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TECHNICAL MANUAL

FOR
MID-5
MODE INDICATING DEVICE

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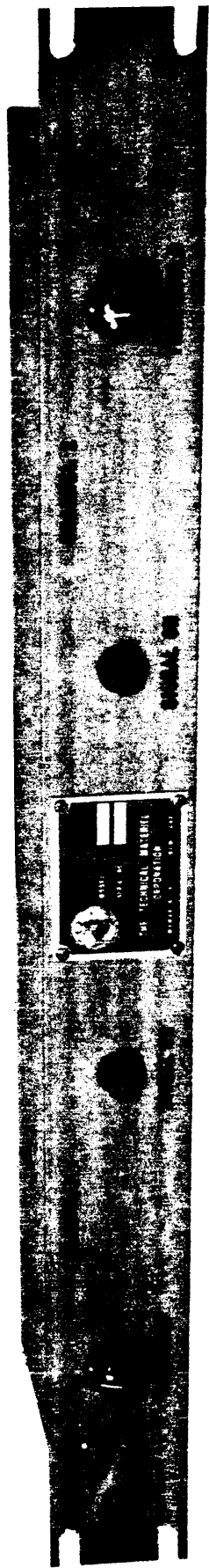


Figure 1-0
Model MID-5
MODE INDICATING DEVICE

GENERAL INFORMATION

1-1. DESCRIPTION.

The MID-5 is a simple dual indicator panel which indicates the status of two squelch circuits. The squelch circuits are contained in two individual printed circuit boards. The unit also contains a threshold control (sensitivity) for each channel.

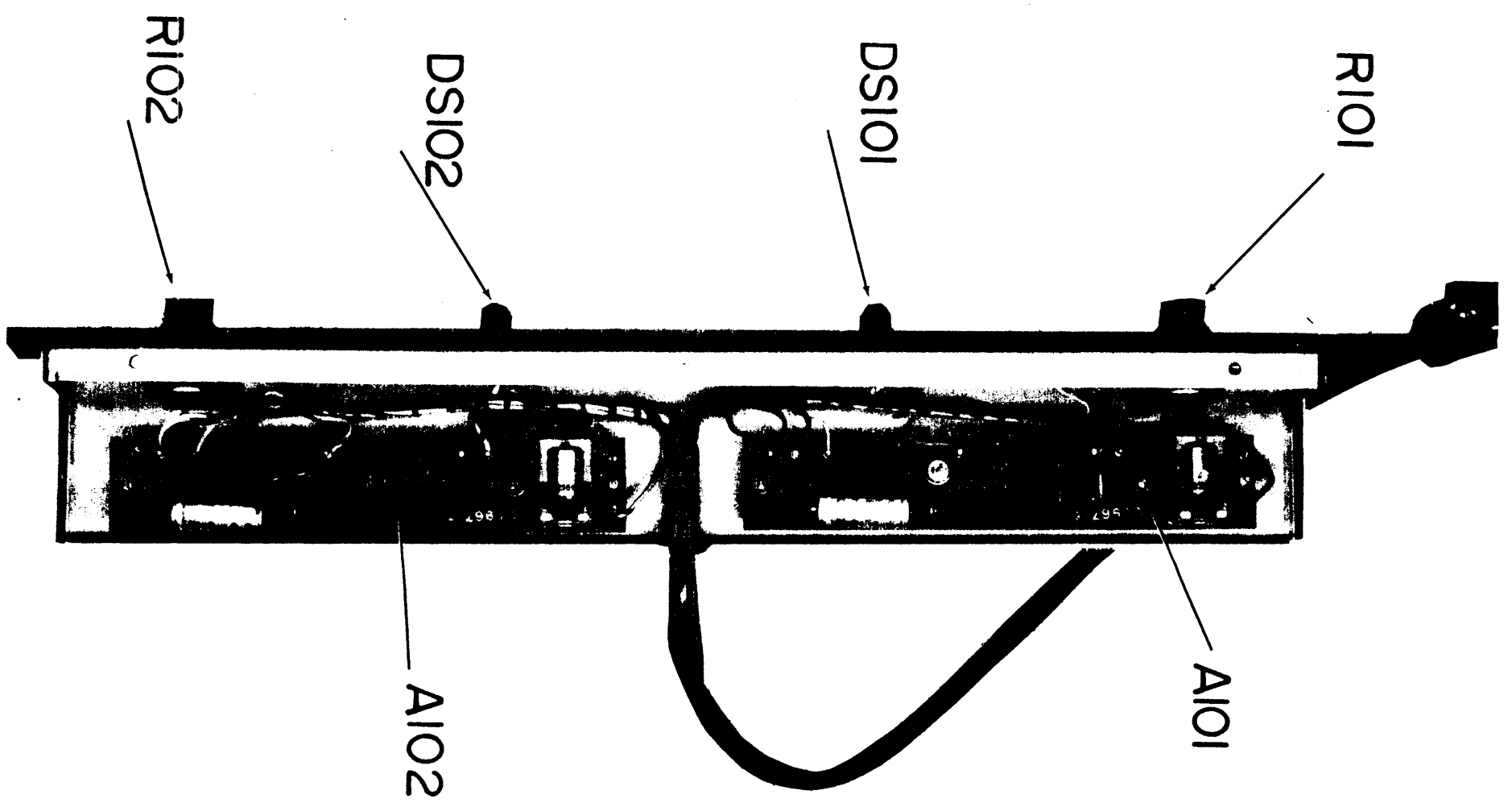
1-2. PHYSICAL DESCRIPTION.

