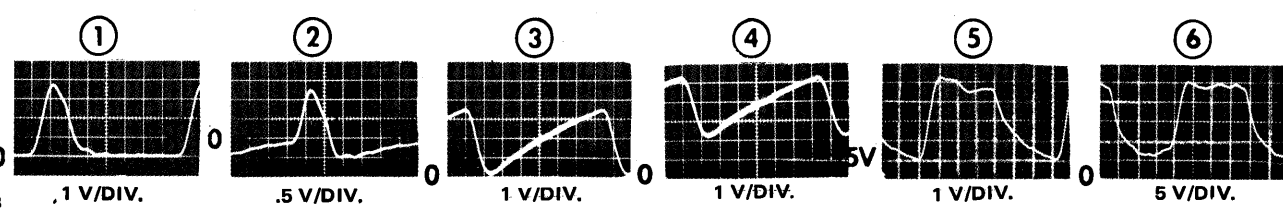


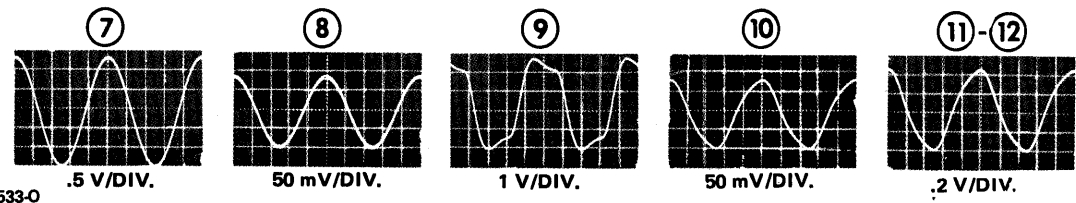
ALL RF WAVEFORMS TAKEN UNDER FOLLOWING CONDITIONS:

1. TO OBTAIN WAVEFORMS SIMILAR TO THOSE SHOWN, OSCILLOSCOPE MUST HAVE AT LEAST 50 MHz BANDWIDTH.
2. WAVEFORMS MUST BE MEASURED WITH A RISE TIME AMPLIFIER.
3. VERTICAL SENSITIVITY SHOWN UNDER EACH WAVEFORM.
4. VERTICAL INPUT - DC.
5. HORIZONTAL DEFLECTION = 10 nanosec/DIV.
6. TRANSMITTER KEYS.
7. NO MODULATION (REMOVE "VIBRA-SENDER" REED IN "PL" RADIO).

EXCITER RF WAVEFORMS (12.5-14.5 MHz)

