

Scott 370R

ADJUSTMENT

Equipment Required

Audio signal generator.

Level meter.

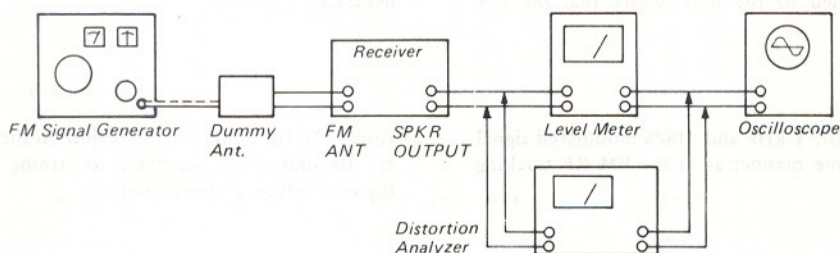
Oscilloscope.

Digital frequency counter, 0–100 kHz.

FM multiplex signal generator.

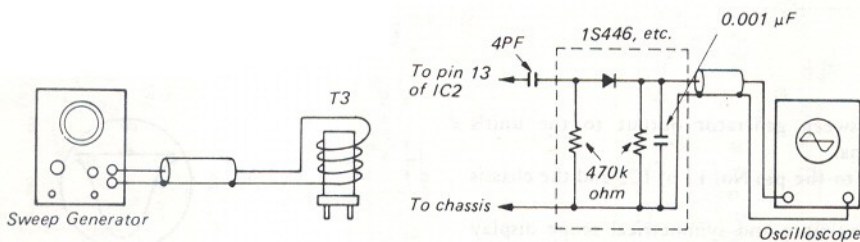
Circuit tester.

FM RF Tracking



- 1) Apply 90 MHz, 1 kHz and 100% modulated, 65 dBf signal with 76 kHz deviation to the FM antenna terminal.
- 2) Tune the unit to 90 MHz.
- 3) Observe the oscilloscope connected to the Speaker output terminal for symmetrical sine wave. If failed, adjust T4.
- 4) Adjust T1 through T3 for maximum level meter reading (connected in parallel with the scope).
- 5) Adjust the signal generator for 106 MHz, and retune the unit.
- 6) Repeat 3), adjusting CT7, if necessary.
- 7) Adjust CT1, CT3 and CT5 for maximum level meter reading.
- 8) Repeat above procedure again until no further improvement is obtained.

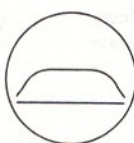
FM IF Amplifier



- 1) Mute the FM local oscillator by shorting CV7.
- 2) Apply 10.7 MHz signal from the sweep generator to T3 in the manner shown as above.
- 3) Adjust T5 and T6 for correct figure as provided below. It may be necessary to increase or decrease the sweep generator output for adjustment convenience.



Correct



*Incorrect,
as too low*



*Incorrect,
as too narrow*

Pilot Signal (76 kHz)

- 1) Apply 98 MHz, 65 dBf signal to the unit with no modulation.
- 2) Adjust RV4 for 76 kHz reading on the frequency counter

Stereo Separation

- 1) Apply 98 MHz, 65 dBf left channel composite signal to the unit modulated with 1 kHz, 9% pilot signal with 6.75 kHz deviation.
- 2) Connect a level meter to the right channel speaker output terminal.
- 3) Adjust RV5 for minimum leakage (minimum level) on the meter.
- 4) Apply 98 MHz, 65 dBf right channel composite signal to the unit, modulated same as step 1).
- 5) Move level meter to the left channel speaker output terminal.
- 6) Observe the right channel leakage appeared on the left channel output. If necessary, readjust RV5 for equal and minimum level at both channels.

FM Center-Tuning Meter

- 1) Remove the signal generator output from the unit.
- 2) With no signal supplied to the unit, verify that the FM

Center-tuning meter reads exact center of the scale. If necessary, adjust T7.

FM Distortion

- 1) Apply 98 MHz, 65 dBf, 1 kHz and 100% modulated signal to the unit, using same manner as in the FM RF tracking set-up.
- 2) Adjust T8 for minimum distortion on the distortion analyzer. Readjust T7 if necessary, as turning T8 core may upset the center-tuning meter balance.

Signal Strength Meter

- 1) Apply 98 MHz, 90 dBf signal to the unit.
- 2) Tune the unit to 98 MHz.
- 3) Adjust RV2 for about 90% reading on the signal-strength

meter.

- 4) Perform this step in AM mode, applying 1,000 kHz.

FM Mute Circuit

- 1) Apply 98 MHz, 20 dBf signal to the unit.
- 2) Tune the unit to 98 MHz.

- 3) Place the Mute switch in On position.

- 4) Adjust RV1, turning slowly until the signal is muted.

AM IF Amplifier

- 1) Apply 455 kHz sweep generator output to the unit's AM Antenna terminal.
- 2) Connect the scope to the pin No. 12 of IC3 and the chassis ground.
- 3) Adjust T11 for maximum and symmetrical scope display as shown to the right.



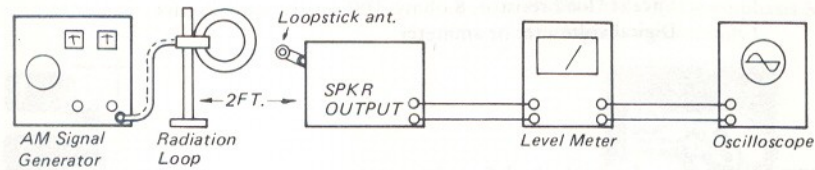
AM RF Tracking

- 1) Apply 600 kHz, 30% modulated with 1 kHz to the AM bar antenna, as illustrated in next page. (Distance between the AM bar antenna and emitting loop should be about 2 feet).
- 2) Adjust the signal generator output so that a sine wave

appears on the scope.

- 3) Adjust T12 for maximum audio output on the level meter connected parallel with the scope. When turning the core, the audio level might rapidly increase and the volt-

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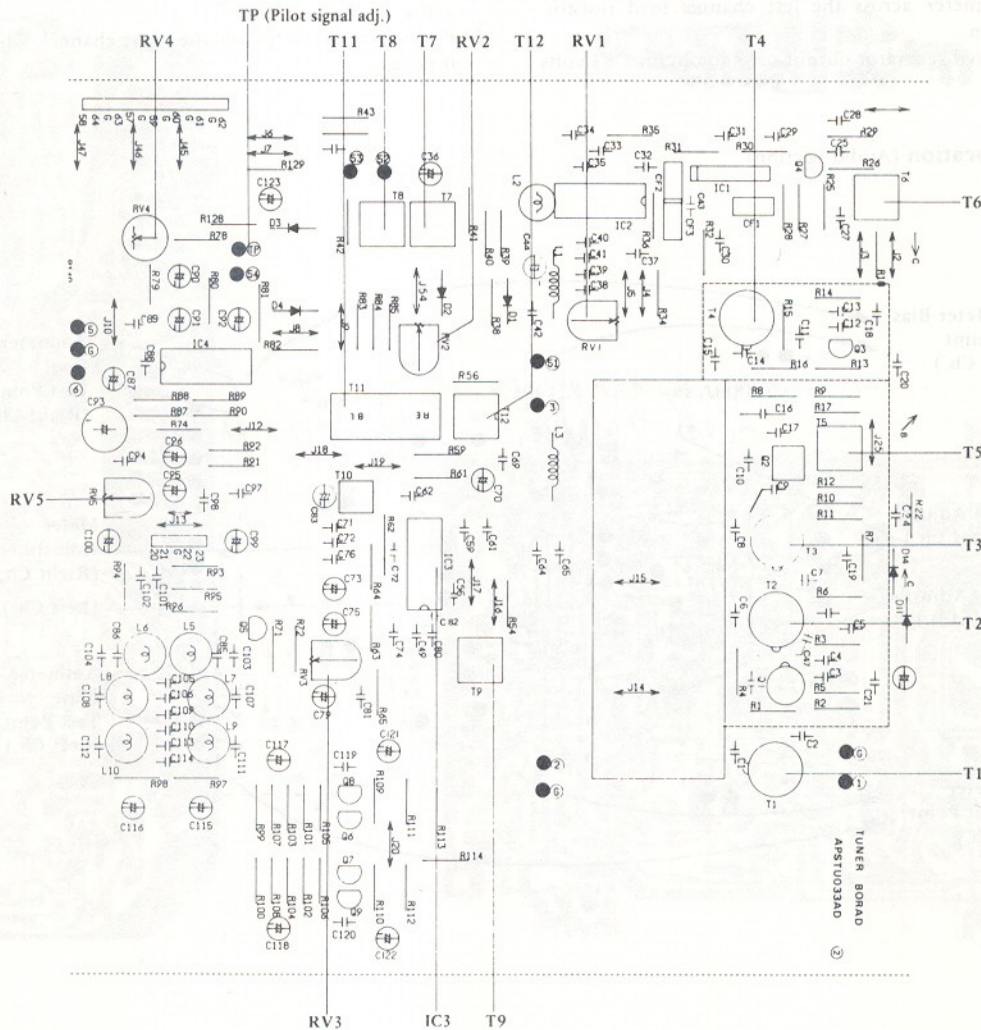
meter goes off scale. In this case, always decrease the signal generator output for proper level. Do not change voltmeter range. Always keep the generator output as low as possible to avoid AGC action and to keep the measurements accurate.

