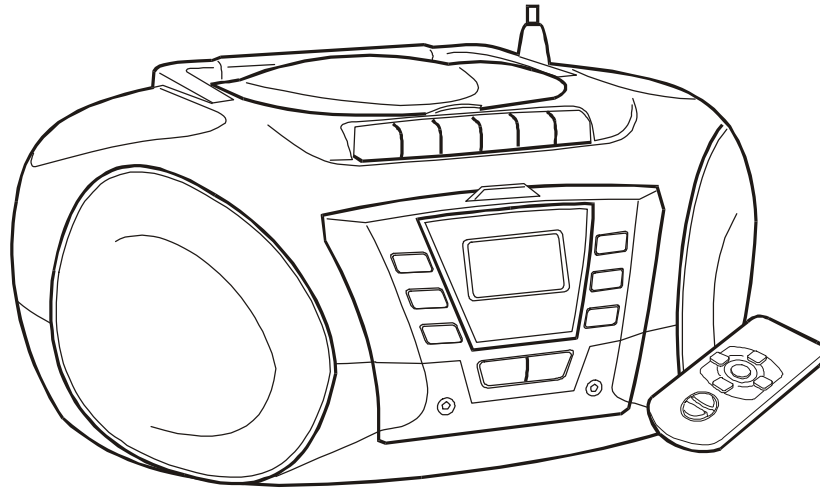


# Service Manual

## PORTABLE CD SYSTEM




**AJ-C3150R**

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### PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety characteristics. These safety characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by  in the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

## SPECIFICATIONS

### GERENAL

Power Source	:AC 120V ~ 60Hz (USA & CANADA) :AC 220V ~ 50Hz (China) :AC 230V ~ 50Hz (Europe & Hong Kong) :AC 240V ~ 50Hz (Australia) :DC 12V (8xC size or UM-2 batteries)
Power Consumption	12W

**Specifications subject to change without notice.**

## PERFORMANCE SPECIFICATIONS

### GENERAL TEST CONDITION

Power Supply	: AC 230V 50Hz
Output Load	: 8 ohm non-reactive
Reference Output	: 50mW
Input Signal Source	: IRE Loop for AM 75 ohm Dummy For FM
Modulation	: 30% 400Hz for AM 22.5kHz Deviation 1000Hz for FM
Remarks	: 7.5kHz Pilot Tone 67.5kHz L+R 1000Hz AC Bias

### (FM) SECTION, FREQUENCY, MODULATION

	TEST ITEMS	UNIT	NOMINAL	LIMIT	
1.	Tuning Range	MHz	87.5 - 108	-	
2.	I. F.	MHz	10.7	±0.3	
3.	30dB S/N	90.1MHz	mV	22	28
		98.1 MHz	mV	22	28
		106.1MHz	mV	22	28
4.	-3dB Limit Sens.	dB	25	30	
5.	I. F. Rej.	98.1MHz	dB	60	50
6.	Image Rej.	106.1MHz	dB	30	18
7.	Spurious Rejection	(F + 0.535 MHz) (Max. Sens. + 6dB)	dB	40	35
8.	AM Suppression	(60dB I/P)	dB	30	20
9.	Mod. Hum		dB	-	45
10.	Distortion at 1mV/m (Mono)		%	1	3
11.	Audio Fidelity, (-3dB) (Pre-emphass) (50µS)		Hz	60/9000	120/6000
12.	Dev. 40kHz 10% THD		W	1	0.8
13.	Low Voltage AC		%	80	85
14.	S/N Ratio at 1mV/m Dev. (Mono)	98.1MHz	dB	50	40
15.	Stereo Separation		dB	26	22
16.	19kHz Leak Carrier		dB	32	27
17.	Stereo LED Indication		dB	26	30
18.	Step Frequency		kHz	-	50
19.	Low Voltage DC		%	65	70

#### REMARKS:

NOTE: All measurement should be done at Bypass mode without X-Bass/Tone/ ... effects.

## PERFORMANCE SPECIFICATIONS - CONTINUED

<b>(AM) SECTION, AMPLITUDE, MODULATION</b>					
	<b>TEST ITEMS</b>	<b>UNIT</b>	<b>NOMINAL</b>	<b>LIMIT</b>	
1.	Tuning Range	kHz	522 - 1620	-	
2.	I. F.	kHz	450	±3	
3.	S/N 5mV/m	0.999MHz dB	36	30	
4.	Sens. (at S/N 20dB)	0.603MHz dBμV	60	66	
		0.999MHz dBmV	60	66	
		1.404MHz dBmV	60	66	
5.	I.F. Rej.	0.603MHz dB	40	30	
6.	Image Rej.	1.404MHz dB	32	26	
7.	Spurious Rejection	dB	35	25	
8.	Bandwidth, -6 dB, at (Max. Sens. +6 dB)	1.404MHz kHz	6	4 - 9	
9.	ACA (±9 kHz) Input	0.999MHz dB	20	10	
10.	AGC Figure Merit	100mV/m dB	50	40	
11.	Distortion, 5mV/m, 30%	80%	%	1	3
			%	3	6
12.	10% THD Power AC 55% Mod.	W	1	0.8	
13.	Audio Fidelity, Centre ±(6) dB	Hz	60/2200	140/2000	
14.	Low Voltage AC	%	80	85	
15.	a. Mod. Hum 10mV/m	dB	34	28	
	b. Hum at Min. Vol.	mV	0.5	2	
16.	Auto Stop Sens.	dB	64	70	
17.	Step Frequency	kHz	-	9	
18.	Low Voltage DC	%	65	70	
REMARKS:					
NOTE: All measurement should be done at Bypass mode without X-Bass/Tone/ ... effects.					

<b>CD SECTION</b>					
	<b>TEST ITEMS</b>	<b>UNIT</b>	<b>NOMINAL</b>	<b>LIMIT</b>	
1.	10% Dis. Output Power (1kHz, 0dB)	W	1	0.8	
2.	Frequency Response (100Hz-20kHz / 1kHz, 0dB)	dB	±2	±4	
3.	De-emphasis Response (1kHz, 0dB / 5kHz-4.5dB / 16kHz-9dB)	dB	±3	±4	
4.	Channel Balance (1kHz, 0dB)	dB	0.5	3	
5.	Channel Separation (1kHz, 0dB)	dB	55	40	
6.	T.H.D. + Noise (1kHz, 0dB)	%	0.15	0.5	
7.	S/N Ratio (1HF-A) (1kHz, 0dB)	dB	70	60	
8.	Playability: Wedge	PHILIPS 444A	μm	-	500
	Black Dot	PHILIPS 444A	μm	600	500
	Eccentricity	TCD - 712ABEX	μm	-	150
	Skew Disc	TCD - 731 RABE	mm	-	±0.5
	Finger Print	PHILIPS 444A	Track	-	No.18

\*with external "A" Weighting Filter

Item 1 - 4 Test Disc "CBS SONY YEDS7"

Level Matching Tape (B112BN)	dB	0	
CD (-10dB 1K)	dB	0	+3/-5
AM (55% 5mV/m)	dB	0	±3
FM (40kHz 1mV)	dB	0	±3

## PERFORMANCE SPECIFICATIONS - CONTINUED

<b>CASSETTE SECTION</b>				
	<b>TEST ITEMS</b>	<b>UNIT</b>	<b>NOMINAL</b>	<b>LIMIT</b>
1.	Tape Speed (B-111LNA)	Hz	3000	3% / -3%
2.	Wow & Flutter Rms (JIS R.M.S.) (B-111LNA)	%	0.35	0.45
3.	Fast Forwards Time	Sec.	110	100 - 180
4.	Rewind - Time	Sec.	110	100 - 180
5.	Frequency Response B-257 (1kHz, 0dB) 125Hz 6.3kHz	dB	±3	±6
		dB	±3	±6
6.	Signal to Noise in Play (B-112BN)	dB	45	35
7.	Separation (MTT-141N)	dB	40	30
8.	Cross Talk (B-121N) w/BPF	dB	40	35
9.	Erase Ratio w/ BPF	dB	32	26
10.	Play Back Distortion (B-118N)	%	1	3
11.	Rec. / Playback S/N Ratio (FM 1mV 75kHz Dev.) w/BPF	dB	32	26
12.	Rec. / Playback Level Difference (Radio)	dB	-	±3
13.	Play Back 10% Distortion-output Per Channel (B-112BN)	W	1	0.8
14.	Record Play Back Distortion (S.R.L. + 20)	%	3	8
15.	ALC Effect Level (55% Mod., 74dB MW)	dB	-	±5
16.	Recovery Time	Sec.	-	<5
17.	VR Min. Hum & Noise (Motor On) w/o Tape	mV	0.5	3
18.	VR Max. Hum & Noise (Motor On) w/o Tape	mV	30	50
19.	Rec. / Play Frequency Response 125Hz, 6.3kHz	dB	-	±6

## ELECTRICAL PARTS LIST

Ref. No.	Description	Mfr's Part No.	Qty.
<b>PCB</b>			
MAIN PCB	PCB CD1831T-02-01 (94HB)	033-001831-400	1
KEY & DISPLAY PCB	PCB CD1831T-02-02 (94HB)	033-001831-400	1
BATTERY PCB	PCB CD1831T-01-03 (94HB)	033-001831-400	1
BATTERY PCB	PCB CD1831T-01-04 (94HB)	033-001831-400	1
RECTIFIER PCB	PCB CD1790-01-07 (94V0)	033-001790-100	1
<b>CD PORTION</b>			
<b>RESISTORS [All are +-5% 1/16w (1/8w) tape &amp; wheel resistors unless otherwise specified]</b>			
D102 R140	*CdF RESISTOR 10 ohm	001-010051-016	2
R920	*CdF RESISTOR 100 ohm	001-010151-016	1
R103,114,115,116,117,151,153,922	*CdF RESISTOR 1 Kohm	001-010251-016	8
R108,109,111,123,124,129,139,155, 159,160,161,163,165,166	*CdF RESISTOR 10 Kohm	001-010351-016	14
R120,190	*CdF RESISTOR 100 Kohm	001-010451-016	2
R156	*CdF RESISTOR 1.5K	001-015251-016	1
R128	*CdF RESISTOR 15 Kohm	001-015351-016	1
R143,146	RESISTOR 150 Kohm	001-015451-016	2
D101	*CdF RESISTOR 22 ohm	001-022051-016	1
R102,107,150	*CdF RESISTOR 2.2 Kohm	001-022251-016	3
R105,106,154,158,191	*CdF RESISTOR 22 Kohm	001-022351-016	5
R127	RESISTOR 220 Kohm	001-022451-016	1
R121,122	RESISTOR 270 ohm	001-027151-016	2
R148	RESISTOR 27 Kohm	001-027351-016	1
R125	*CdF RESISTOR 3.3 Kohm	001-033251-016	1
R118	RESISTOR 39 Kohm	001-039351-016	1
R130,141,142,144,145,152	*CdF RESISTOR 47 Kohm	001-047351-016	6
C103	*CdF RESISTOR 470 Kohm	001-047451-016	1
R162	RESISTOR 5.6 Kohm	001-056251-016	1
R112,113	*CdF RESISTOR 6.8 Kohm	001-068251-016	2
R135,137,147	RESISTOR 68K	001-068351-016	3
R149	RESISTOR 91 ohm	001-091051-016	1
<b>CAPACITORS</b>			
C101,105,107,117,134,138,159,199	(F003-010380-025) CERAMIC CAP 0.01 uF/ 50V +80%-20%	003-010380-050	8
C121,122,125,142,145,146,147,148, 149,152,153	CERAMIC CAP 0.1 uF/16V +80%-20%	003-010480-016	11
C111,114	CERAMIC CAP 0.0022 uF/50V +80-20%	003-022280-050	2
C156	CERAMIC CAP 0.033 uF/50V +80-20%	003-033380-050	1
C132	CERAMIC CAP 0.0047 uF/50V +80%-20%	003-047280-050	1
C127,128,129,164	CERAMIC CAP 0.047 uF/50V +80%-20%	003-047380-050	4
C102	CERAMIC CAP 100 pF/50V +-10%	003-210110-050	1
C135	(UP050B101K-BB) (AXIAL TAPED 52mm) CERAMIC CAP 0.015 uF/50V +-10%	003-215310-050	1
C133	(UP050B153K-B-BZ) (AXIAL TAPED 52mm) CERAMIC CAP 0.0027 uf/16V +-20%	003-227220-016	1
C130,131	(EP050X272M-BB) (AXIAL TAPED 52mm) CERAMIC CAP 470 pF/50V +-10%	003-247110-050	2
C123,124	(UP050B471K-BB) (AXIAL TAPED 52mm) CERAMIC CAP 15 pF/50V +-5% (NPO)	003-415050-050	2
C109,110	(CC45-CH1H150J/RBU04CH150J-L) CERAMIC CAP 33 pF/50V +-5% (NPO)	003-433050-050	2
C136	(CC45-CH1H330J/RBU04CH330J-L) CERAMIC CAP 47 pF/50V +-5% (NPO)	003-447050-050	1
	(CC45-CH1H470J/RBU04CH470J-L)		