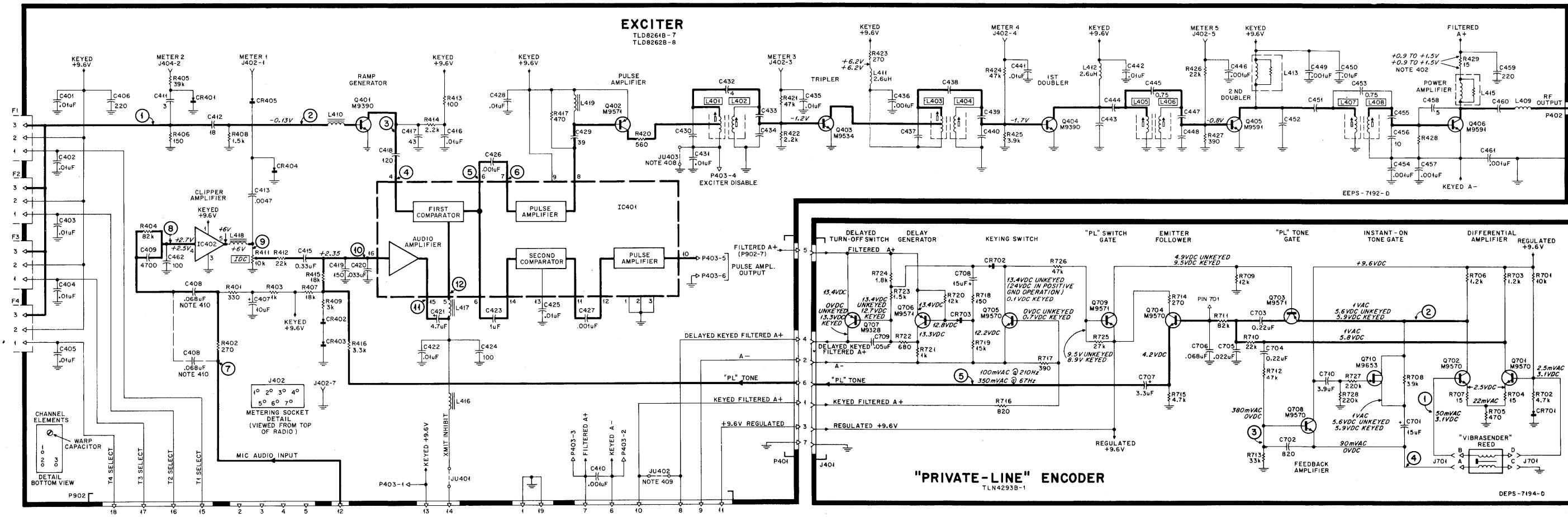


EXCITER AUDIO WAVEFORMS



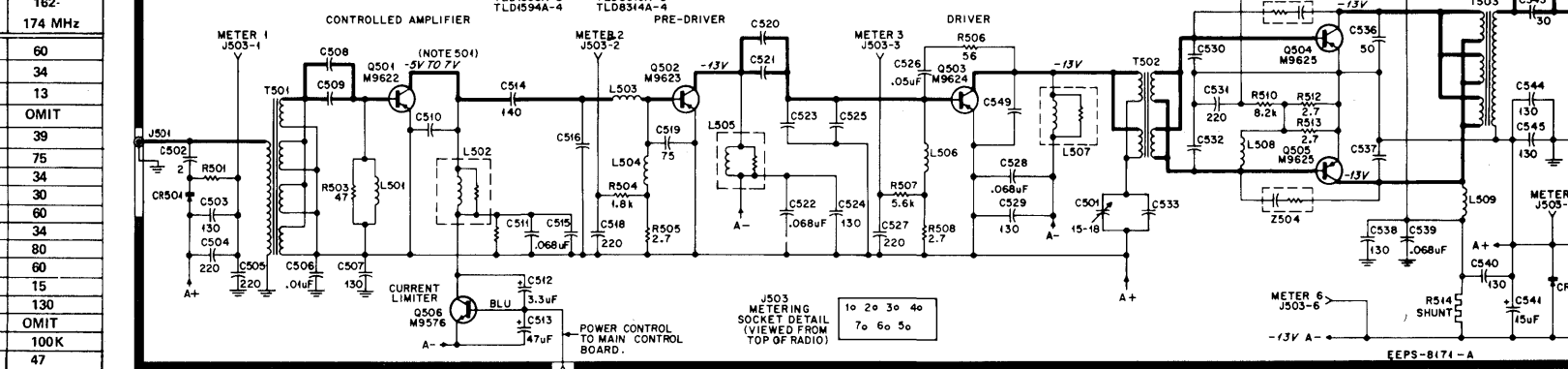
ALL AUDIO WAVEFORMS TAKEN UNDER FOLLOWING CONDITIONS:

1. VERTICAL SENSITIVITY SHOWN UNDER EACH WAVEFORM.
2. HORIZONTAL DEFLECTION = 0.2 msec/DIV.
3. 1000-Hz 1-VOLV rms (2.8 V P-P) AUDIO AT MICROPHONE INPUT.
4. "TONE" POT SET FOR 35 kHz DEVIATION.

