

BENDIX RADIO

BULLETIN

SUBJECT: **Important—Read Carefully and File**

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IMPROVING AVC ACTION IN
RA-1 AIRCRAFT RECEIVER

BULLETIN No. M-115

Date July 12, 1944 ELI

During the past few months the Engineering Department has received numerous requests for an improvement in the AVC circuit of the RA-1 Aircraft Receiver. There has not been sufficient AVC action to prevent blocking on very strong input signals. The trouble was traced to insufficient negative bias applied to the RF and IF stages.

Action of the AVC circuit may be improved by the use of the following circuit changes.

LIST OF PARTS AND MATERIALS

<i>Quantity</i>	<i>Description</i>	<i>Part Number</i>	<i>Symbol</i>
1	100 mmf condenser	C56315-101	C92
1	0.1 mfd condenser	A100100-1	C91
1	500 ohm 1/2W resistor	A18150-501	R50
1	1 meg. 1/4W resistor	A18151-105	R51
3 ft.	Hookup wire	A12416-4	-

The following changes are to be made on resistor and condenser board assembly AA105053-1. This is the assembly located on the right side of the chassis as shown in Figure 1.

1. Remove ground connection from R24, C65, C67. This is the black wire connected to the top side of R24.
2. Remove ground connection (black wire) from bottom terminal of R37, 1 megohm resistor. (Grid resistor of output tube.)
3. Install jumper wire between bottom terminal of R37 and top terminals of R24, C65, C67.
4. Install C91, 0.1 mfd condenser and R50, 500 ohm resistor as shown

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in Figure 1.

The following changes are to be made on resistor board assembly AA100724-1. This is the assembly located in the center of the chassis.

1. Replace R30 (fourth resistor from end of assembly on right side of chassis) with R51, .1 megohm resistor.
2. Remove jumper wire between R51 and R29 terminals; add ground connection from ground lug near V2 and terminal of R51.
3. Install jumper wire between R51 and R29 terminal facing front of set.
4. Remove wire (BK-W) from R51 and cut it off near the cable. Also remove wire (G-W) from pin #41 of PL-1.
5. Remove R38, 750 ohm resistor from C11 and install it between unused terminals on terminal board between R32 and R29. These are the second and third resistors.

Install 100 mmf condenser, C92, on socket of V6 (6R7G) as shown. Remove jumper wires between pin 1 and 8 between 4 and 5. Remove black and green wire from lug marked DR of FL-3 (third IF transformer) and cut off near cable. Also remove green and black wire from AVC switch and cut off near cable. The AVC switch now controls only the ganged RF and audio potentiometers. In AVC ON position, the audio section functions and in AVC OFF position, the RF section functions to control volume. Delayed AVC is present in either position of the AVC switch.

Figure 3 illustrates the AVC control action before and after the changes described herein. These changes have been incorporated in all RA-1 receivers manufactured after May 1, 1944.

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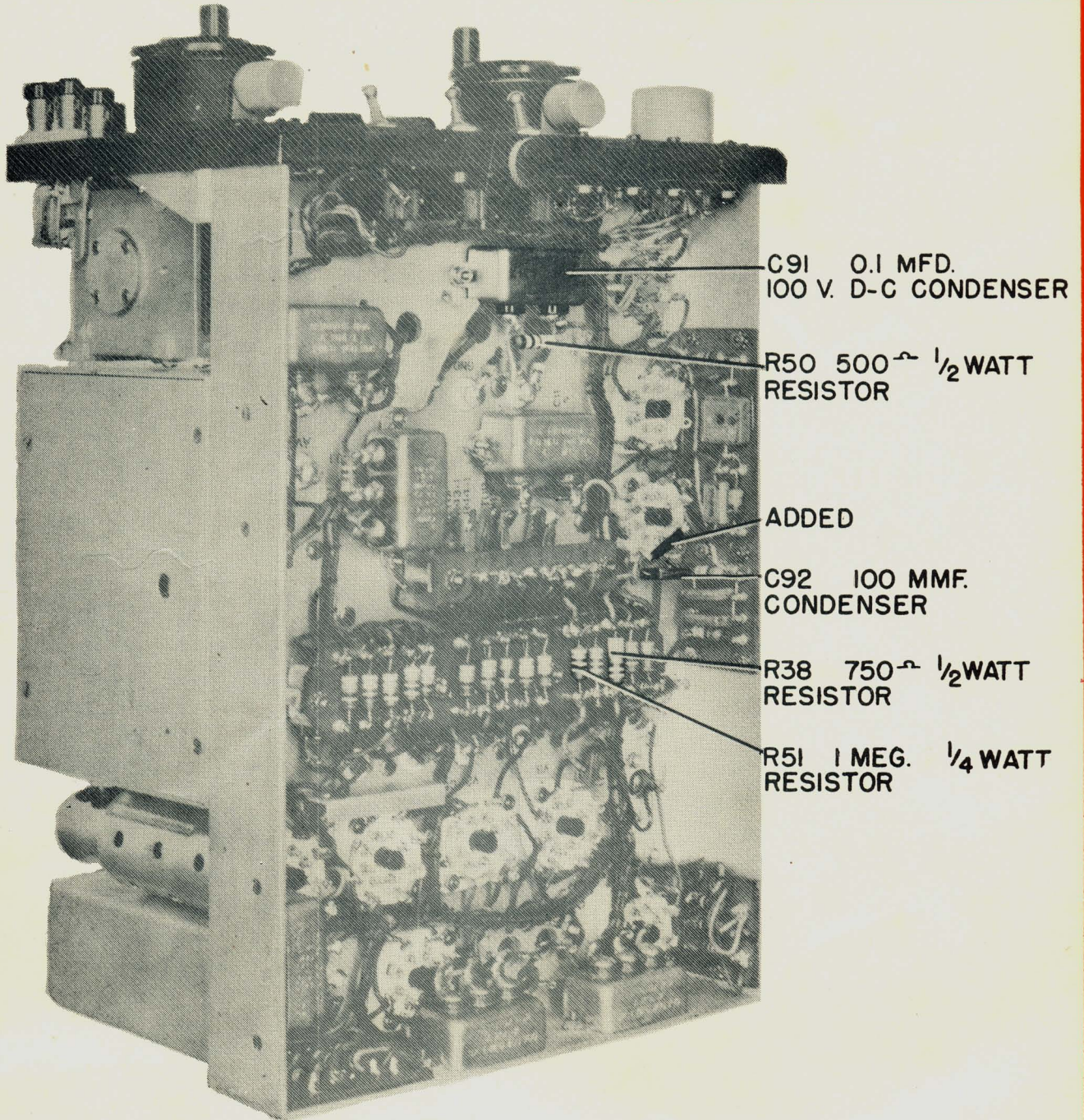


