TASCAM
TEAC Professional Division

CD-A500/CD-A700

SERVICE MANUAL

REVISION

追補版

The circuit diagrams and PC board in this sheet are provided for model CD-A500 serial No.0720001 and higher, and model CD-A700 serial No.0520001 and higher.

ここに記載されている回路図と基板図は、CD-A500のシリアルNo:0720001以降及び、CD-A700のシリアルNo:0520001以降に適用されます。

Revision information

変更内容

1.In order to change the CD section into a digital-servo circuit, CONT-CD PCB was changed.completely.
CD部をデジタルサーボ回路に変更の為、CONT-CD PCBを全面的に変更しました。
2.The above involves the following modifications:
上記変更に伴い下記が変更されています。

<CD-A500>

PCBA,GATHER JPN [J]	3E95105-00F	→	3E95105-00G	
PCBA,GATHER EXTC [US.C.GE]	3E95105-10F	→	3E95105-10G	
PCBA,GATHER EUR [K.E.UK]	3E95105-20F	→	3E95105-20G	
PCBA,GATHER AUS [A]	3E95105-30F	→	3E95105-30G	
PCBA,GATHER JOINT AD-500	3E95396-00A	→	deleted（廃止）	

<CD-A700>

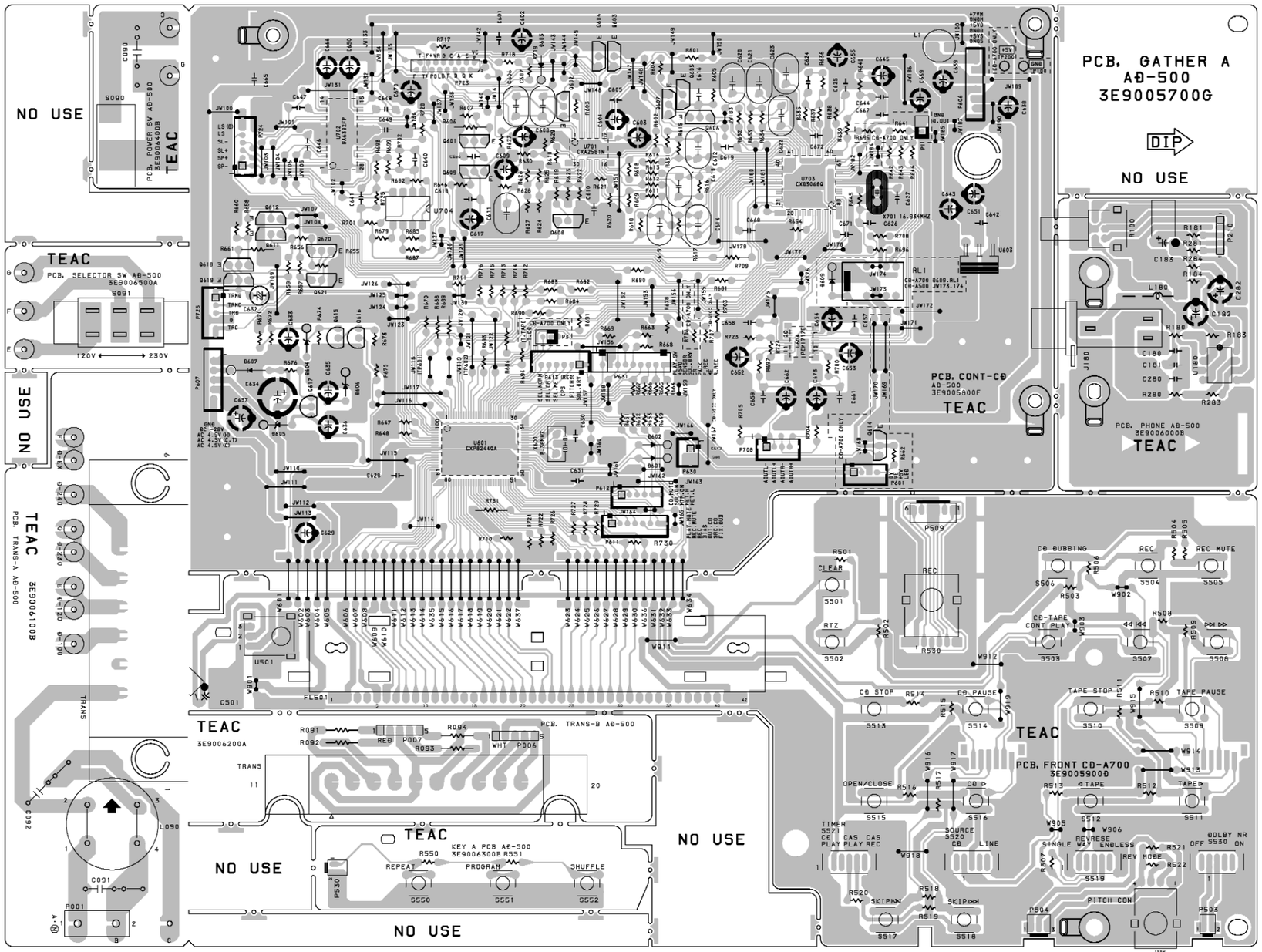
PCBA,GATHER A JPN [J]	3E95206-00F	→	3E95206-00G	
PCBA,GATHER A EXTC [US.C.GE]	3E95206-10F	→	3E95206-10G	
PCBA,GATHER A EUR [K.E.UK]	3E95206-20F	→	3E95206-20G	
PCBA,GATHER A AUS [A]	3E95206-30F	→	3E95206-30G	
PCBA,GATHER (B) CD-A700	3E95207-00B	→	3E95207-00C	(PCB JOINT → All No Mount) (PCB BAL → P8/P9 No Mount)

Effective : July, 2004

PC BOARDS AND PARTS LIST

基板図とパーツリスト

GATHER A PCB (PCB CONT-CD , PCB FRONT , PCB PHONE , PCB POWER , PCB SELECTOR SW , PCB TRANS-A , PCB TRANS-B , KEY PCB)



