

Service Manual

FM - AM Portable Radio

Radio

RF-3700

Colour

(K) Black Type



Area

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	
(EG)	F.R. Germany & Italy	

■ SPECIFICATIONS

■ GENERAL

Power Requirement	AC; 230 V (For U.K. 230-240 V) 50 Hz Battery; 6V, four (UM-1) R20/LR20 batteries
Power Consumption	5 W
Power Output	1.2 W (RMS...max)
Output	Earphone
Speaker	10cm
Dimensions	274 (W) x 149 (H) x 88 (D) mm
Weight	1.1 kg without batteries

Radio Frequency Range

FM1/2; 87.5 ~ 108 MHz
LW; 144 ~ 288 kHz
MW; 522 ~ 1611 kHz
SW; 5.9 ~ 18.0 MHz

Notes :

1. Weights and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

Panasonic®

■ Measurements and Adjustments

■ Alignment Instructions

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Set volume control to maximum.
2. Set band switch to AM or FM.
3. Set power source voltage to 6 V.
4. Output of signal generator should be no higher than necessary to obtain an output reading.

■ MW,LW,SW Alignment

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig.1)	REMARKS
	CONNECTIONS	FREQUENCY				
AM-IF ALIGNMENT						
(1) MW	Fashion a loop of several turns of wire and radiate signal into loop of receiver.	459 kHz (E,EB) 450 kHz (EG) 30% Mod. at 400Hz	Point of non-interference.(on/about 600kHz)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	T2 (AM IFT)	Adjust for maximum output.
LW-RF ALIGNMENT (FOR E,EB AREA)						
(2) LW	"	144 kHz	Tuning capacitor fully closed.	"	L3 (LW OSC Coil)	"
(3) LW	"	162 kHz	Tune to signal	"	[*1] L6-1 (LW ANT Coil)	Adjust for maximum output. Adjust L6-1 by moving coil along the ferrite core.
(4) LW	"	270 kHz	"	"	CT2 (LW ANT Trimmer)	Adjust for maximum output. Repeat steps (2)-(4).
[*1] Fix antenna coil with wax after completing alignment.						
MW-RF ALIGNMENT (FOR E,EB AREA)						
(5) MW	"	522 kHz	Tuning capacitor fully closed.	"	L2 (MW OSC Coil)	Adjust for maximum output.
(6) MW	"	603 kHz	Tune to signal	"	[*2] L6-2 (MW ANT Coil)	Adjust for maximum output. Adjust L6-2 by moving coil along the ferrite core.
(7) MW	"	1404 kHz	"	"	CT1 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (5)-(7).
MW-RF ALIGNMENT (FOR EG AREA)						
(8) MW	"	522 kHz	Tuning capacitor fully closed.	"	L3 (MW OSC Coil)	Adjust for maximum output.
(9) MW	"	603 kHz	Tune to signal	"	[*2] L6 (MW ANT Coil)	Adjust for maximum output. Adjust L6 by moving coil along the ferrite core.
(10) MW	"	1404 kHz	"	"	CT2 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (8)-(10).
[*2] Fix antenna coil with wax after completing alignment.						

SW-RF ALIGNMENT(FOR EG AREA)							
(11)	SW	Connect to test point TP1 through ceramic capacitor (10pF). Negative side to test point TP2 .	5.9 MHz	Tuning capacitor fully closed.	"	L2 (SW OSC Coil)	Adjust for maximum output.
(12)	SW		5.9 MHz	Tune to signal		[*3] L5 (SW ANT Coil)	Adjust for maximum output. Repeat steps (11)~(12).
[*3] Fix antenna coil with wax after completing alignment.							

■ FM ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig.1)	REMARKS
CONNECTIONS	FREQUENCY				
FM-IF ALIGNMENT					
(13)	High side thru. 0.001μF to test point TP1 . Negative side to test point TP2 .	10.7MHz (SWP)	Point of non-interference.(on/about 90MHz)	T1 (FM IFT)	Wave form is shown in Fig. 3.

■ Alignment Point

• Please refer to Printed Circuit Board Diagram for test point locations.

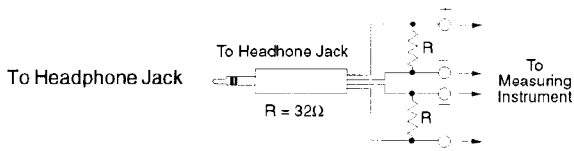
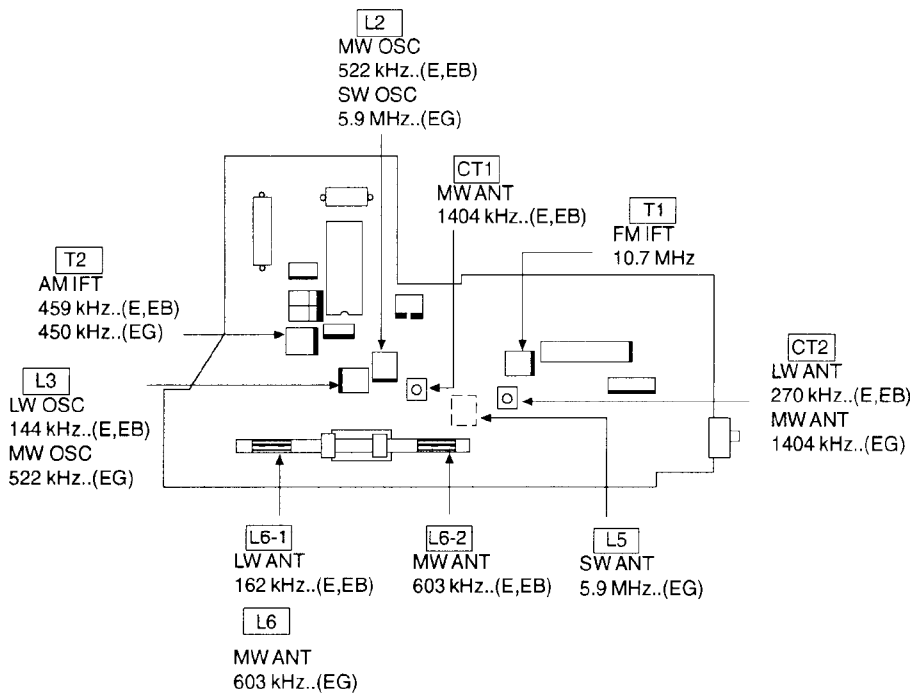


Fig. 2

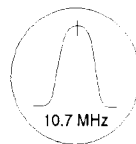


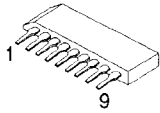
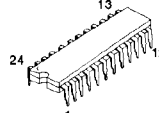
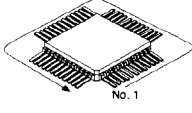
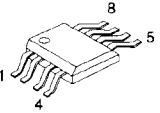
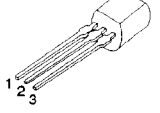
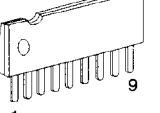
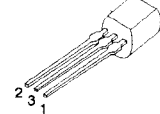
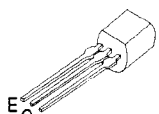
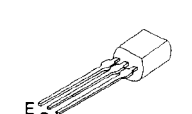
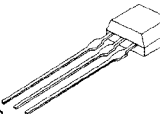
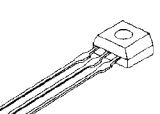
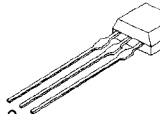
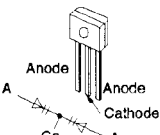
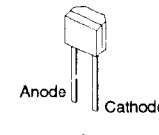
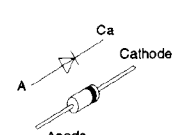
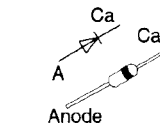
Fig. 3

