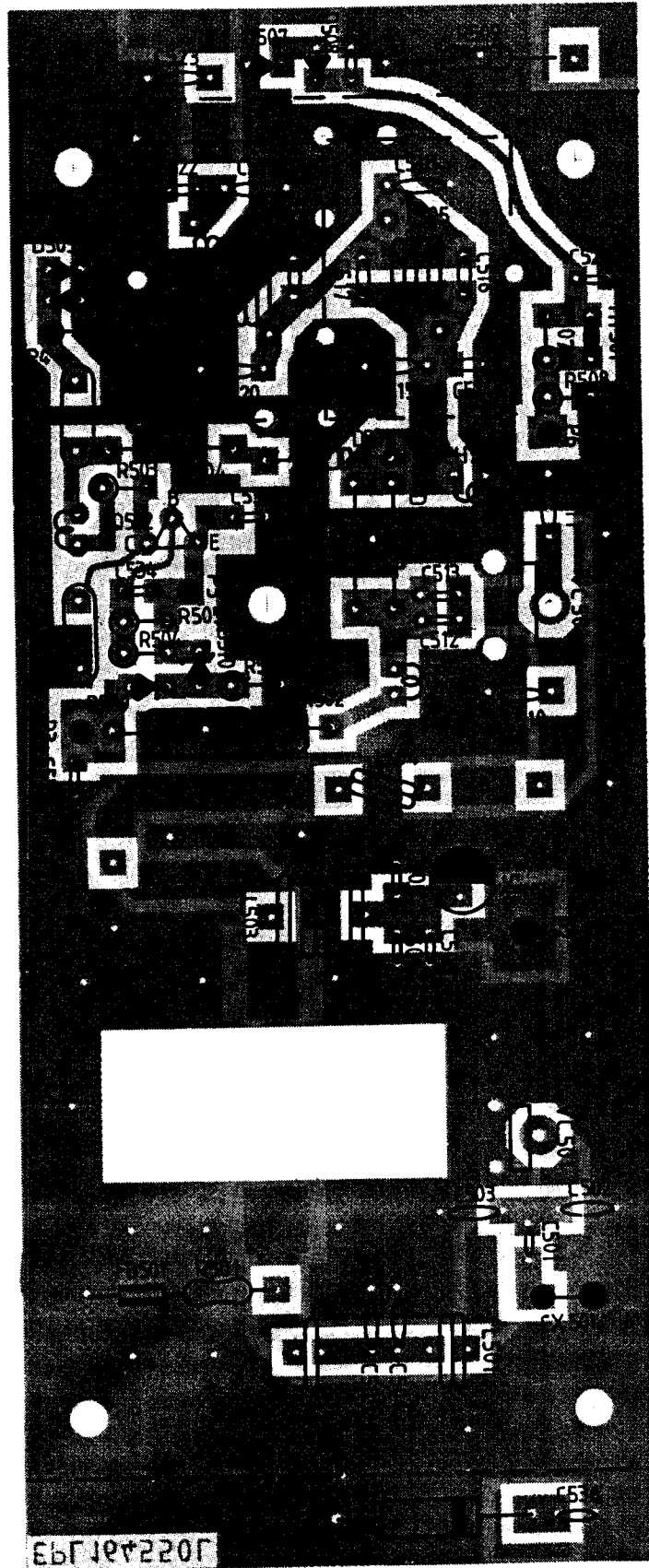


# LAYOUT FINAL POWER AMP BOARD

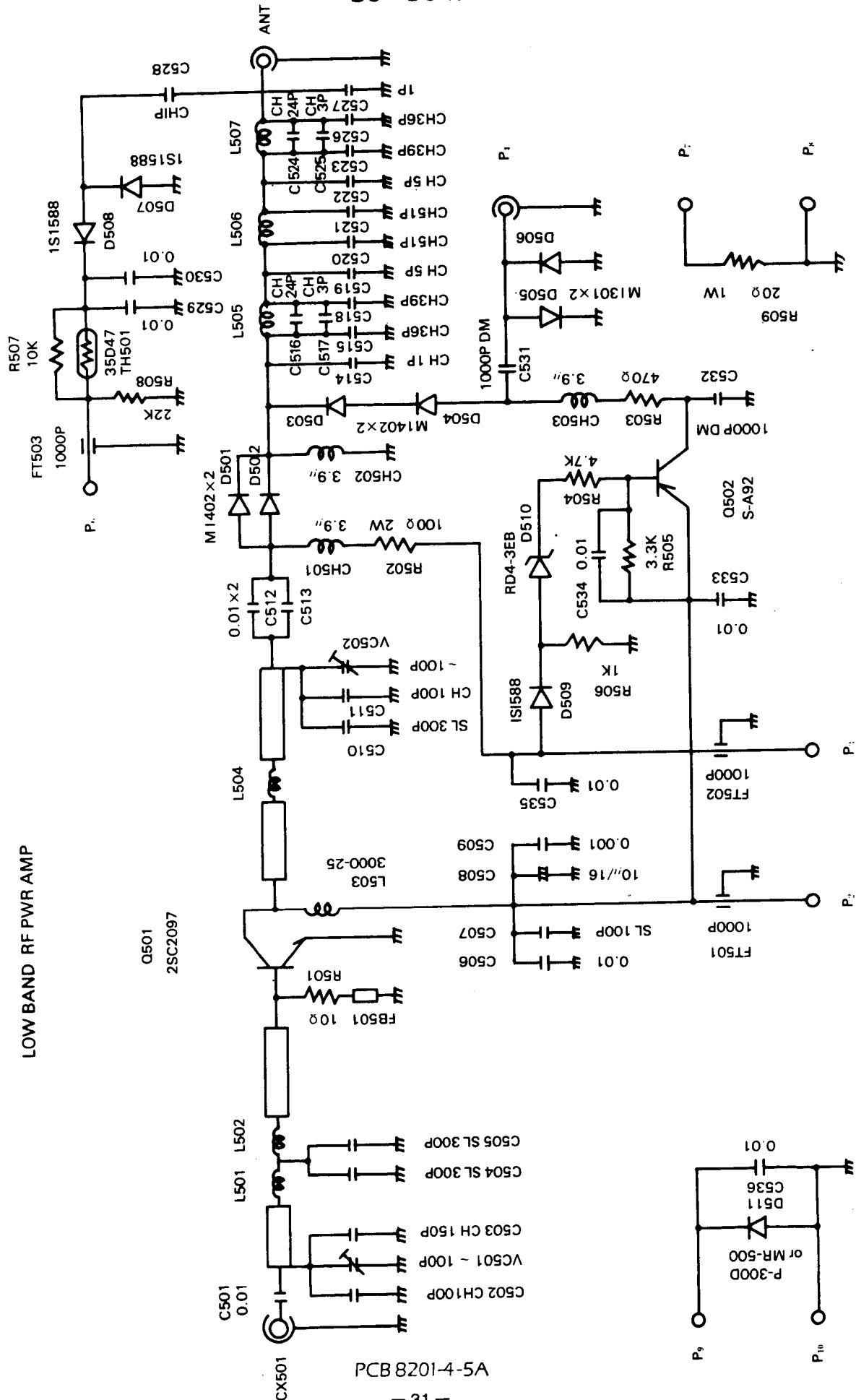
D56014A



PCB 8201-4-5A

# SCHEMATIC FINAL POWER AMP BOARD

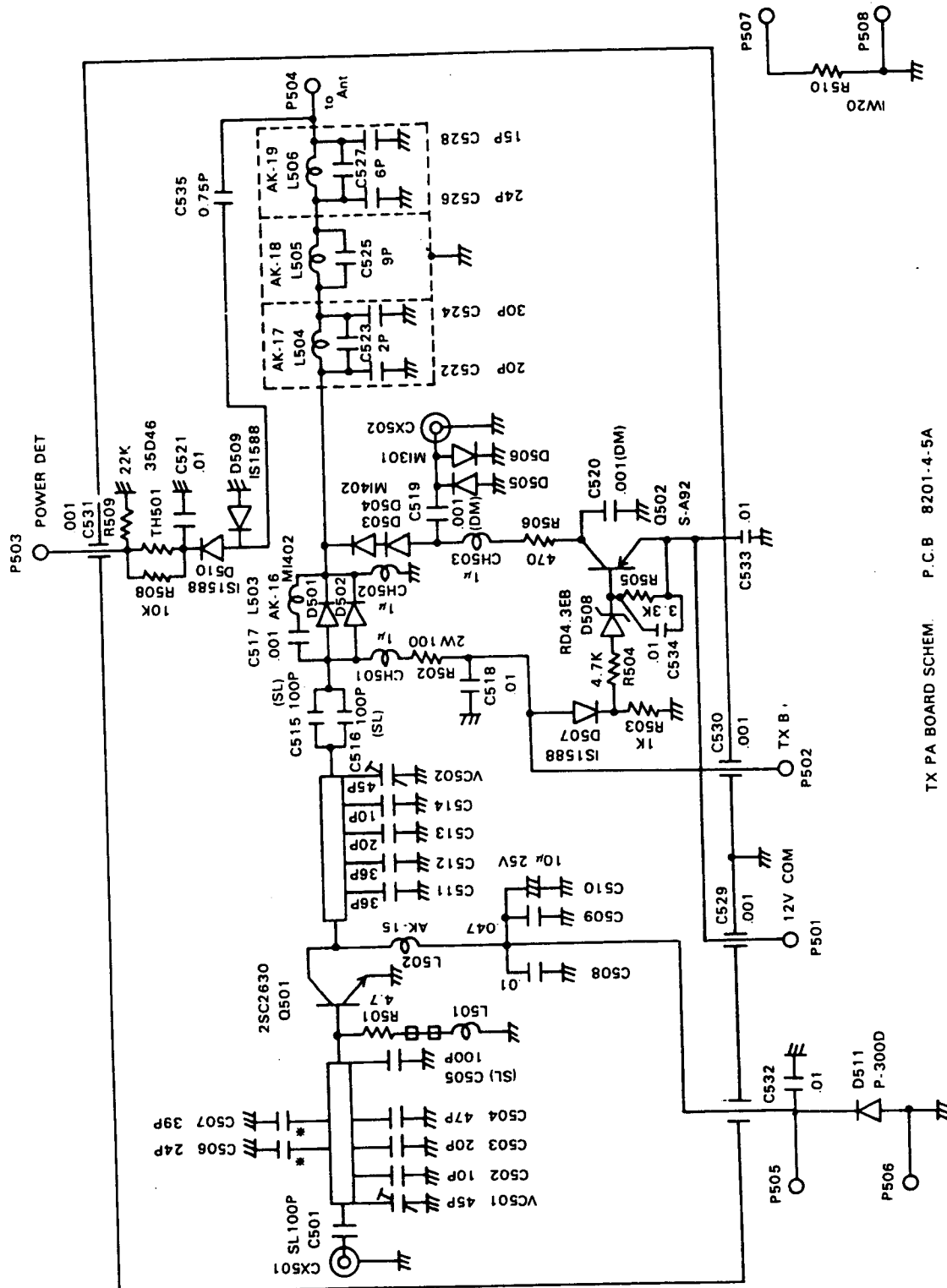
## 30 - 50 MHz





# SCHEMATIC FINAL POWER AMP BOARD

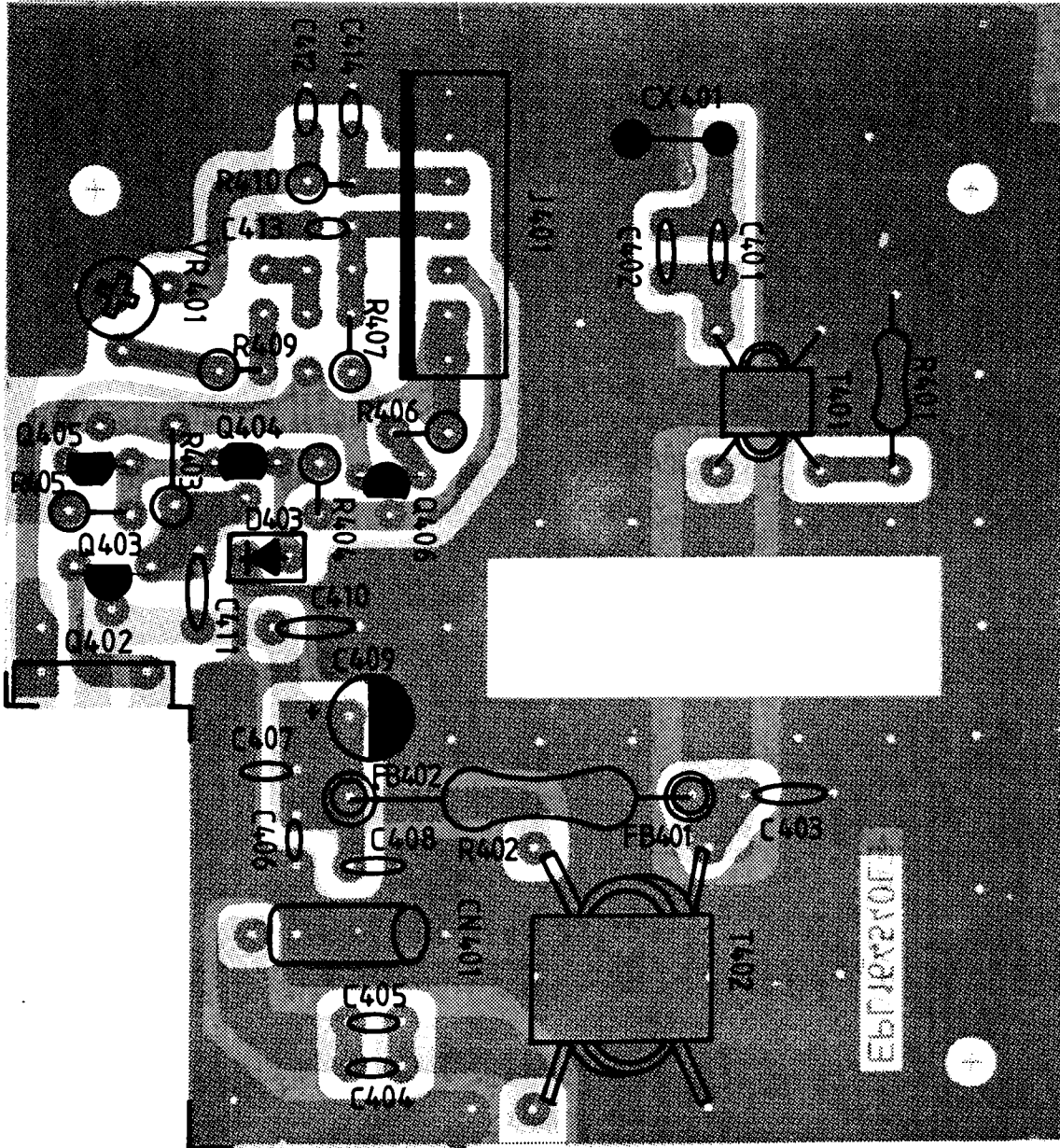
