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TECHNICAL BULLETIN

MAINTENANCE AND MODIFICATION NOTES ON RCA BROADCAST EQUIPMENT

BROADCAST AND TELEVISION EQUIPMENT DEPARTMENT • RADIO CORPORATION OF AMERICA, CAMDEN, N.J.

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Page 1 of 13 Pages

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TX-1A and TX-1B Colorplexers
MI-40209 and MI-40209-A

Bulletin #2

Subject: Suggested circuit modifications to improve the performance of the output amplifiers of the TX-1A and TX-1B Colorplexers

This bulletin describes circuitry which replaces the output amplifier stages (essentially V21 through V28). The necessary changes are described in this bulletin and should be noted in the appropriate instruction books when completed. In the TX-1A Colorplexer, refer to IB-36210-T and Schematic Number 316742. In the TX-1B Colorplexer, refer to IB-36224 and Schematic Number 317709.

RCA AM • FM • TV BROADCAST EQUIPMENT

TABLE OF CONTENTS

I. PARTS LIST

- A. Items Deleted
- B. Items Relocated and Renumbered
- C. Items Added

II. ELECTRICAL DISASSEMBLY

- A. Tube Socket Disassembly
- B. Terminal Board Disassembly
- C. Miscellaneous

III. INSTALLATION - STEP BY STEP

- A. Mechanical
- B. Electrical
- C. Adjustments

IV. DIAGRAMS

A. Schematics

- 1. Gain Stage TX-1A
- 2. Gain Stage TX-1B
- 3. Feedback Stage TX-1A and TX-1B

B. Pictorial

- 1. Potentiometer R504 relocation
- 2. Terminal Board Assembly
- 3. Photograph - TX-1A - Wiring Side
- 4. Photograph - TX-1B - Wiring Side

I. PARTS LISTA. Items Deleted

The following parts have been deleted with no replacements -
Schematic Number 316742 or 317709:

<u>Part No.</u>	<u>Description</u>	<u>Connection</u>
C54	.22 MF 400 V Tubular	TX-1A---TB-3 center lug to ground
C58	10 MF 450 V Electrolytic	TX-1B---TB6* center lug to ground
C59	330 mica	TBA-10 to ground
C61	560 mica	XV22, Pin 9 to ground
C64	.22 MF 400 V Tubular	XV22, Pin 6 to Pin 9
		TBA, terminals 2 to 8
C66	10 Ceramic	Across pot. 104
C68	.22 MF 400 V Tubular	TBA-15 to TBA-16
C74	560 mica	XV24, Pin 6 to XV25, Pin 2
C78	.22 MF 400 V Tubular	TBA-25 to TBA-26
C139	180 mica	XV25, Pin 3 to ground
C154	18 Ceramic	XV22, Pin 2 to ground (may be missing
C105	125 ufd 350 V Elect.	CR 2 to Gnd. on some units)
C163	15 Ceramic	Across the 7-35 mmf. (C-62)
R87	330 1 $\frac{1}{2}$ W 5%	XV22, Pin 7 to ground
R91	4.7 meg. $\frac{1}{2}$ W 5%	XV22, Pin 6 to C60
R92	2.2 meg. $\frac{1}{2}$ W 5%	XV22, Pin 9 to C60
R93	220 1 W 5%	XV22, Pin 8 to ground
R94	1.8 meg. $\frac{1}{2}$ W 5%	XV22, Pin 9 to ground
R96	560 $\frac{1}{2}$ W 10%	XV23, Pin 2 to C62
R97	560 2 W 10%	TBA Terminals 7 to 8
R99	2200 1 W 5%	TBA Terminals 3 to 4
R101	18 1 W 10%	J20 to C65
R102	33 K 1 W 5%	TBA-12 to C65
R103	430 $\frac{1}{2}$ W 5%	Across C67
R106	220 1 W 5%	XV24, Pin 7 to ground lug
R116	10 K N.I.T. 10W	TBA Terminals 9 to 10
R119	2.2 meg. $\frac{1}{2}$ W 5%	XV25, Pin 2 to C73
R120	4.7 meg. $\frac{1}{2}$ W 5%	TBA Terminals 13 to 14
R121	270 1 W 5%	XV25, Pin 8 to Pin 1
R122	1.8 meg. $\frac{1}{2}$ W 5%	XV25, Pin 2 to ground
R123	270 1 W 5%	XV25, Pin 3 to ground
R124	100 $\frac{1}{2}$ W 10%	XV26, Pin 7 to TB5
R125	100 $\frac{1}{2}$ W 10%	XV27, Pin 2 to TB5
R128	18 K $\frac{1}{2}$ W 5%	TBA Terminals 21 to 22
R129	220 2 W 10%	TBA-27 to 28
R130	470 K $\frac{1}{2}$ W 5%	TBA Terminals 19 to 20
R135	39 K 1 W 5%	TBA20 to C79
R180	7500 N.I.T. 10 W (TX-1B, only)	XV28, Pin 2 to C105

*Adj. to C60

I. PARTS LISTB. Items Relocated and Renumbered

The following parts are relocated and renumbered - refer to Schematic Number 316742 or 317709 and Figures A-1 and A-2.

