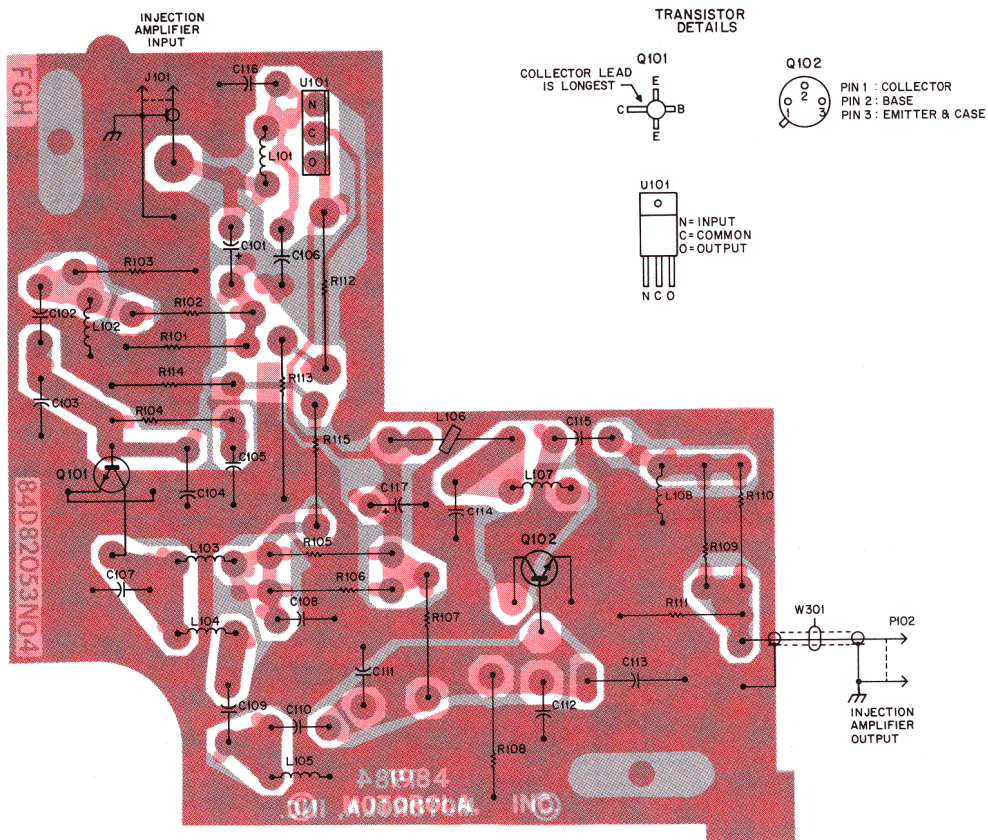


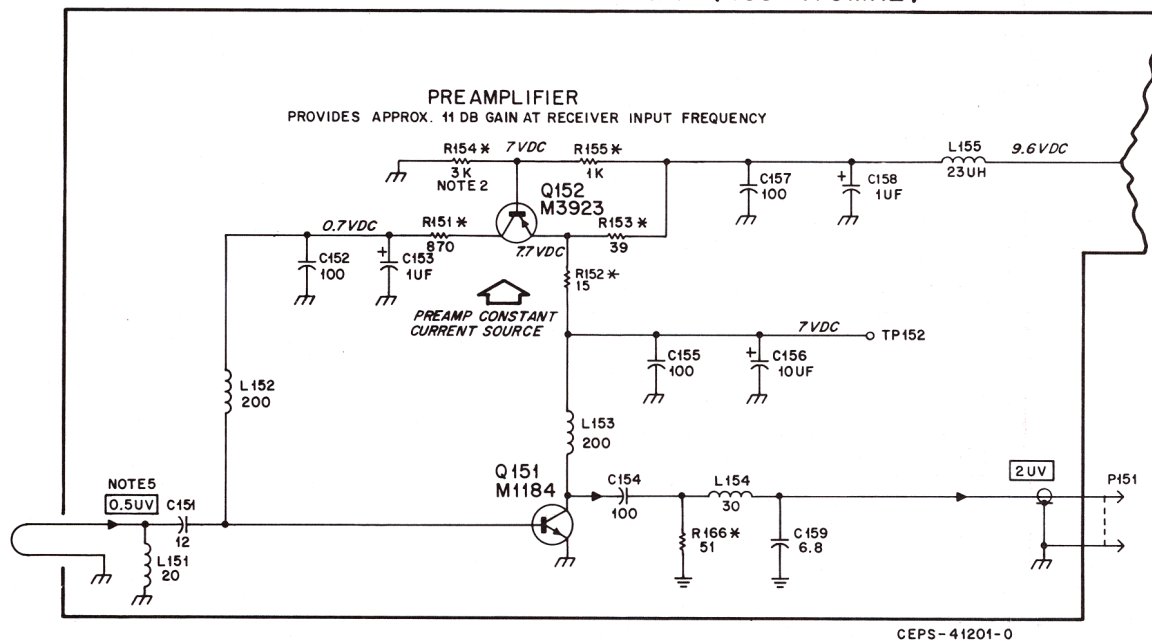
TLE5320A SERIES INJECTION AMPLIFIER (403-475 MHz)