## 136 - 174 MHz



TX PA BOARD SCHEM. P.C.B 8201-4-5A

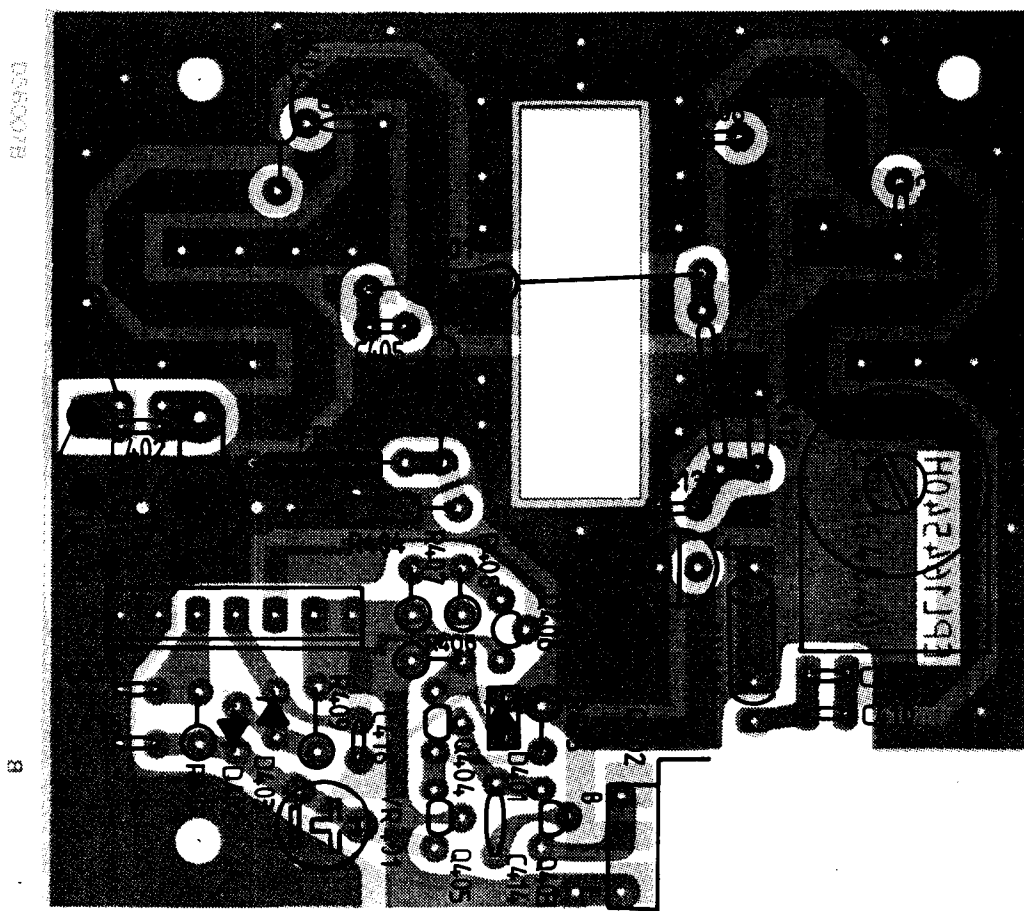
PCB 8201-4-5A

# LAYOUT DRIVER BOARD





## LAYOUT DRIVER BOARD



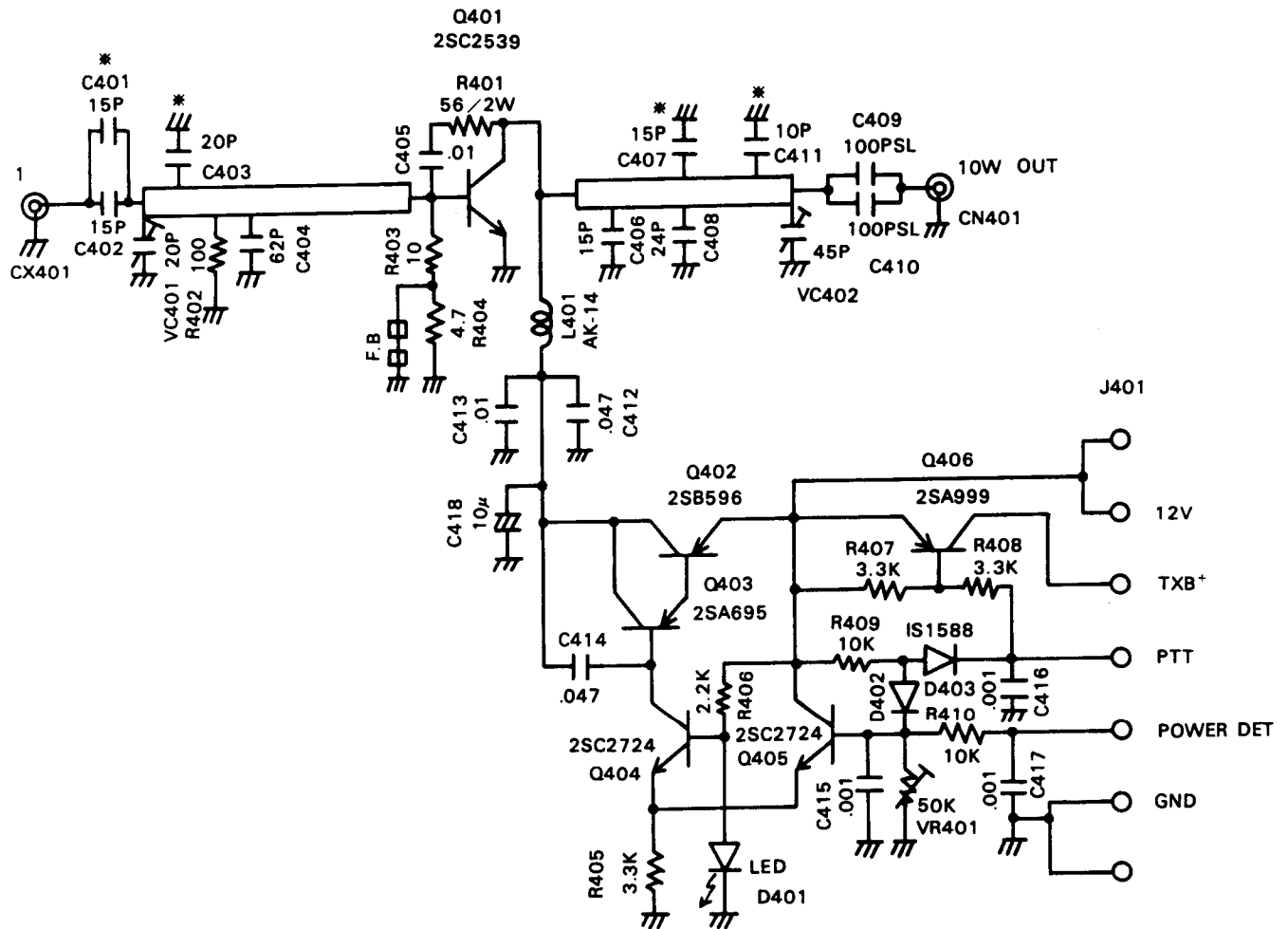
**PCB 8201-4-4A**

# SCHEMATIC DRIVER BOARD

## 136 - 174 MHz

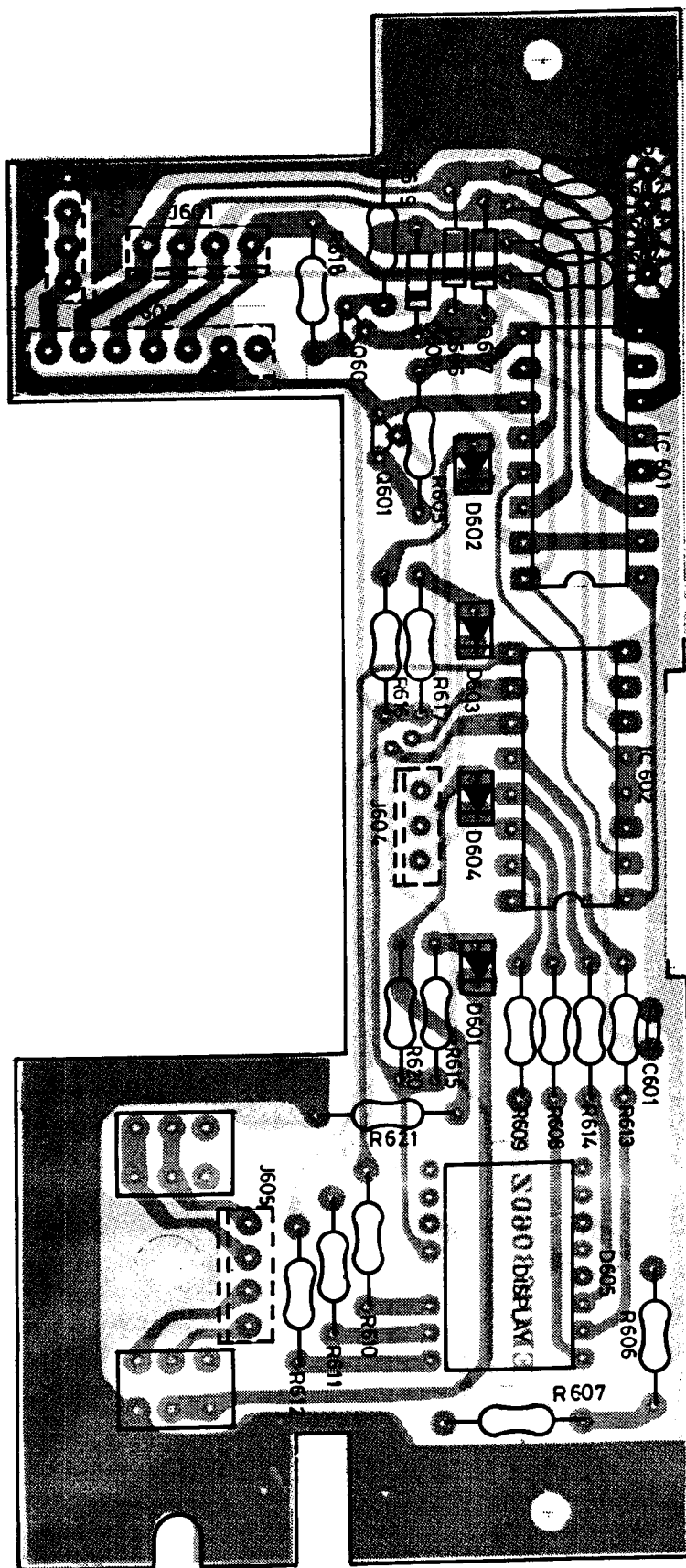
TX Driver & APC Board Schem.