GATHER PCB ASSY CD-A500

REF.NO.		PARTS NO.	DESCRIPTION
		* 3E95105-00G	PCBA,GATHER JPN [J]
		* 3E95105-10G	PCBA,GATHER EXTC [US.C.GE]
		* 3E95105-20G	PCBA,GATHER EUR [K.E.UK]
		* 3E95105-30G	PCBA,GATHER AUS [A]
			PCB ASSY,CONT-CD AD-500
C634	⚠	3C000950	CE, 50V 470UF M
D601		3S000241	DI, 1SS133 T-77
D602		3S000241	DI, 1SS133 T-77
D603		3S000241	DI, 1SS133 T-77
D604		3S000671	ZDI, MTZJ4.3B T-77
D605		3S000671	ZDI, MTZJ4.3B T-77
D606	⚠	3S000691	ZDI, MTZJ24B T-77
D607	⚠	3S000031	DI, 1N4003 TAPING W= 52MM
L1		3E029480	COIL,RCH-875 100UH
P606		3E001180	CONNECT PLUG 6P B6B-EH-A
P607		3E001170	CONNECT PLUG 5P B5B-EH-A
P611		3E010390	CONNECT PLUG B 7B-PH-K-S
P612		3E010370	CONNECT PLUG B 5B-PH-K-S
P613		3E003850	CONNECTOR,PLUG B6B-PH RED
P630		3E010340	CONNCT PLUG B 2B-PH-K-S
P631		3E00403-00A	CABLE ASSY, AD500 TDM-631
P708		3E010360	CONNCT PLUG B 4B-PH-K-S
P723		3E014210	CONNECT,16FMN-BTRK
P724		3E010380	CONNECT PLUG B 6B-PH-K-S
P725		3E010370	CONNECT PLUG B 5B-PH-K-S
Q601		3S000701	TR, 2SA854R TP
Q603		3S002450	TR,DTC114ESTP
Q604		3S002450	TR,DTC114ESTP
Q608		3S002450	TR,DTC114ESTP
Q609		3S000002	TR, 2SC1815GR TP
Q611		3S000301	TR, DTA124ES TP
Q612		3S000301	TR, DTA124ES TP
Q615		3S000002	TR, 2SC1815GR TP
Q616		3S000002	TR, 2SC1815GR TP
Q617	⚠	3S000022	TR, 2SA1015GR TP
Q618		3S000721	TR, 2SC1741R-SPT TP
Q619		3S000721	TR, 2SC1741R-SPT TP
Q620		3S000721	TR, 2SC1741R-SPT TP
Q621		3S000721	TR, 2SC1741R-SPT TP
U601		3S00942-00A	IC,CXP82432A-188Q
U601		3D00621-00A	SOFTWARE 500/700 VER 1.00
U603		3S009390	IC,BA033ST
U604		3S009384	IC,PCM1717E
U701		3S003304	IC,CXA2581N-T4
U702		3S009434	IC,BA6392FP
U703		3S006404	IC,CXD3068Q
U704		3S005680	IC,NJM2904D
X601		3E003680	RESO,CE,CST8.38MTW 3P
X701		3E021130	XTAL 16.9344MHZ
		3E02152-00A	EARTH PLATE B GND-8