<u>Old Pt. #</u>	<u>New Pt. #</u>	<u>Description</u>	<u>Connection</u>
C60	C501	1 MF, 400 V, Tubular	<u>Old:</u> 4.7 meg., R91 to 2.2 meg., R92 <u>New:</u> XV23, Pin 6 to XV24, Pin 2
C62 or C67	C503	Var. 7-35 mmf.	<u>Old (C62):</u> 560 ohms (R96) to ground <u>Old (C67):</u> XV22, Pin 7 to C65 <u>New:</u> Across 15 mmf., C163
C73	C502	1 MF, 400 V, Tubular	<u>Old:</u> 2.2 meg. (R119) to 4.7 meg. R120 <u>New:</u> TBA-14 to TBA-24
R86	R507	100 ohms, $\frac{1}{2}$ W, 10%	<u>Old:</u> (TX-1A)-XV22, Pin 3 to TB3 (TX-1B)-XV22, Pin 3 to TB adj. to C-60 (TB6)* <u>New:</u> XV25, Pin 2 to TBA-18
R88	R286	18,000 ohms, 2 W, 5%	<u>Old:</u> (TX-1A) on TB3 connecting 2 birdies (TX-1B) on TB6 connecting 2 birdies <u>New:</u> XV18, Pin 6 to T1 lug C
R90	R501	15,000 ohms, 2W, 10%	<u>Old:</u> (TX-1A) XV22, Pin 1 to TB3 lower birdie (TX-1B) XV22, Pin 1 to TB6 <u>New:</u> R.H. lug of pot. R504 to -150 V TB5
R95	R522	100 ohms, 1 W, 10%	<u>Old:</u> XV21, Pin 5 to C58 <u>New:</u> (TX-1A) TB3, middle to upper birdie (TX-1B) TBA-12 to TB3
R98	R513	1 meg., $\frac{1}{2}$ W, 10%	<u>Old:</u> TBA 1 to 2 <u>New:</u> XV24, Pin 2 to ground
R100	R519	150,000 ohms, 1 W, 5%	<u>Old:</u> TBA-5 to 6 <u>New:</u> TBA-19 to 20
R104	R504	220 ohms, 2 W, 5%	<u>Old:</u> LH lug - ground Center - XV24 - Pin 2 RH lug - J20 <u>New:</u> LH lug) 15 K(R502)+XV22, Pin 8 Center) RH lug - XV22, Pin 3, +15 K(R501
R105	R508	100 ohms, $\frac{1}{2}$ W, 10%	<u>Old:</u> XV24, Pin 3 to TB3, upper birdie <u>New:</u> XV23, Pin 7 to TB4

*TB6 is to be removed in the process of disassembly and, hence, does not appear in Figure B-4.

B. Items Relocated and Renumbered (continued)

<u>Old Pt. #</u>	<u>New Part #</u>	<u>Description</u>	<u>Connection</u>
R108	R287	18 K, 2 W, 5%	<u>Old:</u> TBA 17 to 18 <u>New:</u> T2 lug C to C85
R109	R518	4700 1 W, 5%	<u>Old:</u> TBA 10 to 14 <u>New:</u> TBA 21 to 22
R117	R514	510 $\frac{1}{2}$ W, 5%	<u>Old:</u> Across C72 <u>New:</u> XV24, Pin 3 to ground
R180	R509	7500 N.I.T., 10 W (TX-1A only)	<u>Old:</u> XV28-Pin 2 to C105 <u>New:</u> TBA-9 to 10-Topside
R284	R284	220 1 W, 5%	<u>Old:</u> TB8 to ground <u>New:</u> TB8 to spare lug on C85
R285	R285	220 1 W, 5%	<u>Old:</u> TB9 to ground <u>New:</u> TB9 to spare lug on C85
C65	C508	125 ufd 380 V	<u>Old:</u> XV23 Pin 3 to Pin 7 <u>New:</u> Negative Power Supply

C. Items Added

Refer to Figures A-1, A-2, A-3 and B-2. Relocated and new components carry symbol numbers in the 500 Series. Components that are not affected by the change are numbered according to Schematics 316742 (TX-1A) and 317709 (TX-1B).

<u>Symbol No.</u>	<u>Description</u>	<u>Location</u>	<u>Dwg. No.</u>	<u>Stock No.</u>
C504	Capacitor, mica, 100 mmf., 500 V, 5%	Across C503	727853-223	98422
C506	Capacitor, mica, 47 mmf., 500 V., 5%	Across C505	727853-215	95320
C507	Capacitor, molded, 0.1 mf., 400 V.	TBA 7 to 8	735715-175	73551
L501	Coil, fixed, 10 mh.	TBA 5 to 6	8825473-505	202910
R502	Resistor, Composition, 15,000 ohms, 2 W, 10%	TB5 to Pot. R504, LH lug	99126-76	522315
R503	Resistor, Composition, 1300 ohms, 1 W, 5%	TB4 to TBA 6	90496-162	512213
R505	Resistor, Composition, 27000 ohms, 2 W, 10%	TBA 1 to 2	99126-79	522327
R506	Resistor, Composition, 27000 ohms, 2 W, 10%	TBA 3 to 4	99126-79	522327
R509	(TX-1B only), 3000 ohms, N.I.T., 10 W	TBA 9 to 10	8817660-17	54229