PCB 8201-4-4A



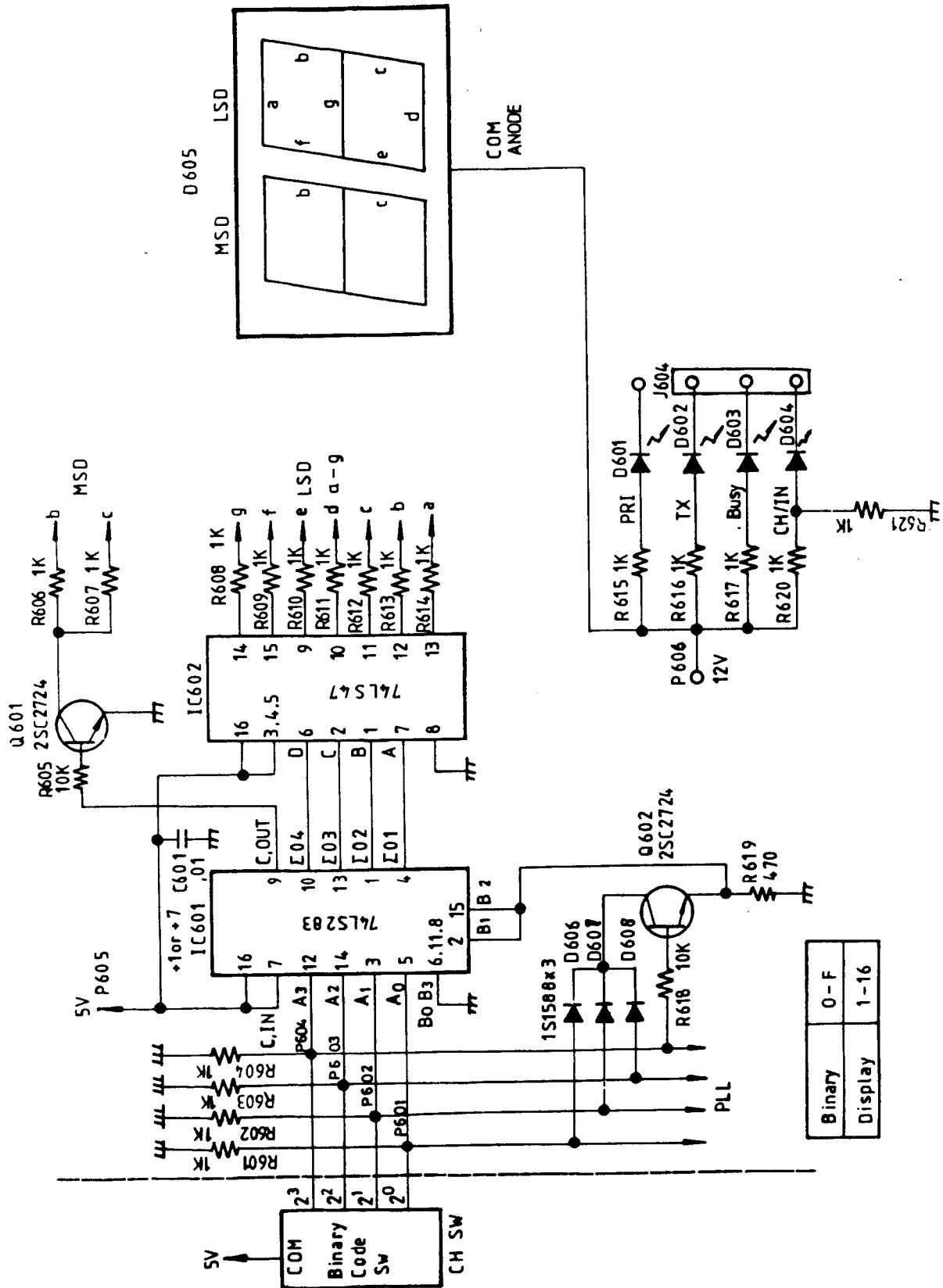


# LAYOUT DISPLAY BOARD

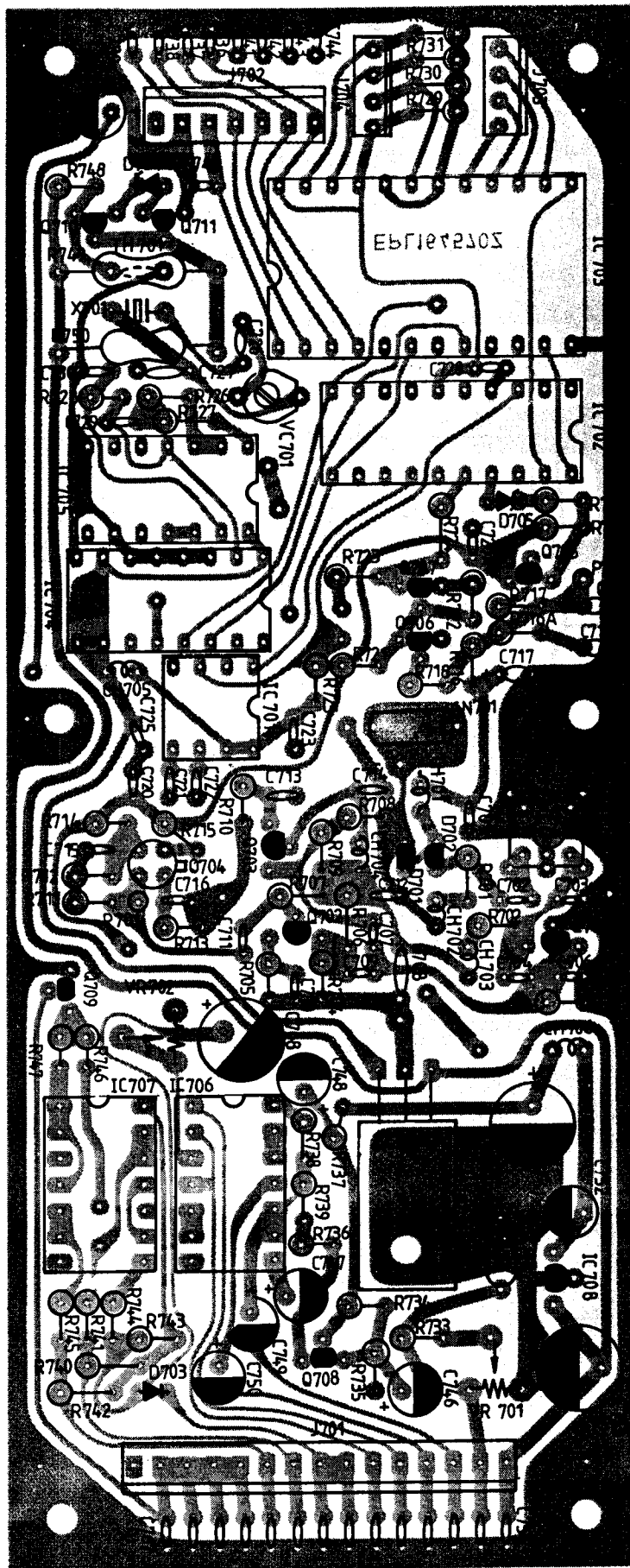


PCB 8201-4-8

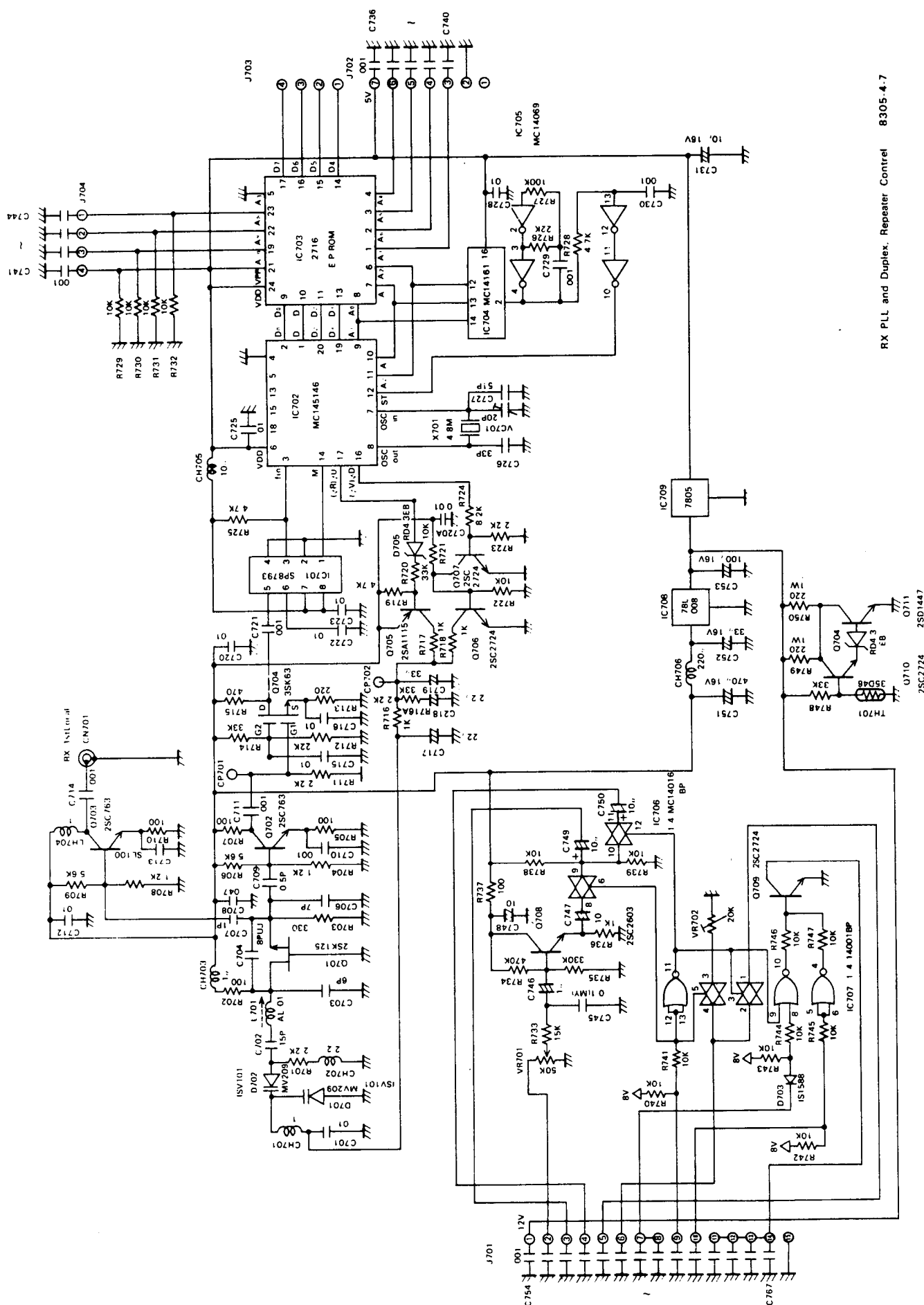
# SCHEMATIC DISPLAY BOARD



# LAYOUT RECEIVER/PLL BOARD

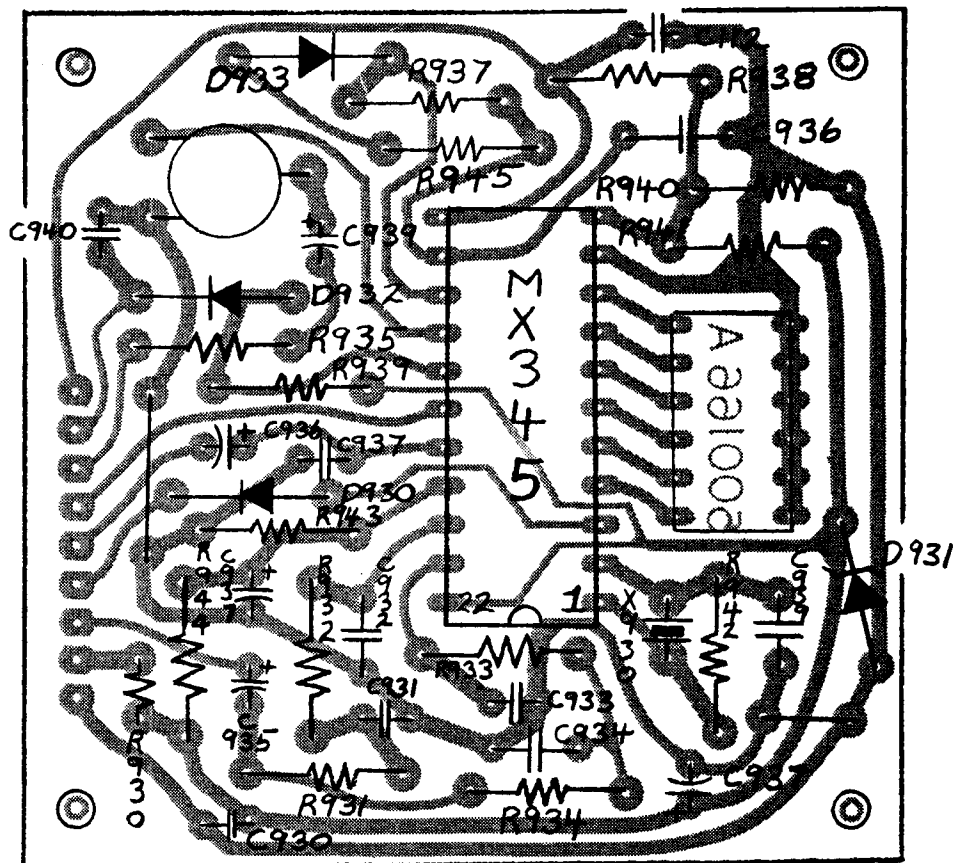