- 4) Adjust the AM loop stick antenna core and T9 core for maximum output on the voltmeter.
- 5) Shift the generator frequency to 1400 kHz with same

modulation condition. Retune the unit.

- 6) Adjust CT4 (dial frequency alignment) + CT2 + CT6 (tracking) for maximum output.
- 7) Repeat above procedure at both frequencies, until no further improvement is obtained.
- 8) Verify the dial frequency indication at 1,000 kHz for accuracy.

Adjustment Location (RF Section)



Audio Adjustment

Equipment Required

Audio Signal Generator.
Speaker load resistor, 8 ohms, 100 watts, noninductive.
Digital voltmeter or ammeter.

Bias Adjustment

The following adjustments are the same for both the left and right channels.

- 1) Connect 8 ohm resistors to the speaker A terminals, and set the Speaker Mode switch to A position.
- 2) Turn the Volume control fully counterclockwise.
- 3) Turn RV1 fully counterclockwise.
- 4) Depending on available equipment, use A or B:
 - A. Set the digital voltmeter to most sensitive range. Connect probes across R37 and R39 (voltmeter bias test point, left channel). Turn unit on. Let it idle at least one minute. Adjust RV1 for 40 mV across the resistors.

- B. With unit off, remove jumper between PC board terminals E and E, and connect ammeter, set to 100 mA range. Turn unit on and let it idle at least one minute. Adjust RV1 for 40 mA.

- 5) Perform the same procedure for the right channel, except measure voltage across R38 to R40 (voltmeter bias test point, right channel) or replace jumper from D to D with ammeter. Adjustment is made with RV2.
- 6) Leave the receiver on for about 30 minutes, then recheck measurement. A tolerance of $\pm 25\%$ is acceptable. Readjust if necessary.

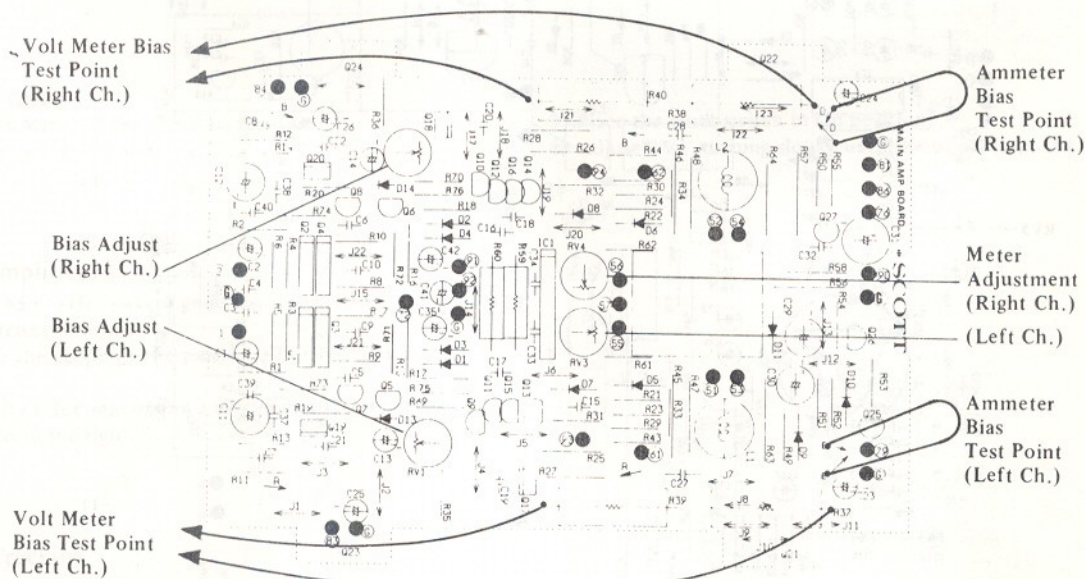
Power Meter Calibration

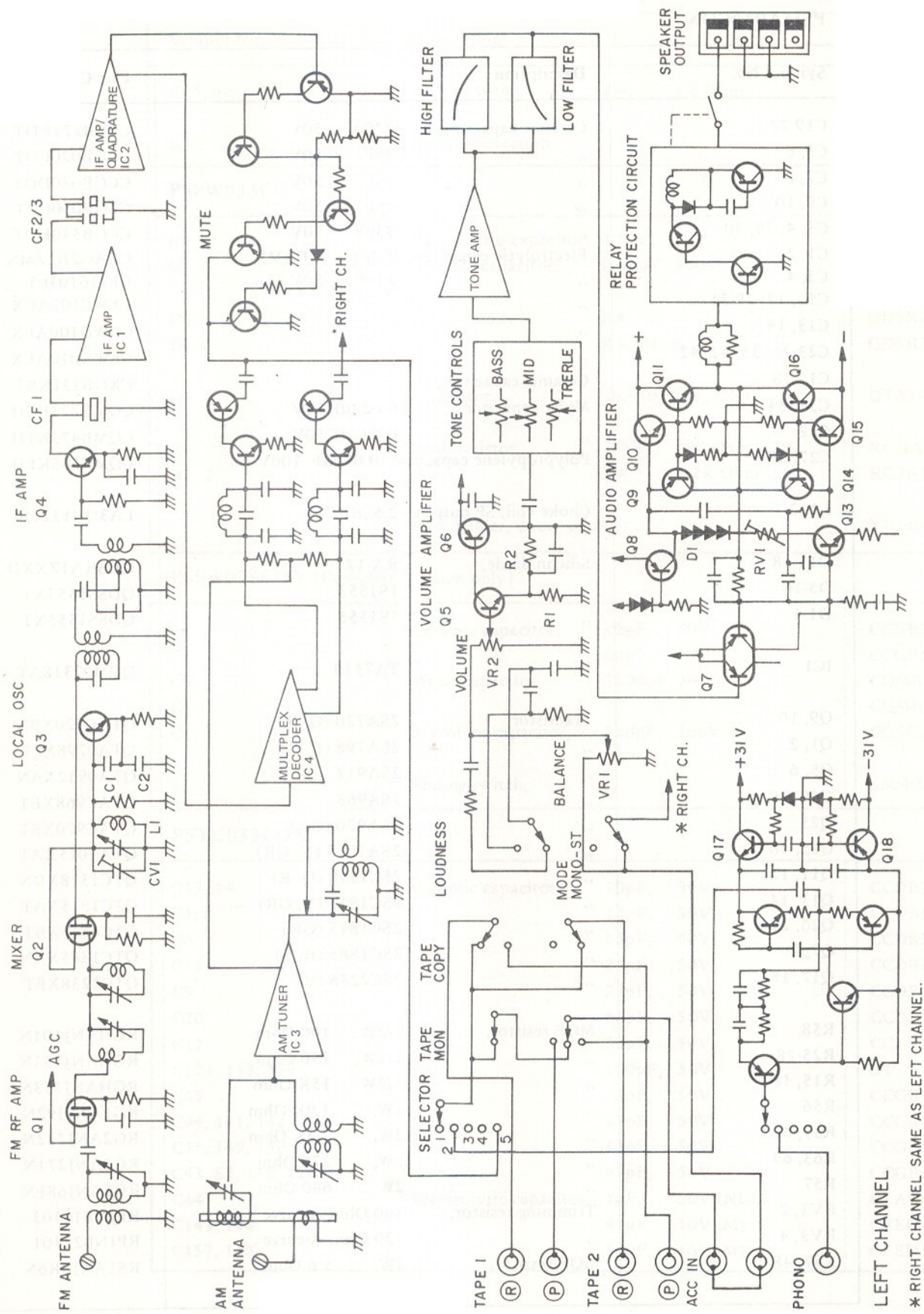
- 1) Connect the audio signal generator to the receiver and apply 1 kHz signal to Aux input, left channel.
- 2) Connect voltmeter across the left channel load resistor.
- 3) Turn power on.
- 4) Adjust the signal generator output so as to obtain 2.83 volts

on the voltmeter.