<u>Symbol No.</u>	<u>Description</u>	<u>Location</u>	<u>Dwg. No.</u>	<u>Stock No.</u>
R510	Resistor, Composition, 220 ohms, $\frac{1}{2}$ W, 5%	XV25, Pin 1 to 6	82283-143	502122
R511	Resistor, Composition, 220 ohms, $\frac{1}{2}$ W, 5%	XV26, Pin 1 to 6	82283-143	502122
R512	Resistor, Composition, 220 ohms, $\frac{1}{2}$ W, 5%	XV27, Pin 1 to 6	82283-143	502122
R515	Resistor, Composition, 82 ohms, $\frac{1}{2}$ W, 5%	XV27, Pin 1 to 8	82283-133	502082
R516	Resistor, Composition, 240 ohms, $\frac{1}{2}$ W, 5%	XV24, Pin 8 to TBA-14	90496-144	512124
R517	Resistor, Composition, 47 ohms, $\frac{1}{2}$ W, 5%	TBA-14 to C503	82283-127	502047
R520	Resistor, Composition, 24,000 ohms, 1 W, 5%	TBA-20 to C79	90496-192	512324
R521	Resistor, Composition, 100 ohms, $\frac{1}{2}$ W, 5%	Across C505 and 506	82283-135	502110
R522	Resistor, Composition, 1200 ohms, N.I.T., 10 W	Yellow-Red Lead (High Voltage Center Tap) of T5 to Gnd.	8817660-13	94772

II. ELECTRICAL DISASSEMBLY

II. ELECTRICAL DISASSEMBLY

C. Miscellaneous

The following components should now be removed and held together with mounting hardware for relocation.

- C55 (TX-1A only)
- C60
- C62
- C67
- R104
- TB4
- TB5

The following components and any items soldered thereto should be removed and discarded. The holes left in the chassis can be covered with any suitable cover plate.

- C58
- C65
- J20

C72 should now be loosened from its standoff in order that R117, 510, 1/2 W, 5% soldered across it may be removed.

Refer to Figure 11 and 12 for the location of the following electrical boards.

Terminal Board 1 (TX-1A) - Remove all components and wires.

Terminal Board 2 (TX-1B) - Remove the three resistors.

Terminal Board 3 (TX-1C) - Remove the two resistors and two capacitors.

Terminal Board 4 (TX-1D) - Remove the two resistors and two capacitors.

Terminal Board 5 (TX-1E) - Remove the two resistors and two capacitors.

Terminal Board 6 (TX-1F) - Remove the two resistors and two capacitors.

Terminal Board 7 (TX-1G) - Remove the two resistors and two capacitors.

Terminal Board 8 (TX-1H) - Remove the two resistors and two capacitors.

Terminal Board 9 (TX-1I) - Remove the two resistors and two capacitors.

Terminal Board 10 (TX-1J) - Remove the two resistors and two capacitors.

Terminal Board 11 (TX-1K) - Remove the two resistors and two capacitors.

Terminal Board 12 (TX-1L) - Remove the two resistors and two capacitors.

Terminal Board 13 (TX-1M) - Remove the two resistors and two capacitors.

Terminal Board 14 (TX-1N) - Remove the two resistors and two capacitors.

Terminal Board 15 (TX-1O) - Remove the two resistors and two capacitors.

Terminal Board 16 (TX-1P) - Remove the two resistors and two capacitors.

Terminal Board 17 (TX-1Q) - Remove the two resistors and two capacitors.

Terminal Board 18 (TX-1R) - Remove the two resistors and two capacitors.

Terminal Board 19 (TX-1S) - Remove the two resistors and two capacitors.

Terminal Board 20 (TX-1T) - Remove the two resistors and two capacitors.

Terminal Board 21 (TX-1U) - Remove the two resistors and two capacitors.

Terminal Board 22 (TX-1V) - Remove the two resistors and two capacitors.

Terminal Board 23 (TX-1W) - Remove the two resistors and two capacitors.

Terminal Board 24 (TX-1X) - Remove the two resistors and two capacitors.

Terminal Board 25 (TX-1Y) - Remove the two resistors and two capacitors.

Terminal Board 26 (TX-1Z) - Remove the two resistors and two capacitors.

III. INSTALLATION

A. Mechanical

(Please refer to Figures B-1, B-3, and B-4).

Variable Resistor R104

The pot should be mounted in accordance with the pictorial drawing, Section IV, Fig. B-1. The hole left in the chassis can be filled with a 3/8" button.

TB 4: Should be relocated in the hole left by C62, the mounting hole, and should be rotated about until the board lies in a vertical plane on the XV23 side of the hole.

TB 5: Mount in the hole formerly occupied by a 6-32 x 5/8" binder head screw supporting the phenolic spacer and C-60. TB 5 should be oriented towards XV 28.

B. Electrical

General Instructions

Parts 1 and 2 of this group deal chiefly with filament and supply voltages. Therefore, the bus and wire connections noted in Parts 1 and 2 should be placed close to the chassis and away from signal leads. On the other hand, steps in Part 4 involve chiefly signal leads which should be soldered point to point and kept away from other wiring.

1. Filament Connections

- (a) XV25 Rewire the heater connections so that it conforms to that of XV26 and XV27. Thus, relocate the white/brown 10-strand lead from Pin 5 to Pin 8. Tie Pins 4 and 5 together.
- (b) T-4 Remove the bus connections between Terminal 6 and the ground lug. Connect Terminal 6 of T4 to the closest birdie on TB 7 (attached to the upper mounting screw holding C105).

2. DC Supply Voltages

- (a) -150 V (1) Remove R180, 7500 NIT, 10 W. Jumper the open connection with Bus wire.
- (2) Remove the white/green/black 7/.010 wire (2 wires for the TX-1B) from Pin 2 and solder to TB 5.