# SCHEMATIC RECEIVER PLL/REPEATER CONTROL



RX PLL and Duplex Repeater Control 8305-4.7

# LAYOUT SINGLE TONE BOARD

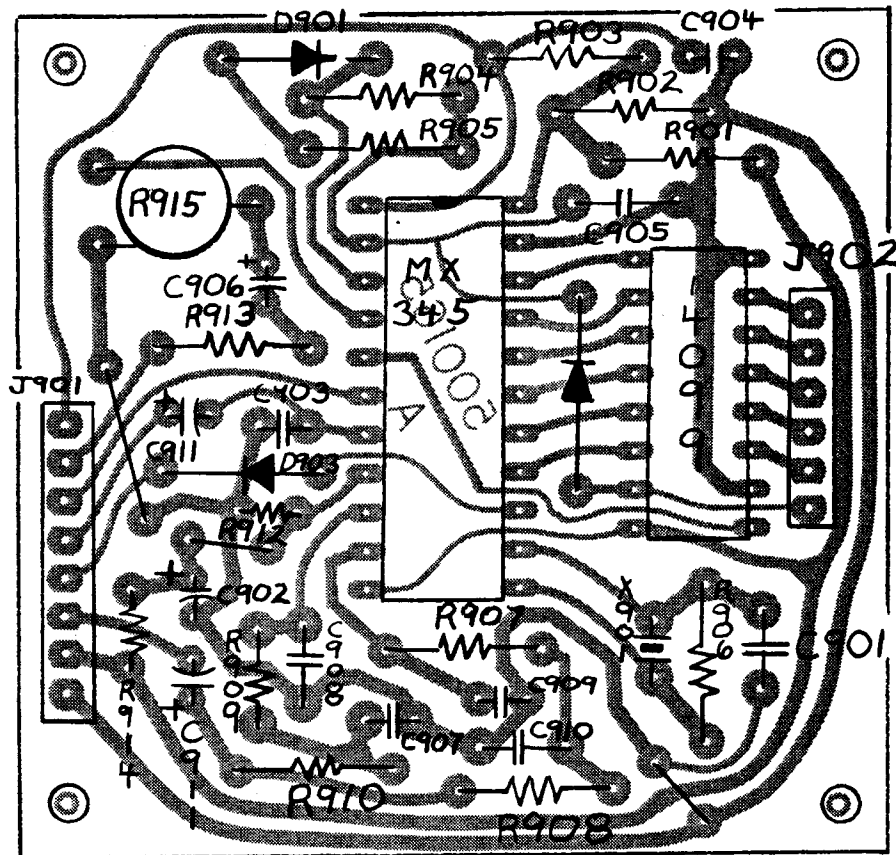


2. For operation  $\pm 50\text{V} + 8$  to  $+16\text{VDC}$ ,

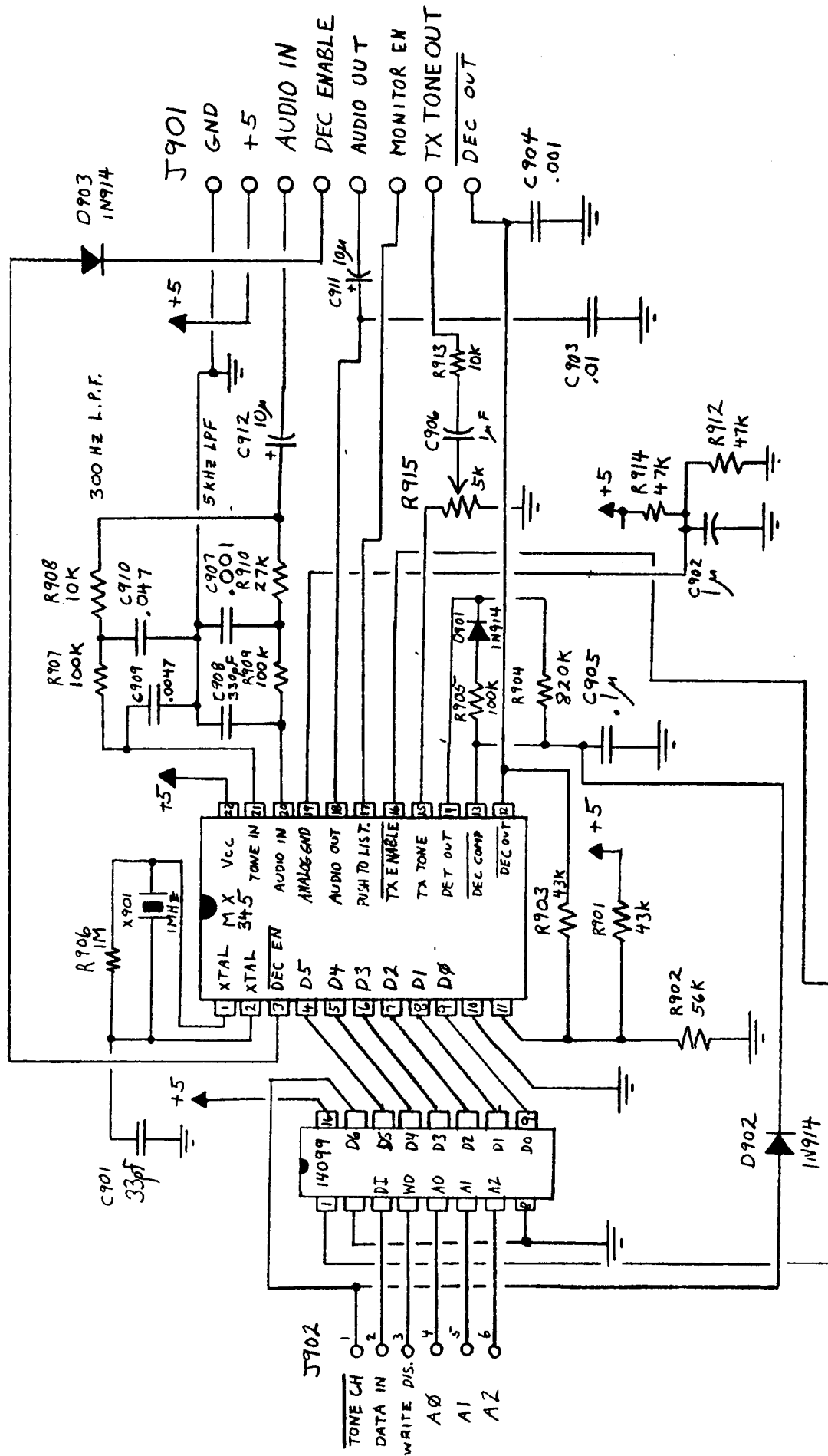
R100=680, D102=14733

3.