■ Terminal Function of IC's

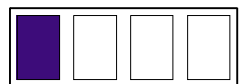
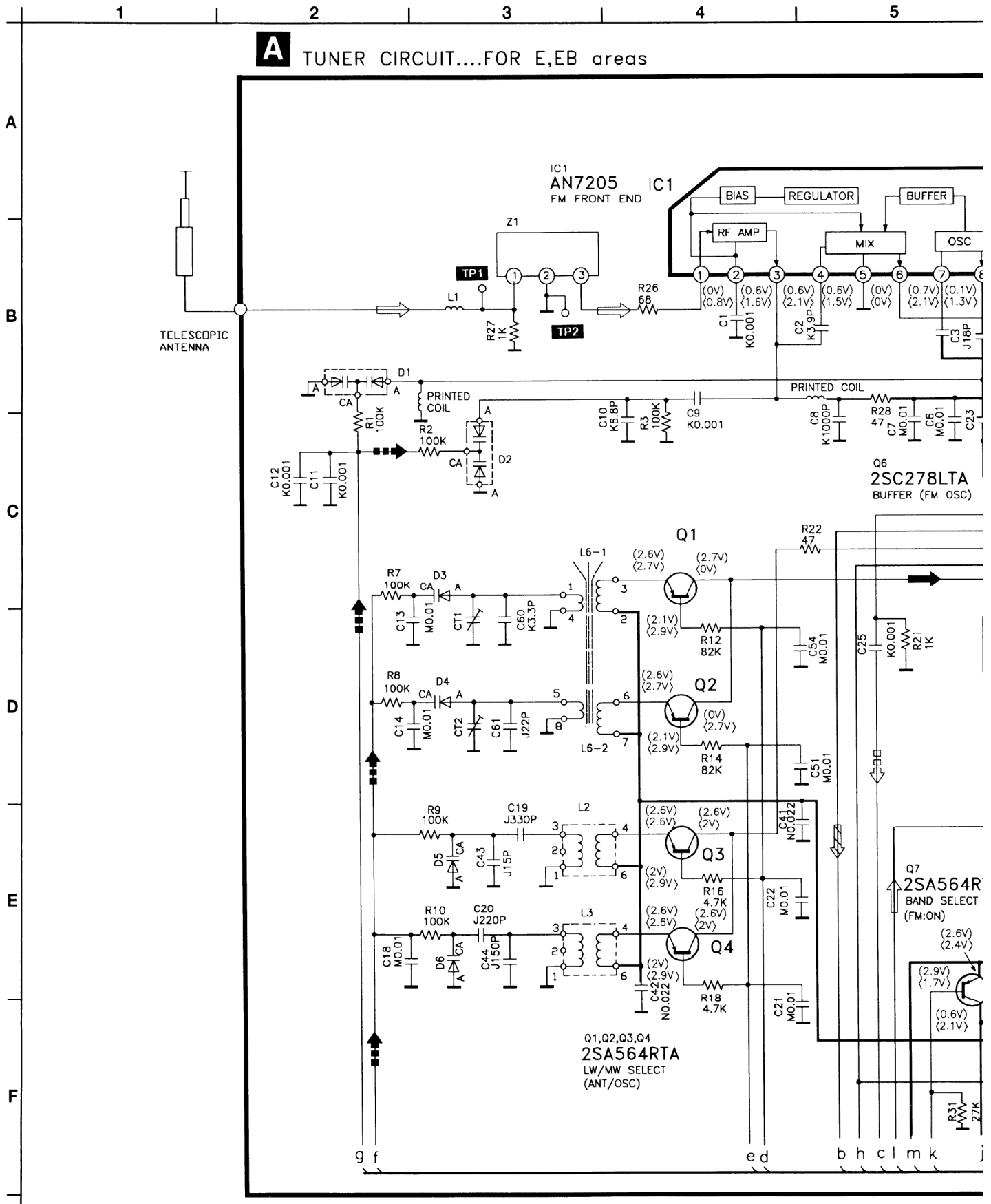
• IC2 (TC9316F052) : UCOM

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1-20	S1~ S20	O	LCD segment signal output	45	PCS	O	Prescaler control output
21-22	K0 ~ K1	I	Key input port	46	FM IN	I	FM programmable counter input
23	NC	—	—	47	GND	—	Ground
24-25	K2 ~ K3	I	Key input port	48	INH	I	Inhibit input
26-29	T0 ~ T3	O	Common output port or key return timing o/p port	49	TEST	I	Test mode Input(not used)
30-31	OT0 ~ OT1	O	Common output port or key return timing o/p port	50-51	XT	—	X 'TAL Oscillator
32-35	P1-0~P1-3	I/O	I/O port	52	INI	I	Initialize input system reset signal input
36	P2-0	I/O	I/O port Buzzer output port (not used)	53	VDD	—	Power supply +3V
37-39	P2-1 ~ P2-3	I/O	I/O PORT	54	VLCD	—	Double voltage transformation terminal for LCD drive
40	MUTE	O	Muting signal output port	55-56	C1-C2	—	Connect capacitor for double voltage transformation
41	AF IN	I	AF input	57	C3	—	Capacitor connection terminal for reference voltage regulator
42-43	DO1-DO2	O	Phase comparator output	58-60	COM1-3	O	LCD common signal output
44	AM IN	I	AM pogramable counter input				

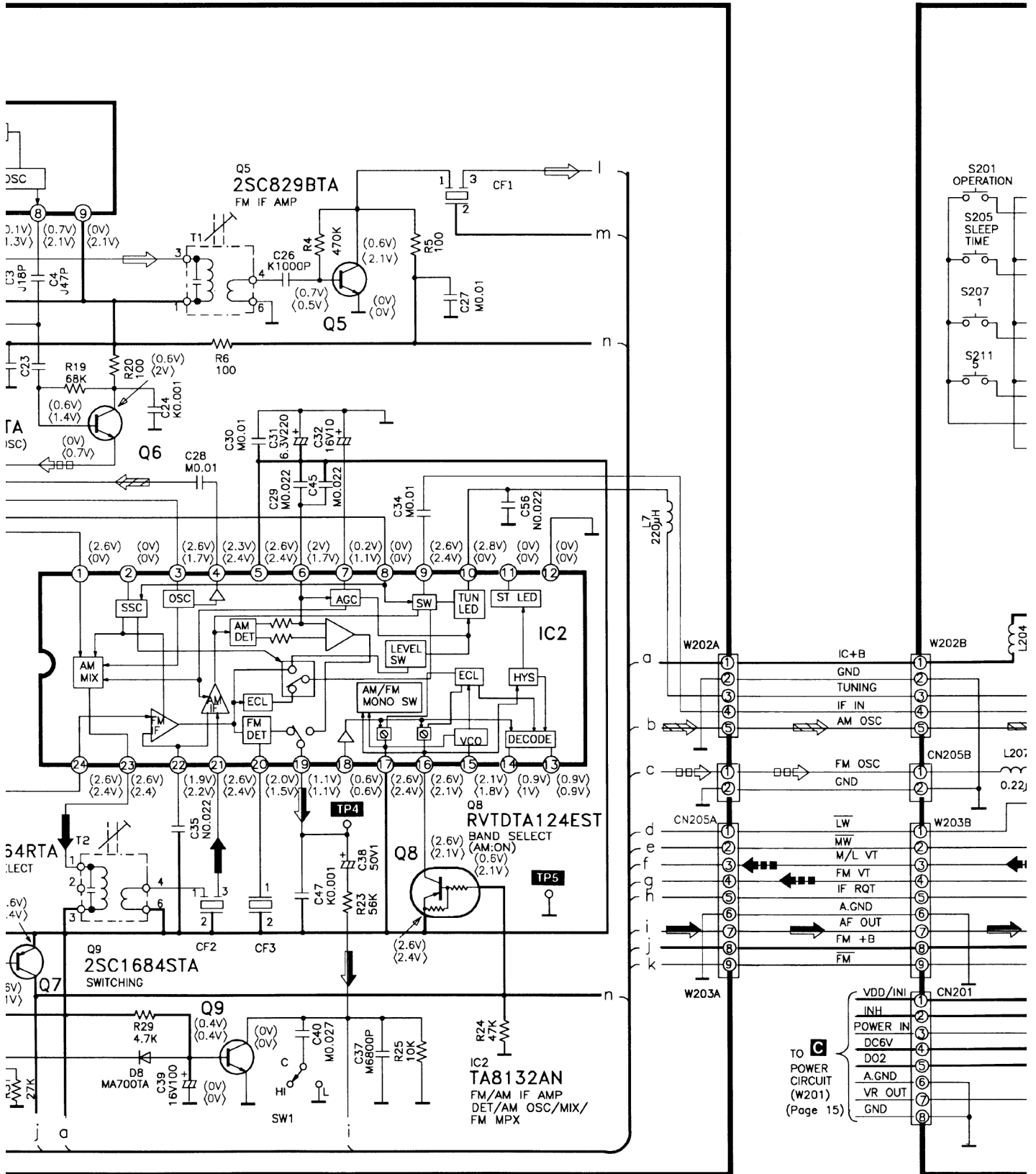
■ Terminal Guide of ICs, Transistors & Diodes