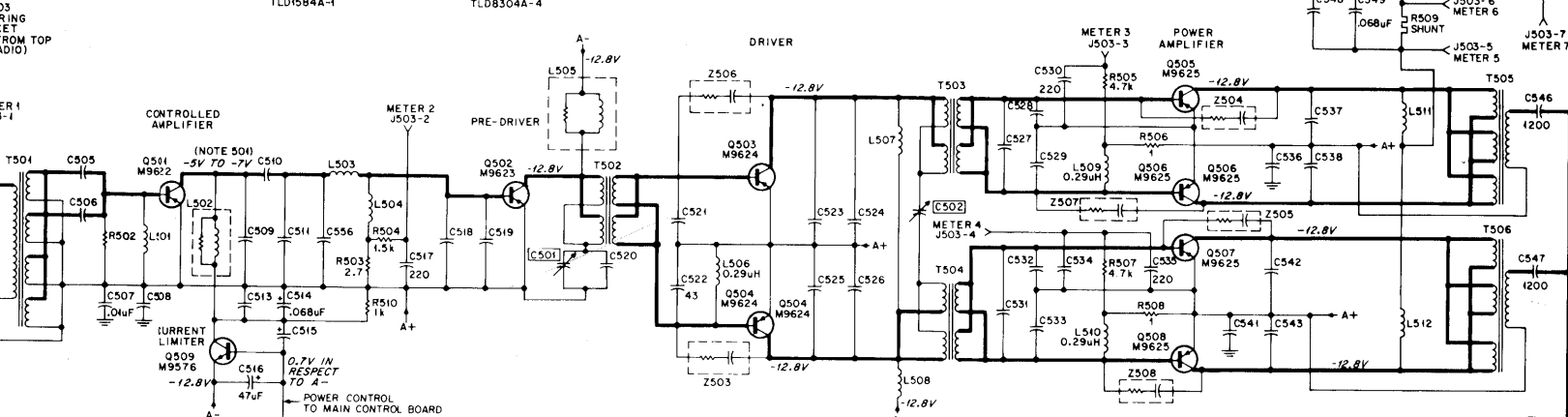


"PRIVATE-LINE" ENCODER

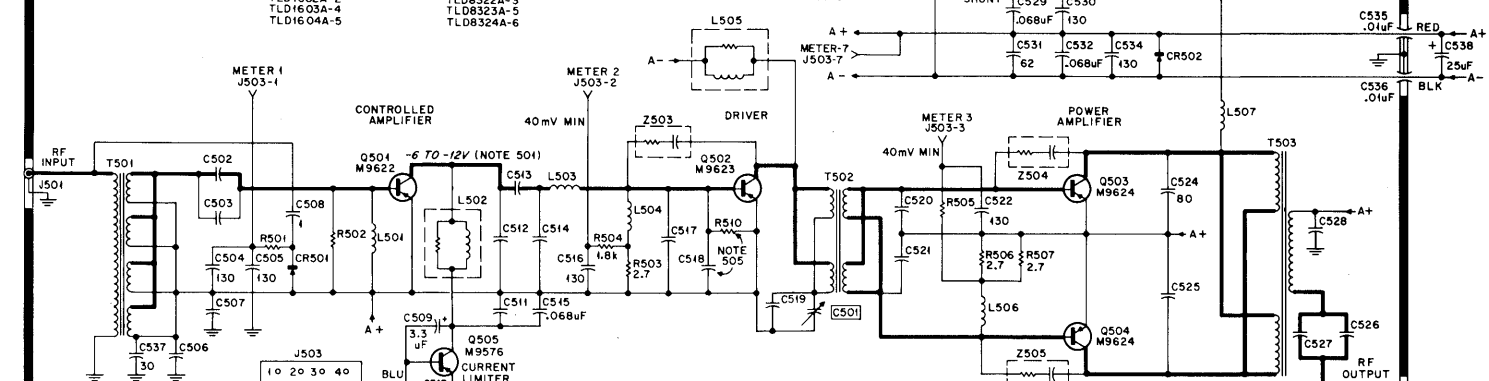
60-WATT POWER AMPLIFIER



90/110-WATT POWER AMPLIFIER



45-WATT POWER AMPLIFIER



90/110 WATT POWER AMPLIFIER COMPONENT VALUES

REFERENCE SYMBOL	132-150.8 MHz	150.8-162 MHz	162-174 MHz
C501	4.40	1.5-18	1.5-18
C502	2.4-27	2.19-3	2.19-3
C503	62	62	62
C506	62	51	34
C508	160	130	130
C509	15	10	10
C510	175	140	140
C511	62	51	39
C513	160	130	130
C515	OMIT	OMIT	3.3 uF
C518	49	30	39
C519	49	49	49
C520	30	20	12
C521	62	43	43
C522	75	51	34
C523	80	120	130
C524	OMIT	OMIT	0.1 uF
C526	OMIT	OMIT	0.1 uF
C527	43	30	20

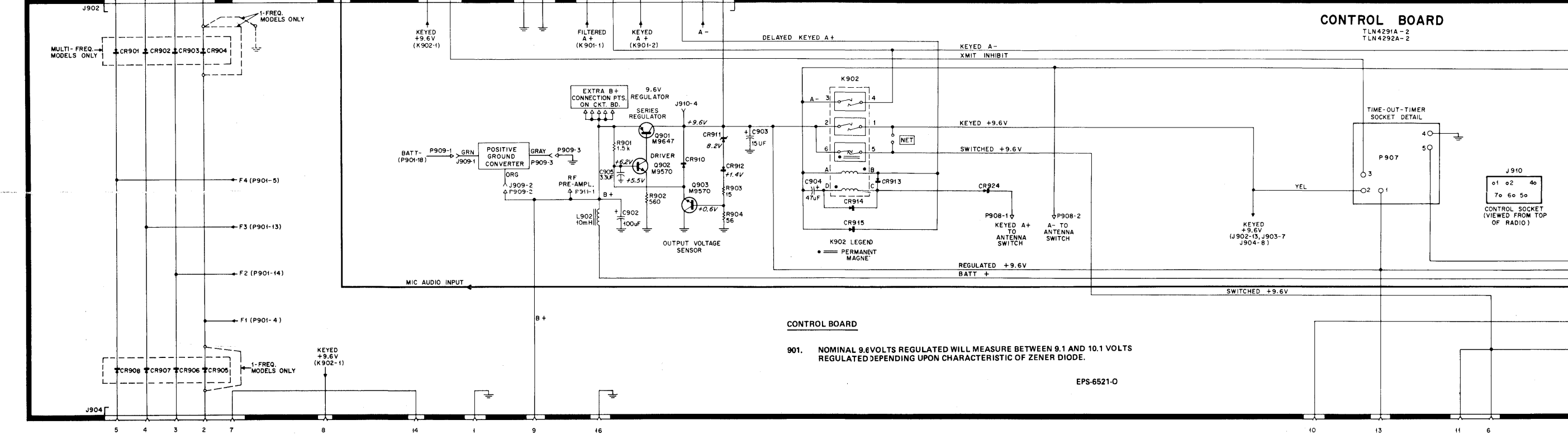
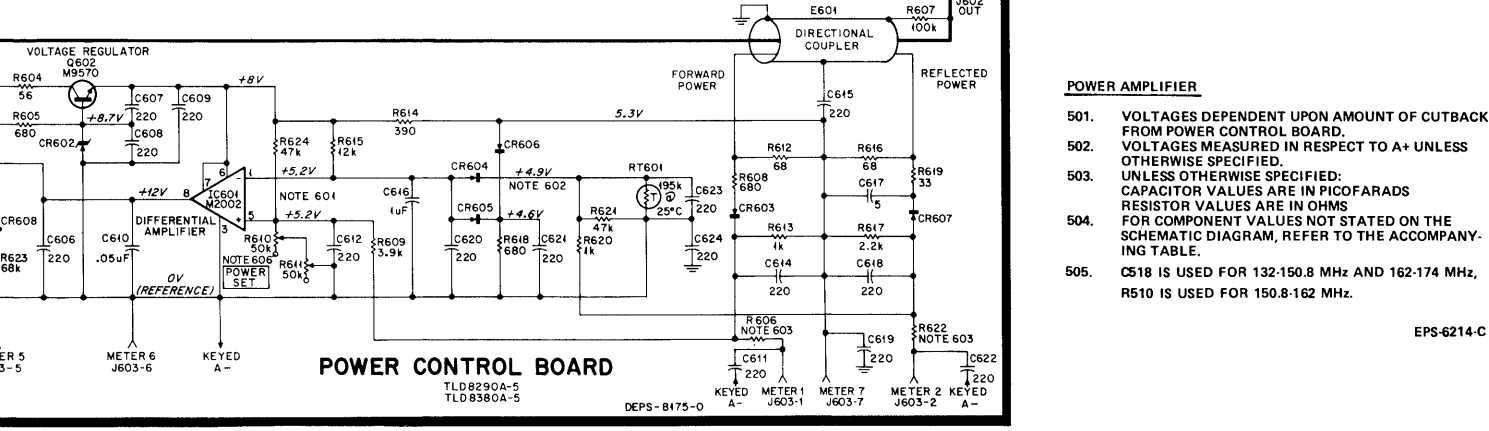
60-WATT POWER AMPLIFIER COMPONENT VALUES

