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SECTION 1. GENERAL

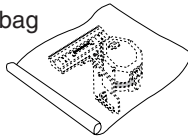
❑ SERVICING PRECAUTIONS

NOTES REGARDING HANDLING OF THE PICK-UP

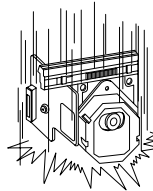
1. Notes for transport and storage

- 1) The pick-up should always be left in its conductive bag until immediately prior to use.
- 2) The pick-up should never be subjected to external pressure or impact.

Storage in conductive bag

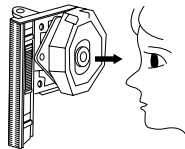


Drop impact



2. Repair notes

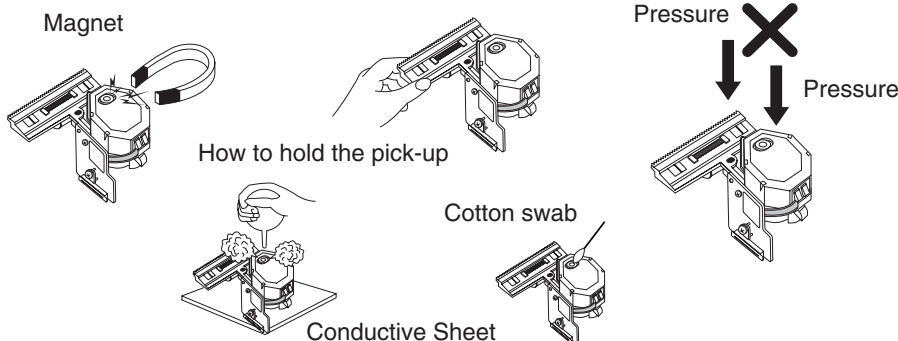
- 1) The pick-up incorporates a strong magnet, and so should never be brought close to magnetic materials.
- 2) The pick-up should always be handled correctly and carefully, taking care to avoid external pressure and impact. If it is subjected to strong pressure or impact, the result may be an operational malfunction and/or damage to the printed-circuit board.
- 3) Each and every pick-up is already individually adjusted to a high degree of precision, and for that reason the adjustment point and installation screws should absolutely never be touched.
- 4) Laser beams may damage the eyes!
Absolutely never permit laser beams to enter the eyes!
Also NEVER switch ON the power to the laser output part (lens, etc.) of the pick-up if it is damaged.



NEVER look directly at the laser beam, and don't let contact fingers or other exposed skin.

5) Cleaning the lens surface

If there is dust on the lens surface, the dust should be cleaned away by using an air bush (such as used for camera lens). The lens is held by a delicate spring. When cleaning the lens surface, therefore, a cotton swab should be used, taking care not to distort this.



6) Never attempt to disassemble the pick-up.

Spring by excess pressure. If the lens is extremely dirty, apply isopropyl alcohol to the cotton swab. (Do not use any other liquid cleaners, because they will damage the lens.) Take care not to use too much of this alcohol on the swab, and do not allow the alcohol to get inside the pick-up.

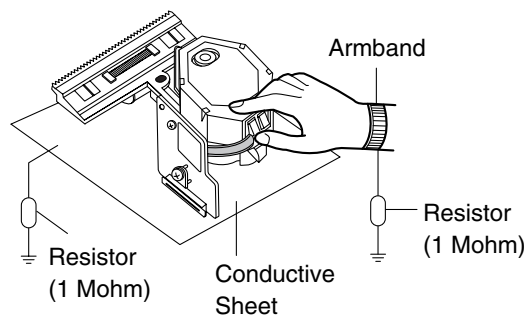
NOTES REGARDING COMPACT DISC PLAYER REPAIRS

1. Preparations

- 1) Compact disc players incorporate a great many ICs as well as the pick-up (laser diode). These components are sensitive to, and easily affected by, static electricity. If such static electricity is high voltage, components can be damaged, and for that reason components should be handled with care.
- 2) The pick-up is composed of many optical components and other high-precision components. Care must be taken, therefore, to avoid repair or storage where the temperature of humidity is high, where strong magnetism is present, or where there is excessive dust.

2. Notes for repair

- 1) Before replacing a component part, first disconnect the power supply lead wire from the unit
- 2) All equipment, measuring instruments and tools must be grounded.
- 3) The workbench should be covered with a conductive sheet and grounded.
When removing the laser pick-up from its conductive bag, do not place the pick-up on the bag. (This is because there is the possibility of damage by static electricity.)
- 4) To prevent AC leakage, the metal part of the soldering iron should be grounded.
- 5) Workers should be grounded by an armband (1MΩ)
- 6) Care should be taken not to permit the laser pick-up to come in contact with clothing, in order to prevent static electricity changes in the clothing to escape from the armband.
- 7) The laser beam from the pick-up should NEVER be directly facing the eyes or bare skin.



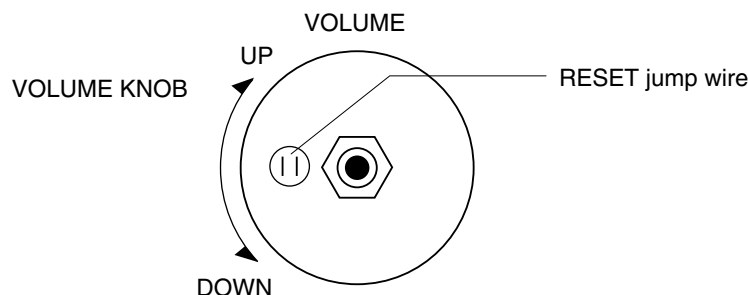
CLEARING MALFUNCTION

You can reset your unit to initial status if malfunction occur(button malfunction, display, etc.).

Using a pointed good conductor(such as driver), simply short the RESET jump wire on the inside of the volume knob for more than 3 seconds.

If you reset your unit, you must reenter all its settings(stations, clock, timer)

- NOTE:** 1. To operate the RESET jump wire, pull the volume rotary knob and release it.
2. If you wish to operate the RESET jump wire, it is necessary to unplug the power cord.



❑ ESD PRECAUTIONS

Electrostatically Sensitive Devices (ESD)

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive Devices (ESD). Examples of typical ESD devices are integrated circuits and some field-effect transistors and semiconductor chip components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ESD devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ESD devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESD devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESD devices.
6. Do not remove a replacement ESD device from its protective package until immediately before you are ready to install it. (Most replacement ESD devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive materials).
7. Immediately before removing the protective material from the leads of a replacement ESD device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION : BE SURE NO POWER IS APPLIED TO THE CHASSIS OR CIRCUIT, AND OBSERVE ALL OTHER SAFETY PRECAUTIONS.

8. Minimize bodily motions when handling unpackaged replacement ESD devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ESD device).

CAUTION. GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH APROWHEAD SYMBOL. WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

SECTION 2. ELECTRICAL

ADJUSTMENTS

This set has been aligned at the factory and normally will not require further adjustment. As a result, it is not recommended that any attempt is made to modificate any circuit. If any parts are replaced or if anyone tampers with the adjustment, realignment may be necessary.

IMPORTANT

1. Check Power-source voltage.
2. Set the function switch to band being aligned.
3. Turn volume control to minimum unless otherwise noted.
4. Connect low side of signal source and output indicator to chassis ground unless otherwise specified.
5. Keep the signal input as low as possible to avoid AGC and AC action.

TAPE DECK ADJUSTMENT

1. AZIMUTH ADJUSTMENT

Deck Mode	Test Tape	Test Point	Adjustment	Adjust for
A Deck Playback	MTT-114	Speaker Out	DECK Screw Azimuth Screw	Maximum
B Deck Playback	MTT-114	Speaker Out	Azimuth Screw	Maximum

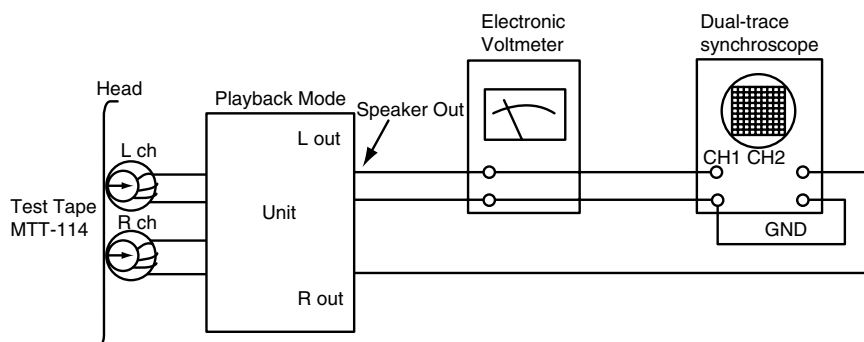


Figure 1. Azimuth Adjustment Connection Diagram

2. MOTOR SPEED ADJUSTMENT

Deck Mode	Test Tape	Test Point	Adjustment	Adjust for	Remark
Normal Speed	MTT-111	Speaker Out	VR501	3kHz $\pm$ 1%	A Deck
HI-Speed	MTT-111	Speaker Out	more than 5.4kHz		HI-Speed Dubbing Mode

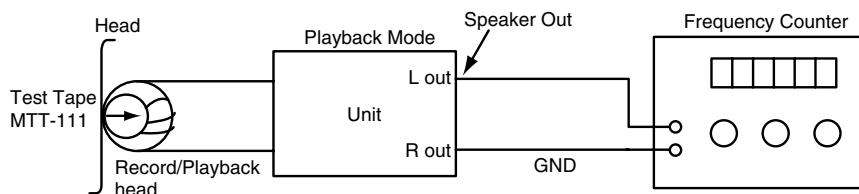


Figure 2. Motor Speed Adjustment Connection Diagram

3. RECORD BIAS ADJUSTMENT

Deck Mode	Test Tape	Test Point	Adjustment	Adjust for
Rec/Pause	MTT-5511	ERASE HEAD WIRE(PN202)	L203	60kHz±5kHz (Auto stop) 85kHz±5kHz(Auto Reverse)

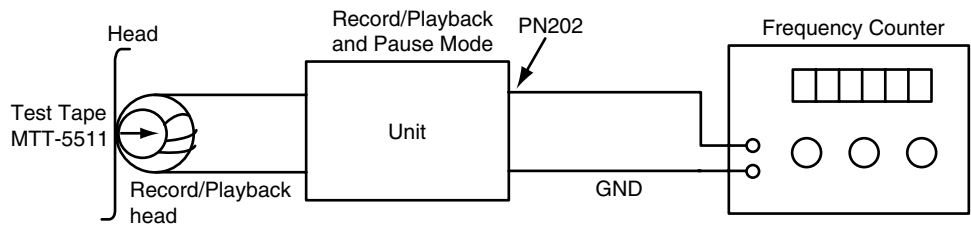
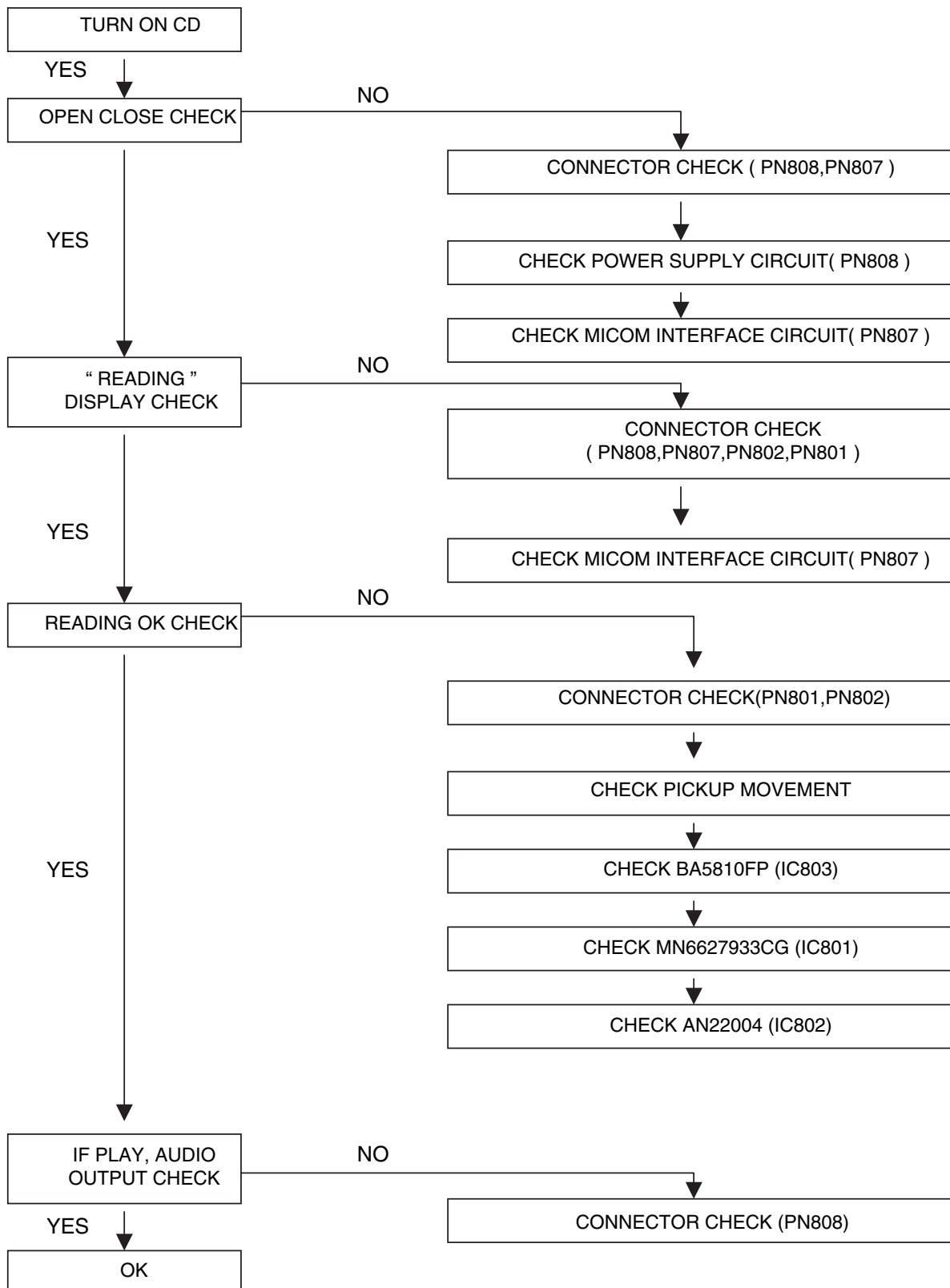


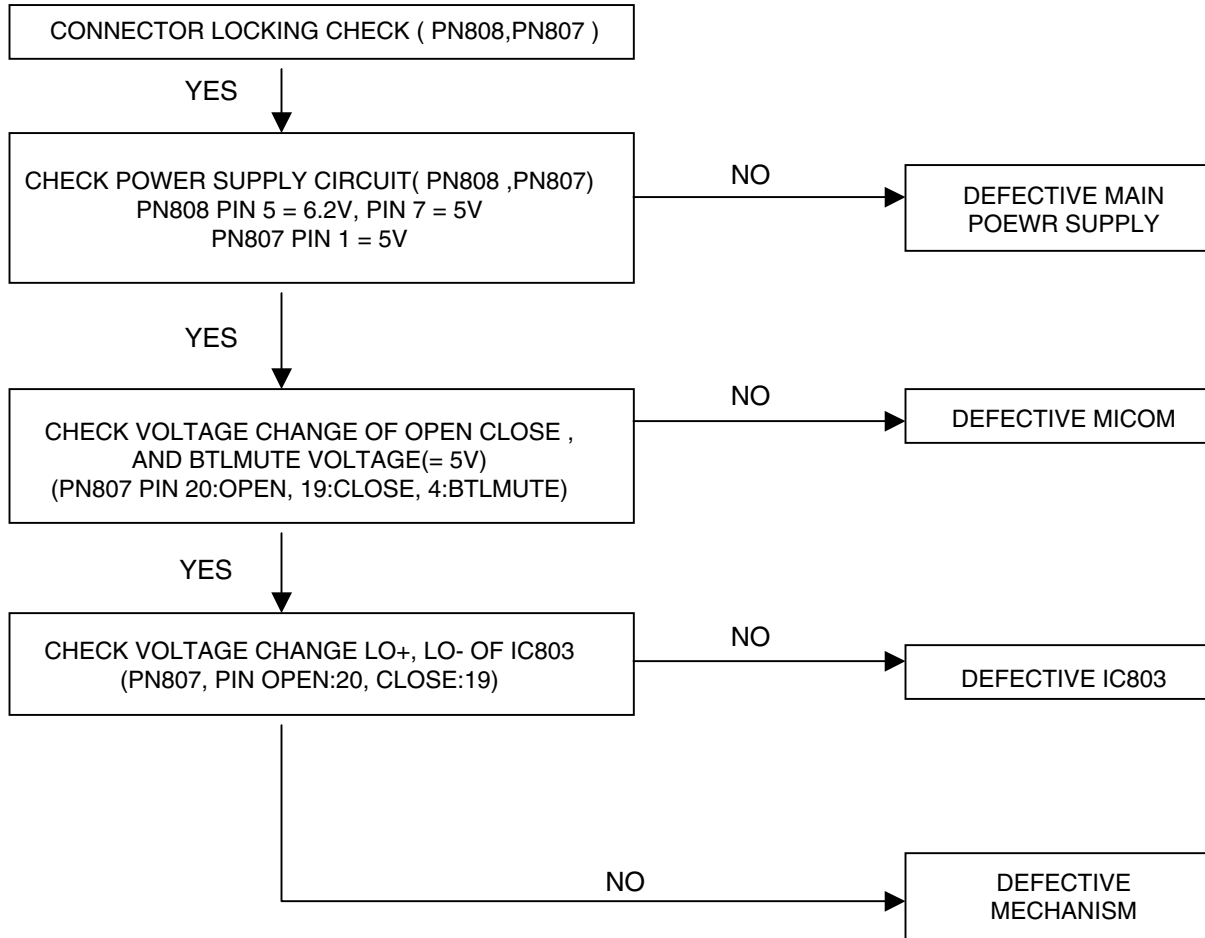
Figure 3. Record Bias Adjustment Connection Diagram

□ TROUBLESHOOTING

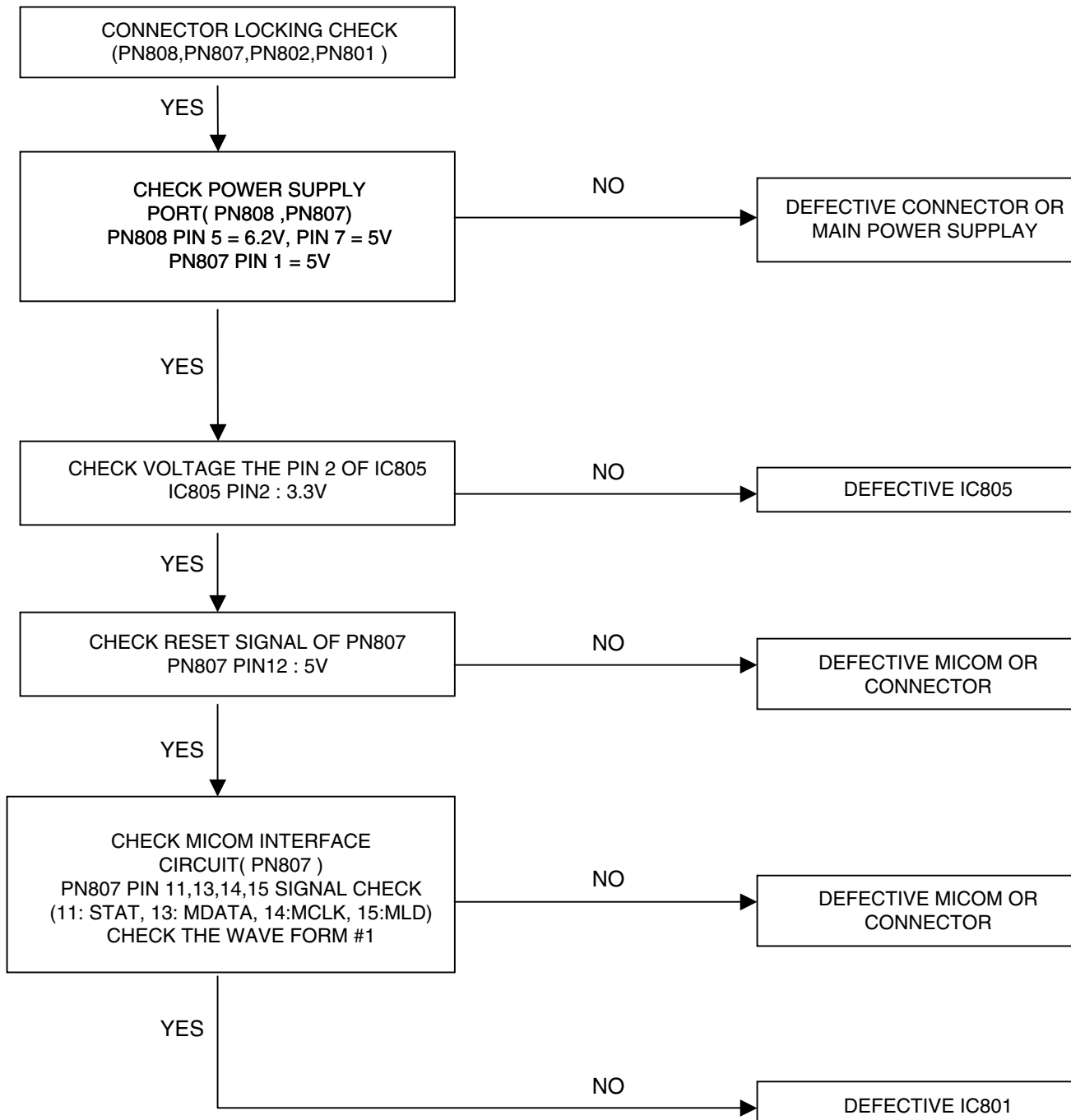
• CD PART



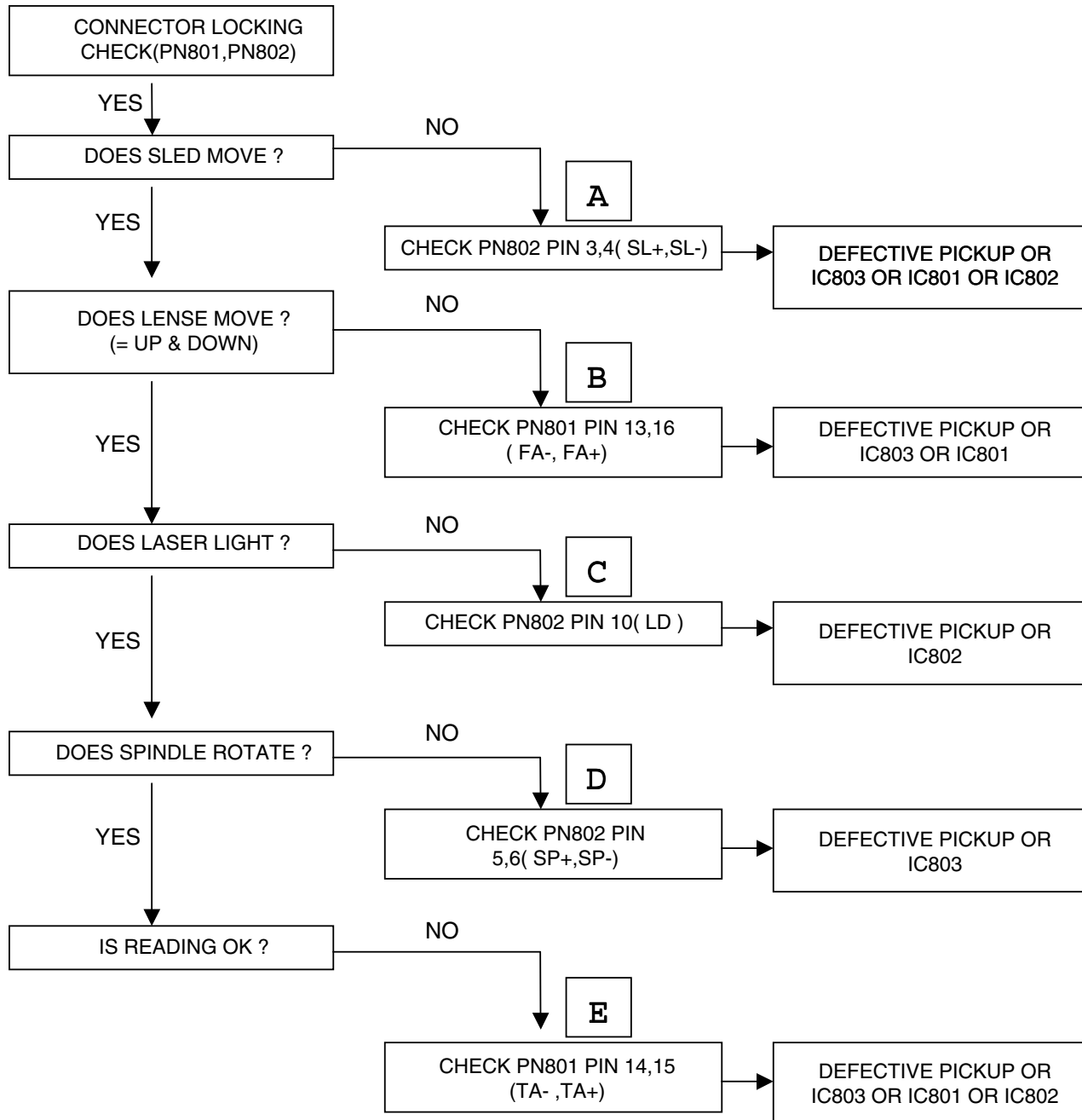
• OPEN CLOSE NG



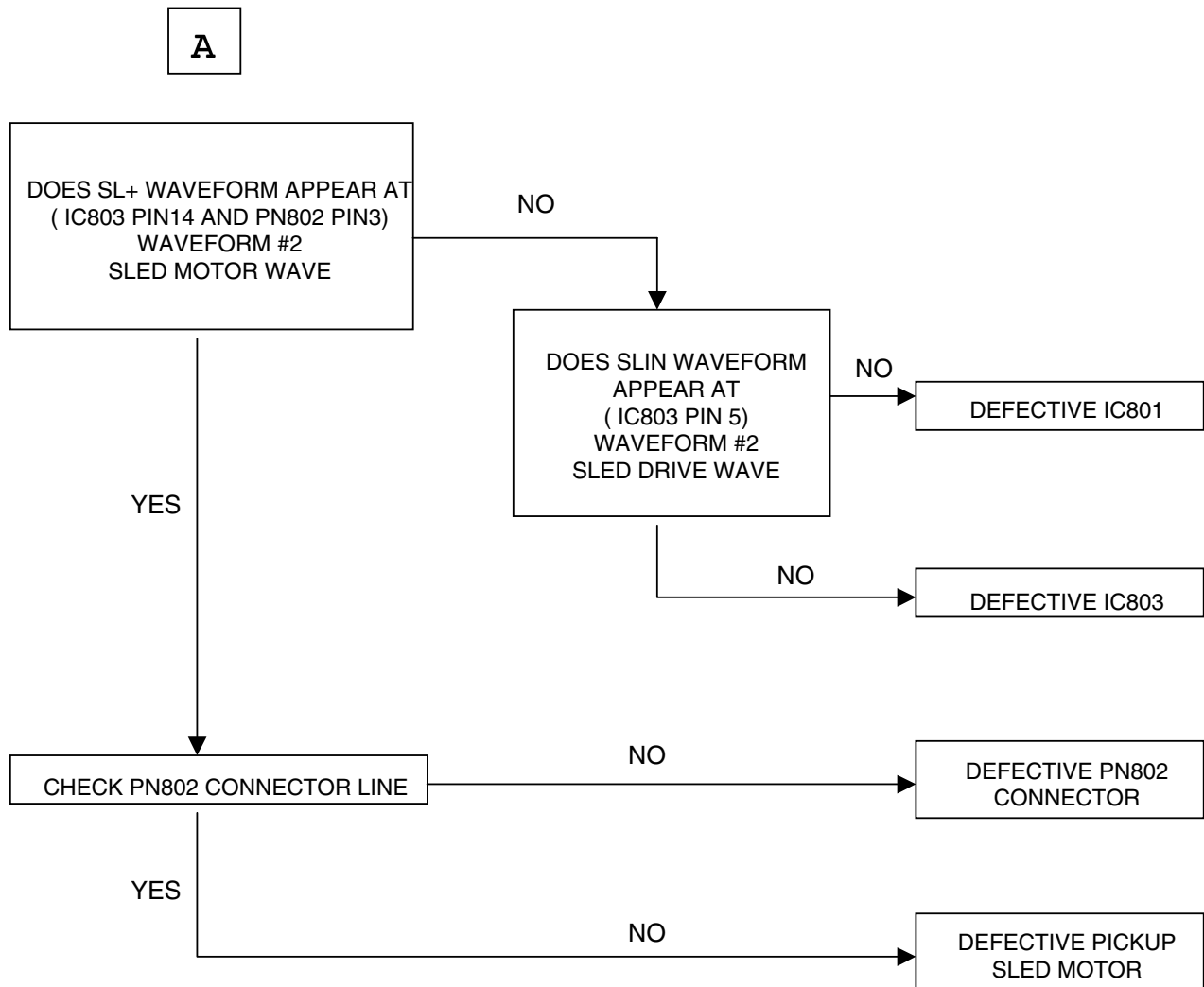
• “ READING ” DISPLAY CHECK
(= ONLY “CD “DISPLAY)



