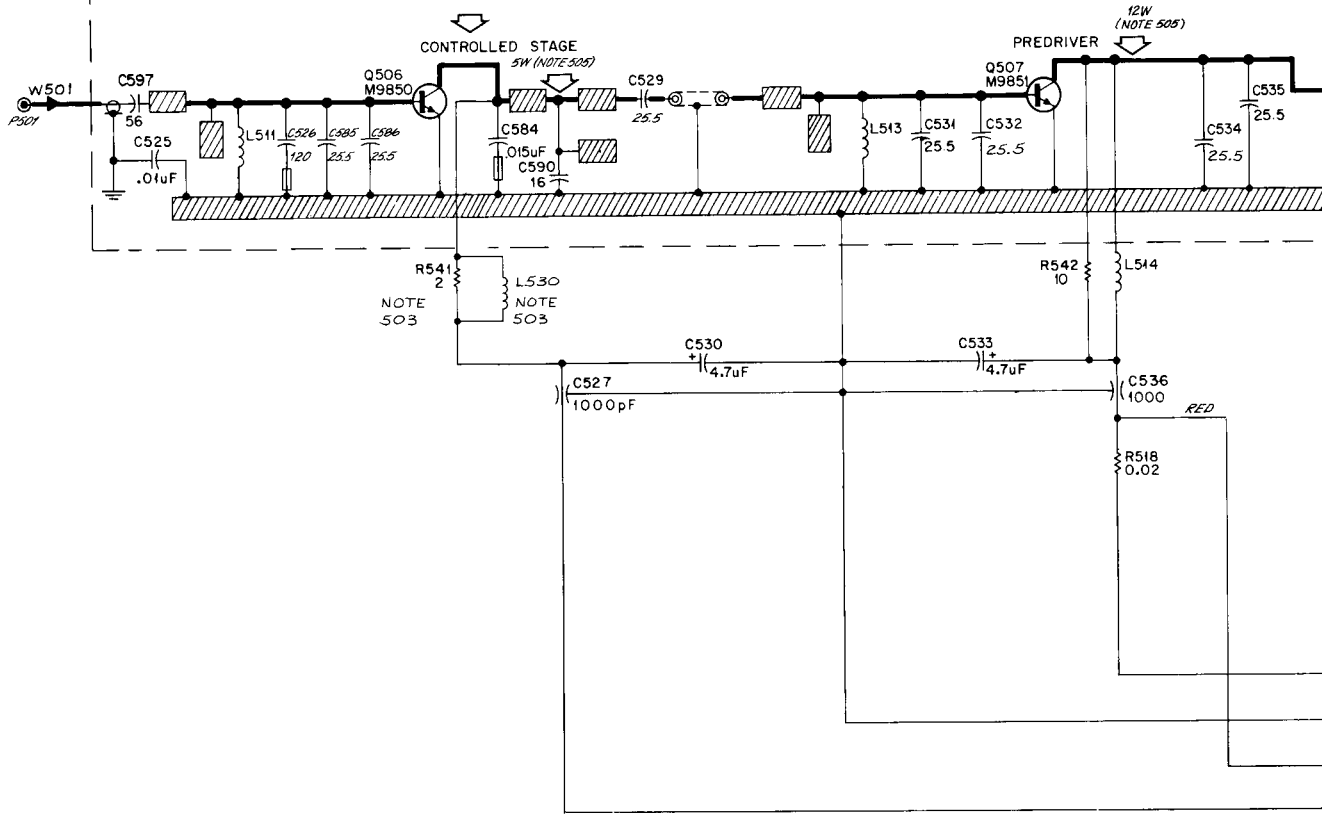


RF INPUT FROM
TRIPLER/LOW
LEVEL AMPL
**2 WATTS
MAXIMUM**

GAIN OF THIS STAGE DETERMINED
BY CONTROL STAGE Q902 ON XMTR
INTERCONNECT BOARD



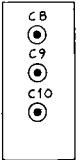
7-10
(NOTE 502)

