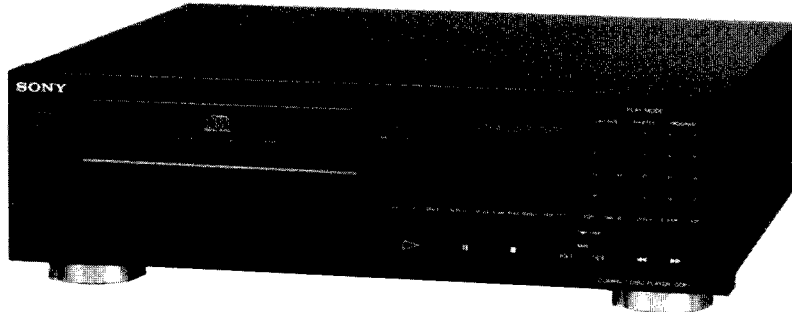


CDP-M72

SERVICE MANUAL

*AEP Model
UK Model
E Model*



Model Name Using Similar Mechanism	CDP-M71
CD Mechanism Type	CDM14-5BD1
Base Unit Name	BU-5BD1

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SPECIFICATIONS

Outputs

DIGITAL OUT (OPTICAL)
(optical output connector)
Wave length 660 nm
Output level - 18 dBm

General

Power requirements Model for Continental Europe
220 V - 230 V AC, 50/60 Hz
Model for the United Kingdom
240 V AC 50 Hz
Model for other countries
110 - 120 V/220 - 240 V
50/60 Hz
Power consumption 12 W
Dimensions 355 × 110 × 310 mm
(approx., including projections)
(w/h/d) (14 × 4 1/4 × 12 1/4 inches)
Weight (approx.) 3.5 kg (7 lbs 15 oz)

Supplied accessories

AC plug adaptor
(for some areas)

Design and specifications subject to change without notice.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This Compact Disc player is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.



COMPACT DISC PLAYER
SONY®

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties
 - Material: GaAlAs
 - Wavelength: 780nm
 - Emission Duration: continuous
 - Laser Output: max.44.6 μ W*
 - * This output is the value measured at a distance of about 200mm from the objective lens surface on the Optical Pick-up Block.
2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

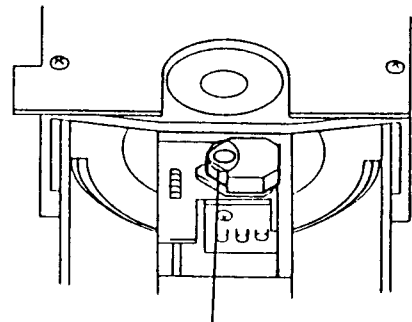
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SERCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.



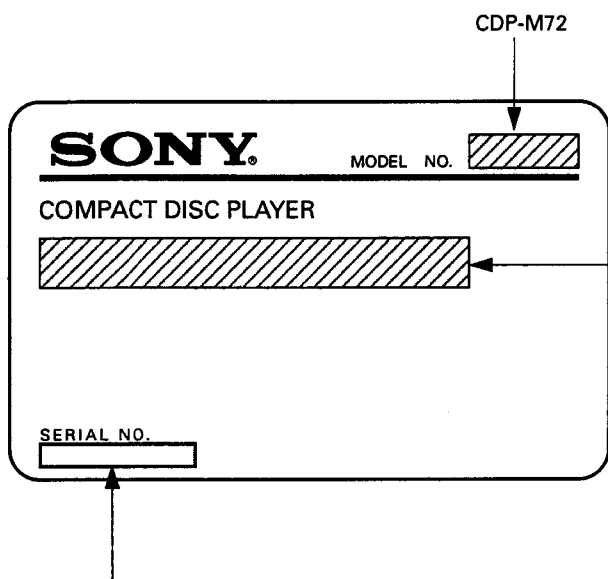
- ① Confirm that laser beam is spread.
- ② Up and down motion of the objective lens. (3 times)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MODEL IDENTIFICATION

– SPECIFICATION LABEL –



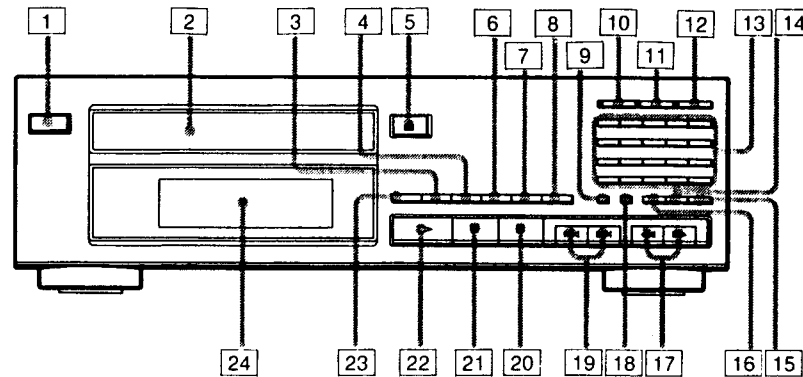
AEP MODEL : AC220, 50/60Hz, 12W
 UK MODEL : AC240V, 50/60Hz, 12W
 E, Saudi Arabia MODEL : AC110-120, 220-240V, 50/60Hz, 12W

MADE IN JAPAN : Japan Made Model
 MADE IN FRANCE : France Made Model

SECTION 1 GENERAL

LOCATION OF CONTROLS

This section is extracted from instruction manual.



- | | |
|------------------------------------|-----------------------------------|
| [1] POWER switch | [13] Numeric buttons |
| [2] Disc tray | [14] CLEAR (program clear) button |
| [3] REPEAT button | [15] >20 (over 20) button |
| [4] A. SPACE (auto space) button | [16] CHECK (program check) button |
| [5] ▲ OPEN/CLOSE button | [17] ◀▶▶▶ (manual search) buttons |
| [6] MUSIC SCAN button | [18] TIME SET button |
| [7] PEAK SEARCH button | [19] ◀▶▶▶ (AMS*) buttons |
| [8] FADER button | [20] ■ (stop) button |
| [9] EDIT/TIME FADE button | [21] (pause) button |
| [10] CONTINUE button and indicator | [22] ▶ (play) button |
| [11] SHUFFLE button and indicator | [23] TIME button |
| [12] PROGRAM button and indicator | [24] Display window |

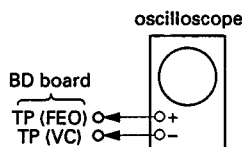
* AMS is an abbreviation of Automatic Music Sensor.

SECTION 2

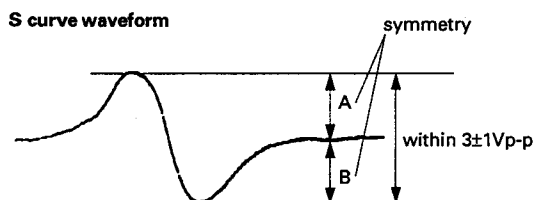
ELECTRICAL BLOCK CHECKING

Note :

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than $10M\Omega$ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

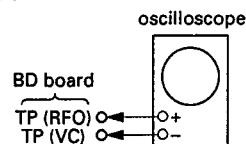
S Curve Check**Procedure :**

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within $3\pm 1V_{p-p}$.



5. After check, remove the lead wire connected in step 2.

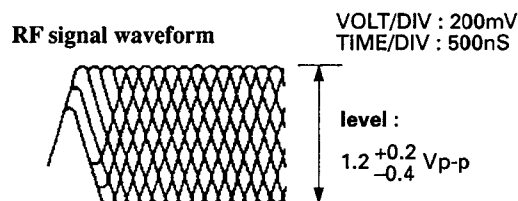
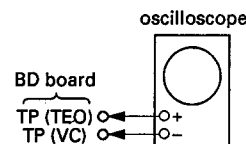
- Note :**
- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
 - Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check**Procedure :**

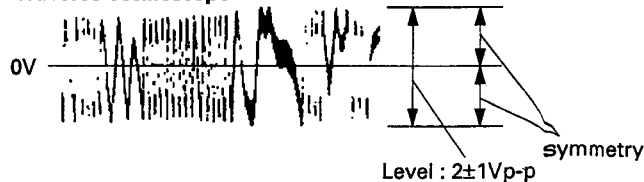
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape “ $\diamond$ ” can be clearly distinguished at the center of the waveform.

**E-F Balance Check****Procedure :**

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

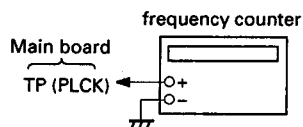
Traverse oscilloscope

6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PLCK) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

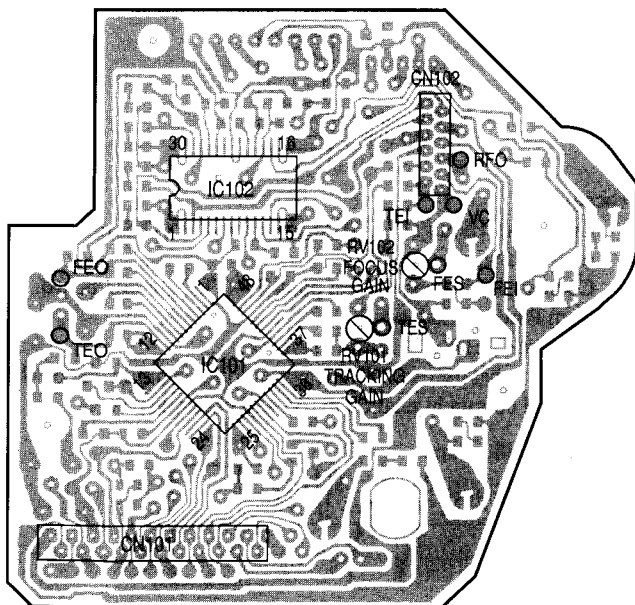
This gain has a margin, so even if it is slightly off. There is no problem.