- (3) Connect Pin 2 to TB 5 with .032 bus.
- (4) Connect the free end of the white/green/black wire to TBA-20. (A longer piece may be required).
- (5) Add R522 1200 Ω . 10W NIT from center tap of T-5 (Yellow-Red Lead formerly connected to GND) to GND.
- (6) C 508
 - (a) 160 ufd section - connect to center tap of T5.
 - (b) 60-40 ufd section - connect to GND.
 - (c) Common - connect to V28, Pin 2

(b) \neq 150 V

<u>First Tie Pt.</u>		<u>Second Tie Pt.</u>	<u>Connection</u>
(1) TX-1A	TBA-12	TB3 (closest birdie)	.032 bus
TX-1B	TBA-12	TB3 (closest birdie)	100 ohms, lw., 10%
(2) TX-1A	TB3 (center birdie)	C85 spare lug	white/red 7/.010
TX-1B	TB3 (closest ")	C85 spare lug	white/red 7/.010
(3) TX-1A	TB3 (closest birdie)	TB3 (center birdie)	100 ohms, lw., 10%
TX-1B	TB3 (closest birdie)	TB3 (furthest birdie)	1300 " lw 5%
(4) R286	XV18, Pin 6, 56 k., 1 w. (may be 2w.) 5% to lug C, T1 - replace with an 18 k., 2 w., 5% (formerly R88).		
(5) R287	XV19, Pin 6, 56 k., lw. (may be 2 w.) 5% to lug C, T2 - replace with 18 k., 2 w., 5% (formerly R108)		
(6) R284	TB8 (attached to XV18) 220, 1 w., 5% to ground lug - lift from ground lug and place on spare lug of C85.		
(7) R285	TB9 (attached to XV19) 220, 1 w., 5% to ground lug - lift from ground lug and place on spare lug of C85.		
(8) TBA-12	Red 7/.010 to XV22, Pin 1.		

(c) \neq 280V

- (1) TX-1A The white/red 7/.010 wire that is free at one end and attached to TB7 (one birdie) at the other end should now be soldered to TBA-10.
- TX-1B -TB7 (1 birdie) should be connected to TBA-1C by means of a white/red 7/.010 wire.
- (2) XV23 Pin 9 should be connected to TBA -10 with a White/Red 7/.010 wire.
- (3) XV24 Pin 6
- (4) XV25 Pin 9
- (5) XV26 Pin 9 To C77 by separate white/red 7/.010 wire.
- (6) XV27 Pin 9

3. Terminal Board Assembly (Refer to Pictorial Diagram B-2) except for the 10 W resistor; all components are placed on the bottom side.

TBA Turret Terminal

<u>First Tie Pt.</u>	<u>Second Tie Pt.</u>	<u>Connection</u>
1	2	27 K, 2 W, 10%
1	#6 ground lug on upper 6-32 mtg. screw	.032 ground bus
2	4	.032 bus (insulated)
3	4	27 K, 2 W, 10%
3	#6 ground lug	.032 ground bus
4	XV23 - Pin 6	.032 bus
5	6	505 Coil
5	7	.032 bus
4	6	1300, 1 W, 5%
7	8	.1, 400 V, DC
7	9	.032 bus
8	XV23 nut strap(TX-1A)	.032 ground bus
	#4 ground lug(TX-1B)	
9 (other side)	10 TX-1A	7500 ohms, 10 W, NI
	TX-1B	3000 ohms, 10 W, NI
9	12	.032 bus (insulated)
10	L7-Pin 3 (TX-1B)	+280 Feed
	TB-3 (TX-1A)	
10	XV23, Pin 9	White/Red 7/.010 wire
12	XV21, Pins 1 and 5	.032 bus
12	XV22, Pin 1	Red 7/.010 wire
12	TB3 (TX-1A)	White/Red 7/.010 wire
	TB3 (TX-1B)	100 1 W, 10%, R522
14	24	C502
14	XV24, Pin 8	240 ohms, R516
14	C503	47 ohms, R517
18	XV25, Pin 2	100 ohms
18	24	.032 bus insulated
19	20	150 K, 1 W, 5%
19	21	.032 bus
20	TB5	-150 V, Feed (white/green/black)
20	C79	24 K, 1 W, 5%
21	22	4700 ohms, 1 W, 5%
21	23	.032 bus
22	XV26 ground lug	.032 ground bus
23	24	470 K, $\frac{1}{2}$ W, 5%
24	XV26, Pin 2 (TX-1A)	100, $\frac{1}{2}$ W
24 (other side)	28 (TX1A)	.032 bus
24	26 (TX1B)	.032 bus
26	XV26, Pin 2 (TX1B)	100, $\frac{1}{4}$ W
26	XV27, Pin 2	100, $\frac{1}{2}$ W
25		<u>REMOVE THIS LUG</u>
28	XV27, Pin 2	100, $\frac{1}{2}$ W
27		<u>REMOVE THIS LUG</u>