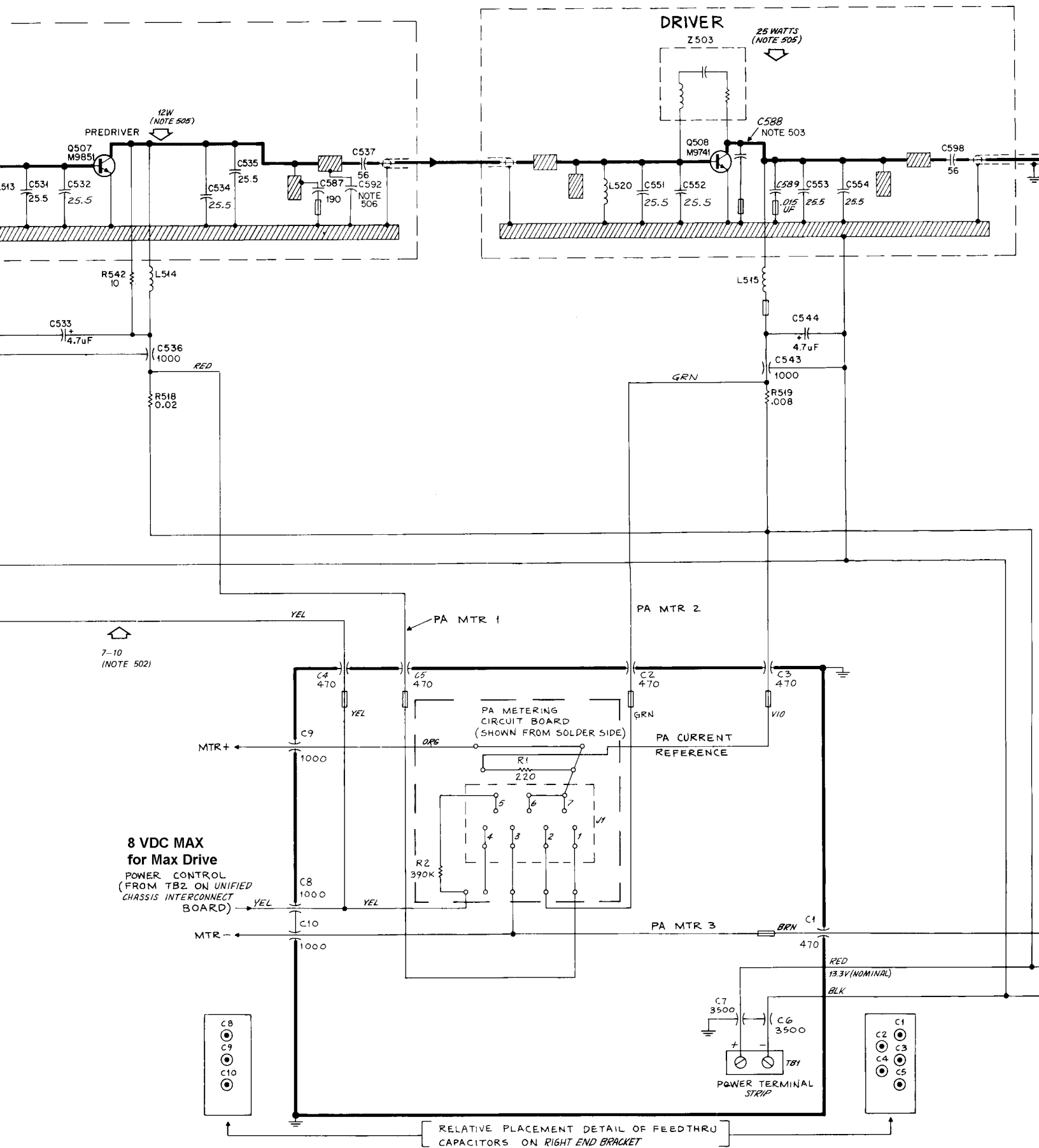
MTR+ ←

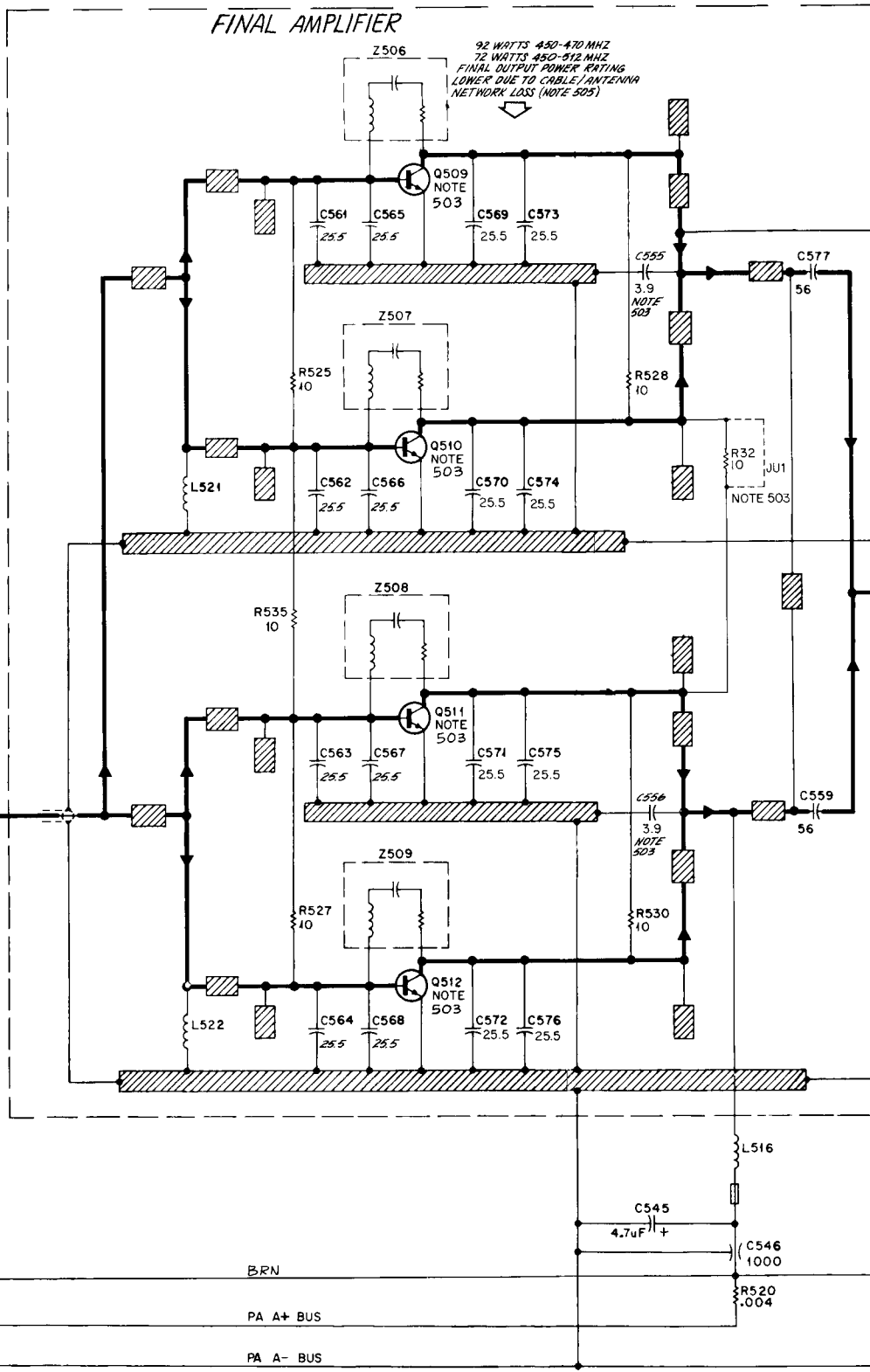