Therefore, do not perform, this adjustment.

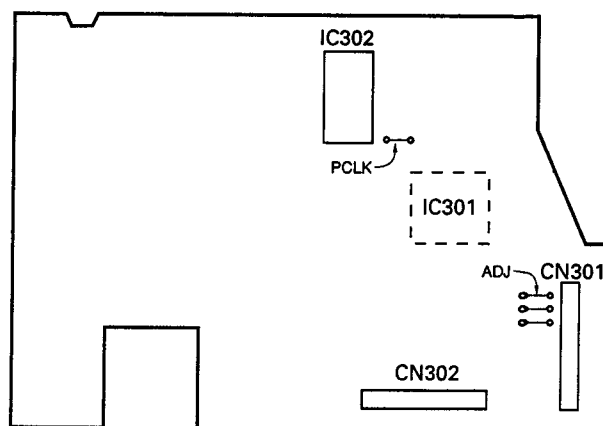
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

ADJUSTMENT LOCATIONS

[BD BOARD] – Conductor Side –

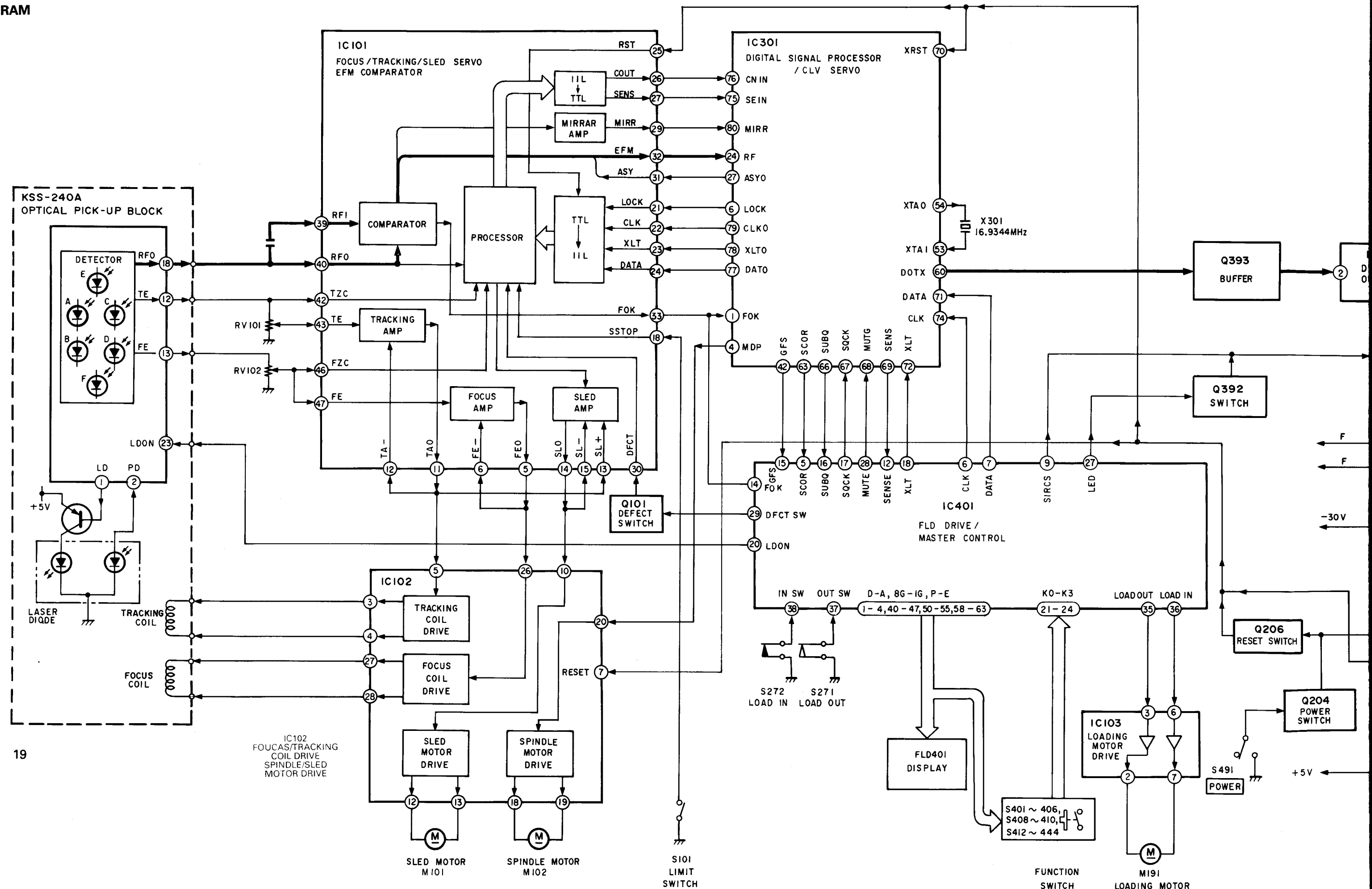


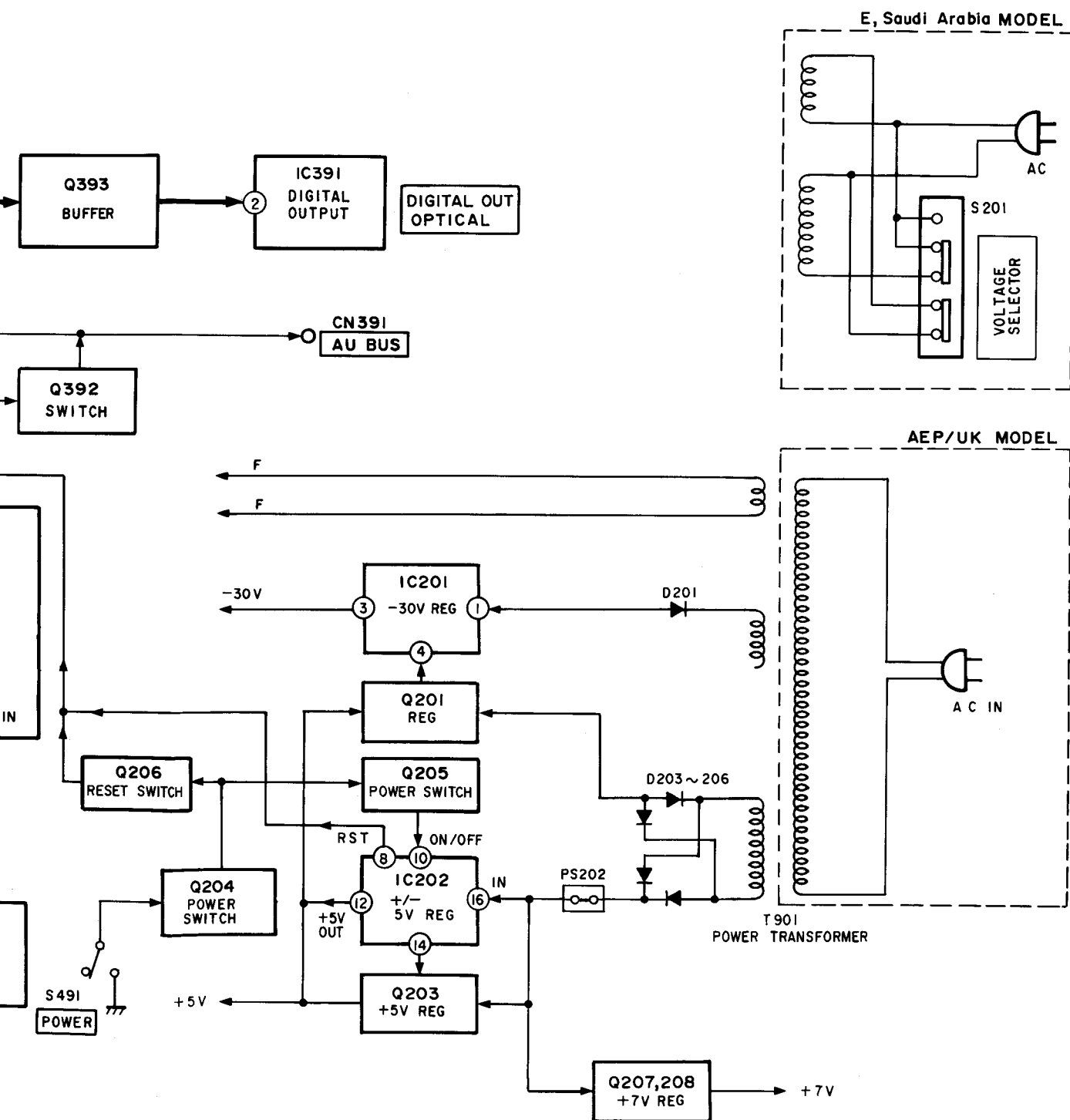
[MAIN BOARD] – Component Side –



SECTION 3 DIAGRAMS

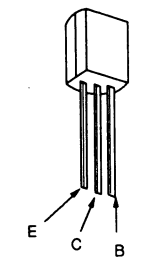
3-1. BLOCK DIAGRAM



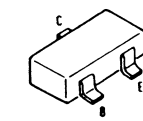


3-2. SEMICONDUCTOR LEAD LAYOUTS

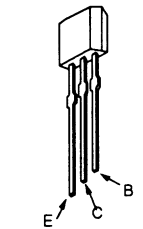
DTA144ES
DTC114ES
DTC144ES
2SC2458-YGR



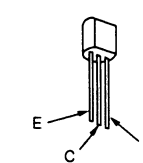
DTC144EK



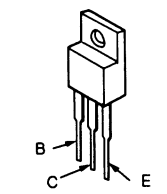
2SA1175-HFE



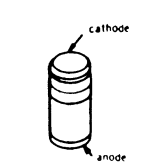
2SA933S-QR



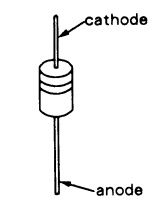
2SB1274-RS
2SB1274SA-Q



