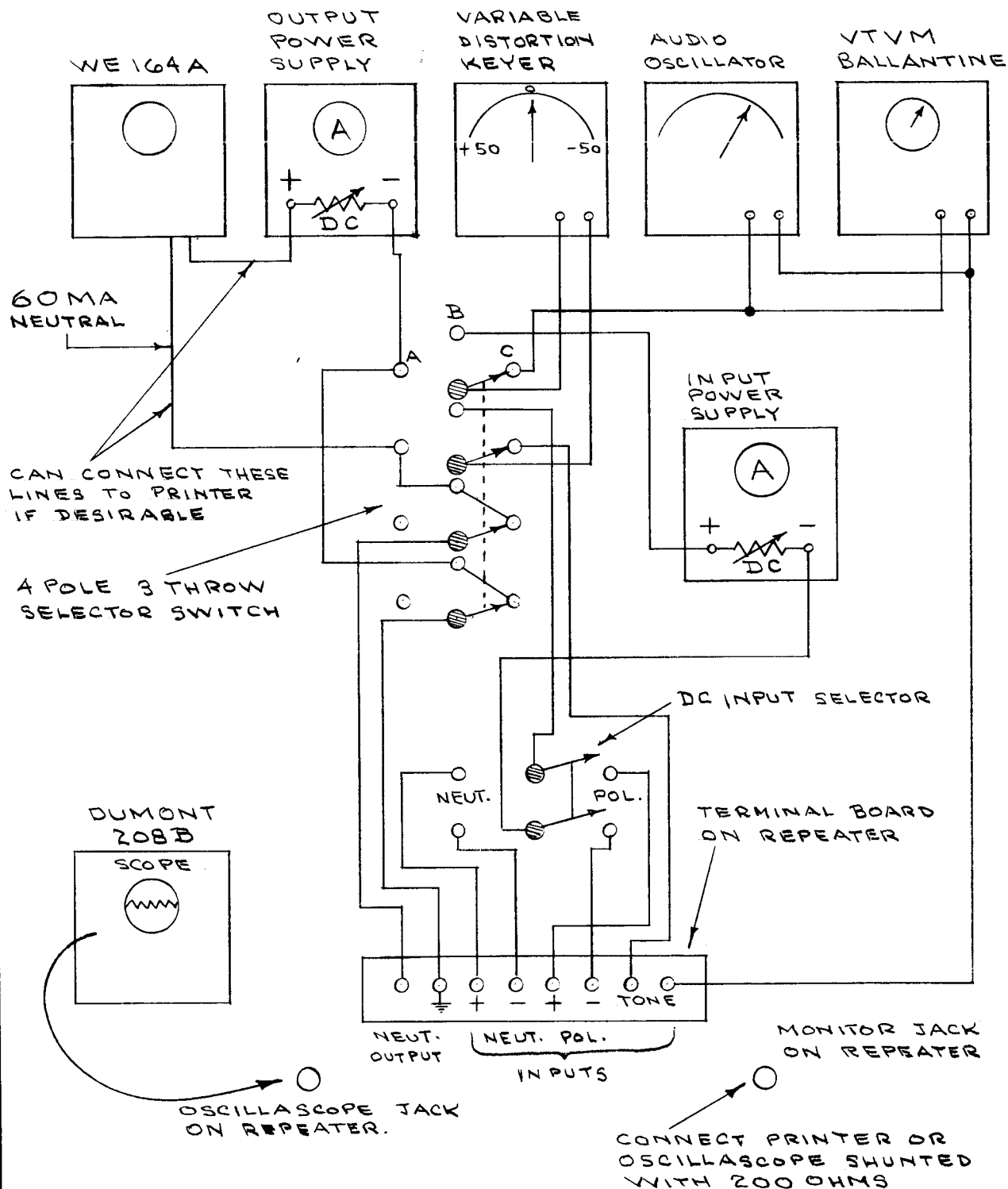


APPROVED *ARB*

FIGURE 1 - TEST SET UP MODEL SFO-2

SELECTOR SWITCH POSITIONS:

- A - CALIBRATE WE 164A AND KEYS.
- B - DC INPUT TO REPEATER, WE 164A ON OUTPUT.
- C - TONE INPUT TO REPEATER, WE 164A ON OUTPUT.