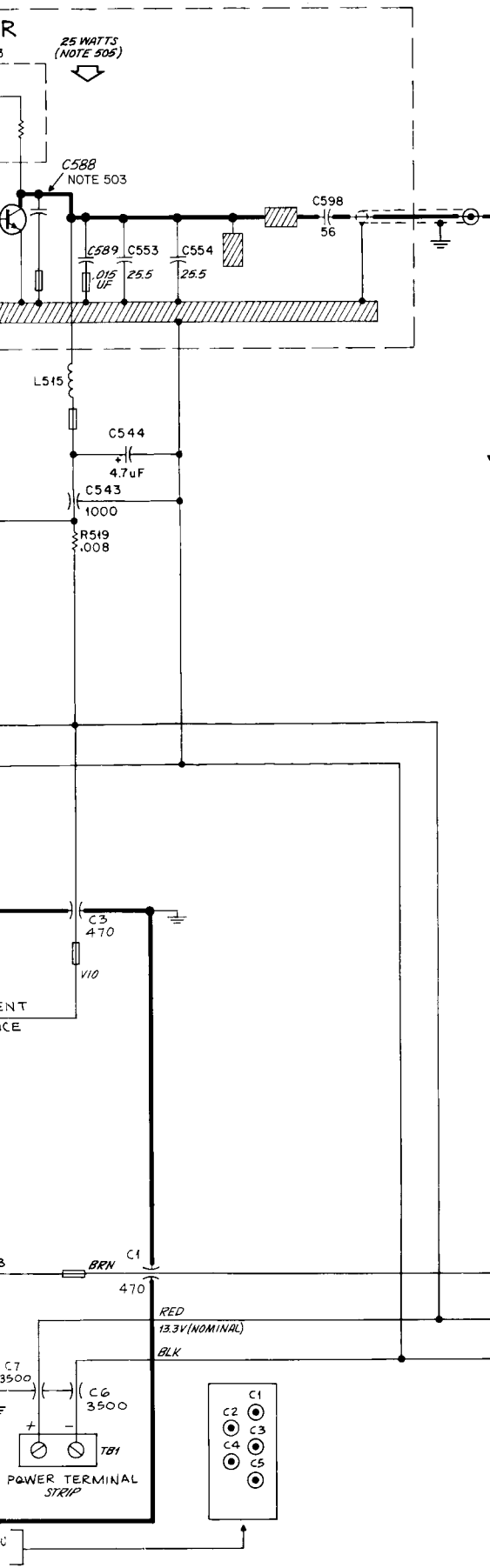
**8 VDC MAX
for Max Drive**