FIGURE 1

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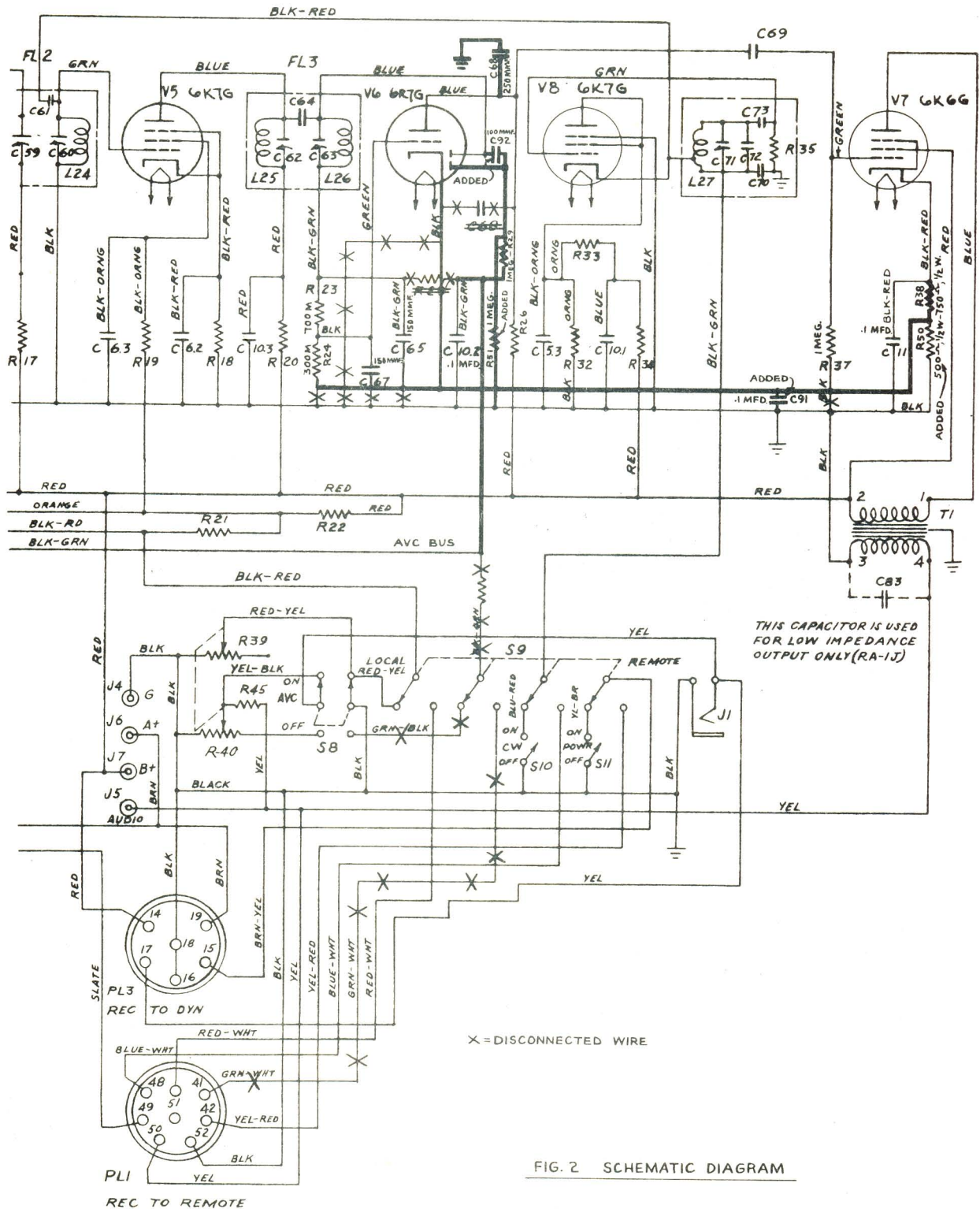