MODEL SFO-2 REGENERATOR REFERENCE DATA

a. Input: 60, 70, or 100 wpm teletype signals.

b. Input keying: tone - 500 to 3,600 cps, 30 ma. polar, 60 ma. neutral, simplex or duplex; DC keying may be positive or negative with respect to ground on mark, tone keying may be either normal or inverse.

c. OUTPUT.

1. WITH V11 TUBE REMOVED FROM ITS SOCKET and regenerator operated as SFO-1 (See instruction book): Relay contacts in series with a 47 ohm resistor, contacts closed on mark during operation or during any steady state input.

2. WITH V11 IN PLACE and regenerator operated as SFO-2 (See instruction book) relay contacts in series with 47 ohm and an open circuit (no signal) at the input of the regenerator appears as an open circuit at the relay output contacts to the teletype machine

INVERSE TONE KEYING WILL NOT OPERATE WITH V11 IN ITS SOCKET.

3. POLAR OUTPUT. A 3 terminal Jones strip on rear of chassis supplies connections for Polar Output.

OUTPUT RELAY CONTACTS ARE NOT GROUNDED.

d. Acceptable input distortion: 45% mark or space bias.

e. Output distortion: less than 5%

f. Tone input level: -20 DBM to 0 DBM.

g. Power requirements: 115 V or 230 V, 50 to 60 cyc, 85 watts. Regenerators are wired for 115 V. For 230 V consult Schematic Diagram.

h. Visual operation indicator: Neon lamp on front panel.

i. Power Supply: Built in on each Regenerator.

j. Monitor Teletypewriter: Front panel jack for monitor teletypewriter.

FOR ALL TONE KEYING, SWITCH S7, LOCATED AT REAR OF CHASSIS, MUST BE IN POSITIVE GROUND POSITION

FOR ALL D.C. KEYING THE NORMAL - REVERSE SWITCH ON FRONT SUB PANEL SHOULD ALWAYS BE IN NORMAL POSITION.

TEST SHEET - MODEL SFO REGENERATOR

Serial No. _____

A-3, 4 Front End check of Trigger point.

<u>DB Input to just Trigger Neon Lamp</u>		<u>Input</u>
<u>Normal keying</u>	<u>Inverse keying</u>	<u>Frequency</u>
		500
		1000
		2000
		3000
		3600

A-5 Clipping starts at _____ DB above above trigger point.

A-6 Amplitude of trigger voltage.

Normal keying _____ volts

Inverse keying _____ volts

A-8 Trigger signal distortion - 1000 cps. tone input.

Trigger Signal distortion

<u>Normal keying</u>	<u>Inverse keying</u>	<u>Input level</u>
		- 20 DB
		- 15 DB
		- 10 DB
		- 5 DB
		- 0 DB

A-9 DC Keying, Trigger point.

<u>Positive Ground</u>	<u>DB</u>	<u>Negative Ground</u>	<u>DB</u>
54 ma Neutral Input _____		54 ma Neutral Input _____	
27 ma Polar Input _____		27 ma Polar Input _____	

NOTE - 90% of normal values are used. Operation is assured at 90% of normal values.

B-2 Range Control Setting - assures duplex operation.

60 WPM Minimum Set _____ ms. from center
Maximum Set _____ ms. from center

75 WPM Minimum Set _____ ms. from center
Maximum Set _____ ms. from center

100 WPM Minimum Set _____ ms. from center
Maximum Set _____ ms. from center

Serial No. _____

C3 Speed Control Setting - check against Sketch II.

Check if OK

60 WPM Minimum set _____
Maximum set _____

75 WPM Minimum set _____
Maximum set _____

100 WPM Minimum set _____
Maximum set _____

C-4 Check for six sampling pips

Check if OK

60 WPM _____
75 WPM _____
100 WPM _____

D-1, 2, 3, 4, 5 Output Distortion check

60 WPM - Range of Output Distortion Control

+ _____ ms, - _____ ms
Minimum distortion _____ %

D-5 75 WPM - Range of Output Distortion Control, + _____ ms, - _____ ms.

D-6 100 WPM - Range of Putput Distortion Control, + _____ ms, - _____ ms.

E-1, 2 Input Distortion Test

Check if OK

Operation at 45% marking bias _____
Operation at 45% spacing bias _____

F-1 Line Voltage Variation

Output Distortion at 115V _____ %
Output Distortion at 105V _____ %
Output Distortion at 125V _____ %

Comments -

Spare relay _____

G-1 Monitor Jack check

Indicate of OK _____

Signed - _____

Date - _____