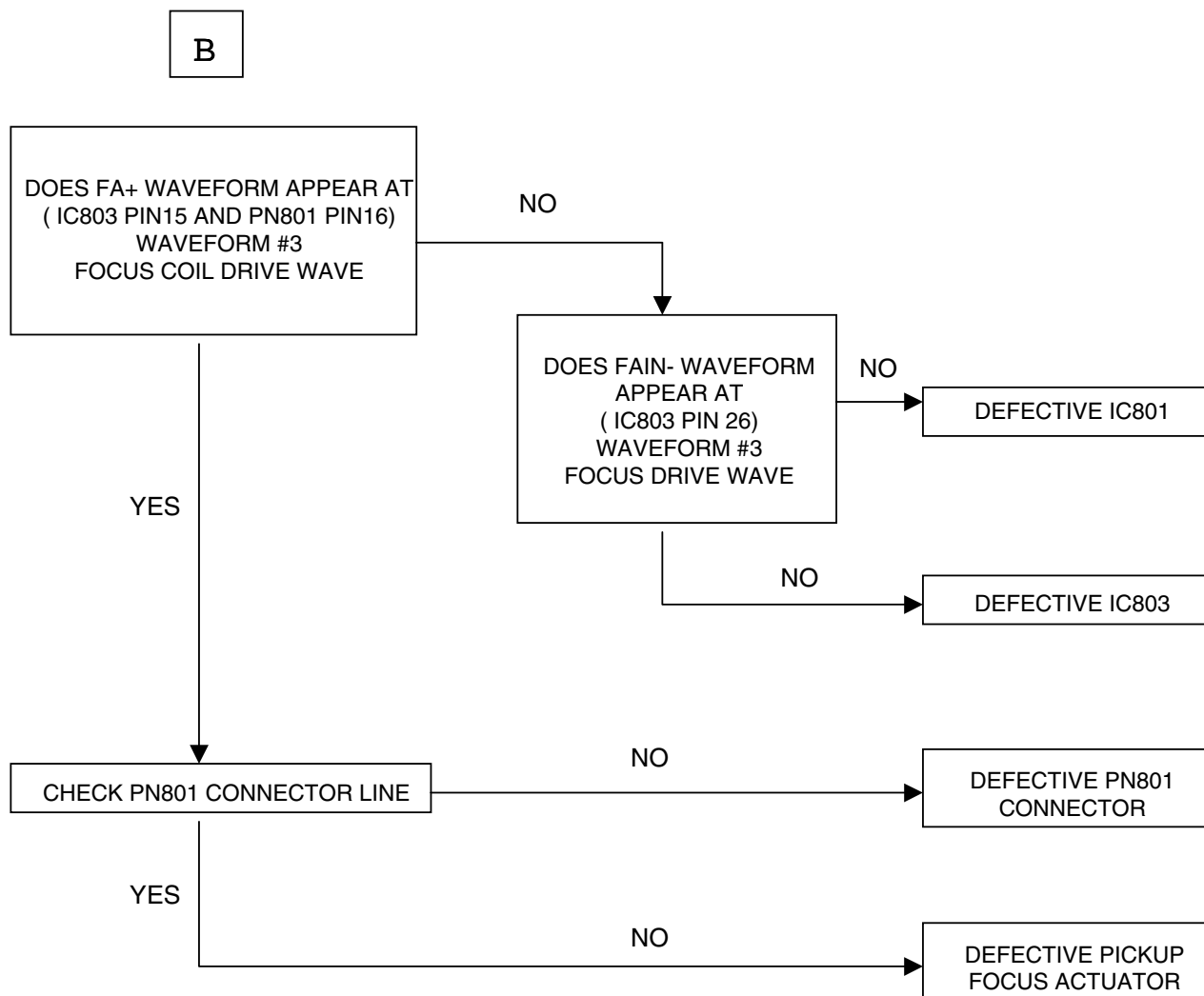
• **READING OK CHECK**
(= “NO DISC” DISPLAY)



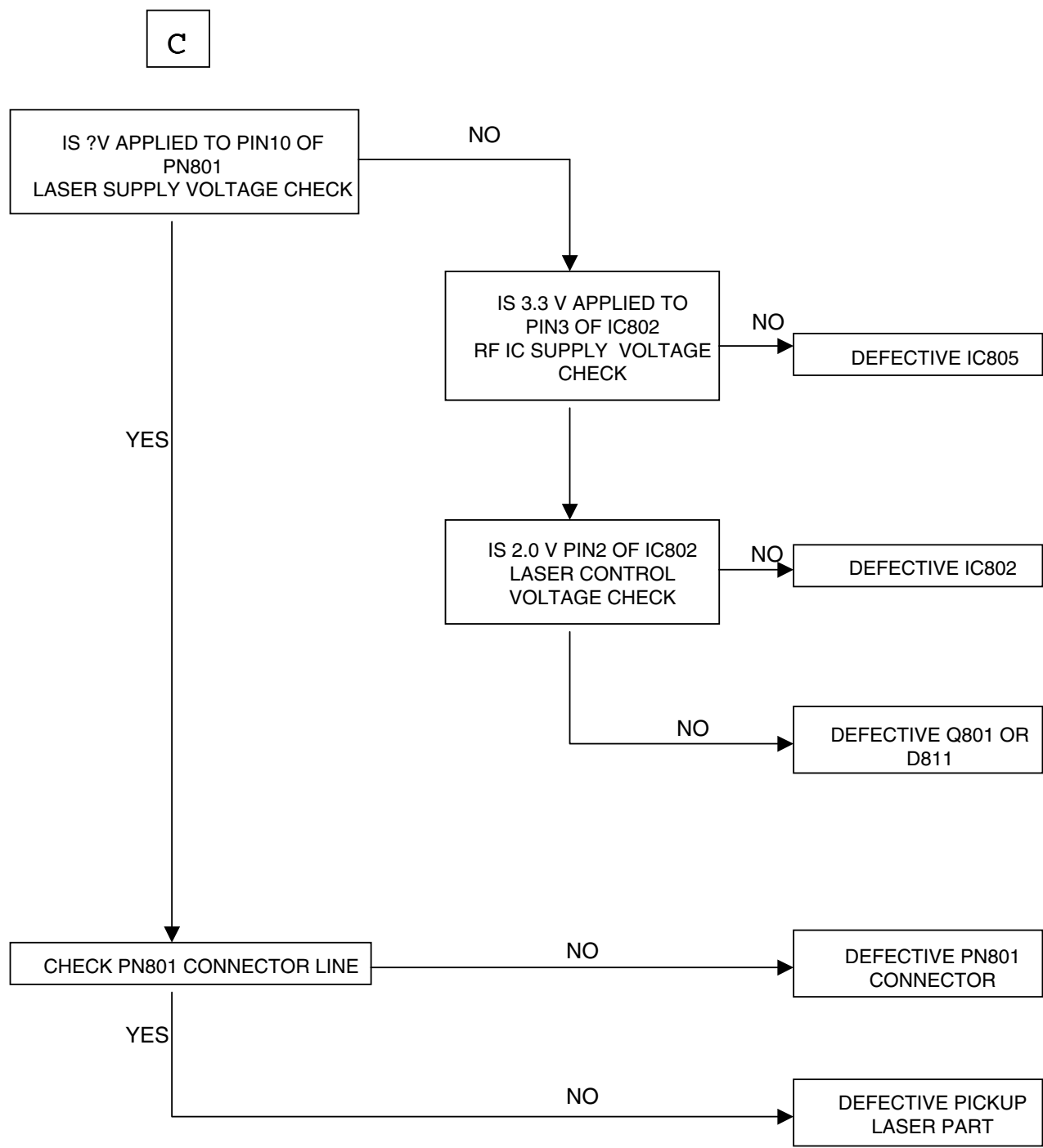
• **READING OK CHECK #A**
(= “NO DISC” DISPLAY)



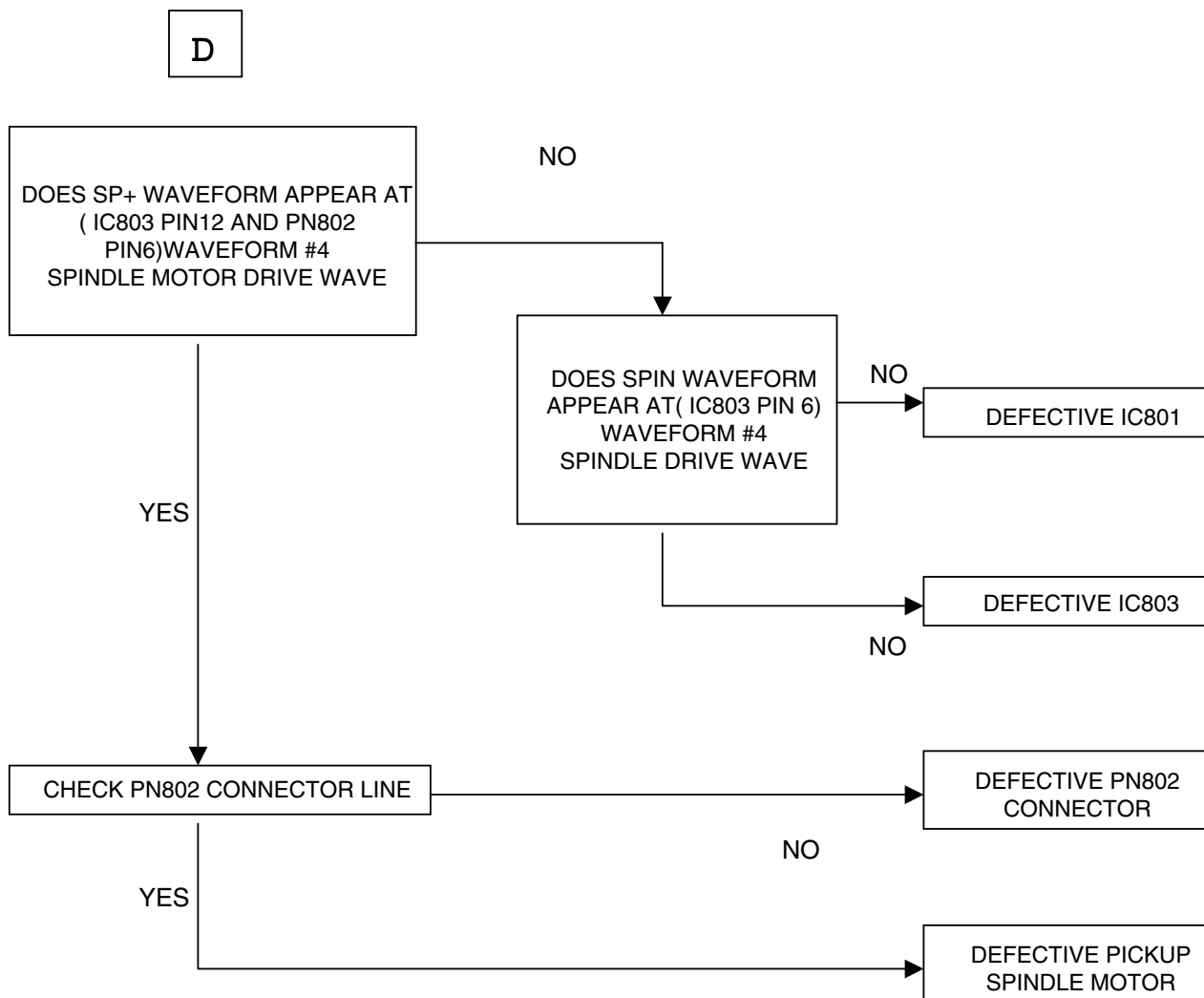
• **READING OK CHECK #B**
(= “NO DISC” DISPLAY)



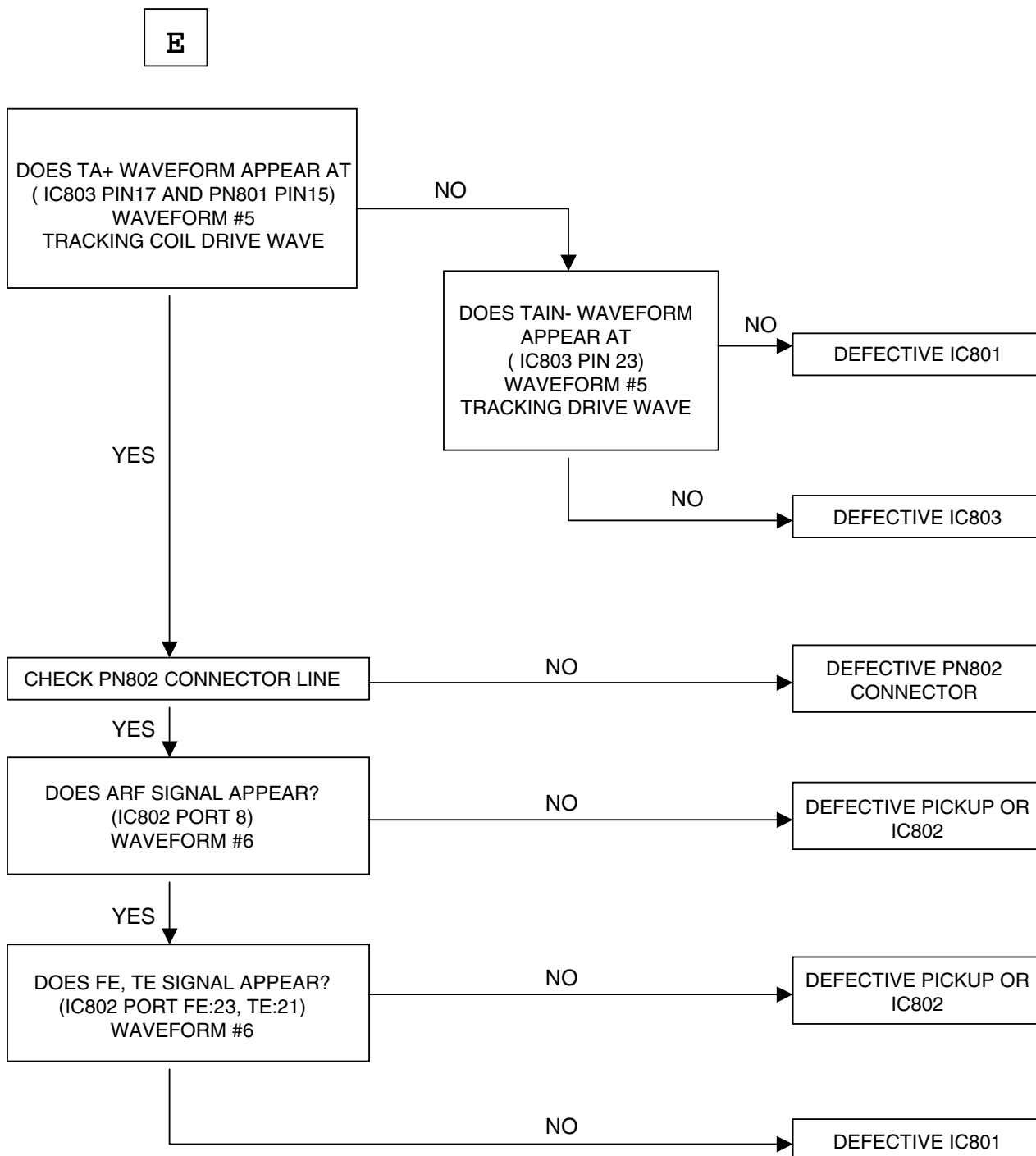
• **READING OK CHECK #C**
(= “NO DISC” DISPLAY)



• **READING OK CHECK #D**
(= “NO DISC” DISPLAY)



• **READING OK CHECK # E**
 (= “NO DISC” DISPLAY)



• CD PART VOLTAGE SHEET

IC	PIN NO.	STOP	CD-DA PLAY	MP3 PLAY	IC	PIN NO.	STOP	CD-DA PLAY	MP3 PLAY
IC801 MN6627933CG	1	0	0	3.3		51	0.8	0.8	0.8
	2	0	0	3.3		52	1.6	1.6	1.6
	3	0	0	3.3		53	1.6	1.6	1.6
	4	0	0	3.3		54	3.3	3.3	3.3
	5	3.3	3.3	3.3		55	1	1.4	1
	6	0	0	3.3		56	1	1.4	1
	7	0	0	0		57	0	0	0
	8	0	0	3.3		58	1.6	1.6	1.6
	9	0	0	3.3		59	0	0	0
	10	0	0	3.3		60	1.6	1.6	1.6
	11	0	0	3.3		61	3.3	3.3	3.3
	12	0	0	3.3		62	0	0	0
	13	0	0	3.3		63	0	0	0
	14	3.3	3.3	3.3		64	0	0	0
	15	3.3	3.3	3.3		65	0	0	0
	16	3.3	3.3	3.3		66	0	0	0
	17	3.3	3.3	3.3		67	1.5	1.5	1.5
	18	3.3	3.3	3.3		68	0	0	0
	19	0	0	3.3		69	0	0	0
	20	0	0	3.3		70	0	0	0
	21	0	0	3.3		71	1.1	1.1	1.1
	22	0	0	3.3		72	2.8	2.8	2.8
	23	3.3	3.3	3.3		73	0	0	0
	24	0	0	0		74	2.9	2.9	2.9
	25	0	0	3.3		75	0	0	0
	26	0	0	0		76	0	0	0
	27	0	0	0		77	0	0	0
	28	1.5	1.5	1.5		78	0	0	0
	29	1.6	1.5	1.6		79	1.6	1.6	1.6
	30	3.3	0	3.3		80	0	0	3.3
	31	1.6	1.6	1.6		81	2.9	2.9	2.9
	32	0	0	0		82	3.3	3.3	3.3
	33	0	0	0		83	0	0	0
	34	0	0	0		84	1.6	1.5	1.5
	35	1.6	1.6	1.6		85	1.6	1.6	1.6
	36	0	0	0		86	3.3	3.3	3.3
	37	1.6	1.7	1.7		87	1.5	1.5	1.5
	38	0	0	0		88	0	0	3.3
	39	3.3	3.3	3.3		89	0	0	3.3
	40	1.6	1.6	1.6		90	0	0	3.3
	41	1.6	1.6	1.6		91	0	0	3.3
	42	1.6	1.6	1.6		92	0	0	3.3
	43	1.6	1.6	1.6		93	0	0	3.3
	44	2.3	2.3	2.3		94	0	0	3.3
	45	1.5	1.5	1.5		95	0	0	3.3
	46	0	3.3	3.3		96	0	0	3.3
	47	3	0	0		97	0	0	3.3
	48	0	0	0		98	3.3	3.3	3.3
	49	0	0	0		99	0	0	3.3
	50	3.3	3.3	3.3		100	0	0	3.3

IC	PIN NO.	STOP	CD-DA PLAY	MP3 PLAY
IC802 AN22004A	1	0	0	0
	2	2.8	2	2
	3	3.3	3.3	3.3
	4	0	0	0
	5	0	2.3	2.3
	6	1.6	2	2
	7	1.3	1.6	1.6
	8	0.4	1.5	1.5
	9	1.3	1.5	1.5
	10	1.5	1.5	1.5
	11	1.5	2	2
	12	1	1	1
	13	0	0	0
	14	0	0	0
	15	3	0	0
	16	0	3.3	3.3
	17	0	0	0
	18	1.6	1.6	1.6
	19	1.6	1.6	1.6
	20	1.6	1.6	1.6
	21	1.6	1.6	1.6
	22	1.6	1.6	1.6
	23	1.6	1.6	1.6
	24	0 (*CD-RW: 3.0)	0 (*CD-RW: 3.0)	0 (*CD-RW: 3.0)
	25	1.6	1.6	1.6
	26	1.6	1.6	1.6
	27	1.6	1.7	1.6
	28	1.6	1.7	1.6
	29	1.6	1.7	1.6
	30	1.6	1.7	1.6
	31	1.6	1.7	1.6
	32	1.6	1.7	1.6

IC	PIN NO.	STOP	CD-DA PLAY	MP3 PLAY
IC803 BA5810FP	1	0	0	0
	2	0	0	0
	3	1.5	1.5	1.5
	4	3.6	3.7	3.7
	5	1.6	1.6	1.6
	6	1.6	1.6	1.6
	7	6.2	6.2	6.2
	8	6.2	6.2	6.2
	9	0	0	0
	10	0	0	0
	11	3.2	3.4	3.4
	12	3.2	3	3
	13	3.2	3.2	3.2
	14	3.2	3.2	3.2
	15	3	2.8	2.8
	16	3.3	3.4	3.4
	17	3.2	3.2	3.2
	18	3.2	3.2	3.2
	19	0	0	0
	20	6.2	6.2	6.2
	21	3.6	3.7	3.7
	22	1.6	1.6	1.6
	23	1.6	1.6	1.6
	24	1.6	1.6	1.6
	25	1.6	1.6	1.6
	26	1.6	1.6	1.6
	27	1.6	1.6	1.6
	28	1.6	1.6	1.6

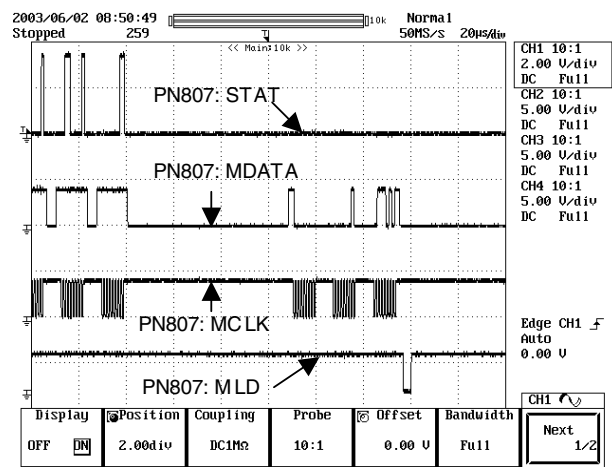
IC	PIN NO.	STOP	CD-DA PLAY	MP3 PLAY
IC804 M12L16161A	1	3.3	3.3	3.3
	2	0	0	3.3
	3	0	0	3.3
	4	0	0	0
	5	0	0	3.3
	6	0	0	3.3
	7	3.3	3.3	3.3
	8	0	0	3.3
	9	0	0	3.3
	10	0	0	0
	11	0	0	3.3
	12	0	0	3.3
	13	3.3	3.3	3.3
	14	3.3	3.3	3.3
	15	3.3	3.3	3.3
	16	3.3	3.3	3.3
	17	3.3	3.3	3.3
	18	3.3	3.3	3.3
	19	0	0	3.3
	20	0	0	3.3
	21	0	0	3.3
	22	0	0	3.3
	23	0	0	3.3
	24	0	0	3.3
	25	3.3	3.3	3.3
	26	0	0	0
	27	0	0	3.3
	28	0	0	3.3
	29	0	0	3.3
	30	0	0	3.3
	31	0	0	3.3
	32	0	0	3.3
	33	0	0	0
	34	3.3	3.3	3.3
	35	0	0	3.3
	36	3.3	3.3	3.3
	37	0	0	0
	38	3.3	3.3	3.3
	39	0	0	3.3
	40	0	0	3.3
	41	0	0	0
	42	0	0	3.3
	43	0	0	3.3
	44	3.3	3.3	3.3
	45	0	0	3.3
	46	0	0	3.3
	47	0	0	0
	48	0	0	3.3
	49	0	0	3.3
	50	0	0	0

IC	PIN NO.	STOP	CD-DA PLAY	MP3 PLAY
IC805 UTC LD1117A	1	0	0	0
	2	3.3	3.3	3.3
	3	4.77	4.6	4.6

• CD PART WAVEFORMS OF MAJOR CHECK POINT

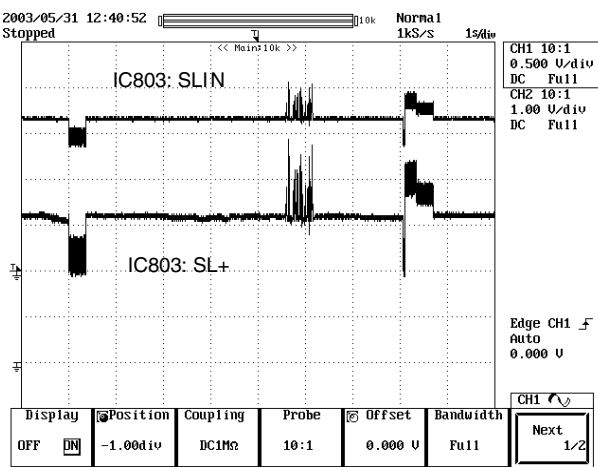
X. MICOM INTERFACE WAVEFORM

(PN807 pin XX, X3, X4, X5) during normal play



#2. S LED DRIVE AND MOTOR WAVEFORM

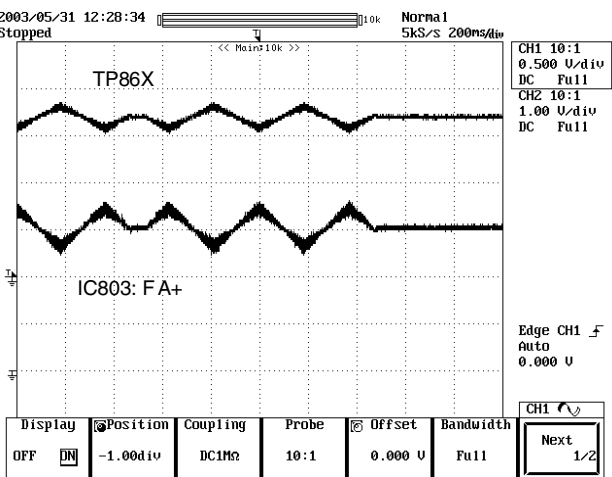
(IC803 pin 5, X4) when focus search



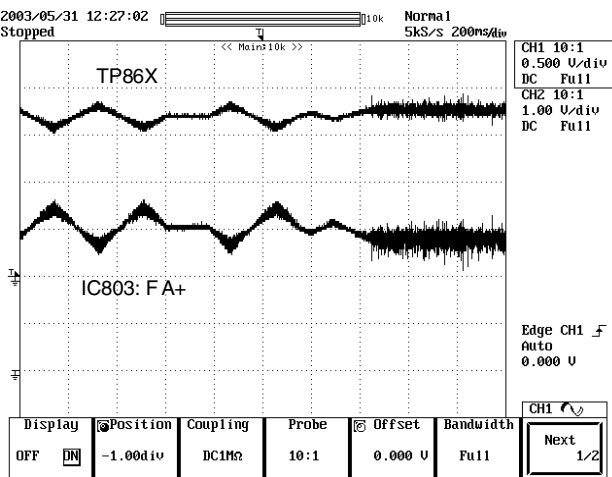
#3. FOCUS DRIVE AND MOTOR WAVEFORM

(TP86X, IC803 pin X5)

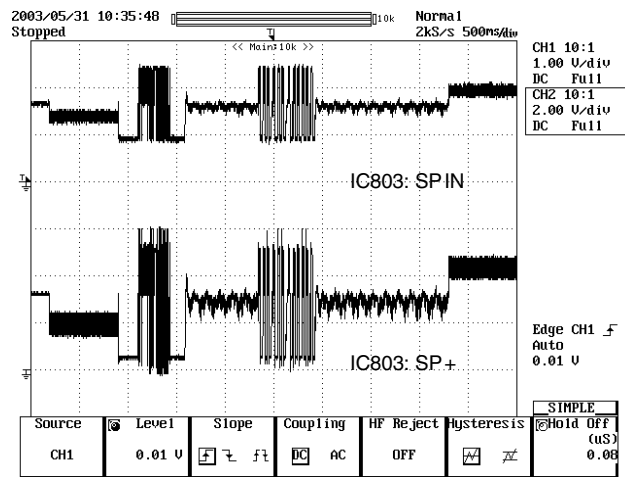
When focus search failed or there is no disc on tray



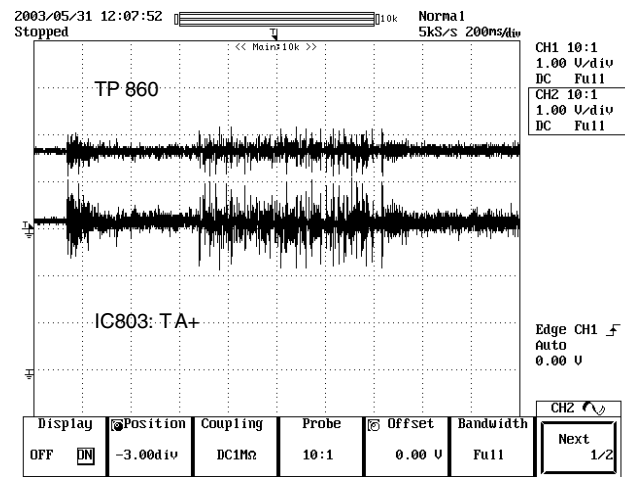
There is disc on tray and focus search success



