

# Service Manual

Stereo Synthesizer Tuner

Tuner

## ST-GT350

Colour

(K)... Black Type



## Area

Suffix for Model No.	Area	Colour
(E)	Europe.	(K)
(EB)	Great Britain.	
(EF)	France.	
(EG)	Germany.	
(EI)	Italy.	
(EP)	Poland.	
(GC)	Asia, Latin America, Middle Near East and Africa.	
(GN)	Oceania.	

SPECIFICATIONS\ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

BLOCK DIAGRAM\БЛОК-СХЕМА

TERMINAL FUNCTION OF IC\НАЗНАЧЕНИЕ ВЫВОДОВ ИНТЕГРАЛЬНОЙ МИКРОСХЕМЫ

SCHEMATIC DIAGRAM\ПРИНЦИПИАЛЬНАЯ СХЕМА

CABINET PARTS LOCATION\РАСПОЛОЖЕНИЕ ЧАСТЕЙ КОРПУСА

REPLACEMENT PARTS LIST\СПИСОК ЗАПАСНЫХ ЧАСТЕЙ

RESISTORS AND CAPACITORS\РЕЗИСТОРЫ И КОНДЕНСАТОРЫ

PACKAGING\УПАКОВКА

# Technics

# ■ SPECIFICATIONS (DIN 45 500)

## ■ FM TUNER SECTION

Frequency range	87.50–108.00 MHz (0.05 MHz steps)
Sensitivity	1.5 $\mu$ V (IHF, usable)
S/N 30 dB	1.3 $\mu$ V (75 $\Omega$ )
S/N 26 dB	1.2 $\mu$ V (75 $\Omega$ )
S/N 20 dB	0.9 $\mu$ V (75 $\Omega$ )
IHF 46 dB stereo quieting sensitivity	28 $\mu$ V (75 $\Omega$ )
Total harmonic distortion	
MONO	0.2%
STEREO	0.3%
S/N	
MONO	70 dB (75 dB, IHF)
STEREO	65 dB (70 dB, IHF)
Frequency response	20 Hz–15 kHz, +0.5 dB to –1.5 dB
Alternate channel selectivity	
$\pm$ 400 kHz	65 dB
Capture ratio	1.0 dB
Image rejection at 98 MHz	45 dB
IF rejection at 98 MHz	90 dB
Spurious response rejection at 98 MHz	75 dB
AM suppression	55 dB
Stereo separation	
1 kHz	40 dB
Carrier leak	
19 kHz	–30 dB (–35 dB, IHF)
38 kHz	–50 dB (–55 dB, IHF)
Channel balance (250 Hz–6.3 kHz)	$\pm$ 1.5 dB
Limiting point	1.2 $\mu$ V
Bandwidth	
IF amplifier	180 kHz
FM demodulator	1000 kHz
Antenna terminal(s)	75 $\Omega$ (unbalanced)

## ■ GENERAL

Output voltage	
for (E) (EB) areas	0.3 V (0.6 V, IHF)
for (EG, EI) areas	0.6 V (1.2 V, IHF)
Power consumption	9 W
Power supply	
for (GC) area	AC 50 Hz/60 Hz, 110 V–127 V/220 V–240 V
for others	AC 50 Hz/60 Hz, 230 V–240 V
Dimensions (W $\times$ H $\times$ D)	430 $\times$ 69.3 $\times$ 301 mm
Weight	2.6 kg

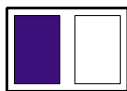
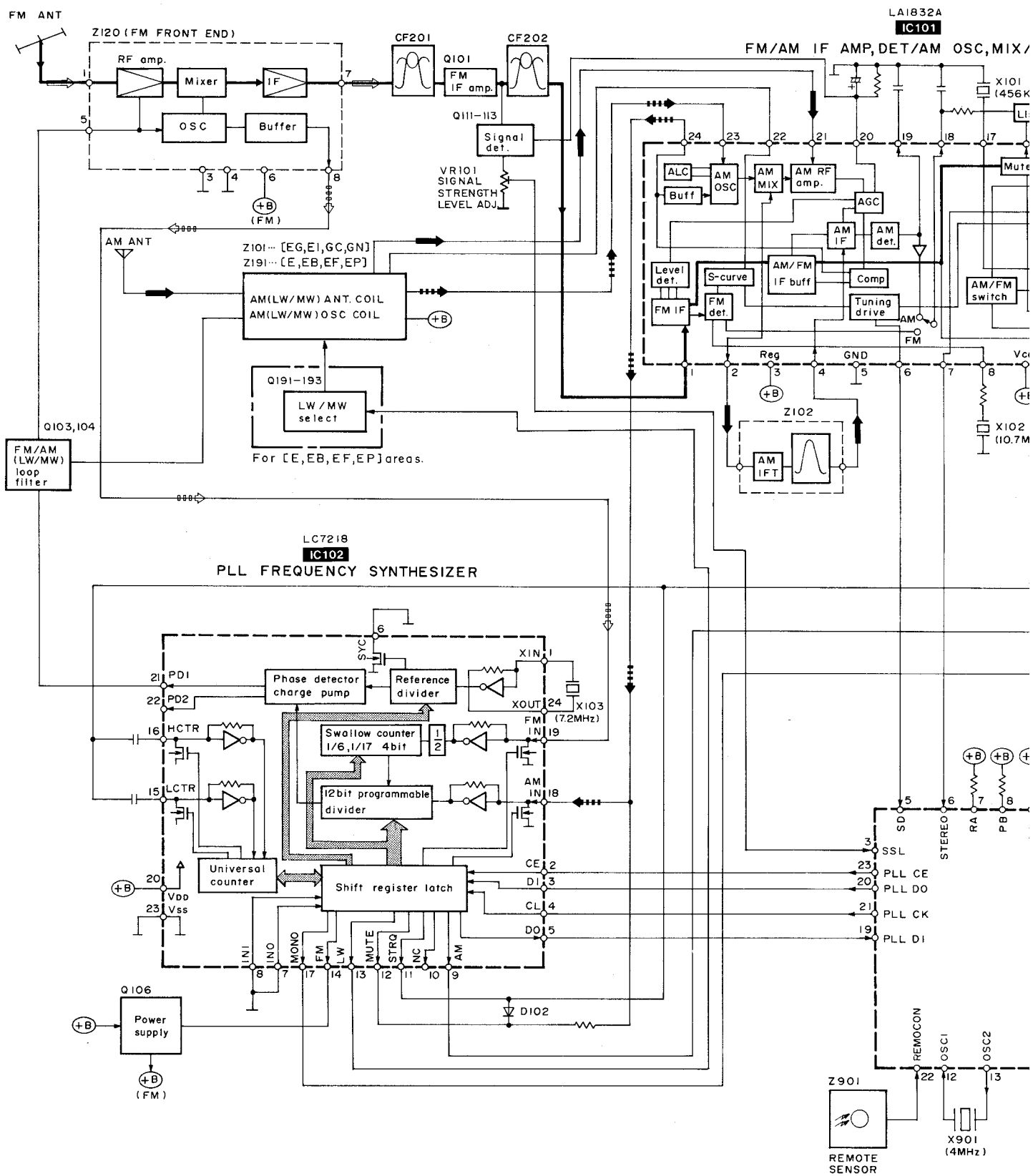
## ■ AM TUNER SECTION

Frequency range	
for (E, EB, EF, EP) areas	
MW	522 kHz~1611 kHz (9-kHz steps)
	530 kHz~1620 kHz (10-kHz steps)
LW	144 kHz~288 kHz (9-kHz steps)
for (EG, EI, GC, GN) areas	
AM	522 kHz~1611 kHz (9-kHz steps)
	530 kHz~1620 kHz (10-kHz steps)
Sensitivity (S/N 20 dB)	
for (E, EB, EF, EP) areas	
MW (at 999 kHz)	20 $\mu$ V, 600 $\mu$ V/m
LW (at 216 kHz)	150 $\mu$ V
for (EG, EI, GC, GN) areas	
AM (at 999 kHz)	20 $\mu$ V, 600 $\mu$ V/m
Selectivity ( $\pm$ 9 kHz)	
for (E, EB, EF, EP) areas	
MW (at 999 kHz)	40 dB
LW (at 216 kHz)	40 dB
for (EG, EI, GC, GN) areas	
AM (at 999 kHz)	40 dB
Image rejection	
for (E, EB, EF, EP) areas	
MW (at 999 kHz)	40 dB
LW (at 216 kHz)	40 dB
for (EG, EI, GC, GN) areas	
AM (at 999 kHz)	40 dB
IF rejection	
for (E, EB, EF, EP) areas	
MW (at 999 kHz)	50 dB
LW (at 216 kHz)	50 dB
for (EG, EI, GC, GN) areas	
AM (at 999 kHz)	50 dB