<p>AN7205</p> 	<p>TA8132AN</p> 	<p>TC9316F052</p> 	<p>TD7101F</p> 	<p>S-806G-Z</p> 	<p>RVIBA527</p> 
<p>S81230PGZ</p> 	<p>2SA564RTA 2SC2001L1TA</p> 	<p>2SC1684STA 2SC829BTA</p> 	<p>RVTDTC124EST RVTDTA114EST</p> 	<p>2SC2785FTA 2SC2787LTA</p> 	<p>2SB1240QTV6 RVTDTC143EST</p> 
<p>SVC211SPA-AL</p> 	<p>RVDSVC321</p> 	<p>1D3E</p> 	 <p>RVD1SS133TA RVDMTZ12BTA RVDMTZ3R6BTA MA700TA</p>		

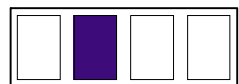
Schematic Diagram



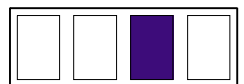
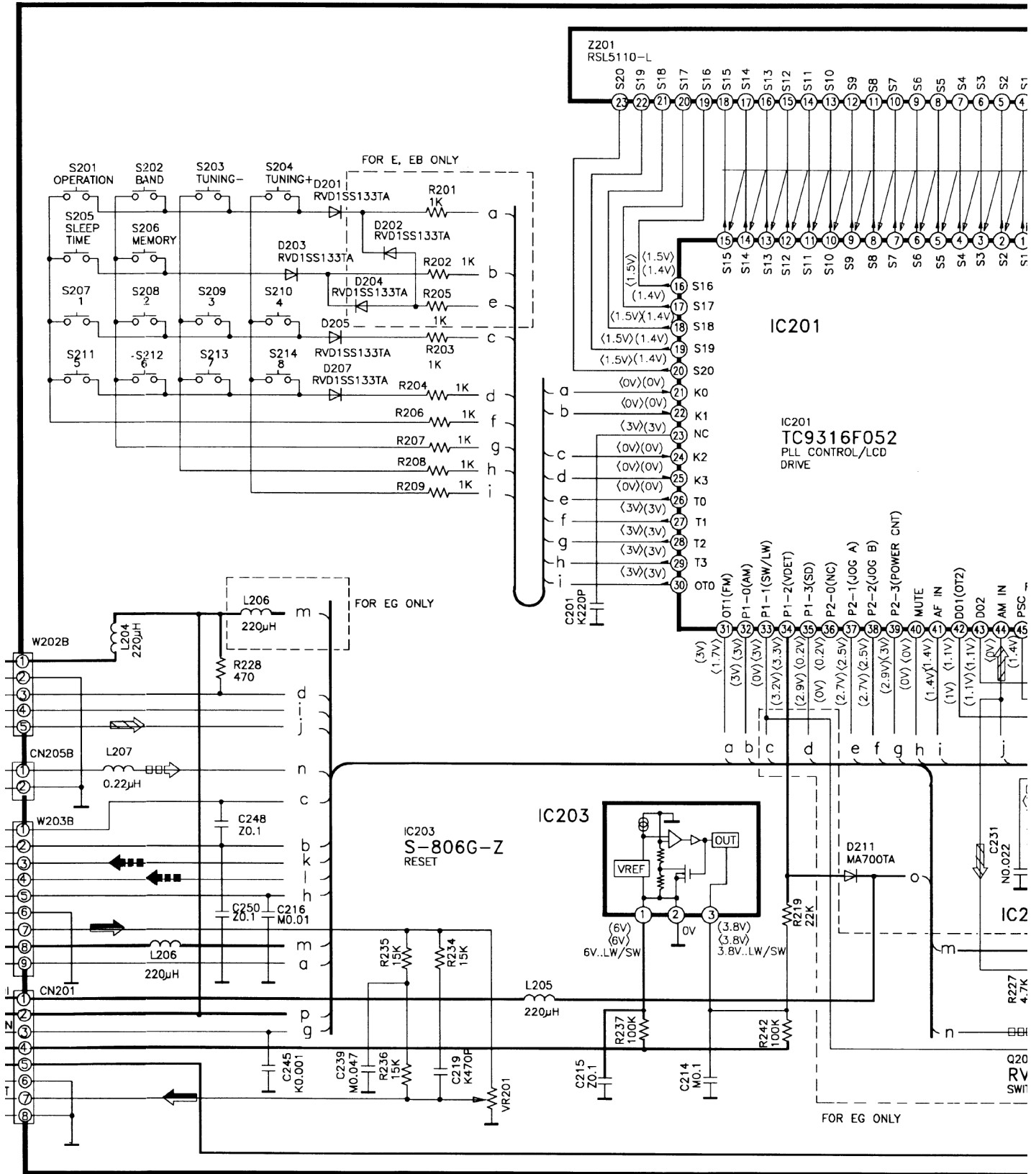
B CONT



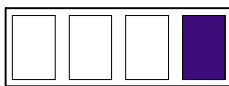
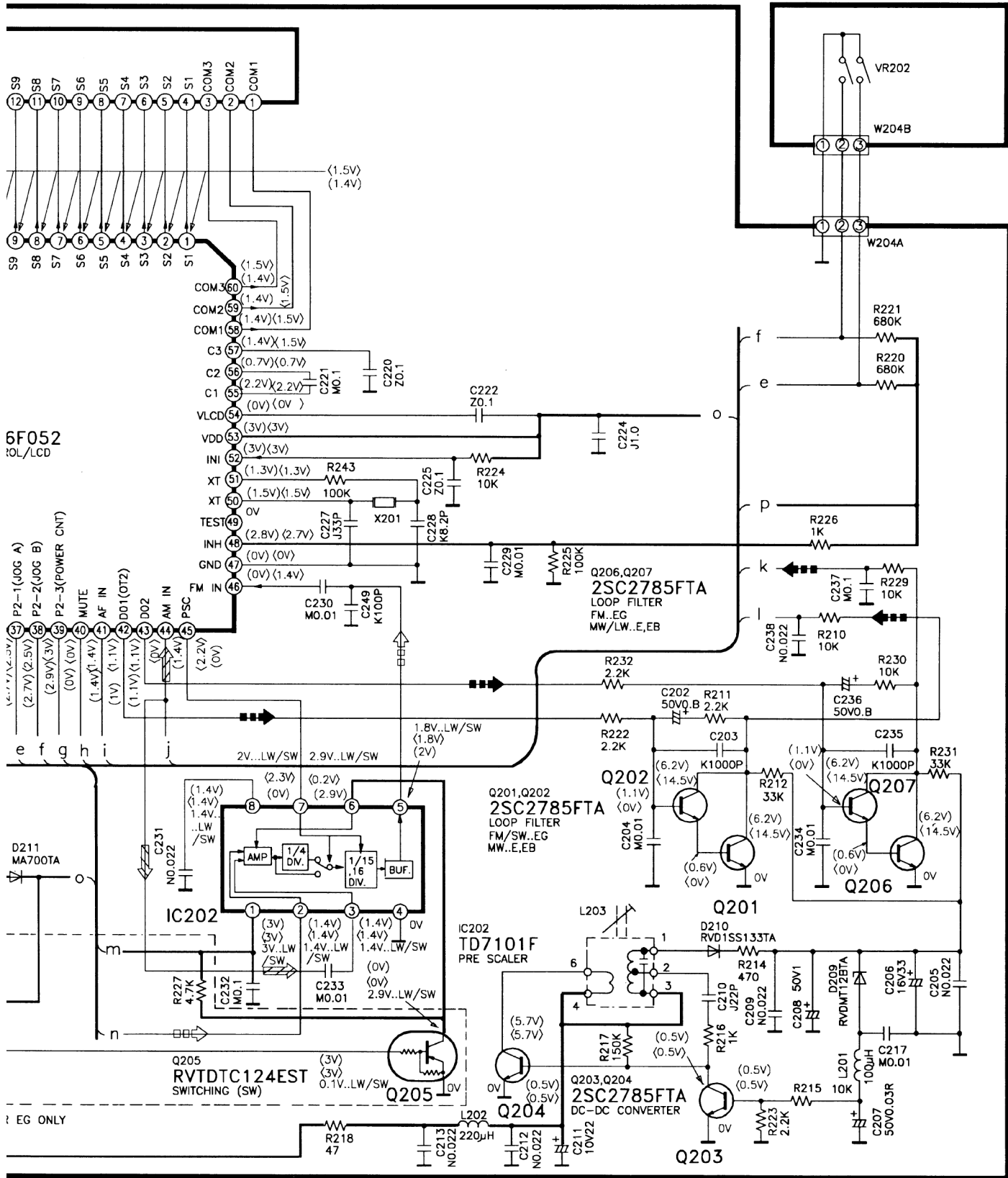
TO POWER CIRCUIT (W201) (Page 15)