GATHER PCB ASSY CD-A500

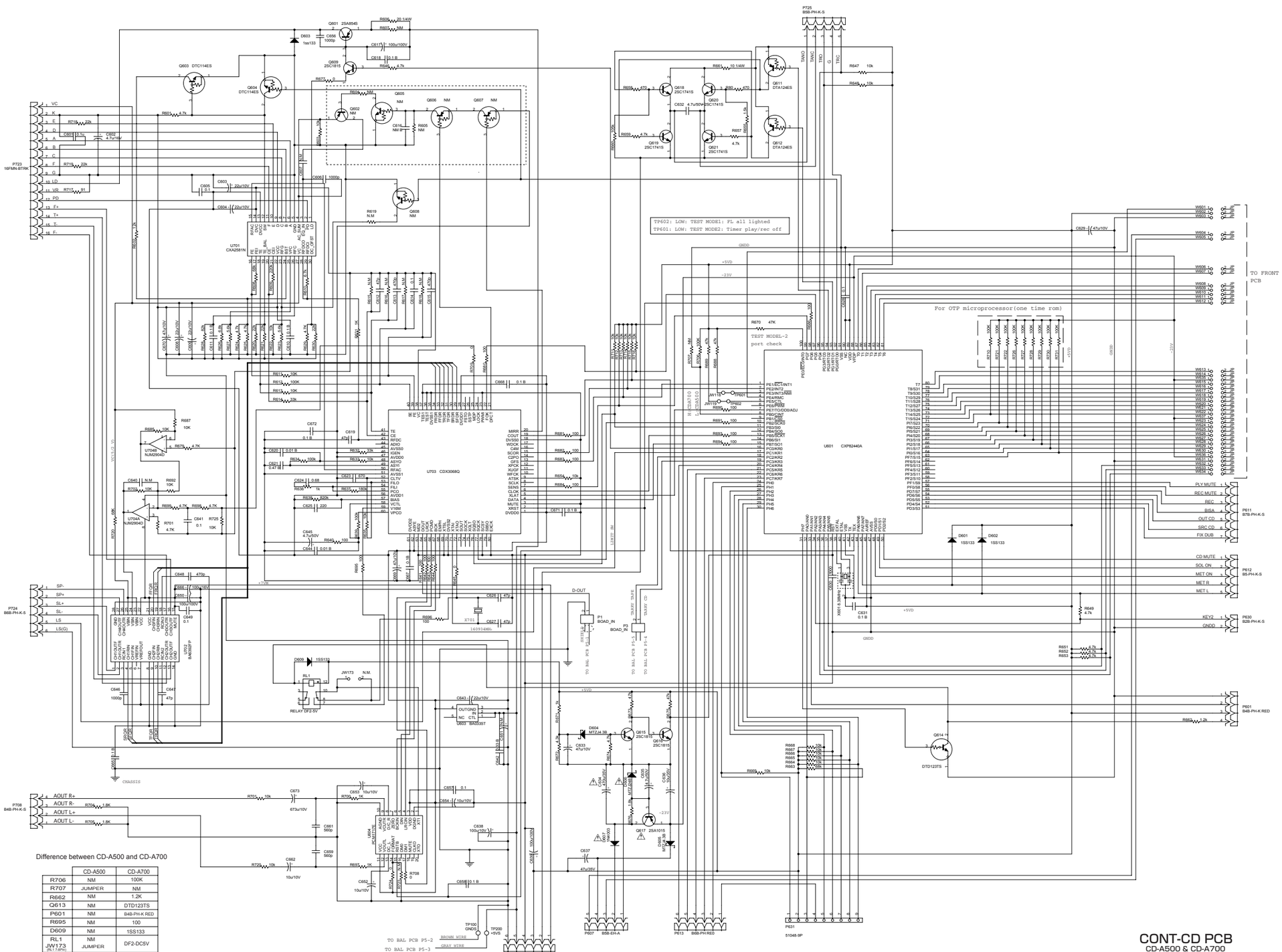
REF.NO.		PARTS NO.	DESCRIPTION
			PCB ASSY,FRONT AD-500
FL501		3E01062-10A	DISPLAY,FL SVAC09MM18
P503		3E00404-01A	CABLE ASSY, AD500 103-503
P504		3E00405-01A	CABLE ASSY, AD500 104-504
P509		3E00406-01A	CABLE ASSY, AD500 109-
509R530		3R004890	VAR RES,10KAX2 RK14K12D
R531		3R003980	VAR REG, 5KB RK11K113 CC
S501 S502		3E029700	SW,TACT SKHHAM2520
S503 S504		3E029700	SW,TACT SKHHAM2520
S505 S506		3E029700	SW,TACT SKHHAM2520
S507 S508		3E029700	SW,TACT SKHHAM2520
S509 S510		3E029700	SW,TACT SKHHAM2520
S511 S512		3E029700	SW,TACT SKHHAM2520
S513 S514		3E029700	SW,TACT SKHHAM2520
S515 S516		3E029700	SW,TACT SKHHAM2520
S517 S518		3E029700	SW,TACT SKHHAM2520
S519 S521		3E014570	SW,SLIDE TKR-0023/474
S520 S530		3E014560	SW,SLIDE TKR-0022/473
U501		3S000760	REMOCON.SENSOR,SBX1976-52
		3M00247-00A	HOLDER,FL(1) AD500
		3M00247-01A	HOLDER,FL(2) AD500
		3M00247-02A	HOLDER,FL(3) AD500
			PCB ASSY,PHONE CD-A500
J180		E0073670	JACK,JY-6313-01-030
L180		3E003721	COIL,100UH EC24-101K-T2
P210		3E00407-01A	CABLE ASSY, AD500 110-210
R190		3R003920	VAR REG, 50KAX2 RK09K12A
U180		3S000840	IC, BA4560
			PCB ASSY,TRANS-A JP AD500
			PCB ASSY,TRANS-A EX AD500
			PCB ASSY,TRANS-A EU AD500
			PCB ASSY,TRANS-A AS AD500
P001		3E002170	PIN,TERMINAL LAPPING 2P
C091 C092	⚠	3C007820	CQ,0.022UF ECQU2A223MN T1
L090	⚠	3E004290	COIL,1MH/1.5A FKOB160MH16
			PCB ASSY,TRANS-B AD500
P006		3E00878-01A	CABLE ASSY AD-500 607-006
P007		3E00879-01A	CABLE ASSY AD-500 107-007
			PCB ASSY,KEY A AD-500
P530		3E00408-01A	CABLE ASSY, AD500 630-530
S550 S551		3E029700	SW,TACT SKHHAM2520
S552		3E029700	SW,TACT SKHHAM2520
			PCB ASSY,POWER SW AD-500
C090	⚠	3E004300	S.KILLER,CS12-F2GA472MYAS
S090	⚠	3E003770	SW, POWER SDDLD1-A2-F-1
			PCB ASSY,SELECT SW AD-500
S091	⚠	3E002110	SW,SLIDE SL13B-022

GATHER A PCB ASSY CD-A700

REF.NO.		PARTS NO.	DESCRIPTION
		* 3E95206-00E	PCBA,GATHER A JPN [J]
		* 3E95206-10E	PCBA,GATHER A EXTC [US.C.GE]
		* 3E95206-20E	PCBA,GATHER A EUR [K.E.UK]
		* 3E95206-30E	PCBA,GATHER A AUS [A]
			PCBA,CONT-CD CD-A700
C634	⚠	3C000950	CE, 50V 470UF M
D601		3S000241	DI, 1SS133 T-77
D602		3S000241	DI, 1SS133 T-77
D603		3S000241	DI, 1SS133 T-77
D604		3S000671	ZDI, MTZJ4.3B T-77
D605		3S000671	ZDI, MTZJ4.3B T-77
D606	⚠	3S000691	ZDI, MTZJ24B T-77
D607	⚠	3S000031	DI, 1N4003 TAPING W= 52MM
D609		3S000241	DI, 1SS133 T-77
L1		3E029480	COIL,RCH-875 100UH
P1,P2		3E014860	CONNECT,PLG B5B-PH-K YEL
P601		3E003830	CONNECTOR,PLUG B4B-PH RED
P606		3E001180	CONNECT PLUG 6P B6B-EH-A
P607		3E001170	CONNECT PLUG 5P B5B-EH-A
P611		3E010390	CONNECT PLUG B 7B-PH-K-S
P612		3E010370	CONNECT PLUG B 5B-PH-K-S
P613		3E003850	CONNECTOR,PLUG B6B-PH RED
P630		3E010340	CONNCT PLUG B 2B-PH-K-S
P631		3E00403-00A	CABLE ASSY, AD500 TDM-631
P708		3E010360	CONNCT PLUG B 4B-PH-K-S
P723		3E014210	CONNECT,16FMN-BTRK
P724		3E010380	CONNECT PLUG B 6B-PH-K-S
P725		3E010370	CONNECT PLUG B 5B-PH-K-S
Q601		3S000701	TR, 2SA854R TP
Q603		3S002450	TR,DTC114ESTP
Q604		3S002450	TR,DTC114ESTP
Q608		3S002450	TR,DTC114ESTP
Q609		3S000002	TR, 2SC1815GR TP
Q611		3S000301	TR, DTA124ES TP
Q612		3S000301	TR, DTA124ES TP
Q614		3S002672	TR,DTD123TS TP
Q615		3S000002	TR, 2SC1815GR TP
Q616		3S000002	TR, 2SC1815GR TP
Q617	⚠	3S000022	TR, 2SA1015GR TP
Q618		3S000721	TR, 2SC1741R-SPT TP
Q619		3S000721	TR, 2SC1741R-SPT TP
Q620		3S000721	TR, 2SC1741R-SPT TP
Q621		3S000721	TR, 2SC1741R-SPT TP
RL1		3E013010	RELAY 5V DF2-DC5V
U601		3S00942-00A	IC,CXP82432A-188Q
U601		3D00621-00A	SOFTWARE 500/700 VER 1.00
U603		3S009390	IC,BA033ST
U604		3S009384	IC,PCM1717E
U701		3S003304	IC,CXA2581N-T4
U702		3S009434	IC,BA6392FP
U703		3S006404	IC,CXD3068Q
U704		3S005680	IC,NJM2904D
X601		3E003680	RESO,CE,CST8.38MTW 3P