### Notes:

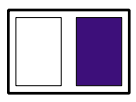
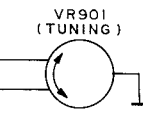
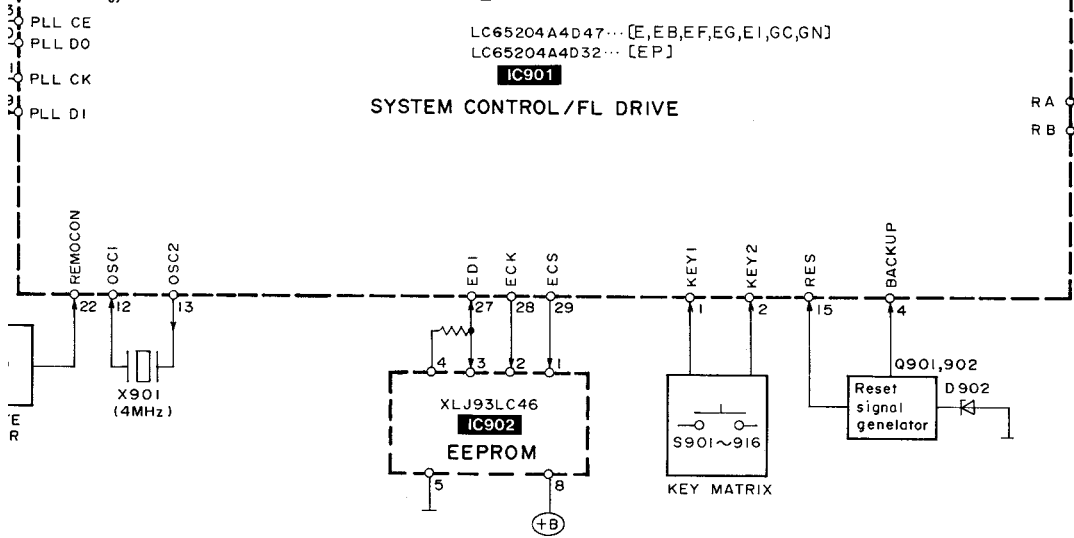
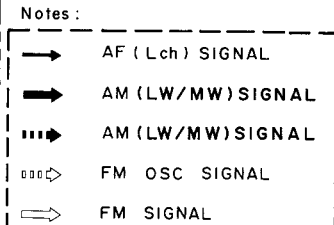
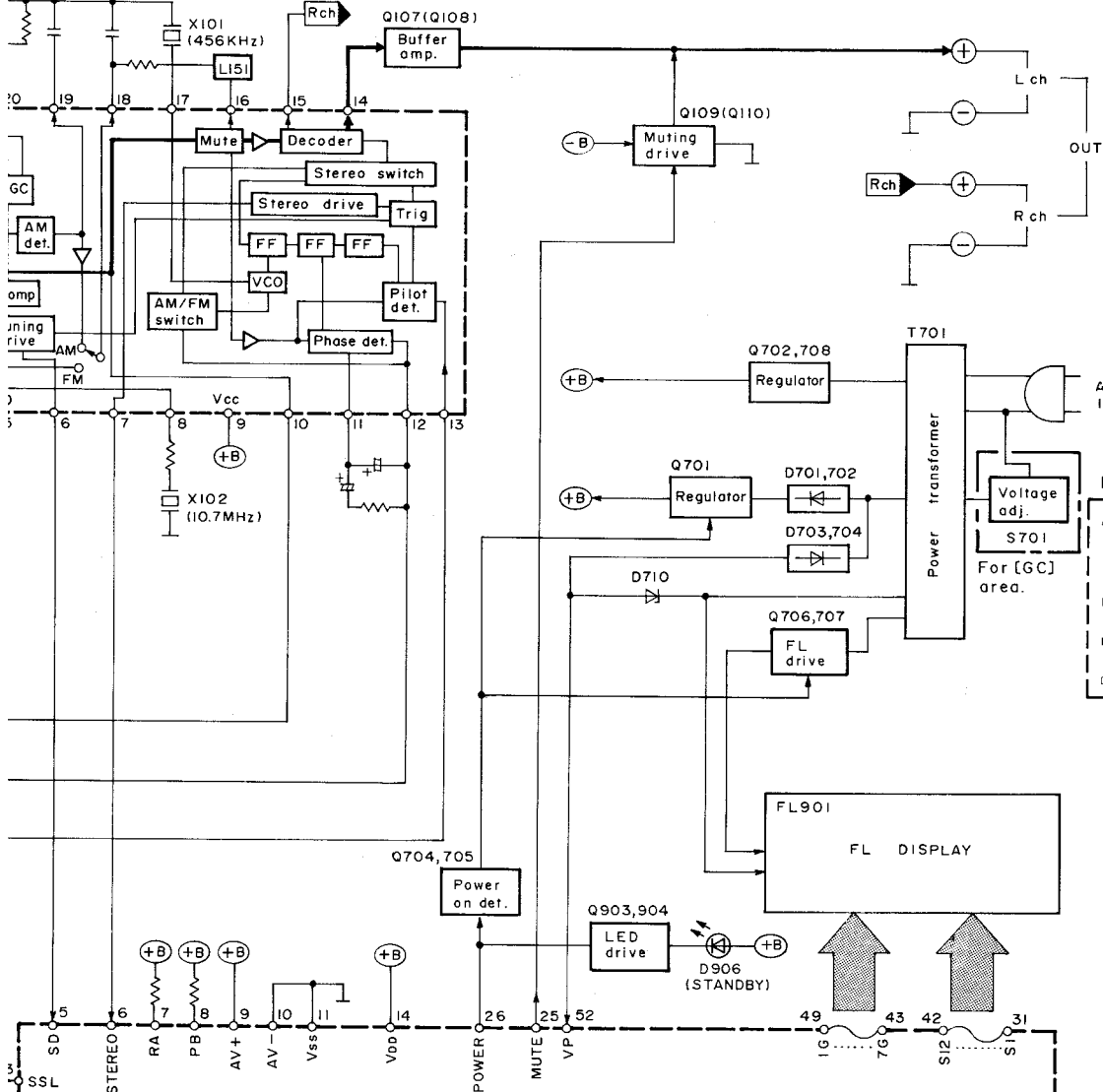
1. Design and specifications are subject to change without notice.  
Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

# BLOCK DIAGRAM



LAI832A  
IC101

P, DET/AM OSC, MIX/FM MPX



## ■ TERMINAL FUNCTION OF IC

• IC901 (LC65204A4D32: for (EP) area/LC65204A4D47: for others): System Control/FL Drive

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	KEY 1	I	Key matrix detect terminal	19	PLLDI	I	Serial data input for PLL tuner
2	KEY 2	I	Key matrix detect terminal	20	PLLDO	O	Serial data output for PLL tuner
3	SSL	I	Not used, connected to resistor	21	PLLCK	O	Serial clock output for PLL tuner
4	BACKUP	I	Power Backup detect terminal	22	REMOCON	I	Remote control terminal
5	SD	I	Received signal detect terminal	23	PLLCE	O	Serial chip enable output for PLL tuner
6	STEREO	I	Stereo signal detect terminal	24	NC	—	No connection
7	RA	I	Not used, connected to resistor	25	MUTE	O	Muting control signal output terminal
8	RB	I					
9	AV+	I	Not used, connected to power supply	26	POWER	O	Power on signal output
10	AV-	—	Not used, connected to GND	27	EDI	I/O	Serial data for EEPROM
11	VSS	—	GND terminal	28	ECK	O	Serial clock output for EEPROM
12	OSC1	I	Quartz oscillation terminal (f=4MHz)	29	ECS	O	Chip select output for EEPROM
13	OSC2	O					
14	VDD	I	Power supply terminal	30	INIT	I	Not used, connected to resistor
15	RES	I	Reset signal detect terminal	31 } 42	S1 } S12	O	Segment signal of FL display
16	X1	I	Quartz oscillation terminal (f=32.7MHz) Not used, connected to power supply	43 } 49	7G } 1G	O	
17	X2	O	Quartz oscillation terminal (f=32.7MHz) Not used, open	50 • 51	NC	—	No connection
18	TEST	—	Test terminal	52	VP	I	