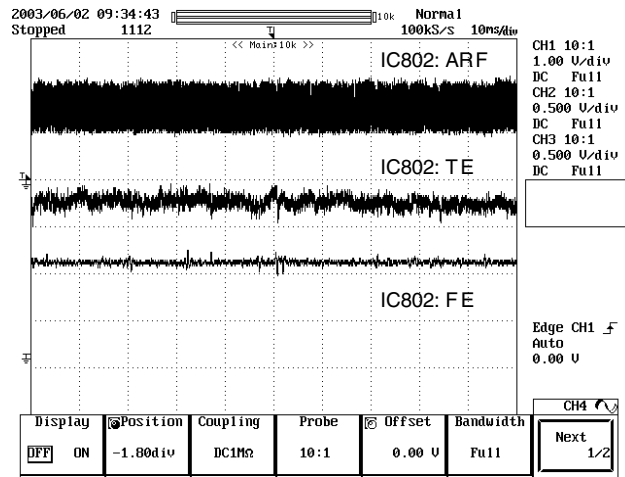
#4. SPINDLE DRIVE AND MOTOR WAVEFORM
(IC803 pin 6, 2) when TOC reading



#5. T RACK DRIVE AND MOTOR WAVEFORM
(TP860, IC803 pin 23) durin g normal play

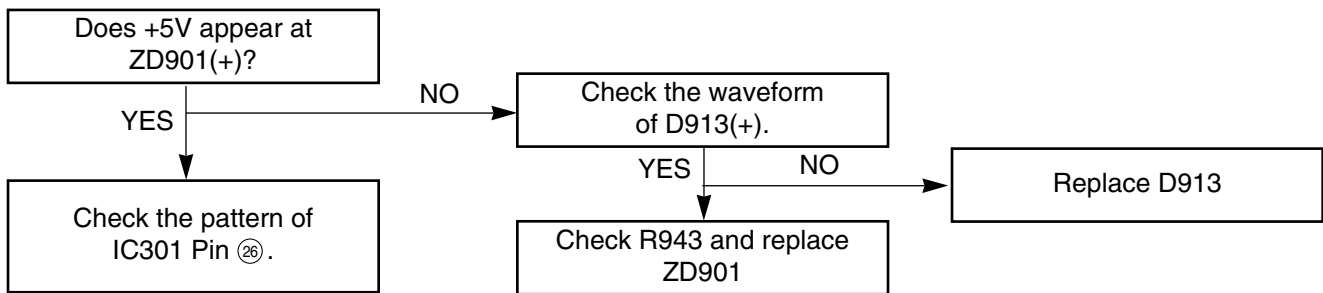


#6. RF, TRA CKING AND FOCUS ERROR WAVEFORM
(IC802 pin 8, 2 , 23) d uring normal play

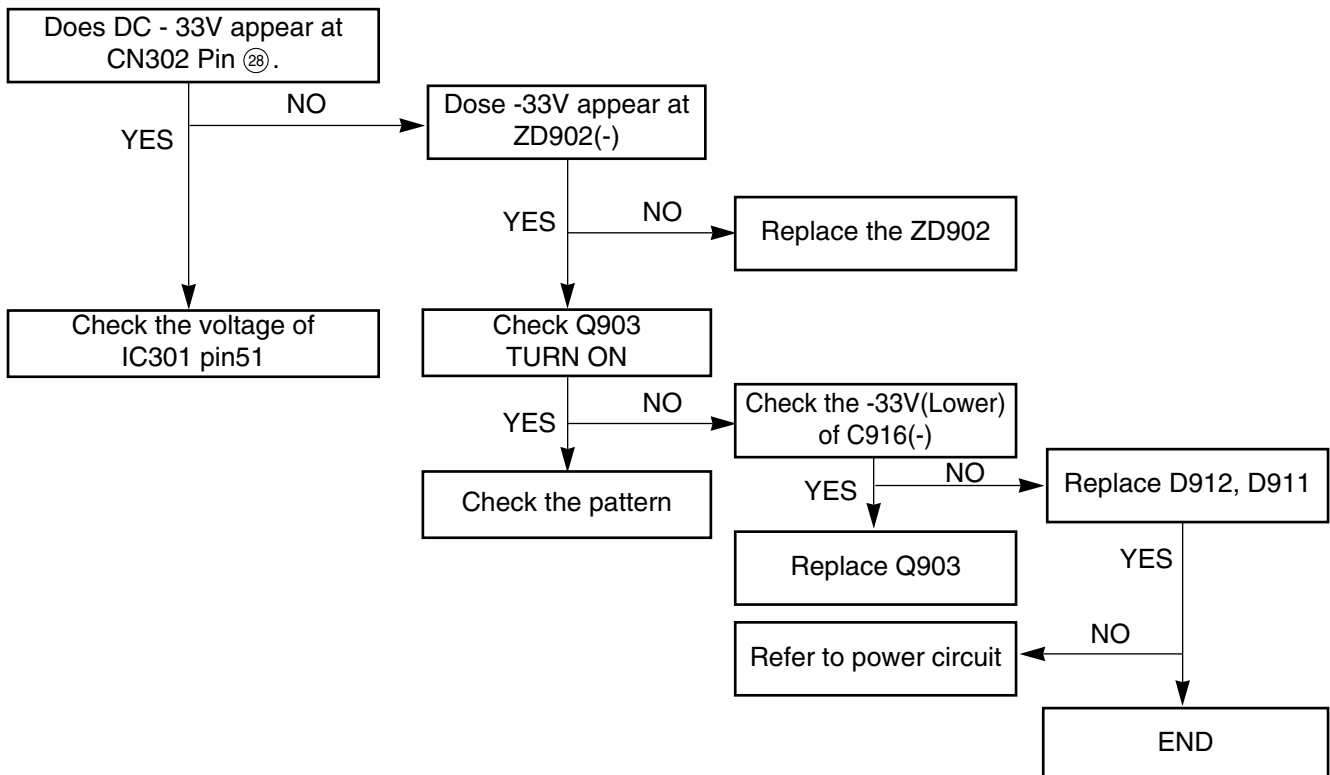


• MAIN SET

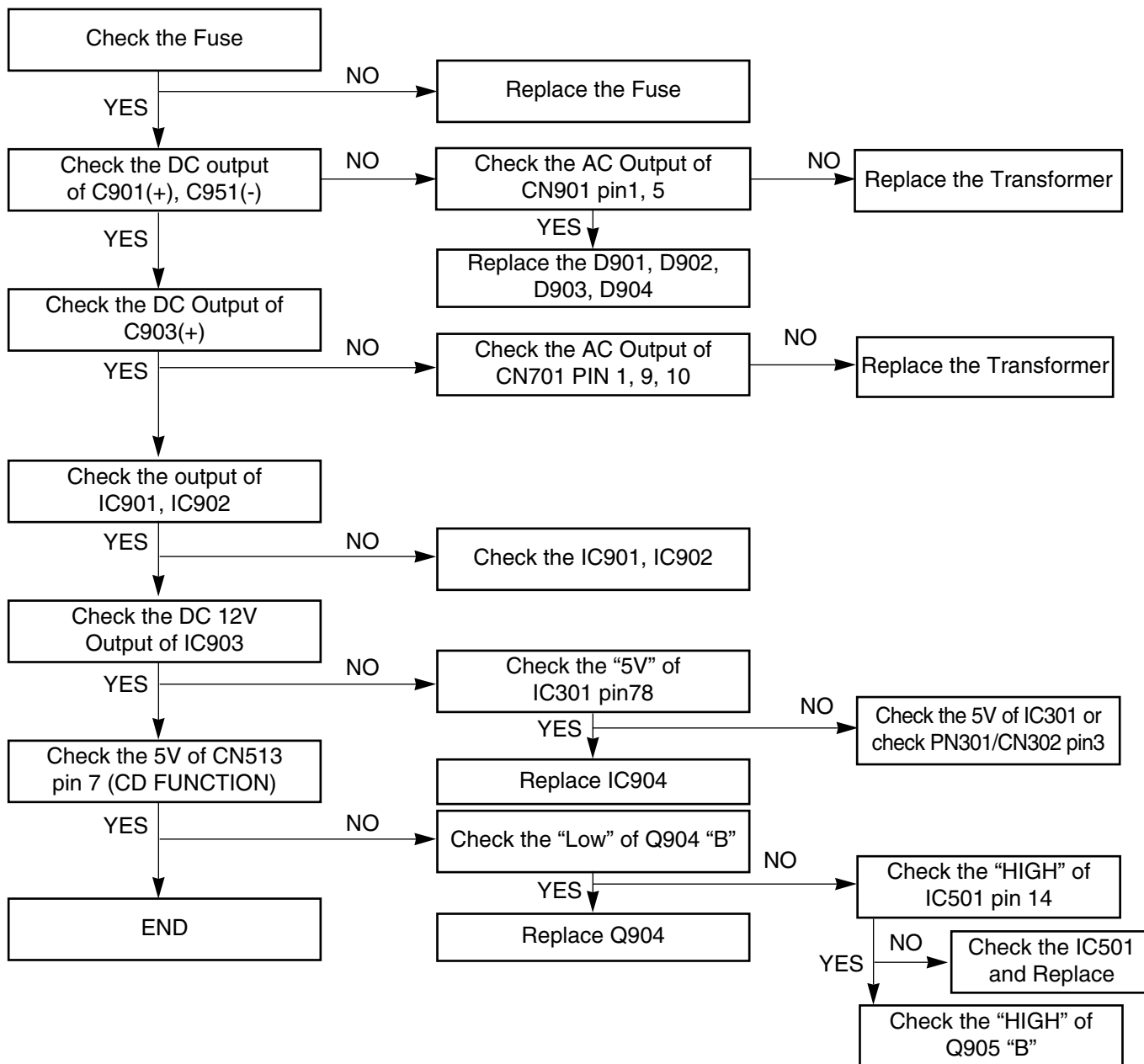
P-SENS PART



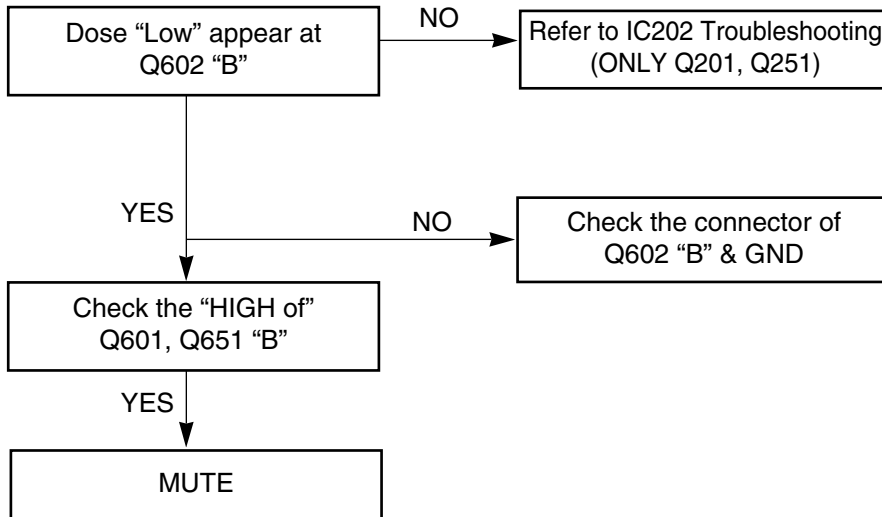
VKK PART



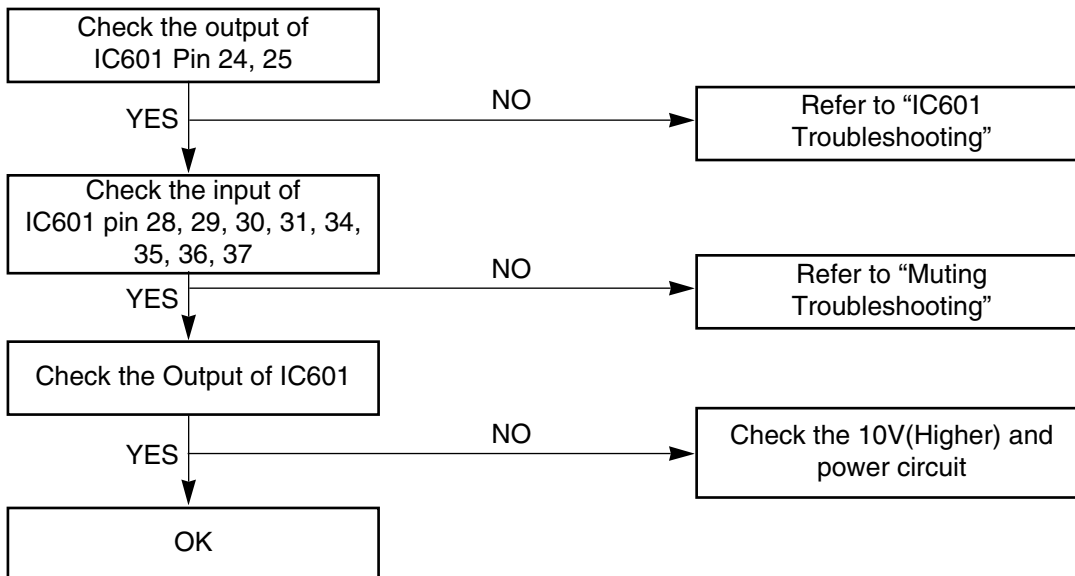
Power Circuit



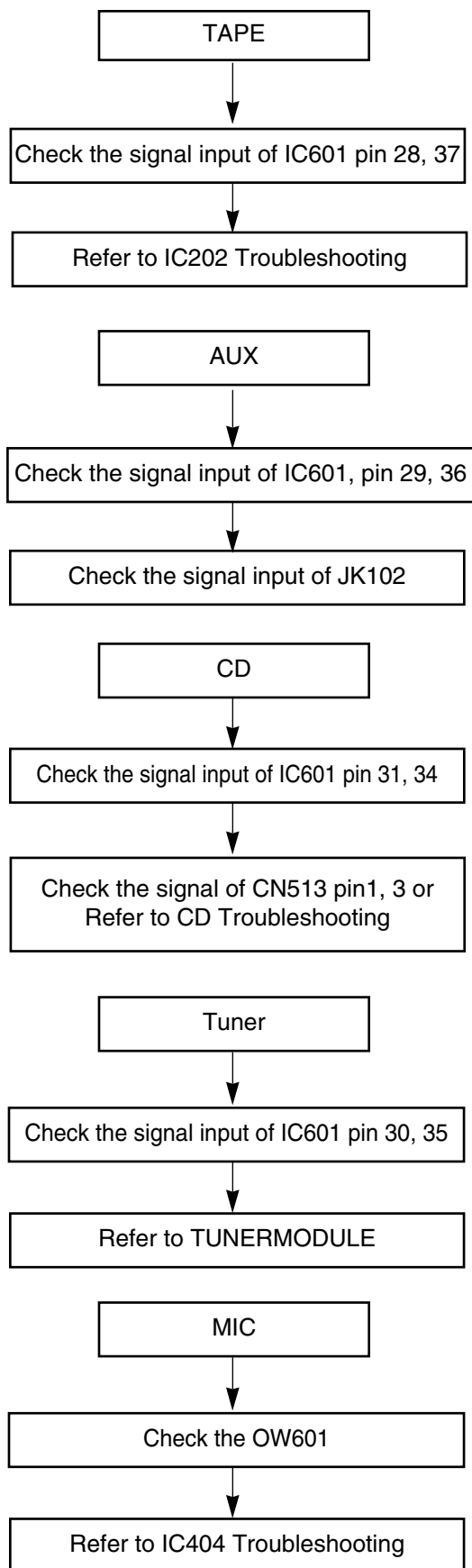
Muting circuit (MUTE)