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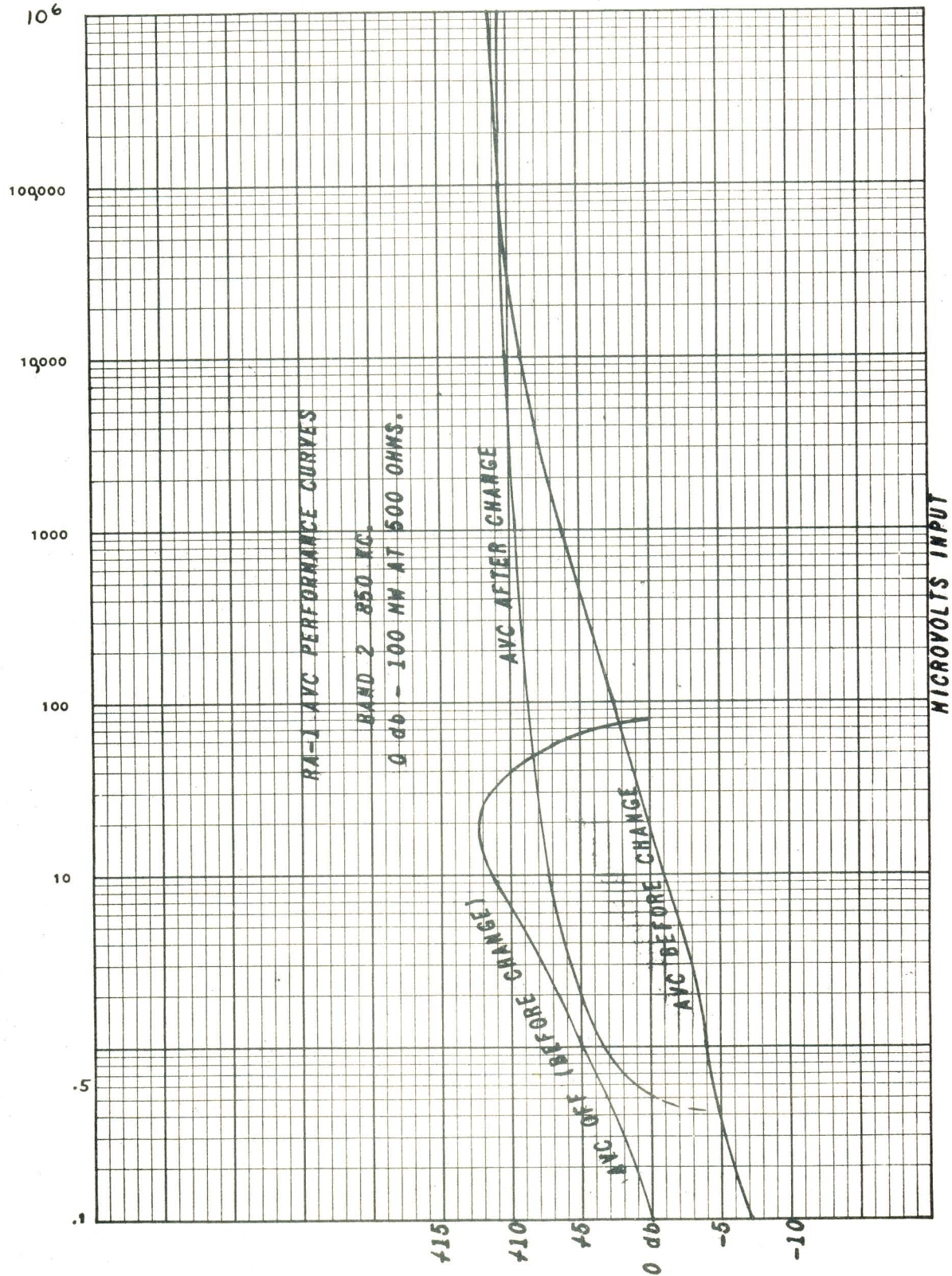


FIGURE 3