## ELECTRICAL PARTS LIST - CONTINUED

Ref. No.	Description	Mfr's Part No.	Qty.
C162	CERAMIC CAP 0.0068 uF/50V +80-20%	003-068280-050	1
C154	CERAMIC CAP 56pF/50V +-5% (NPO)	003-456050-050	1
C112,113	ELECT CAP 3.3 MFD/50V +-20% (5x11)	006-003000-50D	2
C106,118,157,161,163	ELECT CAP 100 MFD/10V +-20% (5x11)	006-010100-10D	5
C115,116,175,319	ELECT CAP 22 MFD/25V +-20% (5x11)	006-022000-25D	4
C104,141	ELECT CAP 220 MFD/10V +-20% (6.3x11)	006-022100-10D	2
C108,137,139,140,143,155,158	ELECT CAP 47 MFD/25V +-20% (5x11)	006-047000-25D	7
<b>TRANSISTORS</b>			
Q102,105	TR PNPSST-RAD&SC-043 2SA1015-GR TOSHIBA	008-110150-000	2
Q101,103	TRLNPPWR-TAP&TO-092 3CG562	008-605620-000	2
Q104,106,108,109,110	TRLNPNSSST-TAP&TO-092 3DG1815	008-618150-000	5
<b>RESONATORS</b>			
X102	CRYSTAL 75.0 KHz +-20ppm TF26-75	009-375000-003	1
X101	*CdF CERAMIC RESONATOR 16.93 MHz ZTA16.93MX (ZHEJIANG JIAKANG)	020-001693-005	1
<b>INTEGRATED CIRCUITS</b>			
IC103	ICMOTORDRIVER-04CH TA2092N (TOSHIBA) (87-A20-157-01J/AIWA)	010-832092-000	1
IC101	ICCDP-001CASP TA2109F	010-832109-000	1
IC102	ICMCU-09K-LCD TC94A09F-202	010-849409-000	1
<b>DIODES</b>			
D103	DIODE IN-4148 ROHM/TELEFUNKEN TAP**50 KEL(NS)(TAP:52mm)/NS(FAIRCHILD)/SEMTECH	011-004148-000	1
D121,122	RECTIFIER IN-4001B	011-024001-000	2
<b>INDUCTOR</b>			
L101	*CdF INDUCTOR 10 uH +-10% CEC22-100K LAL02TB100K (TAIYO YUDEN/COILS)	018-010016-201	1
<b>SWITCH</b>			
CD DOOR	*CdF LEAF SWITCH LSA-1120Y2	022-001120-002	1
<b>WIRES</b>			
CN102 TO CD MECHANISM	FFC CABLE 16 PINS L=240mm PITCH:1mm KLW9529-1A (02-0735C-3F16-232S04N08-08NN) JP WIRE AWG26#1007 3x3mm 120mm BLACK	040-160240-100 051-673120-009	1 1
CN104 TO CD DOOR SW	HSG CD363-2A PIN JST PHR 2mm w/250mm RED,BLK JP AWG28#1007 SLDG 4mm	136-020363-200	1
CN101 TO CD MECHANISM	HSG CD189-55-6B(C) PEC 2001H-6 w/180mm RED,BLK,BL,W,O,YEL AWG30#UL1571 SLDG.3mm	136-060189-B01	1
<b>MISCELLANEOUS</b>			
CN102	*CdF FFC CONN SOCKET 16P P:1 TAIKO DENKI 6116-0101/CFF7816-01-01/TOC-B16X-G2)	135-006116-160	1
CN104	HEADER 2 PINS PEC #2001-WS-2 PITCH 2mm VERTICAL REPLACE:135-PHS020-020	135-2001WS-020	1
CN107,108	FFC CONNECTOR 16 PINS P:1mm D100-SRV-16U/ LWFPC1.0-R-16P RIGHT-ANGLE	135-D100SR-160	2
	CD&-TLB-01-SAMG-N CD MECHANISM CMS-B31BG6U	153-000316-000	1
<b>CONTROL &amp; DISPLAY PORTION</b>			
<b>RESISTORS [All are +-5% 1/16w (1/8w) tape &amp; wheel resistors unless otherwise specified]</b>			
R172	*CdF RESISTOR 1.5K	001-015251-016	1
R173	RESISTOR 2 Kohm	001-020251-016	1
R174	RESISTOR 2.7 Kohm	001-027251-016	1
R175	RESISTOR 3.9K	001-039251-016	1
R171	RESISTOR 6.2 Kohm	001-062251-016	1

## ELECTRICAL PARTS LIST - CONTINUED

Ref. No.	Description	Mfr's Part No.	Qty.
<b>TRANSISTORS</b>			
Q111	(F008-800111-113) TR NPNSST-RAD&SC-072	008-801143-000	1
	DTC114TS(TP)(ROHM)/KRC-111M (KEC)		
Q112	TRANSISTOR 2SK2541-T/2SK2541 (NEC)	008-902541-000	1
<b>SWITCHES</b>			
SW101,102,103,104,105,106,107, 108	TACT SWITCH 4P 5mm 100G #1102A-4/ EVQ PAC 05R (=021-KHH901-000)	021-110200-002	8
<b>WIRES</b>			
CN108 TO CN110	FFC CABLE 16 PINS L=160mm PITCH:1mm RLW8027-1A(01-0735C-3F16-152S04N08-08NN)	040-160160-101	1
CN107 TO CN109	(F040-160200-100) FFC CABLE 16PINS P=1mm L=200mmUL AWM20696 KJW9129-1A/RJW0617-1A	040-160200-101	1
<b>MISCELLANEOUS</b>			
LCD101	LCD-P-04D-4026SM021P TCM-2978A-011 40x26x2.85mm TRANSMISSIVE/REFLECTIVE (TIAN-MA)	112-002978-001	1
CN109,110	FFC CONNECTOR 16 PINS P:1mm D100-SRV-16U/ LWFPC1.0-R-16P RIGHT-ANGLE	135-D100SR-160	2
<b>GENERAL PORTION</b>			
<b>WIRES</b>			
RECT BOARD AC TO AC SOCKET	JP WIRE AWG26#1007 3x3mm 150mm ORANGE	051-673150-003	1
SW404 TO R111	JP WIRE AWG26#1007 3x3mm 150mm BLACK	051-673150-009	1
SW404 TO J166	*CdF JP WIRE AWG26#1007 3x3mm 250mm BLACK	051-673250-009	1
RECT BOARD B+ TO AC SOCKET	*CdF JP WIRE AWG26#1007 5x5mm 160mm RED	051-675160-006	1
BAT BOARD B-TORECT BOARD B- CN801 TO SPEAKER	*CdF JP WIRE AWG26#1007 5x5mm 160mm BLACK HSG CD178-4B(C) PEC 2507-H-4 R,BLKx120mm BLUE,WHTx450mm AWG26#UL1007 SLDG.4mm	051-675160-009 136-040178-C01	1 1
<b>MISCELLANEOUS</b>			
	⚠ PT012WEI41/20&F&WEN& 230V:12V EN STD w/FUSE 125°C (VCD1811ENFN)	123-B53031-100	1
	⚠ FUSE #S506 1.6A/250V 5x20mm TIME LAG. (CUL/SEMKO/VDE/BSI APP.)	124-016020-000	1
	AC SOCKET AC-009 MSC 2.5A/250V VDE/SEMKO APP.	126-220100-006	1
	⚠ PCA-VDE-6'&&&-VDE-MG VDE APP.CORD SET 6' w/2.5A CONNECTOR (GOLD MARK)	134-A14331-002	1
UNIT"KG"	*CdF SOLDERING WIRE 60/40,DIA:0.8mm TYPE #115B/115A (FOR CD ICS) BRAND "SOLNET"	055-006040-108	0.0053
UNIT"KG"	*CdF SOLDERING WIRE 60/40 DIA. 1.2mm EX Rsn60A 1.2B	055-006040-112	0.006
UNIT"KG"	*CdF SOLDERING BAR (PURE TIN) SN 99.9%	055-100000-001	0.0011
UNIT"KG"	*CdF SOLDERING BAR 60/40 SIGMA/KESTER SPK003.5"008OHM01.5W w/SHINY BLACK MYLAR	055-106040-001 131-358001-511	0.027 2
	CAP MAGNET:32x18x6 #AEF35R01/YD93-1 *CdF SOLDERING LUG	137-300000-000	1
<b>POWER AMP. PORTION</b>			
<b>RESISTORS [All are +-5% 1/16w (1/8w) tape &amp; wheel resistors unless otherwise specified]</b>			
R803,804,814	*CdF RESISTOR 1 Kohm	001-010251-016	3
R808,809,830,817	*CdF RESISTOR 10 Kohm	001-010351-016	4
R805,806	RESISTOR 120 ohm	001-012151-016	2
R801,802	RESISTOR 200 ohm	001-020151-016	2
R807	*CdF RESISTOR 22 Kohm	001-022351-016	1
R812,813	RESISTOR 27 Kohm	001-027351-016	2
R810,811	RESISTOR 3.9K	001-039251-016	2