# LAYOUT MULTITONE BOARD

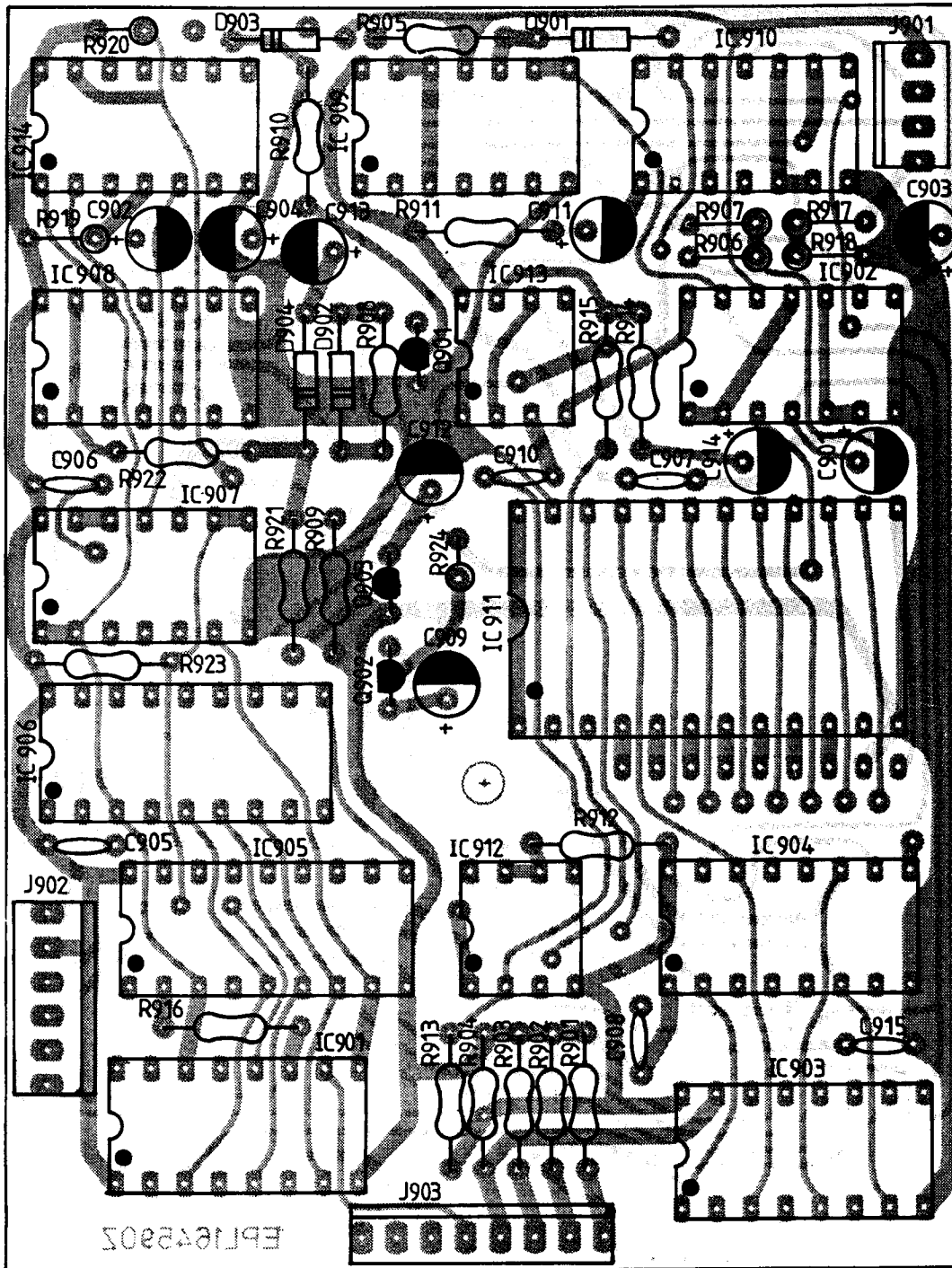


# SCHEMATIC MULTITONE BOARD

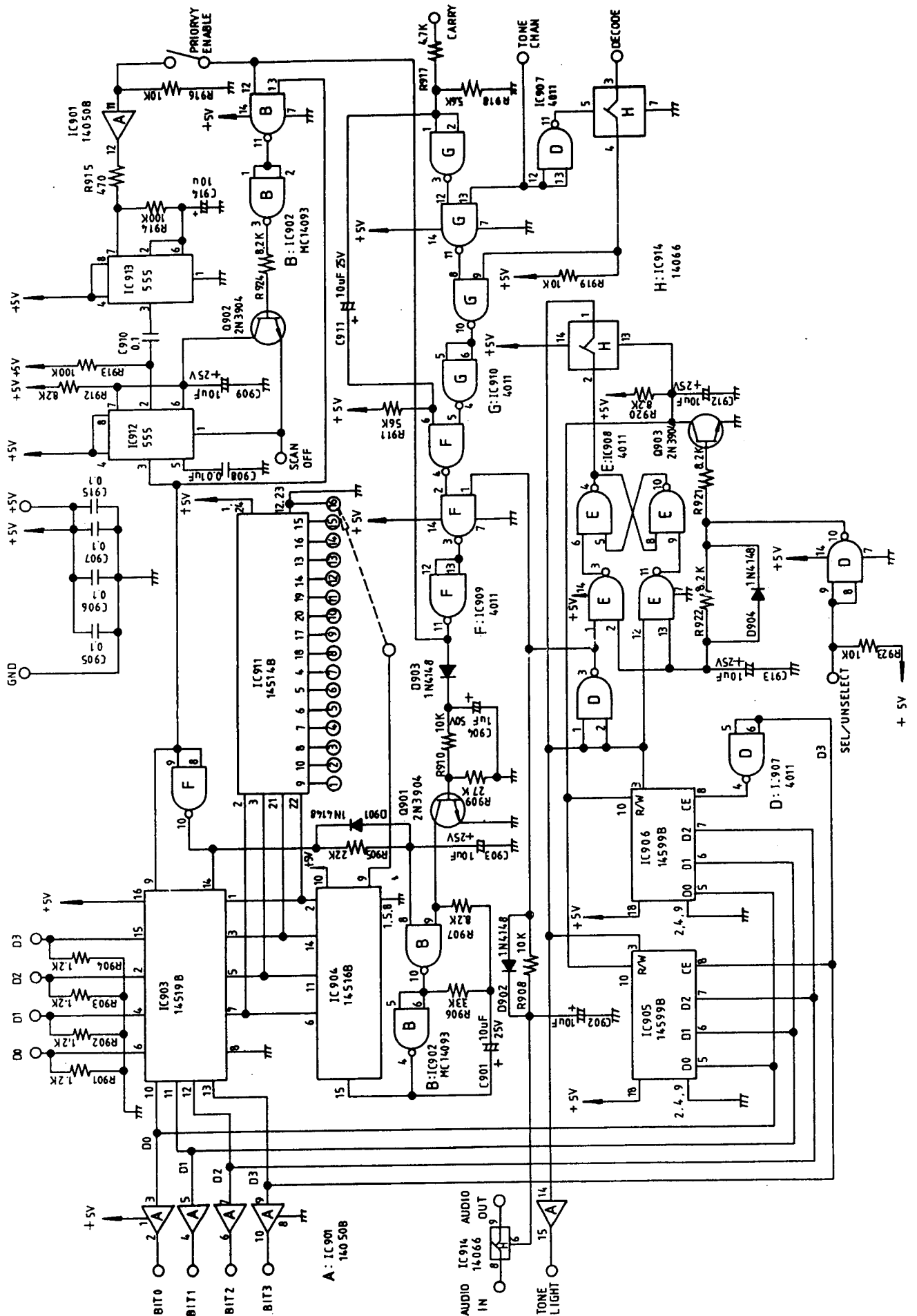




# LAYOUT SCAN BOARD



# SCHEMATIC SCAN BOARD



# PLL/TX EXCITER PCB PARTS LIST

REF	TYPE	DESCRIPTION	PART #	REF	TYPE	DESCRIPTION	PART #
IC201	IC	SP8793	07-8793		Heat Sink	RF Pre-driver	65-0002
202	IC	MC145146	07-5146				
203	IC	2716 with Socket	07-2716	CN201	RF connector	Minipin jack A1	35-0001
204	IC	MC14161BP	07-4161	202	RF connector	Minipin jack A1	35-0001
205	IC	MC14069UBP	07-4069				
206	IC	TA78L008	07-8008	J201	PCB connector		36-0001
207	IC	MC1458	07-1458	202	PCB connector		36-0001
208	IC	7805	07-7805	203	PCB connector		36-0001
				204	PCB connector		36-0001
				205	PCB connector		36-0001
Q201	FET	25K125	11-0125				
202	Transistor	25C763	09-0763	TH201	Thermistor	35D46	15-3546
203	FET	25K125	09-0125				
204	Transistor	25C763	09-0763	R201	¼ w Resistor	2.2K	01-2220
205	FET	35K63GR	11-0063	202	¼ w Resistor	100	01-1010
206	Transistor	25A1115	10-1115	203	¼ w Resistor	330	01-3310
207	Transistor	25C2724	09-2724	204	¼ w Resistor	1.2K	01-1220
208	Transistor	25C2724	09-2724	205	¼ w Resistor	5.6K	01-5620
209	Transistor	25C2026	09-2026	206	¼ w Resistor	100	01-1010
210	Transistor	25C2053	09-2053	207	¼ w Resistor	3.3K	01-3320
211	Transistor	25C730	09-0730	208	¼ w Resistor	2.2K	01-2220
212	Transistor	25A1115	10-1115	209	¼ w Resistor	100	01-1010
213	Transistor	25A1115	10-1115	210	¼ w Resistor	330	01-3310
214	Transistor	25C2724	09-2724	211	¼ w Resistor	10K	01-1030
215	Transistor	25D355	09-0355	212	¼ w Resistor	10K	01-1030
216	Transistor	25A1115	10-1115	213	¼ w Resistor	1.2K	01-1220
217	Transistor	25C2724	09-2724	214	¼ w Resistor	5.6K	01-5620
				215	¼ w Resistor	100	01-1010
D201	Vari-Cap	MV209	22-0209	216	¼ w Resistor	100	01-1010
202	Vari-Cap	MV209	22-0209	217	¼ w Resistor	22K	01-2230
203	Vari-Cap	MV209	22-0209	218	¼ w Resistor	2.2K	01-2220
204	Vari-Cap	MV209	22-0209	219	¼ w Resistor	220	01-2210
205	Vari-Cap	MV201	22-0201	220	¼ w Resistor	33K	01-3330
206	Vari-Cap	MV201	22-0201	221	¼ w Resistor	470	01-4710
207	Zener	RD4.3EB	25-0430	222	¼ w Resistor	4.7K	01-4720
208	Diode	IS1588	05-1588	223	¼ w Resistor	1K	01-1020
209	Zener	RD5.6EB	25-0560	224	¼ w Resistor	1K	01-1020
210	Zener	RD5.6EB	25-0560	225	¼ w Resistor	1K	01-1020
211	Zener	RD4.3EB	25-0430	226	¼ w Resistor	10K	01-1030
212	Diode	IS1588	05-1588	227	¼ w Resistor	10K	01-1030
213	Diode	IS1588	05-1588	228	¼ w Resistor	68K	01-6830
				229	¼ w Resistor	10K	01-1030
T201	Transformer	AK-10	23-1010	230	¼ w Resistor	2.2K	01-2220
202	Transformer	AK-10	23-1010	231	¼ w Resistor	8.2K	01-8220
203	Transformer	AK-11	23-1011	232	¼ w Resistor	2.2K	01-2220
				233	¼ w Resistor	1K	01-1020
L201		AL-01	23-1101	234	¼ w Resistor	100	01-1010
202		AL-02	23-1102	235	¼ w Resistor	1.5K	01-1520
				236	¼ w Resistor	330	01-3310
CH201	Inductor	2.2µH	03-0022	237	¼ w Resistor	22	01-2200
202	Inductor	1µH	03-0010	238	¼ w Resistor	10	01-1000
203	Inductor	1µH	03-0010	239	¼ w Resistor	1K	01-1020
204	Inductor	.68µH	03-0007	240	¼ w Resistor	47 470	01-4700
205	Inductor	.68µH	03-0007	241	¼ w Resistor	47 4R7	01-4700
206	Inductor	2.2µH	03-0022	242	¼ w Resistor	47 4R7	01-4700
207	Inductor	.68µH	03-0007	243	¼ w Resistor	220 221	01-2210
208	Inductor	1µH	03-0010	244	¼ w Resistor	10K 103	01-1030
209	Inductor	100mH	03-1040	245	¼ w Resistor	4.7K 472	01-4720
210	Inductor	220µH	03-2210	246	¼ w Resistor	10K 103	01-1030
211	Inductor	10µH	03-1000	247	¼ w Resistor	2.2K 222	01-2220
				248	¼ w Resistor	4.7K 472	01-4720
VC201	Variable capacitor	20Pf	22-2000	249	¼ w Resistor	10K 103	01-1030
				250	¼ w Resistor	10K 103	01-1030
VR201	Variable Resistor	IK POT	21-1020	251	¼ w Resistor	10K 103	01-1030
202	Variable Resistor	IK POT	21-1020	252	¼ w Resistor	10K 103	01-1030
				253	¼ w Resistor	22K 223	01-2230
X201	X'tal	4.8MHz HC18/u	12-0002				

