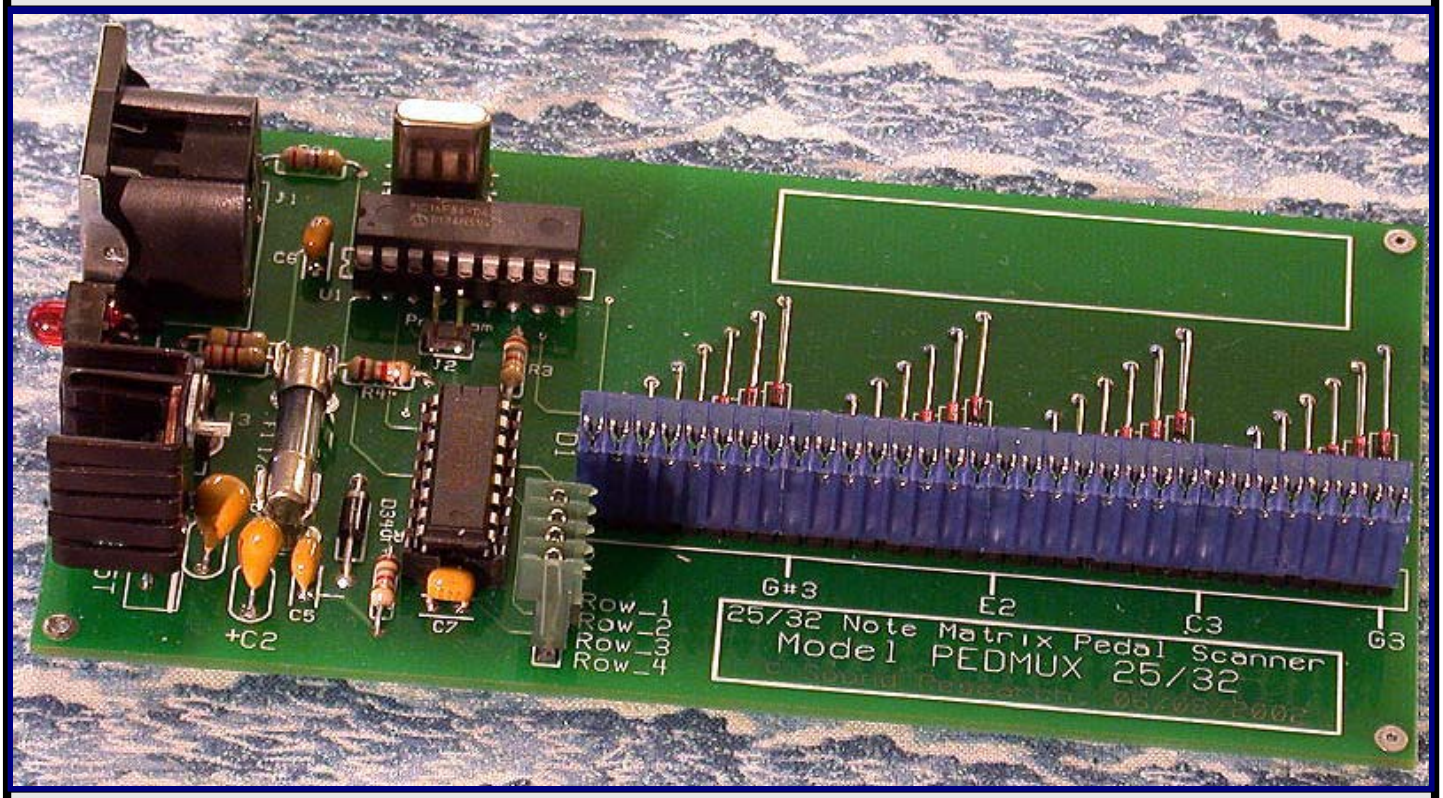
Sound Research

Model PEDMUX 25/32



Programable MIDI Pedal Encoder
For 12 to 32 Pedal Notes
Diode Matrix Keying
Settable MIDI Channel
Settable Velocity
Starting Note and Octave Settable