GATHER A PCB ASSY CD-A700

REF.NO.	PARTS NO.	DESCRIPTION
X701	3E021130	XTAL 16.9344MHZ
	3E01124-01B	UCOM WIRE ASSY CD-A700
	3E01125-01B	FS WIRE ASSY CD-A700
	3E02152-00A	EARTH PLATE B GND-8
		PCBA FRONT CD-A700
FL501	3E01062-10A	DISPLAY,FL SVAC09MM18
P503	3E00404-01A	CABLE ASSY, AD500 103-503
P504	3E00405-01A	CABLE ASSY, AD500 104-504
P506	3E007880	CONNECTOR ,B 6B-PH-SM3-TB
P507	3E011440	CONNECTOR,B 6B-PH-SM3(YL)
P509	3E00406-01A	CABLE ASSY, AD500 109-509
R530	3R004890	VAR RES,10KAX2 RK14K12D
R531	3R003980	VAR REG, 5KB RK11K113 CC
S501 S502	3E029700	SW,TACT SKHHAM2520
S503 S504	3E029700	SW,TACT SKHHAM2520
S505 S506	3E029700	SW,TACT SKHHAM2520
S507 S508	3E029700	SW,TACT SKHHAM2520
S509 S510	3E029700	SW,TACT SKHHAM2520
S511 S512	3E029700	SW,TACT SKHHAM2520
S513 S514	3E029700	SW,TACT SKHHAM2520
S515 S516	3E029700	SW,TACT SKHHAM2520
S517 S518	3E029700	SW,TACT SKHHAM2520
S519 S521	3E014570	SW,SLIDE TKR-0023/474
S520 S530	3E014560	SW,SLIDE TKR-0022/473
U501	3S000760	REMOCON.SENSOR,SBX1976-52
	3M00247-00A	HOLDER,FL(1) AD500
	3M00247-01A	HOLDER,FL(2) AD500
	3M00247-02A	HOLDER,FL(3) AD500
		PCB ASSY,PHONE CD-A500
J180	E0073670	JACK,JY-6313-01-030
P210	3E00407-01A	CABLE ASSY, AD500 110-210
R190	3R003920	VAR REG, 50KAX2 RK09K12A
U180	3S000840	IC, BA4560
		PCB ASSY,TRANS-A JP AD500
		PCB ASSY,TRANS-A EX AD500
		PCB ASSY,TRANS-A EU AD500
		PCB ASSY,TRANS-A AS AD500
C091 C092	3C007820	CQ,0.022UF ECQU2A223MN T1
L090	3E004290	COIL,1MH/1.5A FKOB160MH16
P001	3E002170	PIN,TERMINAL LAPPING 2P
		PCB ASSY,TRANS-B AD500
P006	3E00878-01A	CABLE ASSY AD-500 607-006
P007	3E00879-01A	CABLE ASSY AD-500 107-007
		PCB ASSY,POWER SW AD-500
S090	3E003770	SW, POWER SDDLD1-A2-F-1
C090	3E004300	S.KILLER,CS12-F2GA472MYAS
		PCB ASSY,SELECT SW AD-500
S091	3E002110	SW,SLIDE SL13B-022