## ELECTRICAL PARTS LIST - CONTINUED

Ref. No.	Description	Mfr's Part No.	Qty.
R816,819	*CdF RESISTOR 470 ohm	001-047151-016	2
R820	*CdF RESISTOR 4.7 Kohm	001-047251-016	1
R815	*CdF RESISTOR 47 Kohm	001-047351-016	1
R888,889	*CdF RESISTOR 4.7 ohm	001-047851-016	2
VR801	VR-E12M2GV050KAWSH&D XV012302GPVN15FS-15 A50Kx2/I /XV012311GPVN15FS-L15A50KX2	030-E12503-201	1
<b>CAPACITORS</b>			
C601,602,603,604	(F003-010380-025) CERAMIC CAP 0.01 uF/ 50V +80%-20%	003-010380-050	4
C823,835,836	CERAMIC CAP 0.1 uF/16V +80%-20%	003-010480-016	3
C803,804	CERAMIC CAP 470 pF/50V +-10% (UP050B471K-BB) (AXIAL TAPED 52mm)	003-247110-050	2
C814	CERAMIC CAP 0.047 uF/50V +80%-20% (UP050F473Z-BB) (AXIAL TAPED 52mm)	003-247380-050	1
C820,821	CERAMIC CAP 560 pF/50V +-20% (AXIAL TAPED 52mm)	003-256110-050	2
C811,812	#MYLAR CAP 0.1 uF/50V +-10%	004-010410-050	2
C817,818	#MYLAR CAP 0.0027 uF/100V +-10%	004-027210-100	2
C805,806	ELECT CAP 1 MFD/50V +-20% (5x11)	006-001000-50D	2
C815	ELECT CAP 4.7 MFD/50V +-20% (5x11)	006-004000-50D	1
C807,808,819,822,825,826 ,831	ELECT CAP 100 MFD/25V +-20% (6.3x11)	006-010100-25D	7
C605,816	ELECT CAP 1000 MFD/25V +-20% (12.5x20)	006-010200-25D	2
C801,802	*CdF ELECT CAP 47 MFD/16V +-20% (5x11)	006-047000-16D	2
C809,810	ELECT CAP 470 MFD/10V +-20% (8x11.5)	006-047100-10D	2
C813,824	ELECT CAP 470 MFD/16V +-20% (10x12.5)	006-047100-16D	2
<b>TRANSISTORS</b>			
Q806	(F008-211850-005) TRANSISTOR 2SB1566E/F (ROHM)	008-201566-000	1
Q804,807	TRLNPN SST-TAP&TO-092 3DG1815	008-618150-000	2
Q803	TRLPNPPWR-TAP&TO-092 3CA8550	008-685500-000	1
Q801,802	TRANSISTOR 2SK2541-T/2SK2541 (NEC)	008-902541-000	2
<b>INTEGRATED CIRCUITS</b>			
IC801	ICAMP-POWR-ST-00002W UTC8227/LS2027/ TA8227P DIP-12H POWER AMP2Wx2	010-398227-000	1
IC802	IC L-7805CV (059)	010-727805-000	1
<b>DIODES</b>			
D802,803	DIODE IN-4148 ROHM/TELEFUNKEN TAP**50 KEL(NS)(TAP:52mm)/NS(FAIRCHILD)/SEMTECH	011-004148-000	2
D801	ZENER DIODE 2.2V	011-010022-120	1
D804	ZENER BZX55C6V8CECCL, 6.8V, 1/2W (ROHM) SGS-THOMSON	011-010068-120	1
D601,602,603,604	RECTIFIER IN-4001B	011-024001-000	4
<b>WIRES</b>			
CON2 TO CON3	CONN PIN 4 PINS (3.5+143+3.5) PITCH 2mm AWG26#2651	050-040150-200	1
CN802 TO RECTIFIER PCB CN602	HSG CD268-3B(C) PEC 2507H-3 w/250mm RED,NC,BLACK AWG22#UL1007 SLDG.4mm	136-030268-C00	1
<b>MISCELLANEOUS</b>			
HP801	HEADPHONE JACK STEREO 3.5mm #MSJ-2000 (8Z-CS1-604-01) (Cd FREE)	116-002000-352	1
CN802	HEADER 3 PINS PEC #2507-WS-3 PITCH 2.5mm VERTICAL REPLACE:135-005267-030	135-2507WS-030	1
CN801	HEADER 4 PINS PEC #2507-WS-4 PITCH 2.5mm VERTICAL REPLACE:135-005267-040	135-2507WS-040	1



## ELECTRICAL PARTS LIST - CONTINUED

Ref. No.	Description	Mfr's Part No.	Qty.
<b>REMOTE CONTROL PORTION</b>			
<b>RESISTOR [All are +5% 1/16w (1/8w) tape &amp; wheel resistors unless otherwise specified]</b>			
R101	*CdF RESISTOR 22 ohm +-5% 1/16W (1/8W)	001-022051-016	1
<b>CAPACITORS</b>			
C198	CERAMIC CAP 0.02 uF/50V +80%-20%	003-020380-050	1
EC101	ELECT CAP 100 MFD/10V +-20% (5x11)	006-010100-10D	1
<b>MISCELLANEOUS</b>			
REM101	REMOTE CONTROL HANDSET RC18-07, w/BATTERY, LIGHT GREY COLOR (FOR CD1832)	043-R11807-010	1
	REMOTE/CONTROL PHOTO RECEIVER ROHM/RPM7138-V4	111-007138-000	1
<b>TAPE PORTION</b>			
<b>RESISTORS [All are +5% 1/16w (1/8w) tape &amp; wheel resistors unless otherwise specified]</b>			
R915	*CdF RESISTOR 100 ohm	001-010151-016	1
R308,320	*CdF RESISTOR 1 Kohm	001-010251-016	2
R338,913	*CdF RESISTOR 10 Kohm	001-010351-016	2
R301,322	*CdF RESISTOR 2.2 Kohm	001-022251-016	2
R304	RESISTOR 220 Kohm	001-022451-016	1
R309,310,314,321	*CdF RESISTOR 4.7 Kohm	001-047251-016	4
R311,315	RESISTOR 5.6 Kohm	001-056251-016	2
R914	RESISTOR 5.6 ohm	001-056851-016	1
R302,313	RESISTOR 68 ohm	001-068051-016	2
R307,312	*CdF RESISTOR 6.8 Kohm	001-068251-016	2
R323,324	RESISTOR 8.2 Kohm	001-082251-016	2
R303,305	*CdF RESISTOR 82 Kohm	001-082351-016	2
R316,319	RESISTOR 9.1 Kohm	001-091251-016	2
VR911	*CdF SEMI-FIXED DIA.8mm 10 Kohm EVND8AA03B14 DOUBLE CONTACT/HOR. 3PINS	002-103085-100	1
<b>CAPACITORS</b>			
C316,317	(F003-010380-025) CERAMIC CAP 0.01 uF/ 50V +80%-20%	003-010380-050	2
C915,916	#MYLAR CAP 0.01 uF/100V +-10%	004-010310-100	2
C303,311	#MYLAR CAP 0.0022 uF/100V +-10%	004-022210-100	2
C305,312	#MYLAR CAP 0.027 uF/100V +-10%	004-027310-100	2
C314,315	#MYLAR CAP 0.0039 uF/100V +-10%	004-039210-100	2
C914	#MYLAR CAP 0.0047 uF/100V +-10%	004-047210-100	1
C306,308	ELECT CAP 4.7 MFD/50V +-20% (5x11)	006-004000-50D	2
C301,302,307,310,318	ELECT CAP 10 MFD/50V +-20% (5x11)	006-010000-50D	5
C304,309	ELECT CAP 100 MFD/10V +-20% (5x11)	006-010100-10D	2
C913	ELECT CAP 100 MFD/16V +-20% (5x11)	006-010100-16D	1
C313	ELECT CAP 470 MFD/10V +-20% (8x11.5)	006-047100-10D	1
<b>TRANSISTORS</b>			
Q911	TRLNPNPWR-TAP&TO-092 3DA8050	008-680500-000	1
Q302	TR NPNSST-RAD&SC-072 DTA114TS/A (ROHM) KRA-111M (KEC)	008-801142-000	1
<b>INTEGRATED CIRCUIT</b>			
IC301	IC LS22241 AMP. CASS	010-732224-000	1
<b>DIODES</b>			
D304,911,912	DIODE IN-4148 ROHM/TELEFUNKEN TAP**50 KEL(NS)(TAP:52mm)/NS(FAIRCHILD)/SEMTECH	011-004148-000	3
<b>INDUCTOR</b>			
T901	*CdF IFT 4A-363R(B), 10mm	012-003630-010	1
<b>SWITCH</b>			
SW301	REC SWITCH 9P2T, 2mm PS92D01/PS92D01A	024-009220-000	1

## ELECTRICAL PARTS LIST - CONTINUED

Ref. No.	Description	Mfr's Part No.	Qty.
<b>WIRES</b>			
TO CASS DECK MOTOR B+	JP WIRE AWG26#1007 3x3mm 150mm RED	051-673150-006	1
TO CASS DECK MOTOR B-	JP WIRE AWG26#1007 3x3mm 150mm BLACK	051-673150-009	1
CASS DECK SW	*CdF JP WIRE AWG26#1007 3x3mm 250mm WHITE	051-673250-008	2
CASS DECK TO GND	JP WIRE AWG26#1007 5x5mm 90mm BLACK	051-675090-009	1
FROM E/H TO CN301	HSG CD368-4B(C) PEC 2507-H-4 w/234mm BLK	136-040368-C01	1
	SHIELD WIRE AWG30#UL2547/3C SLDG.2mm		
<b>MISCELLANEOUS</b>			
CN301	HEADER 4 PINS PEC #2507-WS-4 PITCH 2.5mm VERTICAL REPLACE:135-005267-040	135-2507WS-040	1
MOTOR-, MOTOR+, L.SW2, L.SW1	*CdF SOLDERING PIN	137-300000-002	4
	CASSDECK-SM-F-212+2P TK20FX-V683-900	150-700683-K00	1
	CKD KIT w/o MOTOR,RP/H,E/H (CD1811)		
	MOTOR-DC-012V-NORMAL 12V #SM-3425S-2B SAMSON	151-123425-000	1
	RP/HEAD- && &&&&&&& #6PA (CHENWEI)	152-020006-000	1
	RP/HEAD-ST-TECHRECO& #APX4211X(S3)	152-024211-000	1
<b>TUNING PORTION</b>			
<b>RESISTORS [All are +-5% 1/16w (1/8w) tape &amp; wheel resistors unless otherwise specified]</b>			
R414,418	*CdF RESISTOR 1 Kohm	001-010251-016	2
R409,410,411,417,424,425,426,442, 443,446	*CdF RESISTOR 10 Kohm	001-010351-016	10
R436,435,434	*CdF RESISTOR 100 Kohm	001-010451-016	3
R422,423	*CdF RESISTOR 12 Kohm	001-012351-016	2
R432	*CdF RESISTOR 220 ohm	001-022151-016	1
R403,405,407	*CdF RESISTOR 2.2 Kohm	001-022251-016	3
R415,420,421,429,460	*CdF RESISTOR 330 ohm	001-033151-016	5
R413,416,419,431	*CdF RESISTOR 3.3 Kohm	001-033251-016	4
R430	*CdF RESISTOR 4.7 ohm	001-047851-016	1
R433	RESISTOR 51 Kohm	001-051351-016	1
R402	RESISTOR 5.6 Kohm	001-056251-016	1
<b>CAPACITORS</b>			
C406,429,433	CERAMIC CAP 0.001 uF/50V +80%-20%	003-010280-050	3
C408,413,436	(F003-010380-025) CERAMIC CAP 0.01 uF/ 50V +80%-20%	003-010380-050	3
C431,435	CERAMIC CAP 0.0015 uF/50V +80%-20%	003-015280-050	2
C428	CERAMIC CAP 330 pF/50V +-10%	003-033110-050	1
C415	CERAMIC CAP 0.015 uF/50V +-10%	003-215310-050	1
	(UP050B153K-B-BZ) (AXIAL TAPED 52mm)		
C430,434	CERAMIC CAP 10 pF/50V +-5% (NPO) (CC45-CH1H100J/RBU04CH100J-L)	003-410050-050	2
C403,404,405,411,412	CERAMIC CAP 100 pF/50V +-5% (NPO) (CC45-CH1H101J/RBU04CH101J-L)	003-410150-050	5
C438	CERAMIC CAP 15 pF/50V +-5% (NPO) (CC45-CH1H150J/RBU04CH150J-L)	003-415050-050	1
C401,402	CERAMIC CAP 20 pF/50V +-5% (NPO) (CC45-CH1H200J/RBU04CH200J-L)	003-420050-050	2
C437,439	CERAMIC CAP 30 pF/50V +-5% (NPO) (CC45-CH1H300J/RBU04CH300J-L)	003-430050-050	2
C409	#MYLAR CAP 0.01 uF/100V +-10%	004-010310-100	1
C417,418	#MYLAR CAP 0.018 uF/100V +-10%	004-018310-100	2
C432	POLY CAP 390pF/50V +-5% (B391J09P2HH33AAA)	005-039100-000	1
C424,425	*CdF ELECT CAP 0.1 MFD/50V +-20% (VX/5x11)	006-000100-50C	2
C422	ELECT CAP 0.47 MFD/50V +-20% (5x11)	006-000400-50D	1