B CONTROL CIRCUIT

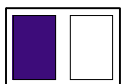
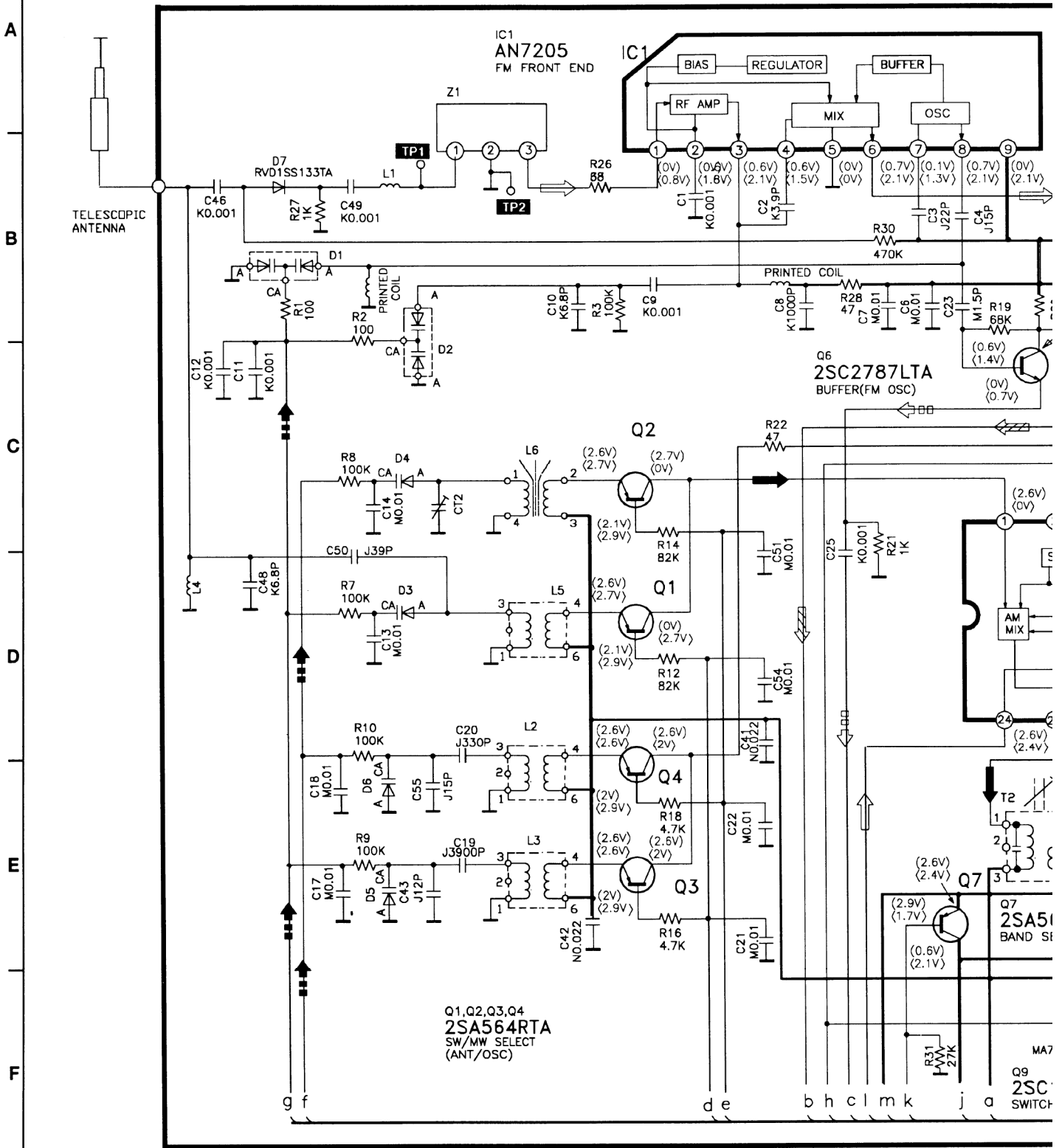


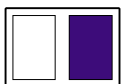
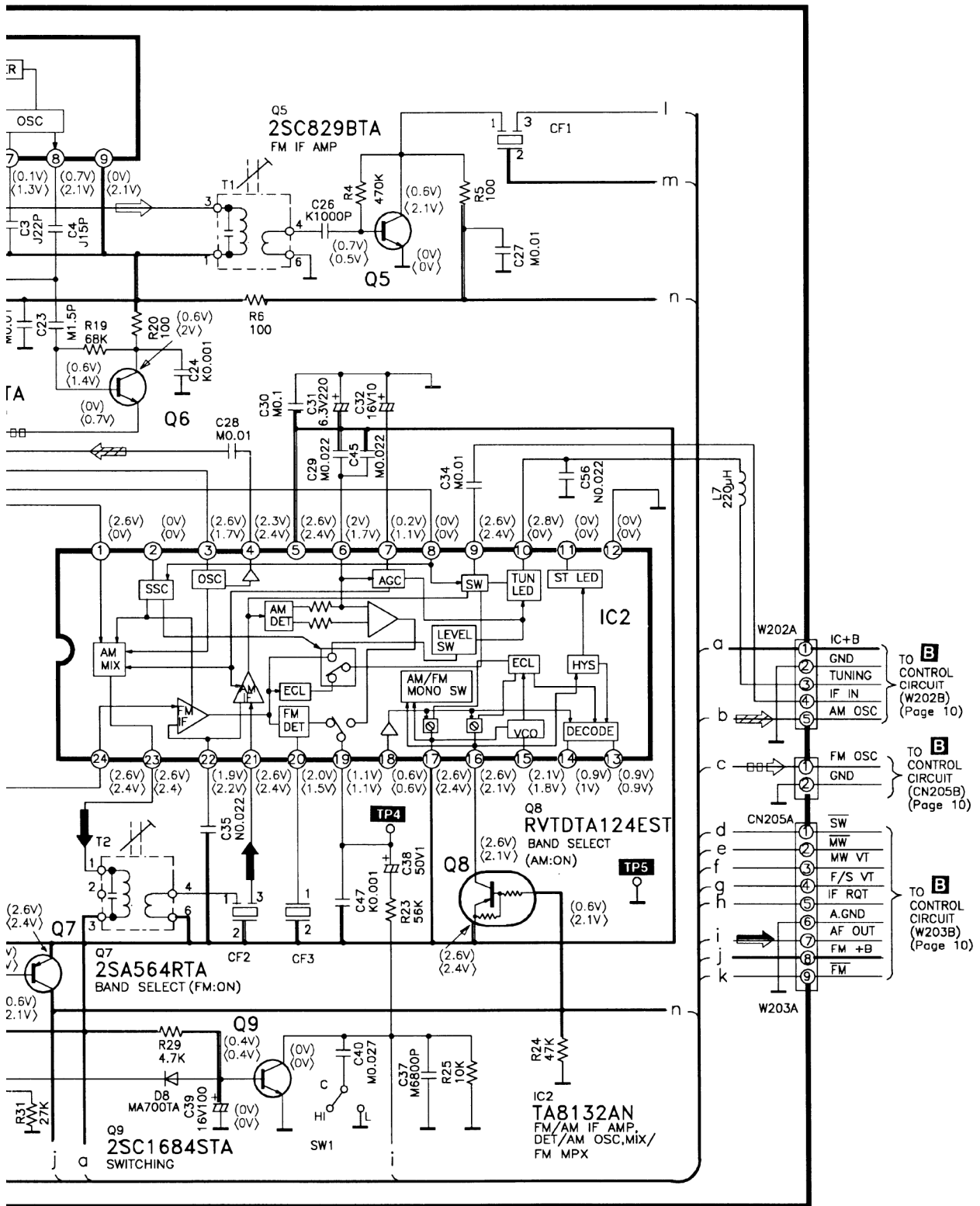
D JOG DIAL CIRCUIT