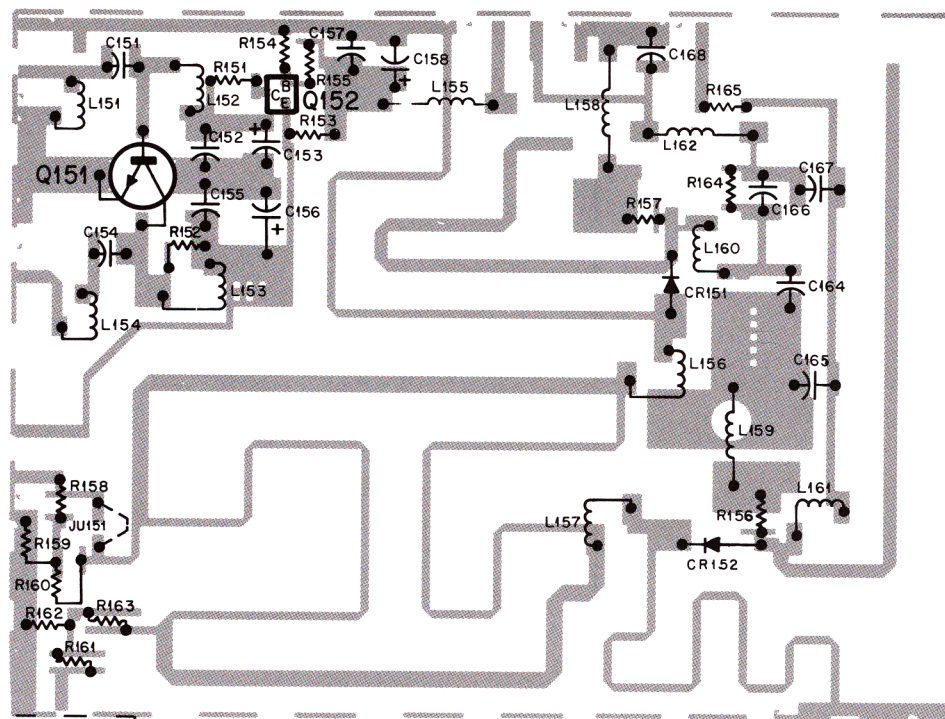
SHOWN FROM COMPONENT SIDE

COMPONENT SIDE: BD-CEPS-37450-A
SOLDER SIDE: BD-CEPS-37451-A
OL-CEPS-37452-A

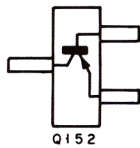
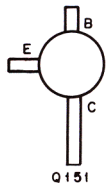
P/O TLE5402A FRONT END (435-475MHz)



TLE5402B FRONT END (435-475 MHz)