Sound Research

PEDMUX 25/32
MIDI Organ Pedals Encoder

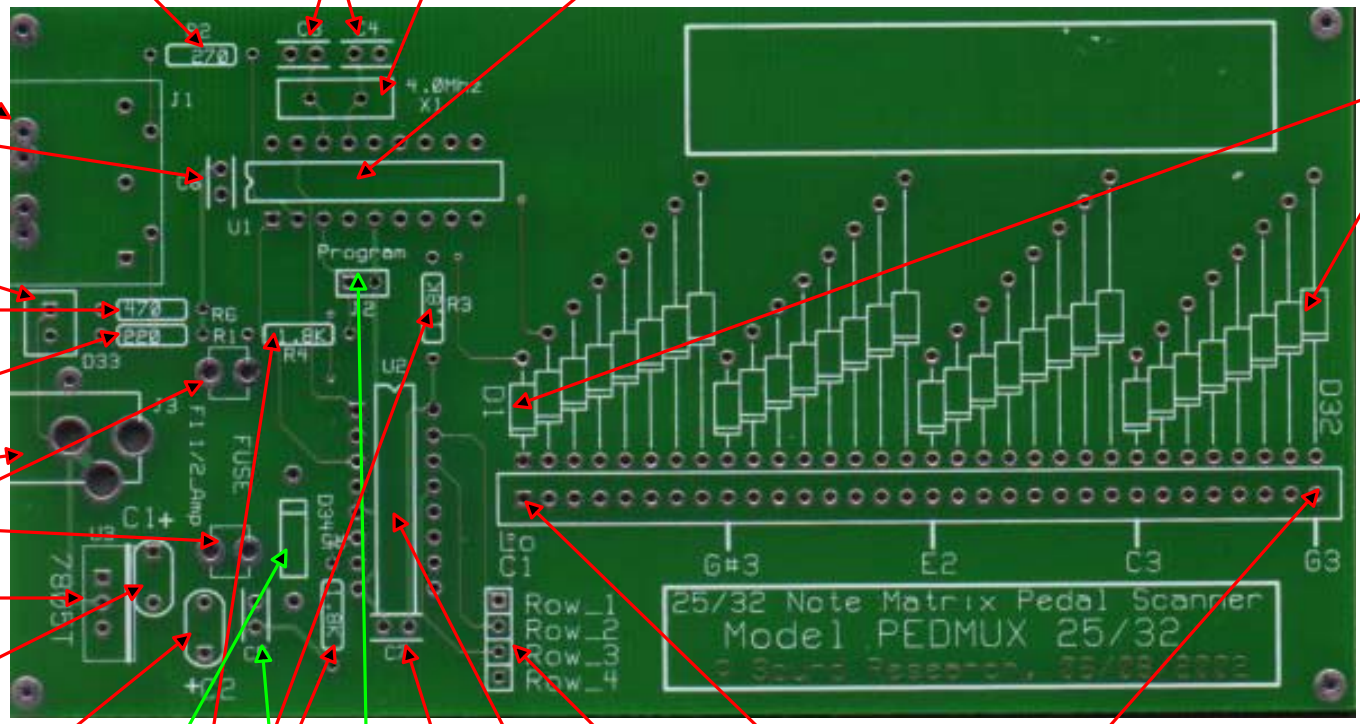
The Sound Research PEDMUX 25/32 is a MIDI Encoder intended for Musical Instrument Organ pedals. This board is a premium quality double sided plated through holes FR4 board with screened lettering. Although it is normally intended for 25 to 32 pedals it maybe used for pedal boards of 12 to 13 notes as well, just use the first 12 or 13 inputs.

Although intended for musical applications, it may be used to encode up to 32 MIDI note events for any purpose. The card is setup as a matrix of 4 rows by 8 columns and uses dry switch contacts. See the layout and wiring diagram for the circuit board.

The board has programmable features that remain after power is removed. By use of a push button switch and the leftmost 10 note input keys, the midi channel may be set, the starting note and octave (transposing) and a fixed velocity of 0 to 127 may also be set. For single note at a time pedal boards, all notes off data may be sent after each key release. Normally for polyphonic playing this feature is disabled. See programming page for details.