4. Socket Assemblies

	<u>First Tie Pt.</u>	<u>Second Tie Pt.</u>	<u>Connection</u>
(a) XV22	(1) Pin 3	Closest lug-pot.	.032 bus
	(2) Pin 6	TB 4	.032 bus
	(3) Pin 7	Ground	.032 bus
	(4) Pin 8	Centre lug-pot.	.032 bus
(b)	(1) Pot - closest lug	TB 5	15 K, 2 W, 5%
	(2) Pot - furthest lug	TB 5	15 K, 2 W, 5%
	(3) Pot - furthest lug	Center lug	.032 bus
(c)	(1) TB 4	XV23, Pin 7	47 $\frac{1}{2}$ W
(d) XV24	(1) Pin 1	Pin 7	.032 bus
	(2) Pin 1	Pin 8	82 $\frac{1}{2}$ W, 5%
	(3) Pin 2	Ground	1 Meg., $\frac{1}{2}$ W, 10%
	(4) Pin 3	C505	.032 bus
	(5) Pin 3	Ground	510 $\frac{1}{2}$ W, 5%
(e)	(1) C503 (outer lug)	C503 (inner lug)	C504
	(2) Ground	47 ohms, $\frac{1}{2}$ W, (R517)	C503
	(3) Mount C503 on the lower mtg. hole of C77. Drill out with a #26 drill, if necessary.		
(f) XV25	(1) Pin 1	Pin 6	220 $\frac{1}{2}$ W, 5%
	(2) Pin 1	Pin 7	.032 bus
	(3) Pin 3	Ground	.032 bus
	(4) Pin 6	XV26, Pin 6	.032 bus
	(5) Pin 9	C77	White/Red 7/.010
(g) XV26	(1) Pin 1	Pin 6	220 $\frac{1}{2}$ W, 5%
	(2) Pin 1	Pin 7	.032 bus
	(3) Pin 3	Ground	.032 bus
	(4) Pin 6	XV27, Pin 6	.032 bus
	(5) Pin 9	C77	White/Red 7/.010
(h) XV27	(1) Pin 1	Pin 6	220 $\frac{1}{2}$ W, 5%
	(2) Pin 1	Pin 7	.032 bus
	(3) Pin 3	Ground	.032 bus
	(4) Pin 6	C79	.032 bus
	(5) Pin 9	C77	White/Red 7/.010

5. Miscellaneous

- (a) C505 (formerly C72) should now have the following soldered across it.

R521	100	$\frac{1}{2}$ W	5%
C506	47	mmf.	5%

Some care must be taken in the positioning of these components as they should be spaced about equidistantly between the chassis and the trimmer.

(b) Coupling Capacitors

C501 and its phenolic spacer should now be mounted over the hole for the mounting screw for the former C-67 standoff. One lead is soldered to TBA-4, while the other is soldered to XV24, Pin 2. On the XV24 side, the metal case of the capacitor should be connected to the pigtail.

C502 (formerly C73) should now be mounted in its original position and one lead should be soldered to TBA-14. The other lead should be soldered to TBA-24 and also to the metal case of the capacitor with as short a lead as possible.

C. Adjustments

Set the gain pot, R504, in its mid-position. Connect the RCA type WA-21, Video Sweep Generator, to XV22, Pin 2, setting it to sweep from zero to 10 Mc. Do not let the output of the sweep exceed 0.5 V. Across one of the output terminals, place a detector probe that is connected to RCA Type TO-524D. Adjust C505 and then C504 for flat response to 8 Mc. After adjusting C504, it may be necessary to readjust C505. The colorplexer is then ready for the standard adjustment procedure as set forth in the instruction book.

D. Levels

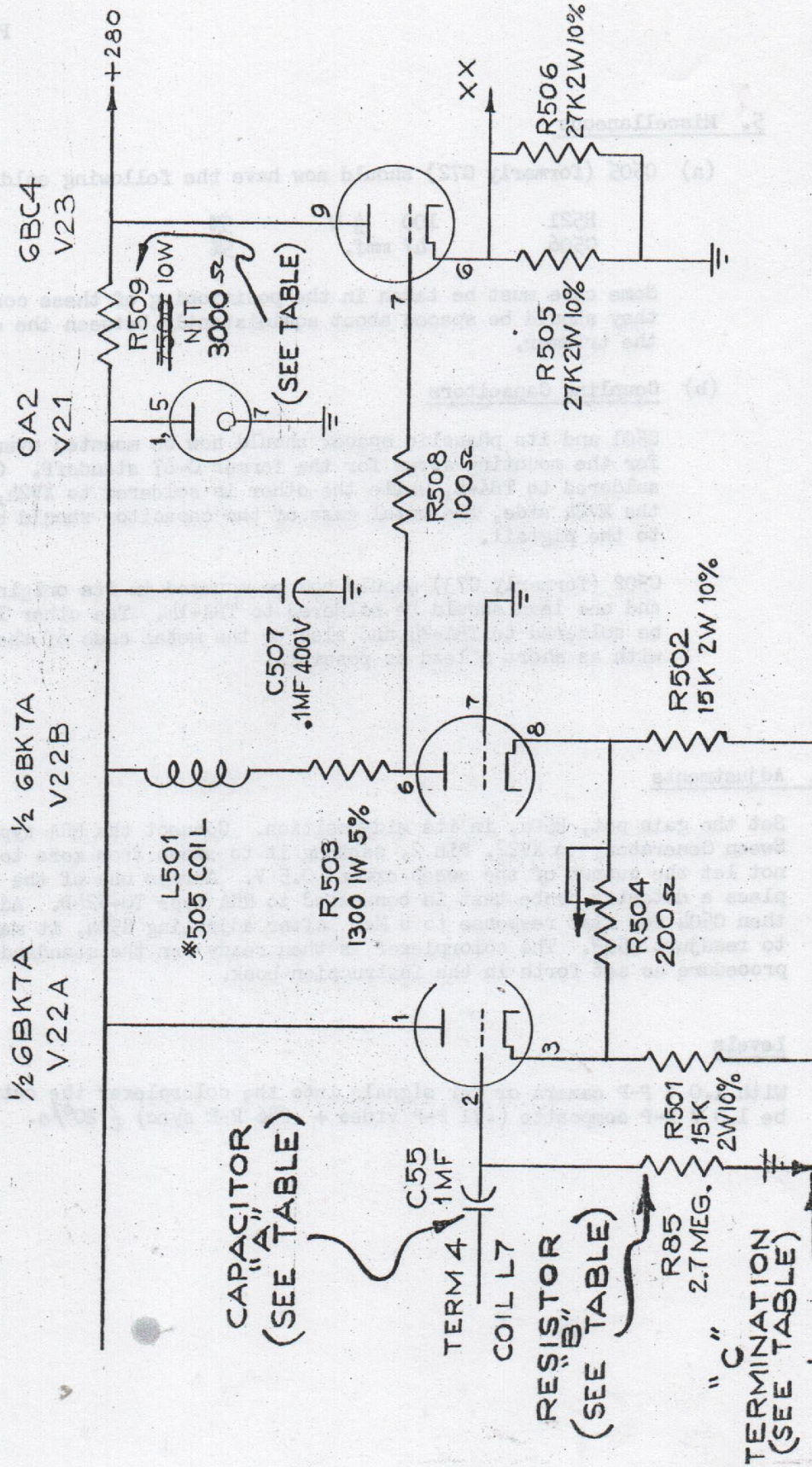
With 1.0 V P-P camera or bar signals into the colorplexer the output should be 1.0 V P-P composite (.71 P-P video + .286 P-P sync) $\pm 20\%$.