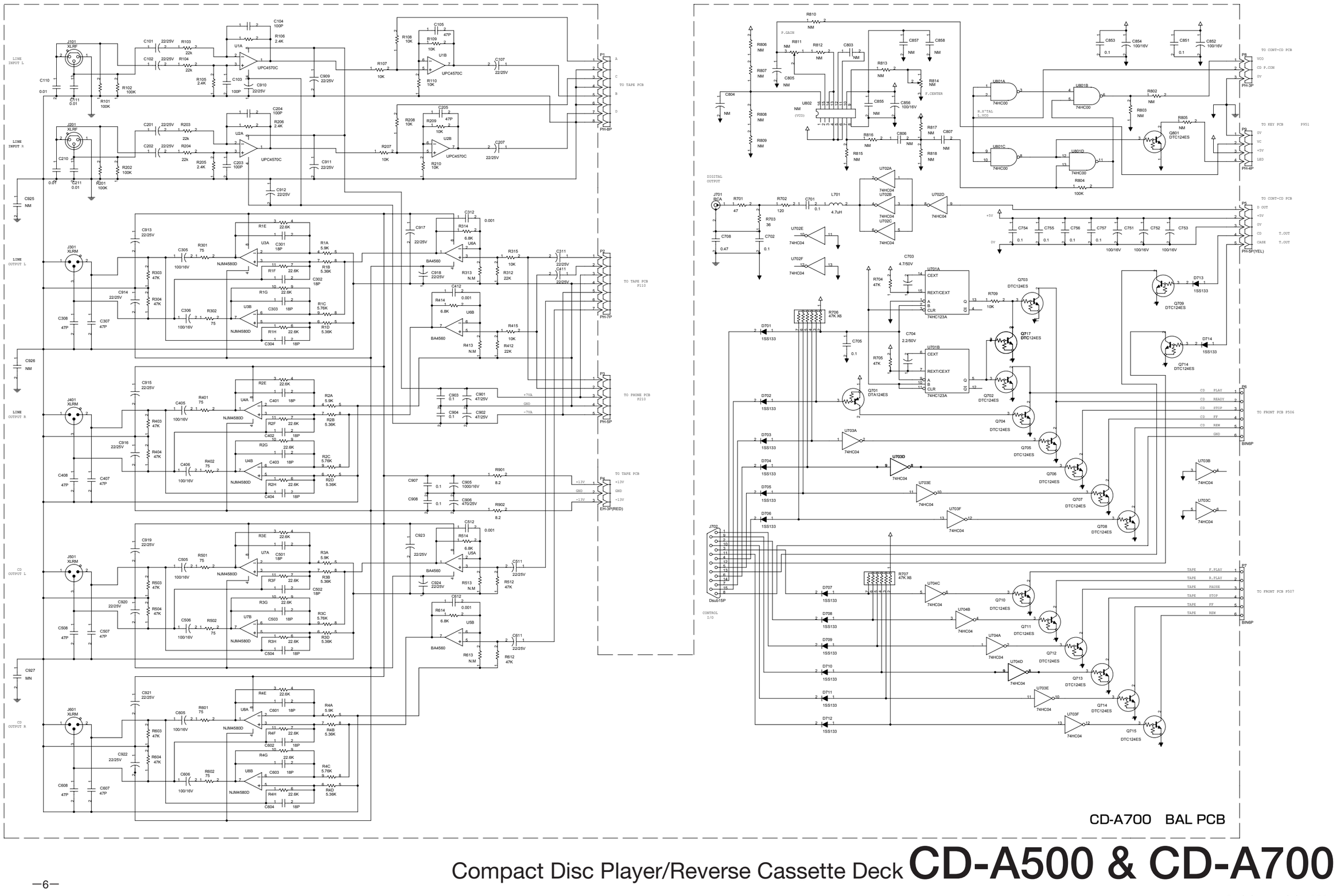


	CD-A500	CD-A700
R706	NM	100K
R707	JUMPER	NM
R662	NM	1.2K
Q613	NM	DTD123TS
P601	NM	B4B-PH-K RED
R695	NM	100
D609	NM	1SS133
RL1	NM	DF2-DC5V
JW173 (RL1 P&P)	JUMPER	
P1 P2	NM	BORD-IN HARNESS
TP100	NM	BORD-IN WIRE(GNDG)
TP200	NM	BORD-IN WIRE(+5VS)

CONT-CD PCB
CD-A500 & CD-A700

Compact Disc Player/Reverse Cassette Deck **CD-A500 & CD-A700**

2nd Issue; July 2004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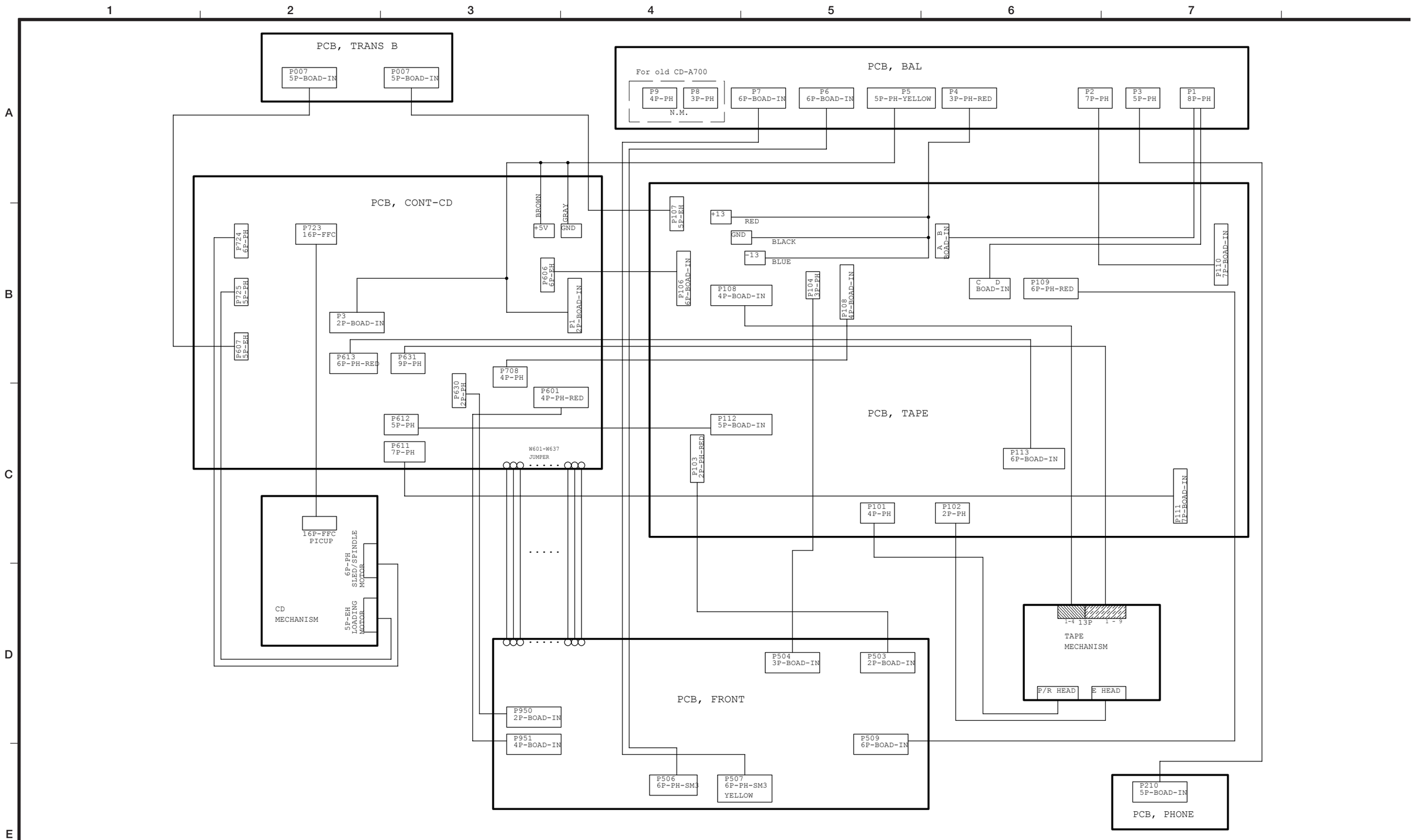
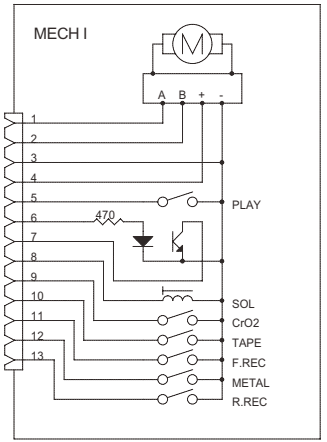
LINE OUTPUT R
CD OUTPUT L
CD OUTPUT R
TO TAPE PCB
TO PHONE PCB P210
DIGITAL OUTPUT
CONTROL I/O
Dsub15P
TO CONT-CD PCB
TO KEY PCB P951
TO FRONT PCB P506
TO FRONT PCB P507
CD-A700 BAL PCB



