

 THOMSON CONSUMER ELECTRONICS
Audio/Communication
Basic Service Data



P R O S C A N



Latin America After Sales

Indianapolis IN 46290 U.S.A.

SERVICE DATA INDEX

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CAUTION: Modification or repair of this unit by unauthorized persons is a direct violation of FCC Rules Part 68.216 and could result in risk of electric shock. You are urged to contact a qualified factory authorized service facility for repairs.

SAFETY NOTICE **USE ISOLATION TRANSFORMER WHEN SERVICING**

Components having special safety characteristics are identified by a ($\triangle$) on schematics and on the parts list in this Service Data and its bulletins. Before servicing this instrument, it is important that the service technician read and follow the "Safety Precautions" in the Basic Service Data.

RP2242A VOLTAGE CHARTS

VOLTAGE CHARTS

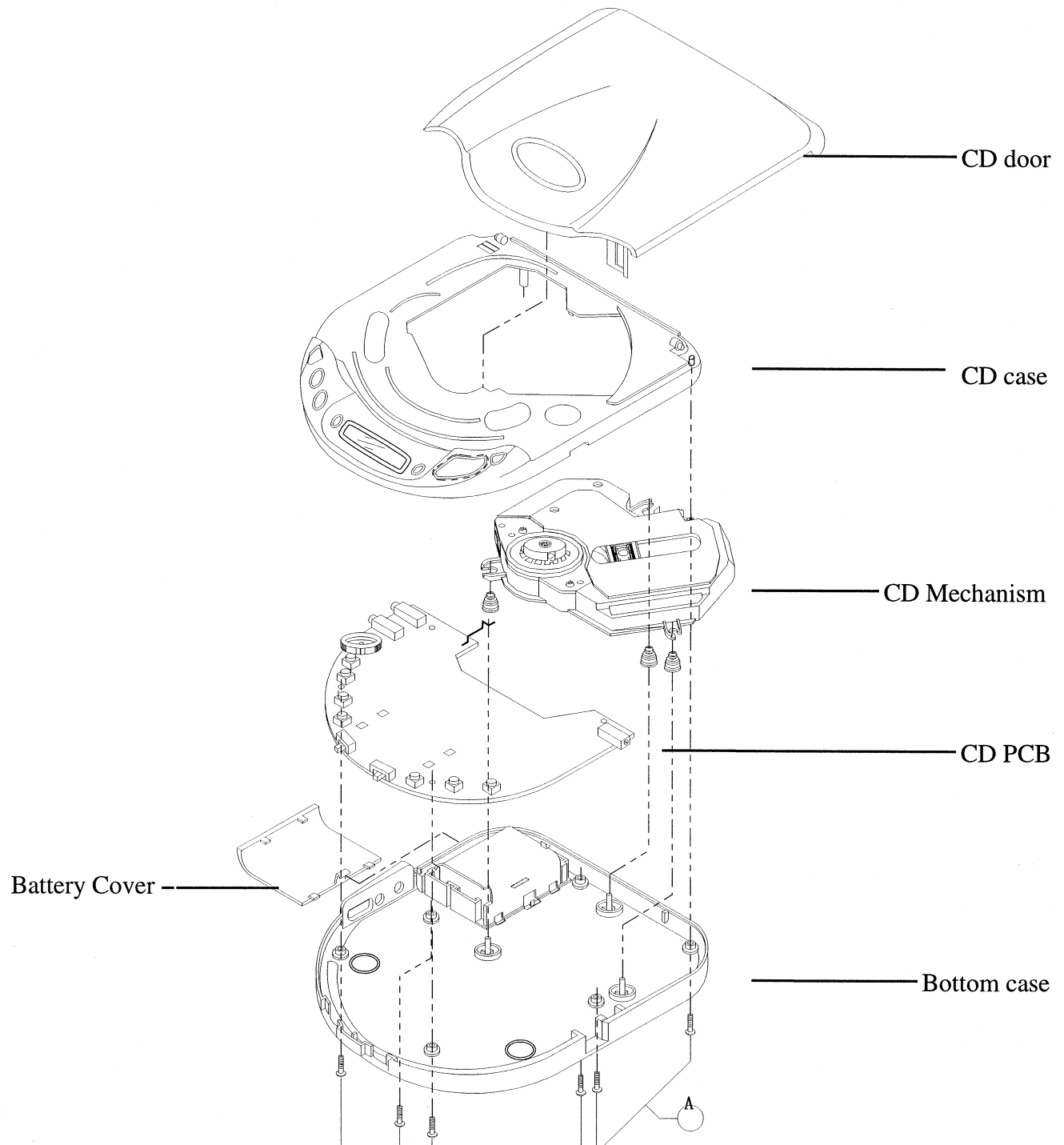
SYMBOL	IC501A BU34381-4E		IC702 MN41V17400CJT-06	IC401A BA5901K	IC201A BU9314KS		IC301A LA4533M	IC701A BU9344K	IC101A BA6377K	SYMBOL	
PIN NO.	VOLTAGE										PIN NO.
1	1.60	3.34	3.22	4.90	3.25	0	1.49	3.22	1.59	51	
2	1.60	3.32	0.02	4.70	1.57	0	1.47	0	0	52	
3	1.60	3.34	0.02	3.31	1.57	0	0	0	0	53	
4	1.62	3.32	3.21	0.84	2.39	0	1.47	0	0	54	
5	1.65	3.31	3.21	0.15	0	0	1.47	0	1.32	55	
6	1.62	3.24	0	0.63	1.37	0	3.33	0	2.09	56	
7	1.65	2.52	0	1.20	0.70	1.07	1.48	0	0.18	57	