REF	TYPE	DESCRIPTION	PART #	REF	TYPE	DESCRIPTION	PART #
R254	1/4 w Resistor	100K 104	01-1040	C233	Tantalum capacitor	3.3μF	02-3355
255	1/4 w Resistor	4.7K 472	01-4720	234	Tantalum capacitor	.33μF	02-3345
256	1/4 w Resistor	2.2K 222	01-2220	235	Ceramic capacitor	CH 30P	02-3001
257	1/4 w Resistor	470 471	01-4710	236	Ceramic capacitor	.01μF	02-1030
258	1/4 w Resistor	6.8K 682	01-6820	237	Ceramic capacitor	CH 30P	02-3001
259	1/4 w Resistor	1.2K 122	01-1220	238	Ceramic capacitor	.01μF	02-1030
260	1/4 w Resistor	47K 473	01-4730	239	Ceramic capacitor	.01μF	02-1030
261	1/4 w Resistor	1K 102	01-1020	240	Ceramic capacitor	SL 100P	02-1012
262	1/4 w Resistor	820 821	01-8210	241	Ceramic capacitor	.01μF	02-1030
263	1/4 w Resistor	82K 823	01-8230	242	Ceramic capacitor	.01μF	02-1030
264	1/4 w Resistor	4.7K 472	01-4720	243	Ceramic capacitor	.01μF	02-1030
265	1/4 w Resistor	4.7K 472	01-4720	244	Ceramic capacitor	.01μF	02-1030
266	1/4 w Resistor	33K 333	01-3330	245	Ceramic capacitor	.01μF	02-1030
267	1 w Metal Film	220 221	01-2212	246	Ceramic capacitor	103	02-1030
268	1 w Metal Film	220 221	01-2210	247	Electrolytic capacitor	.47μF 50	02-4748
269	1/4 w Resistor	25UJ 332 3.3K	01-3320	248	Ceramic capacitor	CH 33P	02-3301
270	1/4 w Resistor	25UJ 103 10K	01-1030	249	Ceramic capacitor	CH 51P	02-5101
271	1/4 w Resistor	25UJ 103 10K	01-1030	250	Electrolytic capacitor	10μF 16V	02-1066
272	1/4 w Resistor	25UJ 103 10K	01-1030	251	Ceramic capacitor	.001μF	02-1020
273	1/4 w Resistor	25UJ 103 10K	01-1030	252	Ceramic capacitor	.001μF	02-1020
C201	Ceramic capacitor	15P	02-1599	253	Ceramic capacitor	SL 100P	02-1012
202	Ceramic capacitor	.01μF	02-1030	254	Electrolytic capacitor	1μF 50V	02-1058
203	Ceramic capacitor	CH 6P	02-0601	255	Ceramic capacitor	SL 100P	02-1012
204	Ceramic capacitor	8P	02-0899	256	Electrolytic capacitor	4.7μF	02-4753
205	Ceramic capacitor	.01μF	02-1030	257	Mylar	.022μF	02-2233
206	Ceramic capacitor	CH 7P	02-0701	258	Ceramic capacitor	SL 100P	02-1012
207	Ceramic capacitor	SL 0.5P	02-0052	259	Electrolytic capacitor	33μF 16V	02-3366
208	Ceramic capacitor	CH 1P	02-0101	260	Electrolytic capacitor	3.3μF 25V	02-3357
209	Ceramic capacitor	.01μF	02-1030	261	Mylar	.056μF	02-5633
210	Ceramic capacitor	.01μF	02-1030	262	Mylar	.056μF	02-5633
211	Electrolytic capacitor	10μF 16V	02-1066	263	Mylar	.056μF	02-5633
212	Ceramic capacitor	.001μF	02-1020	264	Mylar	.056μF	02-5633
213	Ceramic capacitor	.001μF	02-1020	265	Electrolytic capacitor	.47μF 50V	02-4748
214	Ceramic capacitor	.01μF	02-1030	266	Ceramic capacitor	.01μF	02-1030
215	Ceramic capacitor	10P	02-1099	267	Ceramic capacitor	.01μF	02-1030
216	Ceramic capacitor	CH 2P	02-0201	268	Ceramic capacitor	.01μF	02-1030
217	Ceramic capacitor	CH 5P	02-0501	269	Electrolytic capacitor	470μF 16V	02-4776
218	Ceramic capacitor	8P	02-0899	270	Electrolytic capacitor	100μF 25V	02-1077
219	Ceramic capacitor	CH 7P	02-0701	C225A	Ceramic capacitor	.01μF	02-1030
220	Ceramic capacitor	CH 1P	02-0101	C264A	Electrolytic capacitor	.47μ 50V	02-4748
221	Ceramic capacitor	.001μF	02-1020	C231A	Ceramic capacitor	.01μF	02-1030
222	Ceramic capacitor	.001μF	02-1020	C247A	Ceramic capacitor	.01μF	02-1030
223	Ceramic capacitor	.001μF	02-1020				
224	Ceramic capacitor	.01μF	02-1030				
225	Ceramic capacitor	.01μF	02-1030				
226	Ceramic capacitor	.001μF	02-1020				
227	Ceramic capacitor	.01μF	02-1030				
228	Ceramic capacitor	.01μF	02-1030				
229	Ceramic capacitor	CH 10P	02-1001				
230	Ceramic capacitor	.01μF	02-1030				
231	Ceramic capacitor	.01μF	02-1030				
232	Tantalum capacitor	.22μF	02-2245				

# RECEIVER PCB PARTS LIST

REF	TYPE	DESCRIPTION	PART #	REF	TYPE	DESCRIPTION	PART #
Q101	Transistor	35K63	11-0063	R145	Resistor	10K	01-1030
102	Transistor	25K125	11-0125	146	Resistor	33K	01-3330
103	Transistor	25C763	09-0763	147	Resistor	220K	01-2240
104	Transistor	25C1674	09-1674	148	Resistor	10K	01-1030
105	Transistor	25C2724	09-2724	149	Resistor	100	01-1010
106	Transistor	25C763	09-0763	150	Resistor	3.3K	01-3320
107	Transistor	25C2724	09-2724	151	Resistor	15K	01-1530
108	Transistor	25C2724	09-2724	152	Resistor	2.2	01-0022
109	Transistor	25A999	10-0999	153	Resistor	220	01-2210
110	Transistor	25C2724	09-2724	154	Resistor	1	01-0010
				155	Resistor	4.7K	01-4720
				156	Resistor	10K	01-1030
IC101	IC	M51177L	07-1177				
102	IC	AN829	07-0829	C101	Ceramic capacitor	CH 8P	02-0801
103	IC	4069UBP	07-4069	102	Ceramic capacitor	CH 2P	02-0201
104	IC	TDA2002 or 2003	07-2002	103	Ceramic capacitor	CH 1P	02-0101
105	IC	78L09	07-7809	104	Ceramic capacitor	CH 2P	02-0201
				105	Ceramic capacitor	CH 6P	02-0601
D101	Diode	IS1588	05-1588	106	Ceramic capacitor	.01 $\mu$ F	02-1030
102	Diode	IS1588	05-1588	107	Ceramic capacitor	.001 $\mu$ F	02-1020
103	Diode	IS1588	05-1588	108	Ceramic capacitor	.01 $\mu$ F	02-1030
104	Diode	IS1588	05-1588	109	Ceramic capacitor	CH 2P	02-0201
105	Diode	IS1588	05-1588	110	Ceramic capacitor	CH 3P	02-0301
106	Diode	IS1588	05-1588	111	Ceramic capacitor	SL 0.5P	02-0052
				112	Ceramic capacitor	CH 2P	02-0201
R101	Resistor	33K $\Omega$	01-3330	113	Ceramic capacitor	CH 6P	02-0601
102	Resistor	15K	01-1530	114	Ceramic capacitor	SL 0.5P	02-0052
103	Resistor	47	01-4700	115	Ceramic capacitor	CH 2P	02-0201
105	Resistor	100	01-1010	116	Ceramic capacitor	CH 4P	02-0401
106	Resistor	1.5K	01-1520	117	Ceramic capacitor	.01 $\mu$	02-1020
107	Resistor	47	01-4700	118	Ceramic capacitor	.01 $\mu$	02-1020
108	Resistor	1.2K	01-1220	119	Ceramic capacitor	SL 100P	02-1012
109	Resistor	150	01-1510	120	Ceramic capacitor	CH 6P	02-0601
110	Resistor	3.3K	01-3320	121	Ceramic capacitor	CH 2P	02-0201
111	Resistor	100	01-1010	122	Ceramic capacitor	SL 0.5P	02-0052
112	Resistor	100	01-1010	123	Ceramic capacitor	CH 6P	02-0601
113	Resistor	330	01-3310	124	Ceramic capacitor	CH 2P	02-0201
114	Resistor	1.5K	01-1520	125	Ceramic capacitor	.01 $\mu$	02-1030
115	Resistor	100	01-1010	126	Ceramic capacitor	.01 $\mu$	02-1030
116	Resistor	1.5K	01-1520	127	Ceramic capacitor	.01 $\mu$	02-1030
117	Resistor	100	01-1010	128	Ceramic capacitor	CH 82P	02-8201
118	Resistor	22K	01-2230	129	Electrolytic capacitor	10 $\mu$ 16 V	02-1066
119	Resistor	6.8K	01-6830				
120	Resistor	470	01-4710	130	Ceramic capacitor	CH 24P	02-2401
121	Resistor	100	01-1010	131	Ceramic capacitor	.01 $\mu$	02-1030
122	Resistor	10K	01-1030	132	Ceramic capacitor	.01 $\mu$	02-1030
123	Resistor	22K	01-2230	133	Ceramic capacitor	.01 $\mu$	02-1030
124	Resistor	100	01-1010	134	Ceramic capacitor	CH 47P	02-4701
125	Resistor	1K	01-1020	135	Ceramic capacitor	CH 100P	02-1011
126	Resistor	2.2K	01-2220	136	Ceramic capacitor	CH 100P	02-1011
127	Resistor	33K	01-3330	137	Ceramic capacitor	.01 $\mu$	02-1030
128	Resistor	4.7K	01-4720	138	Ceramic capacitor	CH 1P	02-0101
129	Resistor	470	01-4710	139	Ceramic capacitor	SL 100P	02-1012
130	Resistor	100	01-1010	140	Ceramic capacitor	.047 $\mu$	02-4730
131	Resistor	1K	01-1020	141	Ceramic capacitor	.047 $\mu$	02-4730
132	Resistor	2.2K	01-2220	142	Ceramic capacitor	.01 $\mu$	02-1030
133	Resistor	4.7K	01-4720	143	Ceramic capacitor	.01 $\mu$	02-1030
134	Resistor	100	01-1010	144	Electrolytic capacitor	4.7 $\mu$ 16V	02-4756
135	Resistor	1K	01-1020				
136	Resistor	470	01-4710	145	Electrolytic capacitor	4.7 $\mu$ 16V	02-4756
137	Resistor	2.2K	01-2220				
138	Resistor	4.7K	01-4720	146	Ceramic capacitor	.047 $\mu$	02-4730
139	Resistor	2.2K	01-2220	147	Electrolytic capacitor	10 $\mu$ 16V	02-1066
140	Resistor	2.2M	01-2250				
141	Resistor	10K	01-1030	148	Ceramic capacitor	.01 $\mu$	02-1030
143	Resistor	47K	01-4730				
144							

REF	TYPE	DESCRIPTION	PART #	REF	TYPE	DESCRIPTION	PART #
C149	Mylar film capacitor	.0047 $\mu$	02-4723	C181	Ceramic capacitor	.001 $\mu$	02-1020
150	Mylar film capacitor	.0047 $\mu$	02-4723	182	Ceramic capacitor	.001 $\mu$	02-1020
151	Mylar film capacitor	0.01 $\mu$	02-1033	183	Ceramic capacitor	.001 $\mu$	02-1020
152	Mylar film capacitor	0.01 $\mu$	02-1033	L101	Coils	AK-01	23-1001
153	Mylar film capacitor	.0022 $\mu$	02-2223	102	Coils	AK-02	23-1002
154	Mylar film capacitor	0.01 $\mu$	02-1033	103	Coils	AK-03	23-1003
155	Ceramic capacitor	0.01 $\mu$	02-1030	104	Coils	AK-03	23-1003
156	Ceramic capacitor	0.001 $\mu$	02-1020	105	Coils	AK-04	23-1004
157	Electrolytic capacitor	.47 $\mu$ 50V	02-4748	106	Coils	AK-05	23-1005
158	Ceramic capacitor	.01 $\mu$	02-1030	107	Coils	AK-06	23-1006
159	Ceramic capacitor	.01 $\mu$	02-1030	108	Coils	AK-07	23-1007
160	Ceramic capacitor	.001 $\mu$	02-1020	109	Coils	AK-08	23-1008
161	Ceramic capacitor	.01 $\mu$	02-1030	110	Coils	AK-09	23-1009
162	Electrolytic capacitor	1 $\mu$ 50V	02-1058	111	Coils	BH169E	23-2169
163	Electrolytic capacitor	1 $\mu$ 50V	02-1058	112	Coils	BH169E	23-2169
164	Electrolytic capacitor	1 $\mu$ 50V	02-1058	CV101	Variable capacitor	20P	22-2000
165	Electrolytic capacitor	1 $\mu$ 50V	02-1058	VR101	Variable Resistor	50K	21-5030
166	Ceramic capacitor	.001 $\mu$	02-1020	X101	X'tal	21.145 MHz HC18/u	12-0001
167	Electrolytic capacitor	.47 $\mu$ 50V	02-4748	F101	X'tal Filter	21M15C (8C) 21.6 MHz	13-0001
168	Electrolytic capacitor	10 $\mu$ 16V	02-1066	102	Ceramic Filter	LFB20 (8)	13-0002
169	Electrolytic capacitor	.47 $\mu$ 50V	02-4748	103	Ceramic Discriminator	4550	13-0003
170	Tantalun capacitor	.01 $\mu$ 6.3V	02-1045	CN101	RF Connector	Minipin Jack VI	35-0001
171	Electrolytic capacitor	220 $\mu$ 6.3V	02-2275	102	RF Connector	Minipin Jack VI	35-0001
172	Mylar film capacitor	1 $\mu$	02-1043	J101	Connector	R41 3614	36-0001
173	Electrolytic capacitor	100 $\mu$ 25V	02-1077	102	Connector	R41 3614	36-0001
174	Electrolytic capacitor	220 $\mu$ 16V	02-2276	CH101	Ferri Inductor	1mH	03-1020
175	Ceramic capacitor	.001 $\mu$	02-1020	102	Ferri Inductor	1mH	03-1020
176	Ceramic capacitor	.001 $\mu$	02-1020	103	Ferri Inductor	1mH	03-1020
178	Ceramic capacitor	.001 $\mu$	02-1020	104	Ferri Inductor	220 $\mu$ H	03-2210
179	Ceramic capacitor	.001 $\mu$	02-1020		Heat sink	AF P.A.	65-0001
180	Ceramic capacitor	.001 $\mu$	02-1020		15 mm Can		66-1500