RD4.7M-B1



RD6.8ES-B2
RD7.5JS-B2
RD9.1ES-B2
1SS120
11ES2



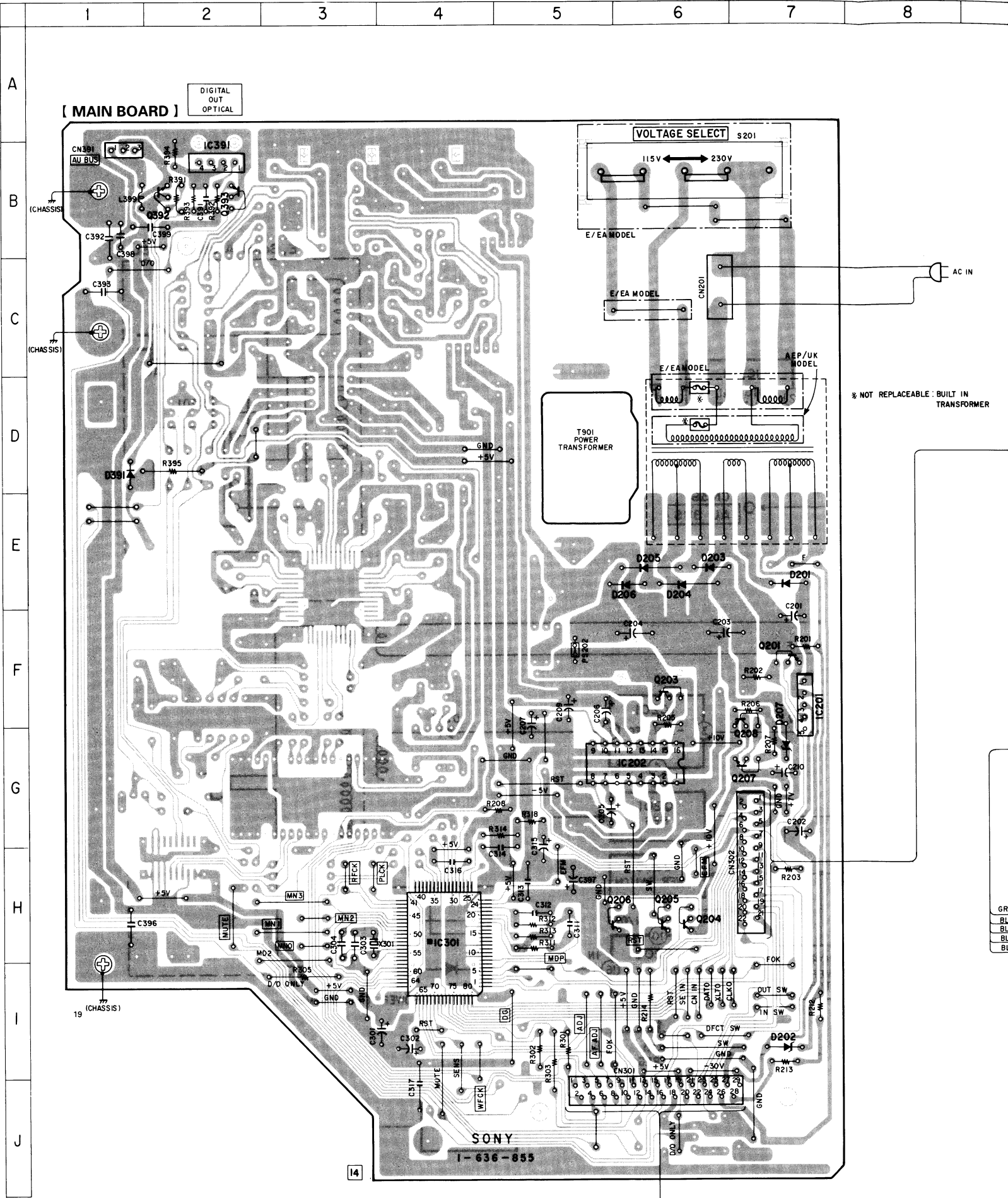
Note:

- : indicated a lead wire mounted on the component side.
- : parts mounted on the conductor side.
- : Through hole.
- ▨ : Pattern from the side which enables seeing.
- ▩ : Pattern of the rear side.
- EA : Saudi Arabia Model

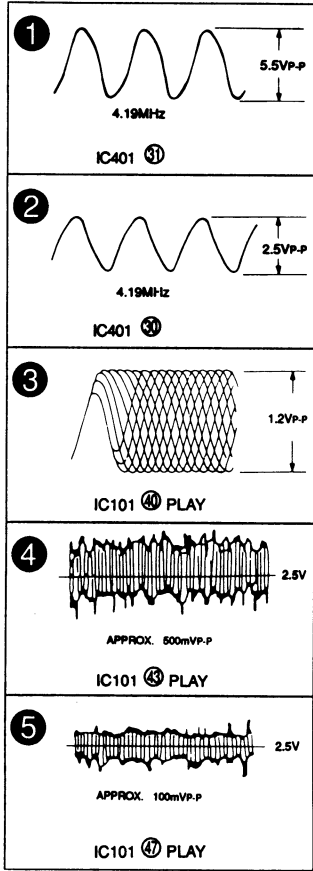
● SEMICONDUCTOR LOCATION

Ref. No	Location
D101	A-12
D201	E-7
D202	I-7
D203	E-6
D204	E-6
D205	E-6
D206	E-6
D207	G-7
D391	D-1
D401	H-15
D402	H-15
D403	G-14
D404	H-14
D405	H-18
D406	I-18
D407	H-18
D408	H-18
D409	I-18
D410	I-18
D411	H-15
D417	I-18
IC101	C-11
IC102	B-11
IC103	A-11
IC201	F-7
IC202	G-6
IC301	H-4
IC391	B-2
IC401	I-17
Q101	C-12
Q201	F-7
Q203	F-6
Q204	H-6
Q205	H-6
Q206	H-6
Q207	G-7
Q208	F-7
Q392	B-2
Q393	B-2