The MID-5 is approximately 19 inches long, 4 inches deep and stands 2 inches high. The unit weight is approximately 3½ pounds.

1-3. PRINCIPLES OF OPERATION.

The squelch printed board provides a means for automatically squelching the audio output of one or both channels (if two boards are fitted) when the received signal drops below a certain level. The level at which squelch action takes place is adjustable by SQUELCH ADJUST potentiometer (s) R2 (and R3 if two squelch boards are fitted). A means is provided for remote indication of squelch status.

Comparator Amplifier IC1 compares the preset DC level at pin 3 of the board (from SQUELCH ADJUST potentiometer) to the STR-5 AGC voltage at pin 2. When the AGC voltage rises above the voltage at pin 3 due to a signal received at the antenna input of the STR-5, the Comparator Amp IC1 turns "on" pin 6 of IC1 then goes "high" and turns "on" relay driver Q1. Relay K1 actuates, providing remote squelch status indication on board pins 7,8,and 9, whilst board pin 5 goes "low" (through CR2 and Q1) thereby putting a short circuit across the squelch line of the STR-5 audio circuit. This reduces the received audio output to zero.



SERIES 100

Part Number	Description	Used On	Qty	Symbol Number
A10967-5	PC Board, Squelch	MID-5		A1, A2
B1110-6	Lamp	MID-5		DS1, DS2
RC20GF202J	Res. Fixed	MID-5		R3, R4
RV4NAYS501A	Res. Variable	MID-5		R1, R2