# FINAL POWER AMP PCB PARTS LIST

REF	TYPE	DESCRIPTION	PART #	REF	TYPE	DESCRIPTION	PART #
Q501	Transistor	2SC2630	09-2630	R515	Ceramic capacitor	SL 100P	02-1012
502	Transistor	2S-A92	10-0092	516	Ceramic capacitor	SL 100P	02-1012
				517	Ceramic capacitor	.001 $\mu$	02-1020
D501	Diode	MI402	05-0402	518	Ceramic capacitor	.01 $\mu$	02-1030
502	Diode	MI402	05-0402	519	D.M. capacitor	.001 $\mu$ (M)	02-1024
503	Diode	MI402	05-0402	520	D.M. capacitor	.001 $\mu$ (M)	02-1024
504	Diode	MI402	05-0402	521	Ceramic capacitor	.01 $\mu$	02-1030
505	Diode	MI301	05-0301	522	Ceramic capacitor	CH 20P	02-2001
506	Diode	MI301	05-0301	523	Ceramic capacitor	CH 2P	02-0201
507	Diode	IS1588	05-1588	524	Ceramic capacitor	CH 30P	02-3001
508	Zener Diode	RD4.3EB	25-0430	525	Ceramic capacitor	CH 9P	02-0901
509	Diode	IS1588	05-1588	526	Ceramic capacitor	CH 24P	02-2401
510	Diode	IS1588	05-1588	527	Ceramic capacitor	CH 6P	02-0601
511	Diode	P-300D	05-0300	528	Ceramic capacitor	CH 15P	02-1501
				529	Feed-Through	.001 $\mu$	02-1029
R501	¼ w Carbon Resistor	4.7 $\Omega$	01-0047	530	Feed-Through	.001 $\mu$	02-1029
502	2 w Metal Film	100	01-1013	531	Feed-Through	.001 $\mu$	02-1029
503	¼ w Carbon Resistor	1K	01-1020	532	Ceramic capacitor	.01 $\mu$	02-1030
504	¼ w Carbon Resistor	4.7K	01-4720	533	Ceramic capacitor	.01	02-1030
505	¼ w Carbon Resistor	3.3K	01-3320	534	Ceramic capacitor	.01	02-1030
506	¼ w Carbon Resistor	470	01-4710	535	Ceramic capacitor	SL .75PF	02-0072
508	¼ w Carbon Resistor	10K	01-1030				
509	¼ w Carbon Resistor	22K	01-2230	VC501	Variable capacitor	CV01C450	22-4510
510	1 w Metal Film	20	01-2002	502	Variable capacitor	CV01C450	22-4510
C501	Ceramic capacitor	SL 100PF	02-1012	TH501	Thermistor	35D46	15-3546
502	Ceramic capacitor	CH 10P	02-1001				
503	Ceramic capacitor	CH 20P	02-2001	CH501	Ferri Inductor	1 $\mu$ H	03-0100
504	Ceramic capacitor	CH 47P	02-4701	502	Ferri Inductor	1 $\mu$ H	03-0100
505	Ceramic capacitor	SL 100P	02-1012	503	Ferri Inductor	1 $\mu$ H	03-0100
506	Ceramic capacitor	CH 24P	02-2401				
507	Ceramic capacitor	CH 39P	02-3901	L501	Coil	HF 3LR35J	23-8335
508	Ceramic capacitor	0.01 $\mu$	02-1030	502	Coil	AK-15	23-1015
509	Ceramic capacitor	0.047 $\mu$	02-4730	503	Coil	AK-16	23-1016
510	Electrolytic capacitor	10 $\mu$ F 25V	02-1067	504	Coil	AK-17	23-1017
511	Ceramic capacitor	CH 36P	02-3601	505	Coil	AK-18	23-1018
512	Ceramic capacitor	CH 36P	02-3601	506	Coil	AK-19	23-1019
513	Ceramic capacitor	CH 24P	02-2401	F.B.	Ferrite Beads	FB101	67-0001
514	Ceramic capacitor	CH 10P	02-1001				

# DRIVER PCB PARTS LIST

REF	TYPE	DESCRIPTION	PART #	REF	TYPE	DESCRIPTION	PART #
Q401	Transistor	2SC2539	09-2539	C406	Ceramic capacitor	CH 15P	02-1501
402	Transistor	2SB596	09-0596	407	Ceramic capacitor	CH 15P	02-1501
403	Transistor	2SA695	10-0695	408	Ceramic capacitor	CH 24P	02-2401
404	Transistor	2SC2724	09-2724	409	Ceramic capacitor	SL 100P	02-1012
405	Transistor	2SC2724	09-2724	410	Ceramic capacitor	SL 100P	02-1012
406	Transistor	2SA999	10-0999	411	Ceramic capacitor	10P	02-1000
				412	Ceramic capacitor	.047 $\mu$ F	02-4730
D401	LED	GL-9NR2	14-0002	413	Ceramic capacitor	.01 $\mu$ F	02-1030
402	Diode	IS1588	05-1588	414	Ceramic capacitor	.047 $\mu$ F	02-4730
403	Diode	IS1588	05-1588	415	Ceramic capacitor	.001 $\mu$ F	02-1020
				416	Ceramic capacitor	.001 $\mu$ F	02-1020
R401	2W Metal Film	56 $\Omega$	01-5603	417	Ceramic capacitor	.001 $\mu$ F	02-1020
402	1/4 Carbon Resistor	100 $\Omega$	01-1010	418	Electrolytic capacitor	16V 10 $\mu$ F	02-1066
403	1/4 Carbon Resistor	10 $\Omega$	01-1000				
404	1/4 Carbon Resistor	4.7 $\Omega$	01-0047	VC401	Variable capacitor	20P 32	22-2000
405	1/4 Carbon Resistor	3.3K	01-3320	VC402	Variable capacitor	45P CV01C450	22-4500
406	1/4 Carbon Resistor	2.2K	01-2220				
407	1/4 Carbon Resistor	3.3K	01-3320	VR401	Variable resistor	50K	21-5030
408	1/4 Carbon Resistor	3.3K	01-3320				
409	1/4 Carbon Resistor	10K	01-1030	L401	Coil	AK 14	03-1014
410	1/4 Carbon Resistor	10K	01-1030				
C401	Ceramic capacitor	CH 15P	02-1501	CN401	RF Connector	Mini Pin Jack A1	35-0001
402	Ceramic capacitor	CH 15P	02-1501				
403	Ceramic capacitor	CH 20P	02-2001	J401	2.5mm Connector	R413614	36-0001
404	Ceramic capacitor	CH 62P	02-6201				
405	Ceramic capacitor	.01 $\mu$ F	02-1030	F-B	Ferrite Beads	FB101	67-0001



## DISPLAY PCB PARTS LIST

REF	TYPE	DESCRIPTION	PART #	REF	TYPE	DESCRIPTION	PART #
IC601	I C	74LS283	07-4283	A605	¼ w Carbon Resistor	10K	01-1030
602	I C	74185	07-4185	606	¼ w Carbon Resistor	1K	01-1020
603	I C	74LS47	07-7447	607	¼ w Carbon Resistor	1K	01-1020
Q601	Transistor	2SC2724	09-2724	608	¼ w Carbon Resistor	1K	01-1020
D601	Diode	GL-9NY2	14-0004	609	¼ w Carbon Resistor	1K	01-1020
602	Diode	GL-9NR2	14-0002	610	¼ w Carbon Resistor	1K	01-1020
603	Diode	GL-9NG2	14-0005	611	¼ w Carbon Resistor	1K	01-1020
604	Diode	SL-2271	14-2271	612	¼ w Carbon Resistor	1K	01-1020
A601	¼ w Carbon Resistor	1K	01-1025	613	¼ w Carbon Resistor	1K	01-1020
601	¼ w Carbon Resistor	1K	01-1025	614	¼ w Carbon Resistor	1K	01-1020
602	¼ w Carbon Resistor	1K	01-1025	615	¼ w Carbon Resistor	1K	01-1020
603	¼ w Carbon Resistor	1K	01-1025	616	¼ w Carbon Resistor	1K	01-1020
604	¼ w Carbon Resistor	1K	01-1025	617	¼ w Carbon Resistor	1K	01-1020
				C601	Ceramic capacitor	.01µF	02-1030

## CHASSIS COMPONENTS PARTS LIST

REF	TYPE	DESCRIPTION	PART #	REF	TYPE	DESCRIPTION	PART #
S703	Channel SW		91-0003	R701	1W Metal Film	10Ω	01-1002
VR701	Volume Pot	20K	91-0001	C701	Ceramic capacitor	SL 100PF	02-1012
702	Squelch Pot	20K	91-0001	702	Ceramic capacitor	SL 100P	02-1012
CN701	Mic Connector		91-0002	703	Ceramic capacitor	SL 100P	02-1012
702	Ant Connector		91-0006				
J701	Ext Sp Jack (3.5mm)		91-0005				
702	Power Jack		91-0004				