POWER CONTROL
(FROM TB2 ON UNIFIED
CHASSIS INTERCONNECT
BOARD) → YEL

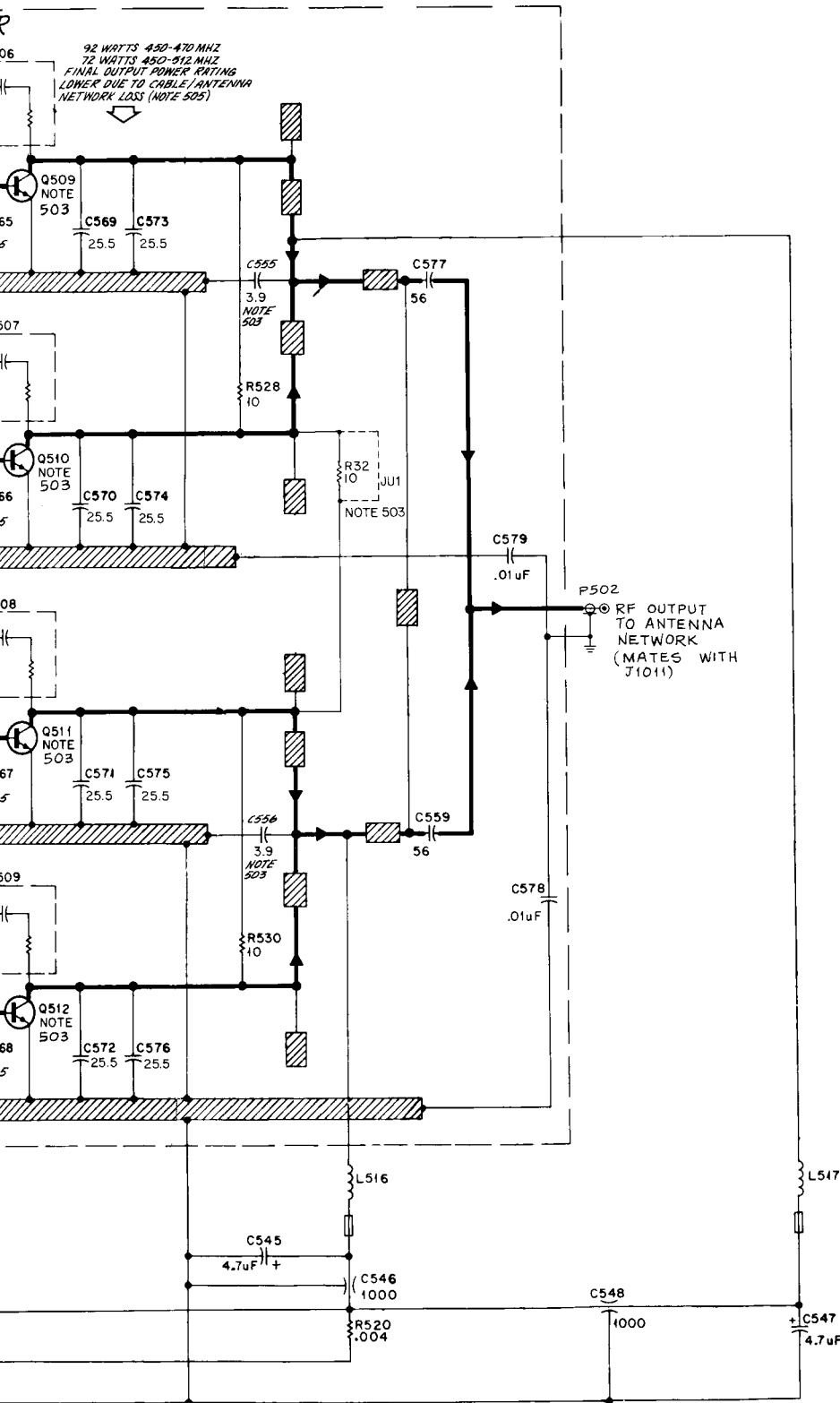
MTR- ←







EEP5-17183-E



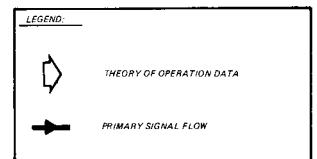
NOTES:

- 501. UNLESS OTHERWISE SPECIFIED, CAPACITOR VALUES ARE IN PICO FARADS.
- 502. VOLTAGE DEPENDENT ON FINAL OUTPUT POWER, ERP, OR CONTROLLED STAGE GAIN. 470-512 MHz STATIONS HAVE A HIGHER NOMINAL VOLTAGE.
- 503.