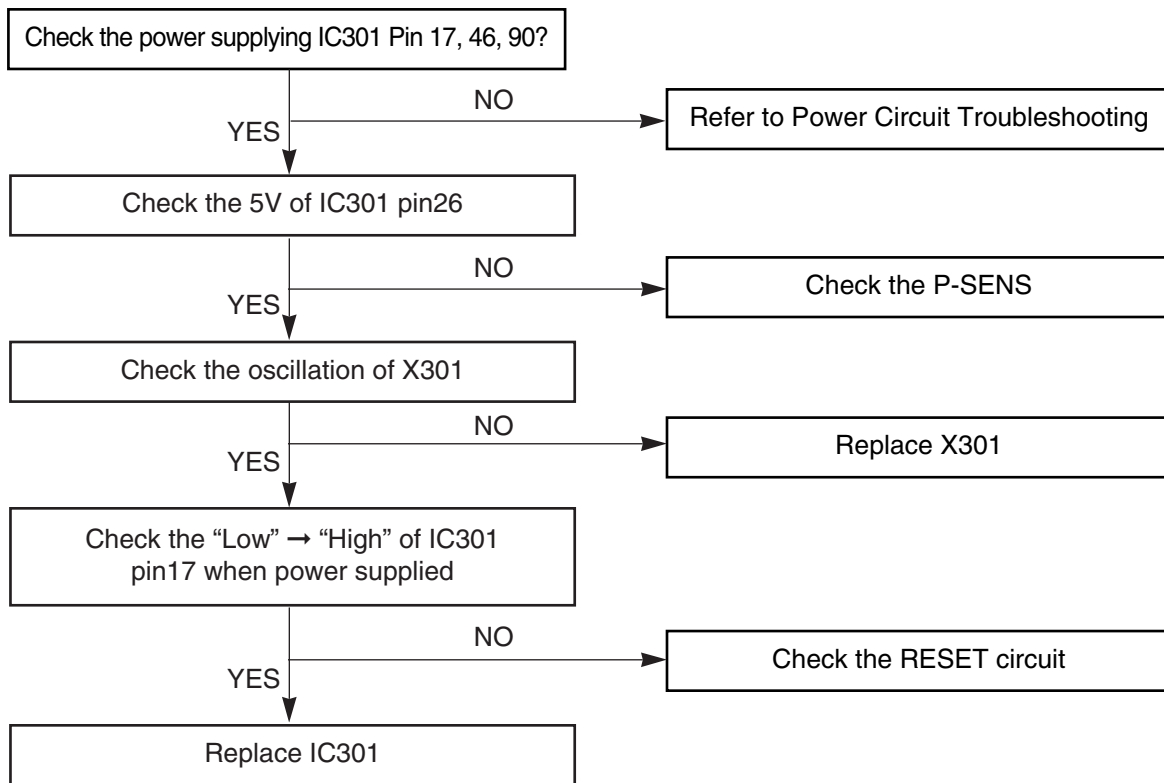
Audio abnormal



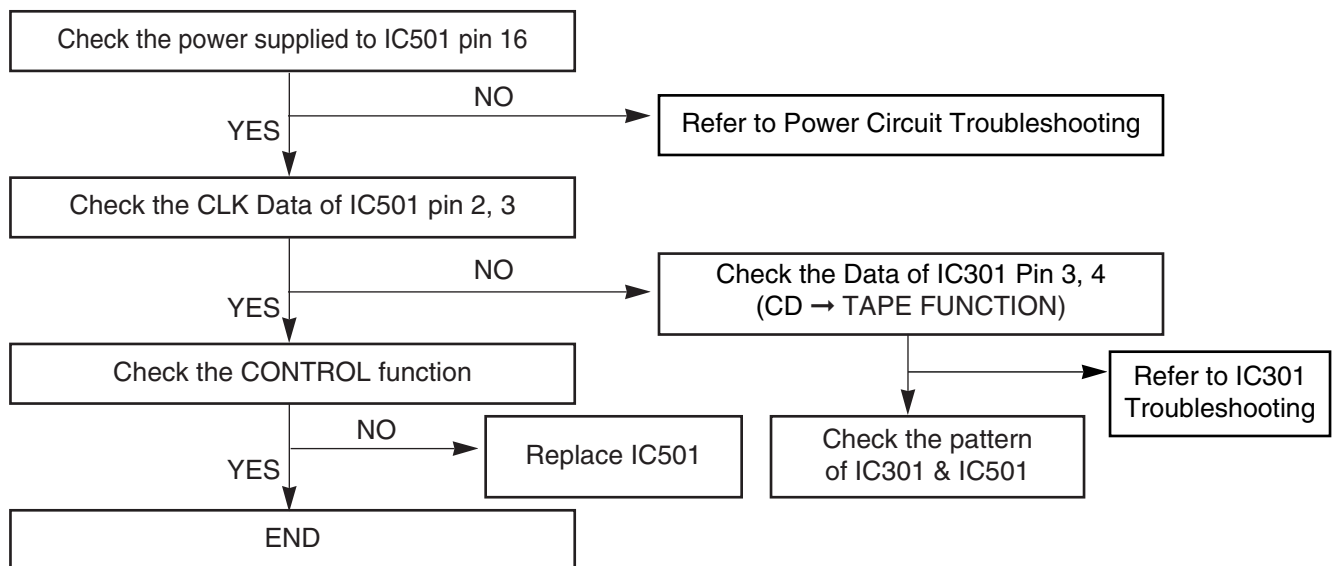
FUNCTION MODE Audio abnormal



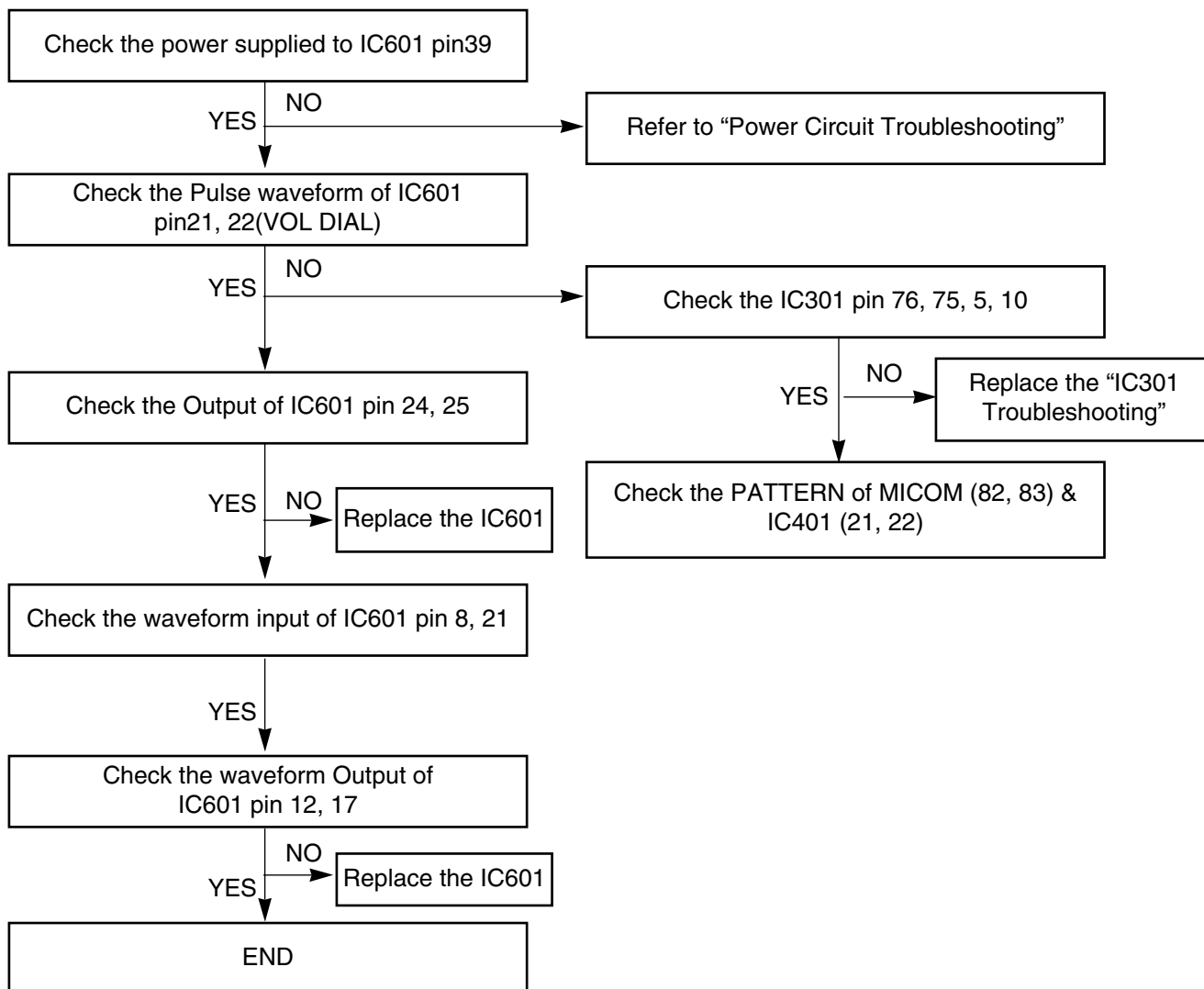
IC301 Troubleshooting



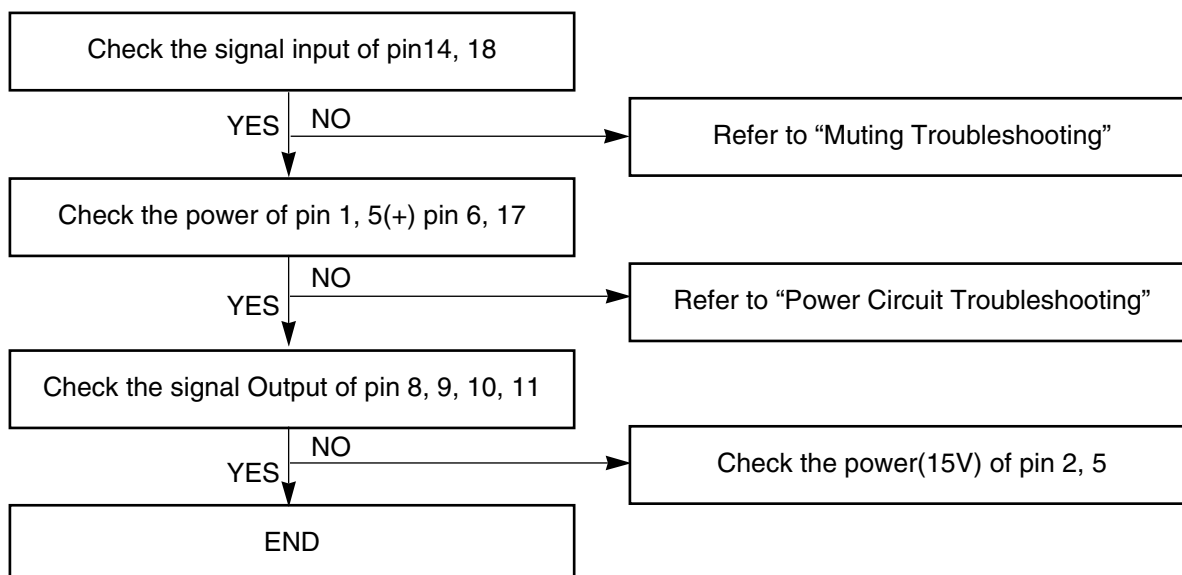
IC501 Troubleshooting



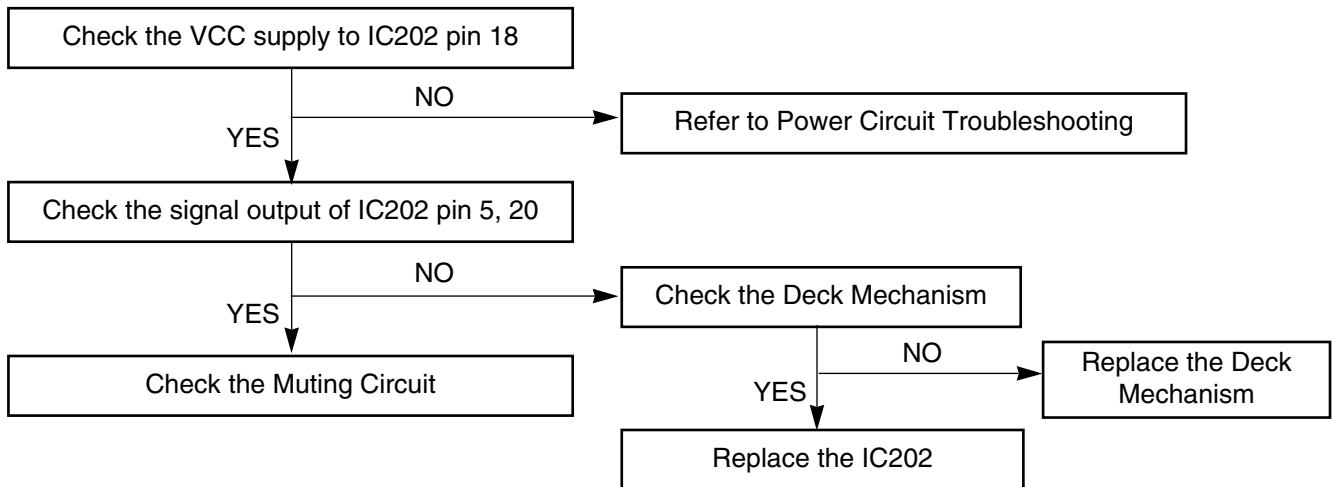
IC601 Troubleshooting



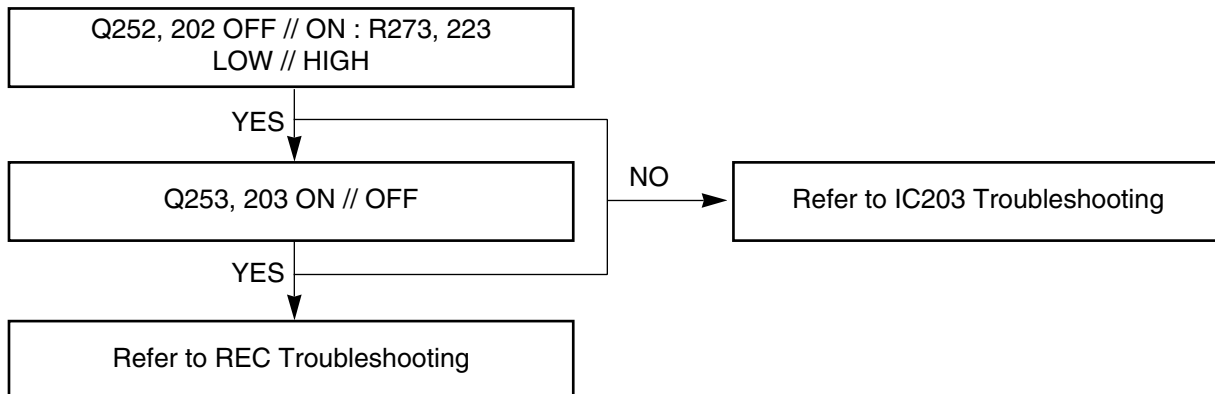
IC701 Troubleshooting



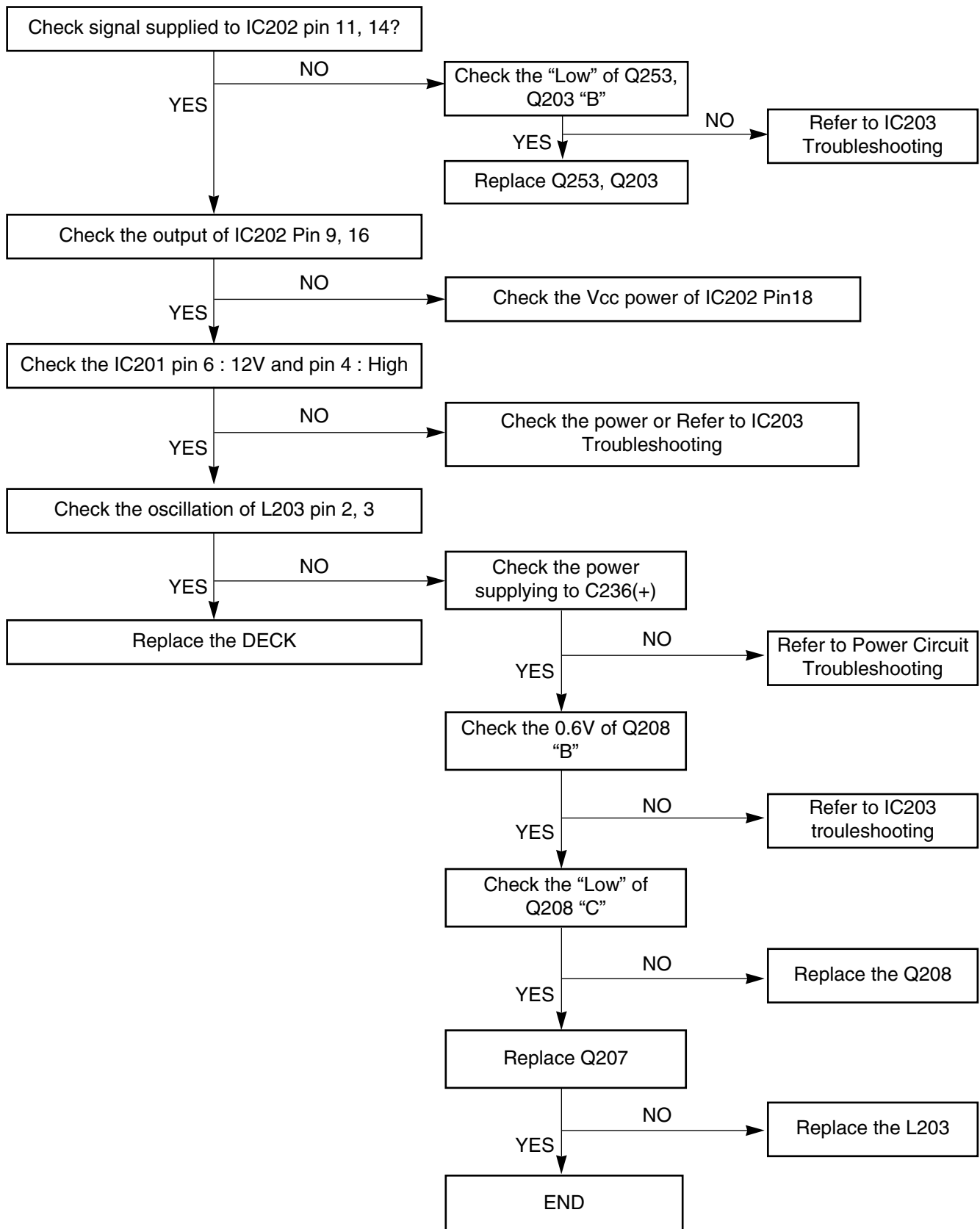
Play



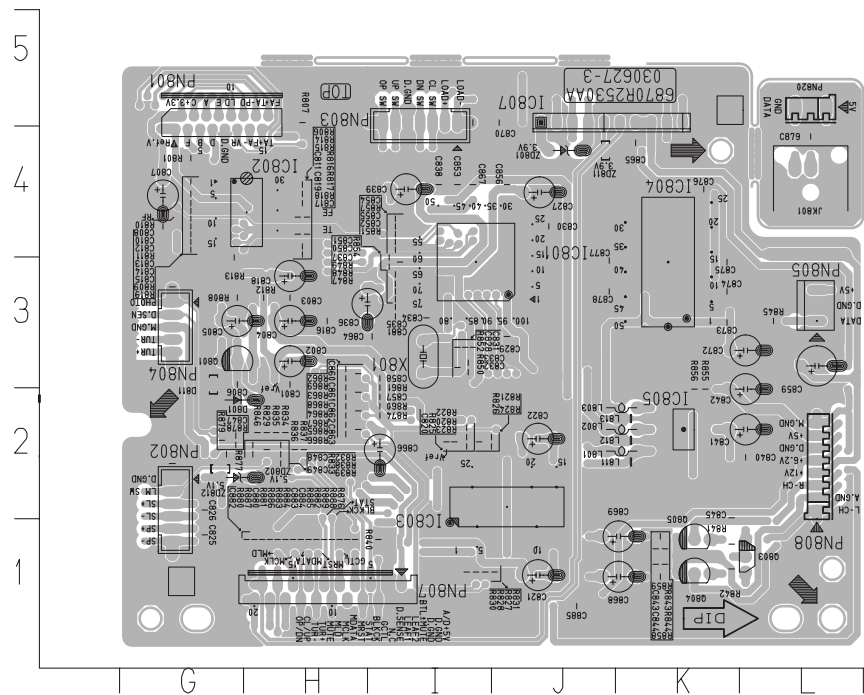
Dubbing(NORMAL or REC // HIGH)



REC (Q252, Q202 ON / R273, R223 High)

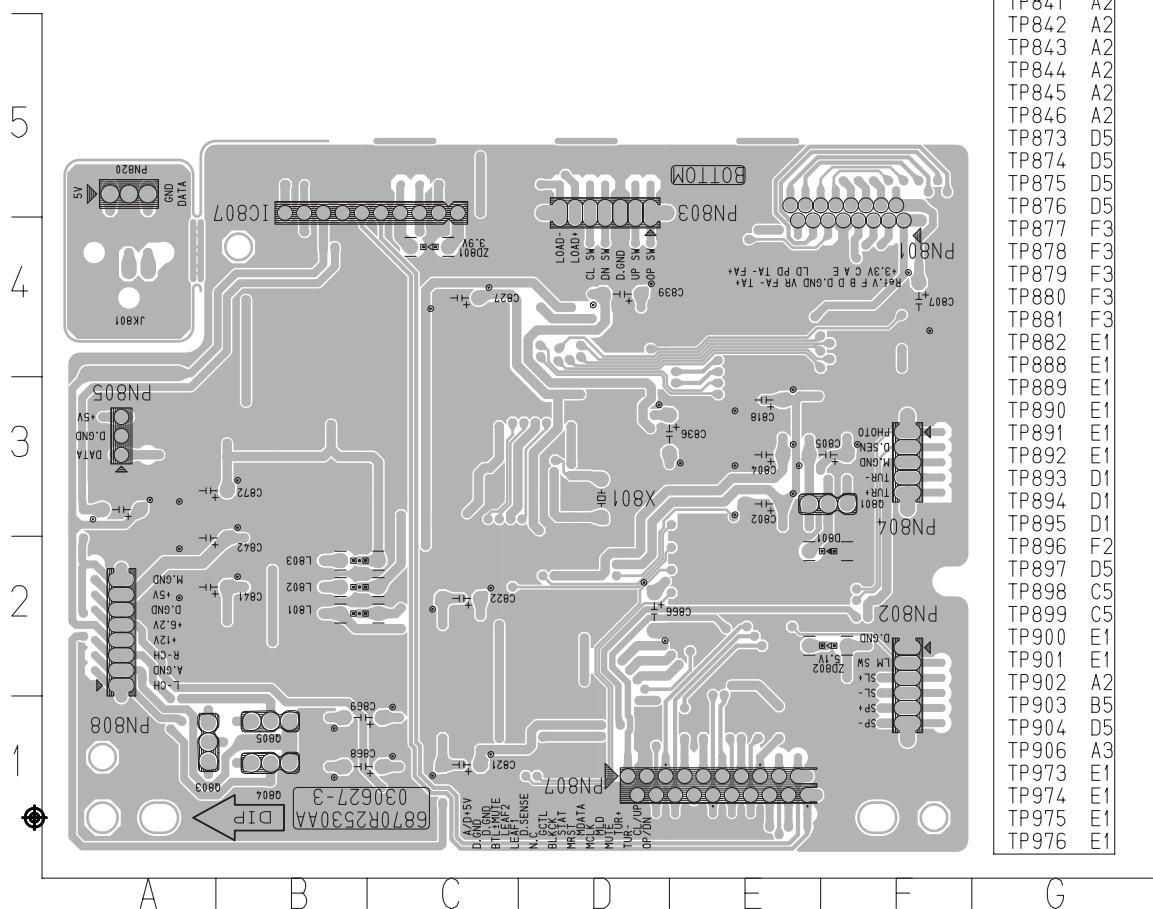


• CD MAIN P.C. BOARD (COMPONENT SIDE)



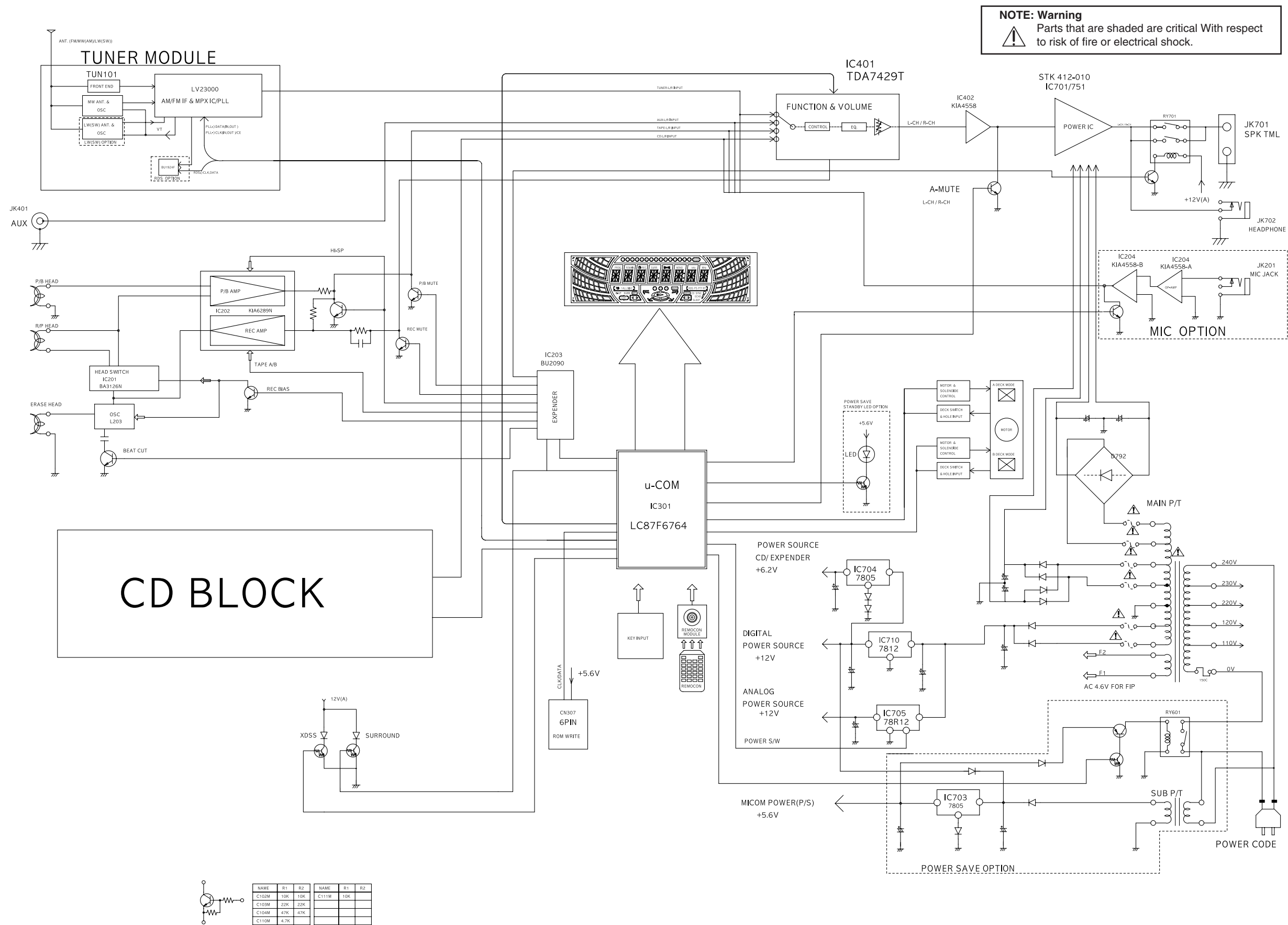
C801	H3	C866	I2	R821	J2	R888	H1	TP917	J4
C802	H3	C867	I4	R822	I2	R889	H1	TP918	K4
C803	H3	C868	K1	R823	I2	TP803	G4	TP919	J4
C804	H3	C869	K1	R824	J2	TP808	H4	TP920	K4
C805	G3	C870	J5	R825	I2	TP822	G3	TP921	K4
C806	G3	C872	L3	R826	I2	TP823	H3	TP922	L3
C807	G4	C873	K3	R827	I1	TP824	G4	TP923	L3
C808	G4	C874	K3	R828	I1	TP825	G4	TP924	L4
C810	G4	C875	K3	R829	H2	TP826	G4	TP925	L4
C811	H4	C876	K4	R830	I1	TP827	G4	TP926	L4
C812	G4	C877	J3	R831	J1	TP828	G4	TP927	K4
C813	G4	C878	J3	R832	H2	TP829	G4	TP928	K4
C814	G4	C879	L4	R833	H2	TP830	H2	TP929	K4
C815	G4	C880	H1	R834	H2	TP831	H2	TP930	K4
C816	H3	C881	I3	R835	H2	TP832	H1	TP931	J3
C817	H4	C882	H1	R836	H2	TP833	H2	TP933	K4
C818	H3	C883	H1	R837	H2	TP836	H1	TP934	J4
C819	H4	C884	H1	R838	H2	TP837	G4	TP935	J4
C820	I2	C885	J1	R839	H2	TP838	G3	TP936	J4
C821	J1	D801	G2	R840	I1	TP839	H4	TP937	I4
C822	J2	D811	G3	R841	K1	TP847	H4	TP938	I4
C825	G1	IC801	I3	R842	K1	TP848	H4	TP939	J4
C826	G2	IC802	H4	R843	K1	TP849	I2	TP940	I4
C827	J4	IC803	J2	R844	K1	TP850	H3	TP941	I4
C828	I3	IC804	K3	R845	L3	TP851	I3	TP942	I4
C829	J3	IC805	K2	R846	H2	TP852	H4	TP943	I4
C830	J4	IC807	J5	R847	I3	TP853	H4	TP944	I4
C831	I3	L801	K2	R848	H3	TP854	G3	TP945	I4
C832	I3	L802	K2	R849	I3	TP855	G3	TP946	I3
C833	I3	L803	K2	R850	I3	TP856	G3	TP948	J1
C834	I3	L811	K2	R851	I4	TP857	G3	TP950	J1
C835	I3	L812	K2	R852	I3	TP858	G3	TP951	I4
C836	I3	L813	K2	R853	I3	TP859	G4	TP952	I3
C837	I3	PN801	J2	R854	K2	TP860	J2	TP953	I3
C838	I4	PN802	G2	R855	K2	TP861	I2	TP954	I3
C839	I4	PN803	I5	R856	I4	TP862	H2	TP956	K1
C840	L2	PN804	G3	R857	K1	TP863	H2	TP957	K1
C841	L2	PN805	L3	R858	K1	TP864	I2	TP958	I3
C842	L2	PN807	I1	R859	I2	TP865	I2	TP959	I3
C843	K1	PN820	L1	R860	I2	TP866	I2	TP960	J3
C845	K2	Q801	G3	R861	I2	TP867	I2	TP961	J3
C847	G2	Q803	L1	R862	H3	TP868	I2	TP962	K3
C848	H2	Q804	K1	R863	H2	TP869	I1	TP963	J3
C849	H2	Q805	K1	R864	H2	TP870	I1	TP964	J3
C850	I3	R801	G4	R865	H2	TP871	I1	TP965	K3
C851	I3	R806	H4	R866	H2	TP872	I1	TP966	J3
C852	I4	R807	H5	R867	H2	TP884	I3	TP967	J3
C853	I4	R808	G3	R868	H3	TP885	K1	TP968	K3
C854	I4	R809	G4	R869	H3	TP874	I2	TP969	J3
C855	I4	R810	G4	R870	H1	TP887	K1	TP970	K3
C856	J4	R811	G4	R871	G2	TP905	G4	TP971	J3
C857	I2	R812	H3	R872	G2	TP907	L3	TP972	I3
C858	I3	R813	G3	R873	G2	TP908	K3	TP977	G2
C859	L3	R814	H4	R874	H1	TP909	J3	TP978	H4
C860	H3	R815	H4	R875	H1	TP910	J3	TP979	H4
C861	H2	R816	H4	R876	H1	TP911	J3	X801	I3
C862	H2	R817	H4	R877	H1	TP912	J3	ZD801	J4
C863	H2	R818	H4	R878	H1	TP913	K4	ZD802	G2
C864	I3	R819	G4	R879	H1	TP914	J4	ZD811	J4
C865	K4	R820	I2	R880	H1	TP915	K4	ZD812	G2
				R887	H1	TP916	K4		

• **CD MAIN P.C. BOARD (SOLDER SIDE)**



TP801	F4
TP802	F5
TP804	F5
TP805	F4
TP806	F5
TP807	F4
TP809	F4
TP810	F5
TP811	E4
TP812	E5
TP813	E4
TP814	E5
TP815	F1
TP816	F1
TP817	F2
TP818	F2
TP819	F5
TP820	F4
TP821	F5
TP834	E1
TP835	E1
TP840	A2
TP841	A2
TP842	A2
TP843	A2
TP844	A2
TP845	A2
TP846	A2
TP873	D5
TP874	D5
TP875	D5
TP876	D5
TP877	F3
TP878	F3
TP879	F3
TP880	F3
TP881	F3
TP882	E1
TP888	E1
TP889	E1
TP890	E1
TP891	E1
TP892	E1
TP893	D1
TP894	D1
TP895	D1
TP896	F2
TP897	D5
TP898	C5
TP899	C5
TP900	E1
TP901	E1
TP902	A2
TP903	B5
TP904	D5
TP906	A3
TP973	E1
TP974	E1
TP975	E1
TP976	E1

BLOCK DIAGRAM

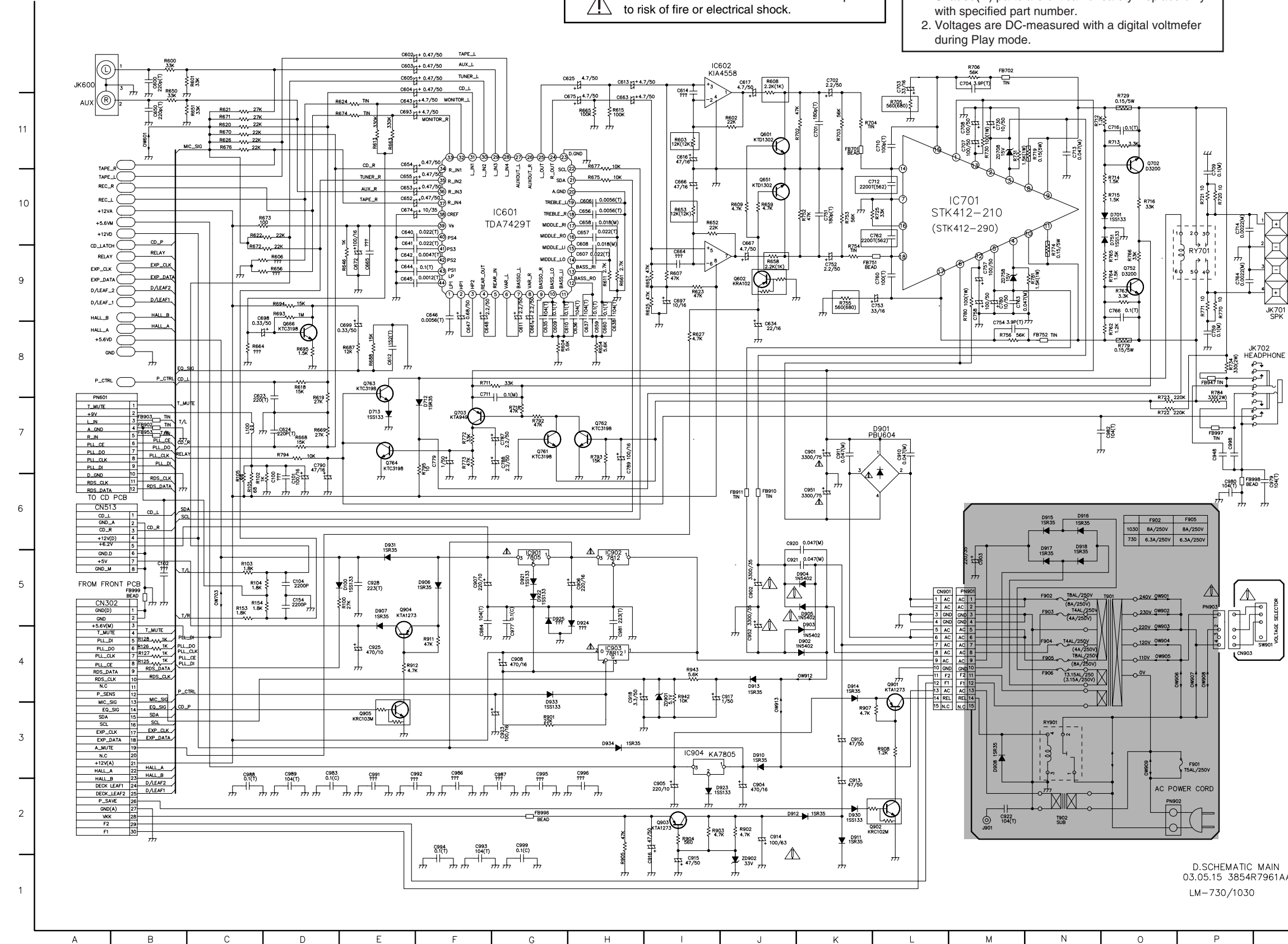


SCHEMATIC DIAGRAMS

MAIN SCHEMATIC DIAGRAM

NOTE: Warning
Parts that are shaded are critical With respect to risk of fire or electrical shock.

NOTE:
1. Shaded(■) parts are critical for safety. Replace only with specified part number.
2. Voltages are DC-measured with a digital voltmeter during Play mode.