- 5) Check that the left channel meter indicates 1 watt. If not, adjust RV3.
- 6) Perform above steps on the right channel, adjusting RV4, if necessary.

Adjustment Location (Audio Section)





LEFT CHANNEL

* RIGHT CHANNEL SAME AS LEFT CHANNEL.

Q1
3SK45(B)



Q5
25C2240(GR,BL)



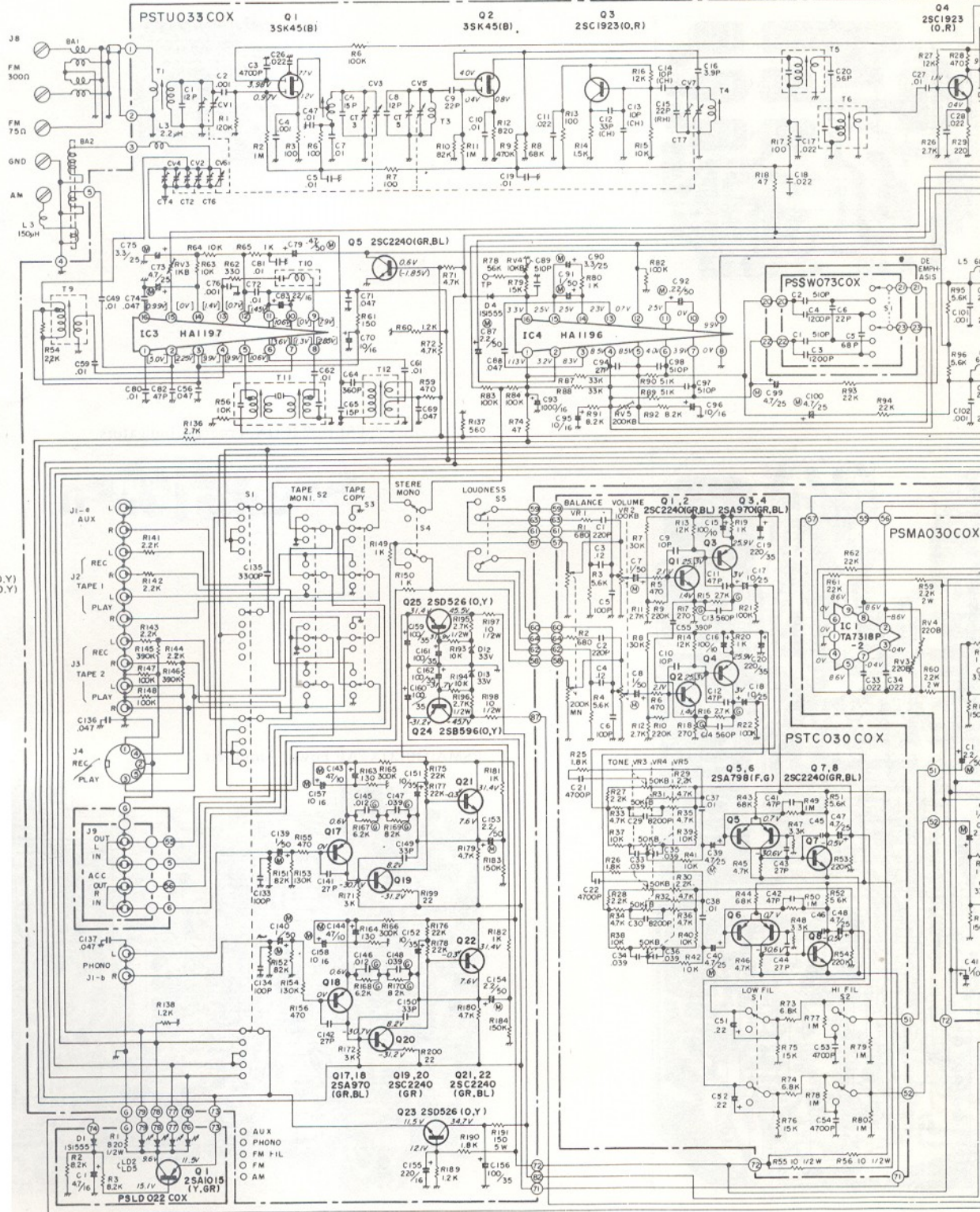
Q2
3SK45(B)



Q3
25C1923(O,R)



Q4
25C1923(O,R)



Q24 25B596(O,Y)
Q25 25D526(O,Y)



BCC

Q1
25A1015(Y,GR)



Q17,18
25A970(GR,BL)



Q19,20
25C2240(GR)



Q23 25D526(O,Y)



Q21,22
25C2240(GR,BL)



Q1,2
25C2240(GR,BL)



Q3,4
25A970(GR,BL)