## ELECTRICAL PARTS LIST - CONTINUED

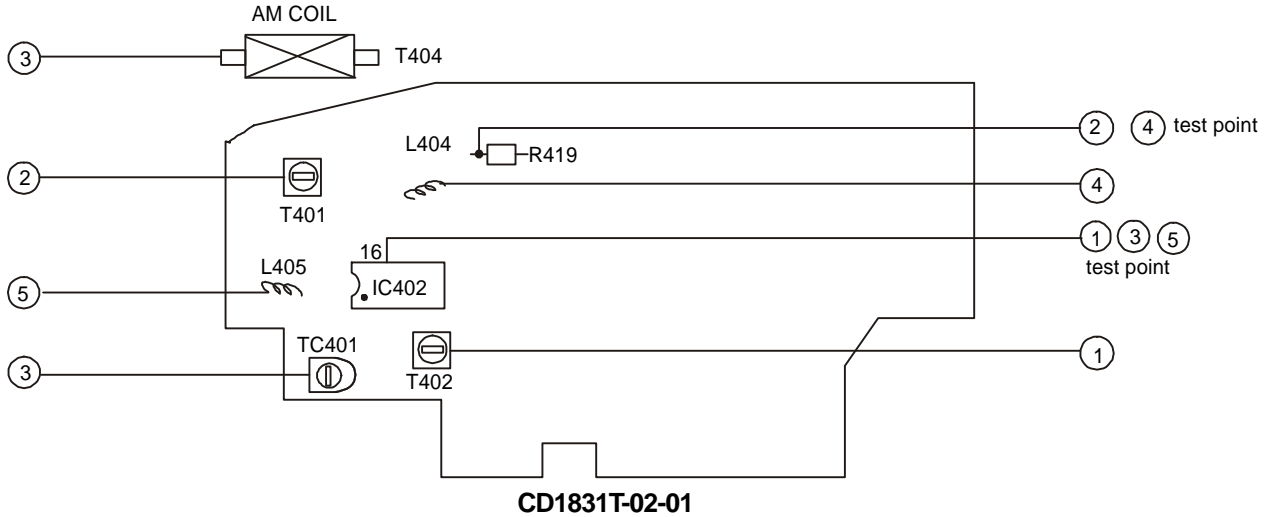
Ref. No.	Description	Mfr's Part No.	Qty.
C426	ELECT CAP 1 MFD/50V +-20% (5x11)	006-001000-50D	1
C410	ELECT CAP 3.3 MFD/50V +-20% (5x11)	006-003000-50D	1
C416,419,420	ELECT CAP 4.7 MFD/50V +-20% (5x11)	006-004000-50D	3
C427	ELECT CAP 10 MFD/50V +-20% (5x11)	006-010000-50D	1
C407,421	*CdF ELECT CAP 100 MFD/10V +-20% (VX/5x11)	006-010100-10C	2
C414	ELECT CAP 22 MFD/25V +-20% (5x11)	006-022000-25D	1
C423	ELECT CAP 47 MFD/25V +-20% (5x11)	006-047000-25D	1
TC401	TRIMMER CAP 1T8M/1S8M (S-08P) 1-8pF (7.8x10x4.9mm) (TUNG TAT)	007-100008-000	1
<b>TRANSISTORS</b>			
Q406	TR PNPSST-RAD&SC-043 2SA1015-GR TOSHIBA	008-110150-000	1
Q401	TR PNPSST-TAP&&2-4E1 2SA1048(Y) (TAPING)	008-110480-000	1
Q402,403,404,405	TR NPNSST-RAD&&2-4E1 2SC2458GR (TOSHIBA)	008-302458-000	4
<b>RESONATOR</b>			
X401	CRYSTAL 4.500 MHz HC-49/U	009-604500-000	1
<b>INTEGRATED CIRCUITS</b>			
IC402	ICREVD-AFM-TR-IF-MPX TA2149BN (TOSHIBA)	010-832149-001	1
IC401	ICPLL TC9257P (TOSHIBA)	010-849257-001	1
<b>DIODES</b>			
D401,403	VARI CAP DIODE 2CC910	011-000910-000	2
D104,405,406	DIODE IN-4148 ROHM/TELEFUNKEN TAP**50 KEL(NS)(TAP:52mm)/NS(FAIRCHILD)/SEMTECH	011-004148-000	3
DZ401	ZENER 10V, 1/2W BL, TOS 05AZ10Z, HITACHI HZ11A3, ROHM MTZJ10 MTZJT-7210 C/D	011-010100-120	1
D404	(F011-060384-000) VARACTOR DIODE SVC384(S/T) (87-A40-616-07)	011-060384-001	1
<b>INDUCTORS</b>			
T402	IFT 7M4A1712N 7.5mm YELLOW/LIK HANG MT222-1571/MATSUTA	012-001712-075	1
T401	IFT 7M1A1954R/OH07-869418 7.5mm RED	012-001954-075	1
T404	AM COIL 68:16T USTC 0.07/M5 L=4x100mm PAPER SIZE:10.5x29mm (AN75-869692)	014-068165-100	1
L404	*CdF FM COIL 3T, 5mm, DIA:0.8mm (CS58-862492)(2.5Tx5mmx0.8mm/HEROWELL)	015-030050-008	1
L403,405	*CdF FM COIL 4T,4.5mm,DIA:0.8mm (CS48-862503)(3.5Tx4.5mmx0.8mm/HEROWELL)	015-040045-008	2
L401	INDUCTOR 220 uH /CEC-221K +-10%	018-010225-000	1
FM-IN TO ROO ANTENNA	JP WIRE AWG26#1007 3x3mm 130mm RED	051-673130-006	1
<b>RESONATORS</b>			
X403	CERAMIC FILTER L10.7MS2-A(CQ)	019-000107-029	1
X402	CERAMIC FILTER JT10.7MG-A	019-000107-037	1
X404	CERAMIC FILTER CFSFU450B (MIDAS)	019-000450-017	1
<b>SWITCHES</b>			
SW404	SLIDE SW SK22F03G9 AA F30 ALE (8C-CDC-622-18) (Cd FREE)	025-220091-108	1
SW403	SLIDE SW SK43D01G9 4P3T	025-430091-104	1
AM BAR	*CdF FERRITE BAR 10x70mm	032-010070-000	1
<b>MISCELLANEOUS</b>			
AM-WHT, AM-RED, AM-GRE, AM-BLK, FM-IN	*CdF SOLDERING PIN	137-300000-002	5

**NOTES:**

1. " # " Mylar is a registered trademark of E.I. Du Pont de Nemours and Company.
2. ⚠ Symbol in parts list represent safety parts.

# ALIGNMENT SET-UP PROCEDURES

## TUNER SECTION



### 1. AM IF Adjustment

Test point: IC402 (TA2149BN) 16 PIN  
 Adjustmnet location: T402  
 T402 ----- 450kHz

### 2. AM Frequency Range Adjustment

Test point: R419  
 Adjustment location: T401  
 Set tuner frequency to be 522kHz.  
 Adjust T401 so that voltage of test point  
 is  $1.5 \pm 0.05V$ .

### 3. AM Tracking Adjustment

Test point: IC402 (TA2149BN) 16 PIN  
 Adjustment location: T404, TC401  
 T404 ----- 603kHz waveform.  
 TC401 ----- 1404kHz waveform.

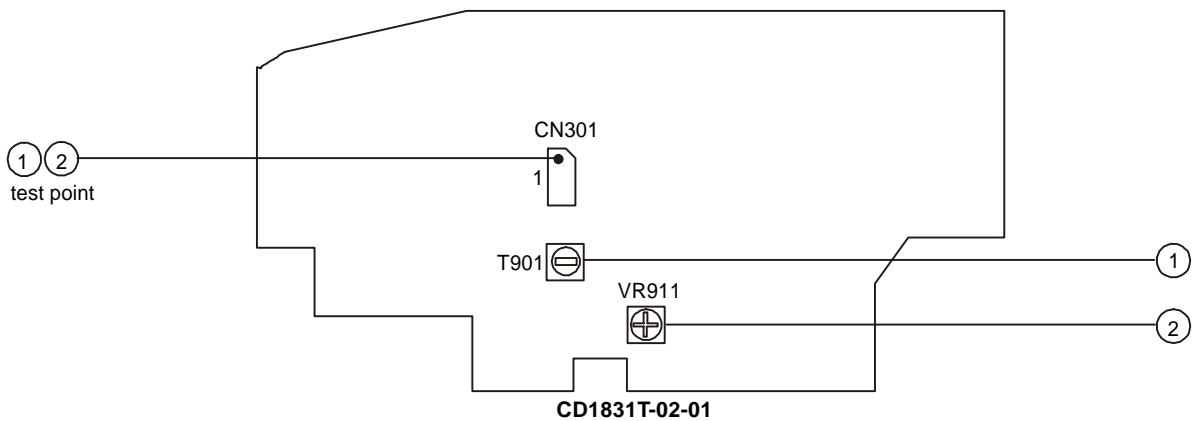
### 4. FM Frequency Range Adjustment

Test point: R419  
 Adjustment location: L404  
 Set tuner frequency to be 87.5MHz.  
 Adjust L404 so that voltage of test point is  
 $1.65 \pm 0.05V$ .

### 5. FM Tracking Adjust

Test point: IC402 (TA2149BN) 16 PIN  
 Adjustmnet locaiton: L405  
 L405 ----- 90MHz waveform max.

## CASSETTE SECTION



### 1. Bias Frequency Adjustment

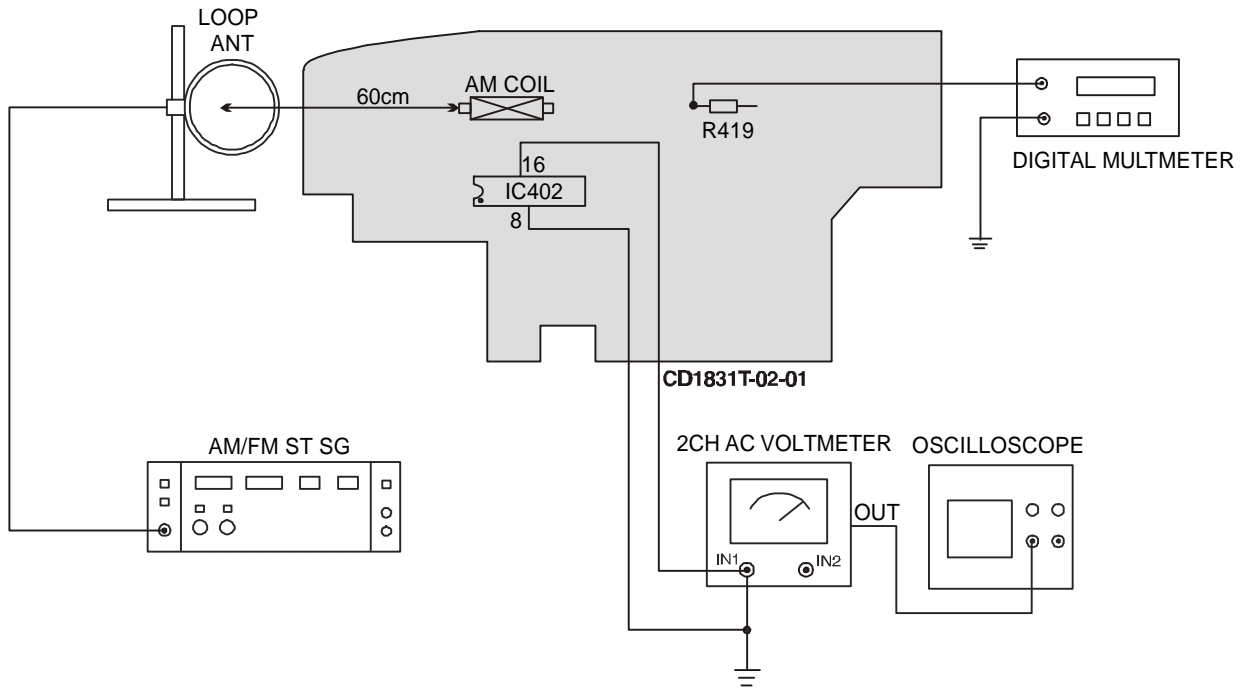
Test point: CN301 1 PIN  
 Adjustment location: T901  
 T901 -----  $60kHz \pm 1kHz$ .