3-3. PRINTED WIRING BOARDS



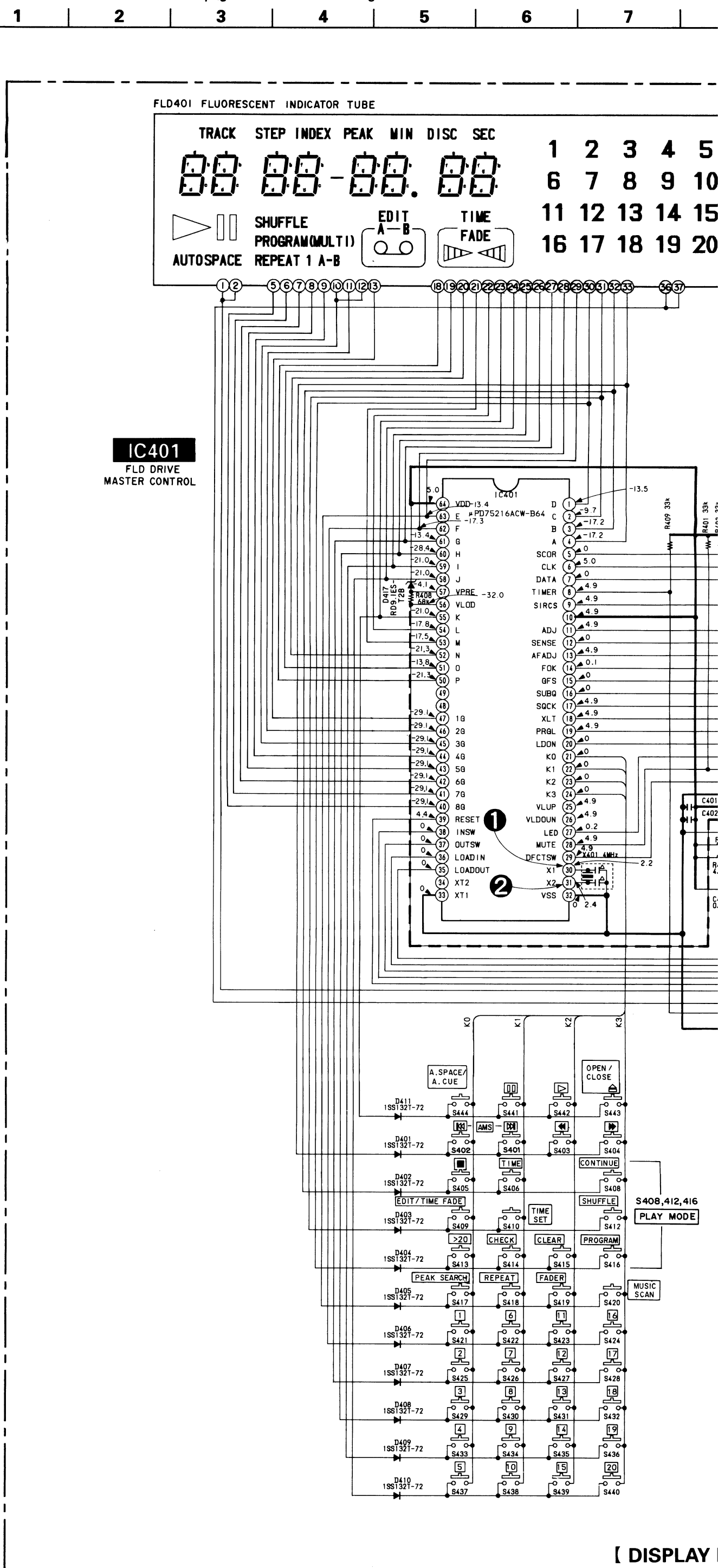
● WAVEFORMS



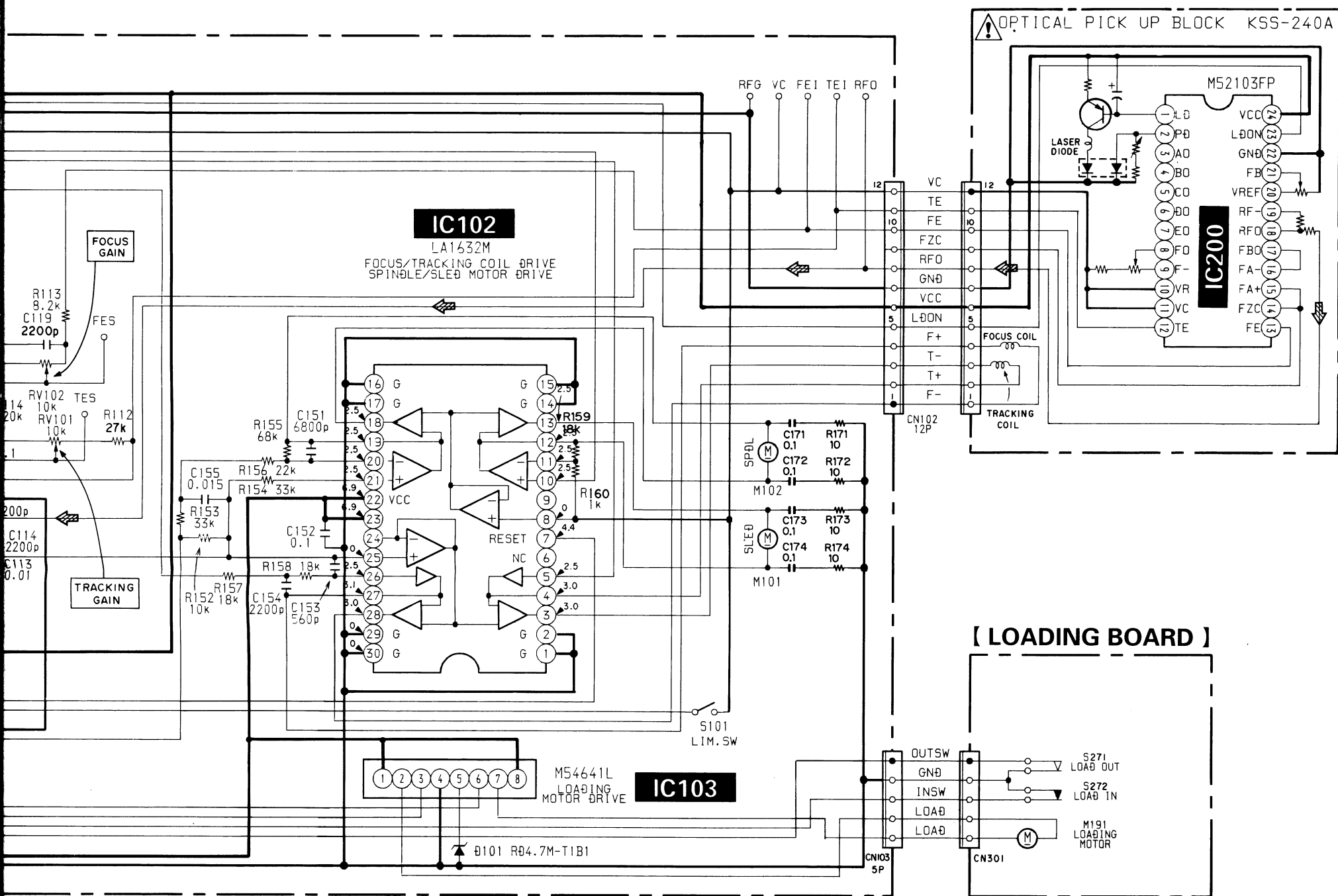
- Note:**
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in ohms, 1/4W or less unless otherwise noted.
 - Δ : internal component.

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

- — : B+ Line.
- - - - : B- Line.
- : adjustment for repair.
- Voltage are DC with respect to ground under no -signal (STOP) conditions.
- no mark : Stop mode
- Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path
- : CD
- EA : Saudi Arabia Model