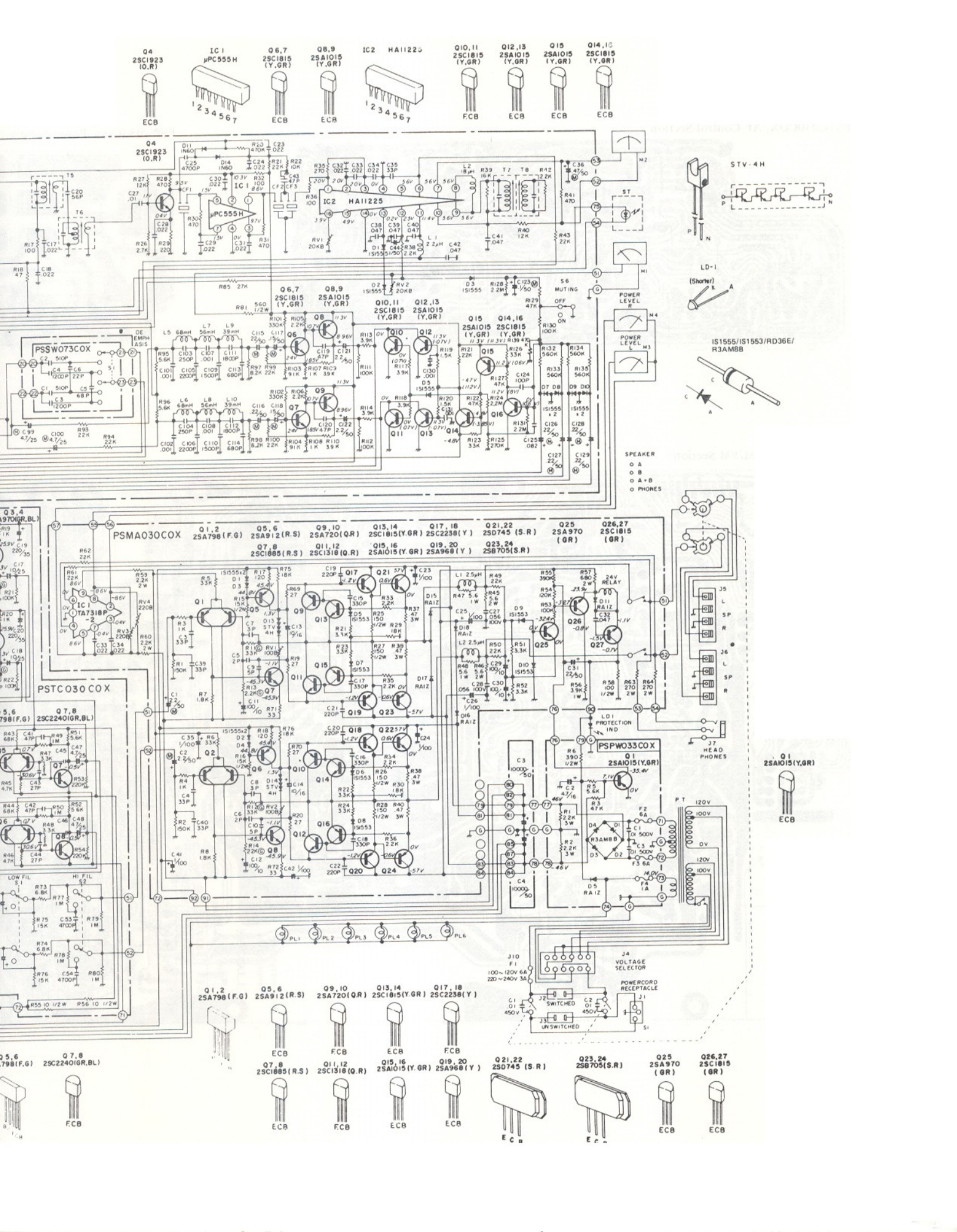


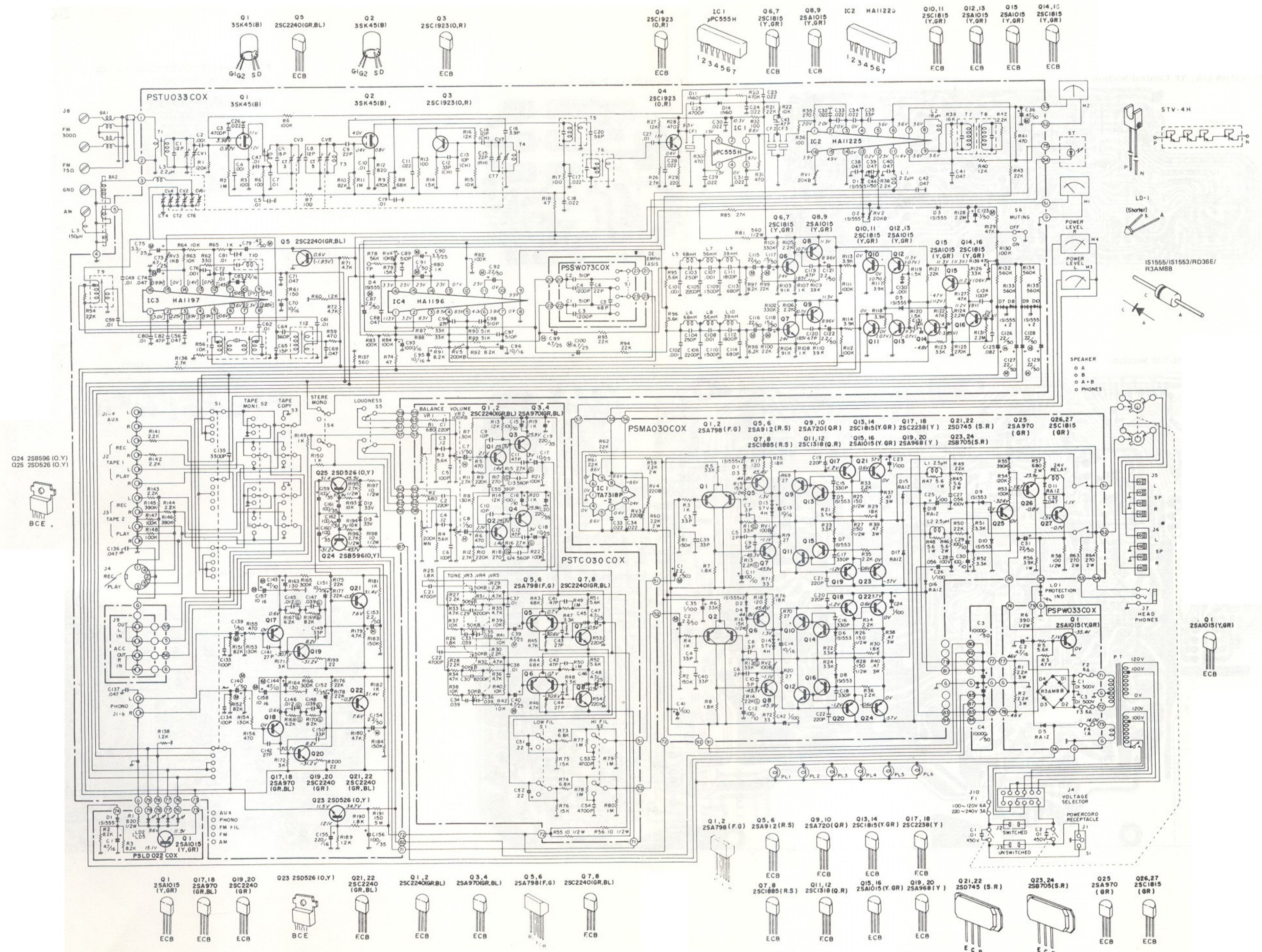
Q5,6
25A798(F,G)



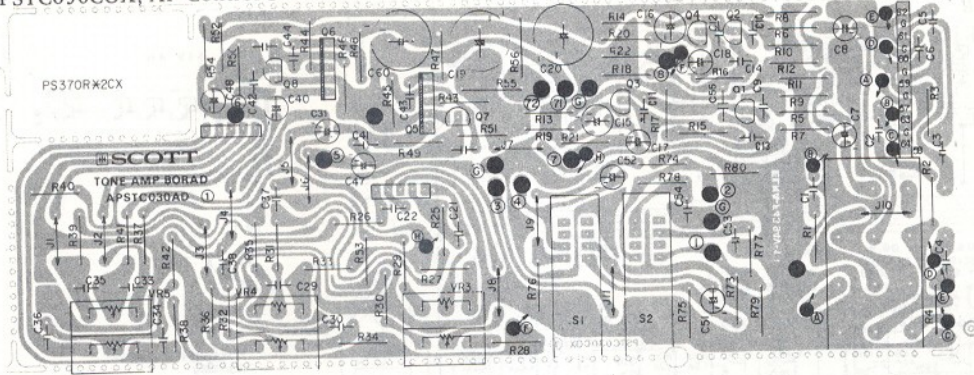
Q7,8
25C2240(GR,BL)