SECT. IV
PART A

FIG. 1: (TX-1A)
FIG. 2: (TX-1B)

TX-1A & TX-1B REVISED OUTPUT AMPLIFIER

GAIN STAGE



CAPACITOR "A"
(SEE TABLE)

TERM 4
COIL L7

RESISTOR "B"
(SEE TABLE)

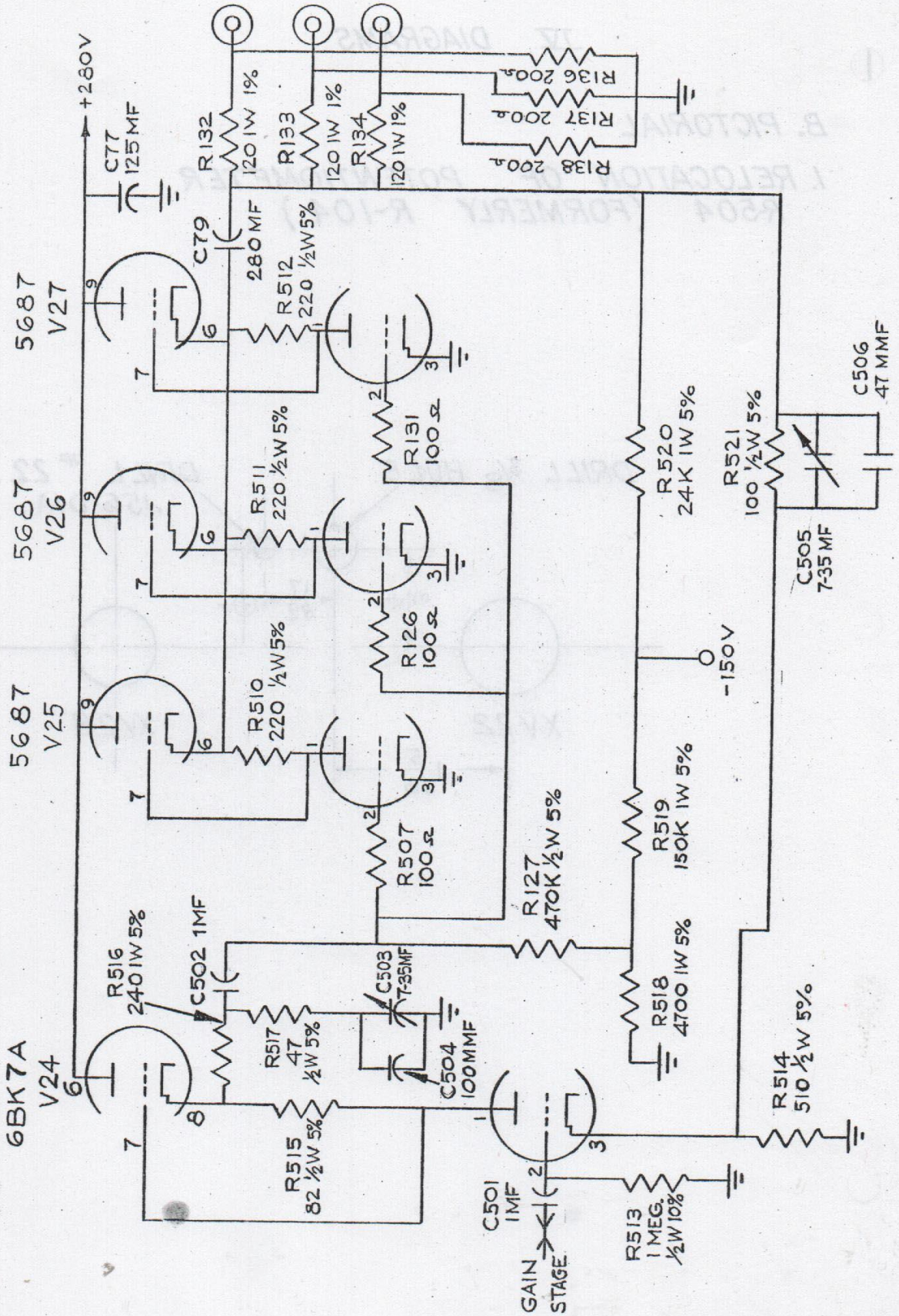
"C" TERMINATION
(SEE TABLE)