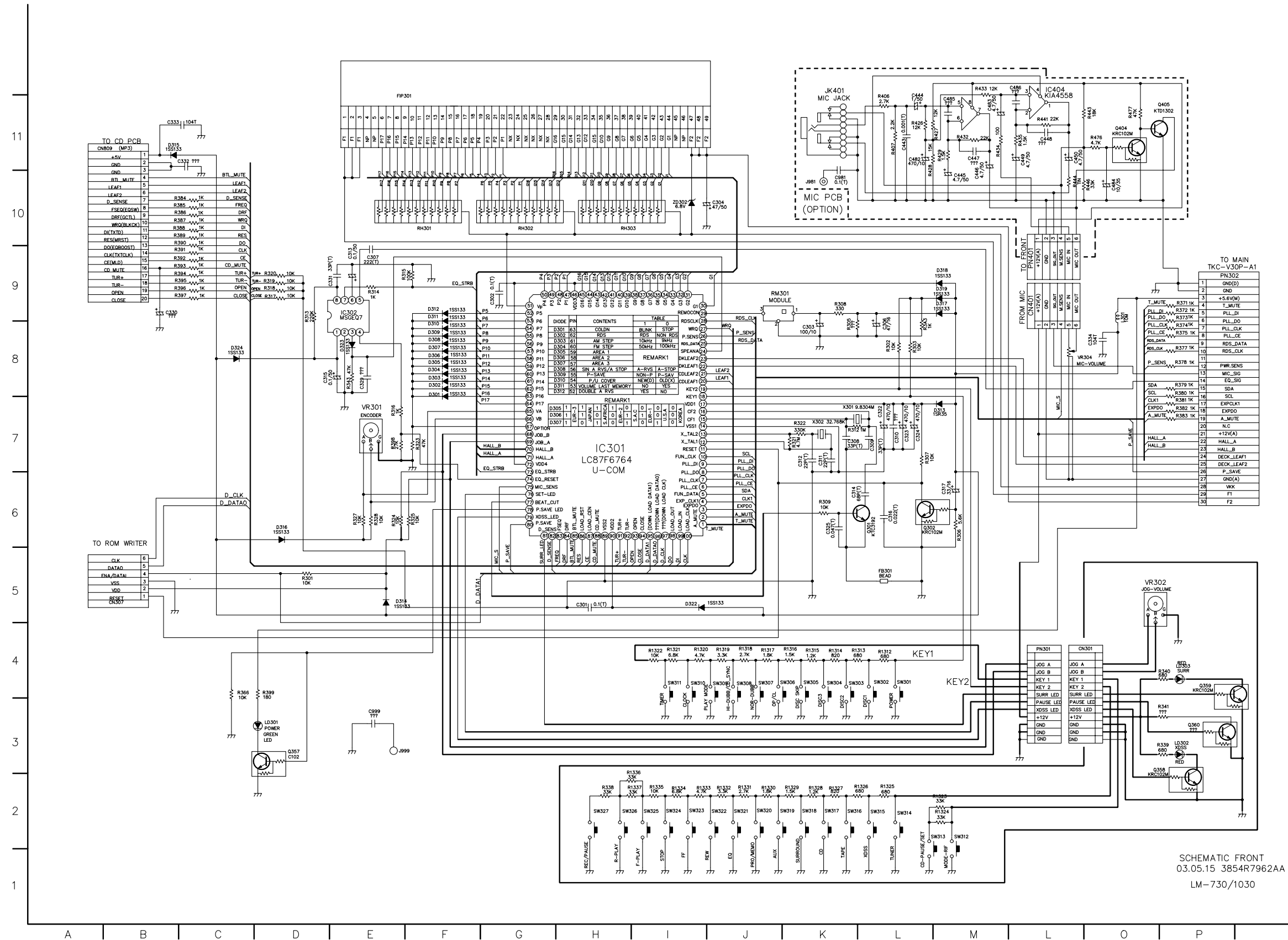


LOCATION GUIDE

C100	D6	C922	M2	Q666	D8	R774	N9
C101	D6	C923	G3	Q702	O11	R779	O8
C102	B5	C925	E4	Q703	F7	R780	M9
C104	D5	C928	E5	Q752	O9	R781	N9
C154	D5	C948	P7	Q761	G7	R784	P8
C600	B12	C951	K6	Q762	H7	R792	G7
C602	E12	C952	J4	Q763	E8	R793	H7
C603	E12	C977	G4	Q764	E7	R794	D7
C604	E12	C979	Q6	Q901	L4	R795	F6
C605	E12	C980	P6	Q902	K2	R901	G3
C606	H10	C981	H4	Q903	I2	R902	J2
C607	H9	C982	O7	Q904	I5	R903	O2
C608	H9	C983	D3	Q905	E3	R904	I2
C609	G8	C984	F4	R100	E5	R905	H1
C610	H8	C986	F3	R101	C6	R907	K3
C611	G8	C987	G3	R102	C6	R908	L3
C612	E8	C988	C3	R103	C5	R911	F4
C613	H12	C989	D3	R104	C5	R912	E4
C614	I12	C991	C3	R105	C6	R942	I4
C616	I1	C992	E3	R125	B4	R943	I4
C617	J12	C993	F2	R126	B4	RELAY	A9
C623	C8	C994	F2	R127	B4	RELAY	B9
C624	D7	C995	G3	R128	B4	RELAY	P7
C625	G12	C996	H3	R153	C5	RY701	B9
C634	J8	C998	P7	R154	C5	RY901	N3
C635	G8	C999	G2	R600	B12	SW901	O4
C636	H8	CN302	A5	R601	C12	R901	O5
C637	H8	CN513	A6	R602	J11	T902	N2
C638	H8	CN501	L5	R603	I11	ZD708	M11
C640	E10	CN903	P4	R604	G8	ZD758	M9
C641	E10	D100	E5	R606	D9	ZD901	I3
C642	E9	D701	O10	R607	I9	ZD902	J1
C643	E11	D712	F7	R608	J12		
C644	E9	D713	E7	R609	J10		
C645	E9	D751	O10	R611	H9		
C646	F9	D901	L7	R613	E11		
C647	F8	D902	K4	R615	H11		
C648	F8	D903	K4	R618	D8		
C650	B11	D904	K5	R619	D7		
C652	E10	D905	K5	R620	C11		
C653	E10	D906	F5	R621	C11		
C654	E11	D907	E5	R622	C10		
C655	E10	D908	M3	R623	I9		
C656	E10	D910	H10	R624	D11		
C657	H10	D911	K2	R625	I9		
C658	H10	D912	J2	R626	C11		
C659	H8	D913	J4	R627	I8		
C660	H8	D914	K4	R646	E9		
C661	G8	D915	N6	R650	B12		
C663	H11	D916	N6	R651	C11		
C664	I9	D917	N6	R652	H10		
C665	E9	D918	N6	R653	H10		
C666	I10	D921	G5	R654	H8		
C667	J10	D922	G5	R656	D9		
C672	E9	D923	I2	R657	I9		
C674	E10	D924	H5	R658	I9		
C675	G11	D925	G5	R659	J10		
C693	E11	D930	K2	R661	H9		
C697	I9	D931	E6	R663	E11		
C698	I9	D933	G3	R664	C8		
C699	E8	D934	H3	R665	H11		
C701	K11	F901	P3	R668	D7		
C702	K12	F902	N5	R669	D7		
C703	L12	F903	N5	R670	C11		
C704	M12	F904	N4	R671	C11		
C707	M11	F905	N4	R672	C9		
C708	M11	F906	N4	R673	C10		
C709	L10	F907	K11	R674	D11		
C710	L11	F908	M12	R675	H10		
C711	F8	F909	K9	R676	C11		
C712	K10	F910	N8	R677	H11		
C713	N11	F911	B7	R678	E8		
C714	P10	F912	B7	R688	E8		
C716	O11	F913	J6	R693	D9		
C730	M11	F914	J6	R694	D9		
C751	K10	F915	P8	R695	D8		
C752	K9	F916	P7	R702	K11		
C753	K8	F917	G2	R703	K11		
C754	M9	F918	P7	R704	K11		
C757	M9	F919	P6	R705	L11		
C758	M9	F920	B5	R706	M12		
C759	P8	F921	G10	R711	F8		
C760	L9	F922	I12	R712	N11		
C762	K10	F923	M10	R713	O11		
C763	M9	F924	G5	R714	O10		
C764	P9	F925	H5	R715	O10		
C766	O9	F926	H4	R716	O10		
C779	F7	F927	I3	R718	G7		
C780	M9	F928	M2	R719	N11		
C787	G7	F929	A12	R720	P10		
C788	G7	F930	O9	R721	P10		
C789	H7	F931	P8	R722	O7		
C790	H7	F932	B11	R723	O7		
C901	K7	F933	C5	R725	L10		
C902	J5	F934	O5	R726	O11		
C903	M5	F935	O5	R727	O11		
C904	J2	F936	O4	R728	M11		
C905	I2	F937	O4	R729	P8		
C906	H5	F938	O4	R730	K10		
C907	F5	F939	P4	R731	K10		
C908	F4	F940	P4	R732	K9		
C910	L7	F941	P4	R733	K9		
C911	K7	F942	O3	R734	M8		
C912	K3	F943	K4	R735	O8		
C913	K2	F944	J3	R736	O9		
C914	J2	F945	A7	R737	O9		
C915	I1	F946	M2	R738	O9		
C916	I1	F947	O2	R739	O9		
C917	H4	F948	P5	R740	P9		
C918	J3	F949	J1	R741	P9		
C920	J6	F950	J9	R742	F7		
C921	J5	F951	J10	R743	F7		

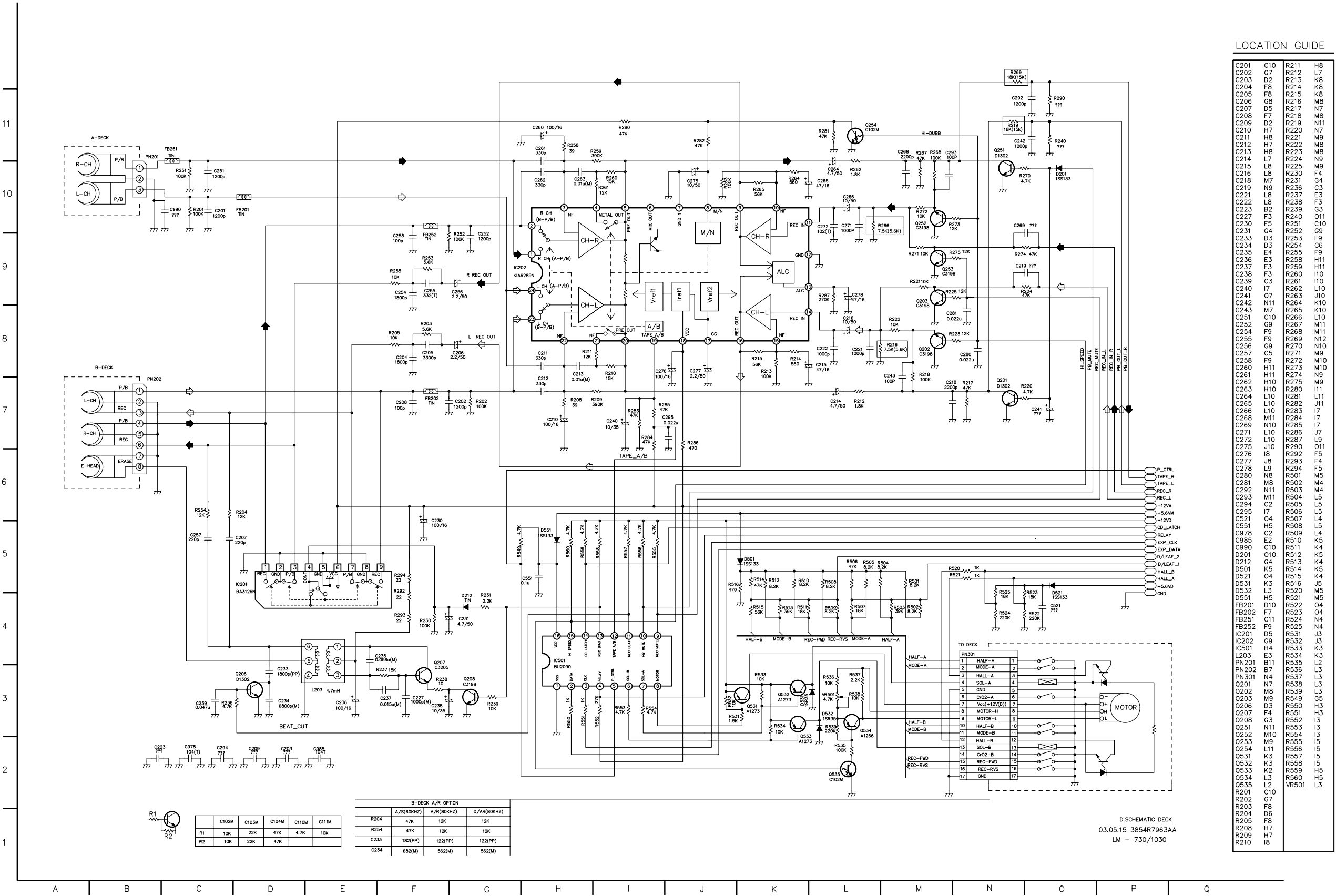
D.SCHEMATIC MAIN
03.05.15 3854R7961AA
LM-730/1030

- **FRONT SCHEMATIC DIAGRAM**



LOCATION GUIDE					
C301	H5	R1332	J2	SW326	H2
C302	G9	R1333	J2	SW327	H2
C303	K8	R1334	I2	VR301	E7
C304	J10	R1335	I2	VR302	O5
C306	L8	R1336	H2	VR304	N8
C307	E9	R1337	H2	X101	K7
C308	K7	R301	D5	X302	I7
C310	L7	R302	D5	ZD302	K10
C310	L7	R303	L8		
C311	K7	R305	K8		
C312	K7	R306	M6		
C313	E9	R307	L7		
C314	K6	R308	K9		
C315	D8	R309	K6		
C316	L6	R312	K7		
C317	M6	R313	D8		
C322	L7	R314	E9		
C323	L7	R315	F9		
C324	L7	R316	E7		
C325	K6	R325	D9		
C329	E8	R318	D9		
C330	B9	R319	D9		
C331	E9	R320	D9		
C332	B11	R323	K7		
C333	B11	R324	L7		
C334	D8	R323	F7		
C443	L11	R324	E6		
C444	L11	R325	F6		
C445	M10	R327	E6		
C446	M10	R328	E6		
C447	H11	R328	H2		
C448	N11	R339	O3		
C449	N11	R340	O4		
C450	N11	R341	O3		
C482	L11	R343	E8		
C483	M11	R366	O4		
C484	O10	R371	P9		
C485	M11	R372	P9		
C486	N12	R373	P9		
C981	K10	R374	P8		
C999	E5	R375	P8		
CN301	N4	R376	P8		
CN307	B3	R378	P8		
CN401	N9	R379	P8		
CN809	A11	R380	P8		
D301	F8	R381	P7		
D302	F8	R382	P7		
D303	F9	R383	P7		
D304	F8	R384	B10		
D305	F8	R385	B10		
D306	F8	R386	B10		
D307	F8	R387	B10		
D308	F8	R388	B10		
D309	F9	R389	B10		
D310	F8	R390	B10		
D311	F9	R391	B9		
D312	F9	R392	B9		
D313	M7	R393	B9		
D314	E5	R394	B9		
D315	B11	R395	B9		
D316	D6	R396	B9		
D317	M9	R397	B9		
D318	M9	R398	E7		
D319	M9	R399	D4		
D322	I5	R403	L8		
D323	E8	R406	L11		
D324	C8	R407	L11		
FB301	L5	R426	L11		
FIP301	E11	R427	M11		
IC301	H7	R428	L10		
IC302	E9	R429	M11		
IC404	N12	R432	M11		
J981	K10	R433	M12		
J999	E3	R434	M11		
JK401	K12	R435	N11		
L301	O8	R441	N11		
LD301	D3	R443	O10		
LD302	P3	R444	N10		
LD303	P4	R446	O10		
PN301	N4	R476	O11		
PN302	P9	R477	O11		
PN401	N9	R481	F10		
Q301	L6	R3502	G10		
Q302	L6	RH303	H10		
Q357	D3	RM301	J9		
Q358	O3	SW301	L4		
Q359	P4	SW302	L4		
Q360	P3	SW303	L4		
Q404	O11	SW304	K4		
Q405	O11	SW305	K4		
R1312	L4	SW306	J4		
R1313	K4	SW307	J4		
R1314	K4	SW308	J4		
R1315	K4	SW309	J4		
R1316	K4	SW310	I4		
R1317	J4	SW311	I4		
R1318	J4	SW312	M2		
R1319	J4	SW313	L2		

• TUNER/DECK SCHEMATIC DIAGRAM

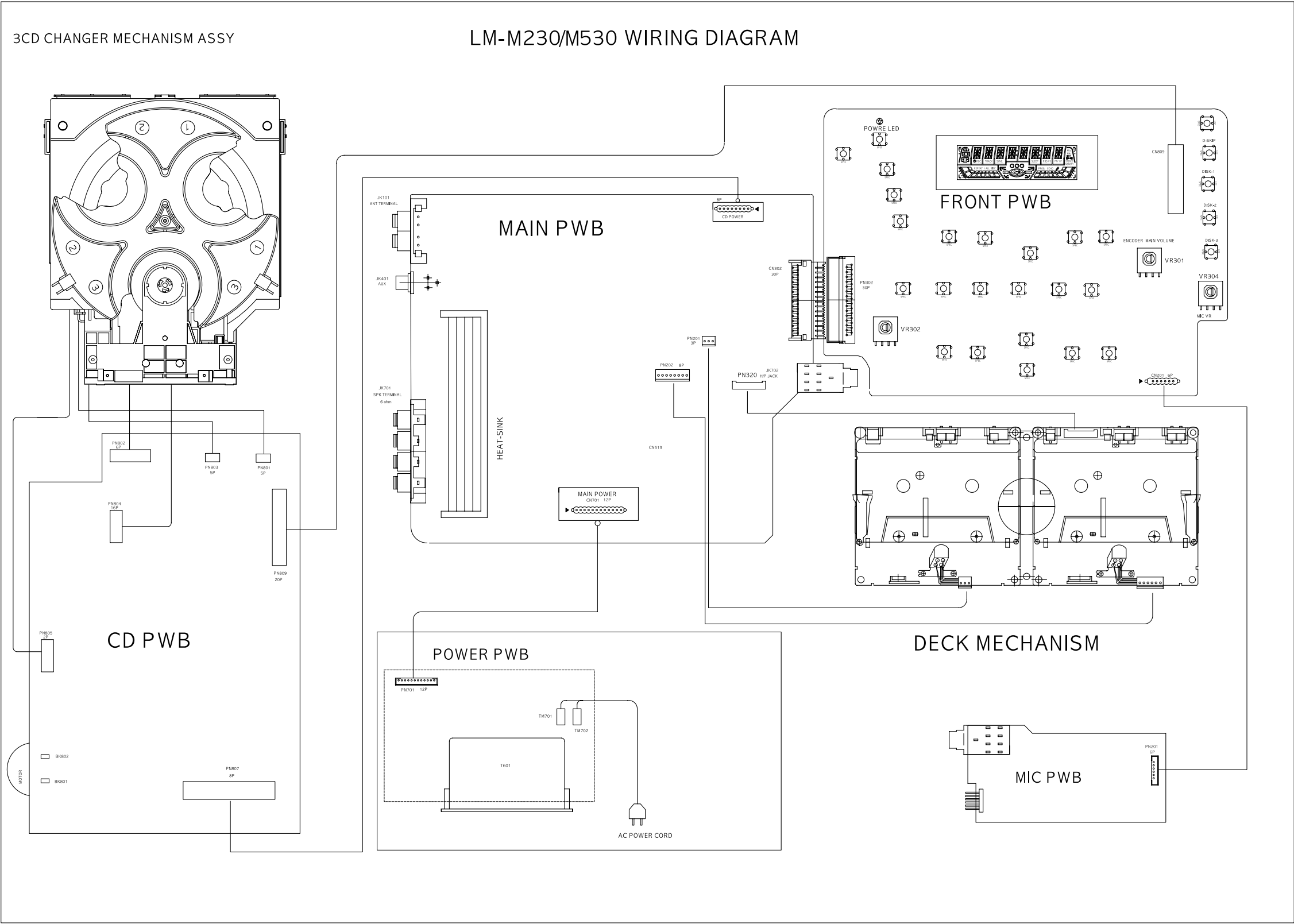


LOCATION GUIDE

C201	C10	R211	H8
C202	G7	R212	L7
C203	D2	R213	K8
C204	F8	R214	K8
C205	F8	R215	K8
C206	G8	R216	M8
C207	D5	R217	N7
C208	F7	R218	M8
C209	D2	R219	N11
C210	H7	R220	N7
C211	H8	R221	M9
C212	H7	R222	M8
C213	H8	R223	M8
C214	L7	R224	N9
C215	L8	R225	M9
C216	L8	R230	F4
C218	M7	R231	G4
C219	N9	R236	C3
C221	L8	R237	E3
C222	L8	R238	F3
C223	B2	R239	G3
C227	F3	R240	O11
C230	F5	R251	C10
C231	G4	R252	G9
C233	D3	R253	F9
C234	D3	R254	C6
C235	E4	R255	F9
C236	E3	R258	H11
C237	F3	R259	H11
C238	F3	R260	I10
C239	C3	R261	I10
C240	I7	R262	J10
C241	O7	R263	J10
C242	N11	R264	K10
C243	M7	R265	K10
C251	C10	R266	L10
C252	G9	R267	M11
C254	F9	R268	M11
C255	F9	R269	N12
C256	G9	R270	N10
C257	C5	R271	M9
C258	F9	R272	M10
C260	H11	R273	M10
C261	H11	R274	N9
C262	H10	R275	N9
C263	H10	R280	I11
C264	L10	R281	L11
C265	L10	R282	J11
C266	L10	R283	I7
C268	M11	R284	I7
C269	N10	R285	I7
C271	L10	R286	J7
C272	L10	R287	L9
C275	J10	R290	O11
C276	I8	R292	F5
C277	J8	R293	F4
C278	L9	R294	F5
C280	N8	R501	M5
C281	M8	R502	M4
C292	N11	R503	M4
C293	M11	R504	L5
C294	C2	R505	L5
C295	I7	R506	L5
C521	O4	R507	L4
C551	H5	R508	L5
C978	C2	R509	L4
C985	E2	R510	K5
C990	C10	R511	K4
D201	O10	R512	K5
D212	G4	R513	K4
D501	K5	R514	K5
D521	O4	R515	K4
D531	K3	R516	J5
D532	L3	R520	M5
D551	H5	R521	M5
FB201	D10	R522	O4
FB202	F7	R523	O4
FB251	C11	R524	N4
FB252	F9	R525	N4
IC201	D5	R531	J3
IC202	G9	R532	J3
IC501	H4	R533	K3
L203	E3	R534	K3
PN201	B11	R535	L2
PN202	B7	R536	L3
PN301	N4	R537	L3
Q201	N7	R538	L3
Q202	M8	R539	L3
Q203	M9	R549	G5
Q206	D3	R550	H3
Q207	F4	R551	H3
Q208	G3	R552	I3
Q251	N11	R553	I3
Q252	M10	R554	I3
Q253	M9	R555	I5
Q254	L11	R556	I5
Q531	K3	R557	I5
Q532	K3	R558	I5
Q533	K2	R559	H5
Q534	L3	R560	H5
Q535	L2	VR501	L3
R201	C10		
R202	G7		
R203	F8		
R204	D6		
R205	F8		
R208	H7		
R209	H7		
R210	I8		

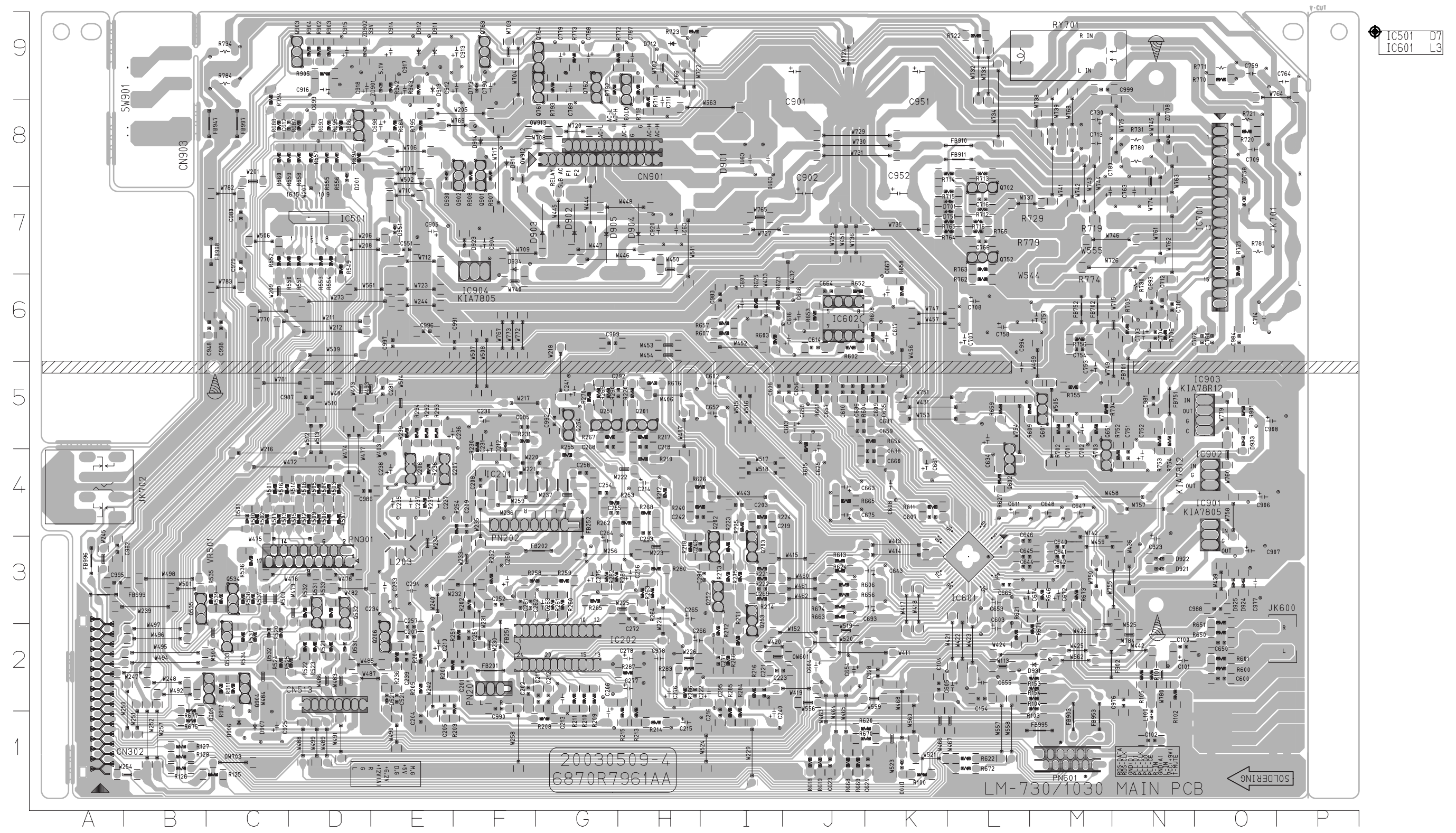
❑ WIRING DIAGRAM

NOTE: Warning
⚠ Parts that are shaded are critical With respect to risk of fire or electrical shock.

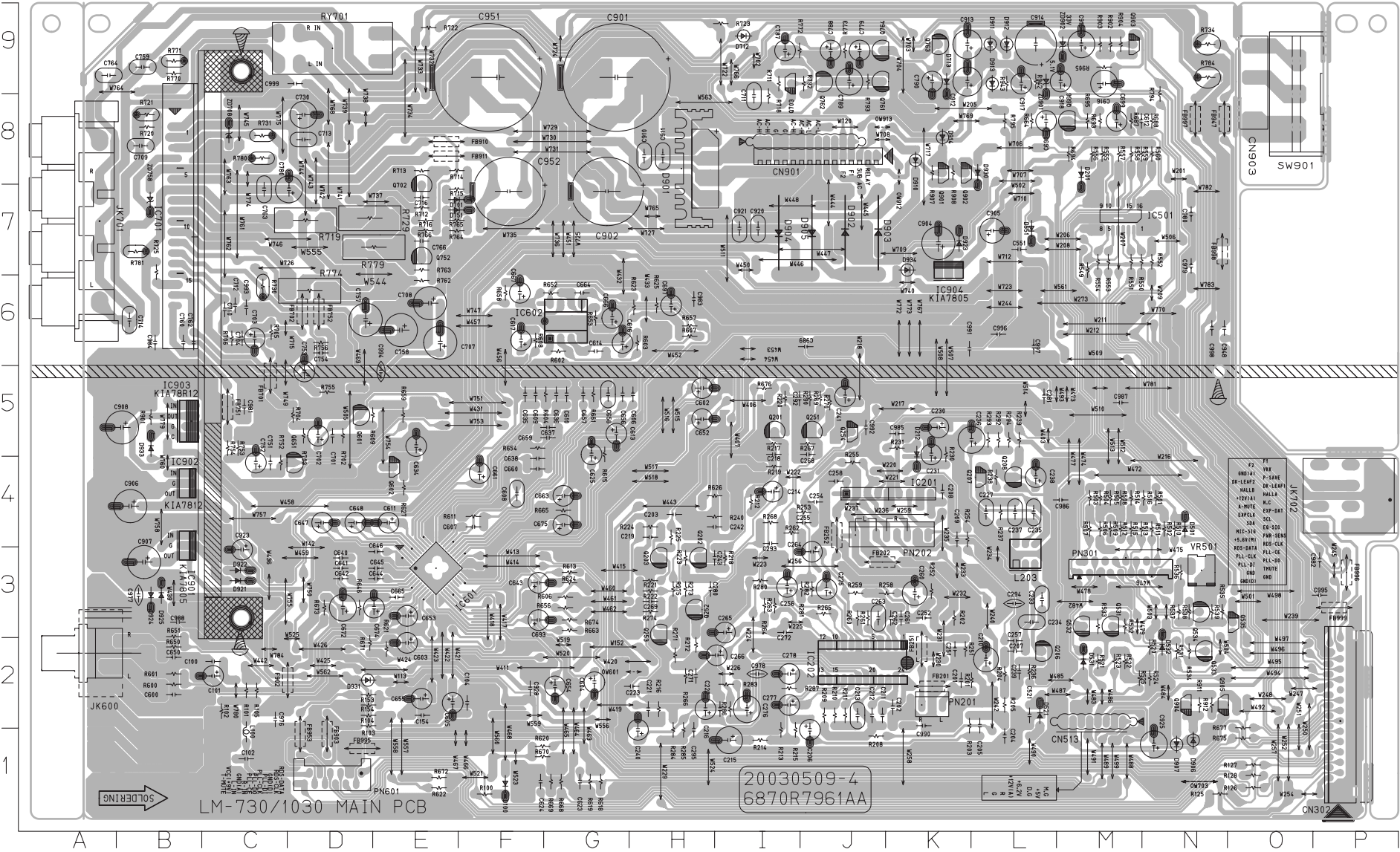


PRINTED CIRCUIT DIAGRAMS

MAIN MIC P.C. BOARD (SOLDER SIDE)

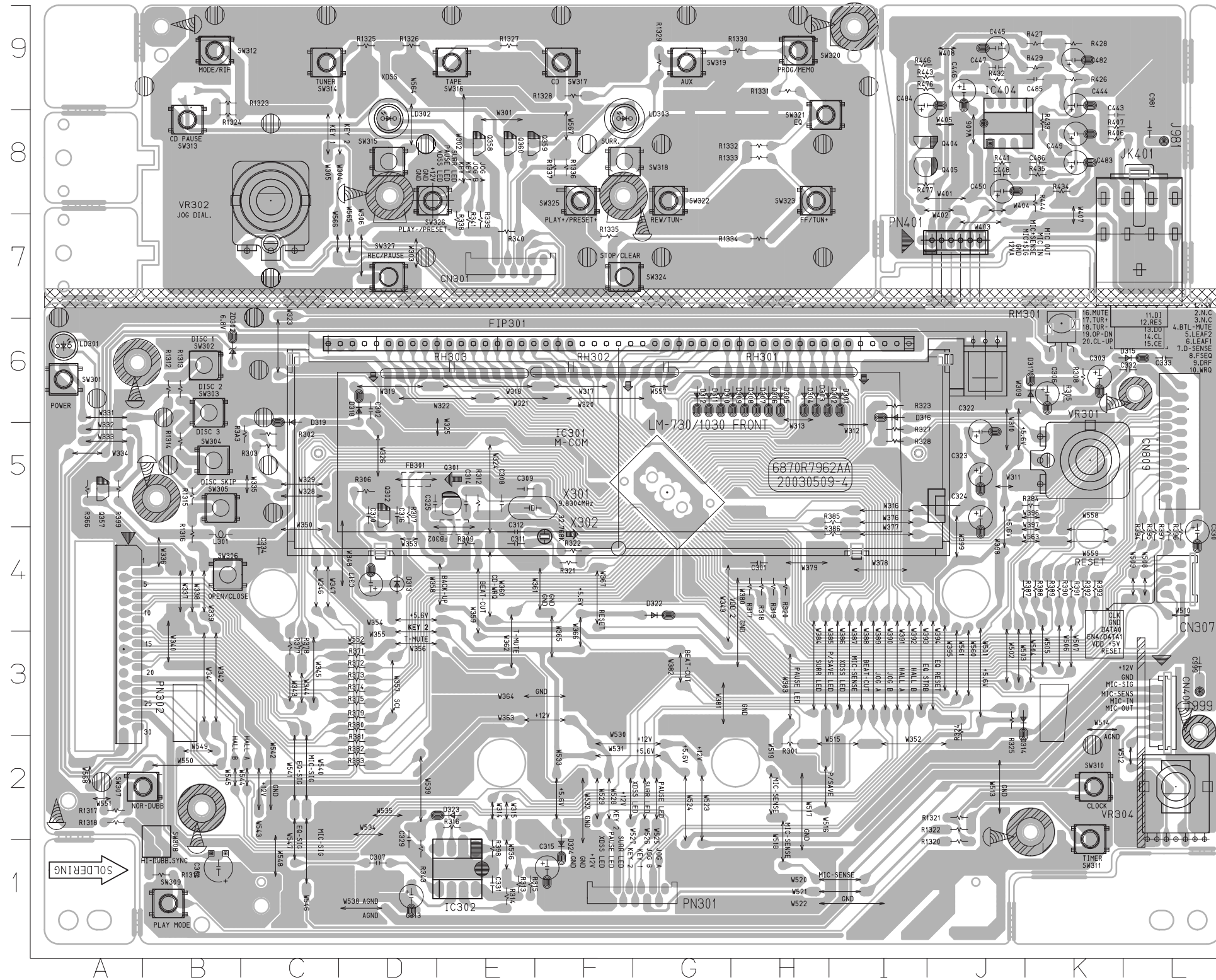


• MAIN MIC P.C. BOARD (COMPONENT SIDE)