REFERENCE SYMBOL	132-150.8 MHz	150.8-162 MHz	162-174 MHz
C528	75	75	80
C529	60	51	51
C531	43	30	15
C532	75	75	80
C533	62	60	68
C536	220	130	OMIT
C537	130	150	100
C538	130	150	120
C541	220	130	130
C542	130	150	100
C543	120	130	100
C548	160	130	130
C551	160	130	130
C562	OMIT	15 uF	OMIT
C566	30	30	OMIT
R501	100K	150K	100K
R502	47	10	47
R506	8.2K	4.3K	8.2K
R507	2.7	1.0	2.7
R508	2.7	1.0	2.7
R510	1K	NONE	NONE

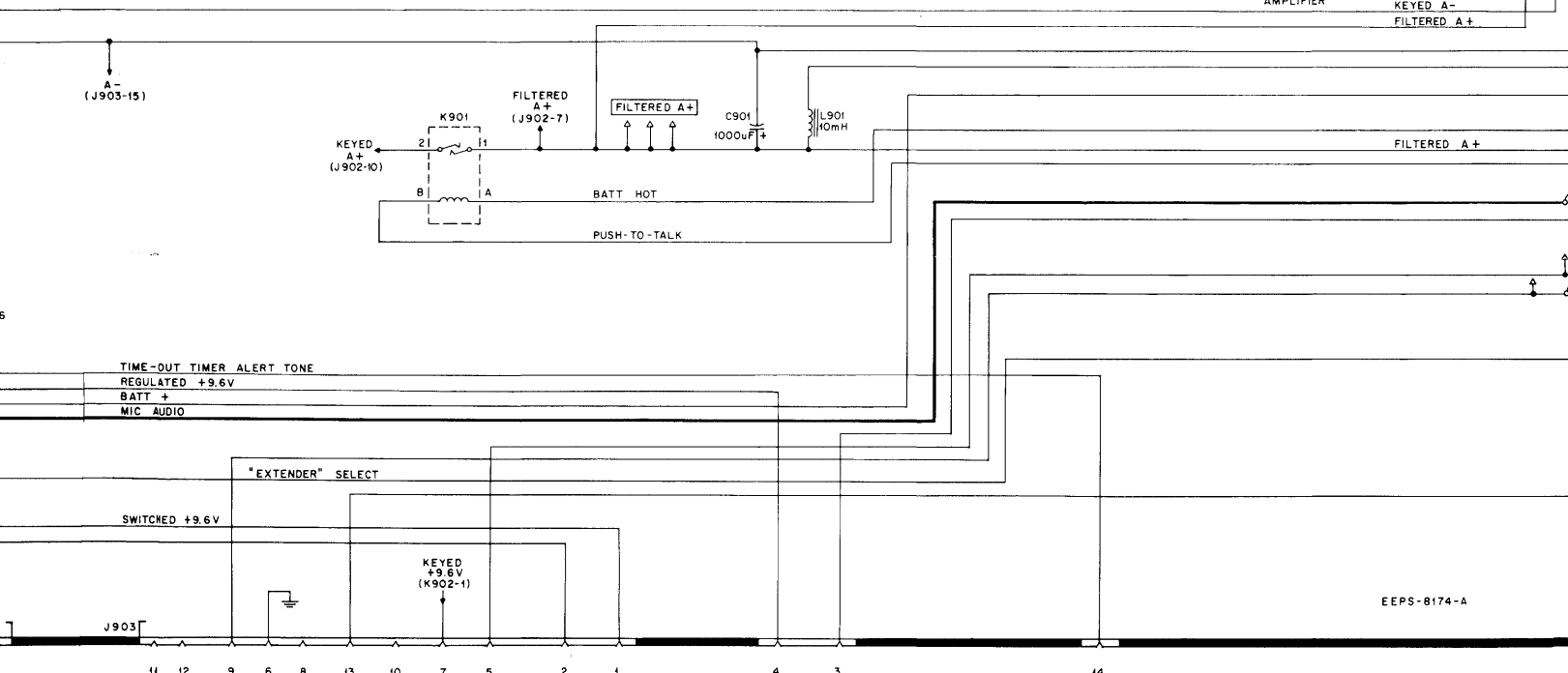
45-WATT POWER AMPLIFIER COMPONENT VALUES

REFERENCE SYMBOL	132-150.8 MHz	150.8-162 MHz	162-174 MHz
C501	4.40	1.5-18	1.5-18
C502	62	62	39
C503	62	51	34
C506	62	51	34
C507	62	130	OMIT
C510	15	15	6
C513	175	100	140
C514	62	62	29
C517	49	30	39
C518	49	OMIT	49
C519	20	20	12
C520	91	51	75
C525	100	100	130
C526	30	OMIT	7
C527	OMIT	OMIT	7
C528	68	62	62
C529	OMIT	OMIT	100 uF
C556	30	OMIT	OMIT
R501	68K	68K	52K
R502	10	10	47
R505	3.3K	3.3K	6.2K
R510	OMIT	88	OMIT
Z503	ADD	OMIT	OMIT