COMPONENT	450-470 MHz	470-512 MHz
C555, C556	3.9 pF	NOT USED
R532	USED	NOT USED
Q509, Q510	M9740	M9755
Q511, Q512	NOT USED	USED
R541	USED	NOT USED
L540	NOT USED	190 pF
C588	NOT USED	NOT USED
C592	16 pF	NOT USED
R32	10 ohm	JU1 (RESISTOR REMOVED)
- 504. N/A
- 505. RF POWER LEVELS ON EACH STAGE REPRESENT TYPICAL VALUES DURING NORMAL OPERATION.

PA MODEL TABLE

PA ASSEMBLY	TKN6768A METERING AND CABLE KIT	MICROSTRIP AND HEATSINK KIT	
		TLE8333A-2	TLE8334A
TLE1713A (75 W) (450-470 MHz)	X	X	
TLE1714A (60 W) (470-512 MHz)	X		X



60/75-WATT POWER AMPLIFIER

MODELS TLE1713A & TLE1714A
(450-512 MHz)

FUNCTION

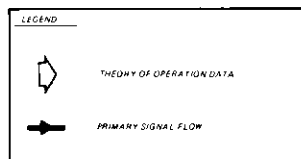
Provides final transmitter output power amplification.

NOTES:

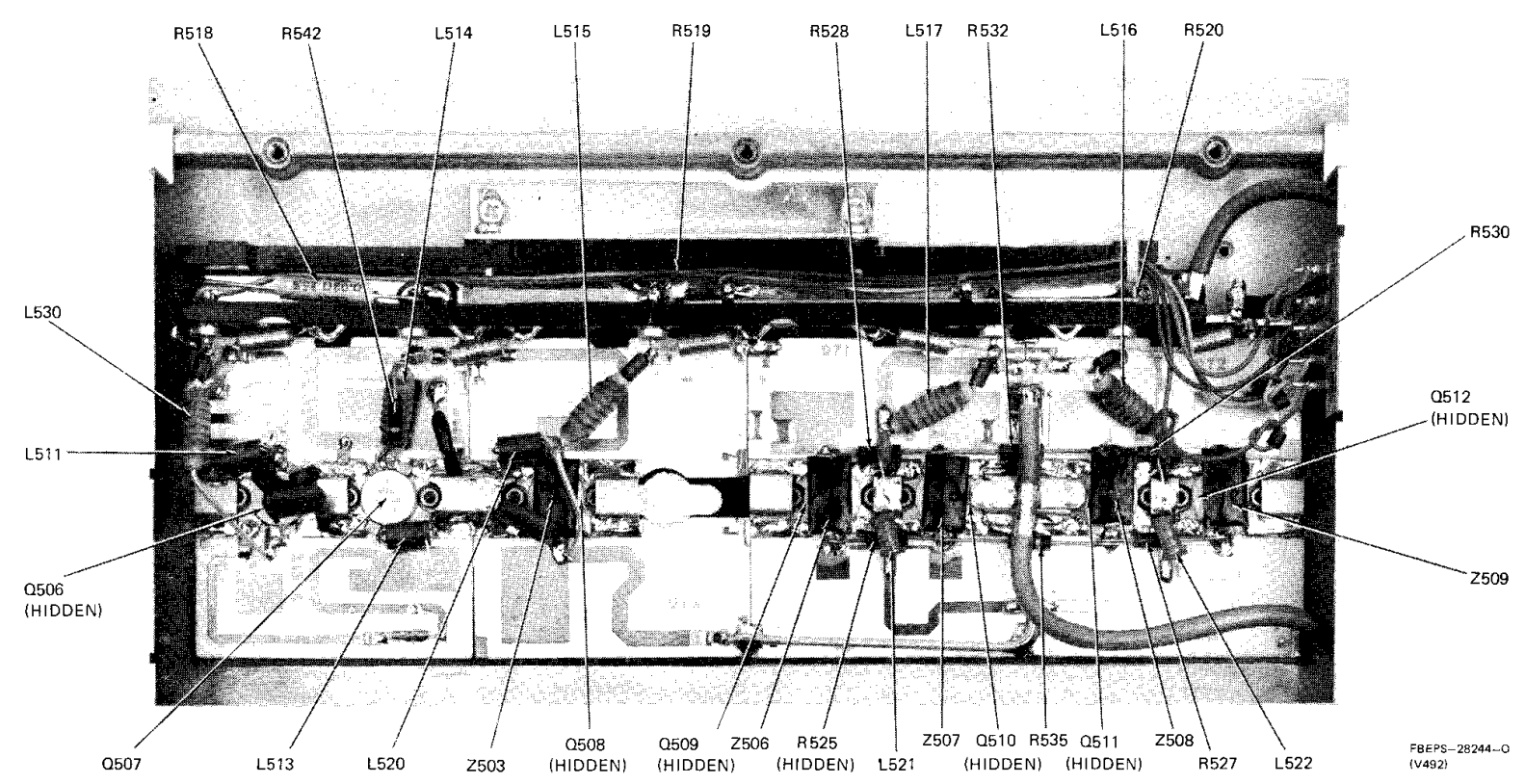
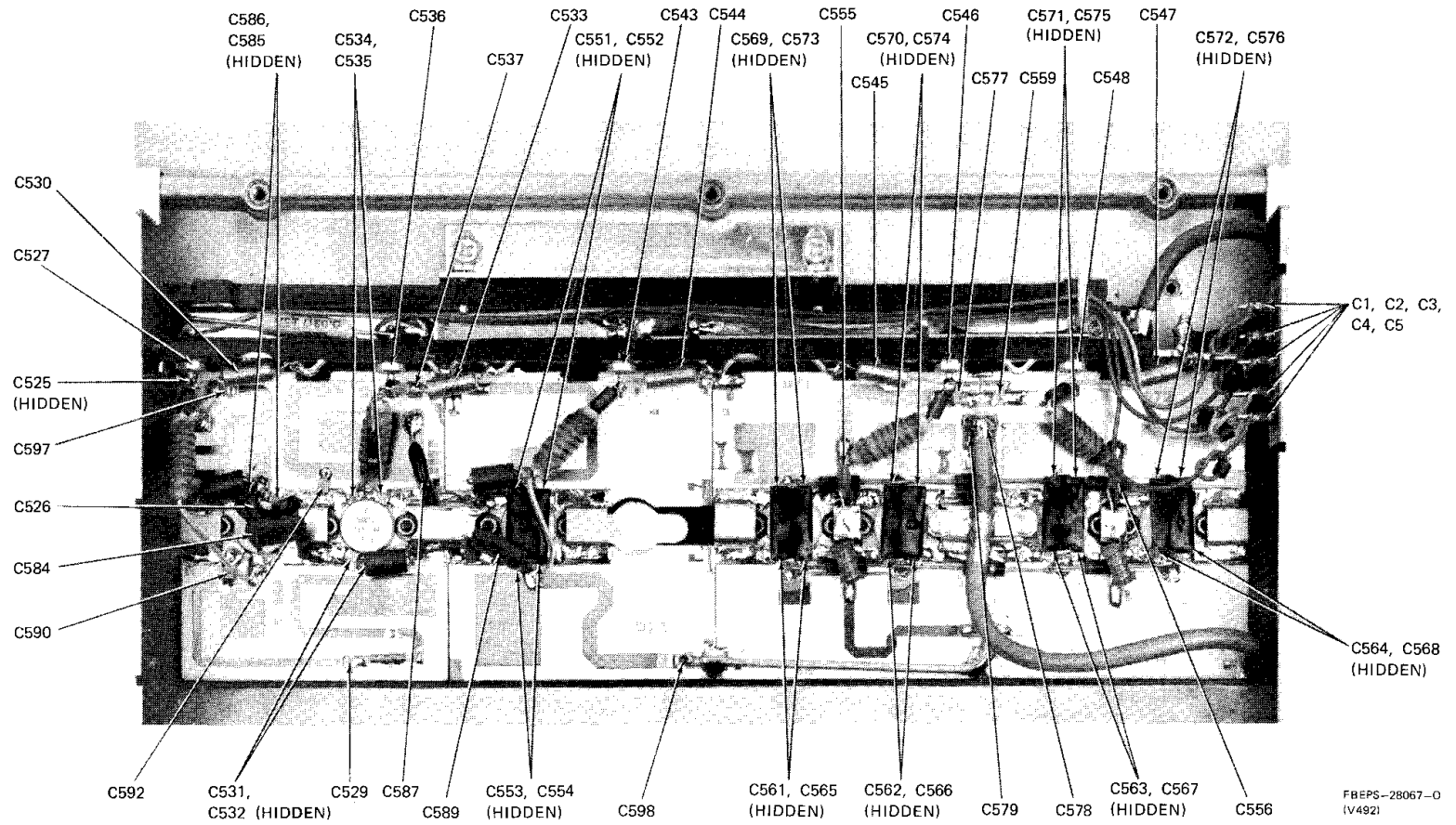
501. UNLESS OTHERWISE SPECIFIED, CAPACITOR VALUES ARE IN PICOFARADS
502. VOLTAGE DEPENDENT ON FINAL OUTPUT POWER, ERP, OR CONTROLLED STAGE GAIN. 470-512 MHz STATIONS HAVE A HIGHER NOMINAL VOLTAGE.
- | 503. COMPONENT | 450-470 MHz | 470-512 MHz |
|----------------|-------------|------------------------|
| C555, C556 | 3.9 pF | NOT USED |
| R532 | USED | NOT USED |
| Q509, Q510 | M9740 | M9755 |
| Q511, Q512 | | |
| R541 | NOT USED | USED |
| L530 | USED | NOT USED |
| C588 | NOT USED | 190 pF |
| C592 | 16 pF | NOT USED |
| R32 | 10Ω | JU1 (RESISTOR REMOVED) |
504. N/A
505. RF POWER LEVELS ON EACH STAGE REPRESENT TYPICAL VALUES DURING NORMAL OPERATION.