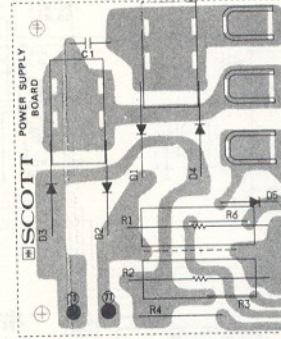




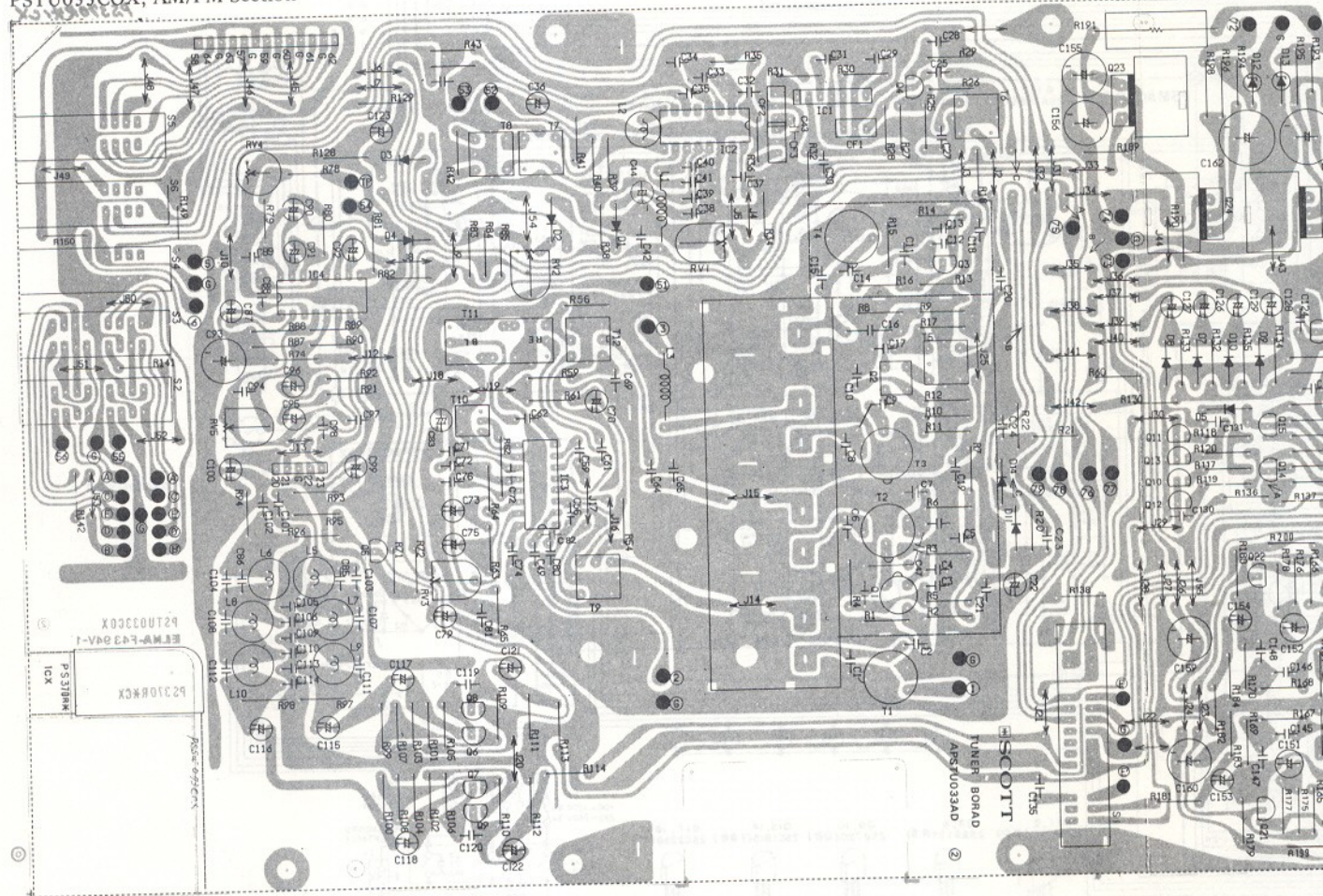
PSTC030COX, AF Control Section



PSPW033COX, Power Supply

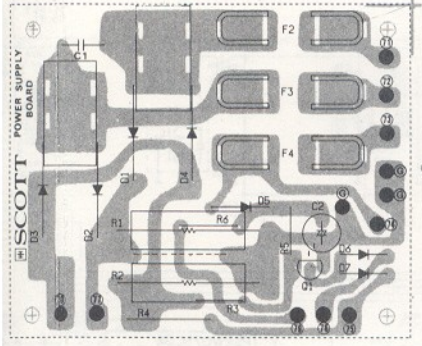


PSTU033COX, AM/FM Section

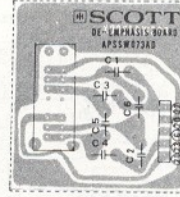


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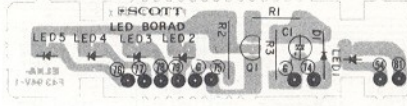
PSPW033COX, Power Supply



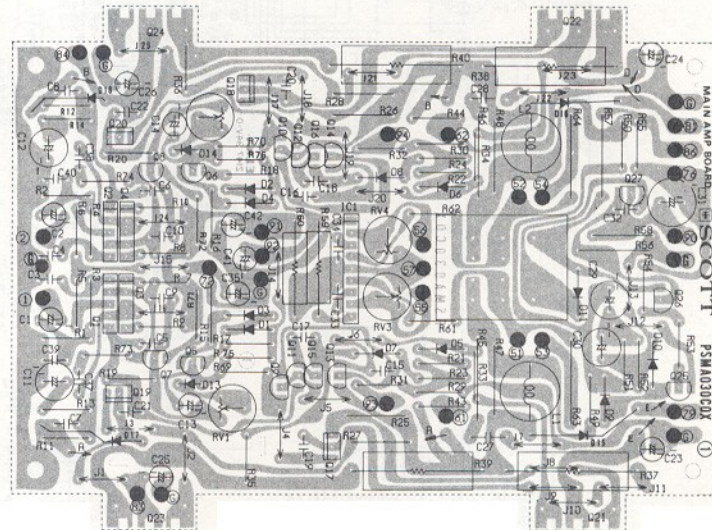
PSSW073COX, De-emphasis Switch
(European version only)



PSLD022COX, Program Indicators

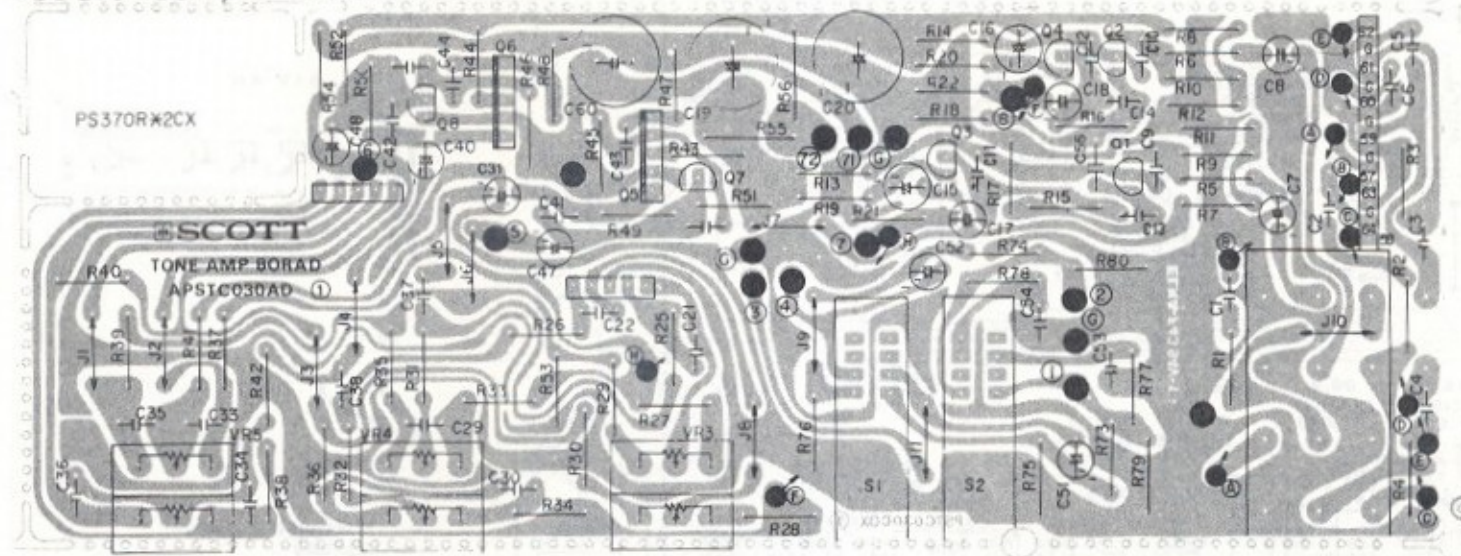


PSMA030COX, AF Power Amplifier

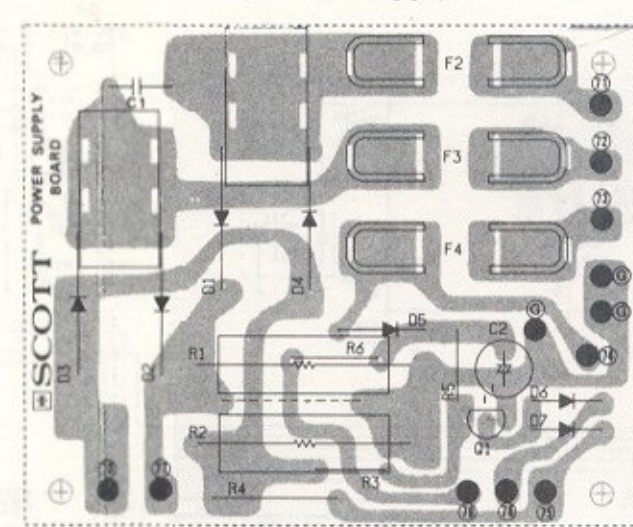


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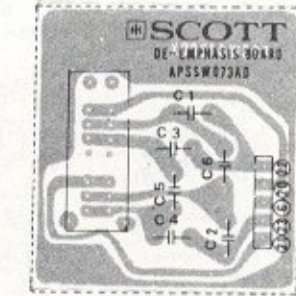
PSTC030COX, AF Control Section