C100	C2	C278	I2	C693	F3	C977	B3	FB201	K2	Q761	J9	R263	I3	R554	M7	R705	C6
C101	C2	C280	H3	C697	H6	C978	I2	FB202	J3	Q762	J9	R264	I3	R555	M8	R706	C6
C102	C1	C281	L5	C698	L8	C979	N7	FB251	K2	Q763	K9	R265	J3	R556	M8	R711	18
C104	F2	C292	I5	C699	M8	C980	N7	FB252	J4	Q764	J9	R266	H2	R557	M8	R712	E7
C154	E2	C293	I4	C701	D5	C981	C5	FB701	C5	Q901	K8	R267	J5	R558	M8	R713	E8
C201	K2	C294	L3	C702	D5	C982	P3	FB702	D6	Q902	K8	R268	I4	R559	M8	R714	E8
C202	K2	C295	H1	C703	C6	C983	H6	FB751	C5	Q903	M9	R269	J5	R560	B2	R715	E7
C203	H4	C521	L2	C704	C6	C984	B6	FB752	D6	Q904	N2	R270	J5	R600	B2	R716	E7
C204	L1	C551	L7	C707	E6	C985	K5	FB903	D1	Q905	N2	R271	H2	R601	B2	R718	19
C205	L2	C600	B2	C708	E6	C986	M4	FB910	E8	R100	F1	R272	H2	R602	G6	R719	D7
C206	J1	C602	H5	C709	B8	C987	M5	FB911	E8	R101	C2	R273	H3	R603	H6	R720	B8
C207	L2	C603	E2	C710	C6	C988	B3	FB947	N8	R102	C2	R274	H3	R604	G5	R721	B8
C208	K4	C604	E2	C711	18	C989	J6	FB953	D1	R103	D2	R275	H3	R606	G3	R722	E9
C209	K4	C605	E2	C712	C6	C990	K2	FB995	D1	R104	D2	R280	I3	R607	H6	R723	19
C210	L2	C606	H5	C713	D8	C991	K6	FB996	P3	R105	C2	R281	J3	R608	F6	R725	B7
C211	J2	C607	F4	C714	B6	C992	J5	FB997	N8	R125	N1	R282	J3	R609	E5	R729	D7
C212	J2	C608	F4	C716	E7	C993	C6	FB998	N7	R126	O1	R283	I2	R611	F4	R730	C6
C213	J2	C609	F5	C730	D8	C994	E5	FB999	P3	R127	O1	R284	H1	R613	G3	R731	C8
C214	I4	C610	G5	C751	C4	C995	P3	IC201	J4	R128	O1	R285	H1	R615	G5	R734	N9
C215	I1	C611	E4	C752	C4	C996	L6	IC202	K2	R153	D2	R286	I2	R618	G1	R752	C4
C216	H2	C612	M8	C753	D5	C997	L6	IC602	G6	R154	D2	R287	I2	R619	G1	R753	C5
C218	I5	C613	G5	C754	D6	C998	N6	IC701	B7	R201	L2	R290	J5	R620	F1	R754	C5
C219	H4	C614	G6	C757	D6	C999	D9	IC901	B4	R202	K3	R292	L5	R621	E2	R755	D5
C221	H2	C616	G6	C758	E6	CN302	P2	IC902	B4	R203	K2	R293	L5	R622	E1	R756	D6
C222	I2	C617	F6	C759	B9	CN513	M2	IC903	B5	R204	L2	R294	L5	R623	H6	R762	E6
C223	H2	C623	G1	C760	B6	CN901	I8	IC904	K7	R205	L2	R501	N4	R624	G3	R763	E7
C227	L4	C624	F1	C762	B6	CN903	O9	JK600	A2	R208	J1	R502	N4	R625	H6	R764	E7
C230	K5	C625	G5	C763	C7	D100	F1	JK701	A7	R209	J2	R503	M4	R626	I4	R765	E7
C231	K5	C634	E5	C764	A9	D201	M8	JK702	P4	R210	J2	R504	M4	R627	E4	R766	E7
C233	L3	C635	F5	C766	E7	D212	K5	L100	C1	R211	J2	R505	M4	R646	D3	R770	B9
C234	L3	C636	G5	C779	J9	D501	N4	L203	L3	R212	I4	R506	M4	R650	B2	R771	B9
C235	L4	C637	G5	C780	D7	D521	L2	OW601	H2	R213	I1	R507	M4	R651	B3	R772	19
C236	L5	C638	F4	C787	I9	D531	M2	OW703	N1	R214	I1	R508	M4	R652	G6	R773	J9
C237	L4	C640	D3	C788	J9	D532	N2	OW912	K8	R215	I1	R509	M4	R653	G6	R774	D6
C238	L4	C641	D3	C789	J9	D551	L7	OW913	J8	R216	H2	R510	N4	R654	F5	R779	E7
C239	L2	C642	D3	C790	K9	D701	E7	PN201	K2	R217	I5	R511	N4	R656	G3	R780	C8
C240	H1	C643	F3	C901	G9	D712	I9	PN202	J4	R218	I3	R512	M4	R657	H6	R781	B7
C241	J5	C644	E3	C902	G7	D713	K9	PN301	M3	R219	I4	R513	M4	R658	F6	R784	N9
C242	I4	C645	E3	C904	K7	D751	E7	PN601	D1	R220	I5	R514	M4	R659	E5	R792	J9
C243	I3	C646	E3	C905	L7	D901	H8	Q201	I5	R221	H3	R515	M4	R661	G5	R793	J9
C251	K2	C647	D4	C906	B4	D902	J7	Q202	H3	R222	H3	R516	N4	R663	G3	R794	N8
C252	K3	C648	D4	C907	B3	D903	J7	Q203	H3	R223	H3	R520	N2	R664	L8	R795	L8
C254	J4	C650	B2	C908	B5	D904	I7	Q206	L2	R224	H4	R521	M2	R665	G4	R901	B5
C255	J4	C652	H5	C910	H8	D905	J7	Q207	L4	R225	H4	R522	M2	R668	G1	R902	M9
C256	I3	C653	E3	C911	H8	D906	N1	Q208	L4	R230	K5	R523	M2	R669	G1	R903	M9
C257	L2	C654	E2	C912	K9	D907	N1	Q251	J5	R231	K5	R524	N2	R670	F1	R904	M9
C258	J4	C655	E2	C913	K9	D910	K8	Q252	H3	R236	L2	R525	M2	R671	D2	R905	M9
C260	K3	C656	G5	C914	L9	D911	L9	Q253	H3	R237	L4	R531	N2	R672	E1	R907	K8
C261	K3	C657	G5	C915	M9	D912	L9	Q254	J5	R238	L4	R532	M3	R673	D3	R908	K8
C262	K3	C658	G5	C916	M9	D913	L9	Q531	M3	R239	L5	R533	M3	R674	G3	R911	N2
C263	J3	C659	G5	C917	L9	D914	K8	Q532	M3	R240	I4	R534	N2	R675	O1	R912	N2
C264	J3	C660	F4	C918	M9	D921	C3	Q533	N2	R251	K2	R535	N3	R676	I5	R942	L9
C265	I3	C661	F4	C920	I7	D922	C3	Q534	N3	R252	K3	R536	N3	R677	O2	R943	L9
C266	I2	C663	G4	C921	I7	D923	K7	Q535	O3	R253	J4	R537	N3	R687	M8	RY701	D9
C268	H5	C664	G6	C923	C3	D924	B3	Q601	D5	R254	K4	R538	N3	R688	N8	SW901	O8
C269	J3	C665	E3	C925	N1	D925	B3	Q602	E4	R255	J4	R539	N3	R693	M8	VR501	N3
C271	H2	C666	G6	C928	F2	D930	L8	Q651	D4	R258	K3	R549	M7	R694	M8	ZD708	C8
C272	I3	C667	F6	C948	N6	D931	D2	Q666	M8	R259	J3	R550	M7	R695	M8	ZD758	B7
C275	J3	C672	D3	C951	F9	D933	B5	Q702	E7	R260	J3	R551	M7	R702	D5	ZD901	L9
C276	I2	C674	E3	C952	F7	D934	K7	Q703	I9	R261	J3	R552	N7	R703	D5	ZD902	M9
C277	I2	C675	G4	C976	C2	F902	D2	Q752	E7	R262	I4	R553	M7	R704	D5		

• FRONT P.C. BOARD(COMPONENT SIDE)

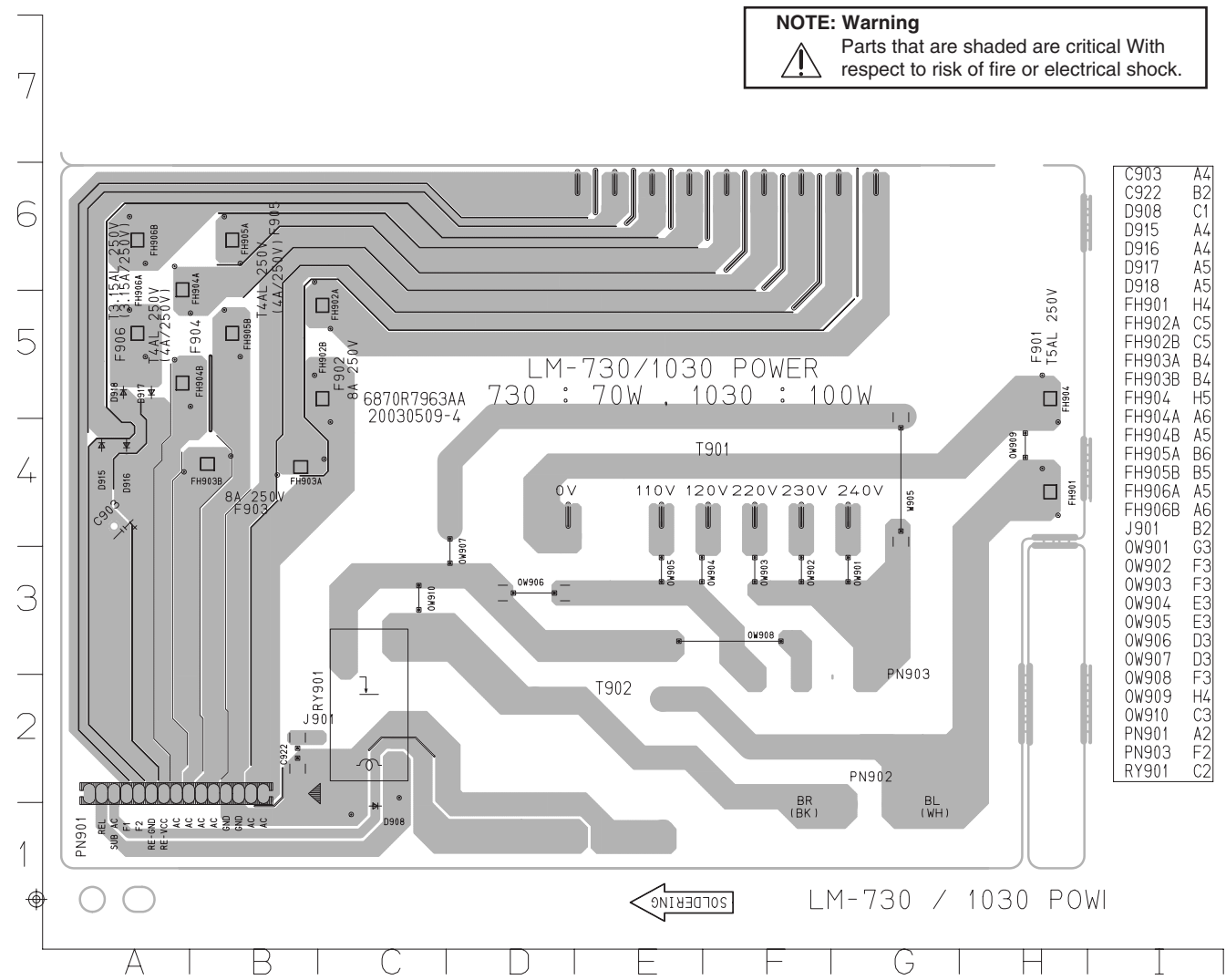


C301	H4	D313	D4	R1336	F8	R397	L4
C302	D6	D314	J3	R1337	F8	R398	E1
C303	K6	D315	L6	R301	H2	R399	A5
C304	B1	D316	I6	R302	C5	R3A3	C5
C306	K6	D317	K6	R303	C5	R406	K8
C307	D1	D318	D6	R305	K6	R407	K8
C308	E5	D319	C5	R306	D5	R426	K9
C309	E5	D322	G4	R307	D5	R427	K9
C310	D5	D323	E2	R308	K6	R428	K9
C311	E4	D324	F1	R309	E4	R429	K9
C312	E4	FB301	D5	R312	E5	R432	J9
C313	D1	FB302	E4	R313	E1	R433	K8
C314	E5	FIP301	F6	R314	E1	R434	K8
C315	F1	IC302	E1	R315	E1	R435	K8
C316	D5	IC404	J8	R316	E2	R441	J8
C317	D4	J981	L8	R317	H4	R443	I9
C322	J5	J999	L3	R318	H4	R444	K8
C323	J5	JK401	L7	R319	H4	R446	I9
C324	J5	L301	B4	R320	H4	R476	I9
C325	D5	LD301	A6	R321	F4	R477	I8
C329	D2	LD302	D8	R322	F4	RH301	G6
C330	L4	LD303	F8	R323	I6	RH302	F6
C331	E1	PN301	G1	R324	J3	RH303	D6
C332	L6	PN302	A3	R325	J3	RM301	K6
C333	L6	PN401	J7	R327	I5	SW301	A6
C334	C4	Q301	E5	R328	I5	SW302	B6
C443	K8	Q302	D5	R338	E7	SW303	B6
C444	K9	Q357	A5	R339	E7	SW304	B5
C445	J9	Q358	E8	R340	E7	SW305	B5
C446	J9	Q359	E8	R341	E7	SW306	B4
C447	J9	Q360	E8	R343	D1	SW307	B2
C448	J8	Q404	I8	R366	A5	SW308	B1
C449	K8	Q405	I8	R371	D3	SW309	B1
C450	J8	R1312	B6	R372	D3	SW310	K2
C482	K9	R1313	B6	R373	D3	SW311	K2
C483	K8	R1314	B5	R374	D3	SW312	B9
C484	I9	R1315	B5	R375	D3	SW313	B8
C485	K9	R1316	B4	R377	C3	SW314	C9
C486	K8	R1317	A2	R378	C3	SW315	D8
C981	L8	R1318	A2	R379	D3	SW316	E9
C999	L3	R1319	B1	R380	D3	SW317	F9
CN301	F7	R1320	J1	R381	D2	SW318	F8
CN307	L4	R1321	J2	R382	D2	SW319	G9
CN401	L3	R1322	J2	R383	D2	SW320	H9
CN809	L5	R1323	B9	R384	K5	SW321	H8
D301	I6	R1324	B8	R385	I5	SW322	G8
D302	H6	R1325	D9	R386	I4	SW323	H8
D303	H6	R1326	D9	R387	J4	SW324	F7
D304	H6	R1327	E9	R388	K4	SW325	F8
D305	H6	R1328	F9	R389	K4	SW326	D8
D306	H6	R1329	G9	R390	K4	SW327	D7
D307	H6	R1330	H9	R391	K4	VR301	K5
D308	H6	R1331	H9	R392	K4	VR302	C8
D309	H6	R1332	H8	R393	K4	VR304	L2
D310	G6	R1333	H8	R394	L4	X301	E5
D311	G6	R1334	H7	R395	L4	X302	F4
D312	G6	R1335	F7	R396	L4	ZD302	B6

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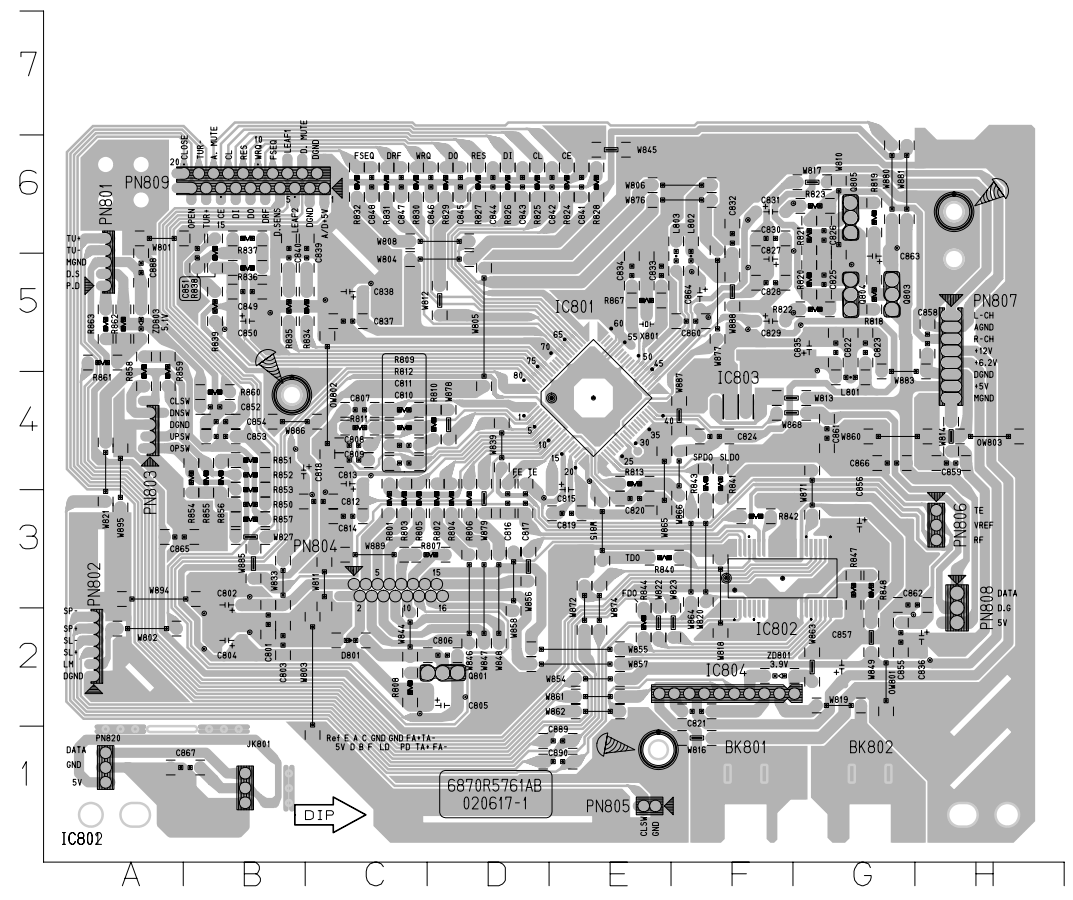


• POWER P.C. BOARD



C903	A4
C922	B2
D908	C1
D915	A4
D916	A4
D917	A5
D918	A5
FH901	H4
FH902A	C5
FH902B	C5
FH903A	B4
FH903B	B4
FH904	H5
FH904A	A6
FH904B	A5
FH905A	B6
FH905B	B5
FH906A	A5
FH906B	A6
J901	B2
OW901	G3
OW902	F3
OW903	F3
OW904	E3
OW905	E3
OW906	D3
OW907	D3
OW908	F3
OW909	H4
OW910	C3
PN901	A2
PN903	F2
RY901	C2

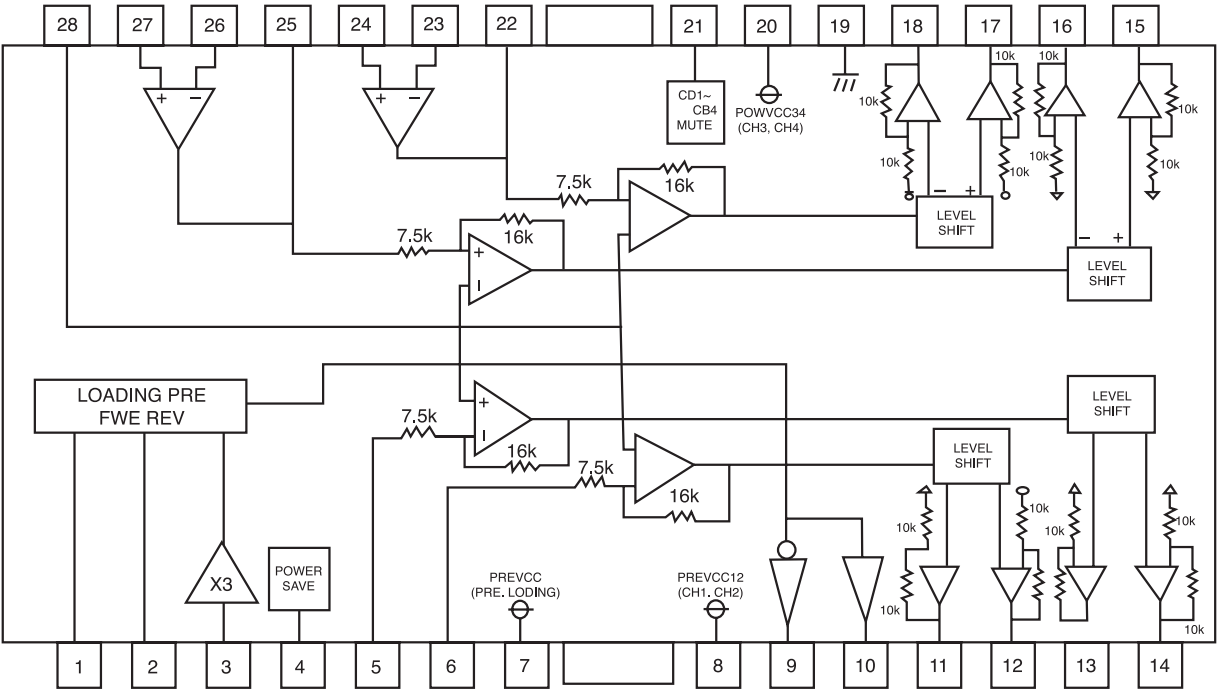
• CD MAIN P.C. BOARD



C801	B2	OW801	C2
C802	B3	OW802	C4
C803	B2	OW803	H4
C804	B2	PN801	A5
C805	D2	PN802	A2
C806	D2	PN803	A4
C807	C4	PN804	C3
C808	C4	PN805	E1
C809	C4	PN806	H3
C810	C4	PN807	H5
C811	C4	PN808	H3
C812	C3	PN809	C6
C813	C4	PN820	A1
C814	C3	Q801	D2
C815	E3	Q803	G5
C816	D3	Q804	G5
C817	D3	Q805	G6
C818	B4	R801	C3
C819	E3	R802	D3
C820	E3	R803	C3
C821	F2	R804	D3
C822	G5	R805	C3
C823	G5	R806	D3
C824	F4	R807	D3
C825	G5	R808	C2
C826	G6	R809	C4
C827	F5	R810	D4
C828	F5	R811	C4
C829	F5	R812	C4
C830	F6	R813	E4
C831	F6	R818	G5
C832	F6	R819	G6
C833	E5	R820	G5
C834	E5	R821	G6
C835	G5	R822	G5
C836	G5	R823	G6
C837	C5	R824	E6
C838	C5	R825	D6
C839	C5	R826	D6
C840	B5	R827	D6
C841	E6	R828	E6
C842	E6	R829	D6
C843	D6	R830	C6
C844	D6	R831	C6
C845	D6	R832	C6
C846	D6	R834	C5
C847	C6	R835	B5
C848	C6	R836	B5
C849	B5	R837	B6
C850	B5	R838	B5
C851	B5	R839	B5
C852	B4	R840	E3
C853	B4	R841	F4
C854	B4	R842	F3
C855	G2	R843	F4
C856	G3	R844	E2
C857	G2	R847	G3
C858	H5	R848	G3
C859	H4	R850	B3
C860	F5	R851	B4
C861	G4	R852	B4
C862	G3	R853	B3
C863	G5	R854	B4
C864	F5	R855	B4
C865	A3	R856	B4
C866	G4	R857	B3
C867	B1	R858	A4
C868	A5	R859	A4
C869	E1	R860	B4
C870	E1	R861	A5
C871	C2	R862	A5
C872	F4	R863	A5
C873	G2	R867	E5
C874	G4	X801	E5
C875	F5	ZD801	F2
C876	F5	ZD803	A5

INTERNAL BLOCK DIAGRAM OF ICs

BA5810FP (IC803)



■ KIA 78R12 PI (IC903)

4 TERMINAL LOW DROP VOLTAGE REGULATOR

The KIA78RXX Series are Low Drop Voltage Regulator suitable for various electronic equipments. It provides constant voltage power source with TO-220 4 terminal lead full molded PKG. The Regulator has multi function such as over current protection, overheat protection and ON/OFF control.

ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, $I_o=0.5A$, $T_a=25^{\circ}C$, Note1.)