8	1.65	1.04	0	0.02	1.60	1.57	0	3.19	2.70	58	
9	1.65	3.31	0	0.78	0	1.57	1.49	1.42	1.19	59	
10	1.60	0	0	0	0.07	0.02	0.80	0	1.61	60	
11	1.60	1.61	0	1.58	0.07	0.24		1.09	2.32	61	
12	1.65	1.60	3.22	3.34	1.58	0.05		1.62	3.09	62	
13	1.60	1.61	0	2.15	3.09	0.13		2.00	1.58	63	
14	1.65	1.61	0	1.57	3.21	1.62		1.57	0.07	64	
15	0		0	3.34	1.61	0		1.60	0.07	65	
16	3.34		0	1.54	1.55	1.62		1.08	1.57	66	
17	3.33		0	1.56	1.57	1.62		3.22	1.57	67	
18	3.33		0	1.56	0.62	1.08		1.61	0	68	
19	3.33		0	3.20	1.56	2.01		0.04	1.14	69	
20	3.34		0	1.65	0	1.61		3.33	1.25	70	
21	0		03.21	0	1.90	0		0	3.14	71	
22	0		0.01	1.59	1.62	3.31		3.21	1.58	72	
23	3.34		0.02	0	1.62	1.41		0	2.15	73	
24	3.33		0	0.65	1.60	1.32		3.34	1.59	74	
25	3.33			0.13	1.50	3.01		0	1.59	75	
26	3.33			0.05	1.59	3.25		3.33	1.59	76	
27	3.33			0.18	0	1.56		0	1.57	77	
28	3.33			0	1.61	1.55		3.21	1.57	78	
29	3.33			1.01	1.35			0	1.59	79	
30	0			0.11	0.50			0	1.58	80	
31	0			0.30	1.61			0	1.17	81	
32	0			0	1.61			0	1.59	82	
33	3.09			0	0.04			3.21		83	
34	2.90			0.01	0			3.21		84	
35	3.33			0	0			0		85	
36	1.70			1.58	3.31			0		86	
37	3.28			4.75	0.03			0		87	
38	1.58			1.61	0.04			0		88	
39	0.05			4.65	3.33			0		89	
40	0.01			3.17	3.22			0		90	
41	3.30			0	0			0		91	
42	0.04			4.80	0			0		92	
43	3.23			0	1.62					93	
44	3.33			0.49	1.64					94	
45	0				1.63					95	
46	3.33				3.25					96	
47	3.34				1.60					97	
48	0				0					98	
49	1.60				0					99	
50	1.50				0					100	