1

2

3

4

5

A

B

C

D

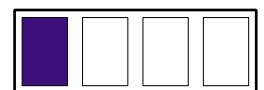
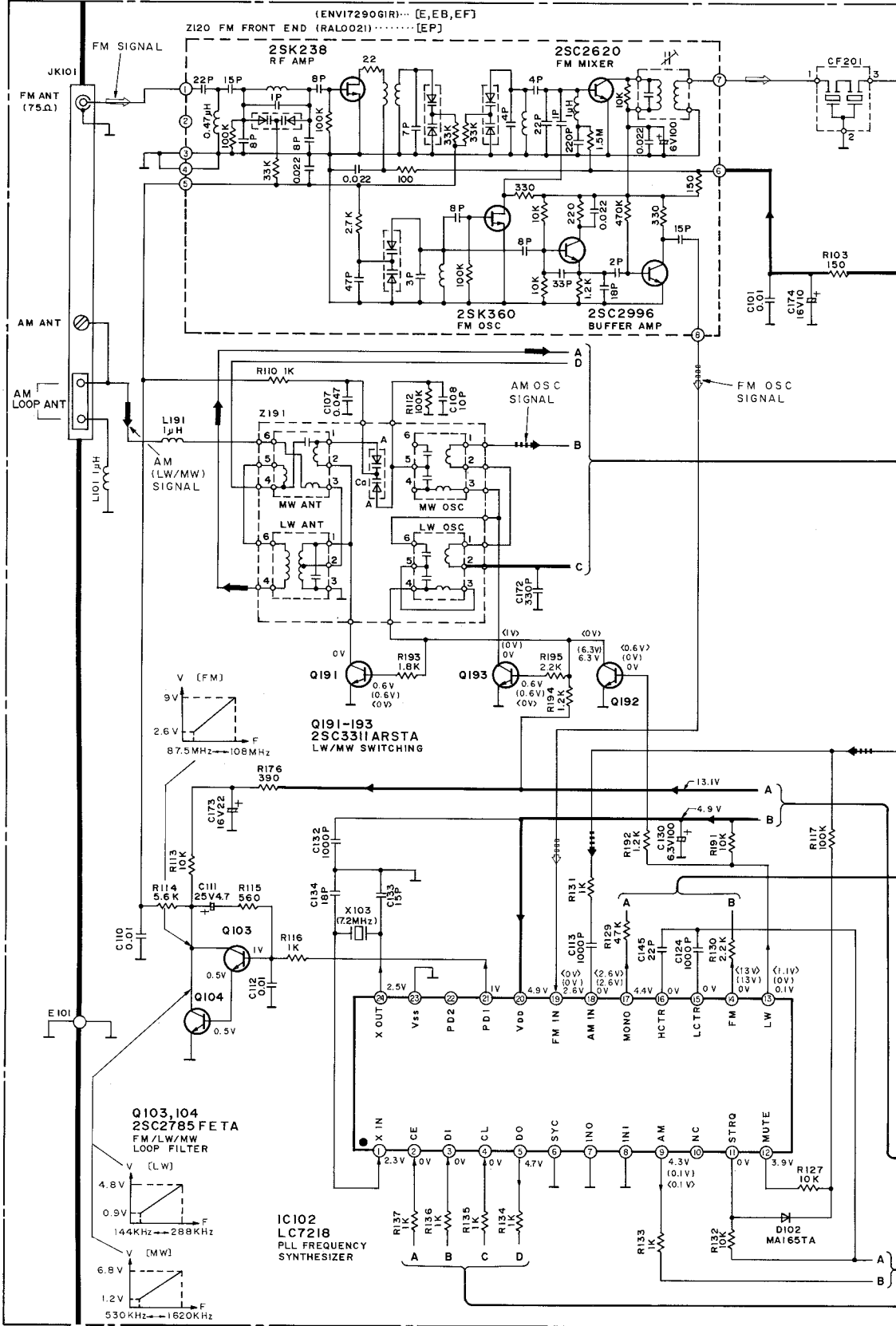
E

F

A MAIN CIRCU

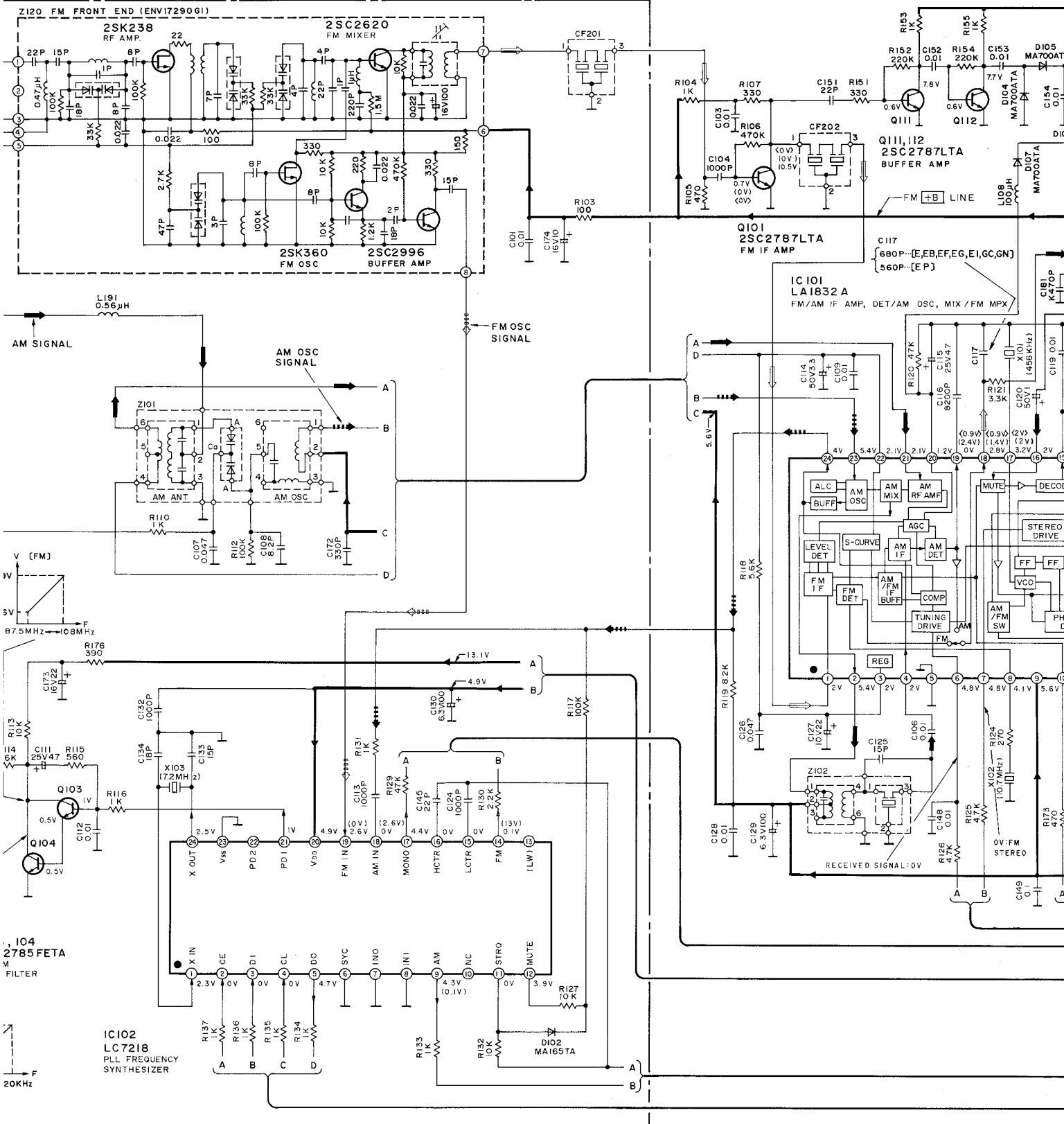
For [E,EB,EF,E,P] areas.