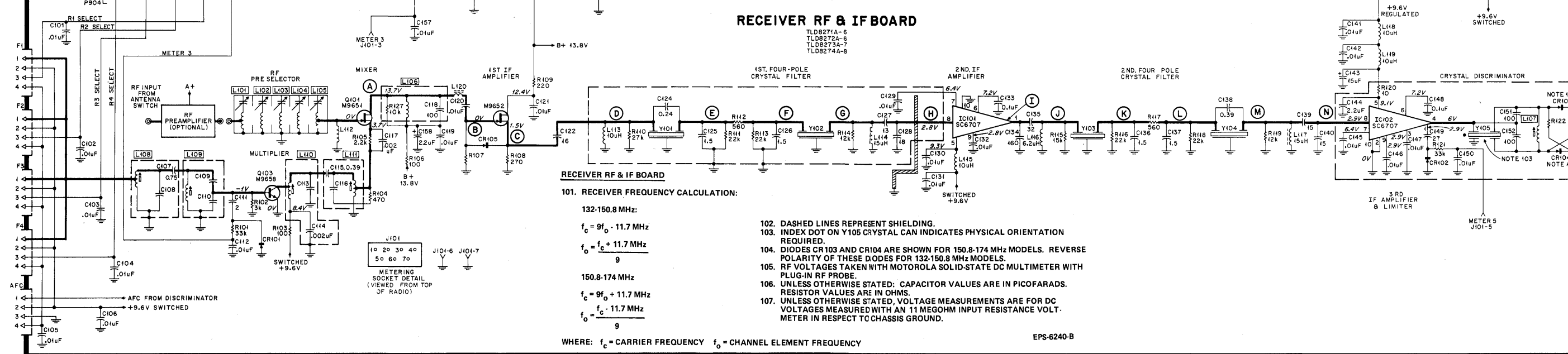
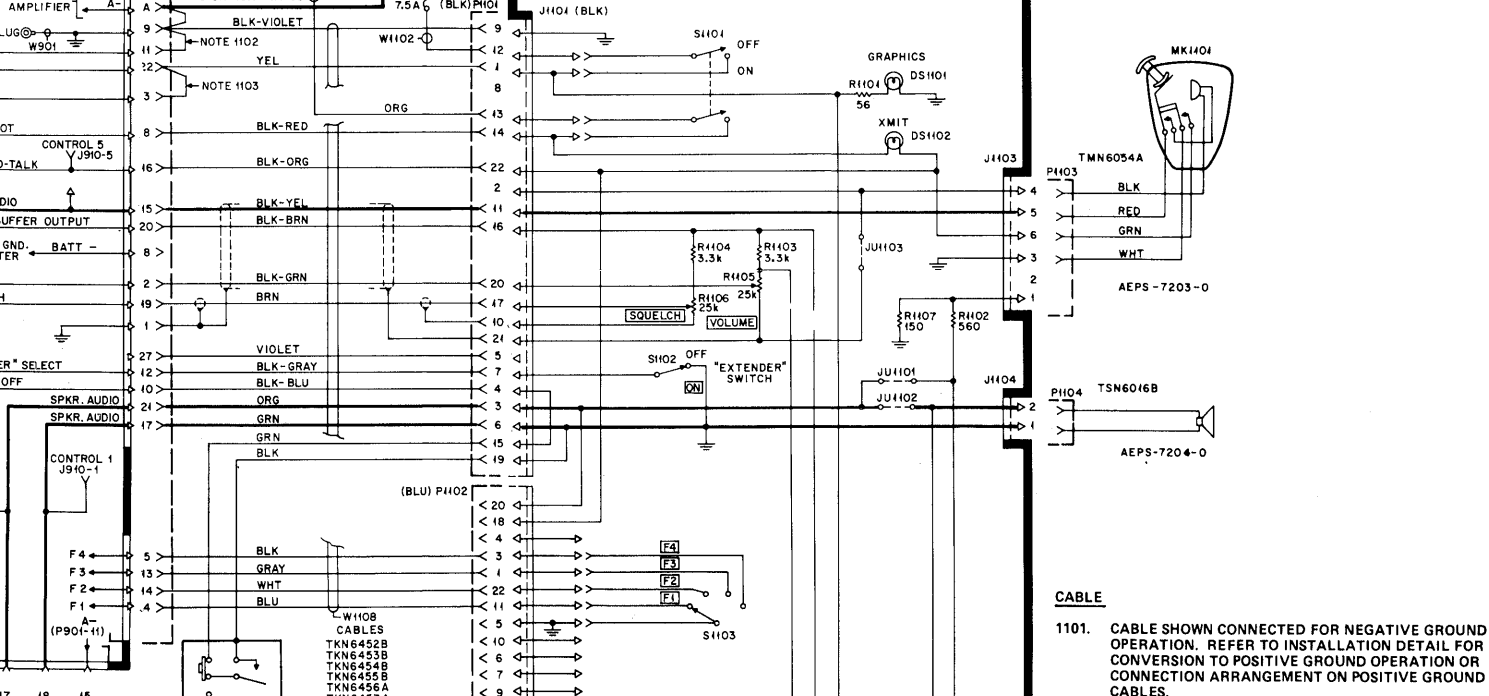
POWER CONTROL BOARD