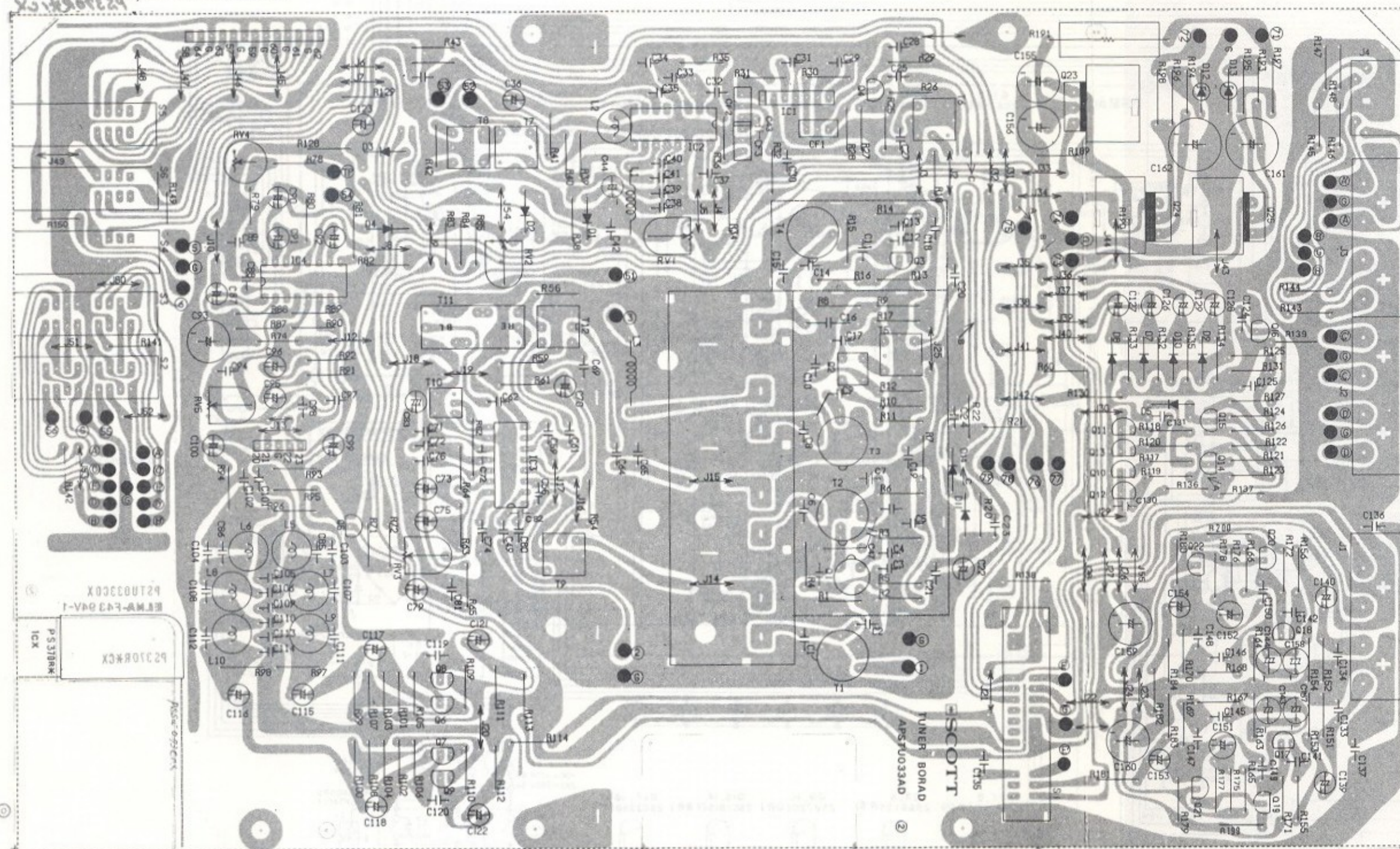
PSPW033COX, Power Supply



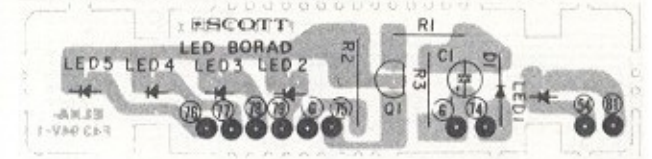
PSSW073COX, De-emphasis Switch
(European version only)