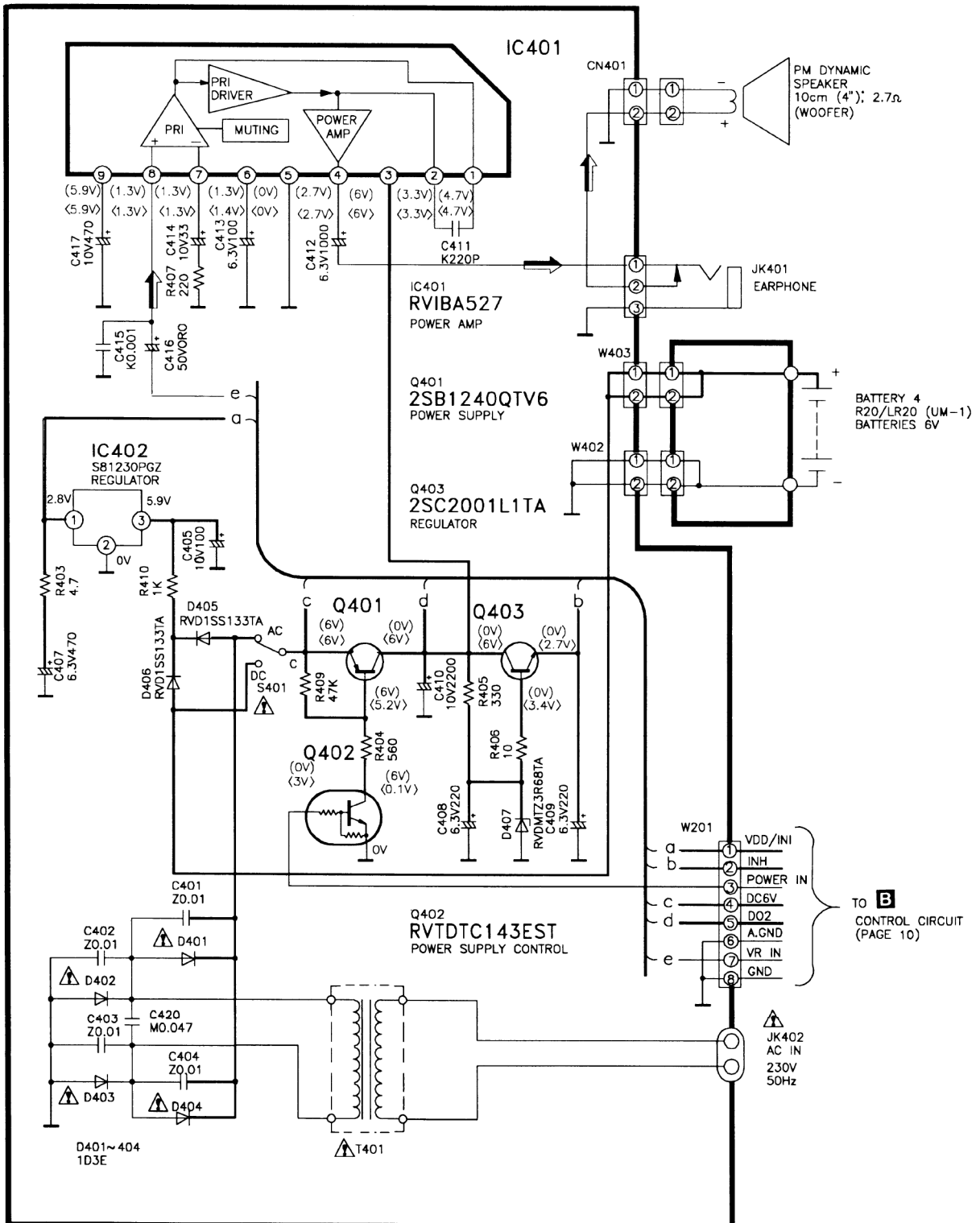
Schematic Diagram

A TUNER CIRCUIT ...FOR EG area

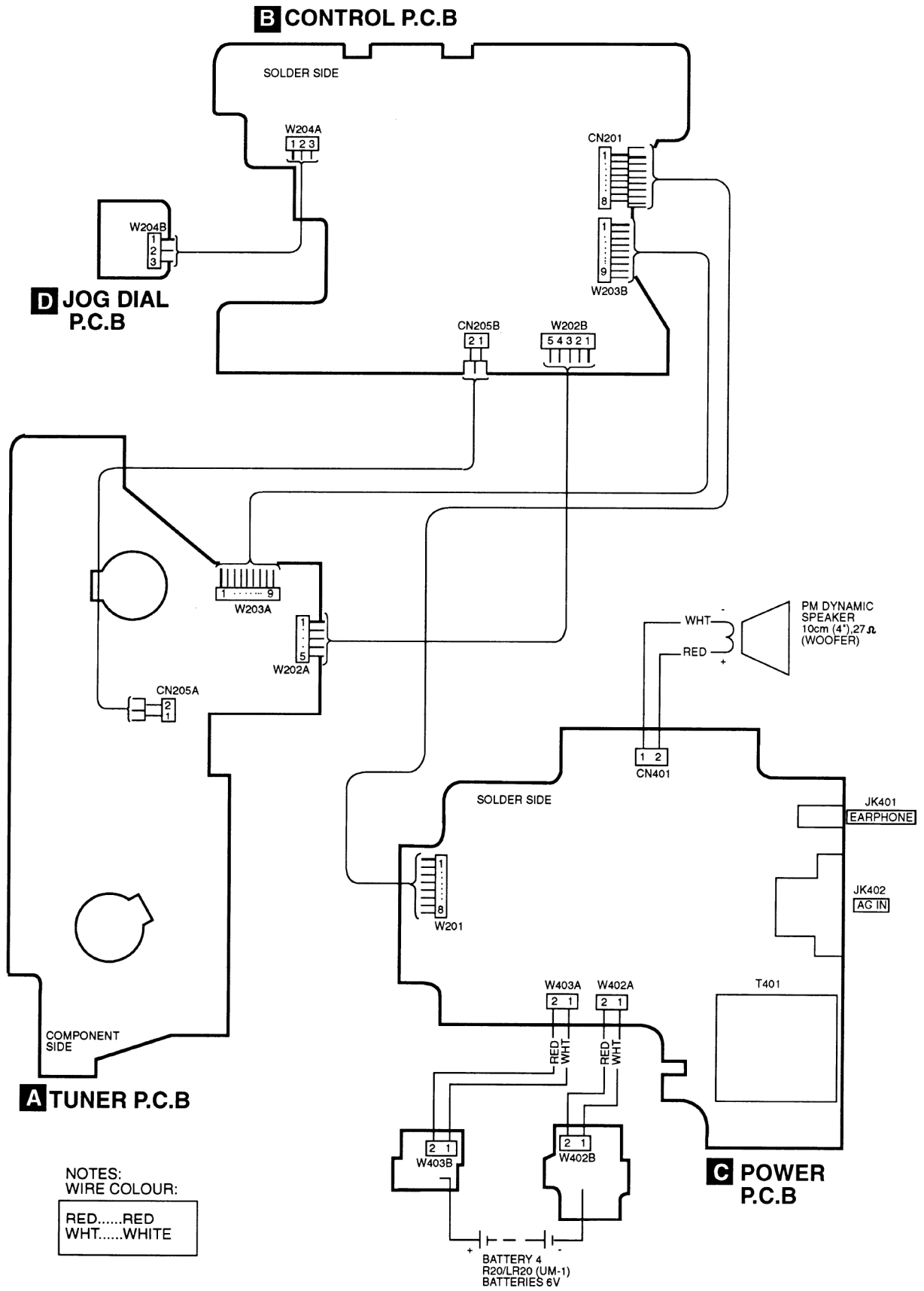




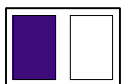
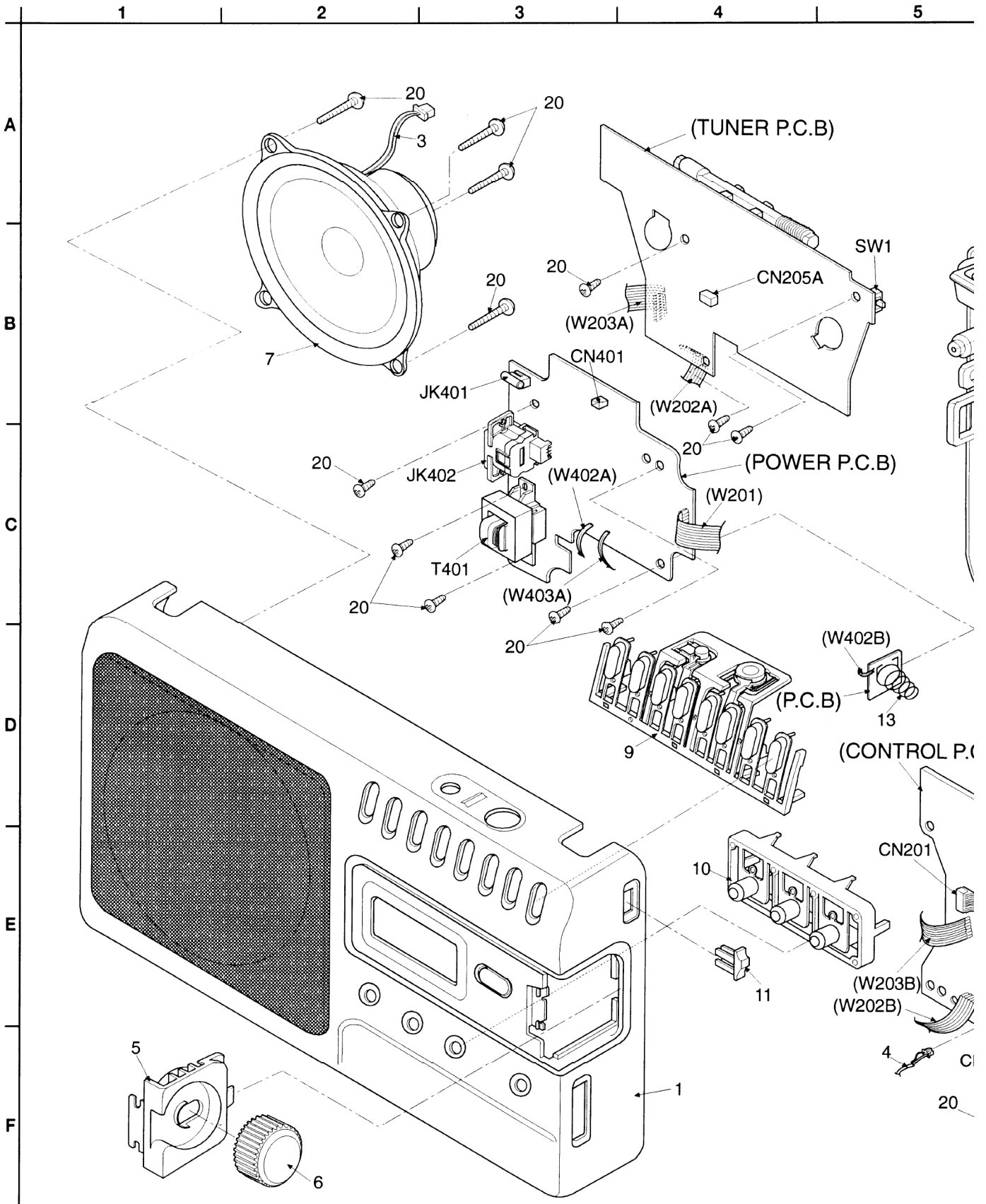
C POWER CIRCUIT



■ Wiring Connection Diagram



■ Cabinet Parts Location



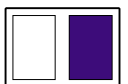
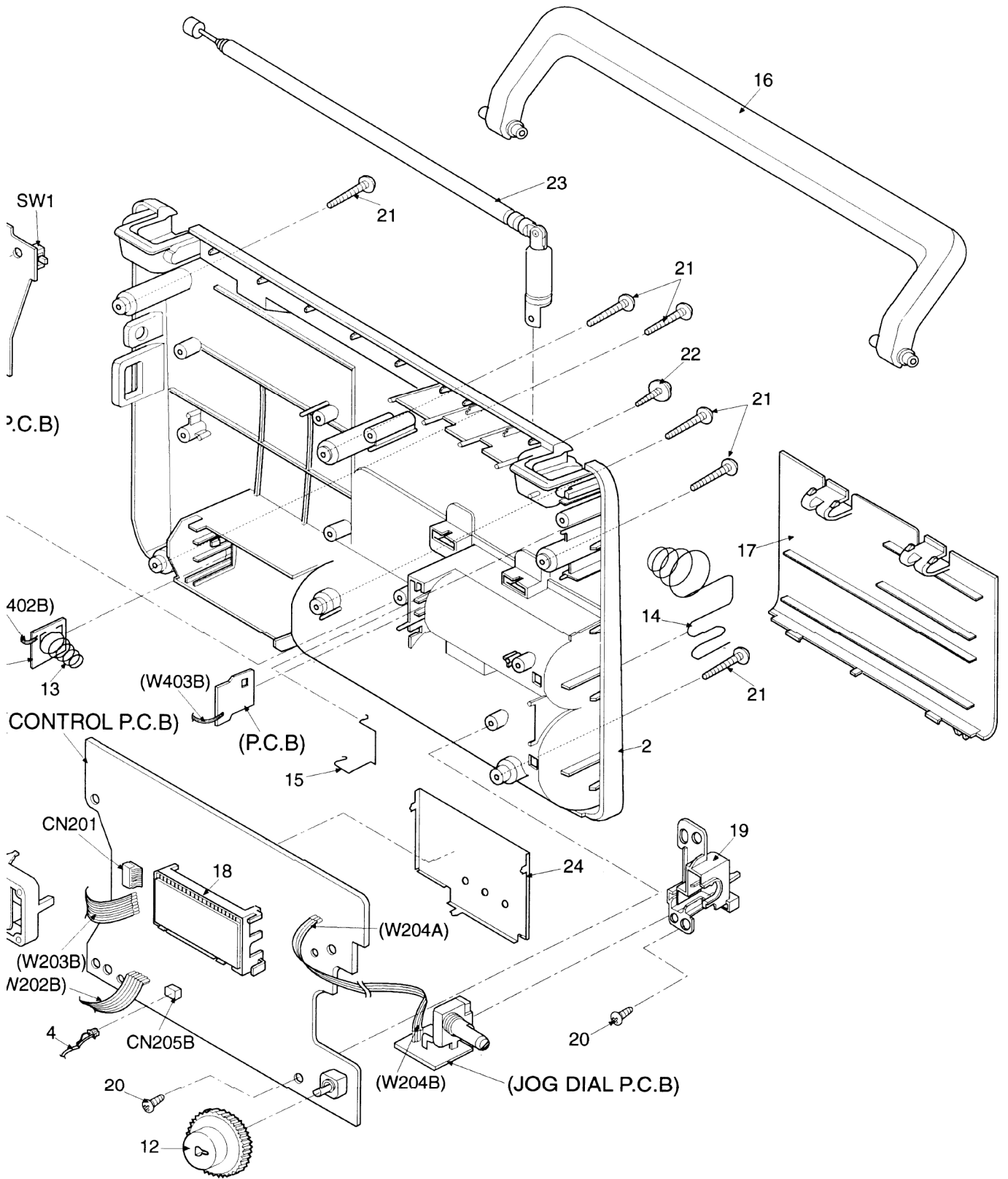
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Replacement Parts List

Notes: * Important safety notice:
 Components identified by Δ mark have special characteristics important for safety.
 Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
 When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
 * The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area)
 Parts without these indications can be used for all areas.
 * [M] and [VRD] in the Remarks column indicate parts supplied by MESA and VIDEO RECORDER DIVISION respectively.
 * The "(SF)" mark denotes the standard part.

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS				TRANSISTORS	
1	RFKGF3700EK	FRONT CABINET ASS'Y	[M] (E, EB)	Q1	2SA564RTA	TRANSISTOR	
1	RFKGF3700EG	FRONT CABINET ASS'Y	[M] (EG)	Q2	2SA564RTA	TRANSISTOR	
2	RFKHF3700EK	REAR CABINET ASS'Y	[M] (E)	Q3	2SA564RTA	TRANSISTOR	
2	RFKHF3700EB	REAR CABINET ASS'Y	[M] (EB)	Q4	2SA564RTA	TRANSISTOR	
2	RFKHF3700EG	REAR CABINET ASS'Y	[M] (EG)	Q5	2SC829BTA	TRANSISTOR	
3	REX0607	S/P WIRE	[M]	Q6	2SC2787LTA	TRANSISTOR	
4	REX0225	COAXIAL WIRE	[M]	Q7	2SA564RTA	TRANSISTOR	
5	RGK0635-K	TUNING AREA ORNAMENT	[M]	Q8	RVTDTA124EST	TRANSISTOR	