### 2. Bias Leve Adjustment

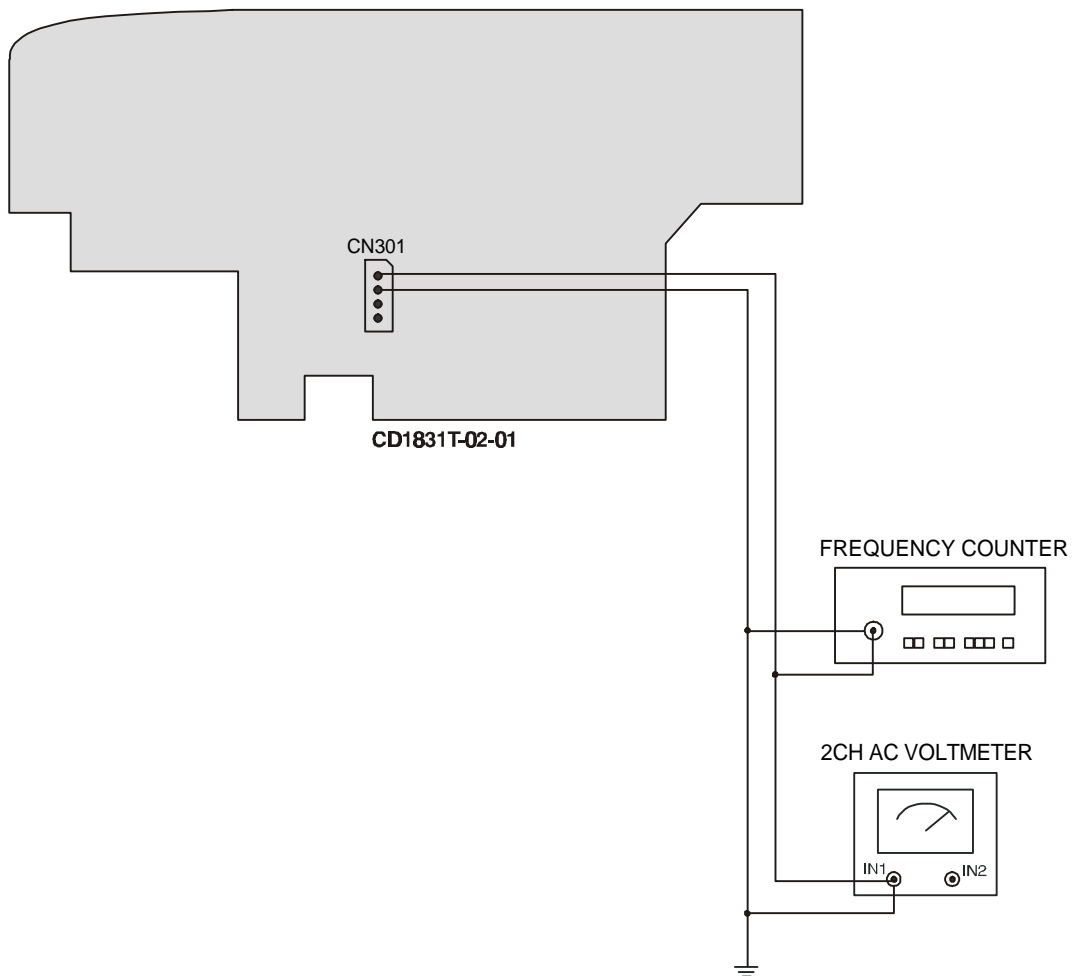
Test point: CN301 1 PIN  
 Adjustment location: VR911  
 VR911 -----  $13V \pm 1V$ .

# EQUIPMENT CONNECTION DIAGRAMS

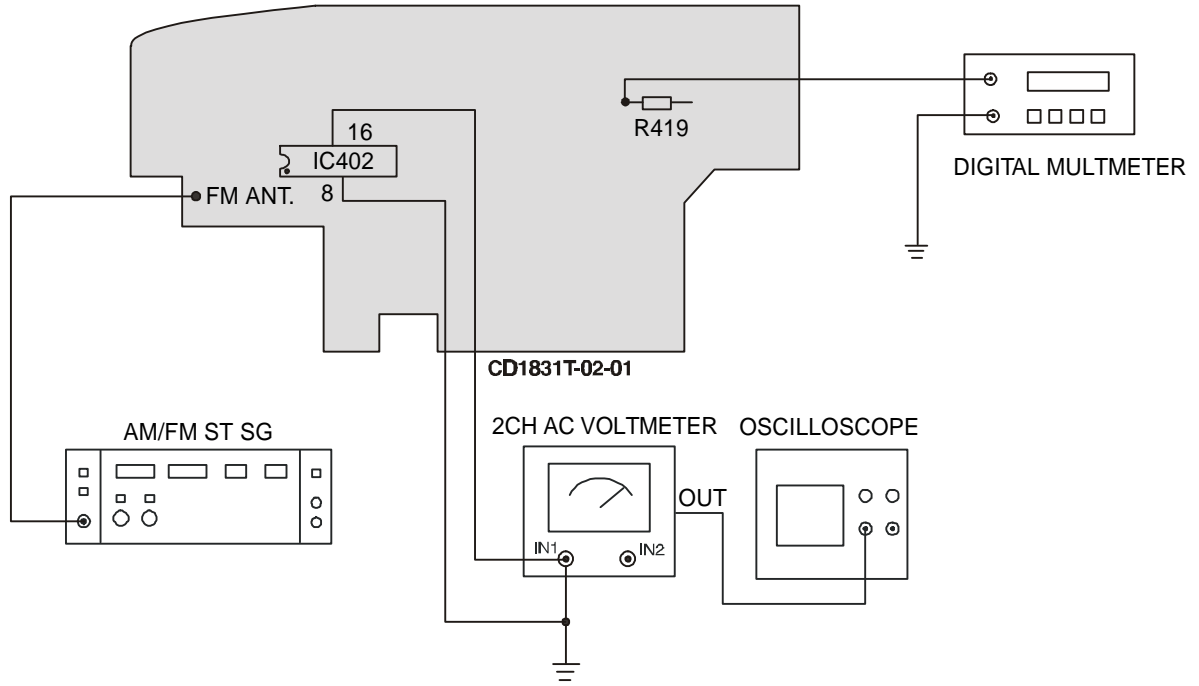
## AM SECTION



## CASSETTE SECTION



# FM SECTION



## VOLTAGE CHART

THE MEASURED VALUE IS DC VOLTAGE

UNIT: V

TUNER SECTION

TEST CONDITION: SET AM/FM TUNER ON ONE FREQUENCY

IC401 (TC9257P)

PIN'S NUMBER	1	2	3	4	5	6	7	8	9	10
AM	2.32	2.42	4.15	4.15	0	0	0.35	0	0.30	4.92
FM	2.29	2.39	4.15	4.15	0	4.71	0	0	1.22	4.69
PIN'S NUMBER	11	12	13	14	15	16	17	18	19	20
AM	0	4.89	2.43	0	0	0	2.27	0	1.16	2.24
FM	0	4.63	0	2.35	0	0	2.30	0	1.14	1.06

IC402 (TA2149BN)

PIN'S NUMBER	1	2	3	4	5	6	7	8
AM	0	0	1.03	4.89	4.92	4.24	4.92	0
FM	0	0.80	0	4.47	4.68	4.25	4.73	0
PIN'S NUMBER	9	10	11	12	13	14	15	16
AM	0.19	4.36	1.26	1.26	0	0.75	0.70	1.12
FM	0.77	4.10	1.24	0	4.11	4.18	0.68	0.88
PIN'S NUMBER	17	18	19	20	21	22	23	24
AM	0.99	4.92	3.36	4.91	4.91	4.91	4.91	4.91
FM	1.25	0.91	3.11	4.66	4.66	4.66	4.66	4.65

TRANSISTOR	Q402(C2458)			Q403(C2458)			Q105(A1015)		
	E	C	B	E	C	B	E	C	B
FM	0.64	5.01	1.14	0	5.01	0.64	4.98	4.68	4.21

CASSETTE SECTION

TEST CONDITION: TAPE PLAY

IC301 (LS22241)

PIN'S NUMBER	1	2	3	4	5	6	7	8	9
PLAY	1.88	0	1.91	0	0	6.97	1.93	0	1.90

TRANSISTOR	Q911(8050)		
	E	C	B
REC.	0.12	9.91	0.62

POWER AMP. SECTION

TEST CONDITION: CD PLAY OR FM ON

IC802 (L7805)

PIN'S NUMBER	1	2	3
CD	10.38	0	5.00

TRANSISTOR	Q806(B1566)			Q807(C1815)		
	E	C	B	E	C	B
FM	12.65	8.23	12.14	5.77	12.17	6.34

TRANSISTOR	Q803(8550)			Q804(C1815)		
	E	C	B	E	C	B
CD	10.33	10.44	9.60	0	0	0.71

## VOLTAGE CHART - CONTINUED

### IC801 (UTC8227P)

<b>PIN'S NUMBER</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
FM	12.48	6.53	12.24	0	0.56	0
<b>PIN'S NUMBER</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
FM	0	0.56	6.72	12.53	6.72	12.70

### CD & DISPLAY SECTION

#### TEST CONDITION: CD PLAY

### IC101 (TA2109F)

<b>PIN'S NUMBER</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
CD PLAY	4.11	1.74	1.74	0	1.78	0	2.84	2.03
<b>PIN'S NUMBER</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
CD PLAY	1.69	0	1.74	1.74	1.55	1.79	1.74	1.74
<b>PIN'S NUMBER</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
CD PLAY	2.88	1.74	1.79	0	1.74	2.22	0	1.74

### IC102 (TC94A09F)

<b>PIN'S NUMBER</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
CD PLAY	/	1.83	/	/	/	/	/	/	/	/
<b>PIN'S NUMBER</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
CD PLAY	/	/	/	/	/	/	1.99	4.04	0	4.42
<b>PIN'S NUMBER</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
CD PLAY	4.09	0	4.08	3.86	4.09	0	4.09	3.46	0	0.19
<b>PIN'S NUMBER</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
CD PLAY	3.82	4.05	0	0	0	0	0	0	3.94	0
<b>PIN'S NUMBER</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>
CD PLAY	0	0	0	4.12	4.12	0	0	1.74	1.70	1.74
<b>PIN'S NUMBER</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>
CD PLAY	1.60	1.74	1.67	0	1.89	1.80	4.11	1.74	1.74	3.22
<b>PIN'S NUMBER</b>	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>	<b>65</b>	<b>66</b>	<b>67</b>	<b>68</b>	<b>69</b>	<b>70</b>
CD PLAY	1.78	1.51	1.78	1.76	1.88	1.74	1.74	0	1.74	1.74
<b>PIN'S NUMBER</b>	<b>71</b>	<b>72</b>	<b>73</b>	<b>74</b>	<b>75</b>	<b>76</b>	<b>77</b>	<b>78</b>	<b>79</b>	<b>80</b>
CD PLAY	1.86	3.46	2.05	4.12	0	0	1.86	2.06	4.08	0
<b>PIN'S NUMBER</b>	<b>81</b>	<b>82</b>	<b>83</b>	<b>84</b>	<b>85</b>	<b>86</b>	<b>87</b>	<b>88</b>	<b>89</b>	<b>90</b>
CD PLAY	2.16	2.06	4.12	2.06	2.16	0	0	0	4.03	3.44
<b>PIN'S NUMBER</b>	<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>95</b>	<b>96</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>100</b>
CD PLAY	0	2.07	1.43	0	4.04	4.05	2.02	2.01	2.00	2.00

### IC103 (TA2092N)

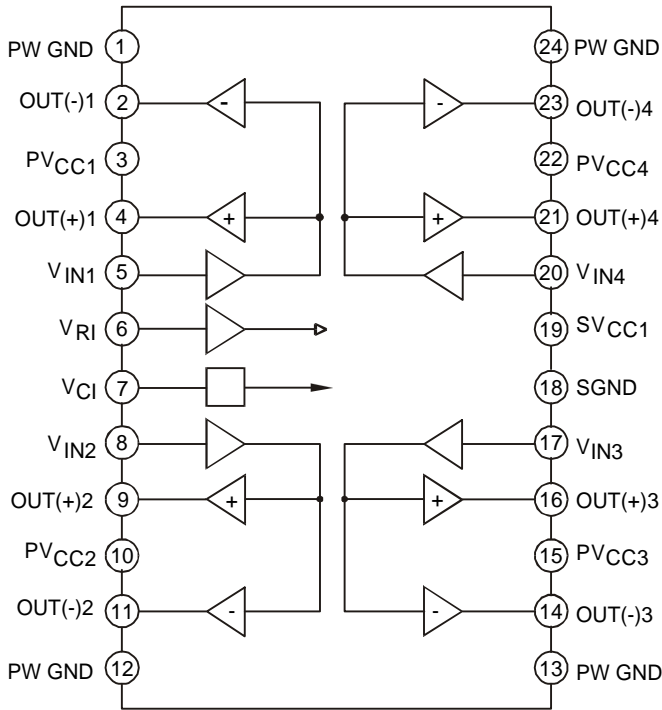
<b>PIN'S NUMBER</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
CD PLAY	0	2.50	6.40	3.34	1.88	1.74	2.93	1.72
<b>PIN'S NUMBER</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
CD PLAY	2.85	6.42	3.00	0	0	2.89	6.40	2.92
<b>PIN'S NUMBER</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
CD PLAY	1.74	0	6.41	1.83	3.15	6.40	2.55	0