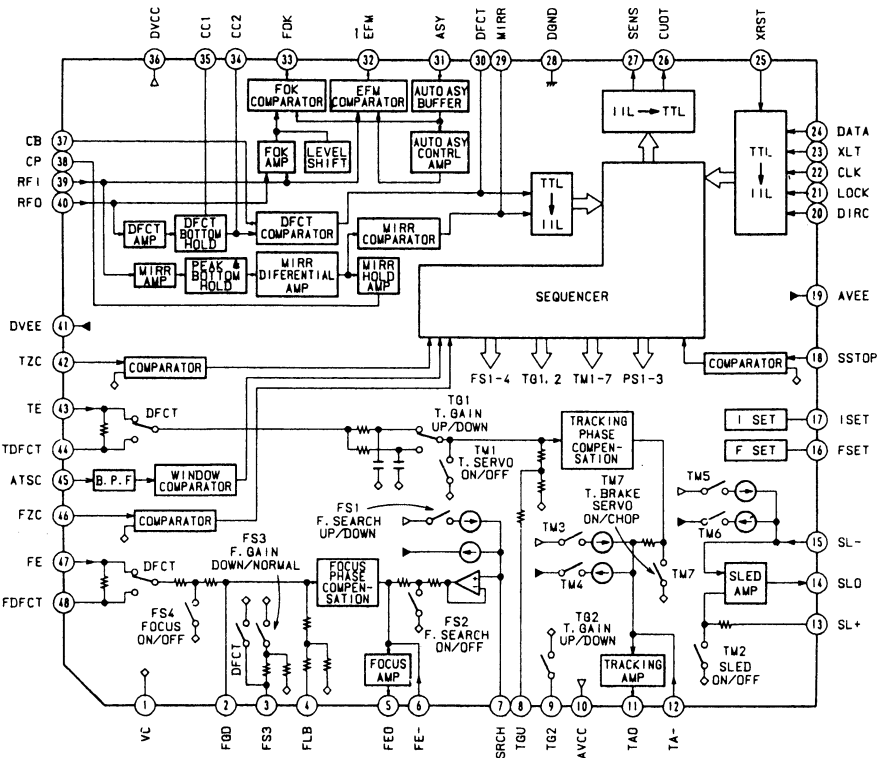




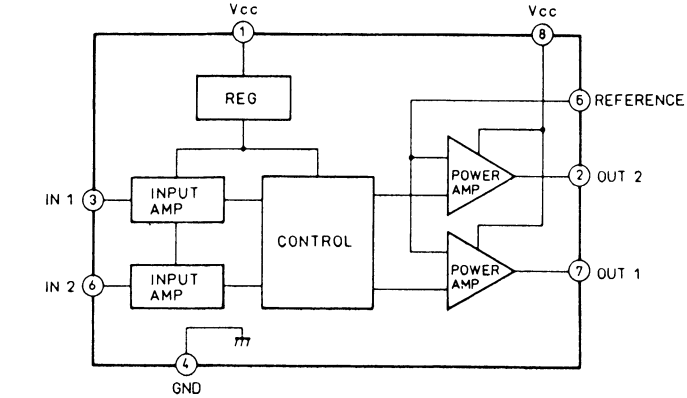


3-5. IC BLOCK DIAGRAMS

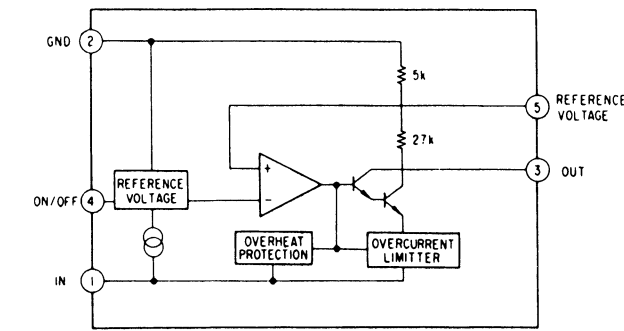
IC101 CXA1372Q



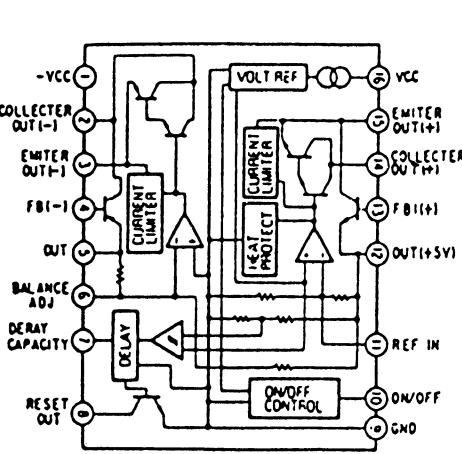
IC103 M54641L



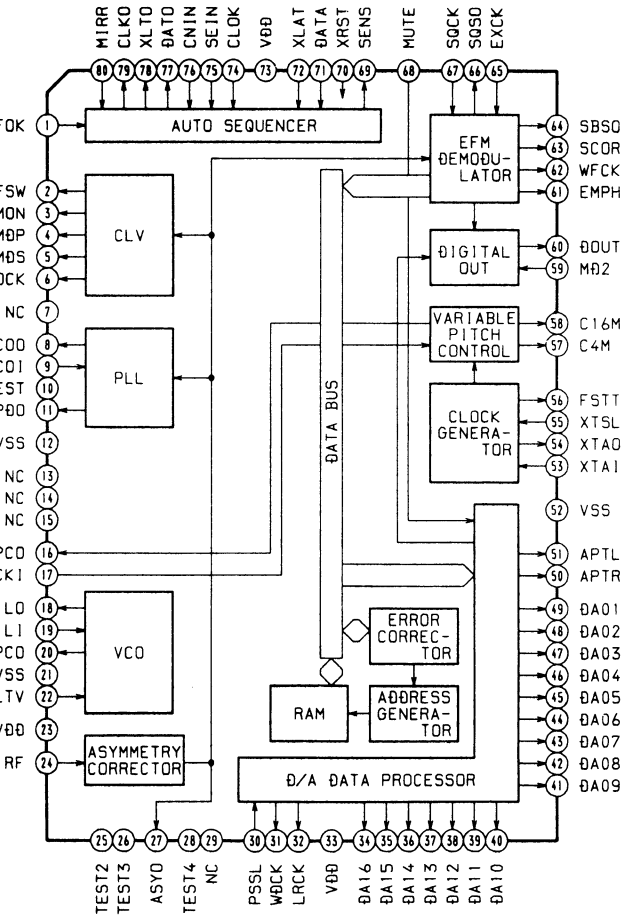
IC201 M5293L



IC202 M5290P-16



IC301 CXD2500AQ



3-6. PIN FUNCTION

• IC401 FL DR

Pin No.	
1 - 4	
5	
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40 - 47	
48, 49	
50 - 54	
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58 - 63	
64	

3-6. PIN FUNCTIONS OF IC401

• IC401 FL DRIVE, MASTER CONTROL (μPD75216ACW-B64)

Pin No.	Pin Name	I/O	Description
1 - 4	D - A	O	Segment output to FL tube and key scan output
5	SCOR	I	Subcode sync S0+S1 detection input from IC301 (CXD2500AQ)
6	CLK	O	Serial data transfer clock output to IC301 (CXD2500AQ)
7	DATA	O	Serial data output to IC301 (CXD2500AQ)
8	TIMER	I	Power on/off detect input
9	SIRCS	I	Sircs remote commander detect input
10	PIZ/INT1	I	Not used (+5 V)
11	ADJ	I	Test mode input. GFS check will not activate by "L"
12	SENSE	I	SENS signal input from IC301 (CXD2500AQ)
13	AFADJ	I	Test mode input. All test operation will be activate by "L" mode when power on.
14	FOK	I	Focus OK signal input from IC101 (CXA1372Q)
15	GFS	I	Frame sync signal clock status input from IC301 (CXD2500AQ)
16	SUB Q	I	Sub code (Q data) serial input from IC301 (CXD2500AQ)
17	SQCK	O	Sub code (Q data) readout clock output to IC301 (CXD2500AQ)
18	XLT	O	Serial data latch output to IC301 (CXD2500AQ)
19	PRGL	O	Attenuate data latch clock output (Not used in this unit)
20	LDON	O	Laser diode ON/OFF select output of optical pick-up
21 - 24	K0-K3	I	Key return signal input
25	VLUP	O	Output for motor volume up (Not used in this unit)
26	VLDQUN	O	Output for motor volume down (Not used in this unit)
27	LED	O	Muting output of sircs remote commander
28	MUTE	O	Muting output for IC301 (CXD2500AQ)
29	DFCTSW	O	Defect circuit ON/OFF select output to IC101 (CXA1372Q)
30	X1	I	Clock input (4 MHz)
31	X2	O	Clock output
32	VSS	—	Ground
33	XT1	I	Clock input (Not used in this unit)
34	XT2	—	Not used (open)
35	LOAD OUT	O	Output for turn the loading motor to unloading
36	LOAD IN	O	Output for turn the loading motor to loading
37	OUT SW	I	Input for loading out switch
38	IN SW	I	Output for loading in switch
39	RESET	I	Reset input
40 - 47	8G - 1G	O	Common output to FL tube
48, 49	—	O	Not used (open)
50 - 54	P - L	O	Segment output to FL tube
55	K	O	Segment output to FL tube and key scan output
56	VLOAD	I	Power voltage -30 V for built in FL tube controller
57	VPRE	I	Power supply for the FL tube predriver
58 - 63	J - E	O	Segment output to FL tube and key scan output
64	VDD	—	Power supply (+5 V)

SECTION 4 EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.

- Color Indication of Appearance Parts

Example:

KNOB, BALANCE (WHITE)... (RED)

↑ ↑
Parts color Cabinet's color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

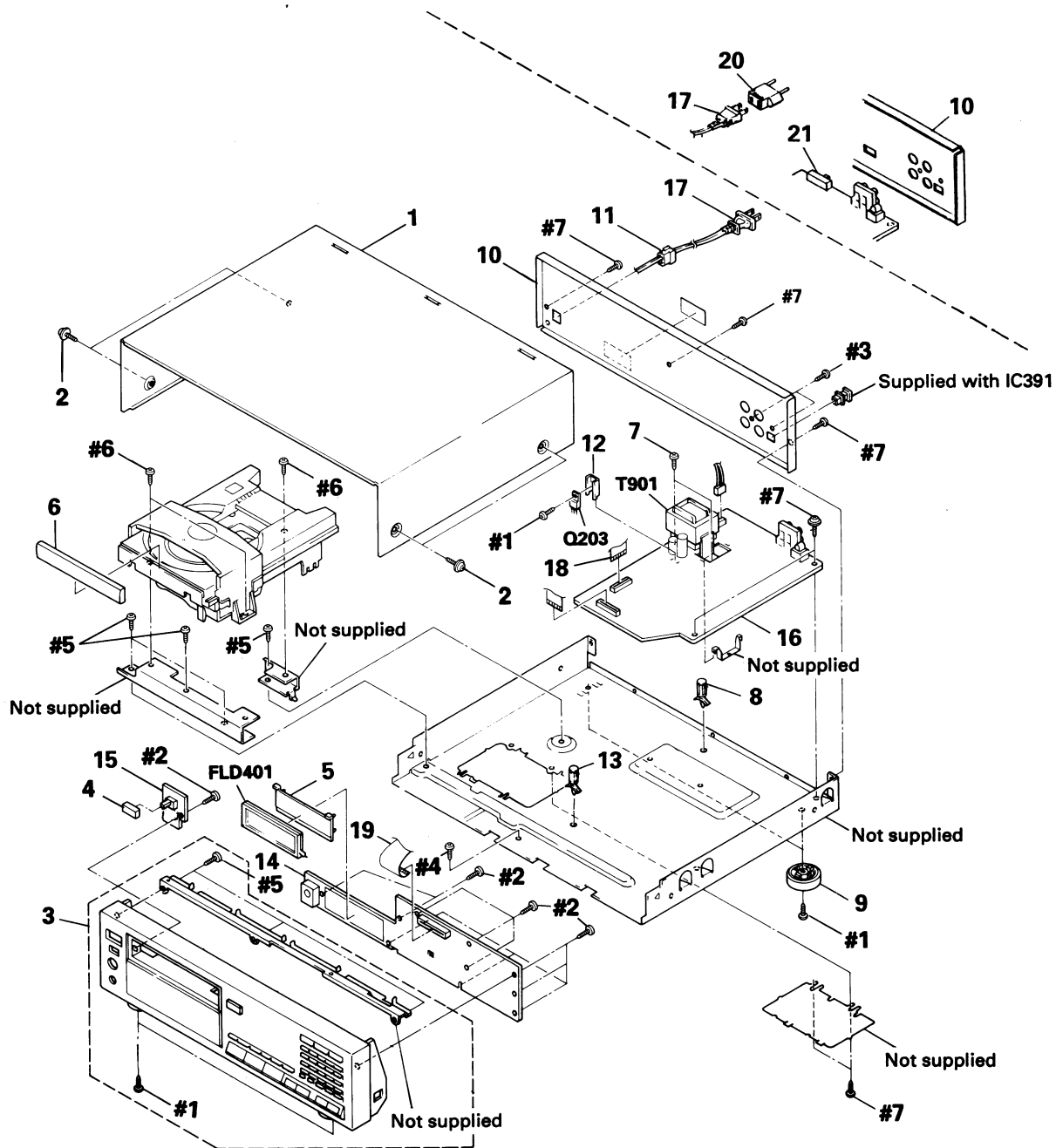
- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list is given in the last of this parts list.