CHARACTERISTIC		SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Output Voltage	KIA78R05	V_o	—	4.88	5.0	5.12	V
	KIA78R06		—	5.85	6.0	6.15	
	KIA78R08		—	7.80	8.0	8.2	
	KIA78R09		—	8.78	9.0	9.22	
	KIA78R10		—	9.75	10.0	10.25	
	KIA78R12		—	11.70	12.0	12.30	
	KIA78R15		—	14.70	15.0	15.30	
Load Regulation		Reg Load	$I_o=5mA \sim 1A$	—	0.1	2.0	%
Line Regulation		Reg Line	(Note 2)	—	0.5	2.5	%
Ripple Rejection		R•R		45	55	—	dB
Drop Out Voltage		V_D	(Note 3)	—	—	0.5	V
Output ON state for control Voltage		$V_{C(ON)}$		2.0	—	—	V
Output ON state for control Current		$I_{C(ON)}$	$V_C=2.7V$	—	—	20	μA
Output OFF state for control Voltage		$V_{C(OFF)}$	—	—	—	0.8	V
Output OFF state for control Current		$I_{C(OFF)}$	$V_C=0.4V$	—	—	-0.4	mA
Quiescent Current		I_Q	$I_o=0$	—	—	10	mA

Note1) V_{IN} of KIA78R05=7V

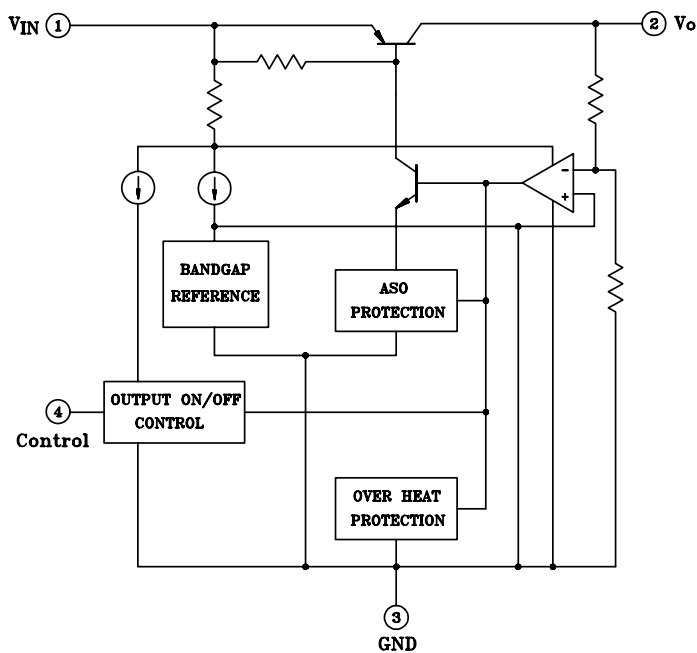
" KIA78R06=8V
 " KIA78R08=10V
 " KIA78R09=15V
 " KIA78R10=16V
 " KIA78R12=18V
 " KIA78R15=21V

Note2) V_{IN} of KIA78R05=6~12V

" KIA78R06=7~15V
 " KIA78R08=9~25V
 " KIA78R09=10~25V
 " KIA78R10=11~26V
 " KIA78R12=13~29V
 " KIA78R15=16~32V

Note3) At $V_{IN}=0.95V_o$

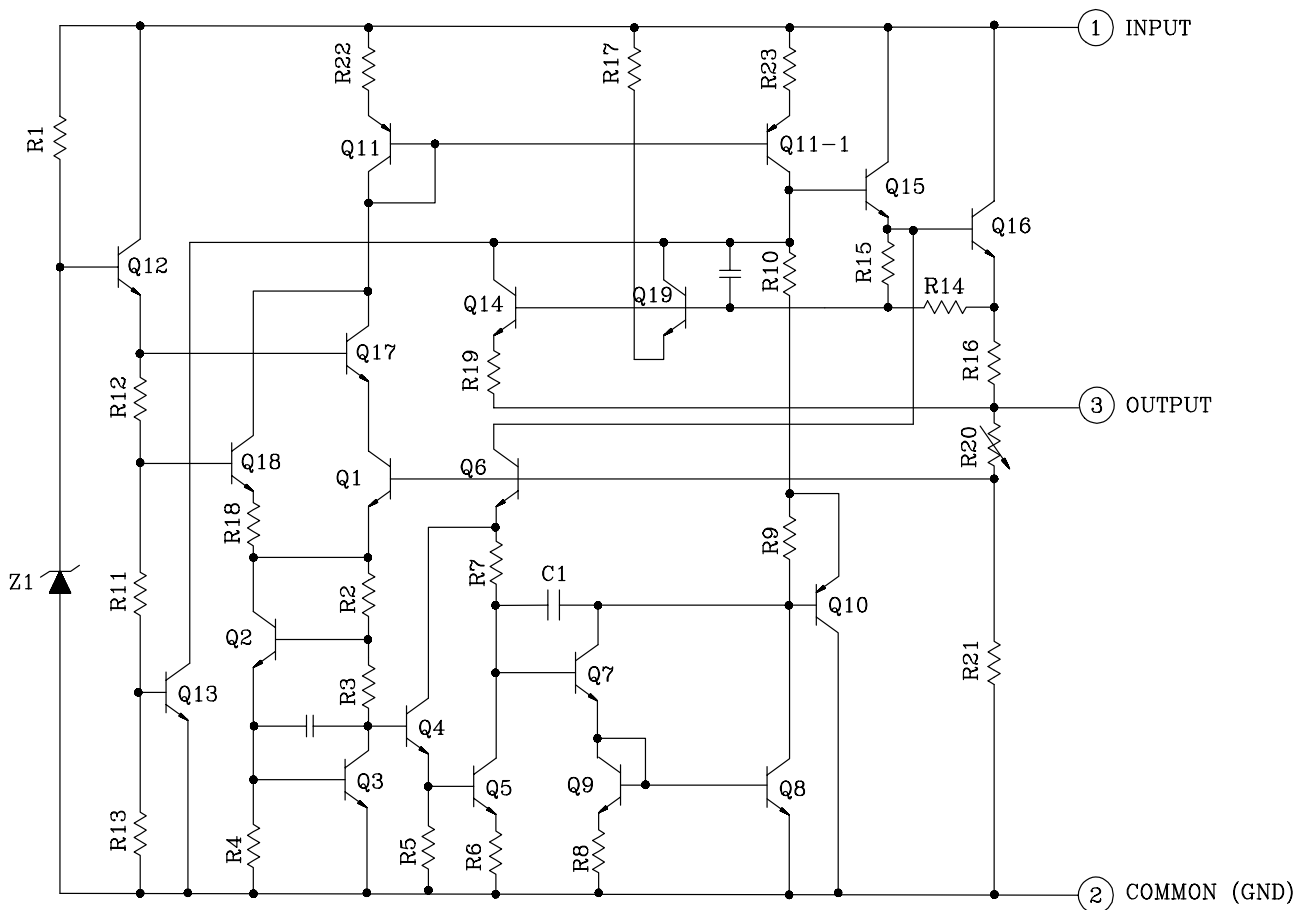
Block Diagram



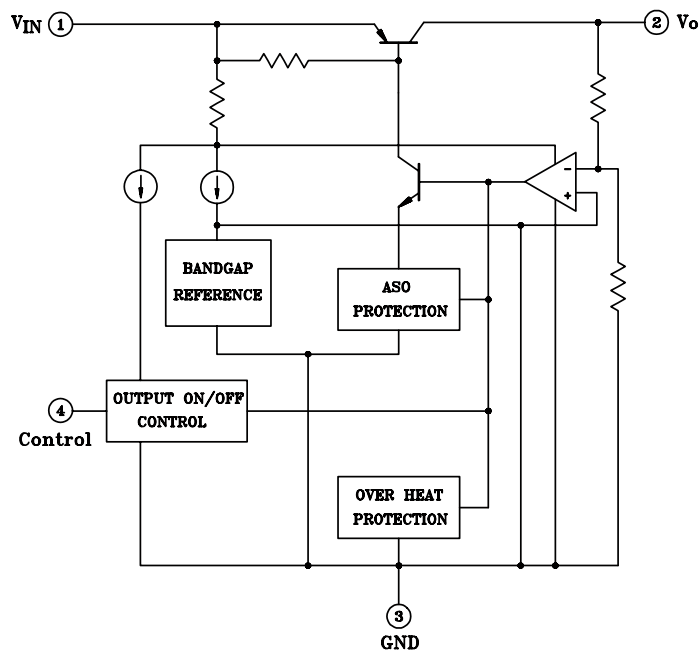
■ KIA7805AP/API (IC901)

THREE TERMINAL POSITIVE VOLTAGE REGULATORS 5V, 6V, 8V, 9V, 10V, 12, 15V, 18V, 24V.

EQUIVALENT CIRCUIT



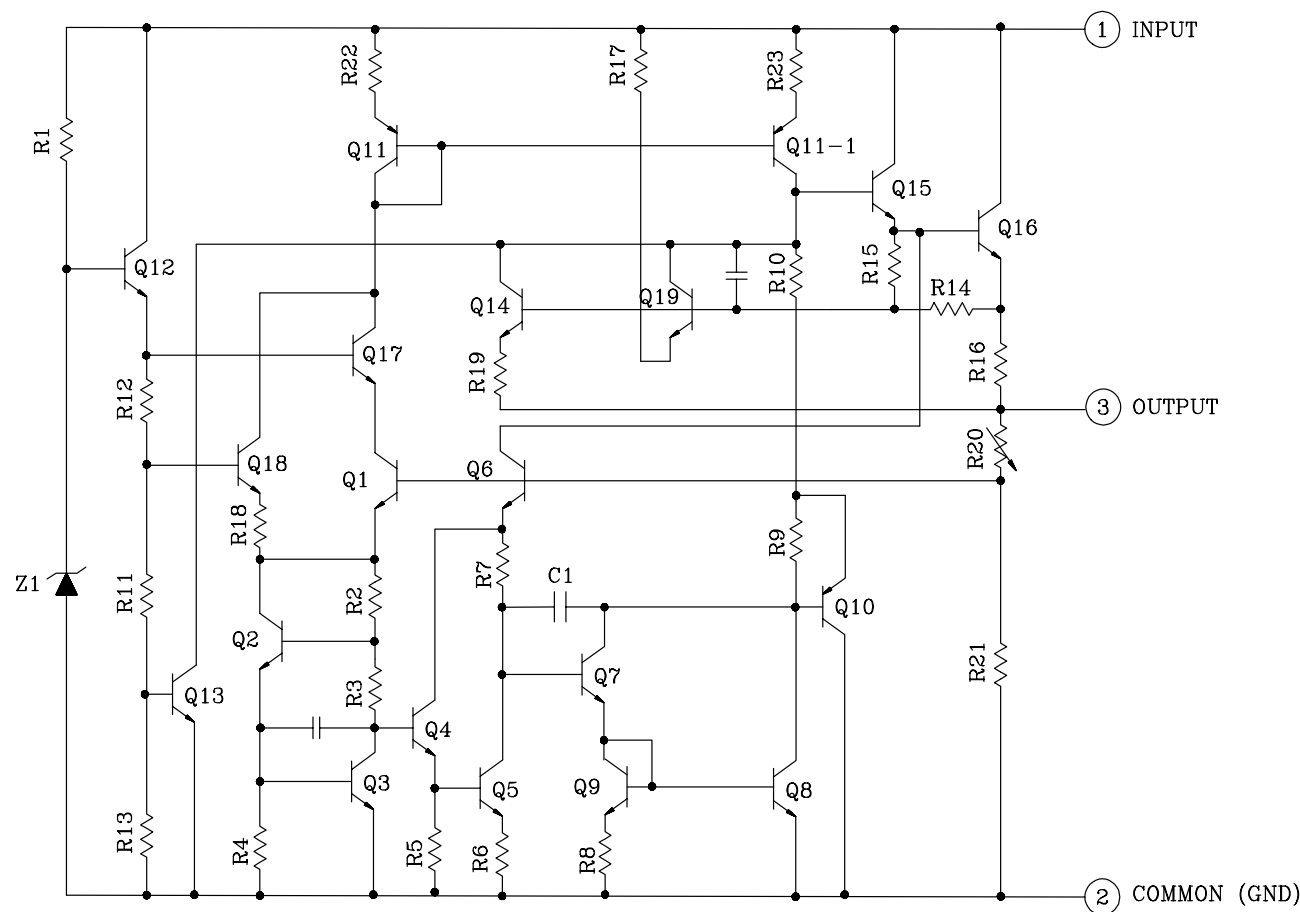
Block Diagram



■ KIA7805AP/API (IC901)

THREE TERMINAL POSITIVE VOLTAGE REGULATORS 5V, 6V, 8V, 9V, 10V, 12, 15V, 18V, 24V.

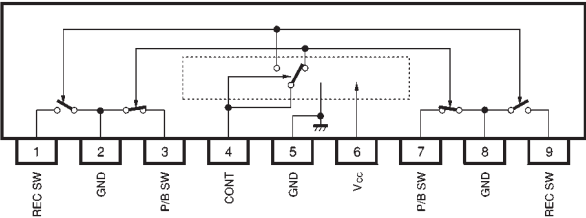
EQUIVALENT CIRCUIT



KIA7805AP/API
ELECTRICAL CHARACTERISTICS ($V_{IN}=10V$, $I_{OUT}=500mA$, $0^{\circ}C \leq T_j \leq 125^{\circ}C$)

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	V_{OUT}	1	$T_j=25^{\circ}C$, $I_{OUT}=100mA$		4.8	5.0	5.2	V
Input Regulation	Reg line	1	$T_j=25^{\circ}C$	$7.0V \leq V_{IN} \leq 25V$	-	3	100	mV
				$8.0V \leq V_{IN} \leq 12V$	-	1	50	
Load Regulation	Reg load	1	$T_j=25^{\circ}C$	$5mA \leq I_{OUT} \leq 1.4A$	-	15	100	mV
				$250mA \leq I_{OUT} \leq 750mA$	-	5	50	
Output Voltage	V_{OUT}	1	$7.0V \leq V_{IN} \leq 20V$ $5.0mA \leq I_{OUT} \leq 1.0A$, $P_o \leq 15W$		4.75	-	5.25	V
Quiescent Current	I_B	1	$T_j=25^{\circ}C$, $I_{OUT}=5mA$		-	4.2	8.0	mA
Quiescent Current Change	ΔI_B	1	$7.0V \leq V_{IN} \leq 25V$		-	-	1.3	mA
Output Noise Voltage	V_{NO}	1	$T_a=25^{\circ}C$, $10Hz \leq f \leq 100kHz$ $I_{OUT}=50mA$		-	50	-	μV_{rms}
Ripple Rejection Ratio	RR	1	$f=120Hz$, $8.0V \leq V_{IN} \leq 18V$, $I_{OUT}=50mA$, $T_j=25^{\circ}C$		62	78	-	dB
Dropout Voltage	V_D	1	$I_{OUT}=1.0A$, $T_j=25^{\circ}C$		-	2.0	-	V
Short Circuit Current Limit	I_{SC}	1	$T_j=25^{\circ}C$		-	1.6	-	A
Average Temperature Coefficient of Output Voltage	TC_{VO}	1	$I_{OUT}=5mA$, $0^{\circ}C \leq T_j \leq 125^{\circ}C$		-	-0.6	-	mV/ $^{\circ}C$

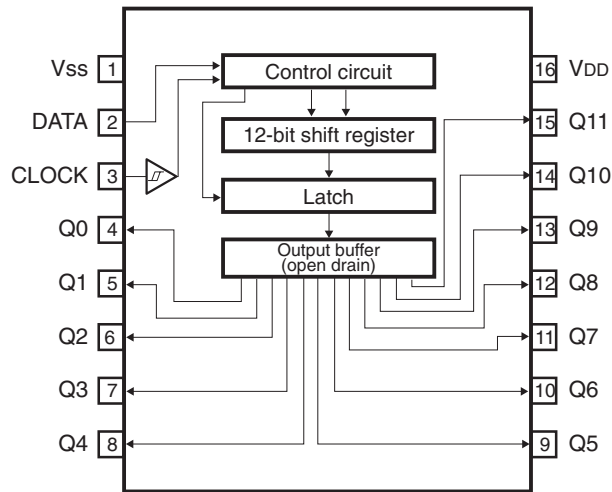
■ **BA3126N (IC201)**
2-channel head switch for radio cassette recorders



■ BU2090F (IC501)

12-bit, Serial IN, Parallel OUT driver

Block diagram

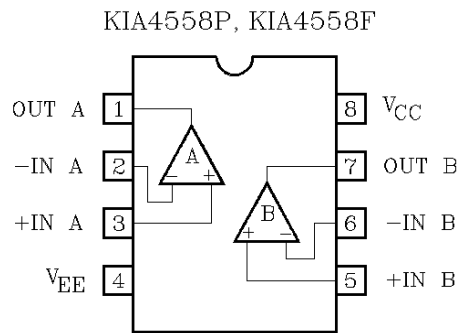


PIN DESCRIPTION

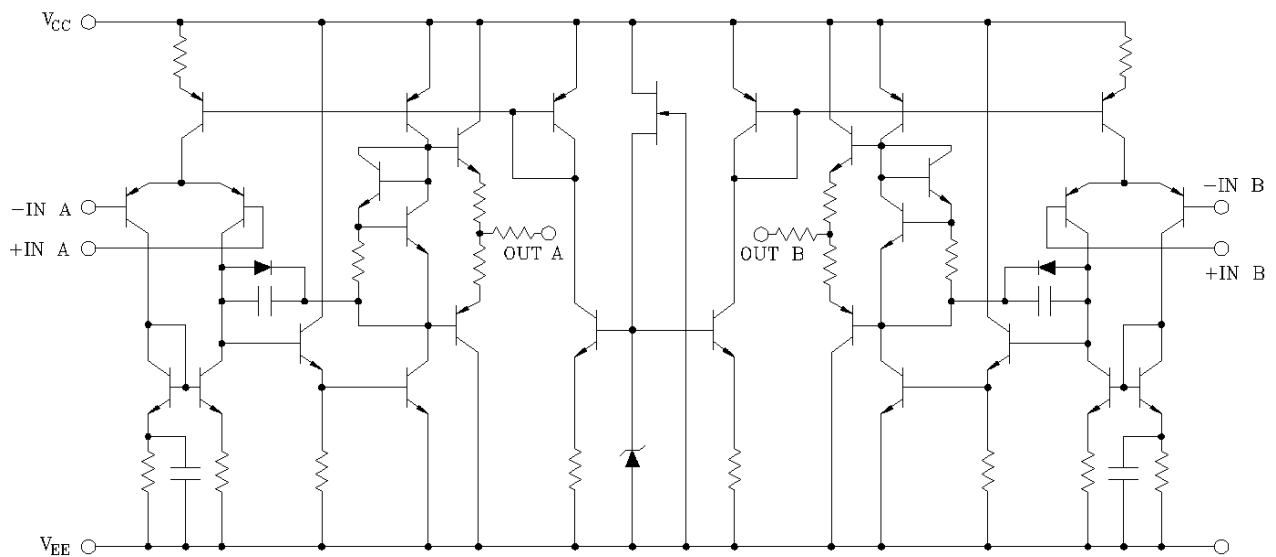
Pin No.			Pin name	Function
BU2090/F/FS	BU2092/F	BU2092/FV		
1	1	1	Vss	GND
2	2	2	DATA	Serial data input
3	3	3	CLOCK	Data shift clock input
-	4	4	LCK	Data latch clock input
4	5	5	Q0	parallel data output
5	6	6	Q1	parallel data output
6	7	7	Q2	parallel data output
7	8	8	Q3	parallel data output
8	9	9	Q4	parallel data output
9	10	10	Q5	parallel data output
10	11	11	Q6	parallel data output
-	-	12	N.C.	Not connected
-	-	13	N.C.	Not connected
11	12	14	Q7	parallel data output
12	13	15	Q8	parallel data output
13	14	16	Q9	parallel data output
14	15	17	Q10	parallel data output
15	16	18	Q11	parallel data output
-	17	19	$\overline{OE}$	Output Enable
16	18	20	VDD	Power supply

■ KIA4558P/S (IC602) BIPOLAR LINEAR INTEGRATED CIRCUIT

PIN CONNECTION (TOP VIEW)



EQUIVALENT CIRCUIT



■ KA3082 (IC804)

Bi-Directional DC Motor Driver

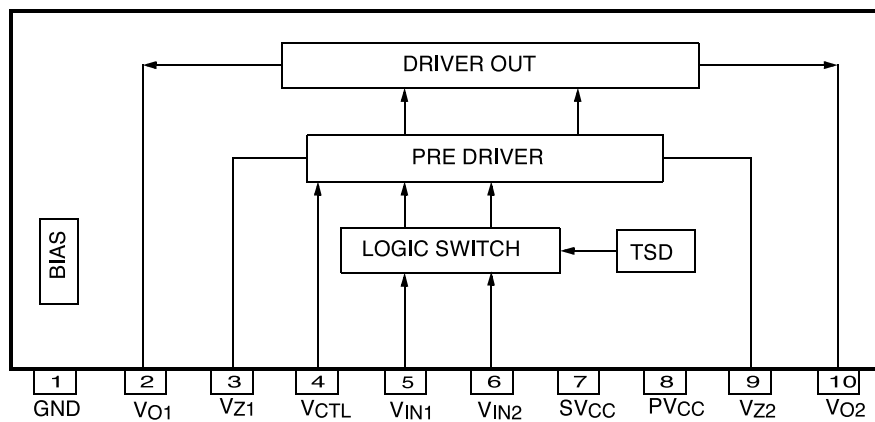
Description

The KA3082 is a monolithic integrated circuit designed for driving bi-directional DC motor with braking and speed control.

Pin Definitions

Pin Number	Pin Name	I/O	Pin Function Description
1	GND	-	Ground
2	VO1	O	Output 1
3	VZ1	-	Phase Compensation
4	VCTL	I	Motor Speed Control
5	VIN1	I	Input 1
6	VIN2	I	Input 2
7	SVCC	-	Supply Voltage (Signal)
8	PVCC	-	Supply Voltage (Power)
9	VZ2	-	Phase Compensation
10	VO2	O	Output 2

Internal Block Diagram

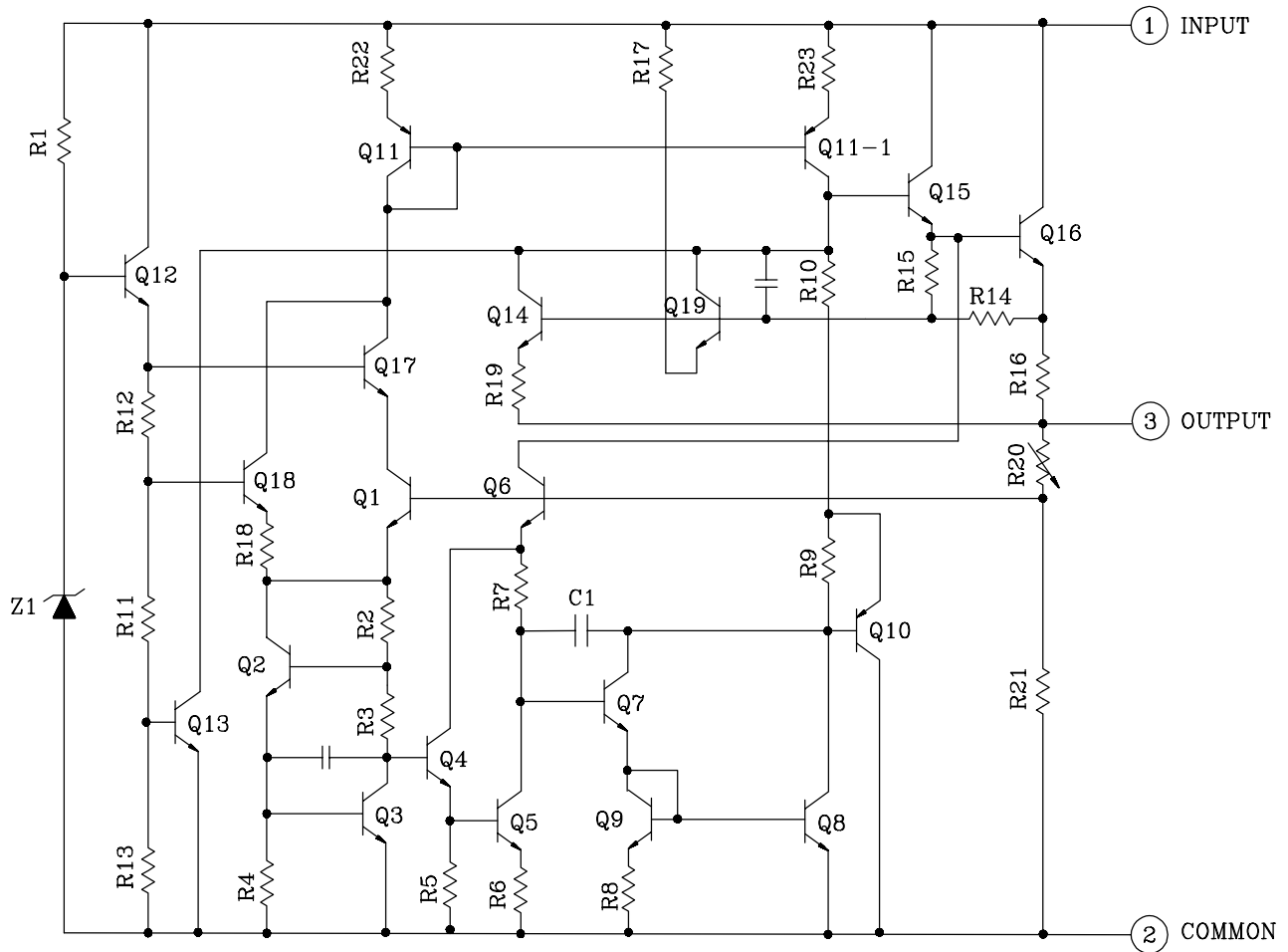


■ KIA7812API (IC902)

BIPOLAR LINEAR INTEGRATED CIRCUIT

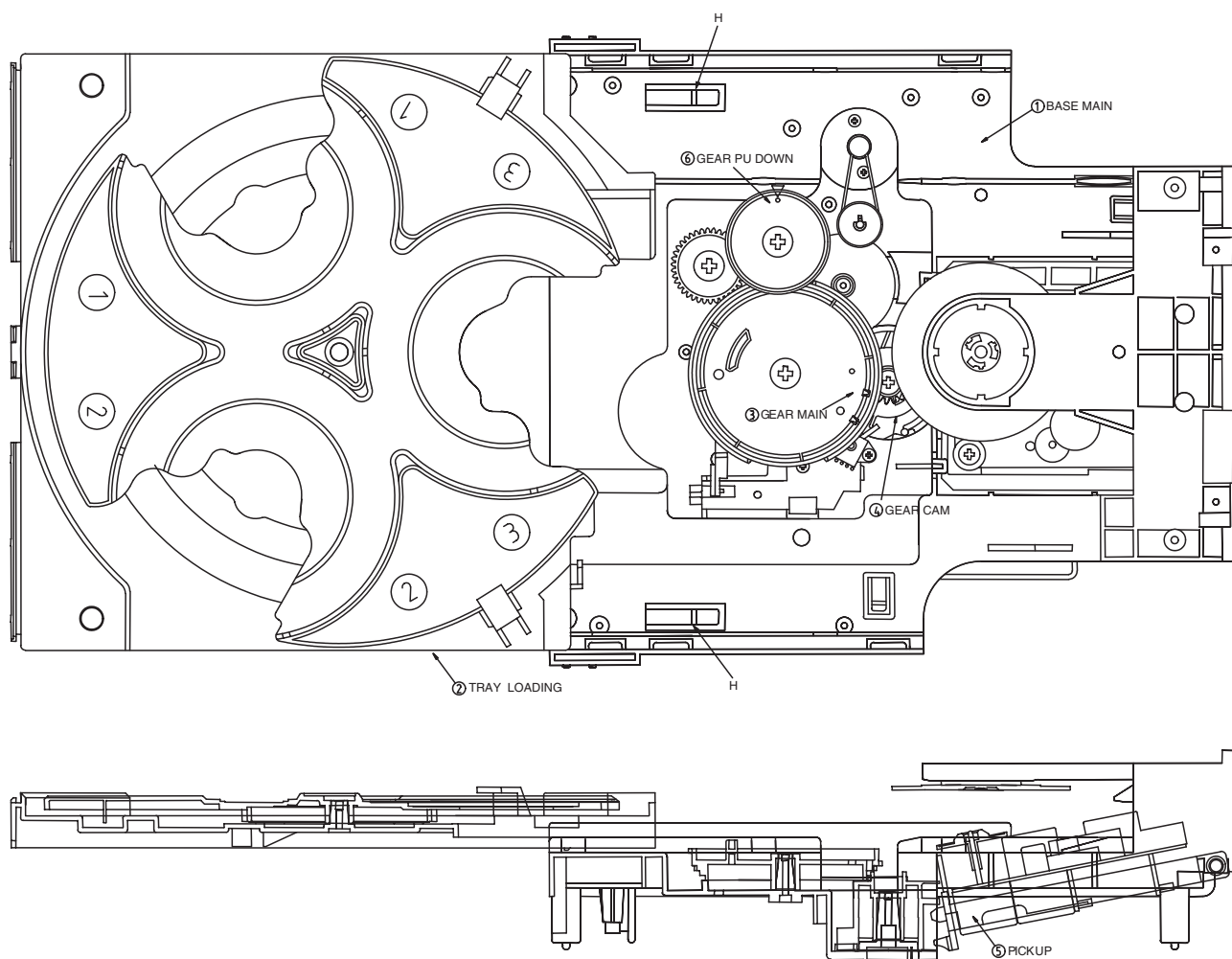
FEATURES

- Suitable for C-MOS, TTL, the Other Digital IC's Power Supply
- Internal Thermal Overload Protection.
- Internal Short Circuit Current Limiting



□ REPAIRS REGARDING CD MECHANISM

■ IMPROVED METHOD - WHEN THE TRAY GEARS WERE DISTORTED



1. How to open the tray

Push two hooks (H) of the ① BASE MAIN, and open the ② TRAY LOADING

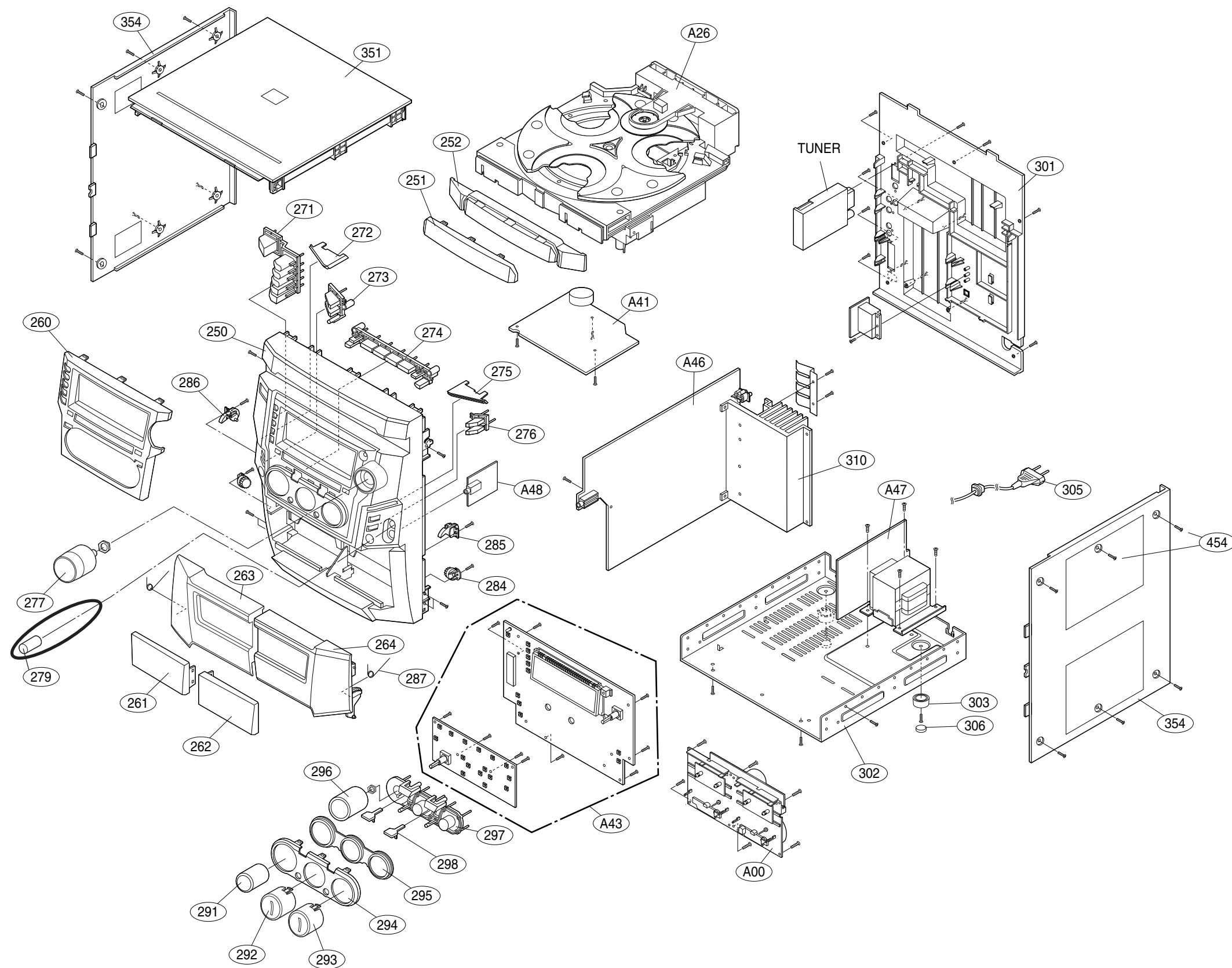
2. How to correct the distorted gears

- (1) Turn ③ GEAR MAIN until it clicks, if so that ⑤ PICK-UP is downed completely
- (2) The hold of ⑥ GEAR FU DOWN array as the arrow of ① BASEMAIN
- (3) Push the ② TRAY LOADING