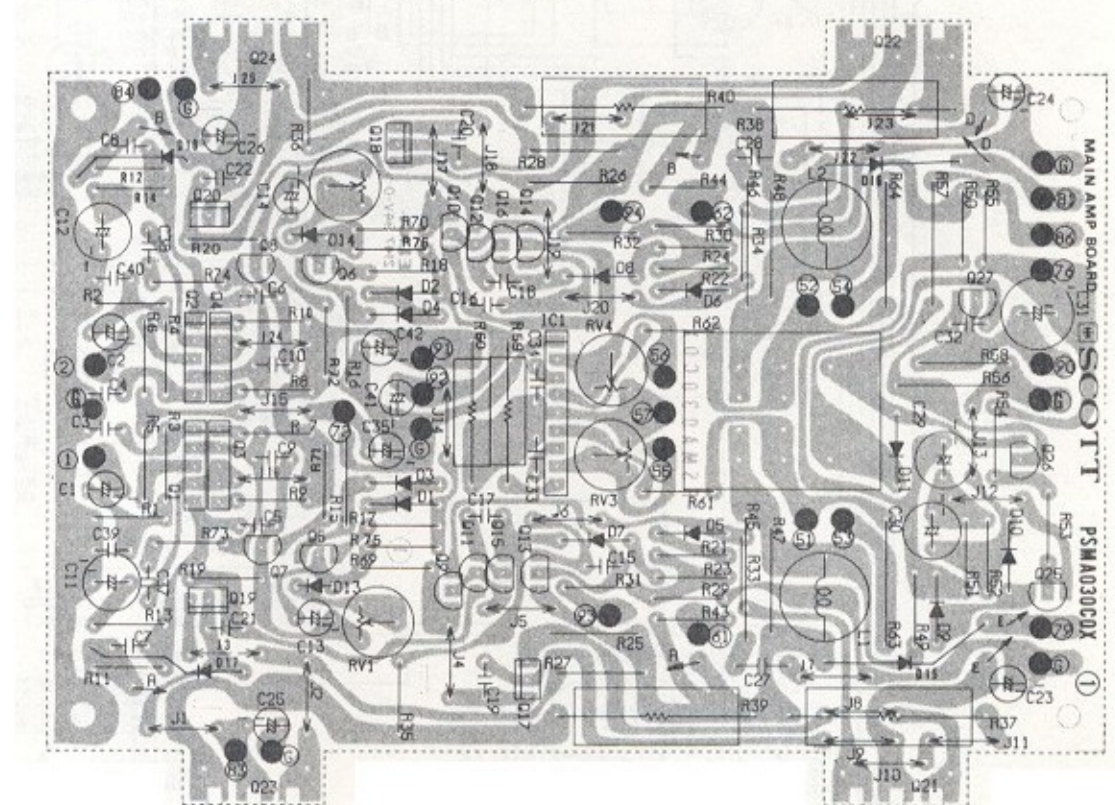
PSTU033COX, AM/FM Section



PSLD022COX, Program Indicators



PSMA030COX, AF Power Amplifier



REPLACEMENT PARTS LIST

PSMA030COX

Symbol No.	Description	Part Code
C19-22	Ceramic capacitor, 220pF 50V	CCFB221KOT
C5, 6	" 2pF 50V	CCGB020COT
C7, 8	" 3pF 50V	CCGB030DOT
C9, 10	" 5pF 50V	CCGB050COT
C3, 4, 39, 40	" 33pF 50V	CCGB330KOT
C1, 2	Electrolytic capacitor, 2.2μF 50V(M)	CEAG2R2ZMN
C3, 4	" 33pF 50V	CEJ1610305
C11, 12, 29-31	"	CEWC101ALX
C13, 14	"	CEWD100ALX
C23-26, 35, 41, 42	"	CEWK010ALX
C15-18	Ceramic capacitor,	CKGB331KBT
C33, 34	Mylar capacitor, 0.022μF 50V	CQMB223KTH
C32	" 0.047μF 50V	CQMB473KTH
C27, 28	Polypropylene capacitor, 0.056μF 100V	CQMC563KEH
L1, 2	Choke coil, SP output, 2.5 μH	LA3QH1323B
D11-18	Silicon diode, RA-1Z	QDSRA1ZXXD
D5-10	" 1S1553	QDSS1553XT
D1-4	" 1S1555	QDSS1555XT
IC1	IC TA7318	QQM07318AT
Q9, 10	Transistor, 2SA720 (Q, R)	QTAC720XBN
Q1, 2	" 2SA798 (F, G)	QTA0798XEE
Q5, 6	" 2SA912	QTA0912XAN
Q19, 20	" 2SA968	QTAC968XBT
Q25	" 2SA970 (GR)	QTAC970XBT
Q15, 16	" 2SA1015 (Y, GR)	QTA1015XAT
Q11, 12	" 2SC1318 (Q, R)	QTC1318XDN
Q13, 14	" 2SC1815 (Y, GR)	QTC1815XAT
Q26, 27	" 2SC1815 (GR)	QTC1815XBT
Q7, 8	" 2SC1885 (R, S)	QTC1885XAN
Q17, 18	" 2SC2238 (Y)	QTC2238XBT
R58	MOF resistor, 1/2W, 100 Ohm	RGHANJ101N
R25-28	" 1/2W, 150 Ohm	RGHANJ151N
R15, 16	" 1/2W, 15K Ohm	RGHANJ153N
R56	" 1W, 3.9K Ohm	RG1ANJ392N
R59, 60	" 2W, 2.2K Ohm	RG2ANJ222N
R63, 64	" 2W, 270 Ohm	RG2ANJ271N
R57	" 2W, 680 Ohm	RG2ANJ681N
RV1, 2	Trimming resistor, 100 Ohm A-curve	RPJNB10103
RV3, 4	" 220 Ohm A-curve	RPJNB22101
R47, 48	MOF resistor, 1W, 5.6 Ohm	RS1ANJ5R6N

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Symbol No.	Description	Part Code
R45, 46	MOF resistor, 2W, 5.6 Ohm	RX2ANJ5R6N
RY1	Relay, protection	ZRA444103U

PSPW033COX

C2	Electrolytic capacitor, 4.7 μ F, 16V	CEWD470ALX
C1, 3	Ceramic capacitor, 0.01 μ F, 500V	CKDE103PEM
D5	Silicon diode RA-1Z	QDSRA1ZXXD
D1-4	" R3-AM8B	QDSR3AM8BE
Q1	Transistor, 2SA1015 (Y, GR)	QTA1015XAT
R6	MOF resistor, 1/2W, 390 Ohm 5%	RGHANJ391N
R1, 2	" 3W, 2.2K Ohm 5%	RG3ANJ222N
	Fuse holder, direct wiring	YHF0P0003Z

PSSW073COX [European Version only]

C6	Ceramic capacitor, 22pF, 50V	CCGB220KOT
C5	" 68pF, 50V	CCGB680KOT
C3	Mylar capacitor, 1200pF, 50V	CQMB122JEH
C4	"	CQMB122JEH
C1, 2	Styroflex capacitor, 510pF, 100V	CQSC511JCF
S1	Sliding switch,	SS040305ZL

PSTU033COX

C13, 14	Ceramic capacitor 10pF, 50V	CCDB100DCM
C1, 8	" 12pF, 50V	CCDB120KOM
C6	" 15pF, 50V	CCDB150KOM
C15	" 22pF, 50V	CCDB220KRM
C9	" 22pF, 50V	CCDB220KOM
C20	" 56pF, 50V	CCDB560KOM
C12	" 33pF, 50V	CCFB330KCT
C124, 133, 134	" 100pF, 50V	OT
C65	" 15pF, 50V	CCGB150KOT
C94, 141, 142	" 27pF, 50V	CCGB270KOT
C35, 149, 150	" 33pF, 50V	CCGB330KOT
C43, 82, 119, 120	" 47pF, 50V	CCGB470KOT
C44	Electrolytic capacitor, 1 μ F, 50V (NLL)	CEAG010ALX
C143, 144	" 47 μ F, 10V (M)	CEEC470ZMN
C157, 158	" 10 μ F, 16V (M)	CEED100ZMN

Symbol No.	Description	Part Code
C93	Electrolytic capacitor, 1000 μ F, 16V (NLL)	CEED102ALX
C155	" 220 μ F, 16V (NLL)	CEED221ALX
C121, 122	" 2.2 μ F, 25V (M)	CEEE2R2ZMN
C75, 90	" 3.3 μ F, 25V (M)	CEEE3R3ZMN
C73	" 4.7 μ F, 25V (M)	CEEE4R7ZMN
C159-162	" 100 μ F, 35V (NLL)	CEEF101ALX
C117, 118	"	CEEGR15ZMN
C92, 115, 116, 126-129	"	CEEGR15ZMN
C36, 79	" 0.47 μ F, 50V (M)	CEEGR47ZMN
C123	" 0.1 μ F, 50V (M)	CEEG0R1ZMN
C156	" 1 μ F, 50V (NLL)	CEEG010ALX
C91, 130, 140	" 1 μ F, 50V (M)	CEEG010ZMN
C87, 153, 154	" 2.2 μ F, 50V (M)	CEEG2R2ZMN
C70, 95, 96	" 10 μ F, 16V	CEVD100ALX
C83, 99, 100	" 22 μ F, 16V	CEVD220ALX
C151, 152	" 10 μ F, 16V	CEVF100ALX
C16	Minic capacitor, 3.9pF, 500V	CG2H3R9KNN
C2, 4	Ceramic capacitor, 1,000pF, 50V	CKDB1027FM
C3, 25	" 4,700pF, 50V	CKDB472ZFM
C5, 7, 10, 19, 27, 49, 59, 61, 62, 80	" 0.01 μ F, 50V	CKFB103ZFT
C11, 17, 18, 23, 24, 26, 28-34	" 0.022 μ F, 50V	CKFB223ZFT
C136	" 0.047 μ F, 50V	CKFB473ZFT
C38-42, 56, 69, 71, 74, 88, 136	" "	CKFB473ZFT
C101, 102	" 1,000pF, 50V	CKGB102KBT
C76	Mylar capacitor 1,000pF, 50V	CQMB102KEH
C72, 81, 130, 131	" 0.01 μ F, 50V	CQMB103KFH
C145, 146	" 0.012 μ F, 50V (AWS)	CQMB123GEH
C109, 110	" 0.15 μ F, 50V	CQMB152JEH
C105	" 0.22 μ F, 50V	CQMB222JEH
C106	" "	CQMB222JEH
C135	" 3,300pF, 50V	CQMB332KEH
C147, 148	" 0.039 μ F, 50V	CQMB393GEH
C125	" 0.082 μ F, 50V	CQMB823KEH
C107, 108	Styroflex capacitor, 0.001 μ F, 100V	CQSC102JCF
C111, 112	" 1,800pF, 100V	CQSC182JCF
C103, 104	" "	CQSC251JCF
C64	" 360pF, 100V	CQSC361JCF
C89, 97, 98	" 510pF, 100V	CQSC511JCF
C113, 114	" 680pF, 100V	CQSC681JCF
CV1-6	Variable capacitor, tuning	CVA3433G02

