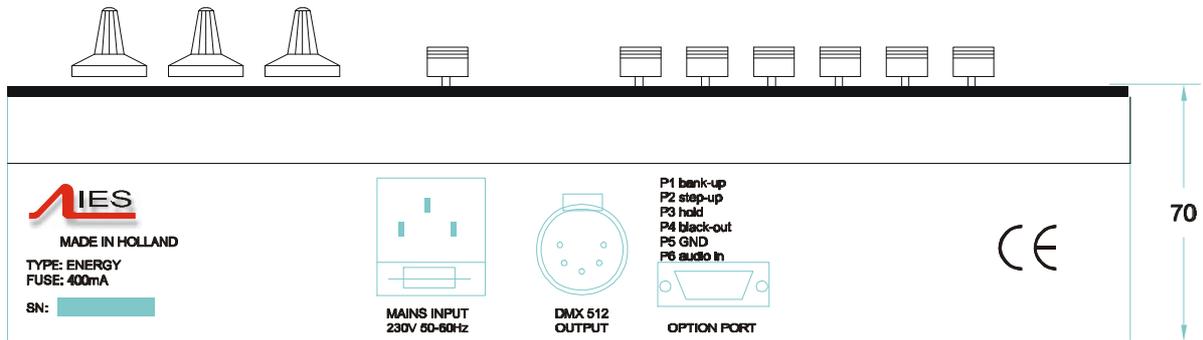instructions.

FUNCTIONS :
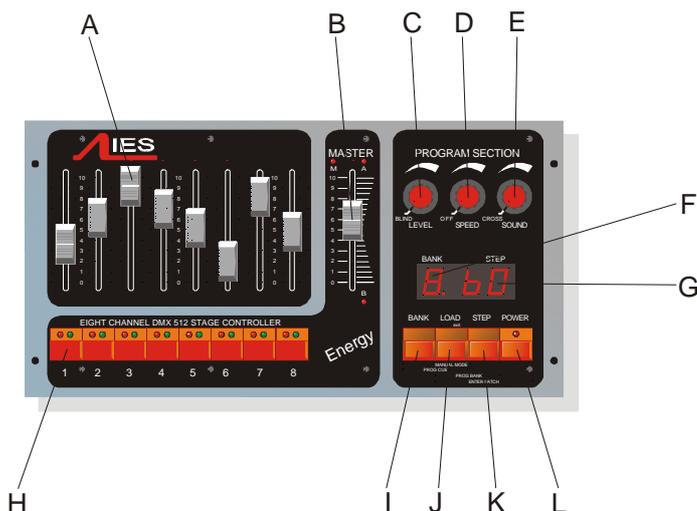
A ⇒ *Channel fader.*
Controls the level of an individual channel.

B ⇒ *Bank selection.*
Selects the desired bank / sequencer. Pressing **load** together with **bank** selects the cue program mode. Pressing **bank + load + step** together sets the Energy in manual mode.

C ⇒ *Load button.*
During a program mode stores the present cue set by the faders in row mentioned in point A. A double click leaves the program mode.

D ⇒ *Step button.*
Increases the present step by one. **Load** pressed together with **step** selects the bank program mode.

E ⇒ *Power button.*
Turns the desk on. Pressing it for more then 2 seconds turns it off and shows 3 Points. Pressing load together with power selects patch mode.

F ⇒ *Bank display (0-9).*
Shows the bank number. In patch mode it displays the channel number. The button enables the speed.

G ⇒ *Step display (0-99).*
This shows the actual step number. In patch mode it shows the DMX channel number were a desk channel number could be assigned to.

H ⇒ *Cue / channel flash.*
Whilst pressed, individual stored cues are flashed, in manual mode or when set by the internal dipswitch, the channels are flashed.

I ⇒ *Master / cross fader.*
This fader has a double function. In manual mode and when the audio knob is not in the position " CROSS" it functions as a master fader for fader 1 to 8.The 'M" led now indicates the master status.If the cross mode is selected the "A" and "B" leds indicate the cross status.
EXAMPLE:
The step display shows "14" and the master is positioned on the top, the "A" led is now full.
If the master now goes towards "B", cue 14 is recalled.
Led "A" is decreased and "B" is increased in intensity. If the master is completely down, the step-counter is increased by one. Sliding the master up these steps are repeated.

J ⇒ *Level fader.*
This fader functions as a master for the sequencer. It also allows the possibility to program a sequence during a performance by turning on the blind mode. The present DMX output is now frozen. In cross mode it functions as an overall master control.

K ⇒ *Speed fader.*
Controls the step frequency and also the cross-fade time. When switched off only the step button can increment a step.