CD-A700 WIRING DIAGRAM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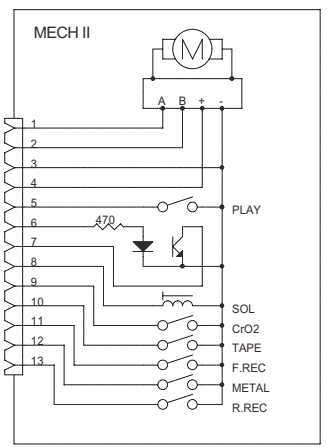
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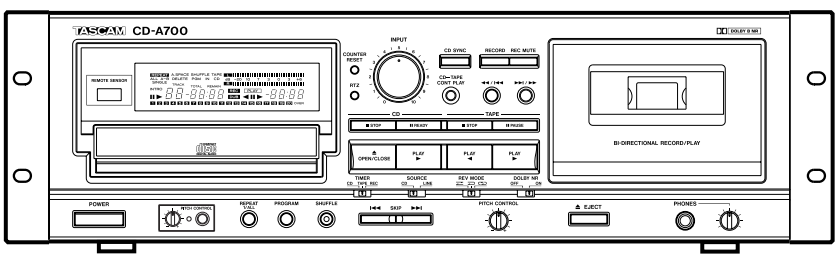
TASCAM

TEAC Professional Division

CD-A700

Compact Disc Player/Reverse Cassette Deck

COMPACT disc DIGITAL AUDIO



OWNER'S MANUAL / MANUEL DU PROPRIETAIRE
BEDIENUNGSANLEITUNG / MANUALE DI ISTRUZIONI
MANUAL DEL USUARIO / GEBRUIKSAANWIJZING

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.
Model number _____
Serial number _____

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT SAFETY INSTRUCTIONS

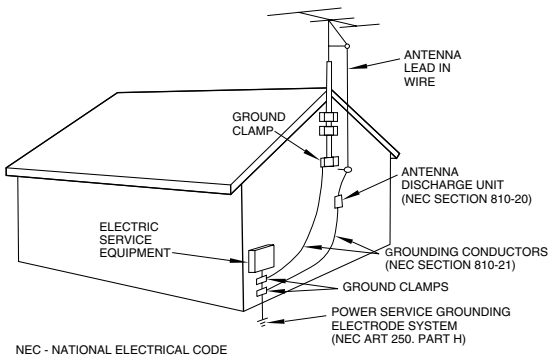
CAUTION:
- **Read all of these Instructions.**
- **Save these Instructions for later use.**
- **Follow all Warnings and Instructions marked on the audio equipment.**

1) Read Instructions — All the safety and operating instructions should be read before the product is operated.
2) Retain Instructions — The safety and operating instructions should be retained for future reference.
3) Heed Warnings — All warnings on the product and in the operating instructions should be adhered to.
4) Follow Instructions — All operating and use instructions should be followed.
5) Cleaning — Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6) Attachments — Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7) Water and Moisture — Do not use this product near water – for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
8) Accessories — Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
9) A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

10) Ventilation — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
11) Power Sources — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
12) Grounding or Polarization — This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
13) Power-Cord Protection — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
14) Outdoor Antenna Grounding — If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

"Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Section 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Example of Antenna Grounding as per
National Electrical Code, ANSI/NFPA 70

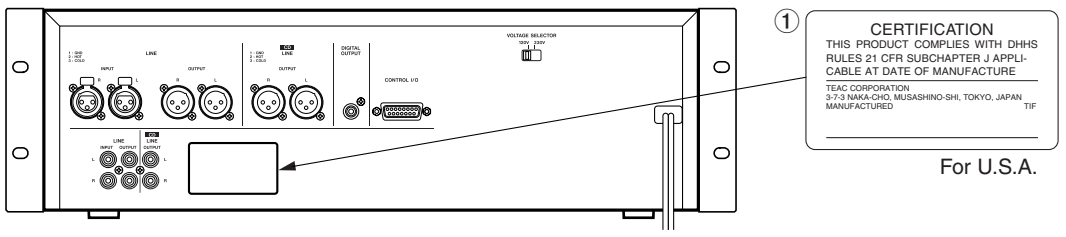


15) Lightning — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
16) Power Lines — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
17) Overloading — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in risk of fire or electric shock.
18) Object and Liquid Entry — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
19) Servicing — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
20) Damage Requiring Service — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
a) when the power-supply cord or plug is damaged.
b) if liquid has been spilled, or objects have fallen into the product.
c) if the product has been exposed to rain or water.
d) if the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
e) if the product has been dropped or damaged in any way.
f) when the product exhibits a distinct change in performance – this indicates a need for service.
21) Replacement Parts — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
22) Safety Check — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
23) Wall or Ceiling Mounting — The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
24) Heat — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

SAFETY INFORMATION

This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as a class 1 laser product. There is no hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings.
The label required in this regulation is shown ①.

● **CAUTION**
- DO NOT REMOVE THE PROTECTIVE HOUSING USING A SCREWDRIVER.
- USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
- IF THIS PRODUCT DEVELOPS TROUBLE, CONTACT YOUR NEAREST QUALIFIED SERVICE PERSONNEL, AND DO NOT USE THE PRODUCT IN ITS DAMAGED STATE.