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Symbol No.	Description	Part Code
T11	IFT + ceramic filter, 455 kHz	FBR455A18Q
CF1	Ceramic filter, 455 kHz	FB10R7F14M
CF2, 3	"	FB10R7F15M
L1, 2	RFC	LCADA3038A
L9, 10	"	LCADA3038A
L7, 8	"	LF563JC01K
L5, 6	"	LF683JC01K
D11, 14	Ceramic diode, 1N60	QDG1N60XXT
D1-10	" 1S7555	QDSS1555XT
D12, 13	Zenner Diode	QDZRD36ECA
IC4	IC, HA1196	QQMA1196AB
IC3	" HA1197	QQMA1197AB
IC1	" MU-PH555	QQM00555BA
IC2	" HA11225	QQM11225AB
Q17, 18	Transistor, 2SA970 (BL, GR)	QTA0970XAT
Q8, 9, 12, 13, 15	"	QTA0970XAT
Q24	" 2SB596 (O, Y)	QTB0596XAT
Q6, 7, 10, 11, 14, 16	" 2SC1815 (Y, GR)	QTC1815XAT
Q3, 4	" 2SC1923 (O, R)	QTC1923XAT
Q5, 21, 22	" 2SC2240 (GR, BL)	QTC2240XAT
Q19, 20	"	QTC2240XCT
Q23, 25	" 2SD526 (D, Y)	QTD0526XAT
Q1, 2	" 3SK45 (B)	QTL0045XAB
R191	Cement resistor, 150 Ohm	RF05SK151B
R195, 196	MOF resistor, 1/2W, 2.7K Ohm	RGHAPJ272B
R81	" 1/2W, 560 Ohm	RGHAPJ561N
RV3	Trimming resistor, 1K Ohm A-curve	RPGNB10201
RV1	" 10K Ohm A-curve	RPGNB10301
RV2	" 20K Ohm A-curve	RPGNB20301
RV5	" 200K Ohm A-curve	RPGNB20401
RV4	" 10K Ohm A-curve	RPJNB10302
R197, 198	MOF resistor, 1/2W, 10 Ohm	RXHAPJ100N
S1	Rotary switch	SH040509UN
S4-6	Lever switch	SL020215ZB
S2, 3	Slide switch	SL040304ZB
T1	RFC	TRA7JZ007S
T10	IFT	TR07BM001M

Symbol No.	Description	Part Code
T5, 6	IFT	TR10MA013S
T7	"	TR10MM013M
T8	"	TR10MM014M
T9	RFC	TR10MN006M
T2	"	TR10MQ002M
T3	"	TR10MQ003M
T4	"	TR10MQ004M
T12	"	TR10MZ002M
J4	Din jack, 5 pin	YJD05S011Z
J1	RCA Jack, 4 pin	YJP04S016U
J2	"	YJP04S016U
J3	"	YJP04S016U

PSLD022COX

C1	Electrolytic capacitor, 4.7 μ F, 25V (NLL)	CEEE4R7ALX
C2	Ceramic capacitor, 0.022 μ F, 50V	CKFB223ZFT
D1	Silicon diode, 1S1555	QDSS1555XT
LD1-4	LED	QLAR5531KR
Q1	Transistor, 2SA1015 (Y, GR)	QTA1015XAT
R1	MOF resistor, 1/2W, 820 Ohm	RGHANJ821N

PSTC030AOX

C1, 2	Ceramic capacitor, 220pF, 50V	CCFB221KOT
C55	" 390pF, 50V	CCFB391KOT
C13, 14	" 560pF, 50V	CCFB561KOT
C9, 10	" 10pF, 50V	CCGB100DOT
C5, 6	" 100pF, 50V	CCGB101KOT
C43, 44	" 27pF, 50V	CCGB270KOT
C11, 12, 41, 42	" 47pF, 50V	CCGB470KOT
C31, 40	Electrolytic capacitor, 4.7 μ F, 25V (M)	CEEE4R7ZMN
C19, 20	" 220 μ F, 35V (NLL)	CEEF221ALX
C51, 52	" 0.22 μ F, 50V (M)	CEEGR22ZMN
C7, 8	" 1 μ F, 50V (M)	CEEG010ZMN
C15, 16	"	CEVC101ALX
C17, 18	"	CEVE100ALX
C47, 48	"	CEVE4R7ALX
C37, 38	Mylar capacitor, 0.01 μ F, 50V	CQMB103KEH

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Symbol No.	Description	Part Code
C3, 4	Mylar capacitor, 0.12 μ F, 50V	CQMB124KFH
C33-36	" 0.039 μ F, 50V	CQMB393KEH
C21, 22, 53, 54	" 4,700pF, 50V	CQMB472KEH
C29, 30	" 8,200pF, 50V	CQMB822KEH
Q5, 6	Transistor, 2SA798 (F, G)	QTA0798XEE
Q3, 4	" 2SA970 (BL, GR)	QTA0970XAT
Q1, 2, 7, 8	" 2SC2240 (GR, BL)	QTC2240XAT
VR1, 2	VR, 200K Ohm	RVGA204X07
VR3-5	" 50K Ohm	RVQA503B05
R55, 56	MOF resistor, 1/2W, 10 Ohm	RXHANJ100N
S1	Lever switch, Low Fil	SL020215ZB
S2	" , Hi Fil	SL020218ZB

Main Chassis

C3, 4	Electrolytic capacitor, 10,000 μ F, 50WV	CEJ1G10305*
C5	Ceramic capacitor, 0.047 μ F, 50V	CKFB473ZFT
C1, 2 (Europe)	Oil-paper capacitor, 0.01, 450V	CNST103MAN
C1 (US/Canada)	Ceramic capacitor, 4,700p, 1.4kV	CKDX472PMM
L2	RFC, 2.2 μ H	LCADA3038A
L1	"	LF151KA01T
LD1	LED, Protection	QLAGD4505R
Q23, 24	Transistor, 2SB705 (S, R)	QTB0705XAA
Q21, 22	" 2SD745 (R, S)	QTD0745XAA
D13, 14	Tr diode, quadruple, STV-4H (G, W)	QVFSTV4HXD
S1 (US/Canada)	Rotary switch, Power, UL listed	SU025108SA
S2 (Europe)	" , " , SEMKO listed	SU025107SA
BA2	Loopstick antenna	TEAR155E01
PT (US/Canada)	Power transformer	TPAA5A003Y
PT (Europe)	"	TPAA5V001Y
BA1	FM 300 Ohm balance coil	TV750301A2
J10	Fuse holder, AC, UL listed	YHF1S3001U
J2, 3	AC receptacle	YJA020005U
J1	"	YJA03S002U
J11	RCA jack, 4 pin	YJP04S011U
J7	Headphone jack, 3 conductor, 1/4"	YJS03S016Z

Symbol No.	Description	Part Code
J4 (Europe only)	Jack, Voltage selector	YJZ10S001U
P1 (Europe only)	Plug, Voltage selector	YPZ06S004U
F1	Fuse, US/Canada; 5 A, UL listed	ZFBQ50201U
	" , Europe; 2.5 A	ZFBQ25202Z
F2, 3	" , US/Canada; 6 A, UL listed	ZFBQ60203U
	" , Europe; 6 A	ZFBQ25202Z
		ZFBQ60201Z
F4	" , US/Canada; 1 A, UL listed	ZFBQ10202U
	" , Europe; 1 A	ZFBQ10203Z
M3, 4	Meter, power output	ZMD2052K01
M1, 2	Meter, FM center-tuning	ZMG2052N02
PL1-6	Lamp	ZPA148103U

Mechanical

	Escutcheon	AM370R**01
	Tuning flywheel assembly	AVFLYWL009
	Rear panel	MB972SM019
	Front chassis	MB974SZ005
	Cabinet cover	MB983SX002
	Dial plate	ME96EAA006
	Dial pointer	MJ311BC002
	Knob	MN276XA020
	"	MN296XA002
	"	MN296XA003
	"	MN376AA019
	"	MN386AA026
	Bottom plate	MS986SZ016
	Chassis	MU865SZ003
	Knob	VN360SX001
	Operation manual	KT370R**AE
	Carton	KP370R**01