<b>TRANSISTOR</b>	<b>Q101(B562)</b>		
	<b>E</b>	<b>C</b>	<b>B</b>
CD PLAY	4.99	4.91	4.25

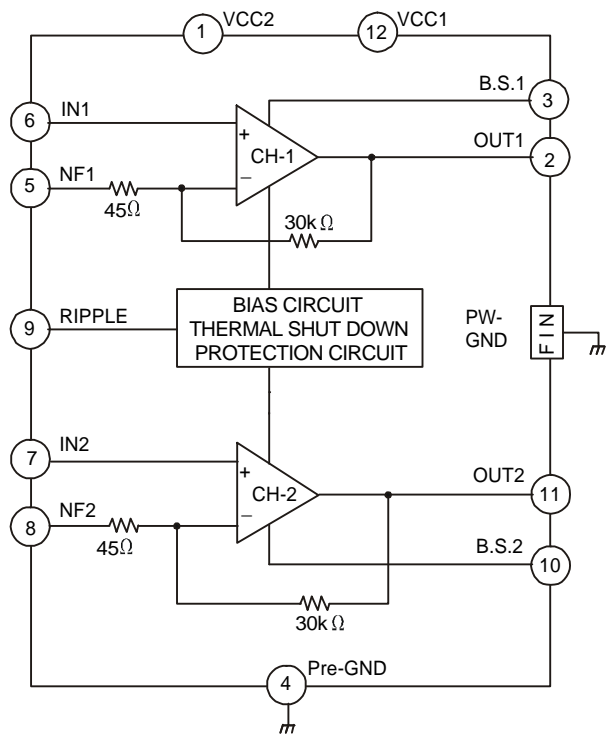




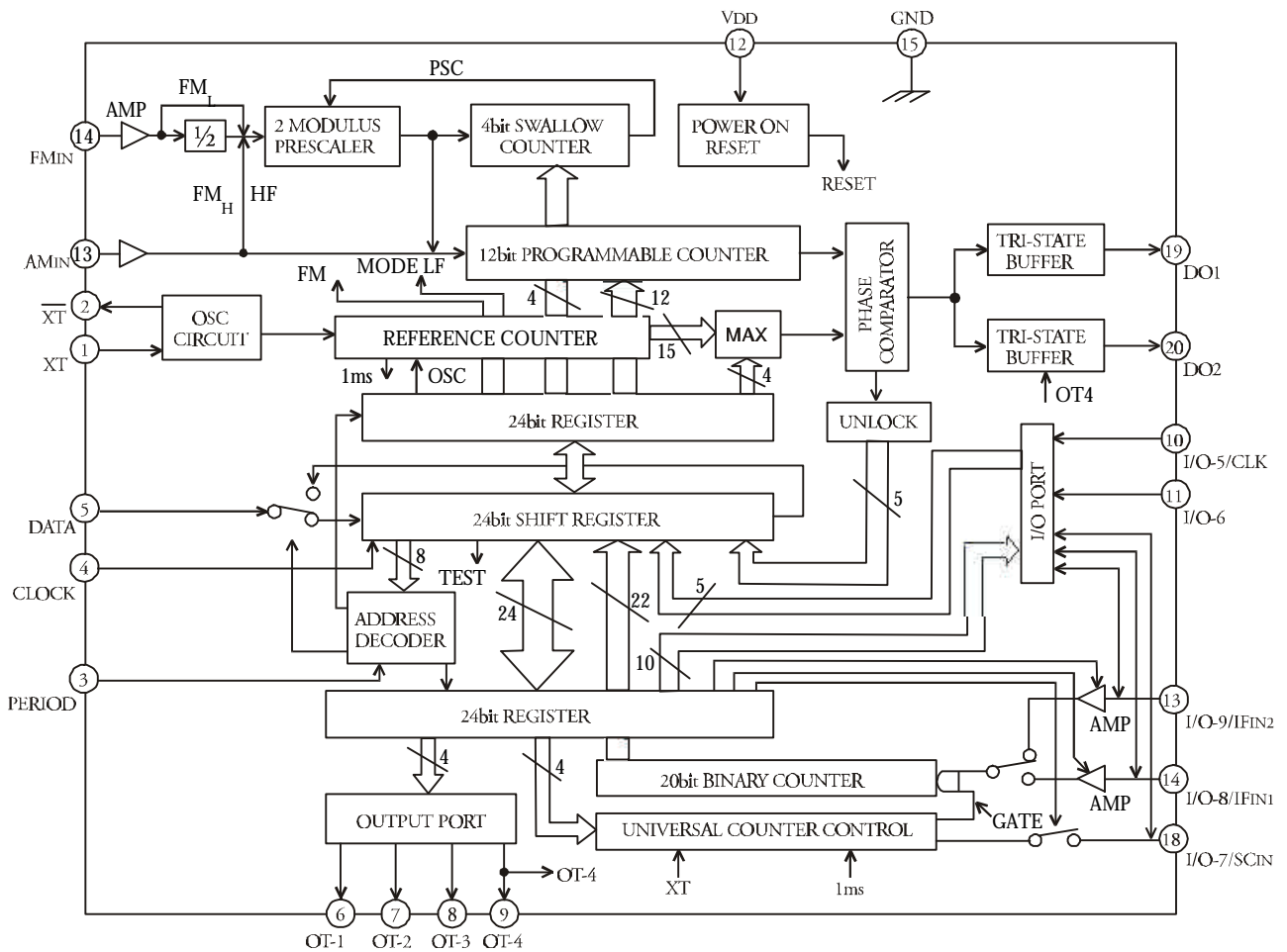
### IC103 TA2092N



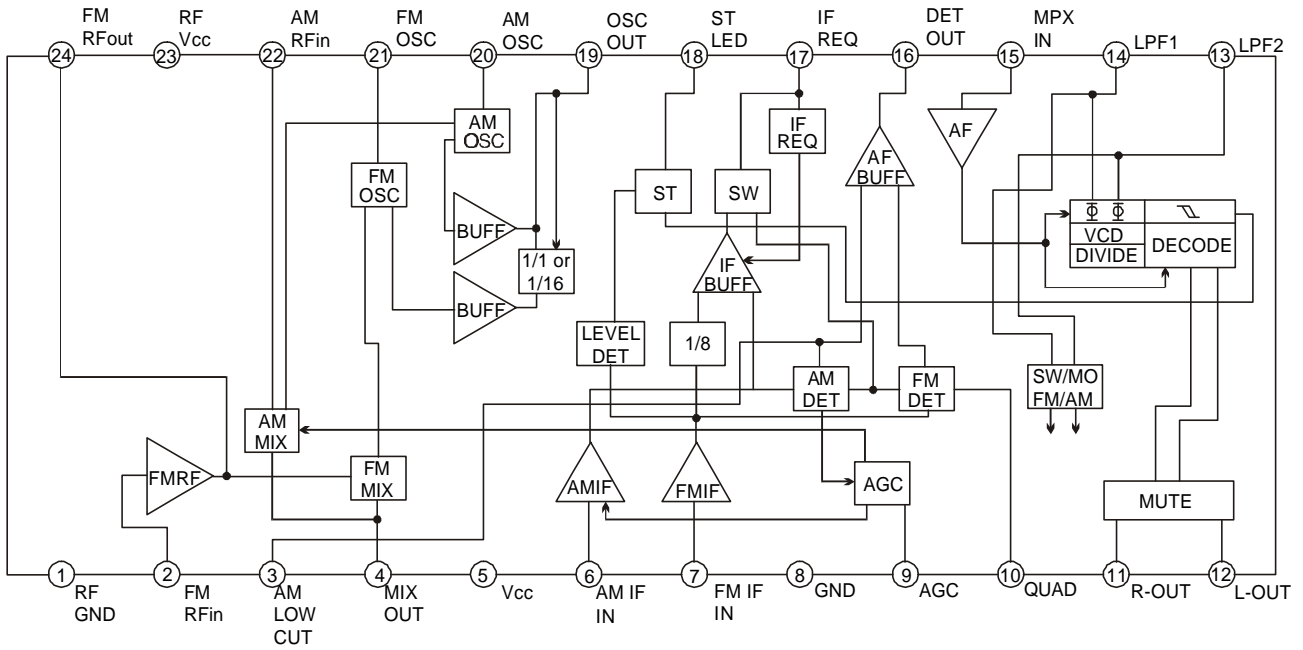
### IC801 UTC8227P



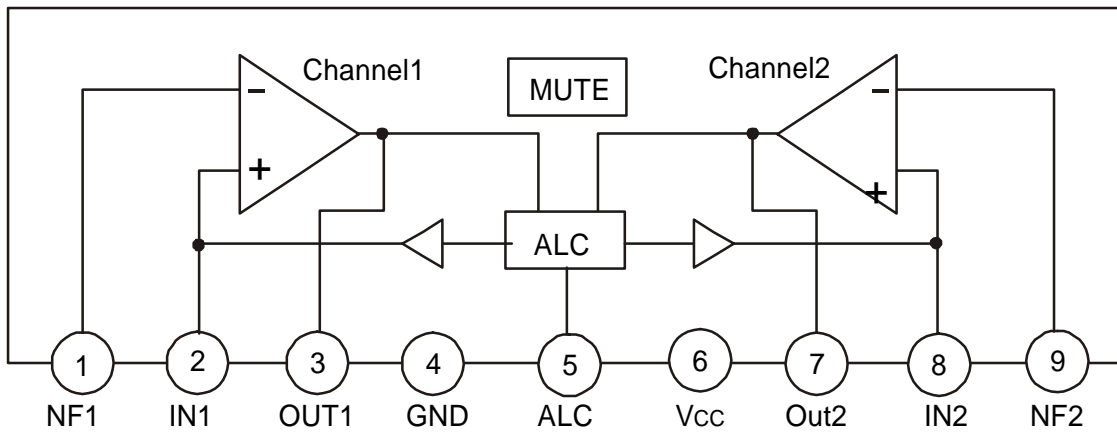
### IC401 TC9257P



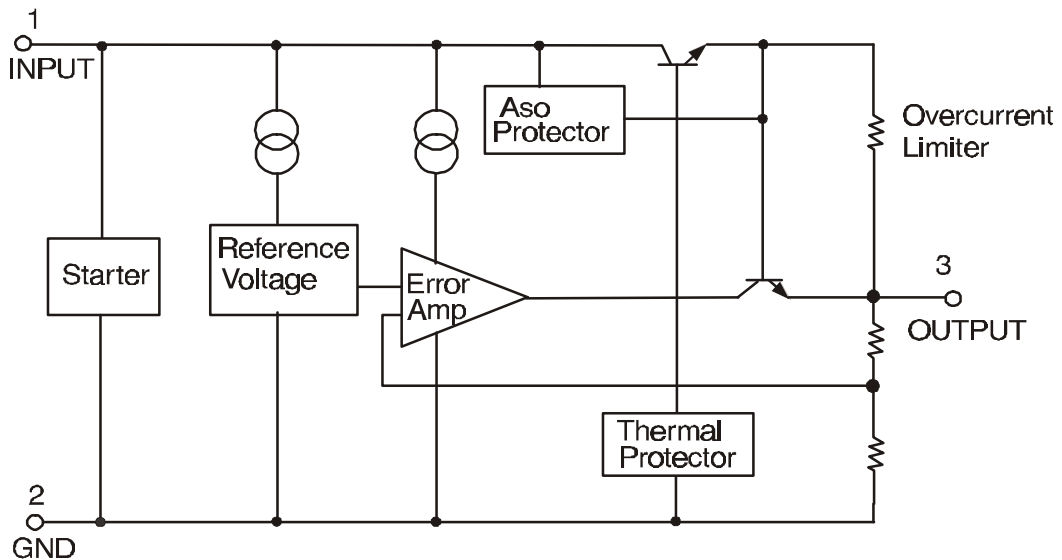
### IC402 TA2149BN



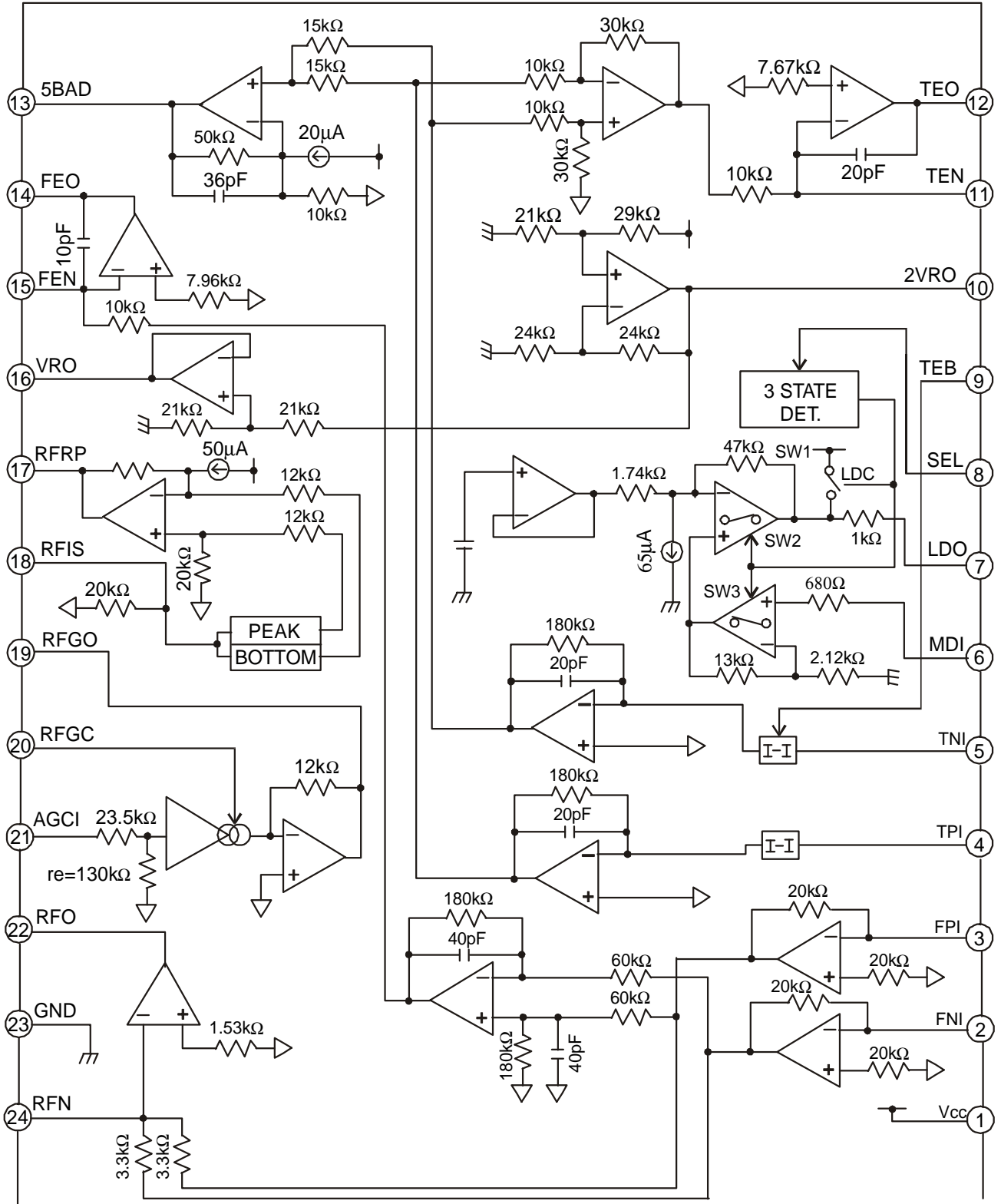
### IC301 LS22241



### IC802 L7805CV

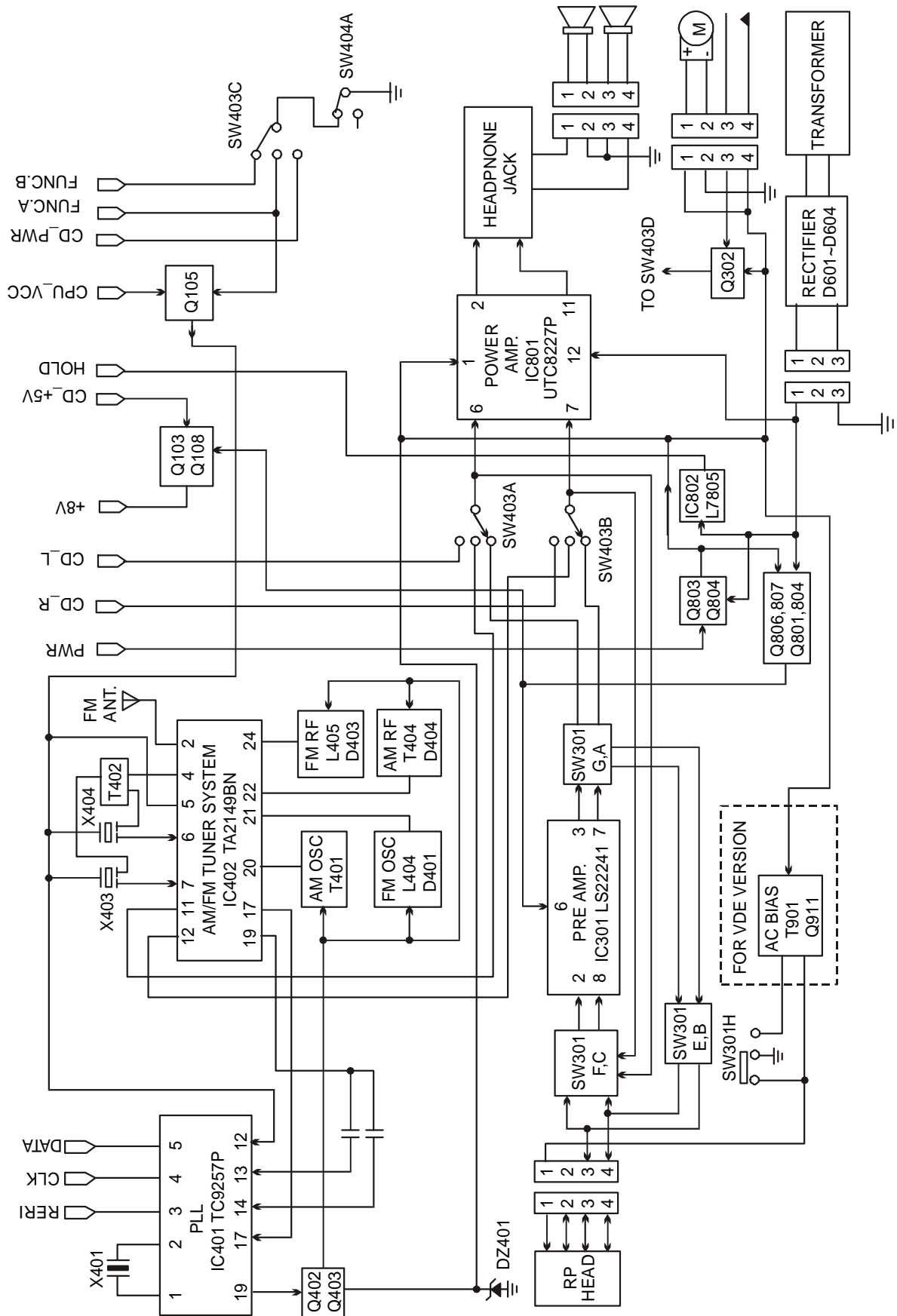


# IC101 TA2109F

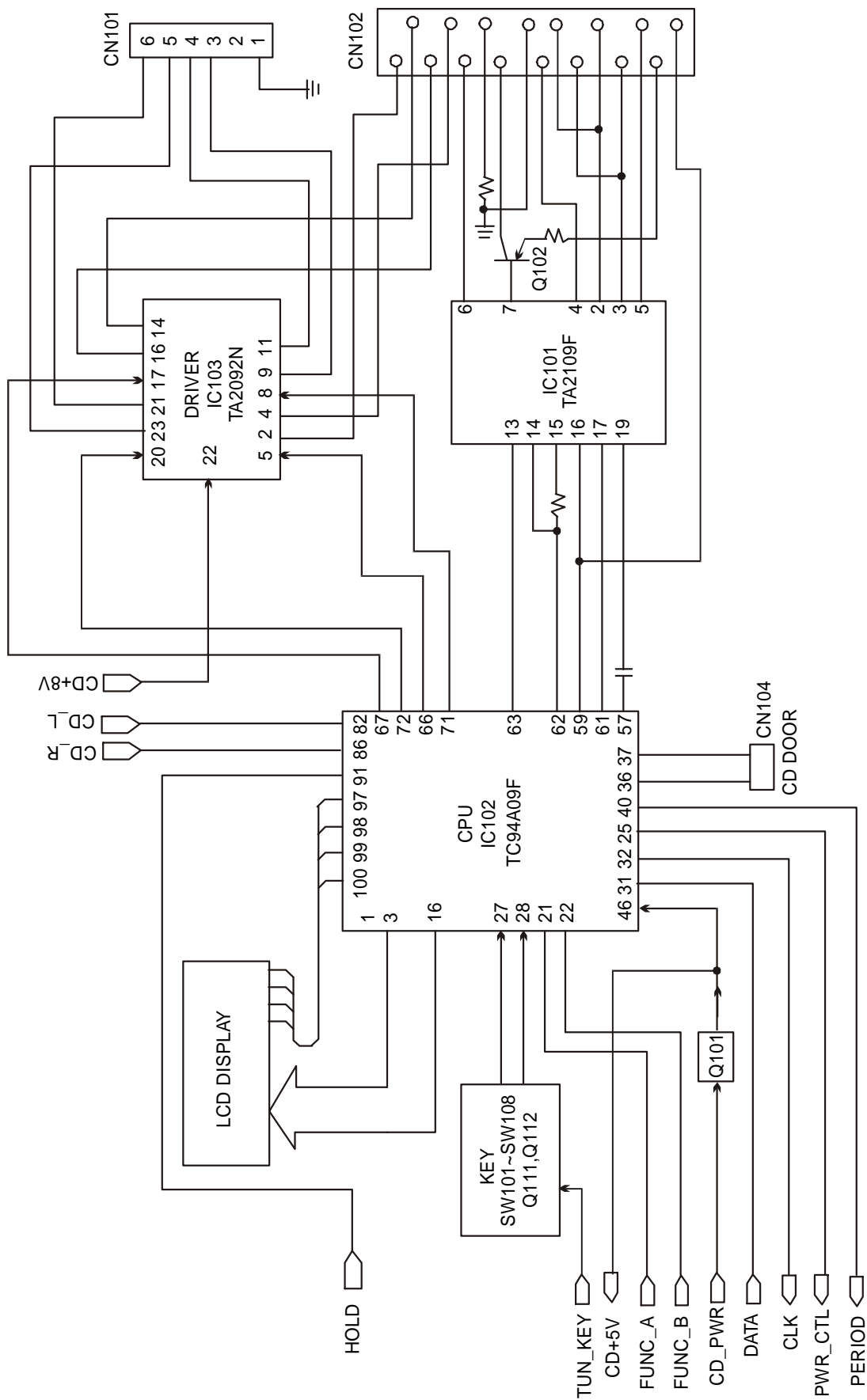


# BLOCK DIAGRAMS

## TUNER, CASSETTE & POWER AMP. SECTION



# CD & DISPLAY SECTION



## EXPLODED DRAWING PARTS LIST

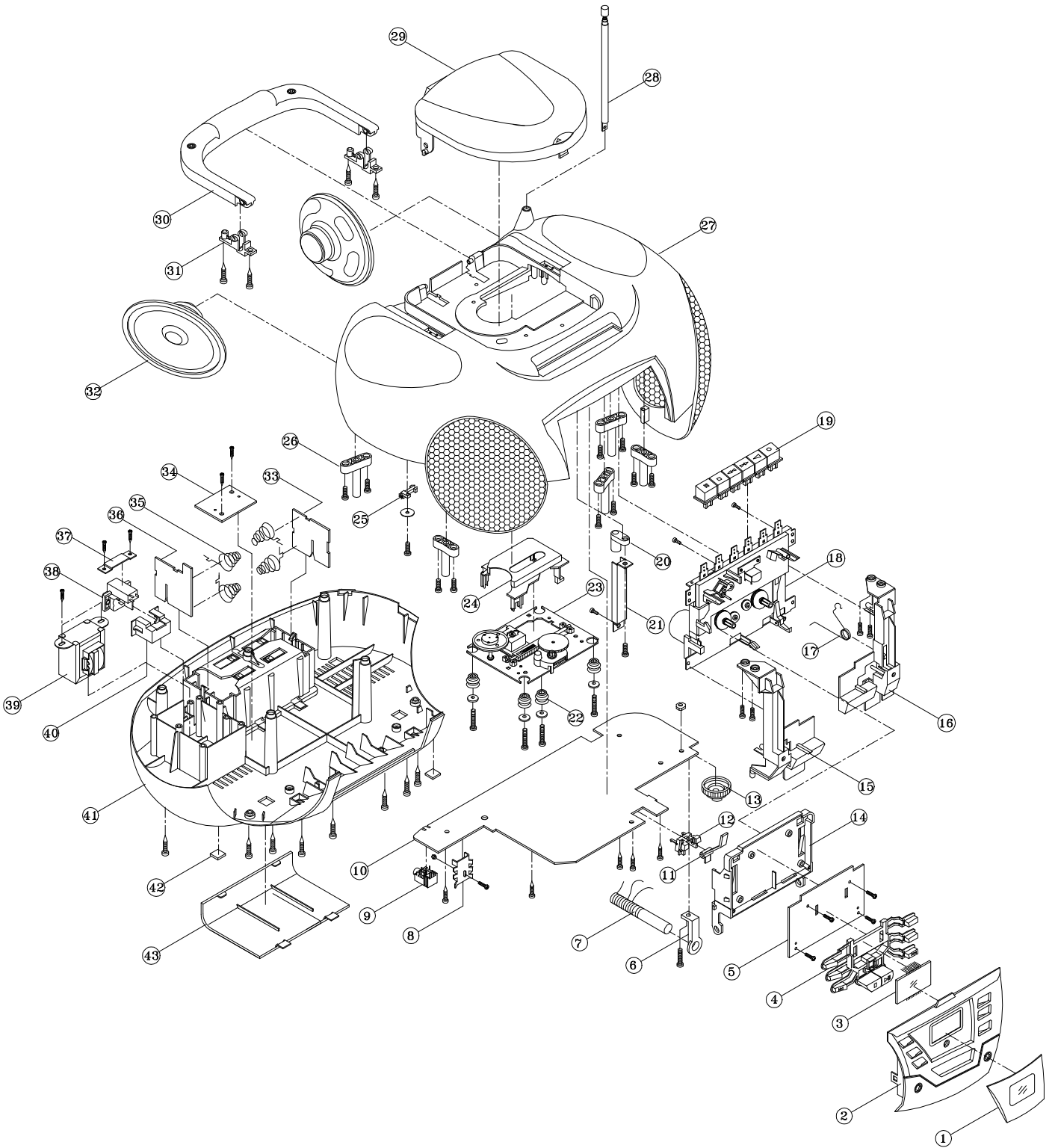
Ref. No.	Description	Mfr's Part No.	Qty.
1	CASS DOOR LENS, MOLD TRANS, w/PNT (SAN) CAV:4	500-183213-xxx	1
2	CASS DOOR COVER, MOLD C.GR 8C, (ABS) CAV:1, w/SPY & PNT	500-183204-xxx	1
3	LCD-P-04D-4026SM021P TCM-2978A-011, 40x26x2.85mm TRANSMISSIVE/REFLECTIVE(TIAN-MA)	LCD101 112-002978-001	1
4	CONTROL KNOB SET, MOLD L.GREY(420C) (ABS) CAV:2, w/SPY	510-183207-xxx	1
5	KEY & DISPLAY PCB CD1831T-02-02	033-001831-400	1
6	(F550-250000-000) ANTENNA BAR HOLDER	1/ANTENNA BAR 505-250000-000	1
7	*CdF FERRITE BAR 10x70mm	AM BAR 032-010070-000	1
8	REGULATOR HEATSINK, 1.0mm THK	613-189226-000	1
9	HEADPHONE JACK STEREO 3.5mm #MSJ-2000, (8Z-CS1-604-01) (Cd FREE)	HP801 116-002000-352	1
10	MAIN PCB CD1831T-02-01	033-001831-400	1
11	RECORDING LEVER, MOLD C.GREY 8C (ABS) CAV:2	509-181115-002	1
12	RECORDING LEVER BRACKET, MOLD C.GREY 8C (ABS) CAV:2	505-181116-002	1
13	VOLUME KNOB, MOLD C.GREY 8C (ABS) CAV:1	510-189116-009	1
14	CASS DOOR FRAME, MOLD C.GREY 8C (ABS) CAV:2	500-183114-000	1
15	CASSETTE DECK BRACKET (L), MOLD C.GREY 8C (ABS) CAV:2	505-181114-002	1