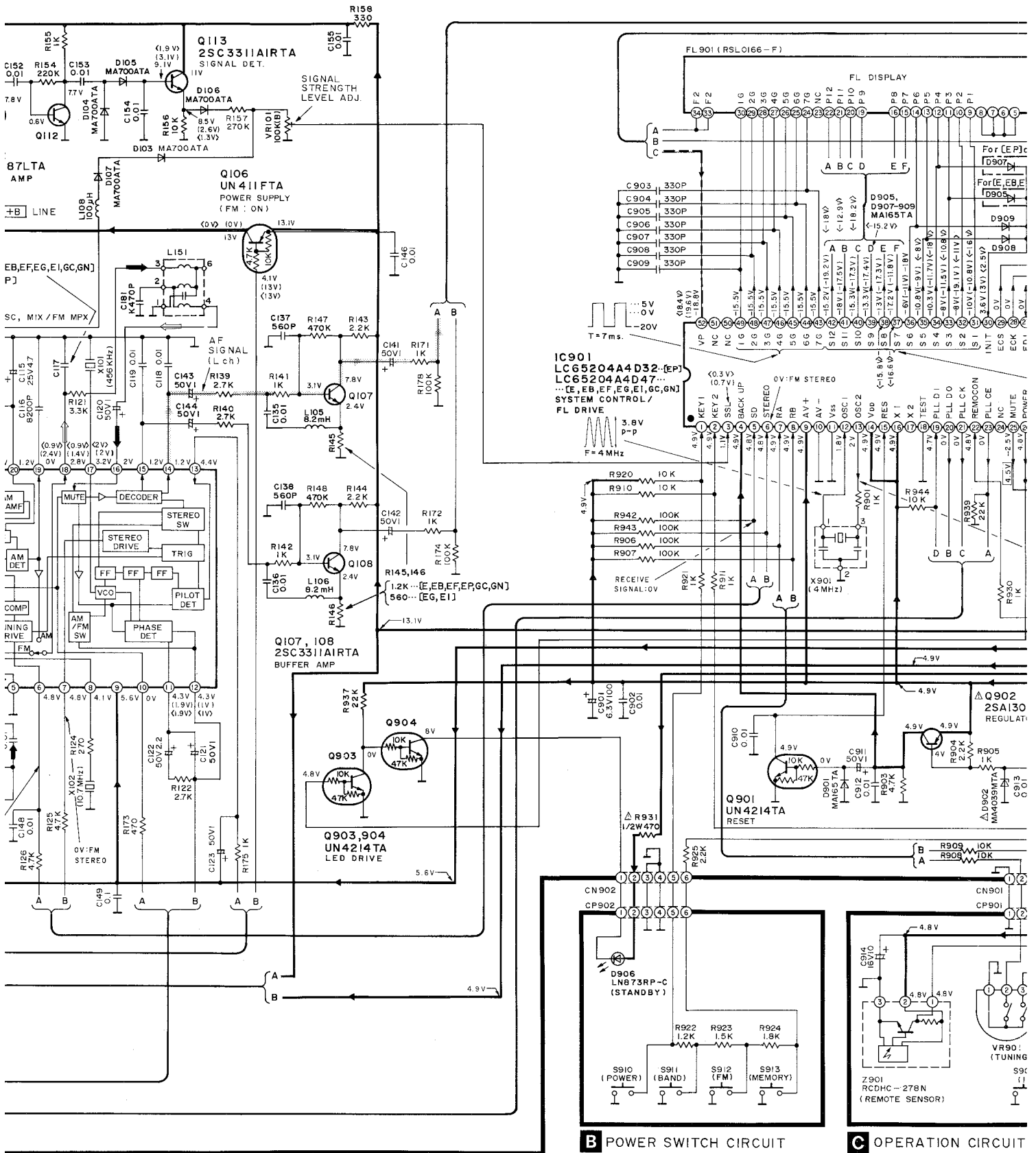
For [EG,EI,GC,GN]a



CIRCUIT (FM FRONT END/PLL/FM-AM IF AMP-DET-MPX/CONTROL/POWER SUPPLY/MUTING)

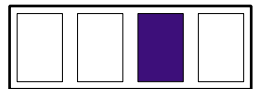
GC,GN J areas.



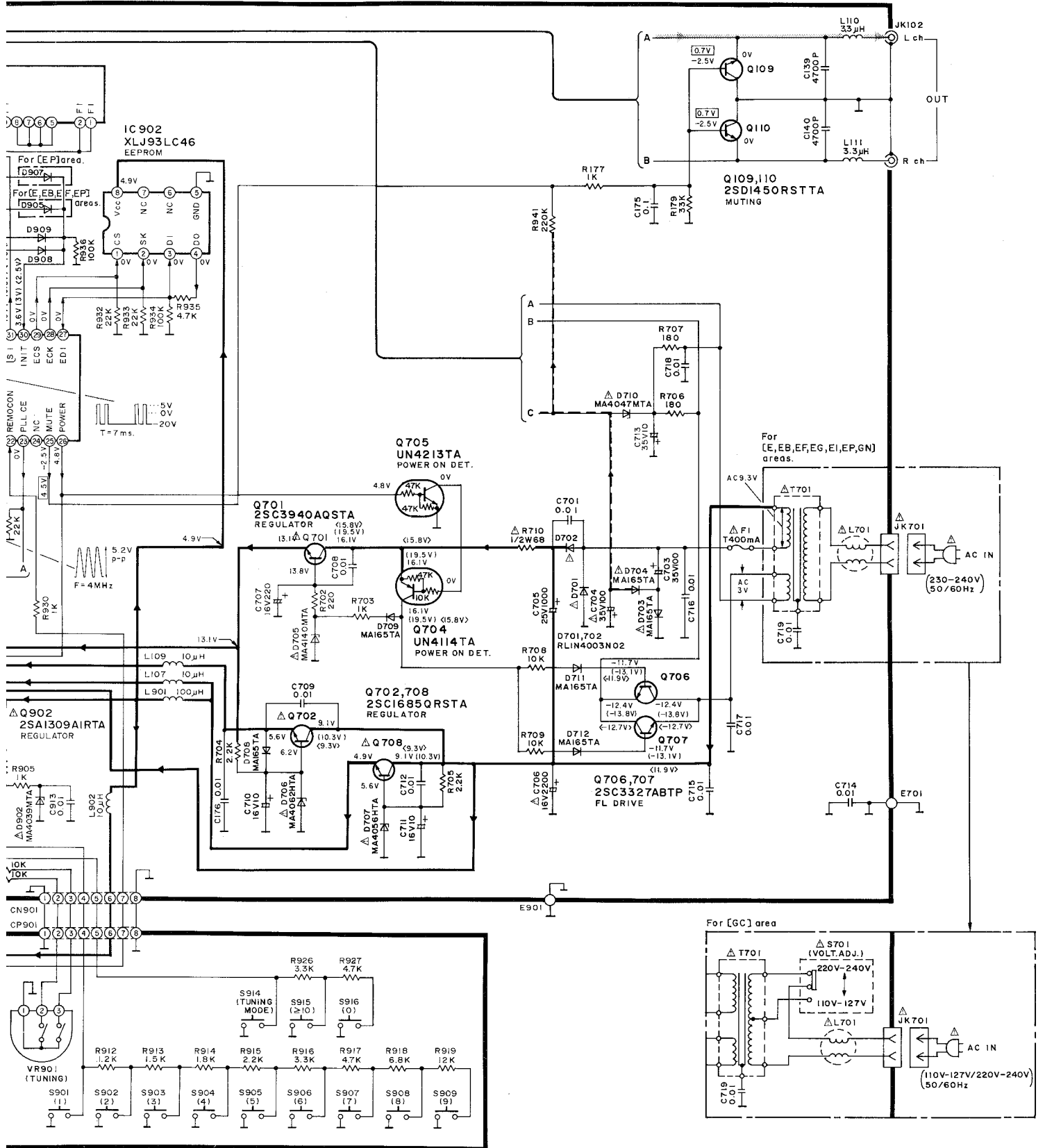


B POWER SWITCH CIRCUIT

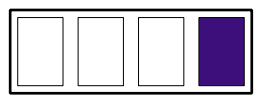
C OPERATION CIRCUIT







CIRCUIT



# SCHEMATIC DIAGRAM (Parts list on pages 21~24.)

(This schematic diagram may be modified at any time with the development of new technology.)

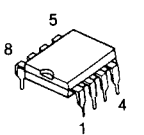
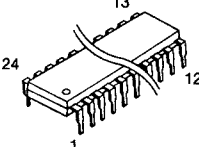
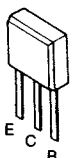
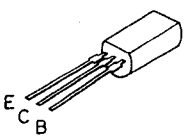
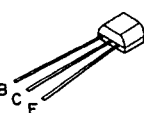
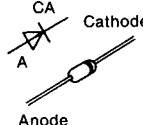
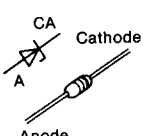
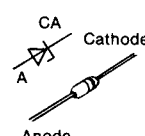
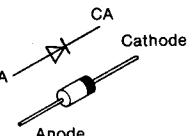
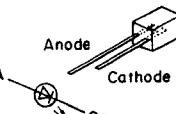
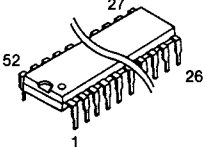
## Notes:

- **S701** : Voltage adj. switch.  
(110V-127V ↔ 220V-240V)
- **S901~909**, **915, 916** : Preset-tuning (1-0, ≥ 10) switches.  