- EA : Saudi Arabia model

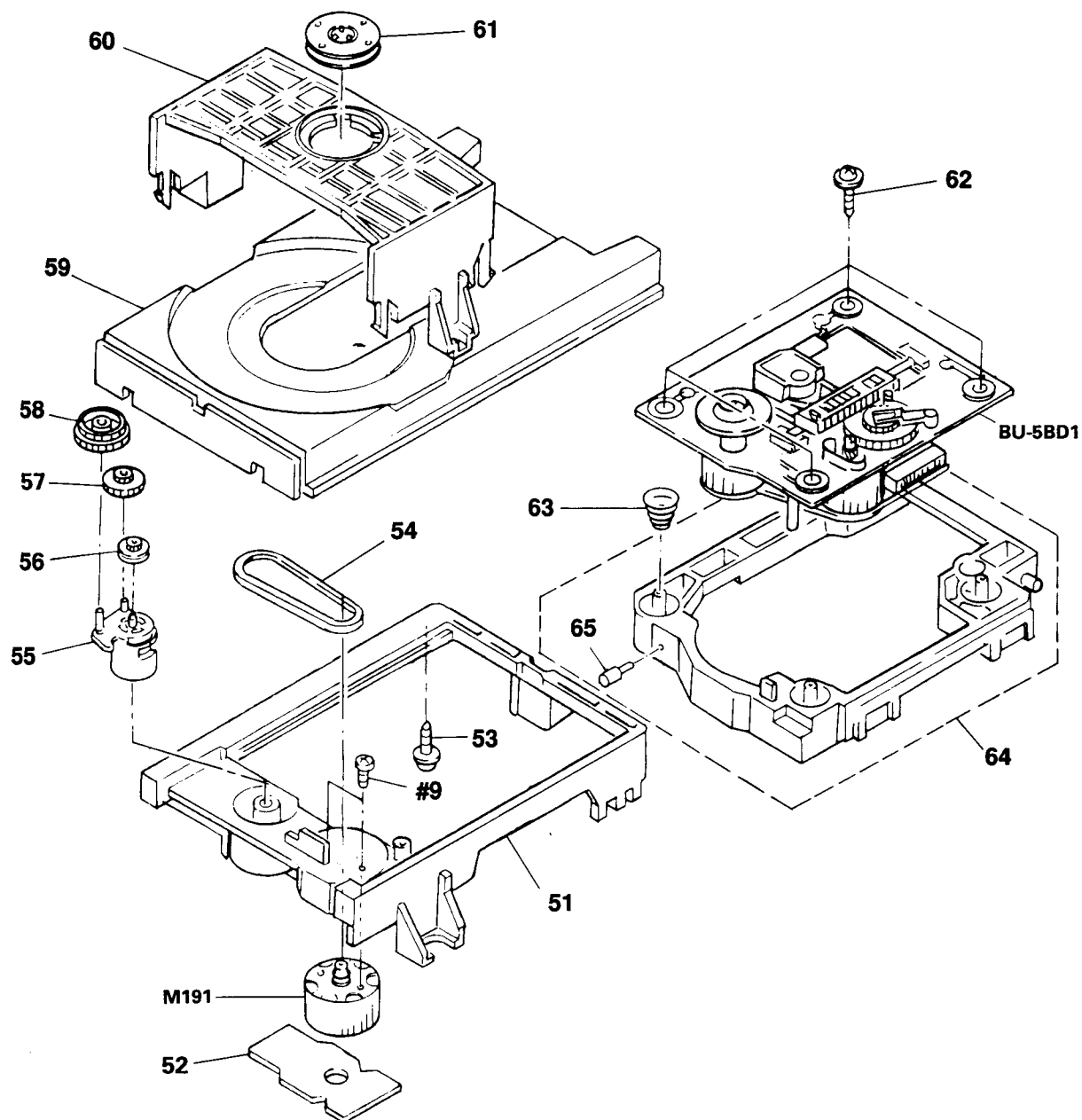
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

4-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-919-377-01	CASE		13	* 4-944-316-01	HOLDER, PC BOARD (BLACK)	
2	3-704-366-01	SCREW (CASE) (M3X8)		14	* A-4617-724-A	DISPLAY BOARD, COMPLETE	
3	X-4941-316-2	PANEL ASSY, FRONT (AEP)		15	* 1-638-659-11	POWER SW BOARD	
	X-4941-572-2	PANEL ASSY, FRONT (UK, E, EA)		16	* A-4617-723-A	MAIN BOARD, COMPLETE (AEP, UK)	
4	4-922-903-01	BUTTON (PW)			* A-4617-726-A	MAIN BOARD, COMPLETE (E, EA)	
5	* 4-941-993-01	HOLDER, FL TUBE		17	△ 1-575-651-21	CORD, POWER (AEP, EA)	
6	4-941-997-01	PANEL, LOADING			△ 1-575-653-21	CORD, POWER (E)	
7	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6			△ 1-590-379-11	CORD, POWER (UK)	
8	* 3-349-025-41	HOLDER, PC BOARD (WHITE)		18	1-575-160-11	WIRE, FLAT TYPE (22 CORE)	
9	4-934-884-01	FOOT		19	1-590-795-11	WIRE, FLAT TYPE (29 CORE)	
10	* 4-943-116-41	PANEL, BACK (AEP)		20	△ 1-569-007-11	ADAPTER, CONVERSION 2P (E)	
	* 4-943-116-51	PANEL, BACK (UK)			△ 1-569-008-11	AEAPTER, CONVERSION 2P (EA)	
	* 4-943-116-61	PANEL, BACK (E, EA)		21	1-571-722-11	SWITCH, VOLTAGE SELECTION (E, EA)	
11	* 3-703-244-00	BUSHING (2104), CORD (AEP, UK, EA)		T901	△ 1-449-922-11	TRANSFORMER, POWER (AEP, UK)	
	3-703-571-00	BUSHING (S) (4516), CORD (E)		T901	△ 1-449-923-11	TRANSFORMER, POWER (E, EA)	
12	4-902-345-01	HEAT SINK					

(2) CD MECHANISM SECTION (CDM14-5BD1)