16	CASSETTE DECK BRACKET (R), MOLD C.GREY 8C (ABS) CAV:2	505-181117-002	1
17	CASS DOOR SPRING, 0.8mm SPRING WIRE NATURAL	561-183122-000	1
18	CASS DECK-SM-F-212+2P TK20FX-V683-900 CKD KIT, w/o MOTOR, RP/H, E/H (CD1811)	150-700683-K00	1
19	CASS KNOB SET, MOLD L.GREY (PMS420C)	510-181106-001	1
20	ROD ANTENNA HOLDER, MOLD C.GREY 8C (ABS) CAV:2	505-183119-000	1
21	TELE ANTENNA MOUNTING BRACKET, T=1.0mm E.G. STEEL	605-179313-000	1
22	*CdF CD CUSHION HARDNESS TO BE 40+2 DEGREE DURO, (CD1892-39)	700-189239-000	4
23	CD&-TLB-01-SAMG-N CD MECHANISM CMS-B31BG6U	153-000316-000	1
24	CD PICKUP COVER, MOLDED BLACK, CAV.2 (ABS), w/o ENGRAVEMENT	500-181121-002	1
25	*CdF LEAF SWITCH LSA-1120Y2	CD DOOR 022-001120-002	1
26	(F542-189224-000) POST ADAPTOR, MOLDED BLACK, CAV.4 (ABS)	503-189224-000	5
27	TOP CAB, MOLD C.GR 5C (HIPS) CAV:1, w/SPY	500-183101-xxx	1
28	ANTRD-0400-&&&D6S06S TL6-110-I (TIANDA)/YHP139103, (YING-HAO) 6 SEC/400mm	132-016110-000	1
29	CD DOOR, MOLD C.GREY 8C (ABS) CAV:1, w/PNT	500-181303-xxx	1
30	HANDLE, MOLD C.GREY 8C (ABS) CAV:2	504-181309-003	1
31	HANDLE HINGE, MOLD C.GREY 8C (POM) CAV:8	509-181110-001	2
32	SPK003.5"008OHM01.5W w/SHINY BLACK MYLAR CAP MAGNET: 32x18x6 #AEF35R01/YD93-1	131-358001-511	2
33	BATTERY PCB CD1831T-01-03	033-001831-400	1
34	RECTIFIER PCB CD1790-01-07	033-001790-100	1
35	BATTERY SPRING, SPRING WIRE	535-181120-000	4
36	BATTERY PCB CD1831T-01-04	033-001831-400	1
37	AC SOCKET PRESS PLATE, T=0.8mm E.G.STEEL	650-181125-000	1
38	AC SOCKET	126-xxxxxx-xxx	1
39	POWER TRANSFORMER	123-xxxxxx-xxx	1
40	AC SOCKET COVER, BLK (94V0)	500-181141-000	1
41	BOTTOM CABINET, MOLD C.GREY 8C (94HB HIPS) CAV:1, (w/o MODEL ENGRAVE)	500-181102-001	1
42	*CdF RUBBER FOOT, 10x10x2mm BLACK (PORON), w/SELF-ADHESIVE	2/BOT CAB 700-630341-000	2