S901: 1, S902: 2, S903: 3, S904: 4,
S905: 5, S906: 6, S907: 7, S908: 8,
S909: 9, S915: ≥ 10, S916: 0
- **S910** : Power "STANDBY  $\phi$  /ON" (POWER, STANDBY  $\phi$  /ON) switch.
- **S911** : Band select (BAND) switch.
- **S912** : FM mode select/FM signal-strength indication (FM) switch.
- **S913** : Memory (MEMORY) switch.
- **S914** : Tuning mode select (TUNING MODE) switch.
- **Signal line**
  - : AF signal (Lch)
  - : AM OSC signal
  - : AM signal
  - : Positive voltage lines
  - : Negative voltage lines
  - : FM OSC signal
  - : FM signal

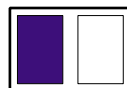
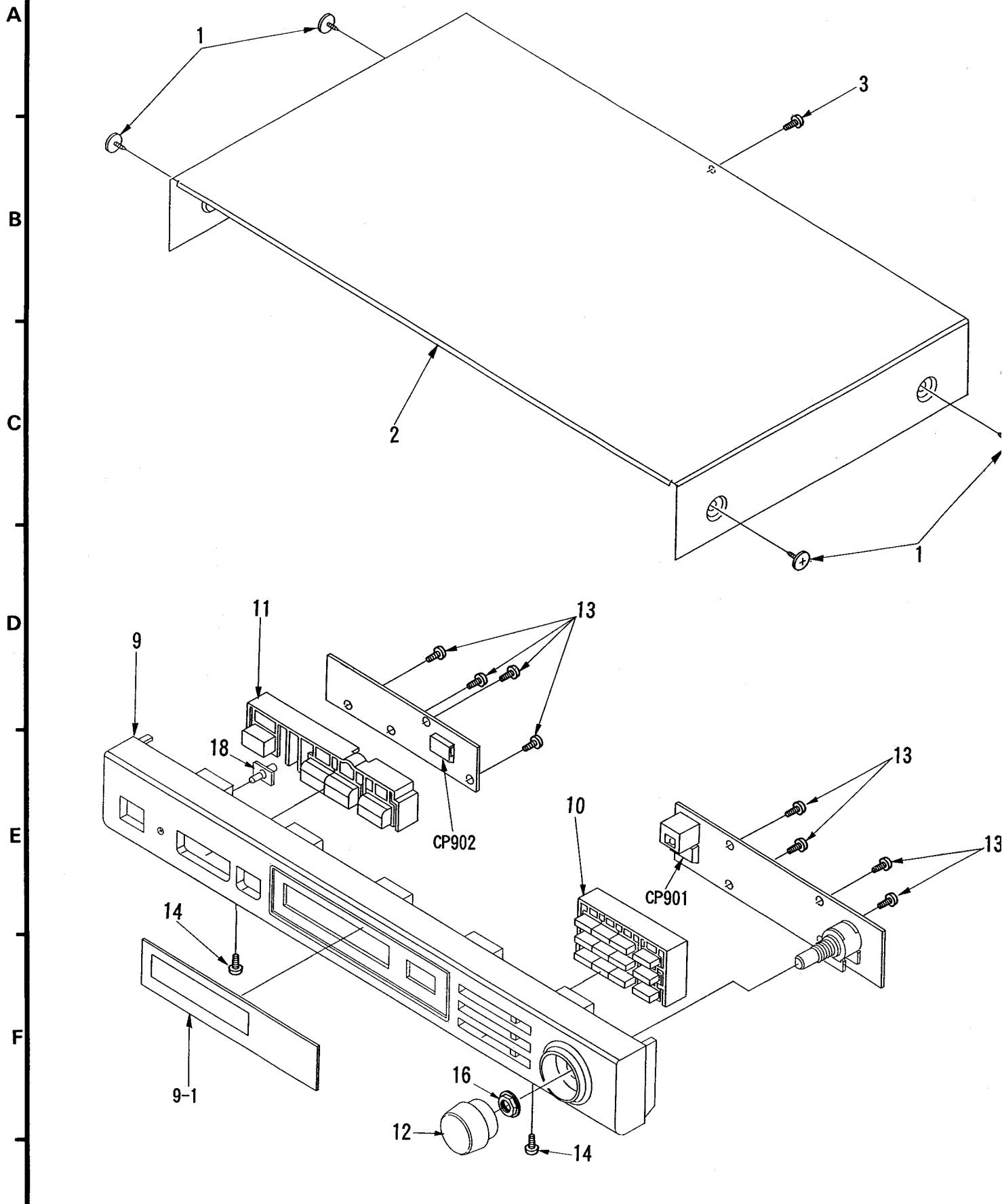
- **Important safety notice**  
Components identified by  $\triangle$  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used as occasion calls. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- All voltage values shown in circuitry are DC voltage in FM signal (Stereo mono) reception mode.
- \* Figures in ( ) Stand for DC-voltage in AM (MW) signal reception mode.
- \* Figures in < > Stand for DC-voltage in LW signal reception mode.
- \* Figures in  stand for DC-voltage in muting mode.
- **Caution!**  
IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
  - Cover the parts boxes made of plastics with aluminum foil.
  - Ground the soldering iron.
  - Put a conductive mat on the work table.
  - Do not touch the legs of IC or LSI with the fingers directly.

## Terminal guide of IC's, transistors and diodes

<b>XLJ93LC46</b> 	<b>LA1832A LC7218</b> 		<b>2SA1309AIRTA</b> <b>2SC2785FETA</b> <b>2SC2787LTA</b> <b>2SC3311AIRTA</b> <b>2SC3311ARSTA</b> (for (E, EB, EF, EP) areas) <b>2SD1450RSTTA</b>	<b>UN411FTA</b> <b>UN4213TA</b> <b>UN4214TA</b> <b>UN4114TA</b>	<b>2SC3940AQSTA</b> <b>2SC1685QRSTA</b> 
<b>2SC3327ABTP</b> 		<b>MA4039MTA</b> <b>MA4047MTA</b> <b>MA4056HTA</b> <b>MA4062HTA</b>	<b>MA4140MTA</b> 	<b>RL1N4003N02</b> 	<b>MA165TA</b> <b>MA700ATA</b> 
<b>LN873RP-C</b> 		<b>LC65204A4D32</b> (for (EP) area) <b>LC65204A4D47</b> (for others)			

1 2 3 4 5

# ■ CABINET PARTS LOCATION



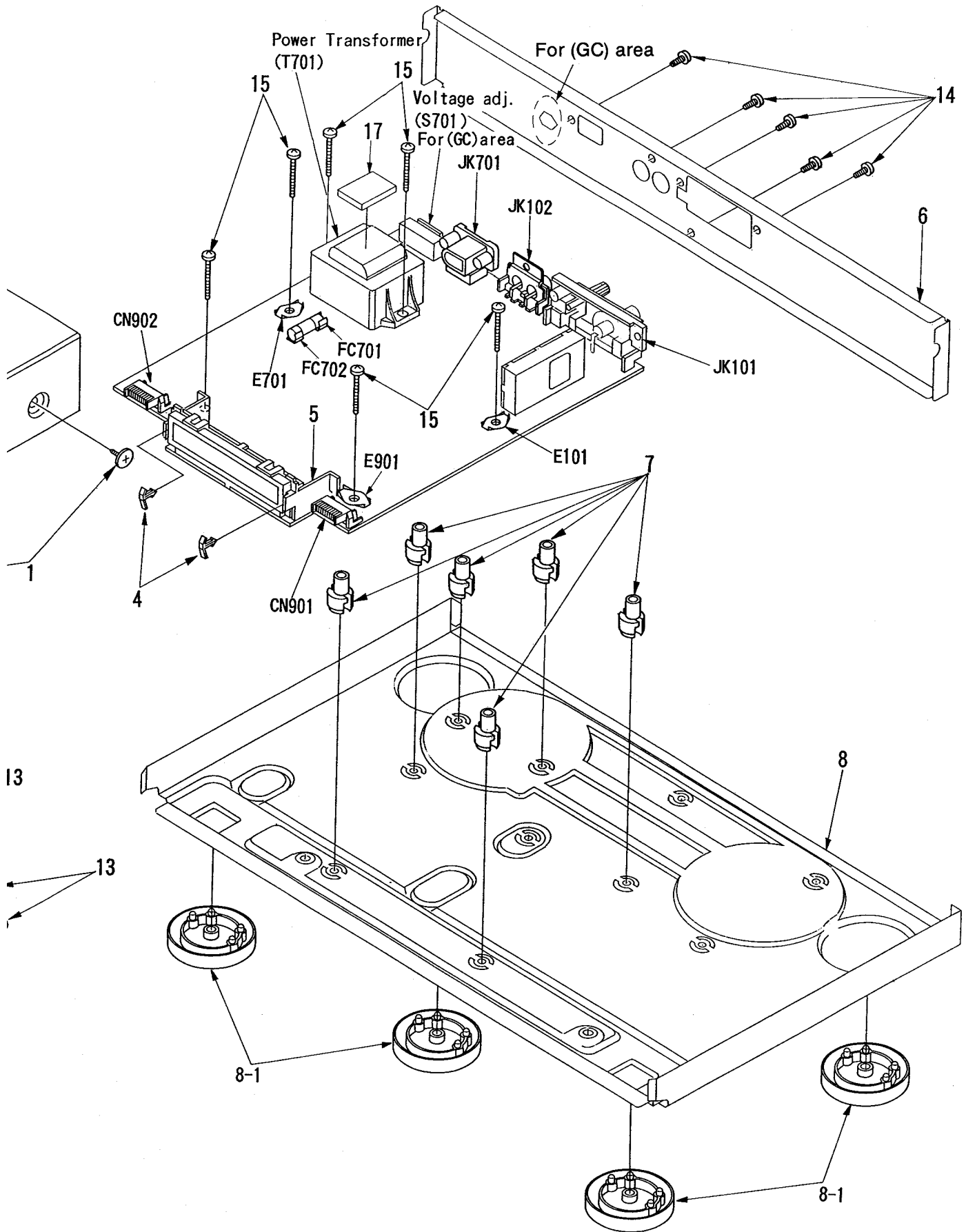
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6