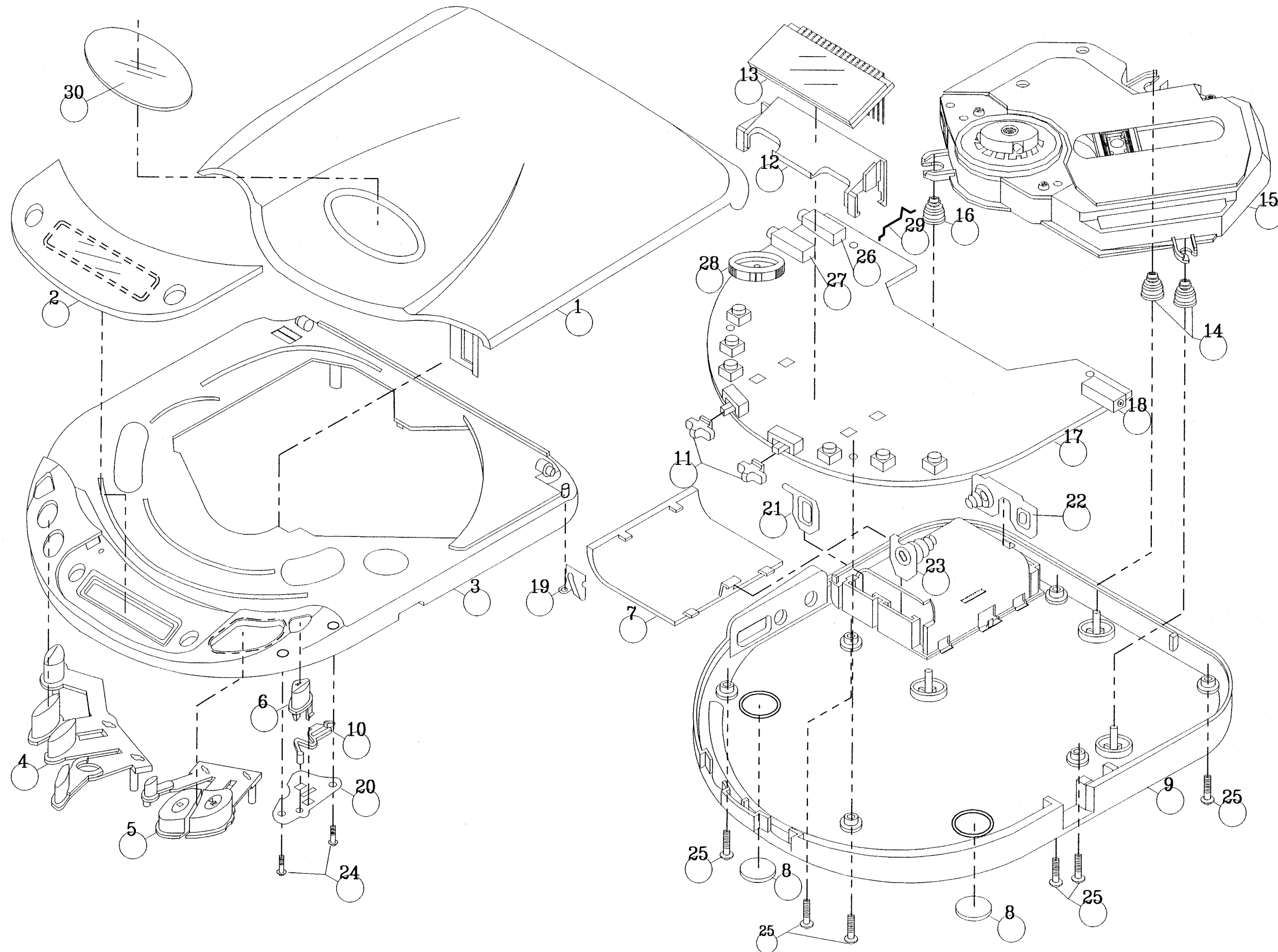
RP2242A VOLTAGE CHARTS

VOLTAGE TABLE FOR TRANSISTORS											
SYMBOL	PIN			SYMBOL	PIN			SYMBOL	PIN		
	b(V)	c(V)	e(V)		b(V)	c(V)	e(V)		b(V)	c(V)	e(V)
Q101	2.98	1.85	2.25	Q311	0	0.79	0.5	Q701	0	3.22	0
Q103	1.59	1.59	0	Q312	3.33	0.04	3.33				
Q104	0	0	1.07	Q601	5.12	1.12	5.01				
Q301	0	0.4	0	Q602	0	5.01	0.01				
Q303	0.04	0	0.25	Q603	3.36	5.04	3.01				
Q304	0.08	0	0.25	Q605	0	3.59	0				

RP2242A DISASSEMBLY

1. Open the CD door and remove the battery cover and batteries.
2. Remove six screws **A** holding the CD case and CD door.
3. Remove the CD mechanism.





SAFETY PRECAUTIONS

1. **Before returning the instrument to the customer**, always make a safety check of the entire instrument, including, but not limited to, the following items:

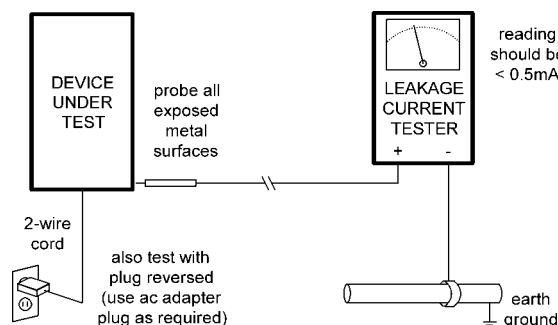
- a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this instrument to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reassembling the instrument, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage, and may expose themselves and others to possible injury.**

- b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) excessively wide cabinet ventilation slots, and (2) improperly fitted and/or incorrectly secured cabinet covers.

- c. **Leakage Cold Check** - With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the *on* position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each push button/customer control, exposed metal screws, metallized overlays and to each cable connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the AC switch in the *off* position.

- d. **Leakage Current Hot Check**

On completely assembled instrument, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) *C101.1 Leakage Current for Appliances* and Underwriters Laboratories (UL) *1492 (Section 67)*. Measure for current from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal or conductive parts of the instrument (antenna connections, handle bracket, metal cabinet, screwheads, metallic overlays, push-buttons, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat the test.



ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING TO ANTENNA OR ACCESSORIES.

- e. **Interconnected Equipment AC Leakage Test**

Avoid shock hazards. The instrument, accessory, or cable(s) to which this instrument is connected should have the applicable sections of the leakage resistance cold check and the leakage current hot check performed. Do not connect this instrument to an antenna, cable or accessory that exhibits excessive leakage currents.