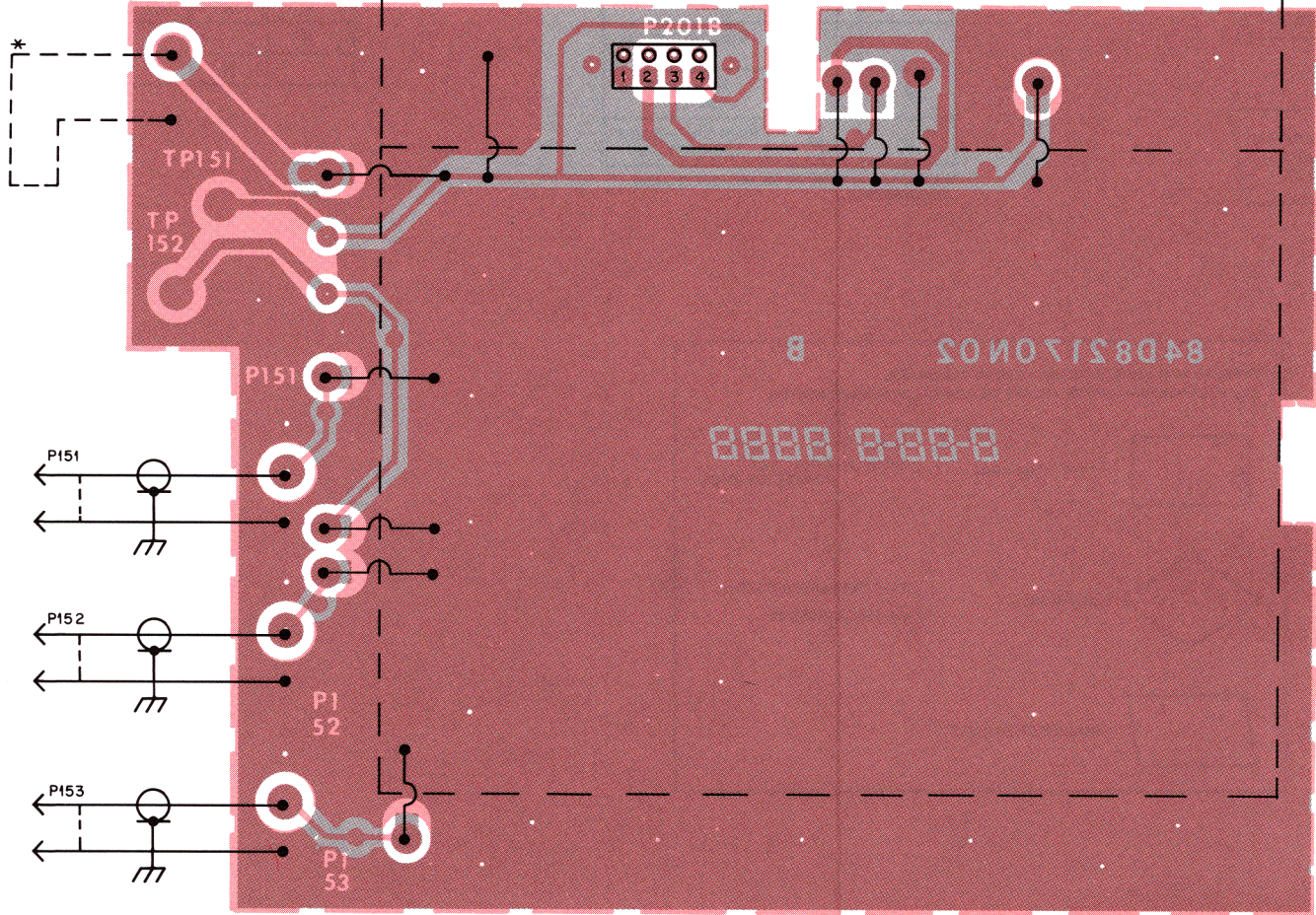
TRANSISTOR OUTLINE



SHOWN FROM COMPONENT SIDE

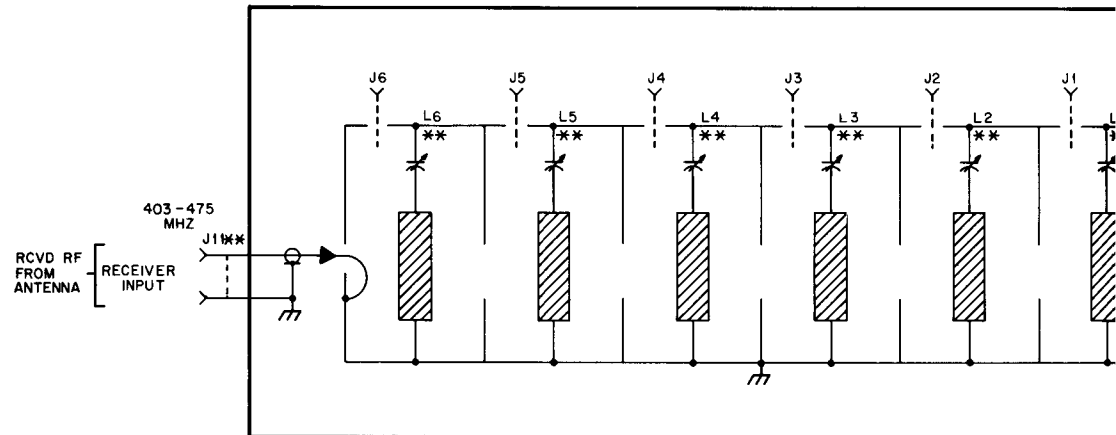
P201B
1-GND
2-+9.6V
3-MIXER OUTPUT & METER 3
4-TEST POINT P151