7

8

9



## REPLACEMENT PARTS LIST

**Notes:** \*Important safety notice:

 Components identified by  $\Delta$  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 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.

\*E indicates in Remarks columns parts are supplied by PFS. (Panasonic France S.A. Longwy division.)

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS		Q113	2SC3311AIRTA	TRANSISTOR	
				Q191-193	2SC3311ARSTA	TRANSISTOR	(E, EB, EF, EP)
1	RHD30035-K	SCREW		Q701	2SC3940AQSTA	TRANSISTOR	$\Delta$
2	RKMO032-K	CABINET		Q702	2SC1685QRSTA	TRANSISTOR	$\Delta$
3	XTB3+8JFZ	SCREW		Q704	UN4114TA	TRANSISTOR	
4	FMNO195	FL PIECE		Q705	UN4213	TRANSISTOR	
5	FMNO251	FL HOLDER		Q706, 707	2SC3327-A	TRANSISTOR	
6	RGR0181A-B	REAR PANEL	(E, EP)	Q708	2SC1685QRSTA	TRANSISTOR	$\Delta$
6	RGR0181A-D	REAR PANEL	(EB)	Q901	UN4214TA	TRANSISTOR	
6	RFKHTGT350EF	REAR PANEL ASS' Y	[E] (EF)	Q902	2SA1309AIRTA	TRANSISTOR	$\Delta$
6	RGR0181A-C	REAR PANEL	(EG)	Q903, 904	UN4214TA	TRANSISTOR	
6	RGR0181A-F	REAR PANEL	[E] (EI)			DIODE (S)	
6	RGR0181B-B	REAR PANEL	(GC)	D102	MA165	DIODE	
6	RGR0181A-D	REAR PANEL	(GN)	D103-107	MA700	DIODE	
7	RKQ0089	P. C. B. SUPPORT		D701, 702	RL1N4003N02	DIODE	$\Delta$
8	RFKJLPG460-K	CHASSIS ASS' Y		D703, 704	MA165	DIODE	$\Delta$
8-1	RKA0053-A	FOOT		D705	MA4140M	DIODE	$\Delta$
9	RFKGTGT350E	FRONT PANEL ASS' Y		D706	MA4062-H	DIODE	$\Delta$
9-1	RKWO329-K	TRANSPARENT PLATE		D707	MA4056HTA	DIODE	$\Delta$
10	RFKNTK55PPAK	PRESET BUTTON ASS' Y		D708, 709	MA165	DIODE	
11	RFKNTK55PPBK	POWER/MODE BUTTON ASS' Y		D710	MA4047MTA	DIODE	$\Delta$
12	RGWO200-K	TUNING KNOB		D711, 712	MA165	DIODE	
13	RHD26017	SCREW		D901	MA165	DIODE	
14	XTBS3+8JFZ1	SCREW		D902	MA4039MTA	DIODE	$\Delta$
15	XTB3+20JFZ	SCREW		D905	MA165	DIODE	(E, EB, EF, EP)
16	RHN90001	NUT		D906	LN873RP-C	L. E. D.	
17	RMGO145	TRANSFORMER RUBBER		D907	MA165	DIODE	(EP)
18	RGL0227-Q	PANEL LIGHT		D908, 909	MA165	DIODE	
		INTEGRATED CIRCUIT (S)				VARIABLE RESISTOR (S)	
IC101	LA1832A	FM/AM IF AMP/AM OSC		VR101	EVNDXAA00B15	SIGNAL STRENGTH LEVEL ADJ.	
IC102	LC7218	PLL. FREQ. SYNTHESIZER		VR901	RRVEC16B12-A	TUNING VOLUME ADJ.	
IC901	LC65204A4D47	SYSTEM CONT. /FL. DRIVE	(E, EB, EF, EG, EI, GC, GN)			COIL (S)	
IC901	LC65204A4D32	SYSTEM CONT. /FL. DRIVE	(EP)	L101	ELESN1ROMA	COIL	
IC902	XLJ93LC46	EEPROM		L105, 106	RLQZB822KT-D	COIL	
		TRANSISTOR (S)		L107	RLQA100JT-Y	COIL	
Q101	2SC2787L	TRANSISTOR		L108	ELEXT101KA9	COIL	
Q103, 104	2SC2785FE	TRANSISTOR		L109	RLQA100JT-Y	COIL	
Q106	UN411FTA	TRANSISTOR		L110, 111	ELEXT3R3KA9	COIL	
Q107, 108	2SC3311AIRTA	TRANSISTOR		L151	SLM1B10M-1M	COIL	
Q109, 110	2SD1450RTA	TRANSISTOR		L191	ELESN1ROMA	COIL	(E, EB, EF, EP)
Q111, 112	2SC2787L	TRANSISTOR					

Ref. No.	Part No.	Part Name & Description	Remarks
L191	ELESNR56MA	COIL	(EG, EI, GC, GN)
L701	RLQZ600M-W	COIL	△
L901	ELEXT101KA9	COIL	
L902	RLQA100JT-Y	COIL	
		TRANSFORMER(S)	
T701	RTP1K4E027	POWER TRANSFORMER	△
		COMPONENT COMBINATION(S)	
Z101	RLA2Z002M-T	COMPONENT COMBINATION	(EG, EI, GC, GN)
Z102	RLI2Z006M-T	COMPONENT COMBINATION	
Z191	RLA6Z005M-T	COMPONENT COMBINATION	(E, EB, EF, EP)
Z901	RCDHC-278N	REMOTE SENSOR	
		FILTER(S)	
CF201	RLFFETNGD01L	FILTER	
CF202	RLFFETMGD01L	FILTER	
		OSCILLATOR(S)	
X101	RSX2456KM07	OSCILLATOR(456KHz)	
X102	RLFDGTD01I	OSCILLATOR(10.7MHz)	
X103	RSXC7M20S04T	OSCILLATOR(7.2MHz)	
X901	EFOEC4004T4	OSCILLATOR(4MHz)	
		DISPLAY TUBE(S)	
FL901	RSLO166-F	DISPLAY TUBE	
		FM FRONT END PACK ASS'Y(S)	
Z120	ENV17290G1R	FM FRONT END	(E, EB, EF)
Z120	ENV17290G1	FM FRONT END	(EG, EI, GC, GN)
Z120	RAL0021	FM FRONT END	(EP)
		FUSE(S)	
F1	XBA2C04TB0	FUSE, 250V T400mA	△
		SWITCH(ES)	
S701	ESD26700A	VOLTAGE ADJ.	(GC) △
S901	EVQ21405R	PRESET-TUNING(1)	
S902	EVQ21405R	PRESET-TUNING(2)	
S903	EVQ21405R	PRESET-TUNING(3)	
S904	EVQ21405R	PRESET-TUNING(4)	
S905	EVQ21405R	PRESET-TUNING(5)	
S906	EVQ21405R	PRESET-TUNING(6)	
S907	EVQ21405R	PRESET-TUNING(7)	