2. Read and comply with all caution and safety-related notes on or inside the instrument cabinet, and on the chassis.
3. **Design Alteration Warning** - *Do not* alter or add to the mechanical or electrical design of this instrument. Design alterations and additions, including, but not limited to, circuit modifications and the addition of items such as auxiliary audio output connections, cables and accessories, etc., might alter the safety characteristics of this instrument and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and will make you, the servicer responsible for personal injury or property damage resulting therefrom.
4. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: (a) near sharp edges, (b) near thermally hot parts - be sure that leads and components do not touch thermally hot parts, and (c) the AC supply. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components and the printed-circuit board. Check AC power cord for damage.
5. Components, parts and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
6. **PRODUCT SAFETY NOTICE** - Many electrical and mechanical parts have special safety-related characteristics, some of which are often not evident from visual inspection, nor can the protection they give be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in this service data by a (⚠) on schematics and in the parts list. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part in this service data parts list might create shock, fire and/or other hazards. Product Safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current service literature.

RP2242A SPECIFICATIONS

Format

System Compact disc digital audio system
Laser Semiconductor laser

General

Power supply
External DC supply.....DC
4.5V
Commercially-available alkaline batteries(LR3/AA) x 2.....DC

3V

Audio

Frequency response 20 Hz ~ 20 kHz,
Output level/impedance
hours LINE OUT 0.5V/47kohm
134mm

Battery life

Commercially-available alkaline batteries (2)Approx.6.5 hours
Supplied rechargeable batteries (2)Approx.3.0

DimensionsW:

Headphone output20 mW + 20 mW (32ohm,1kHz)

H: 29.9mm

D: 158mm

Weight (net)

.....280 g

REPLACEMENT PARTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:

Approved Substitute Stock Numbers - Before ordering stock numbers in the part list, look for an approved substitute stock number in the current Price Schedule. This will minimize your service time and avoid ordering parts you already have in stock.

PRODUCT SAFETY NOTE: Components marked with a critical safety symbol have special characteristics important to safety. Before replacing any of these components, carefully read the **PRODUCT SAFETY NOTICE** in the basic service data. Do not degrade the safety of the set through improper servicing. Although assemblies as a whole may not be marked with a critical safety symbol, replacement of assemblies with other assemblies not approved may result in a safety hazard.

 Critical Safety Symbol

● Not Eligible For Warranty

Warranty Status of Assemblies and Parts - All assemblies and components shown in this part list are eligible for warranty exchange or replacement except those with a dot shown to the left of the Description. Assemblies and components with a dot to the left of the Description are NOT eligible for warranty exchange or replacement.

Warranty replacement of cabinet parts requires the approval of a Thomson Consumer Electronics Field Service Manager.

Warranty Status and Specifications of assemblies and components are subject to change without notice. Consult the TCE Parts Pricing Microfiche for the latest warranty status information.

@NOTE: When ordering components that are listed more than once in this part list, always adhere to the serial number application guidelines given in the description column. If a serial number application guideline is not given, always select the component with a value, rating, other specification or identification marking(s) that match those of the corresponding component in the instrument you are servicing.

Symbol	Stock	Drawing	Description	Symbol	Stock	Drawing	Description
RP2242A							
CABINET ASY							
1	9A34884	113971302285	DOOR CD	D504	16A29089	00400001401	DIODE GMB01-BT
2	6A34885	11797030006	LENS DISPLAY	D603	16A29090	00404001300	DIODE IN-4001
3	98A34886	10397039303	CABINET TOP	D607	16A28402	00401003400	DIODE SB10-03A3-BT
4	43A34887	12897032055	BUTTON CD L	D701	16A29089	00400001401	DIODE GMB01-BT
5	43A34888	12897032155	BUTTON CD R	D702	16A29089	00400001401	DIODE GMB01-BT
6	43A34889	12897030055	BUTTON CD DOOR OPEN	IC101A	33A34898	00206377140	IC BA6377K
7	9A34890	11197030055	DOOR BATTERY	IC201A	33A34899	00209314140	IC BU9314KS
8	45A28458	13610010100	FOOT RUBBER	IC301A	33A28390	00204533040	IC LA453M
9	98A34891	10497030055	CABINET BOTTOM	IC401A	33A33734	00205901140	IC BA5901K
11	43A34892	12797036055	KNOB SLIDE A	IC501A	33A34902	00234381140	IC BU34381-0E
13	63A34894	02961381001	DISPLAY LED	IC701A	33A34900	00209344140	IC BU9344K
15	73A34895	16000031000	MECHANISM CD TPP-31	IC702A	33A34901	00217400010	IC MN41V17400CTJ-06
18	41A28410	02134503101	JACK DC	LED6001	15A28414	01912000110	TRANSISTOR 2SC3330TAC
19	3A34896	16297031303	SPRING CD DOOR	Q101	15A34906	00310933148	TRANSISTOR 2SA9333SR
21	2A28386	04197031002	CONTACT BATTERY +	Q104	15A28399	00303860040	TRANSISTOR 2SC3860AC
22	2A28388	04197033002	CONTACT BATTER +/-	Q303	15A34903	00303901040	TRANSISTOR 2SC3901-AC
23	2A28387	04197032002	CONTACT BATTERY -	Q304	15A34903	00303901040	TRANSISTOR 2SC3901-AC
26	41A28409	02123505102	JACK STEREO GR	Q305	15A29088	00303330040	TRANSISTOR 2SC3330-T-AC
27	41A28408	02123505101	JACK STEREO BLK	Q305	15A29088	00303330040	TRANSISTOR 2SC3330-T-AC
28	49A28403	01020503168	RES CONTROL VOLUME 50K	Q306	15A25193	0030137041	TRANSISTOR 2SA1317U
29	3A28415	13397035106	SPRING RECHARGE CONTACT	Q307	15A29088	00303330040	TRANSISTOR 2SC3330-T-AC
30	6A34897	11697133002	LENS CD DOOR	Q308	15A25193	0030137041	TRANSISTOR 2SA1317U
KNO	43A34893	12797036155	KNOB SLIDE B	Q310	15A28397	00301564040	TRANSISTOR 2SA1564AC
ELECTRICAL COMPONENTS				Q311	15A34903	00303901040	TRANSISTOR 2SC3901-AC
D101	16A29089	00400001401	DIODE GMB01-BT	Q312	15A28397	00301564040	TRANSISTOR 2SA1564AC
D301	16A29089	00400001401	DIODE GMB01-BT	Q601	15A34904	00301585149	TRANSISTOR 2S1585SR
				Q602	15A34905	00304115149	TRANSISTOR 2SD1246T
				Q603	15A34905	00304115149	TRANSISTOR 2SD1246T
				Q701	15A28399	00303860040	TRANSISTOR 2SC3860AC
				SW301	39A34907	02012203105	SWITCH
				SW501	39A28465	02031100154	SWITCH TACT