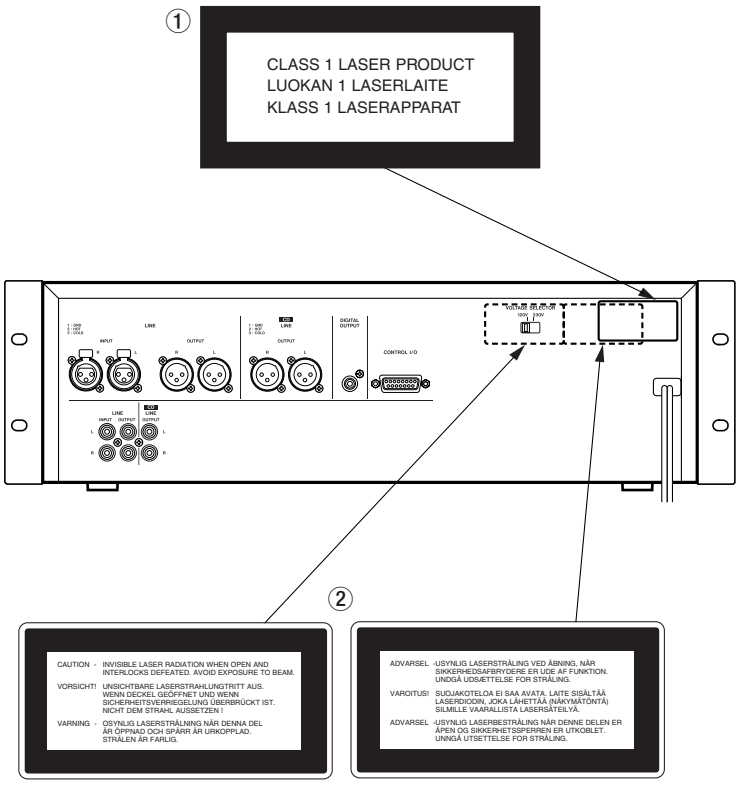


① CERTIFICATION
THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE
TEAC CORPORATION
3-7-3 NAKA-CHO, MUSASHINO-SHI, TOKYO, JAPAN
MANUFACTURED TIF

For U.S.A.

Optical pickup:	Type	: KSS-212B or KSS-213C
	Manufacturer	: SONY Corporation
	Laser output	: Less than 0.4 mW on the objective lens
	Wavelength	: 760–800nm

● CAUTION ● ACHTUNG ● OBSERVERA ● ADVARSEL



① THIS LABEL IS ATTACHED TO THE PLACE AS ILLUSTRATED TO INFORM THAT THE APPARATUS CONTAINS A LASER COMPONENT.

① DIESE AUFKLEBEMARKE IST AN DEM IN DER ABBILDUNG GEZEIGTEN ORT ANGEBRACHT UM DARAUF HINZUWEISEN, DASS IM INNERN DES GERÄTS EINE LASER-KOMPONENTE BEFINDET.

① PÅSKRIFTEN SITTER PÅ APPARATEN SOM VISAS SOM UPPMANING OM ATT APPARATEN OMFATTAR EN INBYGGD LASERKOMPONENT.

① DETTE MÆRKAT ER ANBRAGT SOM VIST I ILLUSTRATIONEN FOR AT ADVARE BRUGEREN OM AT APPARATET INDEHOLDER EN LASERKOMPONENT.

② DETTE MÆRKAT ER SOM VIST PÅ ILLUSTRATIONEN ANBRAGT PÅ INDERSIDEN AF TOPDÆKSLET FOR AT ADVARE BRUGEREN OM AT YDERLIGERE FREMTRÆNGEN VIL VÆRE FORBUNDET MED FARE FOR AT UDSÆTTE SIG FOR LASERSTRÅLING.

ADVARSEL — BETJENING AF ANDRE KONTROLLER OG REGULATORER ELLER BENYTTELES AF ANDRE FREMGANGSMÅDER END BESKREVET HERI ER FORBUNDET MED FARE FOR UDSÆTTELSE FOR LASERSTRÅLING.

VARING: APPARATEN INNEHÅLLER LASER LOMPONENT MED STRÅLNING ÖVERSTIGANDE KLASS 1.

"ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING NAR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING"

"VAROITUS! SUOJAKOTELOA EI SAA AVATA. LAITE SISÄLTÄÄ LASERDIODIN. JOKA LÄHETTÄ (NÄKYMÄTÖNTÄ) SILMILLE VAARALLISTA LASERSÄTEILYÄ".

ADVARSEL: USYNLIG LASERBESTRÅLING NÅR DENNE DELEN ER ÅPEN OG SIKKERHETSSPERREN ER UTKOBLET UNNGÅ UTSETTELSE FOR STRÅLING.

Before Use

Read This Before Operating

- Choose the installation location of your unit carefully. Avoid placing it in direct sunlight or close to a source of heat. Also avoid locations subject to vibrations and excessive dust, heat, cold or moisture. Keep away from such sources that hum, such as transformers or motors.
- Do not open the cabinet as this might result in damage to the circuitry or electrical shock. If a foreign object should get into the set, contact your dealer.
- When removing the power plug from the wall outlet, always pull directly on the plug, never yank the cord.
- Be sure not to handle discs with dirty fingers. Never insert a disc which has a crack on the surface.
- Do not attempt to clean the unit with chemical solvents as this might damage the finish. Use a clean, dry cloth.
- Keep this manual in a safe place for future reference.

Handling the Tapes

Do not store tapes in the following places:

- On top of heaters, exposed to direct sunlight or in any other places with high temperatures.
- Near speakers, on TV sets or amplifiers or where they would be exposed to strong magnetic fields.
- Where humidity is high and in dirty, dusty places.
- Avoid dropping or subjecting cassettes to excessive shocks.
- As C-120 tapes are physically weak and could become entangled in the transport mechanism, do not use them.

Cassette Tape

Tape selection:
For the automatic tape select function to work properly, metal and chrome (cobalt) tapes must have identification holes.