For technical assistance email soundres@foothill.net or call (916) 663-9432

BOARD LAYOUT and Parts Location for PEDMUX 25/32



R2-270 Ohms
Red Violet Brown Gold

C3 & C4
22 Pf (220)
Blue

Crystal
4.00MHZ

U1
CPU
PED32-2
Pin 1-Red Dot

MIDI
Socket

C6 .22uf
(224)
Yellow

LED -Red

R6-470 Ohms
Yellow-Violet-
Brown-Gold

R1-220 Ohms
Red-Red-Brown-
Gold

Power
Jack

Fuse Clips

Regulator
7805
With
Heatsink

C1
22uf @25V
Note Polarity

C2
4.7uf(475)
@25V
Note Polarity

D34
1N4002
Note
Banded end

R3, R4, R5
1.8K
Brown,Grey,
Red,Gold

C5 .22uf
(224)
Yellow

2 Pin
Header

C7 .22uf
(224)
Yellow

U2
74HCT138
Note
Pin 1 orentation

4 Pin
Sip Header

32 Pins of
Sip Header

Diodes D1-D32
1N4148
Note Banded Ends

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Parts List for PEDMUX 25/32

R1	220 Ohms
R2	270 Ohms
R3,R4,R5	1.8 K Ohms
R6	470 Ohms
C1	22 uf. @25V
C2	4.7 uf @25V
U1	16F84/04P with PED32-2 firmware
U2	74HCT138
C3,C4	22pf
C5,C6,C7	.22 uf
D1-D32	1N4148
D33	Right Angle Mount Red LED
D34	1N4002
VR1	7805T
X1	4.00 Mhz Crystal
J1	5 Pin Right Angle Din Socket (MIDI Out)
J2	2 Pin Sip Header (program switch)
J3	Power Jack (2.5mm + Center Pin)
H1	4 Pin SIP Header (row data)
H2	32 Pin Sip Header (column data)
Soc 1	18 Pin Machine Pin Socket for (U1)
Soc 2	16 Pin Tin Socket for (U2)
HS1	Slip on Heatsink TO220 for (VR1)
FC1,FC2	Fuse Clips for F1
F1	.5 Amp Mini fuse fast blow
IDC1	4 Pin IDC Connector (green)
IDC2-IDC5	8 Pin IDC Connector (green)
PGML	Program Switch connector and 5' wire
PCB1	Printed Circuit Board PEDMUX 25/32
PS1	12 Volt Wall Power Unit