January 2000

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REPLACEMENT PARTS (Continued)

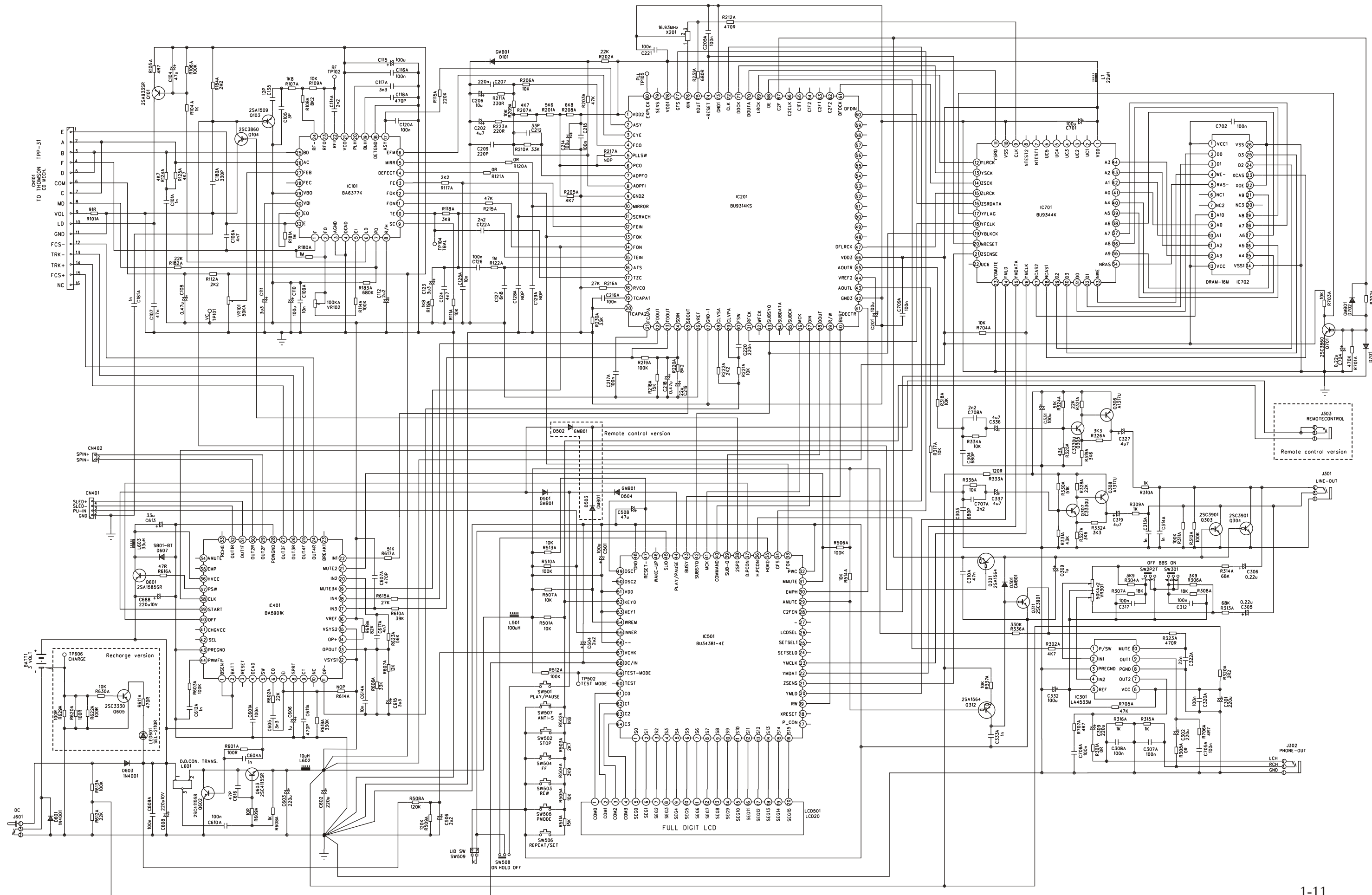
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SW502	39A28465	02031100154	SWITCH TACT
SW503	39A28465	02031100154	SWITCH TACT
SW504	39A28465	02031100154	SWITCH TACT
SW505	39A28465	02031100154	SWITCH TACT
SW506	39A28465	02031100154	SWITCH TACT
SW507	39A28465	02031100154	SWITCH TACT
SW508	39A28404	02011203103	SWITCH
SW509	39A34908	02031100053	SWITCH DETECTOR