COMPONENT SIDE ● BD-CEPS-40439-0
SOLDER SIDE ● BD-CEPS-40440-0
OL-CEPS-40441-0



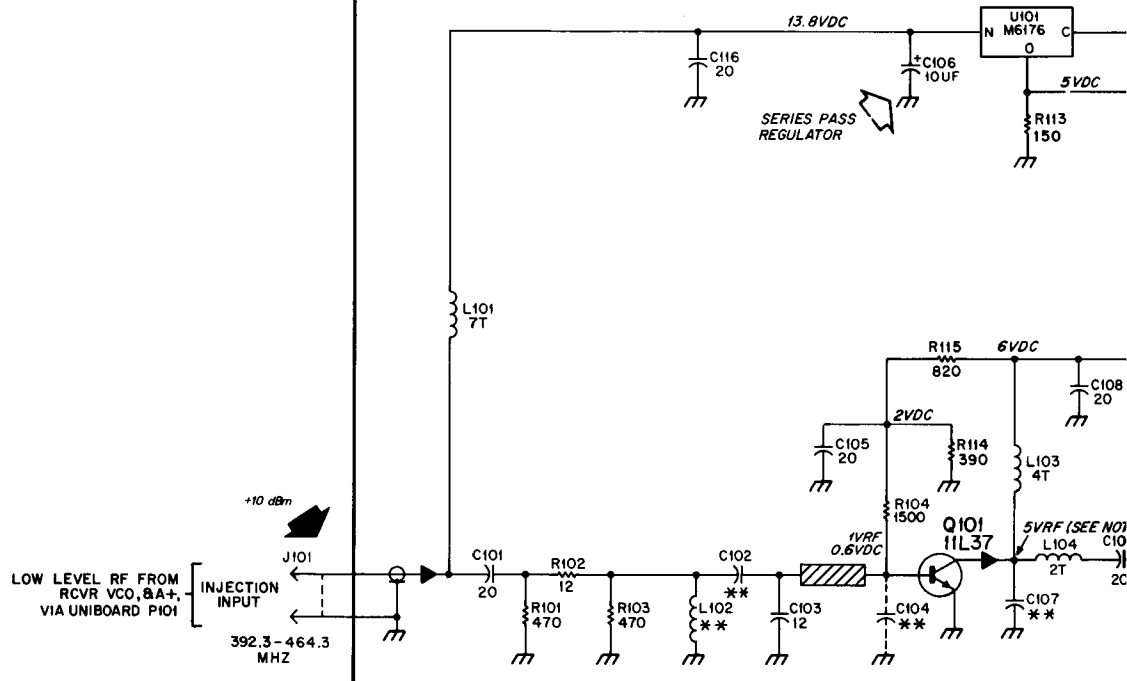
* SOLDER SIDE MOUNTED RF PRESELECTOR PROBE

TLE5390A SERIES OR TLE5711A PRESELECTOR FILTER



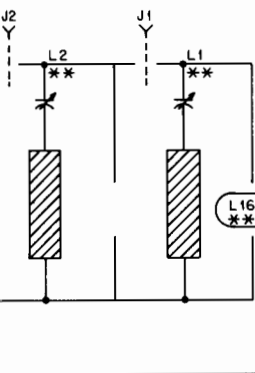
TLE5320A SERIES INJECTION AMPLIFIER

AMPLIFIES THE INJECTION SIGNAL GENERATED BY THE RECEIVER SYNTHESIZER.



