MARS

EK-75

ELECTRONIC KEYER

The EK-75 Electronic Keyer is fully automatic and self-completing generating accurate dots and dashes as well as spacing.

It includes it's own power supply and a tone generator for monitoring.

Both Speed and Audio Controls are on the front panel and a sliding switch controlling the speaker.

The Weight and Dot/Dash Ratio controls are on the back panel of the instrument and are screw-driver adjusting. Once properly set, they need not be touched again regardless of speed.

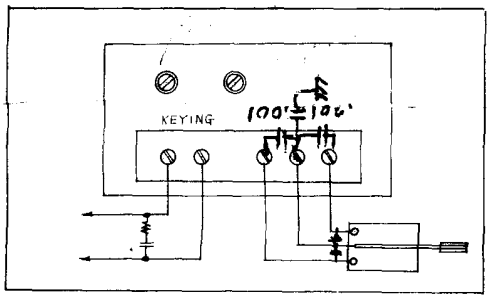
ADJUSTING INSTRUMENT:

Connect a voltmeter through the relay to any battery. Holding the Key in the "dash" position, adjust the "weight control" until the meter reads 3/4 of the battery voltage. Next, hold the Key in the "dot" position and adjust the dot/dash ratio control until the meter reads 1/2 of the battery voltage. Re-check the first adjustment. The instrument is now properly adjusted.

PROTECTION OF RELAY CONTACTS:

When the voltage across the keying circuit exceeds 100 DC volts and/or 200 mA, a contact protection circuit composed of a capacitor-resistor combination is required, located preferably in the transmitter. See Fig. 1 for the C R connections.
The values for this combination are listed in Table 1 for various operating conditions.

FIG. 1

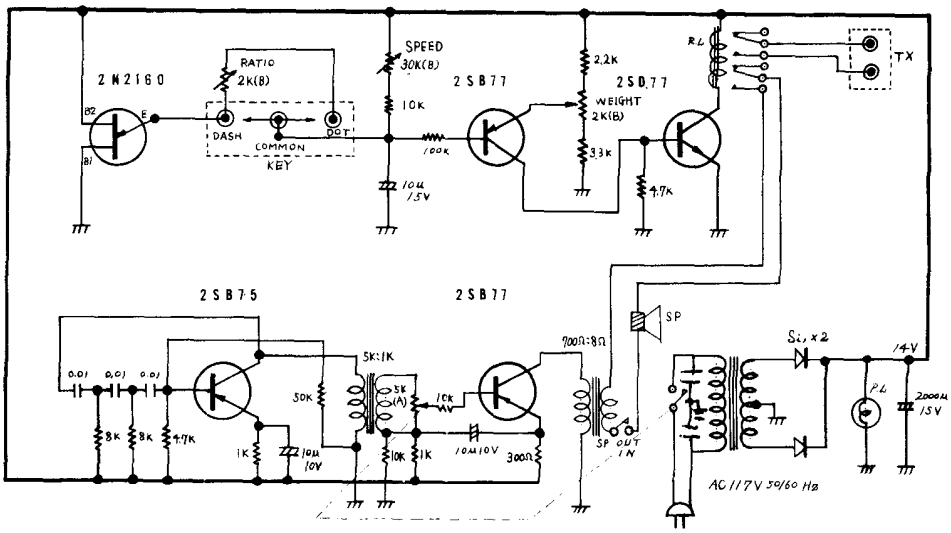


TRANSISTORS: –

Keying Circuit:	1 – 2N2160	(General Electric)
	1 – 2SB77	(RCA 2N109)
	1 – 2SD77	(RCA 2N647)
Monitor:	1 – 2SB75	(RCA 2N217)
	1 – 2SB77	(RCA 2N109)

TABLE 1

	R	C	R	C	R	C
400 – 500mA	47 – 27	0.01 – 0.02	70 – 33	0.01 – 0.02	70 – 33	0.01 – 0.02
200 – 400mA	100 – 70	0.005 – 0.01	100 – 70	0.005 – 0.01	100 – 70	0.002 – 0.01
100 – 200mA	270 – 100	0.001 – 0.005	300 – 100	0.002 – 0.005	300 – 100	0.002
50 – 100mA	2200 – 570	0.001	570 – 300	0.001 – 0.002	570 – 300	0.001
0 – 50mA	3700 – 2200	0.001	2200 – 1300	0.001	2200 – 1300	0.001
Current / Volts	0 – 50V		50 – 150V		50 – 300V	

R = OHMS
C = MFD

SCHEMATIC DIAGRAM