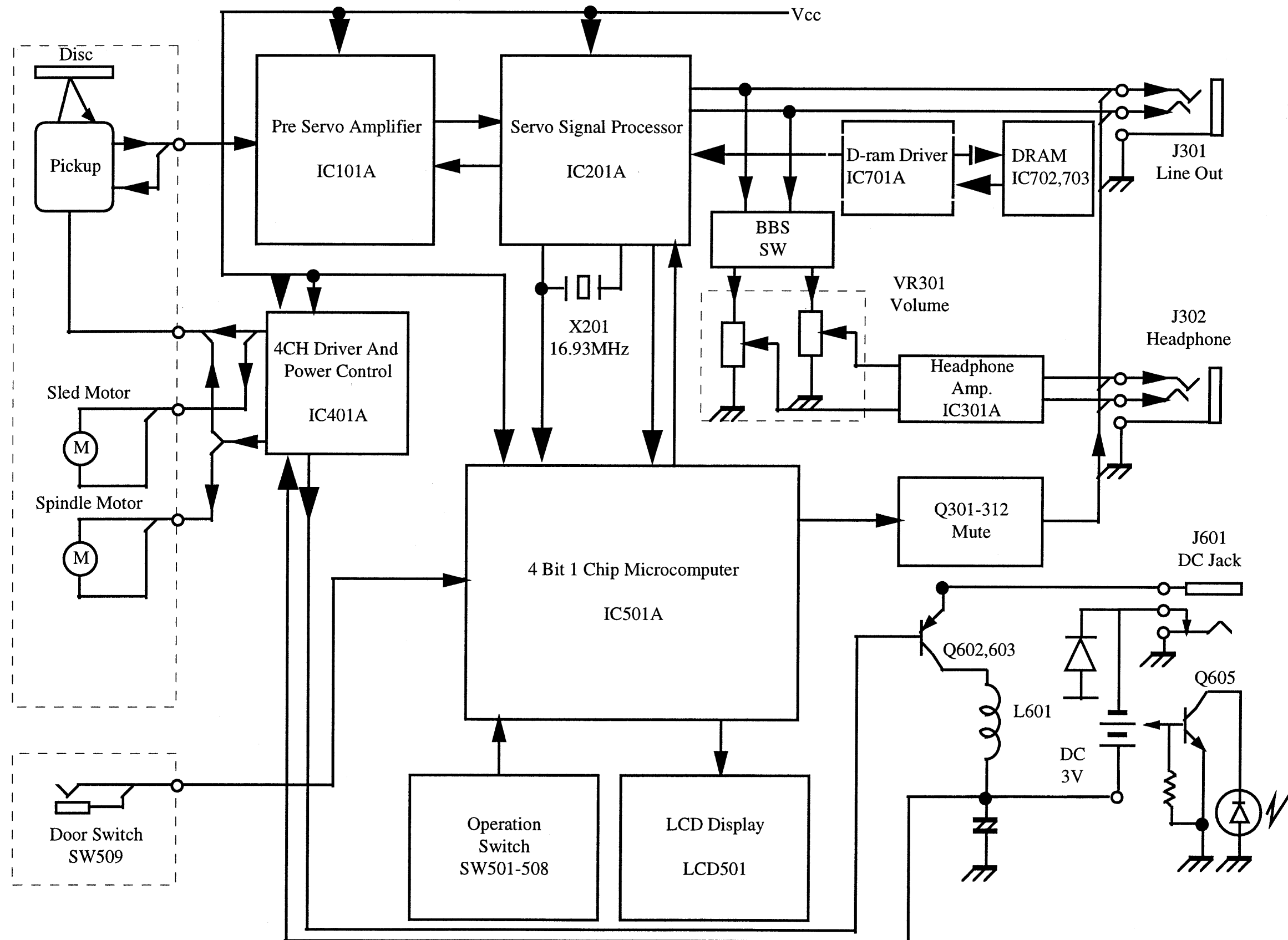
MISCELLANEOUS

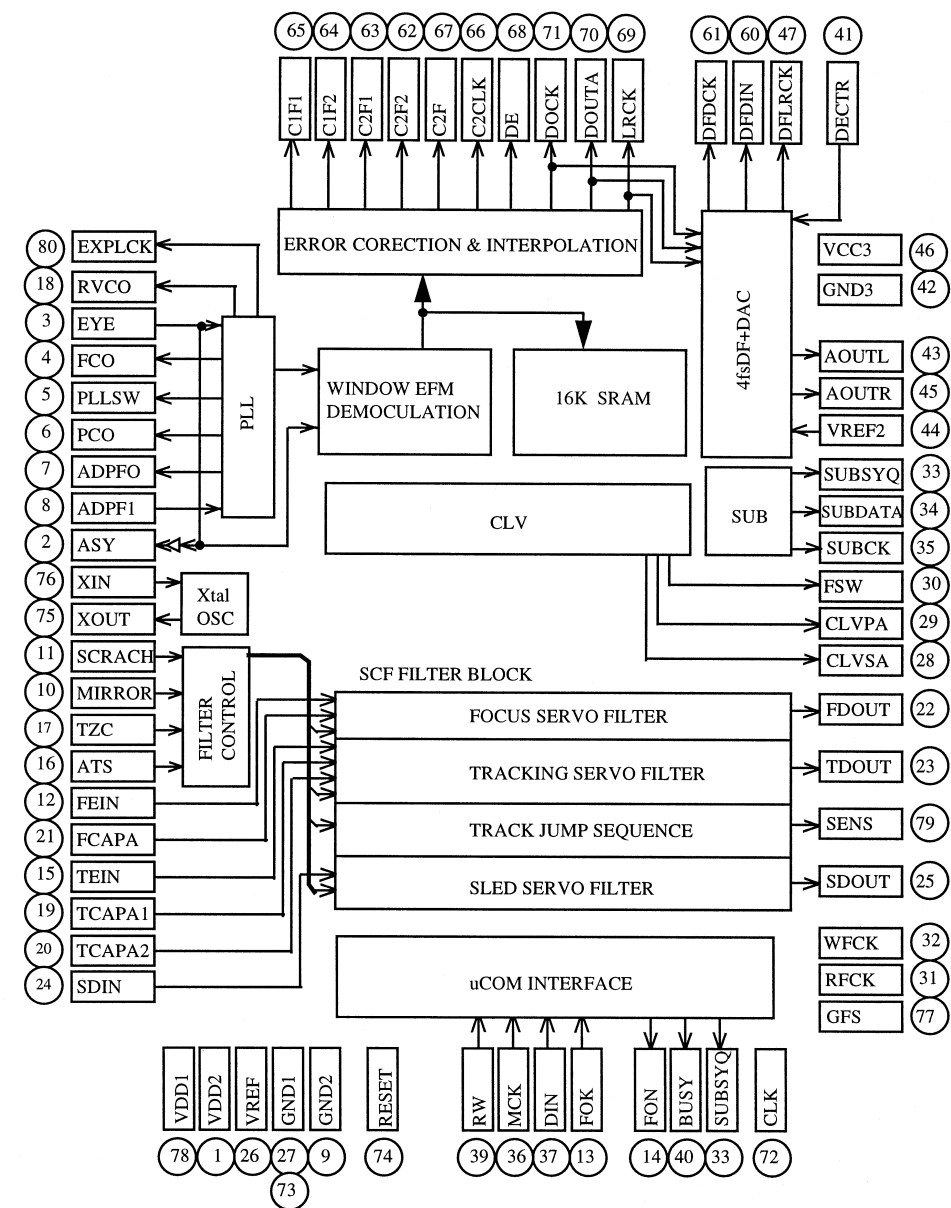
ADA	54979	05997033202	 ADAPTER AC 120V DC4.5 500MA
HEA	68A34909	05322732419	HEADPHONE STEREO