TYPE	R-509	CAPACITOR "A"	RESISTOR "B"	"C" TERMINATION
TX-1A	7500Ω 10W NIT.	C-55 1MF.	R-85 2.7 MEG.	TO GROUND
TX-1B	3000Ω 10W NIT	C-27 1000UF 100V	R-85 2.7 MEG.	TO OUTPUT CLAMP

SECT. 7
PART 1
FIG. 3

TX-1A & TX-1B REVISED OUTPUT AMPLIFIER

FEEDBACK STAGE



IV DIAGRAMS

B. PICTORIAL

1. RELOCATION OF POTENTIOMETER R-504 (FORMERLY R-104)

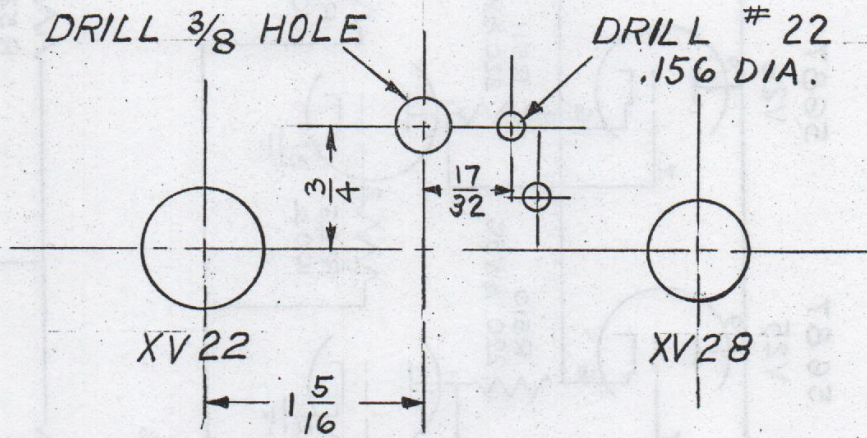


FIG. 3
TOP
PAGE 1

FOR THE LOCATION OF TB9, SEE FIGURE B-3.