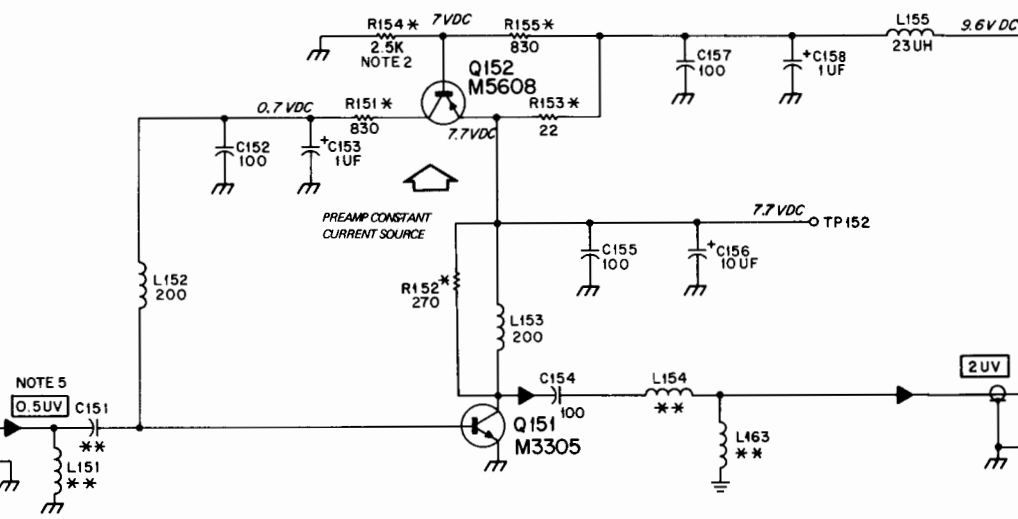
TLE5400A/B SERIES OR TLE5701A FRONT END

R FILTER

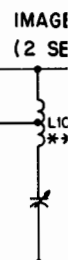


PREAMPLIFIER

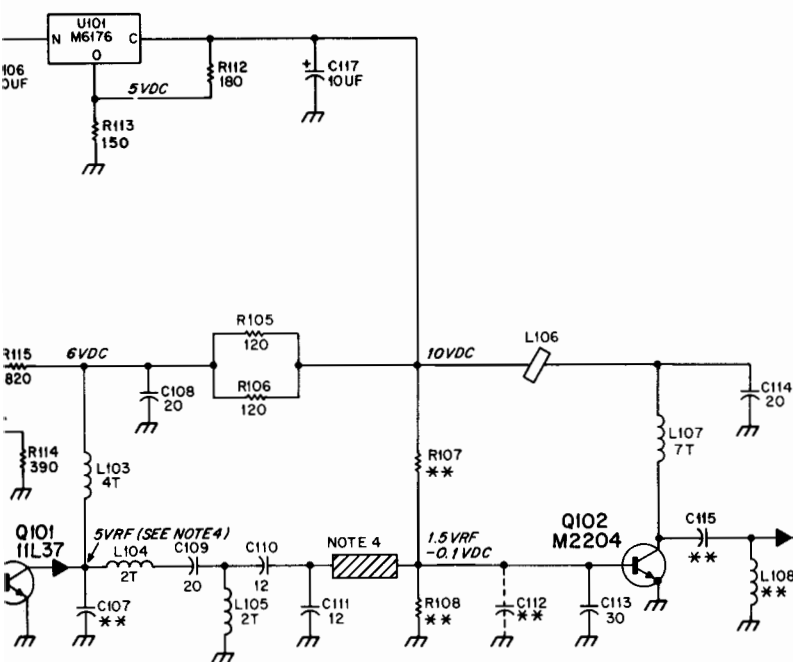
PROVIDES APPROX. 14 DB GAIN AT RECEIVER INPUT FREQUENCY.