PA MODEL TABLE

PA ASSEMBLY	TKN6768A METERING AND CABLE KIT	MICROSTRIP AND HEATSINK KIT	
		TLE8333A-2	TLE8334A
TLE1713A (75 W) (450-470 MHz)	X	X	
TLE1714A (60 W) (470-512 MHz)	X		X



PARTS LIST SHOWN ON BACK
68P81042E19-O
4/15/79- PHI



REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
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This parts list covers two models of the Microstrip and Heatsink Kit. Where differences exist the model number of the applicable unit is given in the description column.

TLE8333A-1 75 W Microstrip and Heatsink Kit (450-470 MHz)
 TLE8334A 60 W Microstrip and Heatsink Kit (470-512 MHz)PL-3427-D

C525	21-84547A05	<u>CAPACITOR, fixed: pF ±20%:</u> 50 V; unless otherwise stated
C526	21-840713	.01 uF
C529, 531, 532, 534, 535, 551, 552, 553, 554, 561, 562, 563, 564, , 565, 566, 567, 568, 585, 586	21-84736 E10	120 ±5%; 500 V
C530, 533, 544, 545, 547	23-82783B11	25.5 ±5%
C555, 556	23-82133G40	4.7 uF; 35 V
C537	21-84736E31	3.9 uF; 50W(TLE8333A only)
C569, 570, 571, 572, 573, 574, 575, 576	21-84636E10	56 ± 5%
C578, 579	21-83422F01	25.5 ±5%
C584	8-82905G15	.015 uF ±10%; 100 V
C587, 588	21-848978	190 ±3% 500 V
C589	8-82905G15	.015 uF ±10%; 100 V
C590	21-84736E08	16 ±5%
C559, 577, 598	21-84736E31	56 ±5%
C592	21-84736E08	16 ±5%
C597	21-84873H26	56 ±10%
L511, 513	24-83977B02	<u>COIL, rf:</u> 2-1/2 turns
L520	24-83977B02	2-1/2 turns (TLE8333A only)
L514, 515, 516, 517	24-84346A03	.090 uH
L521, 522	24-83884G01	3-1/2 turns; coded RED
L530	24-84346 A03	.090 uH (TLE8333A only)
Q506	48-869850	<u>TRANSISTOR: (SEENOTE)</u> NPN; type M9850
Q507	48-869851	NPN; type M9851
Q508	48-869741	NPN; type M9741
Q509, 510, 511, 512	48-869874	NPN; type M9874 (TLE8333A)
Q509, 510, 511, 512	48-869755	NPN; type M9755 (TLE8334A)
R525, 527, 528, 530, 532, 535	6-125C01	<u>RESISTOR, fixed:±10%;1/2 W:</u> unless otherwise stated
R541	17-82177B53	10
R542	6-125C01	2; 5 W (TLE8334A only)
Z503, 506-509	1-80740B06	<u>FILTER, parasitic suppressor:</u> hybrid