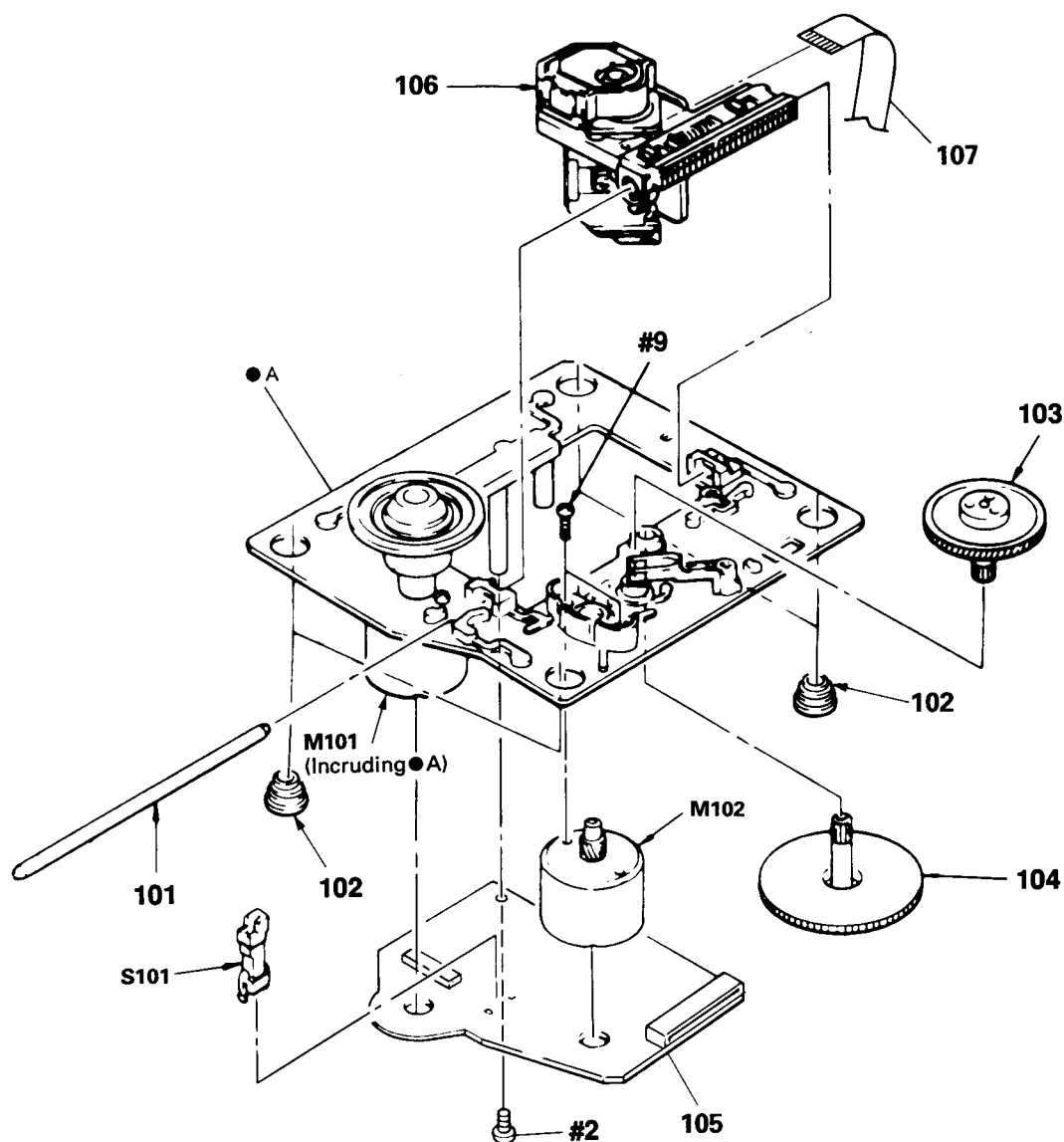
Ref. No.	Part No.	Description
51	4-933-111-01	CHASSIS (MD)
52	* 1-632-202-11	LOADING BOARD
53	* 4-917-583-21	BRACKET, YOKE
54	4-927-649-01	BELT
55	4-933-109-01	CAM
56	4-927-651-01	PULLEY (S)
57	4-927-628-01	GEAR (C)
58	4-933-107-01	GEAR (PL)
59	4-933-112-01	TABLE, DISK

Remarks

Ref. No.	Part No.	Description
60	4-933-110-01	HOLDER (MG)
61	* 1-452-538-11	MAGNET
62	4-933-134-01	SCREW (+PTPWH M2. 6X6)
63	4-917-541-01	SPRING (B)
64	4-933-129-01	HOLDER (BU)
65	4-933-108-01	SHAFT (CAM)
M191	A-4604-363-A	MOTOR (L) ASSY

Remarks

(3) OPTICAL PICK-UP BLOCK (BU-5BD1)



BD

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

SECTION 5

ELECTRICAL PARTS LIST

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE : Metal Oxide-film resistor
F : nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u : μ , for example :
uA...: μ A..., uPA...: μ PA...,
uPB...: μ PB..., uPC...: μ PC...,
uPD...: μ PD...
- CAPACITORS
uF : μ F
- COILS
uH : μ H
- EA : Saudi Arabia model

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
* A-4617-161-A BD BOARD, COMPLETE *****				< IC >			
		< CAPACITOR >		IC101	8-752-050-82 IC	CXA1372Q	
C101	1-163-038-00	CERAMIC CHIP	0.1uF	IC102	8-759-822-36 IC	LA6532M	
C102	1-163-989-11	CERAMIC CHIP	0.033uF	IC103	8-759-633-65 IC	M54641L	
C103	1-126-163-11	ELECT	4.7uF			< CHIP JUMPER >	
C104	1-163-038-00	CERAMIC CHIP	0.1uF	J101	1-216-295-00	METAL CHIP	0 5% 1/10W
C105	1-126-154-11	ELECT	47uF	J102	1-216-295-00	METAL CHIP	0 5% 1/10W
C106	1-126-154-11	ELECT	47uF			< TRANSISTOR >	
C107	1-126-154-11	ELECT	47uF	Q101	8-729-901-01	TRANSISTOR	DTC144EK
C108	1-163-038-00	CERAMIC CHIP	0.1uF			< RESISTOR >	
C109	1-163-038-00	CERAMIC CHIP	0.1uF	R101	1-216-097-00	METAL CHIP	100K 5% 1/10W
C110	1-163-989-11	CERAMIC CHIP	0.033uF	R102	1-216-095-00	METAL CHIP	82K 5% 1/10W
C111	1-131-367-00	TANTALUM	22uF	R103	1-216-091-00	METAL CHIP	56K 5% 1/10W
C112	1-164-232-11	CERAMIC CHIP	0.01uF	R104	1-216-099-00	METAL CHIP	120K 5% 1/10W
C113	1-164-232-11	CERAMIC CHIP	0.01uF	R105	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	R106	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	R107	1-216-114-00	METAL GLAZE	510K 5% 1/10W
C117	1-163-038-00	CERAMIC CHIP	0.1uF	R108	1-216-105-00	METAL CHIP	220K 5% 1/10W
C118	1-163-038-00	CERAMIC CHIP	0.1uF	R109	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	R110	1-216-049-00	METAL CHIP	1K 5% 1/10W
C120	1-163-989-11	CERAMIC CHIP	0.033uF	R111	1-216-049-00	METAL CHIP	1K 5% 1/10W
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	R112	1-216-083-00	METAL CHIP	27K 5% 1/10W
C152	1-163-038-00	CERAMIC CHIP	0.1uF	R113	1-216-071-00	METAL CHIP	8.2K 5% 1/10W
C153	1-163-006-11	CERAMIC CHIP	560PF	R114	1-216-105-00	METAL CHIP	220K 5% 1/10W
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	R152	1-216-073-00	METAL CHIP	10K 5% 1/10W
C155	1-163-023-00	CERAMIC CHIP	0.015uF	R153	1-216-085-00	METAL CHIP	33K 5% 1/10W
C171	1-163-038-00	CERAMIC CHIP	0.1uF	R154	1-216-085-00	METAL CHIP	33K 5% 1/10W
C172	1-163-038-00	CERAMIC CHIP	0.1uF	R155	1-216-093-00	METAL CHIP	68K 5% 1/10W
C173	1-163-038-00	CERAMIC CHIP	0.1uF	R156	1-216-081-00	METAL CHIP	22K 5% 1/10W
C174	1-163-038-00	CERAMIC CHIP	0.1uF	R157	1-216-079-00	METAL CHIP	18K 5% 1/10W
		< CONNECTOR >		R158	1-216-079-00	METAL CHIP	18K 5% 1/10W
CN101	1-568-796-11	SOCKET, CONNECTOR 22P		R159	1-216-079-00	METAL CHIP	18K 5% 1/10W
CN102	1-568-795-11	SOCKET, CONNECTOR 12P		R160	1-216-049-00	METAL CHIP	1K 5% 1/10W
CN103	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P		R171	1-216-001-00	METAL CHIP	10 5% 1/10W
		< DIODE >		R172	1-216-001-00	METAL CHIP	10 5% 1/10W
D101	8-719-105-72	DIODE	RD4.7M-B1	R173	1-216-001-00	METAL CHIP	10 5% 1/10W