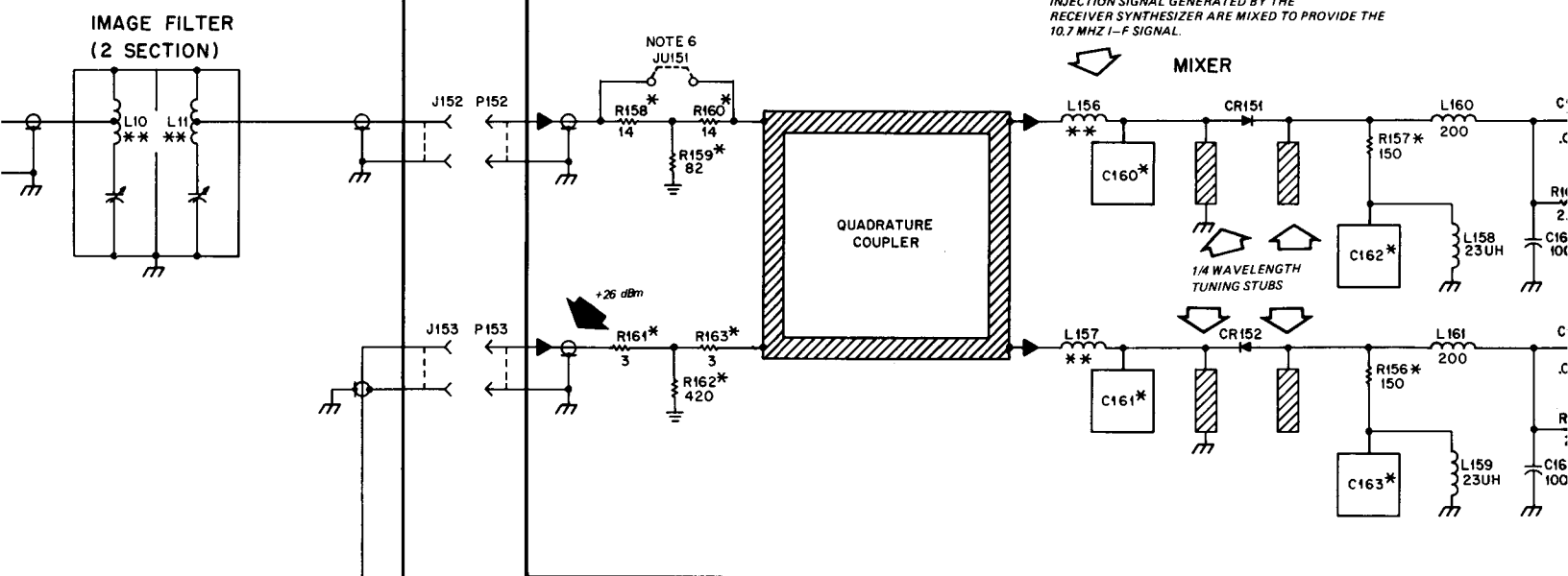
TFE6480A SERIES



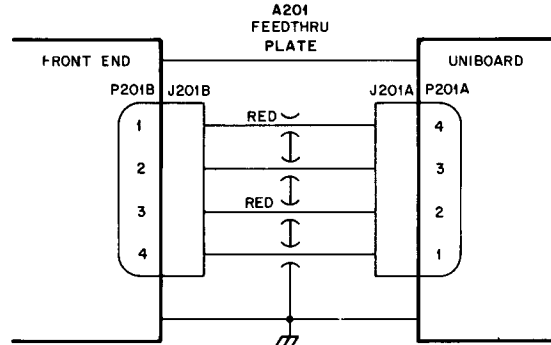
IFIER



5480A SERIES INJECTION FILTER



INTERCONNECT DETAIL

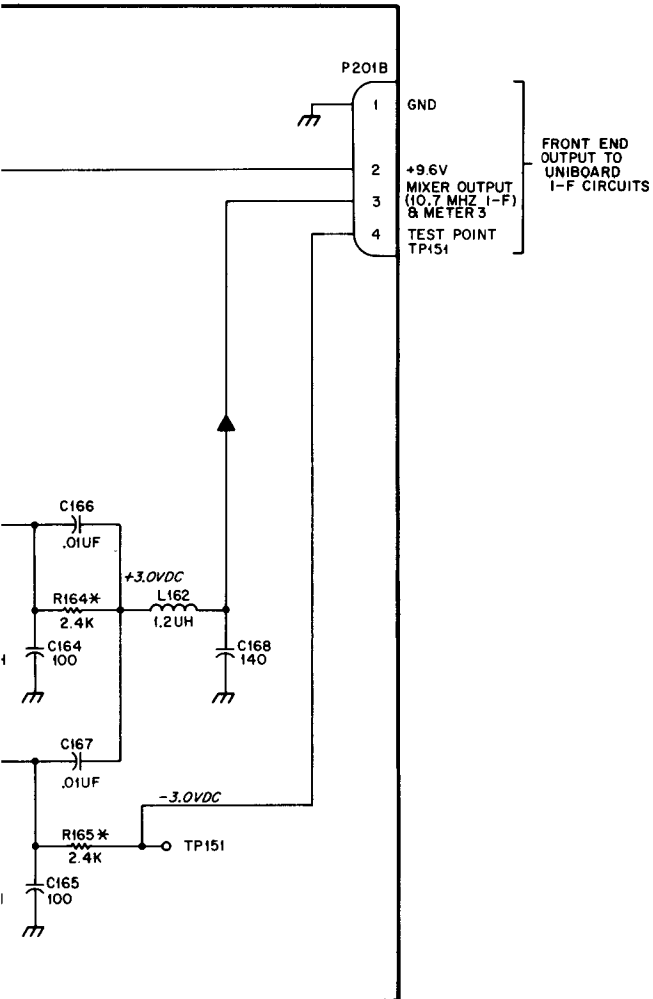


UHF RECEIVER

RECEIVER FRONT ENDS (403-475 MHz)

p/o TUE1760A SERIES OR TUE1901A RF TRAY

SCHEMATIC DIAGRAM



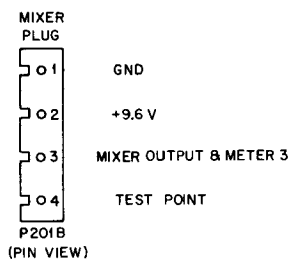
NOTES:

1. Unless otherwise specified, all resistor values are in ohms, capacitor values in picofarads.
2. Resistors marked with a single asterisk (*) are screened directly onto the substrate and are not field-replaceable.
3. Components marked with a double asterisk (**) indicate part value is dependent on frequency range.
4. All rf voltages measured with an rf millivoltmeter.
5. Voltages in the box indicate the necessary signal injected from a signal generator through a 0.01 uF capacitor to produce 20 dB quieting at the speaker.
6. JU151 usage shown in jumper table.