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
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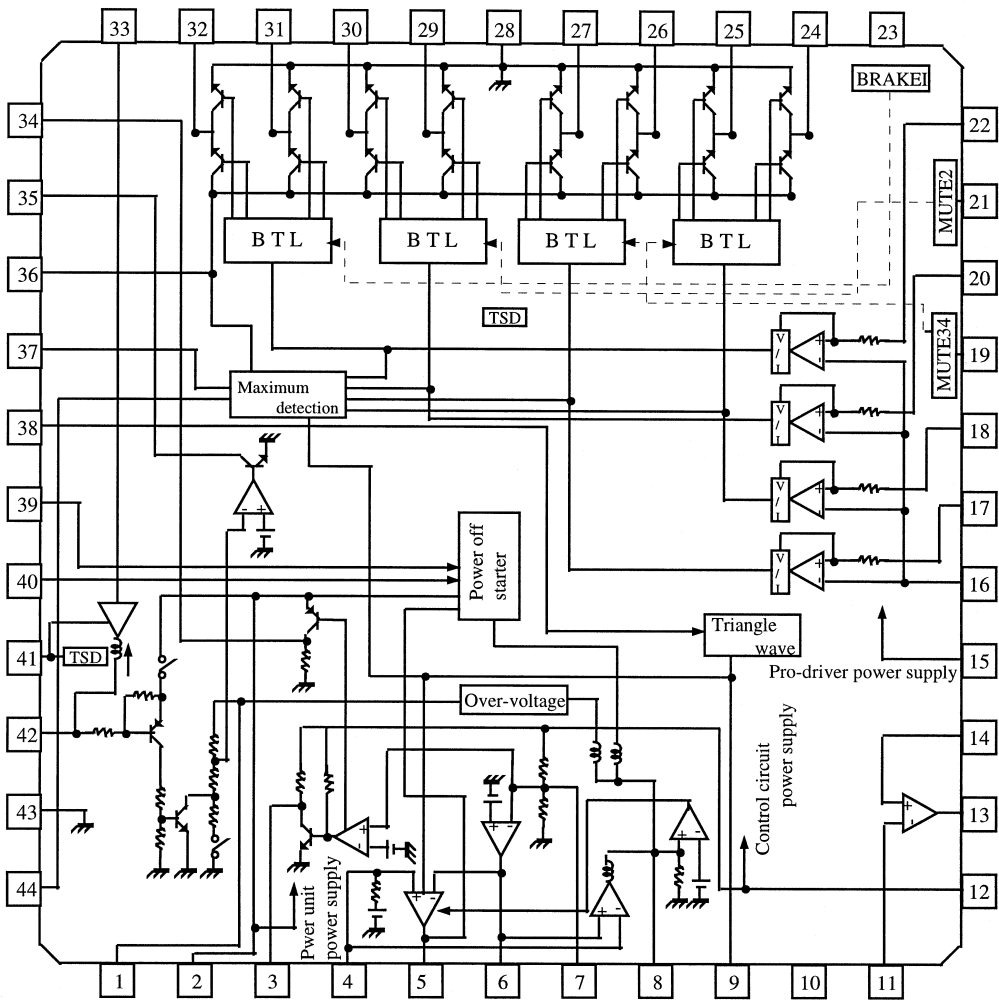
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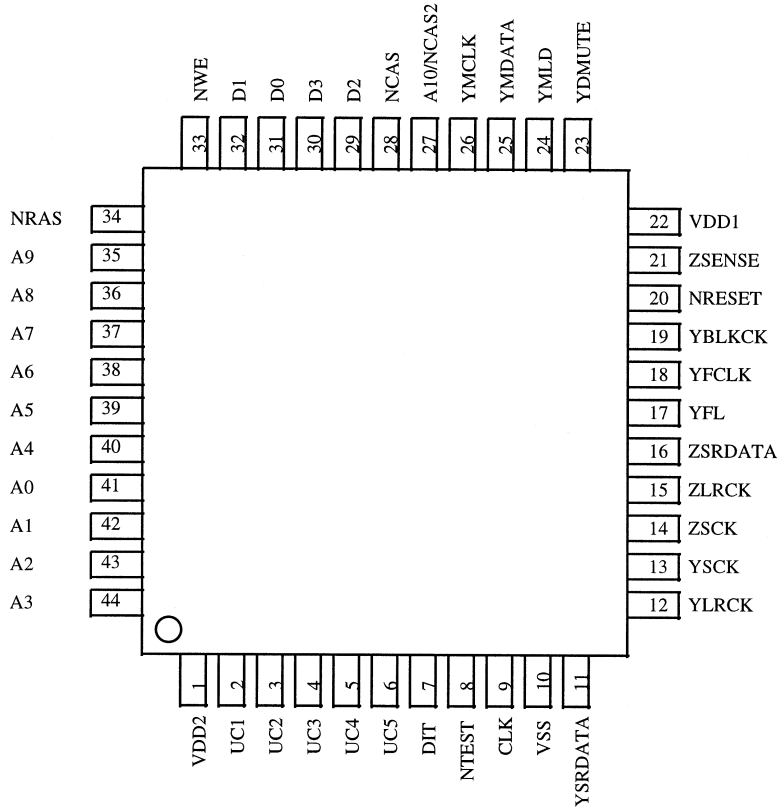


SERVO SIGNAL PROCESSOR: BU9314KS (IC201A)

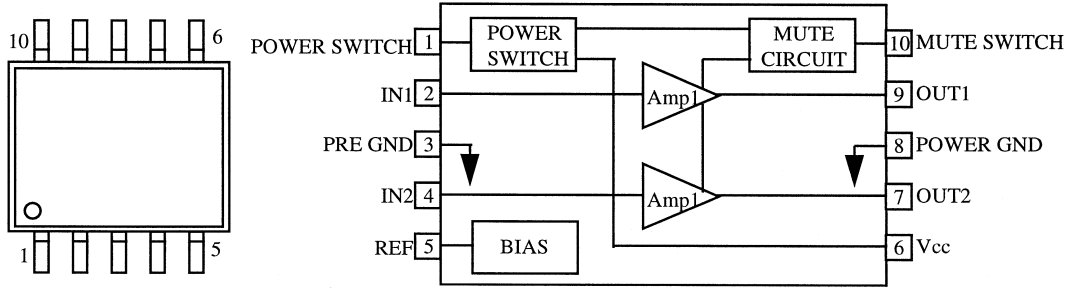
4CH DRIVER AND POWER CONTROL: BA5901K(IC401A)



D-DRAM DRIVER: BU9344KS (IC701A)
D-DRAM DRIVER: S4004SE1-GD (EQUIVALENT)



HEADPHONE AMPLIFIER: LA4533M(IC301A)



4 BIT 1 CHIP MICROCOMPUTER: BU34581-4E (IC501A)