L ⇒ *Audio fader.*
The audio output is provided with an automatic gain control and the compression is adjusted by means of this fader. Beneath 10% the audio input is still blocked.
In cross mode the audio input is ignore and the master now work as a cross-fader

DIMMENSIONS & SPECIFICATIONS :
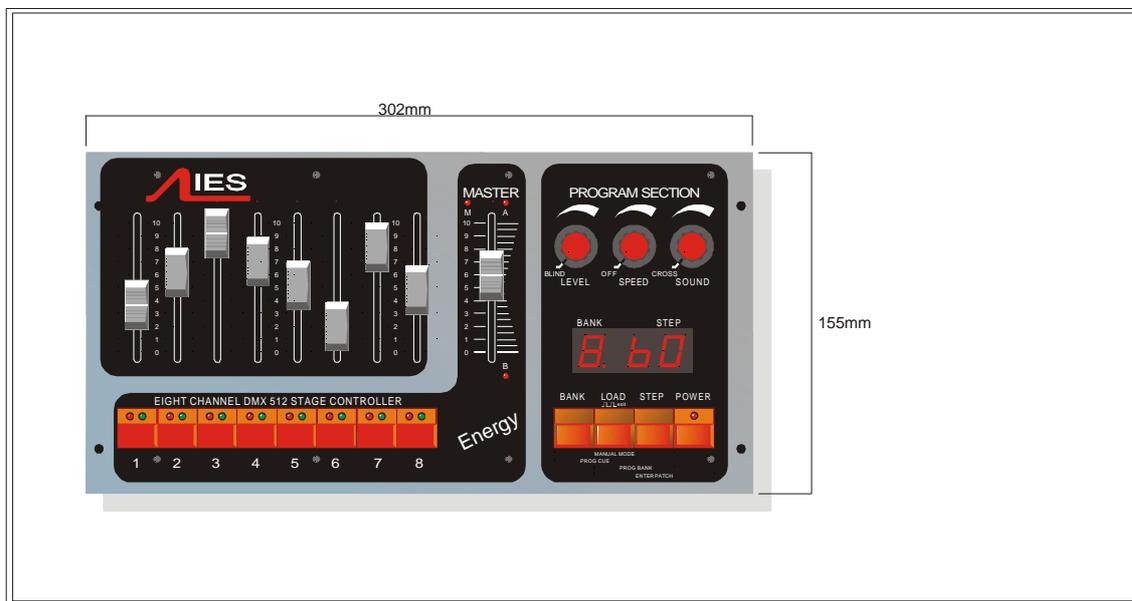
Supply voltage..230V. +/- 20%
Frequency...…..........................50-60 Hz
Channels..…...............8 patched over 96 DMX512
Banks...10
Steps (real-level)..99
Fader cue's 8
Weight...1,4kg
Protection class...IP20
Output level..…… .DMX512 optical isolated
Audio input.. 0,5-50V RMS
Low voltage directive....................................…...…complies to EN 60204
EMC emission..complies to EN 50081-1
EMC immunity..........complies to EN 50082-2 *EN 55024-2 4kV cd / 8kV ad.
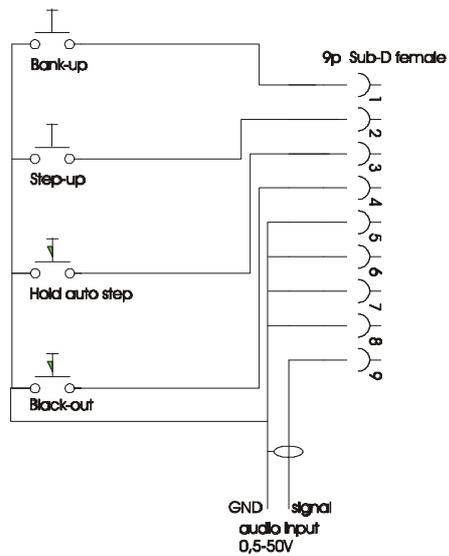   *EN 55024-3 3 V/m *EN55024-4 2kV line /1kV signal

EXTERNAL CONNECTIONS :

IES
MADE IN HOLLAND
TYPE: ENERGY
FUSE: 400mA
SN:

MAINS INPUT
230V 50-60Hz

DMX 512
OUTPUT

P1 bank-up
P2 step-up
P3 hold
P4 black-out
P5 GND
P6 audio in

OPTION PORT

CE

70

16
105
49
25,5
105
145,5

DMX - 512 XLR output	
PIN:	FUNCTION:
1	SHIELD
2	-RS 485 in
3	+Rs485 in
4	-COMPLEMENT
5	+COMPLEMENT

SUB-D CONNECTIONS :