PTT AKTIF (TX AKTIF) JIKA JALUR PTT SEMUA DIGROUNDED, ELSE, KE POSISI RADIO RX

JALUR PTT DARI TERMINAL PTT-MIC KE BOARD RECEIVER + PLL + DRIVER PCB + ARDUINO

POWER DARI FINAL KE SWITCH ON-OFF VOLUME KELUAR SEBAGAI B+  
DICABANG KE RECEIVER BOARD + PLL BOARD + DRIVER PCB

VOLUME + SQUELCH DIKONTROL OLEH TEGANGAN NEGATIF

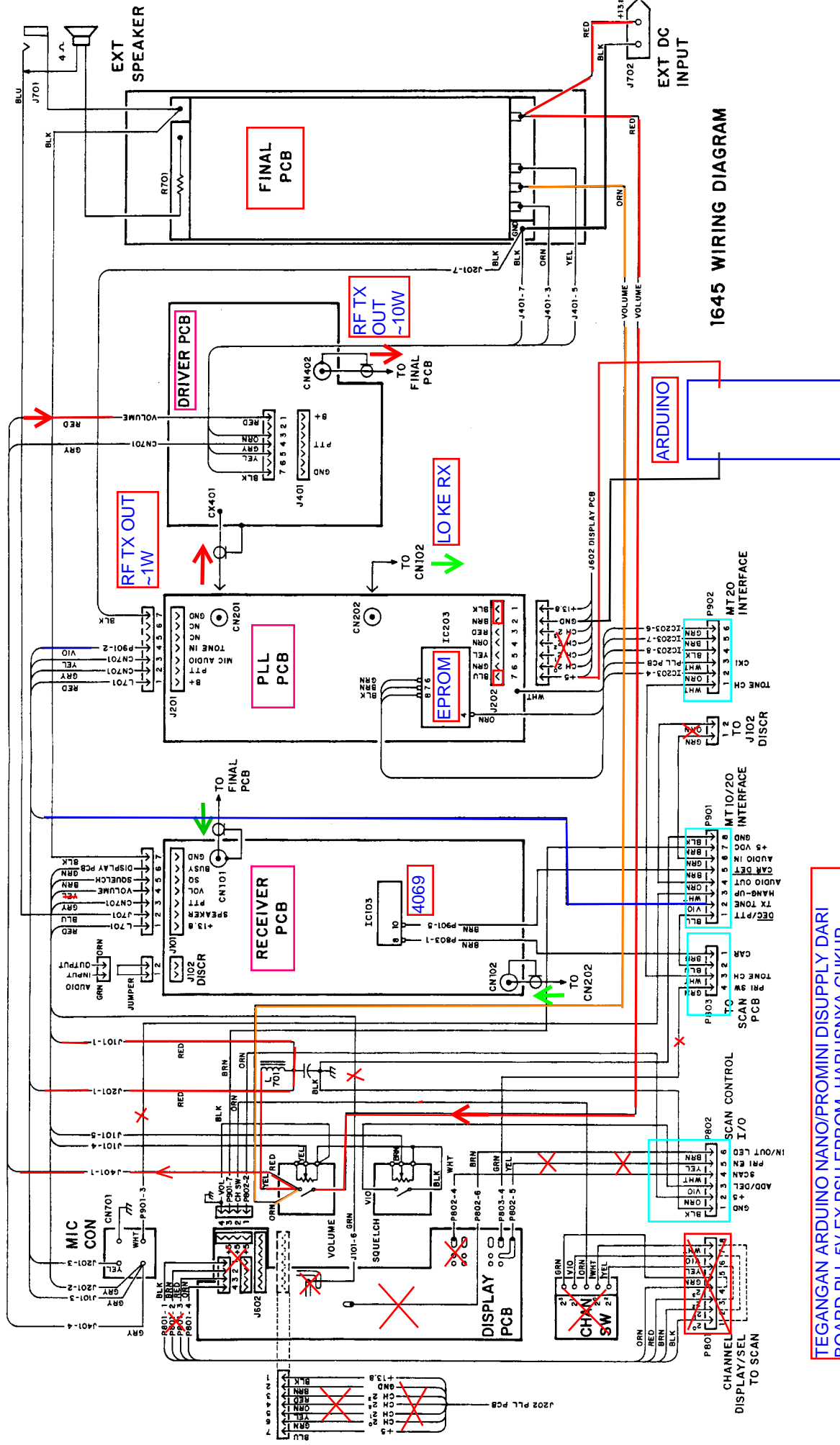
VOLUME V-CTRL = KABEL PUTIH  
SQUELCH V-CTRL = KABEL COKLAT

SPEAKER + = KABEL BIRU

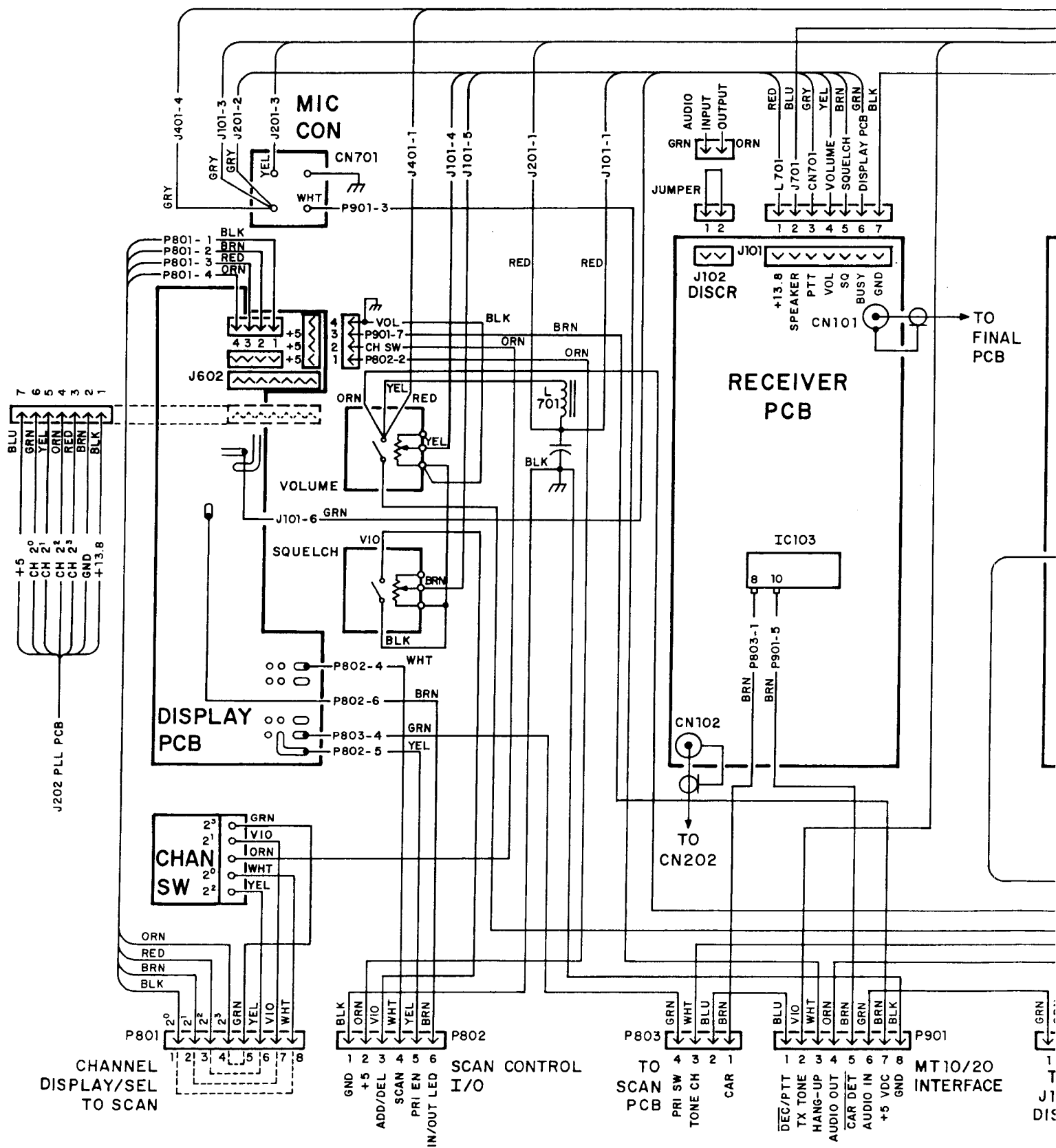
BUSY RECEIVER BOARD = KABEL HIJAU

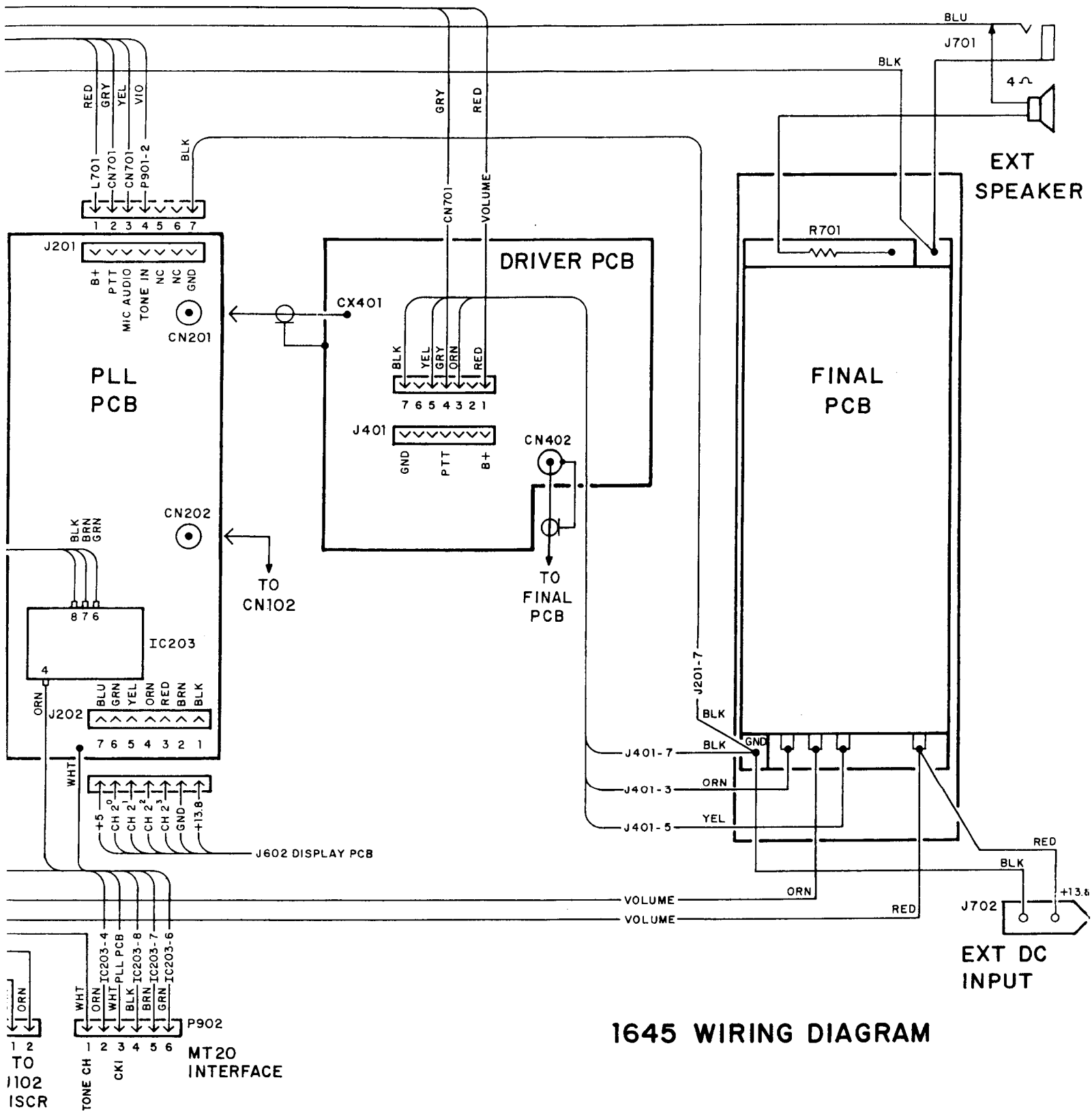
TONE INPUT PLL BOARD = KABEL UNGU

MIC INPUT PLL BOARD = KABEL KUNING



TEGANGAN ARDUINO NANO/PROMINI DISUPPLY DARI BOARD PLL 5V EX PSU EPROM, HARUSNYA CUKUP





## LIMITED WARRANTY

Neutec, a Division of Celltronics Incorporated, warrants that your Neutec product is free of defects in material and workmanship for a period of 90 (ninety) days after initial retail purchase. Neutec will, in this period of time, repair or replace, at its option, any Neutec product returned to its warranty repair station freight prepaid. Additionally, Neutec will, for a period of 12 (twelve) months after initial retail purchase, provide required repair parts for any Neutec product returned to its warranty repair station freight prepaid. Also, Neutec will, for a period of 24 (twenty-four) months after initial retail purchase of a Neutec SM-1645 Series radio, provide exchange printed circuit board assemblies for any Neutec SM-1645 Series radio requiring repair.

The Neutec warranty covers repair or replacement of the product only. Neutec is not responsible for costs of removal, reinstallation, or shipping to the place of repair. Neutec does not extend or modify its warranty period as a result of repair or replacement.

Neutec reserves the right to void a warranty or make reasonable charges for repair of a unit which displays evidence of misuse, abuse, or alteration of basic design.

**Neutec is not responsible for damage to any other equipment or property, or any other consequential or incidental damages of any kind, whether based on contract, negligence, or strict liability. Maximum liability shall not in any case exceed the purchase price of the unit.**

Warranties give you (the buyer) specific legal rights. You may also have other rights which vary from state to state. This warranty is only extended to purchases made in the United States of America or its possessions.