Jumper Table

Model	IN	OUT
TLE5401A		X
TLE5402B		X
TLE5701A	X	

CONNECTOR DETAIL



parts list

LEGEND:
 L = 403-435 MHz
 M = 435-475 MHz
 N = T/R of 3-20 MHz
 W = T/R of 5-20 MHz
 No Code = 403-475 MHz, N or W

TLE5391A Preselector Filter; L, W (See Note)
 TLE5392A Preselector Filter; M, W (See Note)
 TLE5711A Preselector Filter; L, N (See Note)

PL-8146-C

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
J11	—	p/o preselector loop and connector assembly
	1-80751D93	ASSEMBLY, preselector loop and connector includes: ref. item J11 (TLE5391A)
	1-80751D94	ASSEMBLY, preselector loop and connector includes: ref. item J11 (TLE5392A)
	1-80783D54	ASSEMBLY, preselector loop and connector includes: ref. item J11 (TLE5711A)
	2-83718N01	NUT, tension; 6-used
	3-10917A07	SCREW, machine; M3 x 0.5 x 4mm; 18 used
	3-10943J16	SCREW, tapping; 3.5 x 0.6 x 10mm; 40-used
	3-83100N14	SCREW, tuning; 6-used (TLE5392A)
	3-83100N11	SCREW, tuning; 6-used (TLE5391A, 5711A)
	3-83498N01	SCREW, tapping; 4-used
	15-83179N01	COVER, preselector
	15-83189N09	HOUSING, preselector (TLE5391A)
	15-83189N07	HOUSING, preselector (TLE5392A)
	15-83189N08	HOUSING, preselector (TLE5711A)
	32-82798H04	GASKET, rf; 35"-used
	42-83128R02	CLIP, contact; 6 used

note:The preselector filter is a non-repairable unit, except for the items listed. Should any other part of the unit fail, then the entire preselector filter must be replaced.

LEGEND:
 L = 403-435 MHz
 M = 435-475 MHz
 No Code = 403-475 MHz

TLE5321A Injection Amplifier; L
 TLE5322A Injection Amplifier; M

PL-8147-C

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
		capacitor, fixed: pF $\pm$ 5%; 100 V: unless otherwise stated
C101	21-11014H32	20
C102L	21-11014H25	10 $\pm$ 0.5 pF
C102M	21-11014H23	8.2 $\pm$ 0.5 pF
C103	21-11014H27	12
C104L	21-11014H29	15
C105	21-11014H32	20
C106	23-11019A21	10 uF $\pm$ 20%; 35 V
C107L	21-11014H21	6.8 $\pm$ 0.5 pF
C107M	21-11014H17	4.7 $\pm$ 0.25 pF
C108, 109	21-11014H32	20
C110, 111	21-11014H27	12
C112	not p/o kits	
C113	21-84366F26	30; 250 V
C114	21-11014H32	20
C115L	21-11014H28	13
C115M	21-11014H25	10 $\pm$ 0.5 pF
C116	21-11014H32	20
C117	23-11019A21	10 uF $\pm$ 20%; 35 V
J101	28-84227B01	connector, receptacle: phono, male
		coil, rf:
L101	24-11030A06	7-turns; VIO
L102L	24-11030C05	1/2-turn; GRN
L102M	24-11030A01	2-turns; RED
L103	24-11030A03	4-turns; YEL
L104, 105	24-11030A01	2-turns; RED
L107	24-11030A06	7-turns; VIO
L108L	24-11030A01	2-turns; RED
L108M	24-11030C05	1/2-turn; GRN
P102	28-82365D04	connector, plug: phono, male
		transistor: (see note)
Q101	48-84411L37	NPN; type M1137
Q102	48-82022N04	NPN; type M2204
		resistor, fixed; ohms; $\pm$ 5%; 1/4 W: unless otherwise stated
R101	6-11009A41	470
R102	6-11009A03	12
R103	6-11009A41	470
R104	6-11009A53	1.5k
R105, 106	6-11009A27	120
R107L	6-11009A61	3.3k
R107M	6-11009A59	2.7k
R108L	6-11009A32	200
R108M	6-11009A25	100
R109, 110	6-11009A01	10
R111	6-11009A39	390
R112	6-11045A31	180; 1/2 W
R113L	6-11045A29	150; 1/2 W
R114	6-11009A39	390
R115	6-11009A47	820
R116	17-82036G08	10; 2 W
U101	51-84320A47	integrated circuit: (see note) series pass regulator; type M6176
W301	1-80751D83	cable, assembly: coaxial; 5"-used (Injection amplifier output); includes ref. item P102
non-referenced items		
	3-10943M17	SCREW, tapping; 3.5 x 0.6 x 13mm; 2-used
	26-80150B01	HEATSINK
	42-83503H01	RETAINER; 2-used
	2-10971A16	NUT, hex: for U101
	3-83497N04	SCREW, machine; slotted star: for U101
	4-84180C01	WASHER, shoulder: for U101
	29-80014A01	CLIP, coax terminal
	14-83820M02	INSULATOR, thermoconducting: for U101
	26-84012N01	SHIELD
	76-83960B01	CORE, ferrite