Ref. No.	Part No.	Part Name & Description	Remarks
S908	EVQ21405R	PRESET-TUNING(8)	
S909	EVQ21405R	PRESET-TUNING(9)	
S910	EVQ21405R	POWER	
S911	EVQ21405R	BAND	
S912	EVQ21405R	FM	
S913	EVQ21405R	MEMORY	
S914	EVQ21405R	TUNING MODE	
S915	EVQ21405R	PRESET(≥ 10)	
S916	EVQ21405R	PRESET(0)	
		CONNECTOR(S) AND SOCKET(S)	
CN901	RJU003K008M1	SOCKET(8P)	
CN902	RJU003K006M1	SOCKET(6P)	
CP901	RJT003K008-1	CONNECTOR(8P)	
CP902	RJT003K006-1	CONNECTOR(6P)	
		JACK(S)	
JK101	RJH4202M	ANT TERMINAL	
JK102	RJH3201N	LINE OUT	
JK701	SJS9236	AC INLET	(E, EB, EG, EF, EI, EP, GC) △
JK701	SJSD16	AC INLET	(GN) △
		GND PLATE(S)	
E101	SNE1004-2	GND PLATE	
E701	SNE1004-2	GND PLATE	
E901	SNE1004-2	GND PLATE	
		FUSE HOLDER(S)	
FC701, 702	EYF52BC	FUSE HOLDER	