Figure 1-1

MAJOR COMPONENT LOCATION

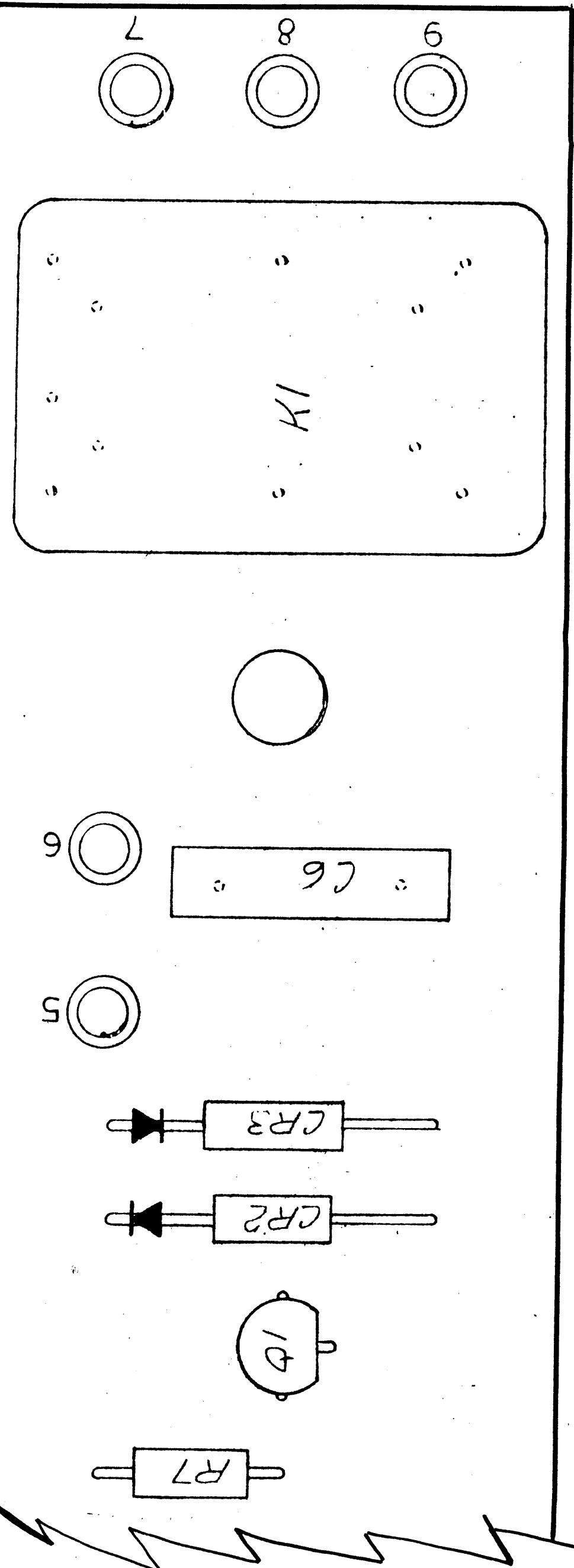
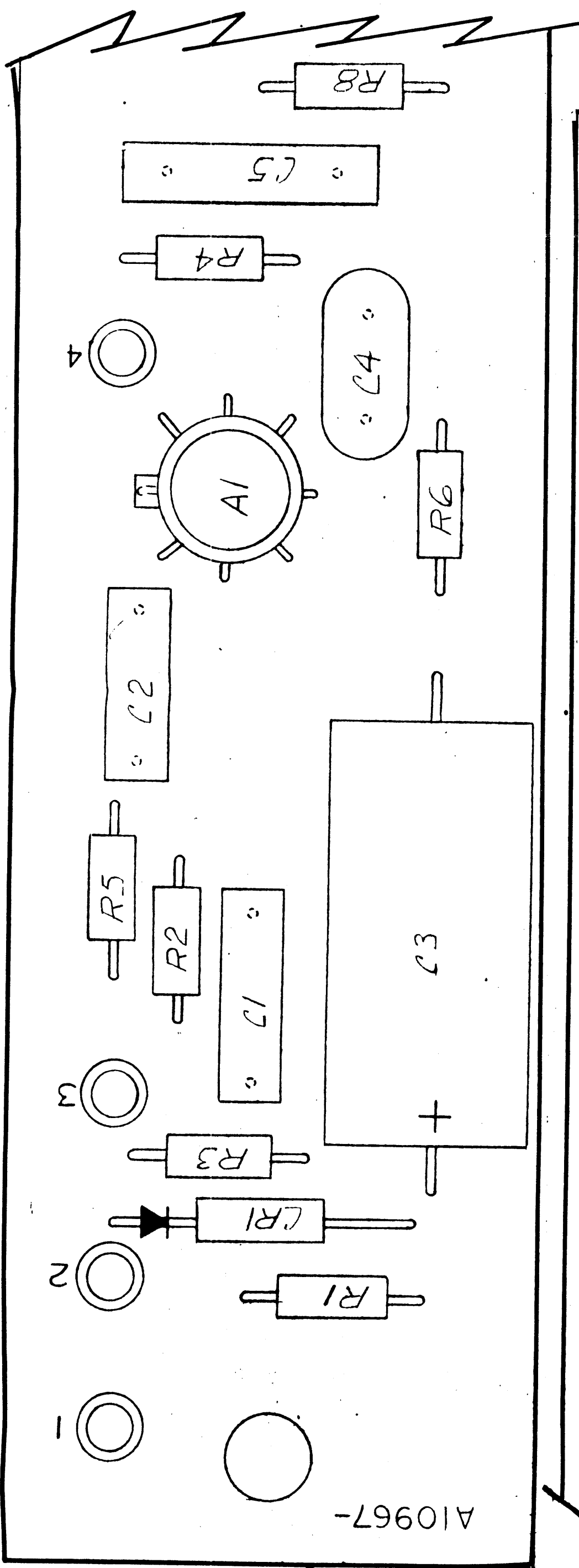