C505 C502 C503 TB3 C55 C501 TB4 TB2 TB5 TB7 R180

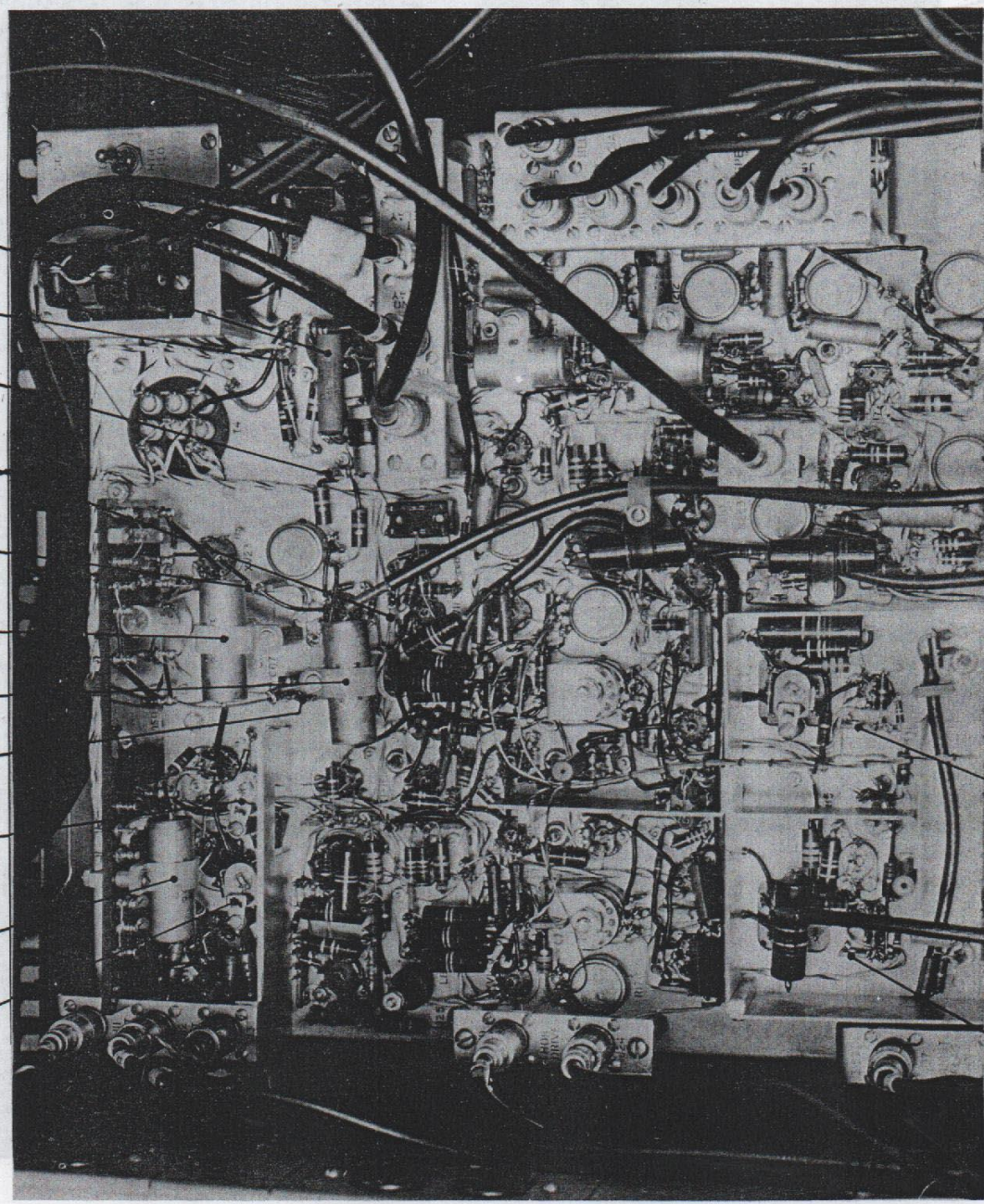


FIGURE " B-3 "

TB8

TB9

FIGURE "B2"

R180

TB5 TB7

TB2

TB4 (UNDERNEATH)

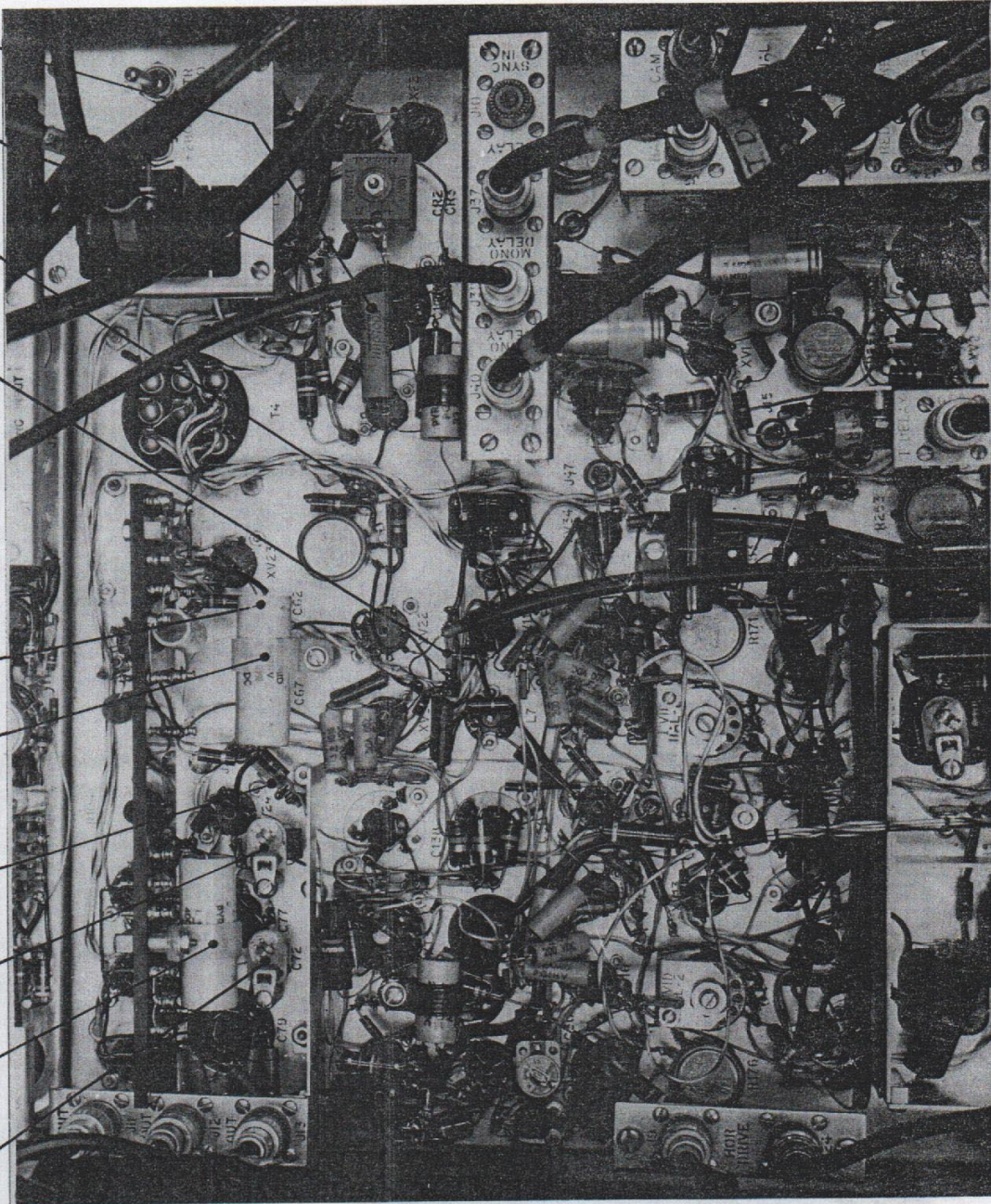
C501

TB3

C503

C502

C505



FOR THE LOCATION OF TB8 & TB9, SEE FIGURE "B3"

FIGURE "B-4"