Bank-up

Step-up

Hold auto step

Black-out

9p Sub-D female
1
2
3
4
5
6
7
8
9

GND   signal
audio input
0,5-50V

INTERNAL CONNECTIONS :
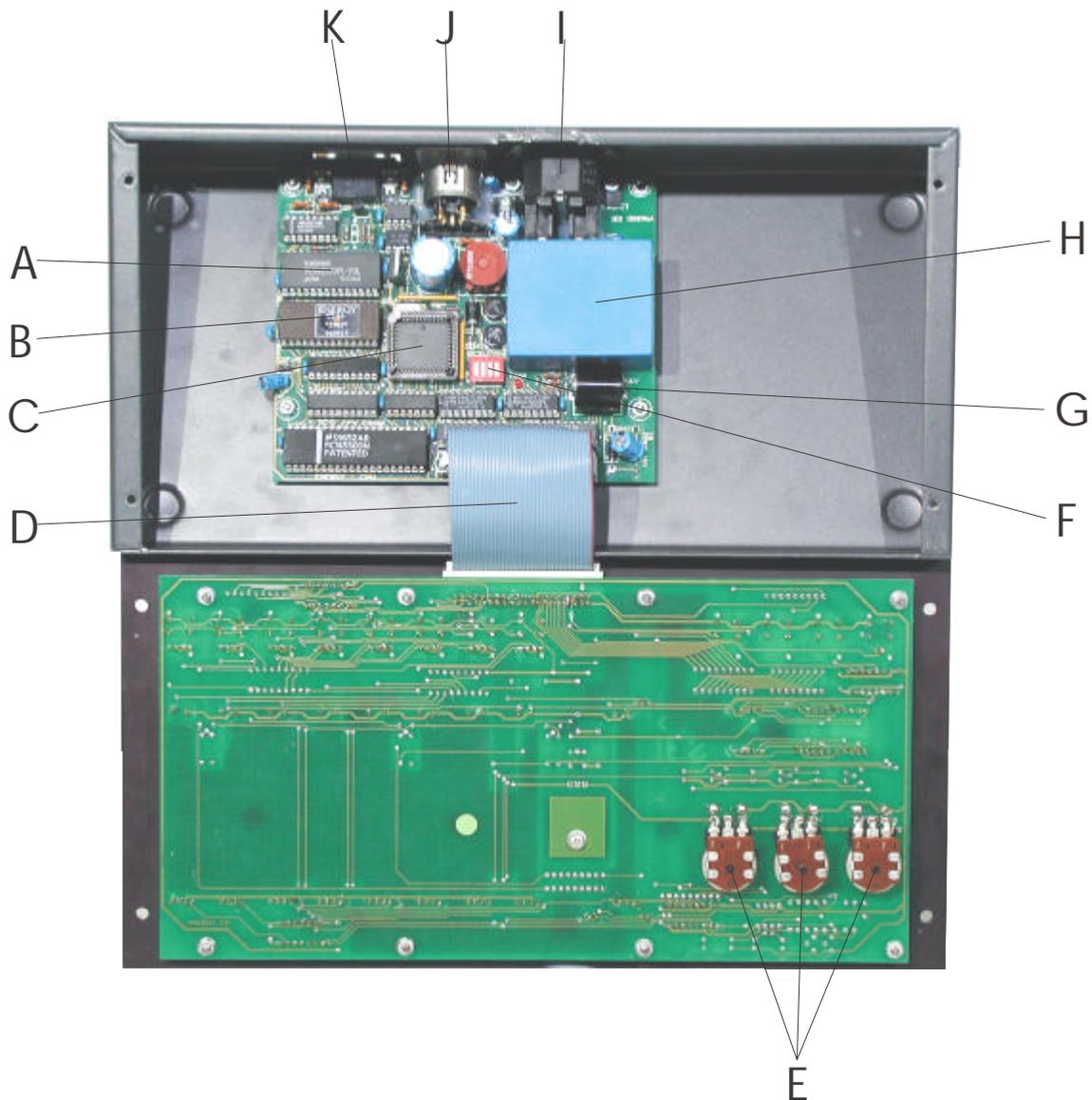
A	:	Memory EPROM 1MB.
B	:	EPROM which contains the main program (version 1.11).
C	:	78HC11 8Mhz / processor board.
D	:	40 pole Flat-cable for communication between boards.
E	:	Pot for level, speed and sound level.
F	:	Dipswitch 4 clears the memory EPROM.
G	:	Back-up battery witch guaranties a reliable back up for over 3 months.
H	:	Power supply.
I	:	Mains input with 2 x fuse (400mA).
J	:	DMX 512 output (5 pole XLR).
K	:	Special sub-d output for external control.
L	:	Device address setting 16 pole flat-cable connector.
M	:	16 pole flat-cable connector.

PRESET CONTROLS :

MANUAL MODE : (bank + load + step) - XX (start-up mode)

In manual mode the row of faders are controlling the individual channels for an independent cue.
In automatic mode these faders all contain a cue.