NON-REFERENCED ITEMS

MICROSTRIPS		
1-80739B15		25-37 W input
1-80709D17		37 W output
1-80709D18		100 W output (TLE8333A only)
1-80709D19		100 W output (TLE8333A only)
1-80739B27		75-100 W input
1-80739B28		75-100 W input
1-80709D27		100 W output (TLE8334A only)
1-80709D28		100 W output (TLE8334A only)
1-80709D51		driver input 22 W
1-80769B99		driver output 22 W
26-82653K01		HEATSINK
30-83693F01		CABLE, coaxial; 1/2" long
30-83694F01		CABLE, coaxial; 3" long
42-84470E01		HOLDER, substrate
76-84069B01		FERRITE BEAD; 7 req'd.
7-82796K01		BRACKET
7-84406D01		BRACKET, mounting; 2 req'd.
15-82737K02		COVER, end cap
42-83123F01		RETAINER; 12 req'd.
42-84473E01		STRAP, ground (.775" wide)
		2 req'd.
42-84473E02		STRAP, ground (.385" wide)
		4 req'd.
42-84473E03		STRAP, ground (.250" wide)
		3 req'd.
42-38764		CLAMP, cable

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
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TKN6768A Metering and Cable Kit PL-3428-O

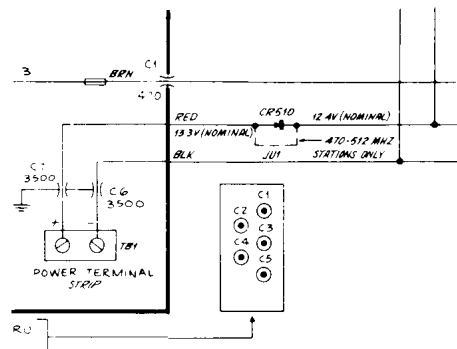
C1 thru 5	21-821474	<u>CAPACITOR, fixed: pF ±20%:</u> 500 V; unless otherwise stated
C6, 7	21-84211B03	470
C8, 9, 10, 527, 536, 543, 546, 548	21-861219	3500; 250 V
		1000 +100-0%
J1	9-84207B01	<u>CONNECTOR, receptacle:</u> 7 contacts
P501, 502	28-84967D01	<u>CONNECTOR, plug:</u> BNC type
R1	6-124A33	<u>RESISTOR, fixed:</u> 220 ±5%; 1/4 W
R2	6-124D12	390k ±10%; 1/4 W
R518	17-82620B03	.02 ±5%; 3 W
R519	6-84605E01	meter shunt; .008 ±1%
R520	6-84606E01	meter shunt; .004 ±1%
TB1	31-50378	<u>TERMINAL BOARD:</u> 2 screw barrier type
W501	1-80775B41	<u>CABLE ASSEMBLY, rf:</u> includes: 30-84173F01 CABLE, coaxial, 12" long and P501
NON-REFERENCED ITEMS		
	76-83960B01	FERRITE BEAD; 5 req'd.
	1-80775B44	BUS BAR, 75 W
	30-84173F01	CABLE, coaxial (used with P501 & P502)
	42-10217A02	STRAP, cable; 2 req'd.
	43-82253C07	BUSHING, threaded; 2 req'd.
	15-82737K01	COVER, end cap
	14-84548A01	INSULATOR, washer; 2 req'd.
	14-82975K01	INSULATOR, terminal strip
	42-38764	CLAMP, cable

NOTE: For optimum performance, replacement diodes, and transistors must be ordered by Motorola part numbers.

REVISIONS

EEPS-17183-D

CHASSIS AND SUFFIX NO.	REF. SYMBOL	CHANGE	LOCATION
TLE1713A (TLE8333A-1)	CR510	DELETED 48-82732C07, CIR- CUIT WAS AS SHOWN BELOW	PA A+ BUS



CHASSIS METERED	METER SWITCH POSITION	FUNCTION	TYPICAL METER READING	FACTORY TEST (Note 2)	DATE WHEN PLACED IN SERVICE
RECEIVER	1	Channel Element Output	15 uA		
	2	1st Doubler Output	15 uA		
	3	2nd Doubler Output	15 uA		
	4 - and +	Discriminator Output	0±2 uA		
	5	Limiter Output	10 uA		
XCTR	1	"IDC" Audio Output	Note 4		
	2	Channel Element Output	25 uA		
	3	Tripler Input	38 uA		
	4	1st Doubler Input	22 uA		
	5	Exciter Output	25 uA		
POWER AMPL	1	Driver Current (75 Watt Only)	15 uA (min)		
	2	PA Current	6-18 uA		
	3	1st Stage Voltage	24-28		
	5	Forward Output Power	3-25		
	1	Reflected Power	24-50 uA		
POWER CONTROL	2	Control Voltage	5-20 uA		
	5	Control Voltage	3-25 uA		

NOTES:

1. On multiple frequency stations, repeat test for each operational frequency.
2. Enter data from factory test tickets provided with station at time of shipment.
3. Reading should be 1 uA or less. If measurement is not readable, inject an on-channel sig
4. The "IDC" audio should be 2 uA without modulation and 10 uA with 120 mV @1000 Hz modul
5. See the complete transmitter alignment procedure included in this section of the manual fo