6	RGN0204-K	TUNING KNOB	[M] (E, EB)	Q9	2SC1684STA	TRANSISTOR	
6	RGW0204-K	TUNING KNOB	[M] (EG)	Q201	2SC2785FTA	TRANSISTOR	
7	EAS10P241JA3	SPEAKER	[M]	Q202	2SC2785FTA	TRANSISTOR	
9	RGU1059-K	PRESET BUTTON	[M]	Q203	2SC2785FTA	TRANSISTOR	
10	RGU1060-K	MEMORY BUTTON	[M]	Q204	2SC2785FTA	TRANSISTOR	
11	RGV0134-K	TONE KNOB	[M]	Q205	RVTDTC124EST	TRANSISTOR	[M] (EG)
12	RGX0017-K	VOLUME KNOB	[M]	Q206	2SC2785FTA	TRANSISTOR	
13	RJC511YA-J	BATTERY SPRING	[M]	Q207	2SC2785FTA	TRANSISTOR	
14	RJC91004	+ - BATTERY TERMINAL	[M]	Q401	2SB1240QTV6	TRANSISTOR	
15	RJR0123	R. ANT TERMINAL	[M]	Q402	RVTDTC143EST	TRANSISTOR	
16	RKH0023-K	HANDLE	[M]	Q403	2SC2001L1TA	TRANSISTOR	
17	RKK0070-K	BATTERY LID	[M]			DIODES	
18	RMN0274	LCD HOLDER	[M]	D1	SVC211SPA-AL	DIODE	
19	RMN0275	ENCODER HOLDER	[M]	D2	SVC211SPA-AL	DIODE	
20	XTV3+10G	SCREW		D3	RVDSVC321	DIODE	
21	XTV3+16G	SCREW		D4	RVDSVC321	DIODE	
22	XYN3+F15FY	SCREW		D5	RVDSVC321	DIODE	
23	XEARR175EA-Y	ROD ANTENNA		D6	RVDSVC321	DIODE	
24	RSC0376	SHIELD PLATE	[M]	D7	RVD1SS135TA	DIODE	(EG)
		INTEGRATED CIRCUITS		D8	MA700TA	DIODE	
IC1	AN7205	IC, FM FRONTEND		D201	RVD1SS133TA	DIODE	
IC2	TA8132AN	IC, AM/FM IF AMP	[M]	D202	RVD1SS133TA	DIODE	(E, EB)
IC201	TC9316F052	IC, UCOM	[M]	D203	RVD1SS133TA	DIODE	
IC202	TD7101F	IC, PRE-SCALER	[M]	D204	RVD1SS133TA	DIODE	
IC203	S-806G-Z	IC, RESET	[M]	D205	RVD1SS133TA	DIODE	
IC401	RVIBA527	IC, POWER AMP		D207	RVD1SS133TA	DIODE	
IC402	S81230PGZ	IC, REGULATOR	[M]	D209	RVDMTZ12BTA	DIODE	
				D210	RVD1SS133TA	DIODE	
				D211	MA700TA	DIODE	