MASTER :

Sets the maximum level for preset A. In automatic mode the master fader can also be used as a dipless cross-fader by switching the sound knob in **"cross"** position.
After a completed cross the bank step is incremented by one.
In this mode the level fader functions as a master level control.

FLASH BUTTONS :

Whilst pressed, individual cue's or channels are flashed. The flash level is controlled by means of the "LEVEL" fader.

PROGRAMMING A BANK (chaser) : ("load" + "step") X-X.X.

The memory is capable of storing 10 chasers, each containing 99 steps with a programmable **"end"** position. The levels are real and can be controlled in total level b.m.o. the level fader.
To enter a program the following steps should be followed:

Press **"load"** together with **"step"** (the 2 points from the step digits are on).
Select the desired bank / step number and make a light setting via the channel faders.
Store these settings by pressing **"load"**. The step counter is now incremented by one.
Make a new light setting and press **"load"** once again.
If you have entered all steps press **"load"** for 3 seconds until the points are flashing to define a **"end"** marker. By means of the step button it is possible to walk through the chaser to check the programmed steps. To leave this program mode double click the **"load"** button within 1 second. To recall a chaser turn the chaser on. The speed can be controlled by the speed fader between 0,1 and 10 seconds. To step manually, switch the speed off and use the step button (or in "cross" mode the master fader where the leds indicate the cross direction).
The green leds indicate the stored data, the red leds the actual level send across the DMX-512 output.

PROGRAMMING A CUE : ("load" + "bank") X-

There are 8 cue's available behind the faders of preset-A.
To store these use the following steps:

Press **"load"** together with **"bank"**(the point from the bank digit is on).
Make the desired light setting and press the flash-button where you want to store this cue together with a pulse on the **"load"** button, the matching led is on.
Repeat this for the other cue's. When finished double click on the **"load"** button to leave this menu.
You can recall this cue b.m.o. the corresponding fader or flash-button.
The master-level is controlled by the master-fader if the master led is on.
The fade-time is set by means of the speed fader.

ENTERING A PATCH FIELD : ("load" + "step" + "power") X. – X.X

The Energy provides a possibility to enter a patch for the outgoing DMX channels to easily relocate you light fixtures. To do so proceed as follows:

Press **"load"** together with **"step"** and **"power"** (the 3 points in the bank and step display are on). The step display now shows the DMX channel number and the bank display shows to which desk channel it is assigned. Select the DMX channel which you would like to alter b.m.o. the step button and assign the desk channel by pressing the channel flash-button.
Leave this menu by a double click on the **"load"** button.
To recall the original setting press the load button for 2 seconds.

DESK SETUP :

To modify the functions of the energy to your own wishes press **flash-button -1** and **"load"** for 5 seconds. By means of the "bank" switch you can select the flash functions.

BANK	FUNCTION
1...................	flash-button works as a channel flash (default)
2...................	flash-button works as a cue flash in "solo" mode
3...................	flash-button works as a cue flash in "add" mode

The "step" button is now used to select the cross function

STEP	FUNCTION
0..................	cross time = 0,0 sec. The step frequency is set b.m.o. speed. The cue's are recalled with the stored levels. This mode is mend for rock and roll use. The total level is still controlled b.m.o. the level master.
1..................	cross time = step time. Use this setting for theatre lighting together with the step switch as a GO button (default).
2	scanner mode levels are recalled as recorded

2th DESK SETUP :

Press flash-button 2 together with load for 5 seconds to enter the second setup menu.

BANK	FUNCTION
0...................	blind programming disabled (default)
1...................	blind programming enabled

STEP	FUNCTION
1...................	cross function off (default)
2...................	cross function possible
3...................	cross function possible + master functions as a up/down selection during entering a bank and a patch.

ALL CLEAR :

It is possible to reset the ENERGY to the original factory settings by pressing **flash-button 8** together with **"load"** for 5 seconds.

IES   I.E.S. B.V.

DECLARATION OF CONFORMITY
According to ISO / IEC Guide 22

Manufacturer's name: I.E.S. B.V.
Manufacturer's address: Wageningselaan 52-54
3903 LA Veenendaal
Netherlands

Declares that the product:
Product name: ENERGY
Model number: ENERGY   no.9603

Conforms to the following product Specifications:

Emission EN 50081-1 / EN 50081-2
EN 55011
EN 55014

Immunity EN 50082-1 / EN 50082-2
EN 55024-2   6 kV Contact discharge
8 kV Air discharge
EN 55024-3   3 V / m
EN 55024-4   1 kV Signal lines
2 kV Power lines

Supplementary information: The product complies with the EMC Directive 89/336/EEC.

Veenendaal

December 2000

J.H.D. de Jonge
Technical Manager