LEGEND:
L = 403-435 MHz
M = 435-475 MHz
N = T/R of 3-20 MHz
W = T/R of 5-20 MHz
No Code = 403-475 MHz, N or W

TLE5401A Front End; L, W
TLE5402B Front End; M, W
TLE5701A Front End; L, N

PL-8148-D

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
capacitor, fixed: pF ± 5%; 50 V: unless otherwise stated		
C151	21-11078B13	10 ± 0.5 pF
C152	21-11078B42	100; 100 V
C153	23-11049A08	1 uF ± 10%; 35 V
C154,155	21-11078B42	100
C156	23-11049A45	10 uF ± 10%; 35 V
C157	21-11078B42	100
C158	23-11049A08	1 uF ± 10%; 35 V
C160 thru 163		screened area capacitor
C164, 165	21-11078B42	100
C166, 167	21-84547A05	.01 ± 20%
C168	21-11078B46	140
diode: (see note) hot carrier		
CR151, 152	48-84616A12	
coil, rf; fixed; uH: unless otherwise stated		
L151L	24-84331M05	5-turns
L151M	24-84035N12	3-turns
L152, 153	24-84331M25	8-turns
L154L		not p/o kits
L154M	24-84331M13	4-turns
L155	24-82723H35	23
L156L, 157L	24-84331M43	4-turns
L156M, 157M	24-84331M02	5-turns
L158, 159	24-82723H35	23
L160, 161	24-84331M25	8-turns
L162	24-82723H49	1.2
L163L	24-84331M02	5-turns
L163M		not p/o kits
L164L	24-83194N10	preselector loop
L164L,N, 164M,W	24-83194N04	preselector loop
connector, plug: phono, male		
P151, 152, 153	28-84227B05	
P201B	9-83730M05	4-contact, female
transistor: (see note) NPN; type M33P05		
Q151	48-82233P05	
Q152	48-11056A08	PNP; type M56A08
resistor, fixed: screened nominal values on schematic		
R151 thru 165		
non-referenced items		
	42-83680N02	STRAP, omega; 10-used

note: For optimum performance, diodes, transistors, and integrated circuits must be ordered by Motorola part numbers.

LEGEND:
L = 403-435 MHz
M = 435-475 MHz
No Code = 403-475 MHz

TFE8481A Injection Image Filters; L
TFE8482A Injection/Image Filters; M

PL-8149-B

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
connector, receptacle: phono, female		
J102	9-84135B05	
J151,152,153	9-84135B05	phono, female
coil, rf:		
L7L	24-84833M05	BLU
L7M	24-84833M02	RED
L8L	24-84833M06	GRN
L8M	24-84833M07	VIO
L9L	24-84833M08	VIO
L9M	24-84833M02	RED
L10L	24-84833M03	ORG
L10M	24-84833M01	BRN
L11L	24-84833M03	ORG
L11M	24-84833M04	YEL
mechanical parts		
	2-84773E02	NUT, tension; 5-used
	3-83101N02	SCREW, tuning; 5-used
	15-83171N04	CASTING, injection filter (TFE8481A)
	15-83171N02	CASTING, injection filter (TFE8482A)
	15-83174N01	COVER, image filter
	15-83175N01	COVER, injection filter
	15-83958N01	COVER, phono connector
	32-82796H02	GASKET, rfi
	37-122062	TUBING, teflon