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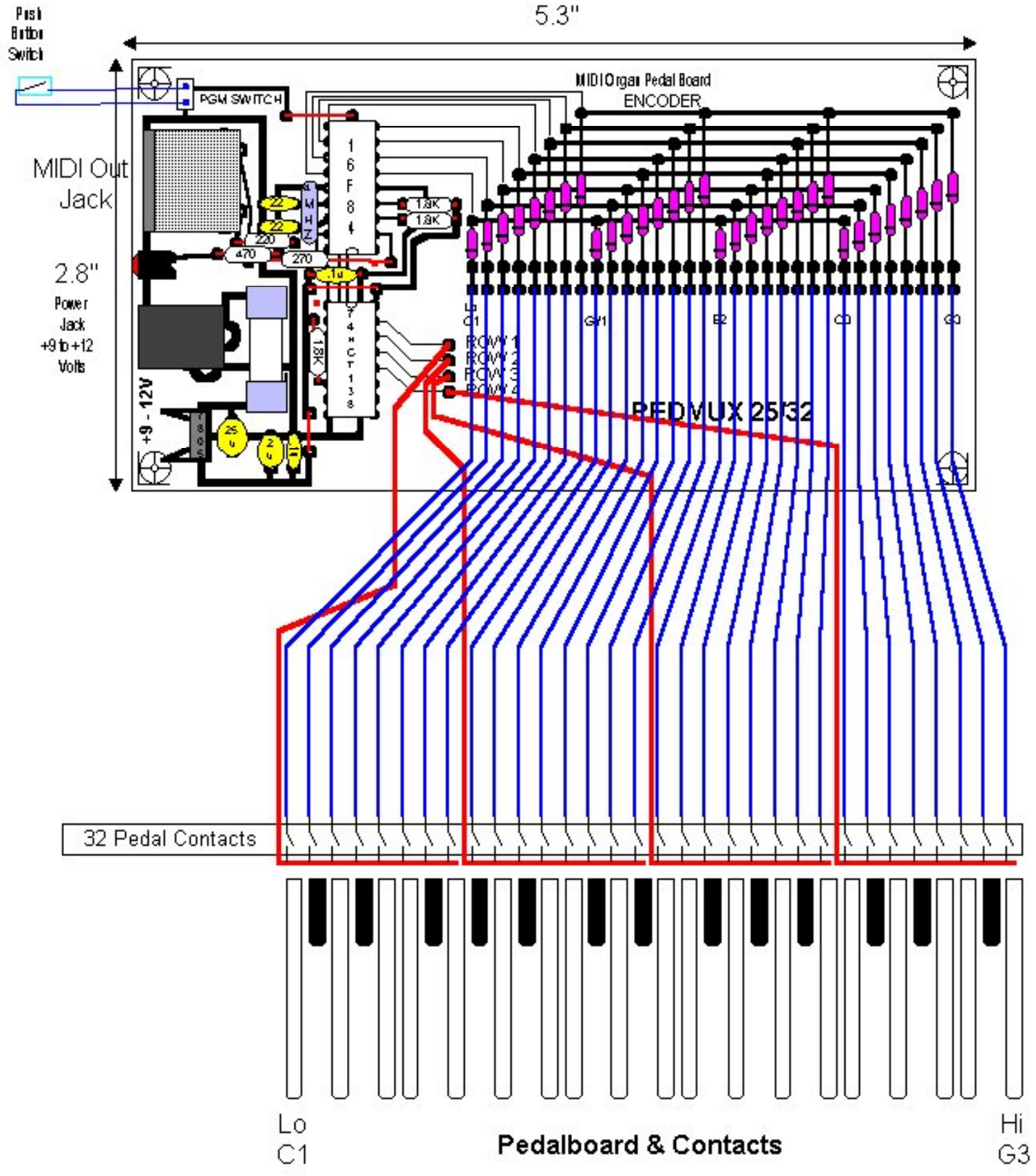
32 Note MIDI Pedal Encoder Pedal Wiring Schematic



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SOUND RESEARCH -- MIDI Works

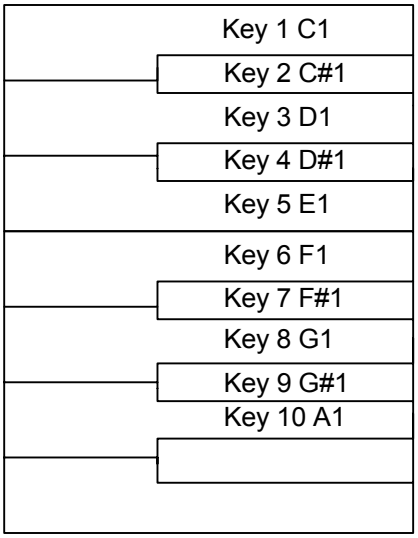
MIDI Organ Manual/Pedals ENCODER

Model MKCC01

Software Version MKCCA

ENCODER Programing Information

Programing Keys
Left - Most End of Keyboard



MIDI Channel -
MIDI Channel +
Starting Octive -1
Starting Octive +1
Starting Note -1
Starting Note +1
Velocity -1
Velocity +1
Disable All notes off
Enable All notes off

Programing MIDI Encoder

While holding down program switch press any of the 10 program function keys on the MIDI Keyboard, each depression will increment or decrement that function as indicated by the plus or minus sign.

After obtaining the desired functions, release the program switch, the desired functions will remain in memory until reprogramed.

V.E. Jones 3/06/02