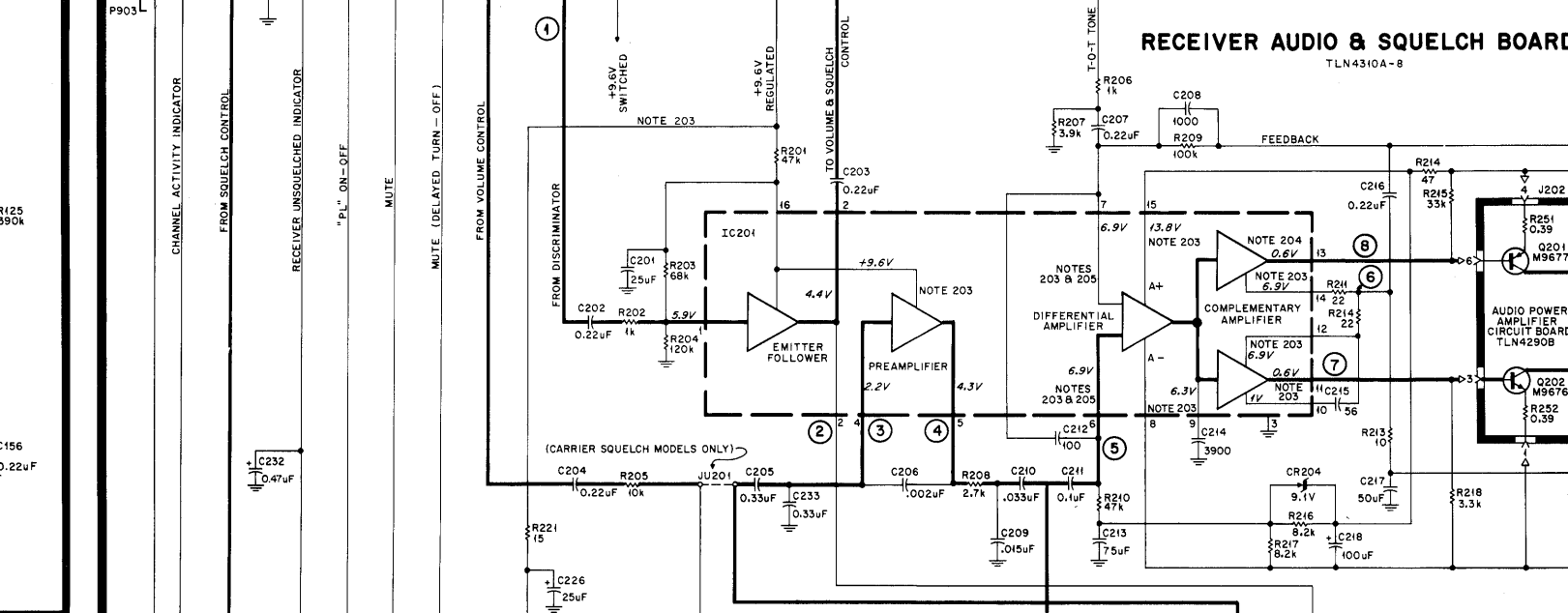
CONTROL BOARD



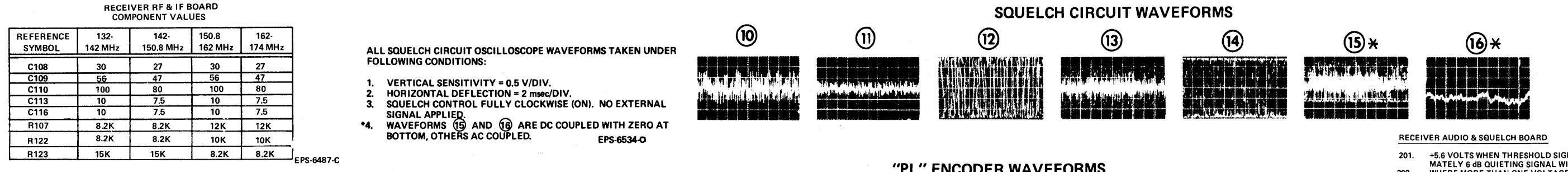
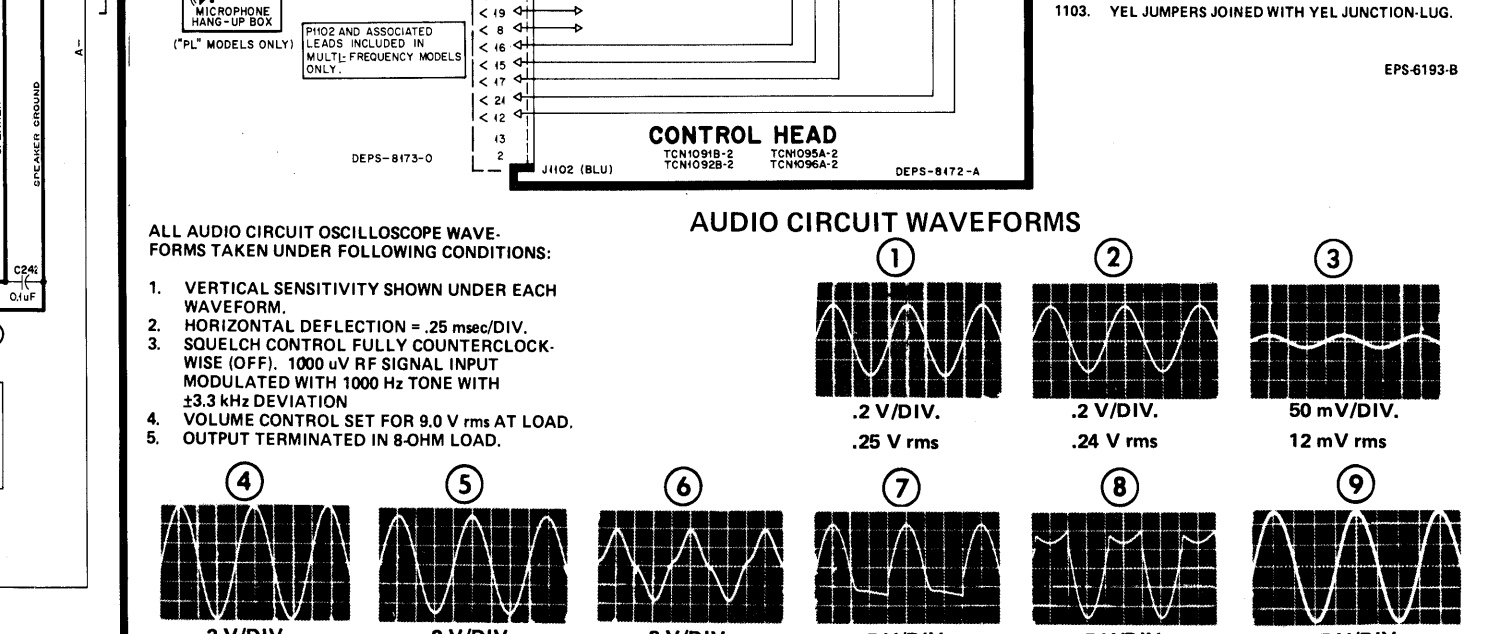
POWER CONTROL BOARD