Ref No.	Part No.	Part Name & Description	Remarks
D401	1D3E	DIODE	[M]
D402	1D3E	DIODE	[M]
D403	1D3E	DIODE	[M]
D404	1D3E	DIODE	[M]
D405	RVD1SS133TA	DIODE	
D406	RVD1SS133TA	DIODE	
D407	RVDMTZ3R6BTA	DIODE	[M]
		VARIABLE RESISTORS	
VR201	RRV09A01D54A	VR	[M]
VR202	RRV16B24202A	JOG VR	[M]
		SWITCHES	
S201	EVQQEJ04K	SW,OPERATION	[M]
S202	EVQ21405R	SW,BAND	
S203	EVQ21405R	SW,TUNING(-)	
S204	EVQ21405R	SW,TUNING(+)	
S205	EVQQEJ04K	SW,SLEEP TIMER	[M]
S206	EVQ21405R	SW,MEMORY PRESET	
S207	EVQ21405R	SW,PRESET CHANNEL(1)	
S208	EVQ21405R	SW,PRESET CHANNEL(2)	
S209	EVQ21405R	SW,PRESET CHANNEL(3)	
S210	EVQ21405R	SW,PRESET CHANNEL(4)	
S211	EVQ21405R	SW,PRESET CHANNEL(5)	
S212	EVQ21405R	SW,PRESET CHANNEL(6)	
S213	EVQ21405R	SW,PRESET CHANNEL(7)	
S214	EVQ21405R	SW,PRESET CHANNEL(8)	
SW1	RSS2B57ZA-Q	SW,TONE	
S401	RJJ1SE01-H	SW, AC IN	
		CONNECTORS	
CN201	RJS8T7ZA	8P CONNECTOR	
CN205A	RJP2G18ZA	CONNECTOR	
CN205B	RJP2G18ZA	CONNTECOR	
CN401	RJP2G4YA	2P CONNECTOR	
		COILS & TRANSFORMERS	
L1	RLQY30S1W	CHOKE COIL	[M]
L2	RL02B108-M	MW OSC COIL	(E, EB)
L2	RL03B87-M	SW OSC COIL	(EG)
L3	RL01B12-M	LW OSC COIL	(E, EB)
L3	RL02B108-M	MW OSC COIL	(EG)
L4	RLQY30S1W	CHOKE COIL	[M] (EG)
L5	RLA3B41-M	SW ANT COIL	(EG)

Ref No.	Part No.	Part Name & Description	Remarks
L6	RLF2W156-0	FERRITE ANT	(EG)
L6	RLF6D154-0	FERRITE ANT	(E, EB)
L7	RLQZP221KT-Y	AXIAL COIL	
L201	RLQZP101KT-Y	AXIAL COIL	
L202	RLQZP221KT-Y	AXIAL COIL	
L203	RL09B18-M	DD OSC COIL	
L204	RLQZP221KT-Y	AXIAL COIL	
L205	RLQZP221KT-Y	AXIAL COIL	
L206	RLQZP221KT-Y	AXIAL COIL	
L207	RLQZPR22KT-Y	AXIAL COIL	
T1	RLJ4B153-M	FM IFT	
T2	RLJ2B153-M	AM IFT	
T401	RLT5I2E1A-V	POWER TRANSFORMER	[M] (EB)
T401	RLT5I2G3A-V	POWER TRANSFORMER	[M] (E, EG)
		VARIABLE CAPACITORS	
CT1	ECRLA010A53R	SEMI-FIXED CAP	(E, EB)
CT2	ECRLA010A53R	SEMI-FIXED CAP	(EG)
CT2	ECRLA030E53R	SEMI-FIXED CAP	(E, EB)
		CERAMIC FILTERS	
CF1	RLFFETWLA02D	FM CF	
CF2	RVFSFZ450JL3	AMCF	(EG)
CF2	RVFSFZ459JL	AMCF	[M] (E, EB)
CF3	RLFDFTA01D	DISCRIMINATOR	
		COMPONENT COMBINATION	
Z1	RCRBMT002-H	FM BPF	
Z201	RSL5110-L	LCD	[M]
		OSCILLATORS	
X201	RSXD75K0L03	75 KHZ X'TAL	[M]
		JACKS	
JK401	RJJ1D20YB-C	EP JACK	
JK402	RJJ1SE01-H	AC IN JACK	
		PACKING MATERIALS	
P1	RPG2110	GIFT BOX	[M] (EG)
P1	RPG2111	GIFT BOX	[M] (EB)
P1	RPG2223	GIFT BOX	[M] (E)

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
P2	RPN0802	POLYFOAM	[M]	A2	RFKSF3700EK	INSTR. MANUAL ASS'Y	[M] (E)
P3	RPF0130	BAG	[M]				
		ACCESSORIES					
A1	RJA0019-2K	AC CORD	(SF) (E, EG) A				
A1	VJA0733	AC CORD	(SF)(VRD)(EB) A				
A2	RQT2531-B	O/I BOOK	[M] (EB)				
A2	RQT2532-D	OPERATING INSTR. MANUAL	[M] (EG)				

Resistors & Capacitors

Notes :

- * Capacitor values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads
- * Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- * Bracketed indications in Remarks columns specify the area (Refer to the first page for area).
- Parts without these indications can be used for all areas.
- * [M] in the values & remarks column indicates parts supplied by MESA