## EXPLODED DRAWING PARTS LIST - CONTINUED

Ref. No.	Description	Mfr's Part No.	Qty.
43	BATTERY DOOR, MOLD C.GREY 8C (HIPS) CAV:2	500-181105-001	1
	SCREW ST3x10mm BB HEAD V5.9-6.3 BRASS BASED	720-110300-100	10
	METAL WASHER Ø2.7xØ12.7x0.6mm	1/LEAF S/W 532-202712-760	1
	METAL WASHER DIA:2.8/DIA:9.5x0.5mm	4/CD MECH 532-202809-550	4
	*CdF SPONGE, 12x12x8mm WHITE	700-000001-020	2
	RUBBER FOAM, 15x20x8mm THK	1/PWB 700-026880-000	1.5
		0.5/BAR	
	PWB FELT 408-27 T=0.5mm SIZE:15mmx8mm	700-040827-000	1
	SCREW ST3x15mm, PWAB BRASS BASED W=7	2/TRANSFORMER 720-030300-150	2
	SCREW ST2.6x6mm PB BRASS BASED (M3H)	4/CONTROL PCB 720-050260-060	4
	SCREW ST2.6x8mm PB BRASS BASED	720-050260-080	1
	SCREW ST2.6x8mm, BBT	720-100260-080	2
	SCREW ST2.6x17mm BB w/CHROMATE-PLATING	720-110260-172	4
	SCREW 3x8 BA BRASS BASED	2/RECTIFY PCB 720-120300-080	8
		4/DECK BKT	
		2/BOT-DECK BKT	
	SCREW ST3x10mm BA BRASS BASED	1/ROD ANTENNA 720-120300-100	9
		2/PCB	
		2/AC SOCKET	
		4/DECK BKT	
	SCREW ½3x20mm BAB BRASS BASED	720-120300-200	5
	SCREW 3x8mm, PM BRASS BASED	1/ROD ANTENNA 721-010300-080	2
		1/HEAT SINK	
	SCREW 3x10mm, PM BRASS BASED	2/ANTENNA BAR HOLDER 721-010300-100	1
	SCREW 3x8mm BB T.T.S (P TYPE)	722-080300-082	4
	YELLOW ZINC (PTTB3x8MC)		
	*CdF NUT M3x0.5 PITCH Ni	1/ANTENNA BAR HOLDER 725-000030-500	2
		1/HEAT SINK	
	*CdF 4" CABLE/PLASTIC TIE (SKB-1M/CV-100)	727-000100-000	4
	*CdF (F650-723867-002) SHIELDING PLATE, CHIYODA COPPER TAPE(75mm(W)x100M/ROL	UNIT"RL" 650-723867-003	0.00019
	*CdF FUSE HOLDER, HTF-015	F601 550-790000-000	2
	*CdF SPONGE 12x12x8mm WHITE	700-000001-020	1
	*CdF PVC HEAT SHRINKABLE TUBE DIA. 3mm (UNITUBE) (UL/CSA APP)	UNIT"M" 728-015030-001	0.3



# EXPLODED DRAWING



## NOTES

***October, 2002***