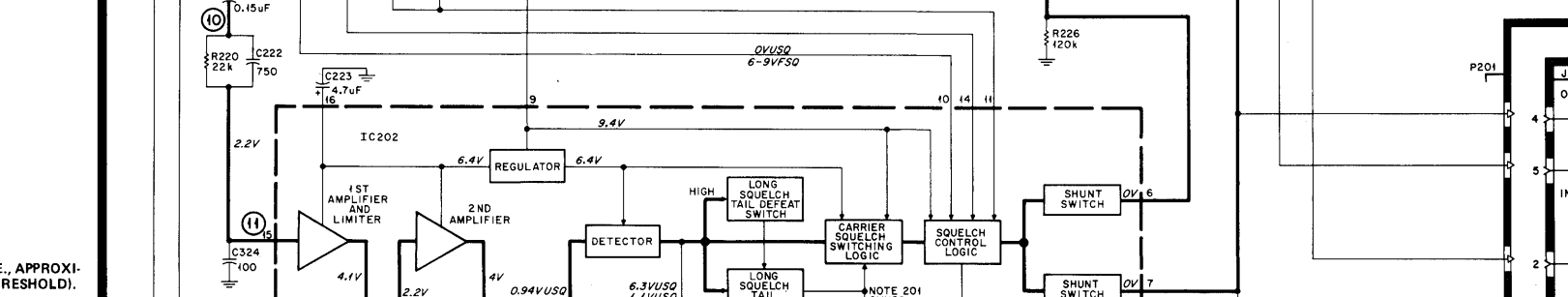
RECEIVER RF & IF BOARD



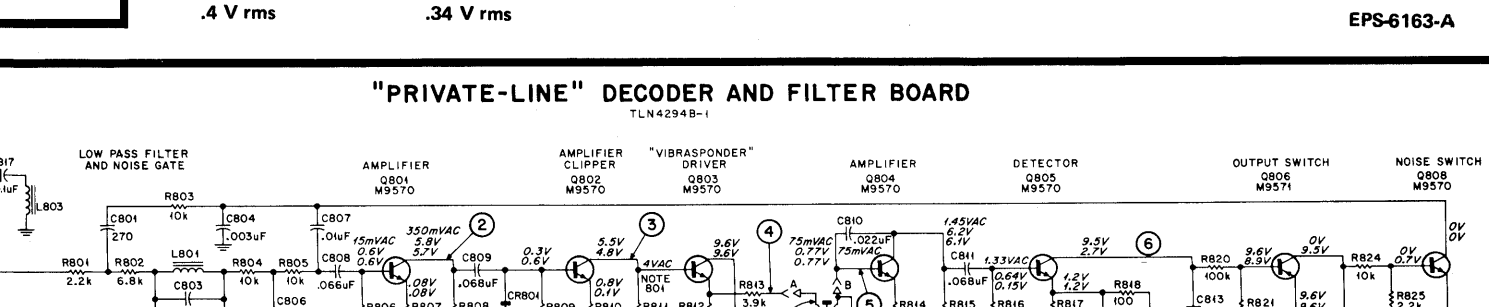
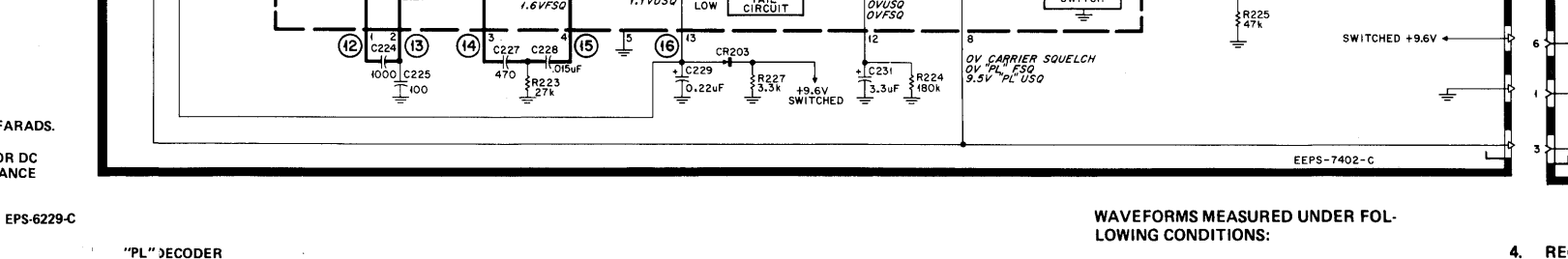
RECEIVER AUDIO & SQUELCH BOARD