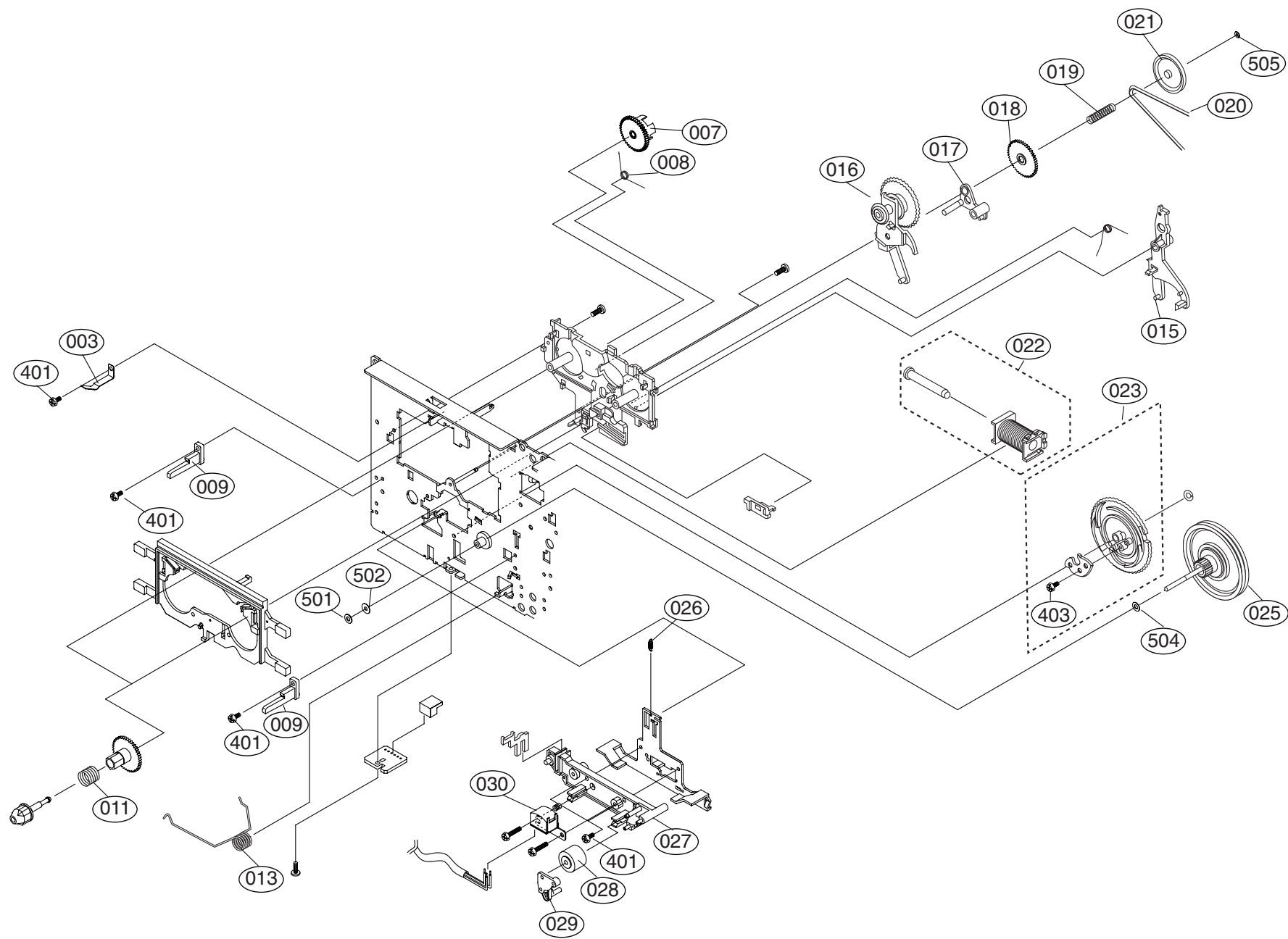
SECTION 3. EXPLODED VIEWS

CABINET AND MAIN FRAME SECTION

NOTE) Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.

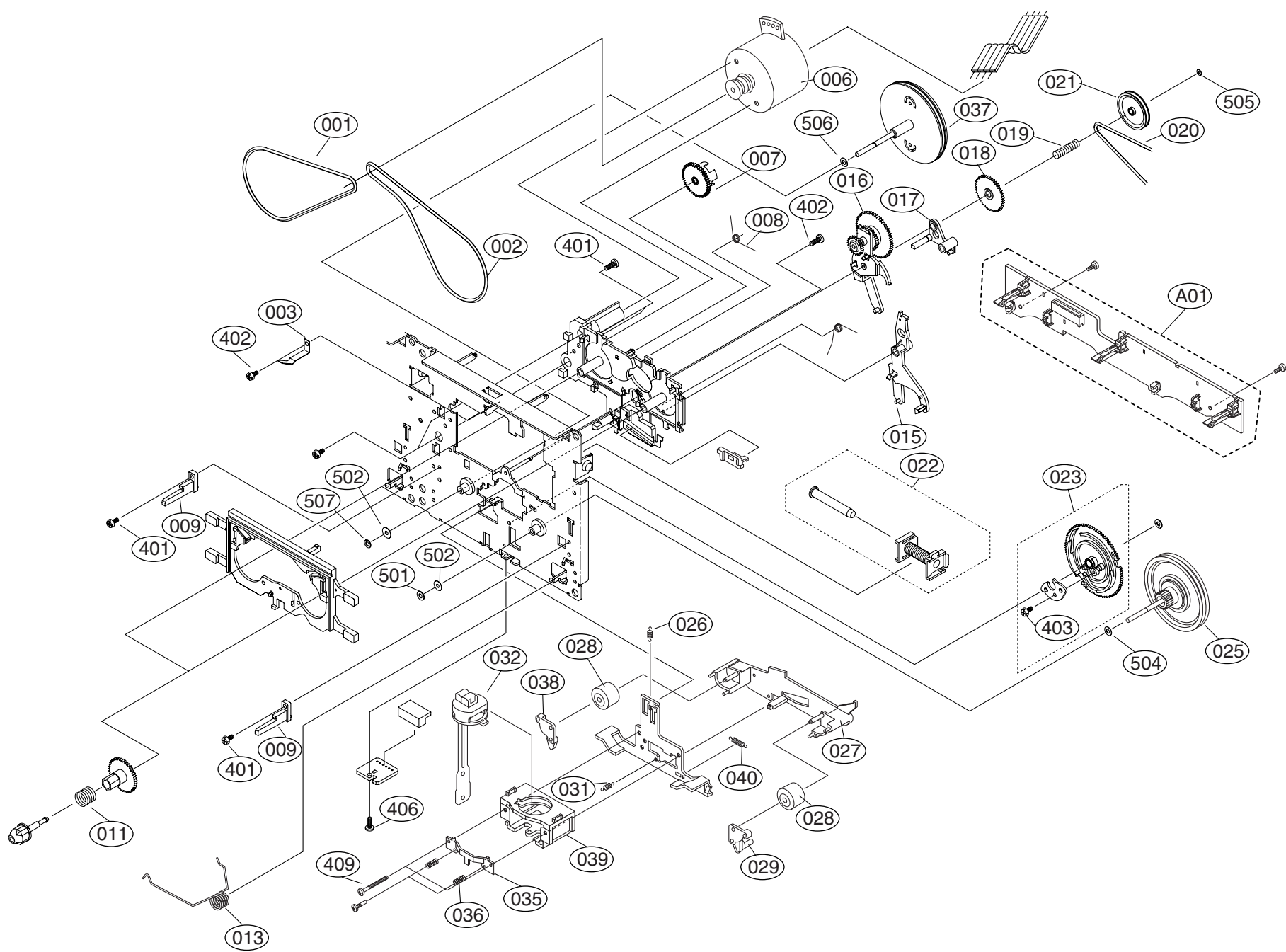


• TAPE DECK MECHANISM (A/R & A/S : LEFT A/S DECK)



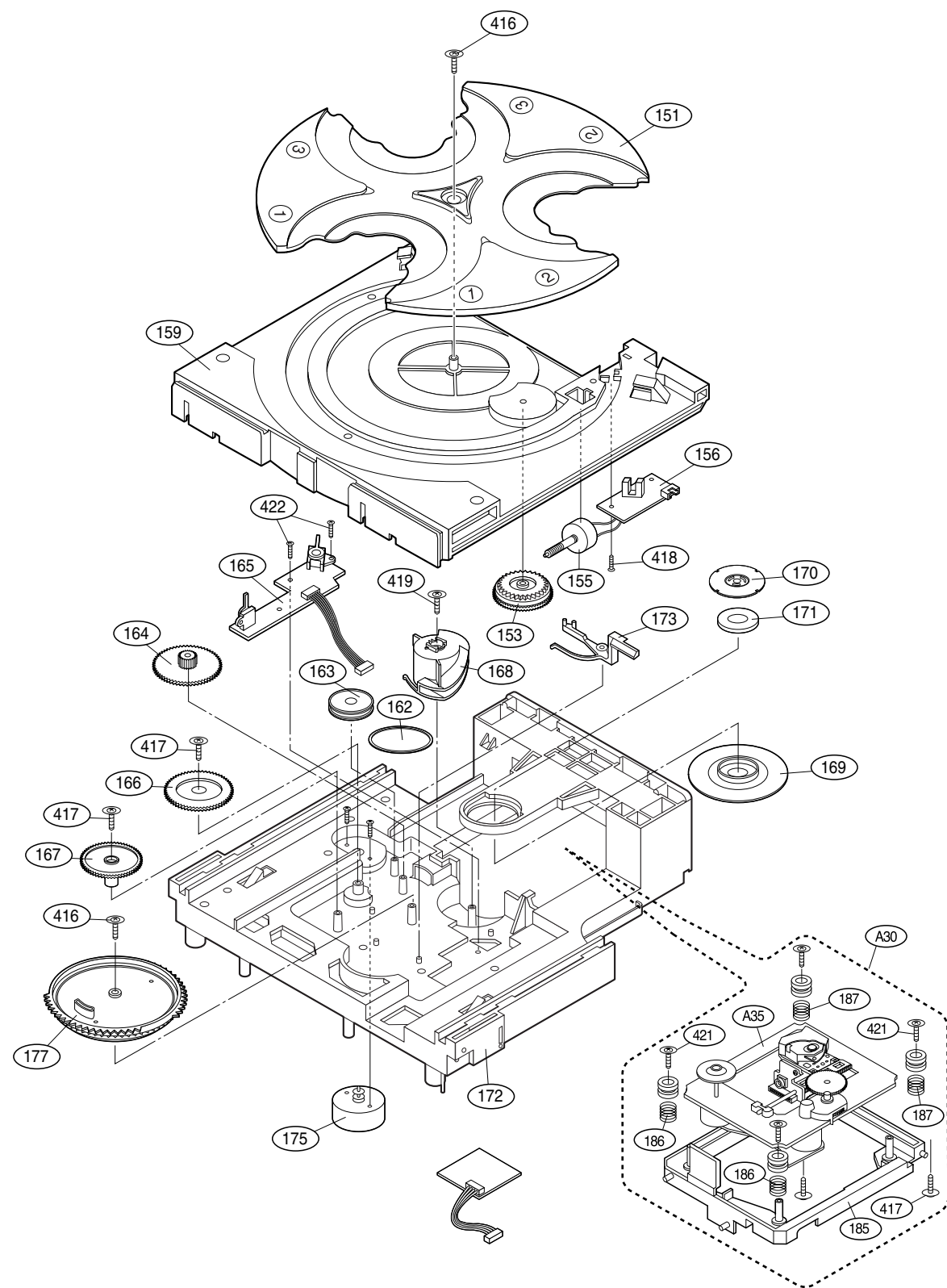
LOCA. NO.	LG PART NO.	DESCRIPTION	SPECIFICATION
A00	6720AG0002C	DECK,AUDIO	CWM42FR47 TOKYO PIGEON L-DOUBL
003	6768R-PP03A	DECK MECHANISM PARTS	33-160-4309 PIGEON PRESS CASSE
007	6768R-GP03B	DECK MECHANISM PARTS	50-222-4578 PIGEON GEAR IDLER
008	6768R-SP01F	DECK MECHANISM PARTS	01-082-4598 PIGEON SPRING CWL4
009	6768R-MP01C	DECK MECHANISM PARTS	50-219-4014 PIGEON MOLD CWL44
011	6768R-SP01A	DECK MECHANISM PARTS	01-081-4601 PIGEON SPRING CWL4
013	6768R-SP03A	DECK MECHANISM PARTS	01-082-4686 PIGEON SPRING CRM4
015	6768R-AP01A	DECK MECHANISM PARTS	50-268-3016 PIGEON ARM CWL44
016	6768R-GP01H	DECK MECHANISM PARTS	50-093-4503 PIGEON GEAR CRL442
017	6768R-AP01C	DECK MECHANISM PARTS	50-239-4072 PIGEON ARM CWL44
018	6768R-GP01J	DECK MECHANISM PARTS	50-222-4428 PIGEON GEAR CRL442
019	6768R-SP01P	DECK MECHANISM PARTS	01-081-4678 PIGEON SPRING CRL4
020	6768R-BP01C	DECK MECHANISM PARTS	02-083-4188 PIGEON BELT/FELT C
021	6768R-LP01C	DECK MECHANISM PARTS	50-223-4429 PIGEON PULLEY/FLYW
022	6768R-VP03A	DECK MECHANISM PARTS	50-093-4748 PIGEON SOLENOID AS
023	6768R-GP03A	DECK MECHANISM PARTS	50-093-4810 PIGEON GEAR ASSY C
025	6768R-JP03B	DECK MECHANISM PARTS	50-093-31009 PIGEON PULLEY/FLY
026	6768R-SP01D	DECK MECHANISM PARTS	01-080-4609 PIGEON SPRING CWL4
027	6768R-DP01A	DECK MECHANISM PARTS	50-259-3342 PIGEON LEVER CWL44
028	6768R-RP01A	DECK MECHANISM PARTS	22-027-41054 PIGEON ROLLER CWL
029	6768R-MP01A	DECK MECHANISM PARTS	50-219-4033 PIGEON MOLD CWL44
030	6768R-EP03C	DECK MECHANISM PARTS	T21V0P PIGEON HEAD CWM42FF30
401	6768R-CP01B	DECK MECHANISM PARTS	GSE20A2005 PIGEON SCREW CWL44
403	6768R-CP01D	DECK MECHANISM PARTS	GSL10A1704 PIGEON SCREW CWL44
501	6768R-WP03A	DECK MECHANISM PARTS	GWN19S035040 PIGEON WASHER CRM
502	6768R-WP03B	DECK MECHANISM PARTS	03-000-4532 PIGEON WASHER CRM4
504	6768R-WP01D	DECK MECHANISM PARTS	GWP21X045020 PIGEON WASHER CWL
505	6768R-WP01E	DECK MECHANISM PARTS	GWP12X030040S PIGEON WASHER CW

• TAPE DECK MECHANISM: AUTO REVERSE DECK



LOCA. NO.	LG PART NO.	DESCRIPTION	SPECIFICATION
A00	6720AG0002C	DECK,AUDIO	CWM42FR47 TOKYO PIGEON L-DOUBL
A01	6768R-UP03D	DECK MECHANISM PARTS	50-093-4895 PIGEON PWB UNIT CW
001	6768R-BP03D	DECK MECHANISM PARTS	02-083-4254 PIGEON BELT/FELT C
002	6768R-BP03E	DECK MECHANISM PARTS	02-083-4256 PIGEON BELT/FELT C
003	6768R-PP03A	DECK MECHANISM PARTS	33-160-4309 PIGEON PRESS CASSE
006	6768R-QP03C	DECK MECHANISM PARTS	50-093-4880 PIGEON MOTOR(ASSY)
007	6768R-GP03B	DECK MECHANISM PARTS	50-222-4578 PIGEON GEAR IDLER
008	6768R-SP01F	DECK MECHANISM PARTS	01-082-4598 PIGEON SPRING CWL4
009	6768R-MP01C	DECK MECHANISM PARTS	50-219-4014 PIGEON MOLD CWL44
011	6768R-SP01A	DECK MECHANISM PARTS	01-081-4601 PIGEON SPRING CWL4
013	6768R-SP03A	DECK MECHANISM PARTS	01-082-4686 PIGEON SPRING CRM4
015	6768R-AP01A	DECK MECHANISM PARTS	50-268-3016 PIGEON ARM CWL44
016	6768R-GP01H	DECK MECHANISM PARTS	50-093-4503 PIGEON GEAR CRL442
017	6768R-AP01C	DECK MECHANISM PARTS	50-239-4072 PIGEON ARM CWL44
018	6768R-GP01J	DECK MECHANISM PARTS	50-222-4428 PIGEON GEAR CRL442
019	6768R-SP01P	DECK MECHANISM PARTS	01-081-4678 PIGEON SPRING CRL4
020	6768R-BP01C	DECK MECHANISM PARTS	02-083-4188 PIGEON BELT/FELT C
021	6768R-LP01C	DECK MECHANISM PARTS	50-223-4429 PIGEON PULLEY/FLYW
022	6768R-VP03A	DECK MECHANISM PARTS	50-093-4748 PIGEON SOLENOID AS
023	6768R-GP03A	DECK MECHANISM PARTS	50-093-4810 PIGEON GEAR ASSY C
025	6768R-JP03B	DECK MECHANISM PARTS	50-093-31009 PIGEON PULLEY/FLY
026	6768R-SP01D	DECK MECHANISM PARTS	01-080-4609 PIGEON SPRING CWL4
027	6768R-DP01A	DECK MECHANISM PARTS	50-259-3342 PIGEON LEVER CWL44
028	6768R-RP01A	DECK MECHANISM PARTS	22-027-41054 PIGEON ROLLER CWL
029	6768R-MP01A	DECK MECHANISM PARTS	50-219-4033 PIGEON MOLD CWL44
031	6768R-SP04A	DECK MECHANISM PARTS	01-082-4731 PIGEON SPRING
032	6768R-EP04A	DECK MECHANISM PARTS	50-093-41007 PIGEON HEAD ASSY
035	6768R-PP04A	DECK MECHANISM PARTS	50-119-4915 PIGEON PRESS
036	6768R-SP04B	DECK MECHANISM PARTS	01-081-4730 PIGEON SPRING
037	6768R-JP03A	DECK MECHANISM PARTS	50-093-4674 PIGEON PULLEY/FLYW
038	6768R-MP01D	DECK MECHANISM PARTS	50-219-4034 PIGEON MOLD CWL44
039	6768R-MP02A	DECK MECHANISM PARTS	50-219-3900 PIGEON MOLD
040	6768R-SP01M	DECK MECHANISM PARTS	01-080-4607 PIGEON SPRING CWL4
401	6768R-CP01B	DECK MECHANISM PARTS	GSE20A2005 PIGEON SCREW CWL44
402	6768R-CP01A	DECK MECHANISM PARTS	GSE10A2003 PIGEON SCREW CWL44
403	6768R-CP01D	DECK MECHANISM PARTS	GSL10A1704 PIGEON SCREW CWL44
406	6768R-CP01G	DECK MECHANISM PARTS	GSE20A2004 PIGEON SCREW CWL44
409	6768R-CP02A	DECK MECHANISM PARTS	GSD10A2016 PIGEON SCREW
501	6768R-WP03A	DECK MECHANISM PARTS	GWN19S035040 PIGEON WASHER CRM
502	6768R-WP03B	DECK MECHANISM PARTS	03-000-4532 PIGEON WASHER CRM4
504	6768R-WP01D	DECK MECHANISM PARTS	GWP21X045020 PIGEON WASHER CWL
505	6768R-WP01E	DECK MECHANISM PARTS	GWP12X030040S PIGEON WASHER CW
506	6768R-WP01H	DECK MECHANISM PARTS	GWP23X040020 PIGEON WASHER CWL
507	6768R-WP01F	DECK MECHANISM PARTS	GWN21X040040 PIGEON WASHER CWL

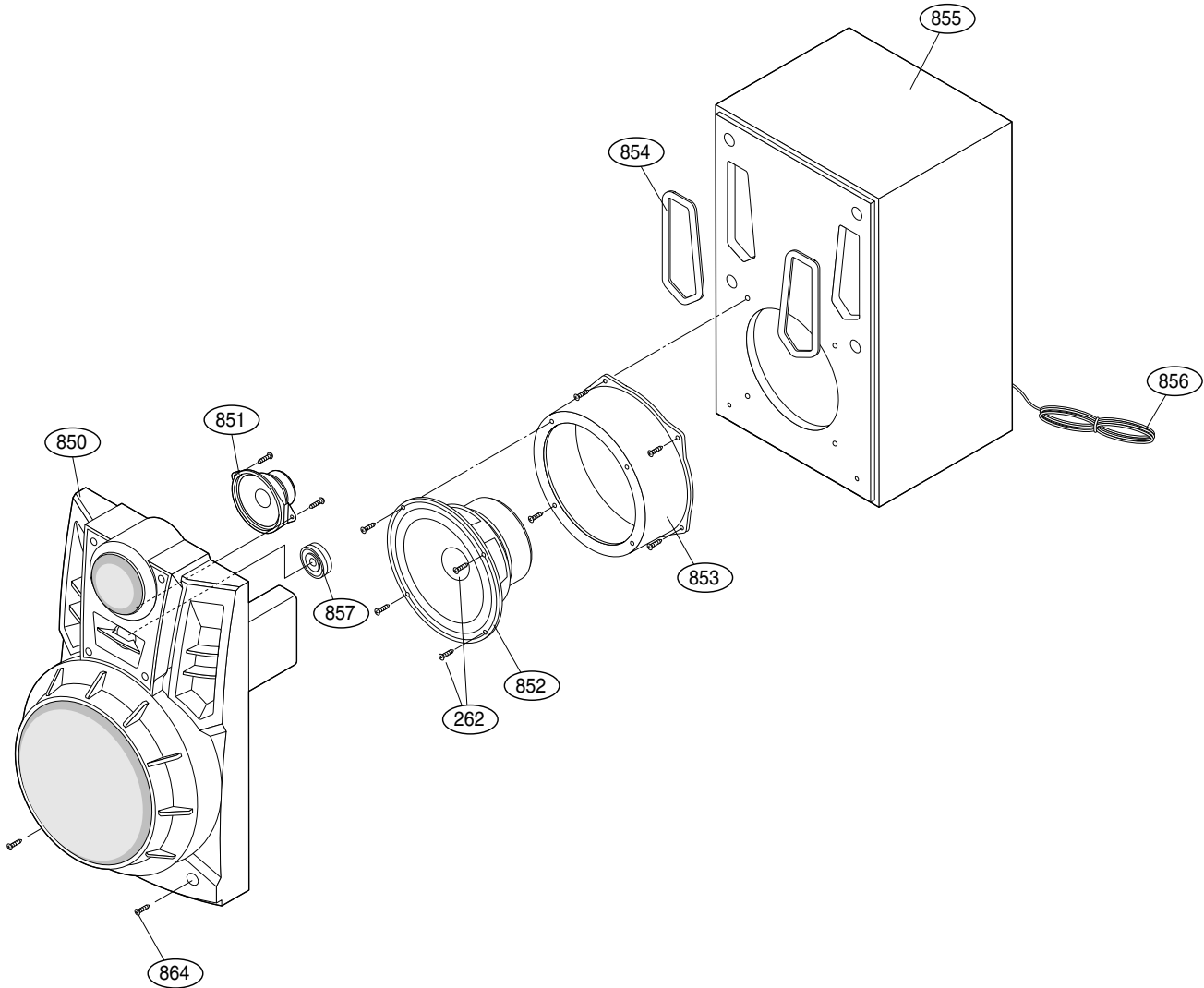
CD MECHANISM



LOCA.NO.	PART NO	DESCRIPTION	SPECIFICATION
A26	4405RBE004C	MECHANISM ASSEMBLY	CDM-H1503 3 CD CHANGER
A30	3041RB0002C	BASE ASSEMBLY	PU(SPONG DAMPER)
A35	6717RCA001A	PICK UP ASSY	KSM-213VSCM SONY FRONT LOADING
151	3390RB0002A	TRAY	DISC(CDM-H1503)
153	4470RB0005A	GEAR	TRAY (CDM-H1503)
155	4681RBA001A	MOTOR ASSEMBLY	TRAY (CDM-H1503)
156	6871RF9211A	PWB(PCB) ASSEMBLY,FRONT	1503 T/D SENSOR
159	3390RB0001A	TRAY	LOADING(CDM-H1503)
162	4400SB0001A	BELT	MAIN(CDM-H1303)
163	4470SB0003A	GEAR	PULLEY (CDM-H1303)
164	4470RB0003A	GEAR	LOADING (CDM-H1503)
165	6871RZ7036A	PWB(PCB) ASSEMBLY,OTHERS	CDM-H1503 UP/DW/OP/CL
166	4470RB0006A	GEAR	PU UP (CDM-H1503)
167	4470RB0007A	GEAR	PU DOWN (CDM-H1503)
168	4470RB0002A	GEAR	CAM (CDM-H1503)
169	4860SB0001A	CLAMP	DISC(CDM-H1303)
170	3550SB0001A	COVER	MAGNET(CDM-H1303)
171	524-012AAAA	COVER	CLAMP MAGNET (030X018X5T)
172	3040RB0005A	BASE	MAIN (CDM-H1503)
173	4510RB0001A	LEVER	S/W CLOSE
175	4680SBP001A	MOTOR(MECH)	OTHER ...
177	4470RB0001A	GEAR	MAIN (CDM-H1503)
184	4900RB0001A	DAMPER	RUBBER 3CD CHANGER
185	3040SB0003A	BASE	PU(CDM-H1303)
186	4970RB0001A	SPRING	COIL 3 CD CHANGER
187	4970RB0001B	SPRING	COIL 50 3CD CHANGER
416	88H-0004	CD MECHA PARTS	3X12X12FNM
417	88H-0002	CD MECHA PARTS	3X9X12FZMY
418	353-025BAAA	SCREW	#NAME?
419	88H-0003	CD MECHA PARTS	3X12X10FZMY
420	353S353F	SCREW	#NAME?
421	6756SBX001A	CD MECHANISM PARTS	SCREW 2.6X10X10XFZMY CDM-H813
422	353-028H	SCREW	#NAME?

SECTION 4. SPEAKER SECTION

MODEL: LMS-M1030



LOCA. NO.	PART NO.	DESCRIPTION	SPECIFICATION	REMARKS
850	3720RMF052A	PANEL,FRONT	SPK LMS-1030 MOLD PANEL STAND	
851	6400TETB03A	SPEAKER,TWEETER	06N45EHC2411 EAW TWEETER(CONE)	
852	6400WETJ05A	SPEAKER,WOOFER	16L90EHC2409A EAW WOOFER LMS-1	
853	4980RM0001A	SUPPORTER	SPK LMS-1030 MOLD W/F SUPPORT	
854	4766RM0035A	FELT	LMS-1030(BLACK) DUCT	
855	3091RMW059A	CABINET ASSEMBLY	SPK LMS-1030 (CABINET ASSY)	
856	6871RU9275B	PWB(PCB) ASSEMBLY,SUBSET(AUDIO	LMS-1030 2.2UF (NEGATIVE) NETW	
857	6400RCEY01A	SPEAKER,FULLRANGE	6400RCEY01A EAW 500 OHM 100 W	
862	353M050N	SCREW,DRAWING	+ 1 D3.5 L18 FZMY2 WOOD	
864	353M025Z	SCREW,DRAWING	+ 1 D3.5 L18 FZMY2 WOOD	

MEMO