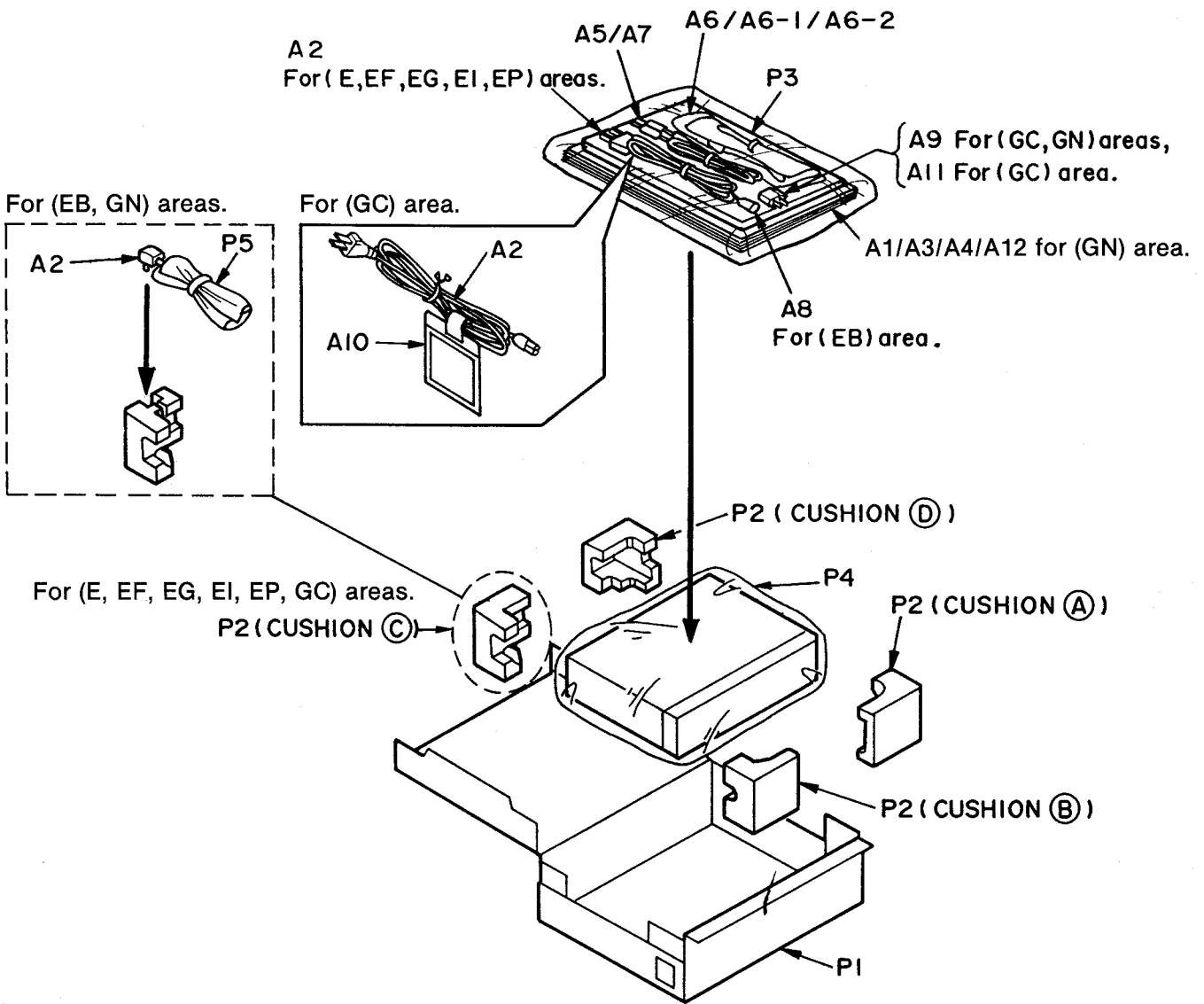
## RESISTORS AND CAPACITORS

Notes : \* Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)  
\* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS						
R103	ERDS2TJ101	1/4W 100	R178	ERDS2TJ104	1/4W 100K	R941	ERDS2TJ224T	1/4W 220K
R104	ERDS2TJ102	1/4W 1K	R179	ERDS2TJ333	1/4W 33K	R942, 943	ERDS2TJ104	1/4W 100K
R105	ERDS2TJ471	1/4W 470	R191	ERDS2TJ103	1/4W 10K (E, EB, EF, EP)	R944	ERDS2TJ103	1/4W 10K
R106	ERDS2TJ474	1/4W 470K	R192	ERDS2TJ122	1/4W 1.2K (E, EB, EF, EP)			CAPACITORS
R107	ERDS2TJ331	1/4W 330	R193	ERDS2TJ182	1/4W 1.8K (E, EB, EF, EP)	C101	ECBT1C103NS5	16V 0.01U
R110	ERDS2TJ102	1/4W 1K	R194	ERDS2TJ122	1/4W 1.2K (E, EB, EF, EP)	C103	ECBT1C103NS5	16V 0.01U
R112	ERDS2TJ104	1/4W 100K	R195	ERDS2TJ222	1/4W 2.2K (E, EB, EF, EP)	C104	ECBT1H102KB5	50V 1000P
R113	ERDS2TJ103	1/4W 10K	R702	ERDS2TJ221	1/4W 220	C106	ECBT1C103NS5	16V 0.01U
R114	ERDS2TJ562	1/4W 5.6K	R703	ERDS2TJ102	1/4W 1K	C107	ECFR1E473KR	25V 0.047U
R115	ERDS2TJ561	1/4W 560	R704, 705	ERDS2TJ222	1/4W 2.2K	C108	ECBT1H100JC5	50V 10P (E, EB, EF, EP)
R116	ERDS2TJ102	1/4W 1K	R706, 707	ERDS2TJ181T	1/4W 180	C108	ECBT1H8R2KC5	50V 8.2P (EG, EI, GC, GN)
R117	ERDS2TJ104	1/4W 100K	R708, 709	ERDS2TJ103	1/4W 10K	C109, 110	ECBT1C103NS5	16V 0.01U
R118	ERDS2TJ562	1/4W 5.6K	R710	ERDS1FVJ680T	1/2W 68 $\Delta$	C111	ECEA1EKA4R7B	25V 4.7U
R119	ERDS2TJ822	1/4W 8.2K	R901	ERDS2TJ102	1/4W 1K	C112	ECBT1C103NS5	16V 0.01U
R120	ERDS2TJ473	1/4W 47K	R903	ERDS2TJ472	1/4W 4.7K	C113	ECBT1H102KB5	50V 1000P
R121	ERDS2TJ332	1/4W 3.3K	R904	ERDS2TJ222	1/4W 2.2K	C114	ECEA1HKA3R3B	50V 3.3U
R122	ERDS2TJ272T	1/4W 2.7K	R905	ERDS2TJ102	1/4W 1K	C115	ECEA1EKA4R7B	25V 4.7U
R124	ERDS2TJ271	1/4W 270	R906, 907	ERDS2TJ104	1/4W 100K	C116	ECBT1C822MS5	16V 8200P
R125, 126	ERDS2TJ472	1/4W 4.7K	R908-910	ERDS2TJ103	1/4W 10K	C117	ECQP2A681JZT	200V 680P (E, EB, EF, EG, EI, GC, GN)
R127	ERDS2TJ103	1/4W 10K	R911	ERDS2TJ102	1/4W 1K	C117	ECQP2A561JZT	200V 560P (EP)
R129	ERDS2TJ473	1/4W 47K	R912	ERDS2TJ122	1/4W 1.2K	C118, 119	ECQB1H103JF3	50V 0.01U
R130	ERDS2TJ222	1/4W 2.2K	R913	ERDS2TJ152	1/4W 1.5K	C120, 121	ECEA1HKA010B	50V 1U
R131	ERDS2TJ102	1/4W 1K	R914	ERDS2TJ182	1/4W 1.8K	C122	ECEA1HKA2R2B	50V 2.2U
R132	ERDS2TJ103	1/4W 10K	R915	ERDS2TJ222	1/4W 2.2K	C123	ECEA1HKA010B	50V 1U
R133-137	ERDS2TJ102	1/4W 1K	R916	ERDS2TJ332	1/4W 3.3K	C124	ECBT1H102KB5	50V 1000P
R139, 140	ERDS2TJ272T	1/4W 2.7K	R917	ERDS2TJ472	1/4W 4.7K	C125	ECBT1H150JC5	50V 15P
R141, 142	ERDS2TJ102	1/4W 1K	R918	ERDS2TJ682T	1/4W 6.8K	C126	ECFR1E473KR	25V 0.047U
R143, 144	ERDS2TJ222	1/4W 2.2K	R919	ERDS2TJ123	1/4W 12K	C127	ECEA1AKA220B	10V 22U
R145, 146	ERDS2TJ122	1/4W 1.2K (E, EB, EF, EP, GC, GN)	R920	ERDS2TJ103	1/4W 10K	C128	ECBT1C103NS5	16V 0.01U
R145, 146	ERDS2TJ561T	1/4W 560 (EG, EI)	R921	ERDS2TJ102	1/4W 1K	C129, 130	ECEA0JKA101B	6.3V 100U
R147, 148	ERDS2TJ474	1/4W 470K	R922	ERDS2TJ122	1/4W 1.2K	C132	ECBT1H102KB5	50V 1000P
R151	ERDS2TJ331	1/4W 330	R923	ERDS2TJ152	1/4W 1.5K	C133	ECBT1H150JC5	50V 15P
R152	ERDS2TJ224T	1/4W 220K	R924	ERDS2TJ182	1/4W 1.8K	C134	ECBT1H180JC5	50V 18P
R153	ERDS2TJ102	1/4W 1K	R925	ERDS2TJ222	1/4W 2.2K	C135, 136	ECBT1C103KS5	16V 0.01U
R154	ERDS2TJ224T	1/4W 220K	R926	ERDS2TJ332	1/4W 3.3K	C137, 138	ECBT1H561KB5	50V 560P
R155	ERDS2TJ102	1/4W 1K	R927	ERDS2TJ472	1/4W 4.7K	C139, 140	ECQB1H472JF3	50V 4700P
R156	ERDS2TJ103	1/4W 10K	R930	ERDS2TJ102	1/4W 1K	C141-144	ECEA1HKA010B	50V 1U
R157	ERDS2TJ274	1/4W 270K	R931	ERDS1FVJ471T	1/2W 470 $\Delta$	C145	ECBT1H220J5	50V 22P
R158	ERDS2TJ331	1/4W 330	R932, 933	ERDS2TJ223	1/4W 22K	C146	ECKR1H103ZF5	50V 0.01U
R171, 172	ERDS2TJ102	1/4W 1K	R934	ERDS2TJ104	1/4W 100K	C148	ECBT1C103NS5	16V 0.01U
R173	ERDS2TJ471	1/4W 470	R935	ERDS2TJ472	1/4W 4.7K	C149	ECFR1E104ZF5	25V 0.1U
R174	ERDS2TJ104	1/4W 100K	R936	ERDS2TJ104	1/4W 100K	C151	ECBT1H220J5	50V 22P
R175	ERDS2TJ102	1/4W 1K	R937	ERDS2TJ223	1/4W 22K	C152-155	ECBT1C103KS5	16V 0.01U
R176	ERDS2TJ391	1/4W 390	R939	ERDS2TJ223	1/4W 22K			
R177	ERDS2TJ102	1/4W 1K						

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C172	ECBT1H331KB5	50V 330P	C705	ECA1EM102B	25V 1000U	C901	ECEAOJKA101B	6.3V 100U
C173	ECEA1CKA220B	16V 22U	C706	ECA1CM222B	16V 2200U $\Delta$	C902	ECKR1H103ZF5	50V 0.01U
C174	ECEA1CKA100B	16V 10U	C707	ECA1CM221B	16V 220U	C903-909	ECKR1H331KB5	50V 330P
C175	ECFR1E104ZF5	25V 0.1U	C708, 709	ECKR1H103ZF5	50V 0.01U	C910	ECKR1H103ZF5	50V 0.01U
C176	ECKR1H103ZF5	50V 0.01U	C710, 711	ECEA1CKA100B	16V 10U	C911	ECEA1HKA010B	50V 1U
C181	ECBT1H471KB5	50V 470P	C712	ECKR1H103ZF5	50V 0.01U	C912, 913	ECKR1H103ZF5	50V 0.01U
C701	ECKR1H103ZF5	50V 0.01U	C713	ECEA1VKA100B	35V 10U	C914	ECEA1CKA100B	16V 10U
C703	ECA1VM101B	35V 100U	C714-718	ECKR1H103ZF5	50V 0.01U			
C704	ECA1VM101B	35V 100U $\Delta$	C719	ECBT1C103NS5	16V 0.01U			

■ PACKAGING



CUSHION (A) (B) (C) (D) : RPN0811 For (E, EG, GC, EP) areas.  
 : RPN0769-1 For (EB, GN) areas, RPN0325 For (EF, EI) areas.



### REPLACEMENT PARTS LIST

**Notes:** \*Important safety notice:

Components identified by  $\Delta$  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 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.

\*The "SF" mark denotes the standard part.

\* $\square$  Indicates in Remarks columns parts are supplied by PFS. (Panasonic France S.A. Longwy division.)

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
				A1	RQT2349-V	INSTRUCTION MANUAL	[F] (EI)
		PACKING MATERIAL		A1	RQF2221	INSTRUCTION MANUAL ASS'Y	(EP)
				A1	RFKSTGT350GC	INSTRUCTION MANUAL ASS'Y	(GC)
P1	RPG1982	PACKING CASE	(E, EG, GC, EP)	A1	RQT2350-L	INSTRUCTION MANUAL	(GN)
P1	RPG1983	PACKING CASE	(EB)	A2	RJA0019-2K	AC POWER SUPPLY CORD	(E, EF, EG, EI, GC, EP)
P1	RPG1985	PACKING CASE	[F] (EF)				$\Delta$ (SF)
P1	RPG1986	PACKING CASE	[F] (EI)	A2	VJA0733	AC POWER SUPPLY CORD	(EB) $\Delta$ (SF)
P1	RPG1984	PACKING CASE	(GN)	A2	RJA0036-K	AC POWER SUPPLY CORD	(GN) $\Delta$ (SF)
P2	RPN0811	CUSHION	(E, EG, GC, EP)	A3	RQA0013	WARRANTY CARD	(E, EB, EF, EG, EI)
P2	RPN0767-1	CUSHION	(EB, GN)	A3	RQX7433ZA	WARRANTY CARD	(GN)
P2	RPN0325	CUSHION	(EF, EI)	A4	RQCB0169	SERVICENTER LIST	(E, EB, EF, EG, EI, GC, GN)
P3	RPQ0164	PAD		A5	RSA0007	FM INDOOR ANT	
P4	XZB52X60A01Z	PROTECTION BAG (UNIT)		A6	RSA0010	AM LOOP ANTENNA SET	
P5	RPH0032	PROTECTION SHEET	(EB, GN)	A6-1	RMN0244	AM ANTENNA HOLDER	
				A6-2	XTN3+10AFZ	SCREW	
		ACCESSORIES		A7	SJP2276	STEREO CONNECTION CABLE	
				A8	SJP9009	ATTACHMENT PLUG	(EB)
A1	RFKSTGT350E	INSTRUCTION MANUAL ASS'Y	(E)	A9	RFE0014	ANTENNA PLUG	(GC, GN)
A1	RQT2345-B	INSTRUCTION MANUAL	(EB)	A10	RQLA0134	VOLTAGE CAUTION LABEL	(GC)
A1	RFKSTGT350EF	INSTRUCTION MANUAL ASS'Y	(EF)	A11	SJP5213-1	POWER PLUG ADAPTOR	(GC) $\Delta$
A1	RQT2348-D	INSTRUCTION MANUAL	(EG)	A12	SOX40022	AM STEREO CAUTION LABEL	(GN)