BD

LOADING

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R174	1-216-001-00	METAL CHIP 10 5% 1/10W		C392	1-164-159-11	CERAMIC 0.1uF	50V
		< VARIABLE RESISTOR >		C396	1-164-159-11	CERAMIC 0.1uF	50V
RV101	1-238-016-11	RES, ADJ, CARBON 10K		C397	1-126-022-11	ELECT 47uF	20% 16V
RV102	1-238-016-11	RES, ADJ, CARBON 10K		C398	1-164-159-11	CERAMIC 0.1uF	50V
		< SWITCH >		C399	1-164-159-11	CERAMIC 0.1uF	50V
S101	1-572-085-11	SWITCH, LEAF				< CONNECTOR >	
*****				CN201	* 1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
	* 1-632-202-11	LOADING BOARD		CN301	* 1-568-844-11	SOCKET, CONNECTOR 29P	
		*****		CN302	* 1-568-822-11	SOCKET, CONNECTOR 22P	
		< CONNECTOR >		CN391	* 1-565-561-11	PIN, CONNECTOR 3P	
CN301	* 1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P				< DIODE >	
		< SWITCH >		D201	8-719-200-82	DIODE 11ES2	
S271	1-572-086-11	SWITCH, LEAF (LOAD OUT)		D202	8-719-109-97	DIODE RD6.8ES-B2	
S272	1-572-086-11	SWITCH, LEAF (LOAD IN)		D203	8-719-200-82	DIODE 11ES2	
*****				D204	8-719-200-82	DIODE 11ES2	
	* A-4617-723-A	MAIN BOARD, COMPLETE (AEP, UK)		D205	8-719-200-82	DIODE 11ES2	
		*****		D206	8-719-200-82	DIODE 11ES2	
	* A-4617-726-A	MAIN BOARD, COMPLETE (E, EA)		D207	8-719-114-49	DIODE RD7.5JS-B2	
		*****		D391	8-719-912-20	DIODE 1SS120	
	1-571-722-11	SWITCH, VOLTAGE SELECTION (E, EA)				< IC >	
	4-902-345-01	HEAT SINK		IC201	8-759-633-42	IC M5293L	
		< CAPACITOR >		IC202	8-759-630-21	IC M5290P-16	
C201	1-124-572-11	ELECT 100uF 20% 63V		IC301	8-752-337-26	IC CXD2500AQ	
C202	1-126-059-11	ELECT 10uF 20% 50V		IC391	8-749-921-20	IC T-1550	
C203	1-124-478-11	ELECT 100uF 20% 25V				< COIL >	
C204	1-126-937-11	ELECT 4700uF 20% 16V		L398	1-410-953-11	INDUCTOR, SMALL TYPE	
C205	1-126-163-11	ELECT 4.7uF 20% 50V		L399	1-424-090-11	COIL, LINE FILTER	
C206	1-126-059-11	ELECT 10uF 20% 50V				< IC LINK >	
C207	1-126-059-11	ELECT 10uF 20% 50V		PS202	△ 1-532-637-00	LINK, IC	
C209	1-124-997-11	ELECT 470uF 20% 10V				< TRANSISTOR >	
C210	1-126-024-11	ELECT 220uF 20% 16V		Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C301	1-126-022-11	ELECT 47uF 20% 16V		Q203	8-729-111-67	TRANSISTOR 2SB1274-RS	
C302	1-126-301-11	ELECT 1uF 20% 50V		Q204	8-729-900-65	TRANSISTOR DTA144ES	
C303	1-162-206-31	CERAMIC 20PF 5% 50V		Q205	8-729-900-89	TRANSISTOR DTC144ES	
C304	1-162-207-31	CERAMIC 22PF 5% 50V		Q206	8-729-900-89	TRANSISTOR DTC144ES	
C311	1-130-491-00	MYLAR 0.047uF 5% 50V		Q207	8-729-230-45	TRANSISTOR 2SC2458-YGR	
C312	1-161-374-11	CERAMIC 0.0015uF 20% 50V		Q208	8-729-111-67	TRANSISTOR 2SB1274SA-Q	
C313	1-161-494-00	CERAMIC 0.022uF 25V		Q392	8-729-900-80	TRANSISTOR DTC114ES	
C314	1-162-306-11	CERAMIC 0.01uF 20% 16V		Q393	8-729-920-68	TRANSISTOR 2SA933S-QR	
C315	1-126-300-11	ELECT 0.47uF 20% 50V				< RESISTOR >	
C316	1-161-494-00	CERAMIC 0.022uF 25V		R201	1-249-435-11	CARBON 33K 5% 1/4W	
C317	1-164-159-11	CERAMIC 0.1uF 50V		R202	1-249-438-11	CARBON 56K 5% 1/4W	
C391	1-162-286-31	CERAMIC 220PF 10% 50V		R203	1-249-429-11	CARBON 10K 5% 1/4W	
				R205	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R206	1-249-417-11	CARBON 1K 5% 1/4W	
				R207	1-249-417-11	CARBON 1K 5% 1/4W	

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Replace only with part number specified.

When indicating parts by reference number, please include the board name.

MAIN

DISPLAY

POWER SW

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R208	1-249-423-11	CARBON	3. 3K 5% 1/4W	D408	8-719-912-20	DIODE 1SS120	
R212	1-249-385-11	CARBON	2. 2 5% 1/6W	D409	8-719-912-20	DIODE 1SS120	
R213	1-249-385-11	CARBON	2. 2 5% 1/6W	D410	8-719-912-20	DIODE 1SS120	
R214	1-249-417-11	CARBON	1K 5% 1/4W	D411	8-719-912-20	DIODE 1SS120	
R301	1-249-417-11	CARBON	1K 5% 1/4W	D417	8-719-110-13	DIODE RD9. 1ES-B2	
R302	1-249-417-11	CARBON	1K 5% 1/4W			(FILTER)	
R303	1-249-421-11	CARBON	2. 2K 5% 1/4W	FLD401	1-519-618-21	INDICATOR TUBE, FLUORESCENT	
R305	1-249-411-11	CARBON	330 5% 1/4W			(IC)	
R311	1-249-423-11	CARBON	3. 3K 5% 1/4W	IC401	8-759-151-90	IC μ PD75216ACW-B16	
R312	1-249-429-11	CARBON	10K 5% 1/4W			(RESISTOR)	
R313	1-249-423-11	CARBON	3. 3K 5% 1/4W	R401	1-249-435-11	CARBON 33K 5% 1/4W	
R314	1-249-429-11	CARBON	10K 5% 1/4W	R402	1-249-435-11	CARBON 33K 5% 1/4W	
R318	1-249-441-11	CARBON	100K 5% 1/4W	R403	1-249-435-11	CARBON 33K 5% 1/4W	
R391	1-249-417-11	CARBON	1K 5% 1/4W	R404	1-249-435-11	CARBON 33K 5% 1/4W	
R392	1-249-405-11	CARBON	100 5% 1/4W	R405	1-249-435-11	CARBON 33K 5% 1/4W	
R393	1-249-406-11	CARBON	120 5% 1/4W	R406	1-249-425-11	CARBON 4. 7K 5% 1/4W	
R394	1-249-435-11	CARBON	33K 5% 1/4W	R407	1-249-425-11	CARBON 4. 7K 5% 1/4W	
R395	1-249-429-11	CARBON	10K 5% 1/4W	R408	1-249-439-11	CARBON 68K 5% 1/4W	
		(TRANSFORMER)		R409	1-249-435-11	CARBON 33K 5% 1/4W	
T901	Δ 1-449-922-11	TRANSFORMER, POWER (AEP, UK)				(SWITCH)	
	Δ 1-449-923-11	TRANSFORMER, POWER (E, EA)		S401	1-572-198-11	SWITCH, KEY BOARD ($\square \triangleleft$)	
		(CRYSTAL)		S402	1-572-198-11	SWITCH, KEY BOARD ($\triangleright \square$)	
X301	1-567-908-11	VIBRATOR, CRYSTAL (16. 9344MHz)		S403	1-572-198-11	SWITCH, KEY BOARD ($\triangleleft \triangleleft$)	
		*****		S404	1-572-198-11	SWITCH, KEY BOARD ($\triangleright \triangleright$)	
	* A-4617-724-A	DISPLAY BOARD, COMPLETE		S405	1-572-198-11	SWITCH, KEY BOARD ($\square$)	
		*****		S406	1-572-198-11	SWITCH, KEY BOARD (TIME)	
	* 1-638-659-11	POWER SW BOARD		S408	1-572-198-11	SWITCH, KEY BOARD (CONTINUE)	
		*****		S409	1-572-198-11	SWITCH, KEY BOARD (EDIT/T. FADE)	
	* 4-934-853-01	CUSHION (FL)		S410	1-572-198-11	SWITCH, KEY BOARD (TIME SET)	
	* 4-941-993-01	HOLDER, FL TUBE		S412	1-572-198-11	SWITCH, KEY BOARD (SHUFFLE)	
		(CAPACITOR)		S413	1-572-198-11	SWITCH, KEY BOARD ()20	
C401	1-164-159-11	CERAMIC 0. 1 μ F	50V	S414	1-572-198-11	SWITCH, KEY BOARD (CHECK)	
C402	1-164-159-11	CERAMIC 0. 1 μ F	50V	S415	1-572-198-11	SWITCH, KEY BOARD (CLEAR)	
C403	1-164-159-11	CERAMIC 0. 1 μ F	50V	S416	1-572-198-11	SWITCH, KEY BOARD (PROGRAM)	
C404	1-164-159-11	CERAMIC 0. 1 μ F	50V	S417	1-572-198-11	SWITCH, KEY BOARD (P. SEARCH)	
		(CONNECTOR)		S418	1-572-198-11	SWITCH, KEY BOARD (REPEAT)	
CN401	* 1-568-844-11	SOCKET, CONNECTOR 29P		S419	1-572-198-11	SWITCH, KEY BOARD (FADER)	
		(DIODE)		S420	1-572-198-11	SWITCH, KEY BOARD (M. SCAN)	
D401	8-719-912-20	DIODE 1SS120		S421	1-572-198-11	SWITCH, KEY BOARD (1)	
D402	8-719-912-20	DIODE 1SS120		S422	1-572-198-11	SWITCH, KEY BOARD (6)	
D403	8-719-912-20	DIODE 1SS120		S423	1-572-198-11	SWITCH, KEY BOARD (11)	
D404	8-719-912-20	DIODE 1SS120		S424	1-572-198-11	SWITCH, KEY BOARD (16)	
D405	8-719-912-20	DIODE 1SS120		S425	1-572-198-11	SWITCH, KEY BOARD (2)	
				S426	1-572-198-11	SWITCH, KEY BOARD (7)	
D406	8-719-912-20	DIODE 1SS120		S427	1-572-198-11	SWITCH, KEY BOARD (12)	
D407	8-719-912-20	DIODE 1SS120		S428	1-572-198-11	SWITCH, KEY BOARD (17)	
				S429	1-572-198-11	SWITCH, KEY BOARD (3)	
				S430	1-572-198-11	SWITCH, KEY BOARD (8)	

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