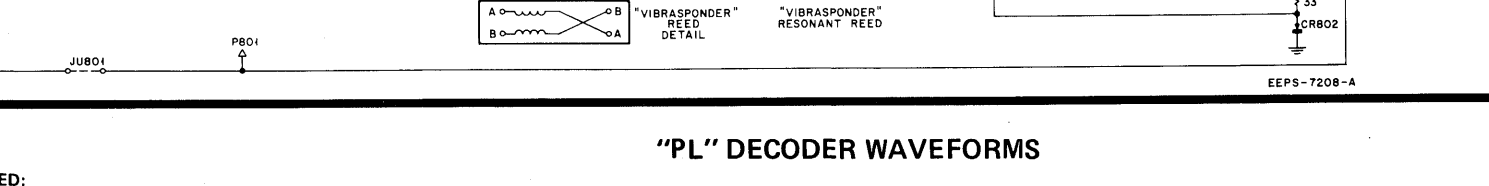
SQUELCH CIRCUIT WAVEFORMS



"PL" ENCODER WAVEFORMS



"PRIVATE-LINE" DECODER AND FILTER BOARD



NON-EXTENDER RECEIVER RF BOARD COMPONENT VALUES

REFERENCE SYMBOL	132-150.8 MHz	150.8-162 MHz	162-174 MHz
C108	30	30	30
C109	56	47	47
C110	100	89	100
C116	10	7.5	7.5
R107	8.2K	8.2K	12K
R122	8.2K	8.2K	10K
R123	15K	15K	8.2K

OSCILLOSCOPE WAVEFORMS MEASURED UNDER FOLLOWING CONDITIONS:

SET RF INPUT AT ANT. TO OBTAIN 100	RF INPUT SHOULD BE AT TEST POINT	RF INPUT SHOULD BE AT (MAY VARY APPROX. 2 TO 1)
300 mV	A	13 mV
	B	13 mV
	C	2 mV
	D	4 mV
	E	5 mV
	F	10 mV
	G	15 mV
	H	15 mV
	I	21 mV
	J	72 mV

RECEIVER AUDIO & SQUELCH BOARD

201	1.5 V VOLTS WHEN THRESHOLD SIGNAL JUST OFF SQUELCH (I.E. APPROXIMATELY 6 dB QUIETING SIGNAL WITH SQUELCH CONTROL AT THRESHOLD). WHEN MORE THAN ONE VOLTAGE READING APPEARS, USE - RECEIVER UNSQUELCHED AND - RECEIVER FULLY SQUELCHED.
203	VOLTAGE MEASURED WITH RESPECT TO A.
204	VOLTS MEASURED WITH RESPECT TO A.
205	VOLTAGE MEASURED WITH RESPECT TO A.
206	VOLTS MEASURED WITH RESPECT TO A.
207	VOLTAGE MEASURED WITH RESPECT TO A.
208	VOLTS MEASURED WITH RESPECT TO A.
209	VOLTS MEASURED WITH RESPECT TO A.
210	VOLTS MEASURED WITH RESPECT TO A.
211	VOLTS MEASURED WITH RESPECT TO A.

"PL" ENCODER

701	ALL AC VOLTAGE MEASUREMENTS ARE RMS VALUES. ALL AC VOLTAGES ARE SINUSOIDAL EXCEPT Q708. EMITTER, METER READING DEPENDENT UPON METER RESPONSE TO NON-SINUSOIDAL WAVE.
702	DC VOLTAGE MEASUREMENTS IN Q705, Q706 AND Q707 STAGES TAKEN WITH RESPECT TO A. VOLTAGES FOR ALL OTHER STAGES TAKEN WITH RESPECT TO CHASSIS GROUND. ALL DC VOLTAGES MAY BE MEASURED WITH 20,000 OHM PER VOLTMETER OR HIGH IMPEDANCE DC VOLTMETER (11 MEGOHM EXCEPT BASE OF Q704 WHICH CAN ONLY BE MEASURED WITH A HIGH IMPEDANCE METER).
703	UNLESS OTHERWISE STATED - CAPACITOR VALUES ARE IN PICOFARADS. RESISTOR VALUES ARE IN OHMS.
704	PIN 710 IS USED ONLY FOR CERTAIN OPTIONAL EQUIPMENT.

RECEIVER AUDIO & SQUELCH BOARD

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RECEIVER AUDIO & SQUELCH BOARD

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