Figure 1-4

Squelch Assembly(A1/A2)

Part Number	Description	Used On	Qty	Symbol Number
CC10011-2	Capacitor: 0.015uF	A10967-5		C1
CE105-1000-10	Capacitor	A10967-5		C2
Same as C1		A10967-5		C3
CC10011-8	Capacitor: 0.1uF	A10967-5		C4
CM111E221J	Capacitor: 220pF	A10967-5		C5
Same as C4		A10967-5		C6
1N4002	Diode	A10967-5		CR1
1N34A	Diode	A10967-5		CR2
NW10010	Integrated Circuit	A10967-5		IC1
RL10041	Relay, 12v SPDT	A10967-5		K1
2N3904	Transistor NPN	A10967-5		Q1
RC07GF102J	Res. Fxd, Comp. 1K	A10967-5		R1
Same as R1		A10967-5		R2
RC07GF222J	Res. Fxd, Comp. 2.2K	A10967-5		R3
Same as R1		A10967-5		R4
RC07GF394J	Res. Fxd, Comp. 390K	A10967-5		R5
RC07GF152J	Res. Fxd, Comp. 1.5K	A10967-5		R6
Same as R3		A10967-5		R7
Same as R3		A10967-5		R8

Material List for A1 and A2

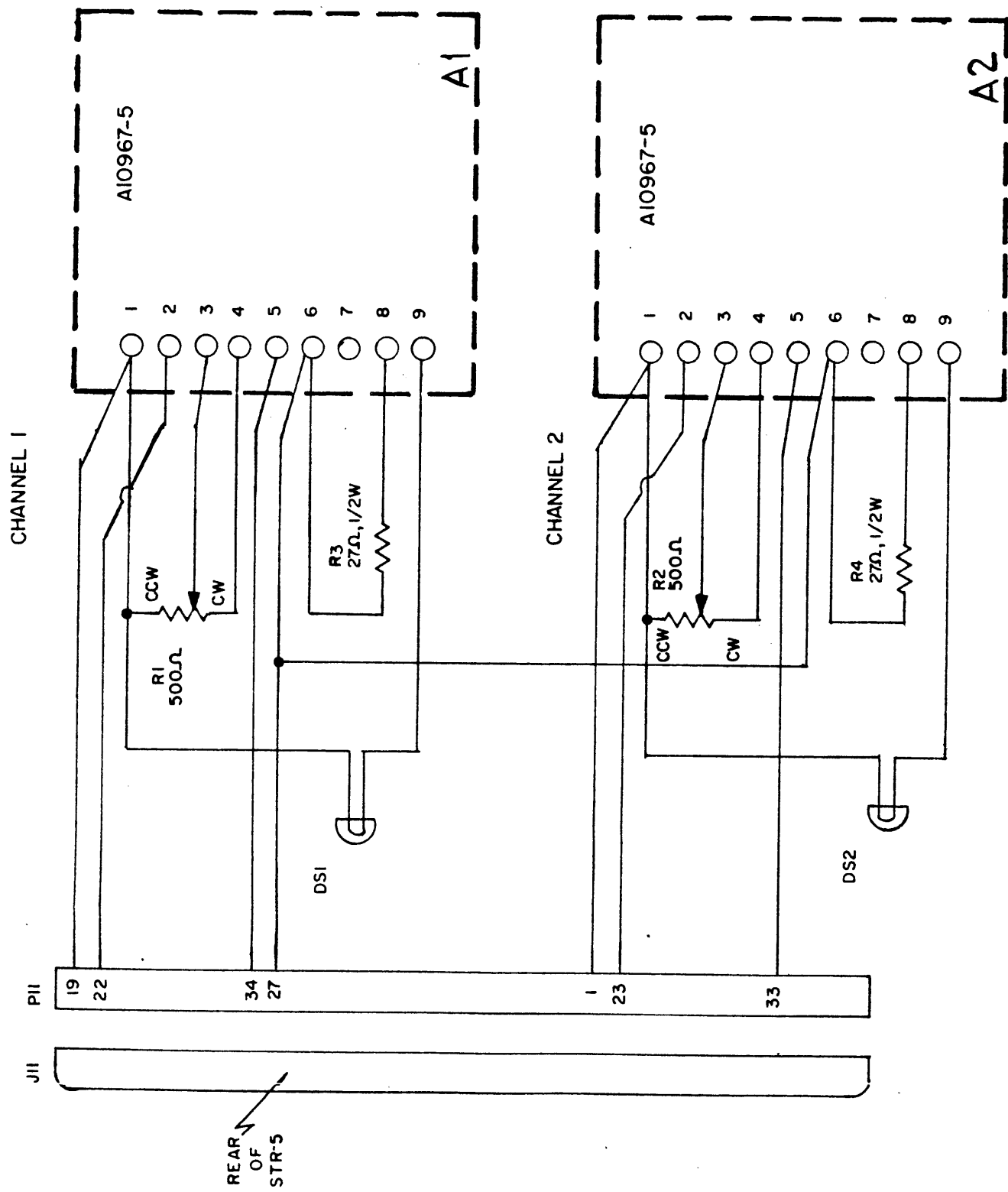


Figure 1-5

Squelch Assembly
A1 and A2 Interfacing

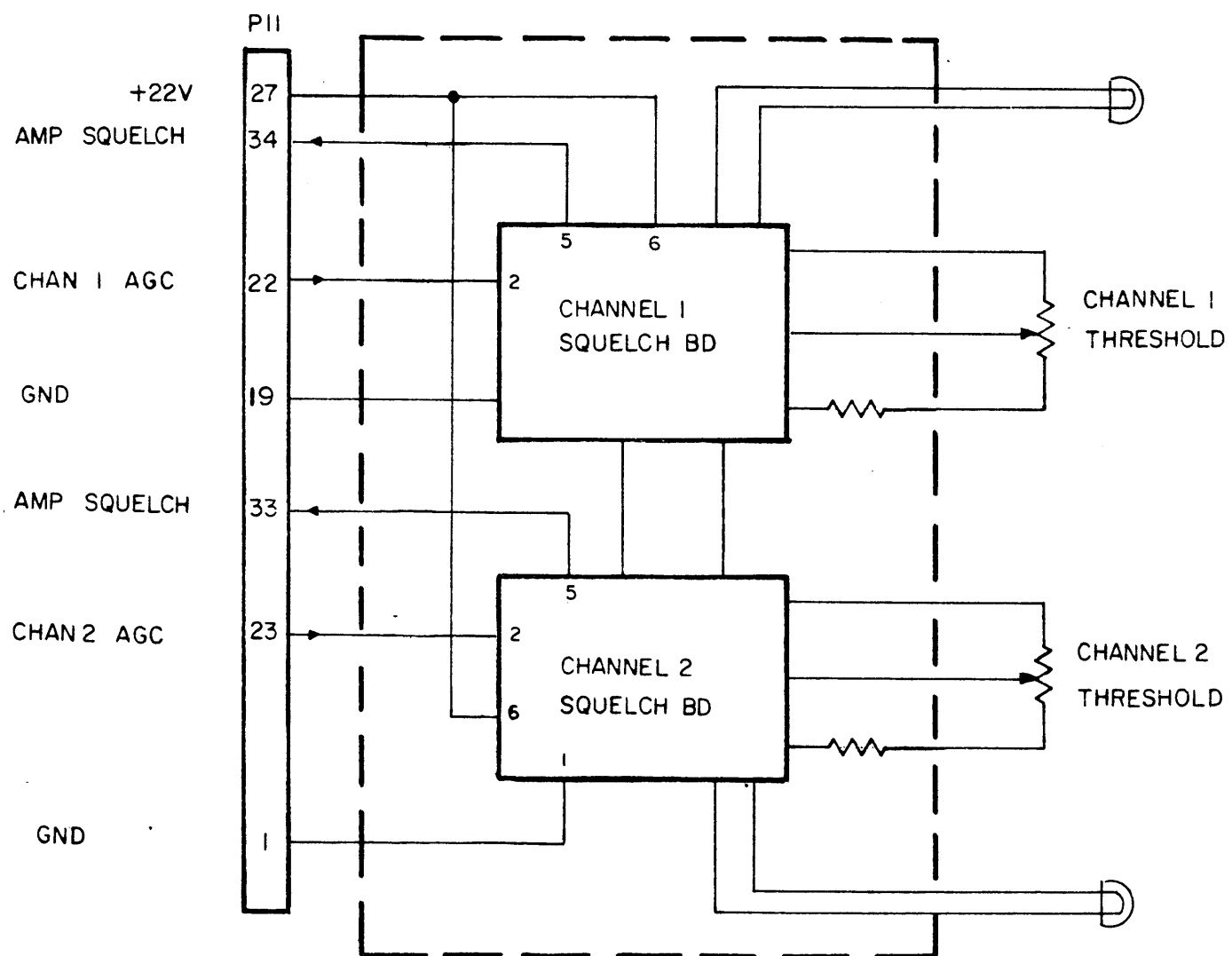
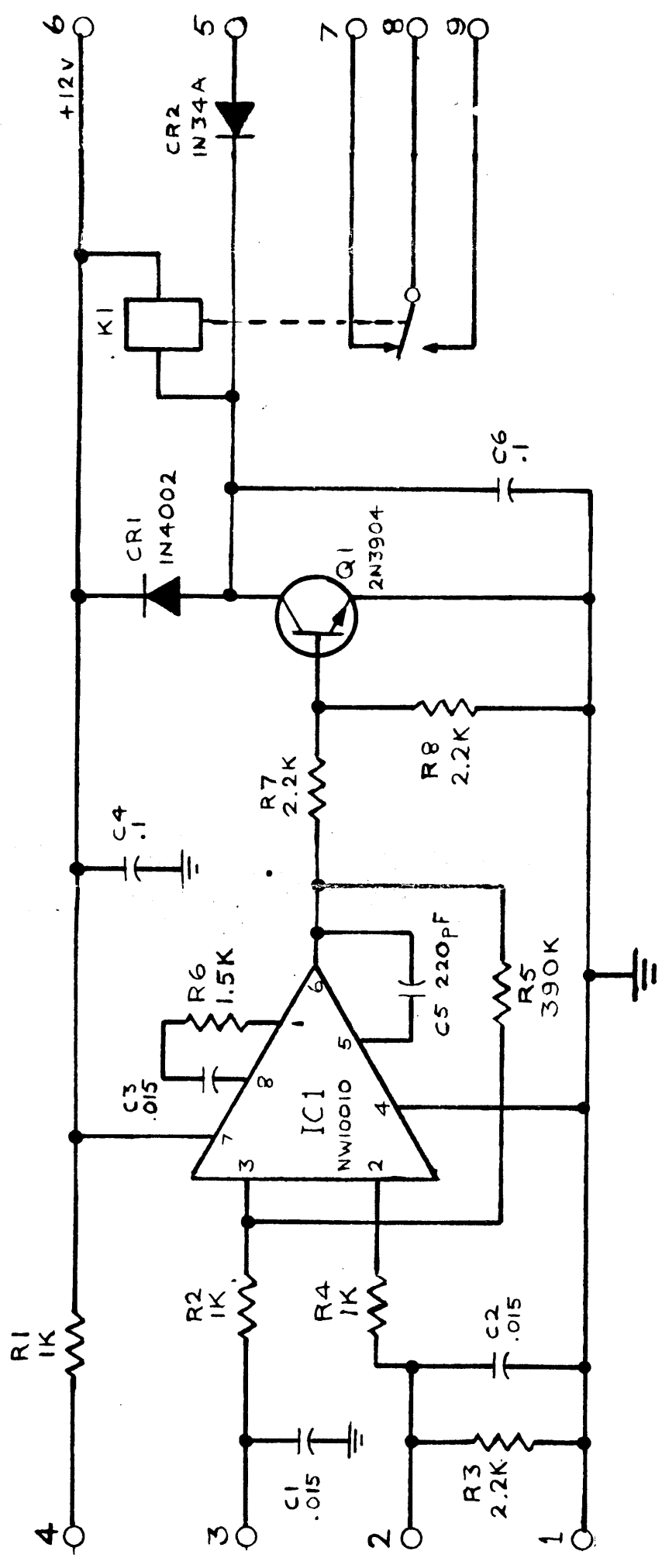


Figure 1-6

MID-5 Block Diagram



NOTES:

1. RESISTANCE IN OHMS
2. CAPACITANCE IN UF UNLESS SHOWN OTHERWISE

Figure 1-7