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
	RESISTORS		R205	ERDS2TJ102T	1K 1/4W	R403	ERDS2TJ4R7T	4.7 1/4W
R1	ERDS2TJ104T	100K 1/4W	R206	ERDS2TJ102T	1K 1/4W	R404	ERDS2TJ561T	560 1/4W
R2	ERDS2TJ104T	100K 1/4W	R207	ERDS2TJ102T	1K 1/4W	R405	ERDS2TJ331T	330 1/4W
R3	ERDS2TJ104T	100K 1/4W	R208	ERDS2TJ102T	1K 1/4W	R406	ERDS2TJ100T	10 1/4W
R4	ERDS2TJ474T	470K 1/4W	R209	ERDS2TJ102T	1K 1/4W	R407	ERDS2TJ221T	220 1/4W
R5	ERDS2TJ101T	100 1/4W	R210	ERDS2TJ103T	10K 1/4W	R409	ERDS2TJ473T	47K 1/4W
R6	ERDS2TJ101T	100 1/4W	R211	ERDS2TJ222T	2.2K 1/4W	R410	ERDS2TJ102T	1K 1/4W
R7	ERDS2TJ104T	100K 1/4W	R212	ERDS2TJ333T	33K 1/4W		CAPACITORS	
R8	ERDS2TJ104T	100K 1/4W	R214	ERDS2TJ471T	470 1/4W	C1	ECBT1H102KB5	1000P 50V
R9	ERDS2TJ104T	100K 1/4W	R215	ERDS2TJ103T	10K 1/4W	C2	ECBT1H3R9KC5	3.9P 50V
R10	ERDS2TJ104T	100K 1/4W	R216	ERDS2TJ102T	1K 1/4W	C3	ECBT1H220JC5	22P 50V
R12	ERDS2TJ823T	82K 1/4W	R217	ERDS2TJ154T	150K 1/4W	C4	ECBT1H150JC5	15P 50V
R14	ERDS2TJ823T	82K 1/4W	R218	ERDS2TJ470T	47 1/4W	C6	ECBT1C103MS5	0.01 16V
R16	ERDS2TJ472T	4.7K 1/4W	R219	ERDS2TJ223T	22K 1/4W	C7	ECBT1C103MS5	0.01 16V
R18	ERDS2TJ472T	4.7K 1/4W	R220	ERDS2TJ684T	680K 1/4W	C8	ECBT1H102KB5	1000P 50V
R19	ERDS2TJ683T	68K 1/4W	R221	ERDS2TJ684T	680K 1/4W	C9	ECBT1H102KB5	1000P 50V
R20	ERDS2TJ101T	100 1/4W	R222	ERDS2TJ222T	2.2K 1/4W	C10	ECBT1H6R8KC5	6.8P 50V
R21	ERDS2TJ102T	1K 1/4W	R223	ERDS2TJ222T	2.2K 1/4W	C11	ECBT1H102KB5	1000P 50V
R22	ERDS2TJ470T	47 1/4W	R224	ERDS2TJ103T	10K 1/4W	C12	ECBT1H102KB5	1000P 50V
R23	ERDS2TJ563T	56K 1/4W	R225	ERDS2TJ104T	100K 1/4W	C13	ECBT1C103MS5	0.01 16V
R24	ERDS2TJ473T	47K 1/4W	R226	ERDS2TJ102T	1K 1/4W	C14	ECBT1C103MS5	0.01 16V
R25	ERDS2TJ103T	10K 1/4W	R227	ERDS2TJ472T	4.7K 1/4W (EG)	C17	ECBT1C103MS5	0.01 16V (EG)
R26	ERDS2TJ680T	68 1/4W	R228	ERDS2TJ471T	470 1/4W	C18	ECBT1C103MS5	0.01 16V
R27	ERDS2TJ102T	1K 1/4W	R229	ERDS2TJ103T	10K 1/4W	C19	ECQP1392JZ	3900P 100V (EG)
R28	ERDS2TJ470T	47 1/4W	R230	ERDS2TJ103T	10K 1/4W	C19	ECQP2A331JZT	330P 100V (E, EB)
R29	ERDS2TJ472T	4.7K 1/4W	R231	ERDS2TJ333T	33K 1/4W	C20	ECQP2A221JZT	220P 100V (E, EB)
R30	ERDS2TJ474T	470K 1/4W (EG)	R232	ERDS2TJ222T	2.2K 1/4W	C20	ECQP2A331JZT	330P 100V (EG)
R31	ERDS2TJ273T	27K 1/4W	R234	ERDS2TJ153T	15K 1/4W	C21	ECBT1C103MS5	0.01 16V
R201	ERDS2TJ102T	1K 1/4W	R235	ERDS2TJ153T	15K 1/4W	C22	ECBT1C103MS5	0.01 16V
R202	ERDS2TJ102T	1K 1/4W	R236	ERDS2TJ153T	15K 1/4W	C23	ECBT1H1R5MC5	1.5P 50V
R203	ERDS2TJ102T	1K 1/4W	R237	ERDS2TJ104T	100K 1/4W	C24	ECBT1H102KB5	1000P 50V
R204	ERDS2TJ102T	1K 1/4W	R242	ERDS2TJ104T	100K 1/4W			
			R243	ERDS2TJ104T	100K 1/4W			

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C25	ECBT1H102KB5	1000P 50V	C227	ECBT1H330J5	33P 50V			
C26	ECBT1H102KB5	1000P 50V	C228	ECBT1H8R2KC5	8.2P 50V			
C27	ECBT1C103MS5	0.01 16V	C229	ECBT1C103MS5	0.01 16V			
C28	ECBT1C103MS5	0.01 16V	C230	ECBT1C103MS5	0.01 16V			
C29	ECBT0J223NS5	0.022 6.3V	C231	ECBT0J223NS5	0.022 6.3V			
C30	ECFR1C104MR	0.1 16V	C232	ECFR1C104MR	0.1 16V			
C31	ECEA0JU221BV	220 6.3V	C233	ECBT1C103MS5	0.01 16V			
C32	ECEA1CK100B	10 16V	C234	ECBT1C103MS5	0.01 16V			
C34	ECBT1C103MS5	0.01 16V	C235	ECBT1H102KB5	1000P 50V			
C35	ECBT0J223NS5	0.022 6.3V	C236	ECEA50M1RB	0.B 50V			
C37	ECBT1C682MR5	6800P 16V	C237	ECFR1C104MR	0.1 16V			
C38	ECEA1HU010BV	1 50V	C238	ECBT0J223NS5	0.022 6.3V			
C39	ECEA1CU100BV	10 16V	C239	ECFR1C473MR	0.047 16V			
C40	ECFR1C273MR	0.027 16V	C245	ECBT1H102KB5	1000P 50V			
C41	ECBT0J223NS5	0.022 6.3V	C248	ECBT1H104ZF5	0.1 50V			
C42	ECBT0J223NS5	0.022 6.3V	C249	ECBT1H101KB5	100P 50V			
C43	ECBT1H120JC5	12P 50V (EG)	C250	ECBT1H104ZF5	0.1 50V			
C43	ECBT1H150JC5	15P 50V (E, EB)	C401	ECKR1H103ZF5	0.01 50V			
C44	ECQP2A151JZT	150P 100V (E, EB)	C402	ECKR1H103ZF5	0.01 50V			
C45	ECBT0J223MS5	0.022 6.3V	C403	ECKR1H103ZF5	0.01 50V			
C46	ECBT1H102KB5	1000P 50V (EG)	C404	ECKR1H103ZF5	0.01 50V			
C47	ECBT1H102KB5	1000P 50V	C405	ECEA1AU101B	100 10V			
C48	ECBT1H6R8KC5	6.8P 50V (EG)	C407	ECEA0JU471B	470 6.3V			
C49	ECBT1H102KB5	1000P 50V (EG)	C408	ECEA0JU221B	220 6.3V			
C50	ECBT1H390J5	39P 50V (EG)	C409	ECEA0JU221B	220 6.3V			
C51	ECBT1C103MS5	0.01 16V	C410	ECEA1AU222E	2200 10V			
C54	ECBT1C103MS5	0.01 16V	C411	ECBT1H221KB5	220P 50V			
C55	ECBT1H150JC5	15P 50V (EG)	C412	ECEA0JU102B	1000 6.3V			
C56	ECBT0J223NS5	0.022 6.3V	C413	ECEA0JU101B	100 6.3V			
C60	ECBT1H3R3KC5	3.3P 50V (E, EB)	C414	ECEA1AU330B	33 10V			
C61	ECBT1H220JC5	22P 50V (E, EB)	C415	ECBT1H102KB5	1000P 50V			
C201	ECBT1H221KB5	220P 50V	C416	ECEA1HKA0R1B	0R0 50V			
C202	ECEA50M1RB	0.B 50V	C417	ECEA1AU471B	470 10V			
C203	ECBT1H102KB5	1000P 50V	C420	ECFR1C473MR	0.047 16V			
C204	ECBT1C103MS5	0.01 16V						
C205	ECBT0J223NS5	0.022 6.3V						
C206	ECEA1CK330B	33 16V						
C207	ECEA1HKA3R3B	0.03R 50V						
C208	ECEA1HK010B	1 50V						
C209	ECBT0J223NS5	0.022 6.3V						
C210	ECBT1H220JC5	22P 50V						
C211	ECEA1AKA20B	22 10V						
C212	ECBT0J223NS5	0.022 6.3V						
C213	ECBT0J223NS5	0.022 6.3V						
C214	ECFR1C104MR	0.1 16V						
C215	ECBT1H104ZF5	0.1 50V						
C216	ECBT1C103MS5	0.01 16V						
C217	ECBT1C103MS5	0.01 16V						
C219	ECBT1H471KB5	470P 50V						
C220	ECBT1H104ZF5	0.1 50V						
C221	ECFR1C104MR	0.1 16V						
C222	ECBT1H104ZF5	0.1 50V						
C224	ECQV1H105JZ3	10 50V						
C225	ECBT1H104ZF5	0.1 50V						