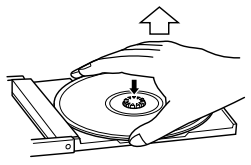
*Dolby noise reduction manufactered under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Handling the Discs

This unit has been designed specifically for reproduction of compact discs bearing the "COMPACT disc DIGITAL AUDIO" mark. No other discs can be reproduced.

- Always place the compact disc in the disc tray with the label facing upward. (Compact discs can be played only on one side.)
- To remove a disc from its storage case, press down on the center of the case and lift the disc out, holding it carefully by the edges.

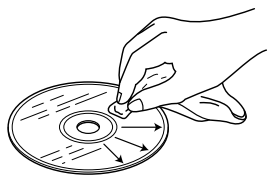
How to remove the disc



How to hold the disc

- Fingerprints and dust should be carefully wiped off the disc's recorded surface with a soft cloth.

Wipe radially

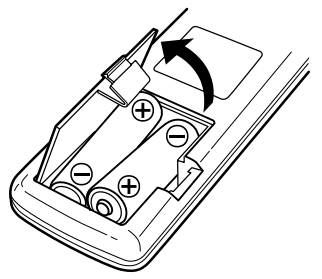


- Do not use thinner, benzine or alcohol as they damage the surface of the disc's plastic surface.
- Discs should be returned to their cases after use to avoid serious scratches that could cause the laser pickup to "skip."
- Do not expose discs to direct sunlight or high humidity and temperature for extended periods.
  Long exposure to high temperatures can warp the disc.
- Do not stick paper or write anything with a ballpoint pen on the surface of the label side.

Remote Control Unit

When operating the remote control unit, point it towards the remote sensor on the front panel of the unit.

■ Battery installation



1. **Remove the battery compartment cover.**
2. **Insert two "AA" (R6, SUM-3) dry batteries.**
   Make sure that the batteries are inserted with their positive ⊕ and negative ⊖ poles positioned correctly.
3. **Close the cover until it clicks.**

Battery replacement
If you notice that the distance between the remote control unit and the unit for correct operation becomes shorter, it indicates that the batteries are exhaust- ed. In this case replace the batteries with new ones.

Precautions concerning batteries

- Be sure to insert the batteries with correct positive ⊕ and negative ⊖ polarities.
- Use batteries of the same type. Never use different types of batteries together.
- Rechargeable and non-rechargeable batteries can be used. Refer to the precautions on their labels.
- When the remote control unit is not to be used for a long time (more than a month), remove the batteries from the remote control unit to prevent them from leaking. If they leak, wipe away the liquid inside the battery compartment and replace the batteries with new ones.
- Do not heat or disassemble batteries and never dispose of old batteries by throwing them in fire.

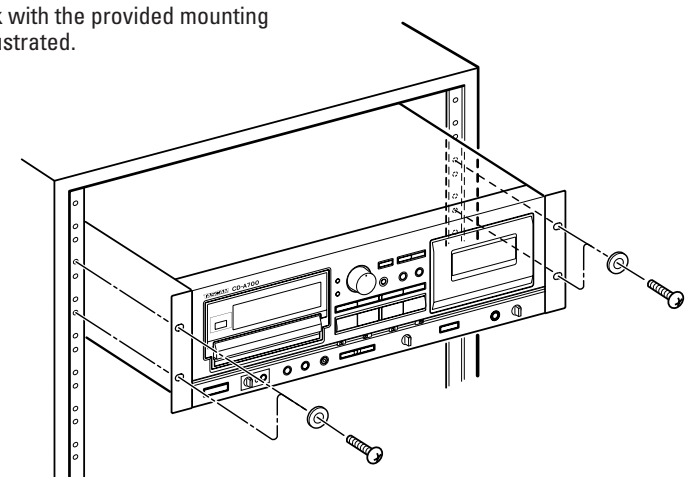
Voltage Conversion
(For general export models)

Be sure to remove the power cord from the AC outlet before repositioning the voltage converter switch.

1. Locate the voltage selector on the rear panel.
2. Using a flat-bladed screwdriver, set to the appropriate 230 V or 120 V position according to your area.

Rack Mounting

Install this deck with the provided mounting screw kit as illustrated.



Connections

- Before connection, turn off all components and pay special attention to left (L) and right (R) channel indications.
- Read the owner's manual of each component you intend to use with this unit.

■ Signal cords

LINE INPUT/OUTPUT terminals (Balanced/Unbalanced)
Use these terminals to connect the deck to a mixer, cassette tape recorder or other components.

- LINE OUTPUT terminals output the compact disc or cassette deck tape signal. When both compact disc and tape are played back, the tape sound has priority.

CD LINE OUTPUT terminals (Balanced/Unbalanced)
Use these terminals to connect the deck to the CD, DAT or AUX terminals of the stereo amplifier.

- CD LINE OUTPUT terminals always output the disc signal.

DIGITAL OUTPUT
This RCA connector outputs digital audio data in SPDIF format.

CONTROL I/O (Parallel port)
This 15-pin "D"-sub connector is used for connection to a suitably-equipped controller.
The pinouts of this connector are given below.
Caution:
If the CD player interferes with the tuner, TV reciever, etc., allow a reasonable distance between them.

Pin No.	Component & Signal		Direction	Function
1	CASSETTE	READY	IN	External command reception; active when low (at ground potential for 30 ms or longer)
2	CASSETTE	REVERSE PLAY	IN	
3	CASSETTE	FORWARD PLAY	IN	
4	CD	REW	IN	
5	CD	F. FWD	IN	
6	CD	STOP	IN	
7	CD	READY	IN	
8	COMMON Ground		—	—
9	CASSETTE	STOP	IN	External command reception; active when low (at ground potential for 30 ms or longer)
10	CASSETTE	F. FWD	IN	
11	CASSETTE	REW	IN	
12	CASSETTE	PLAY TALLY	OUT	Open collectors: ON (when at PLAY) Transistor rating: maximum allowable voltage 15 V and maximum allowable current 80 mA
13	CD	PLAY TALLY	OUT	
14	CD	FADER START/READY	IN	High→Low:START, Low→High:READY (high or low pulse must be 500 ms or longer)
15	CD	EVENT START	IN	Active when low (at ground potential for 100 ms) One-shot pulse makes the unit START.

■ Power cord

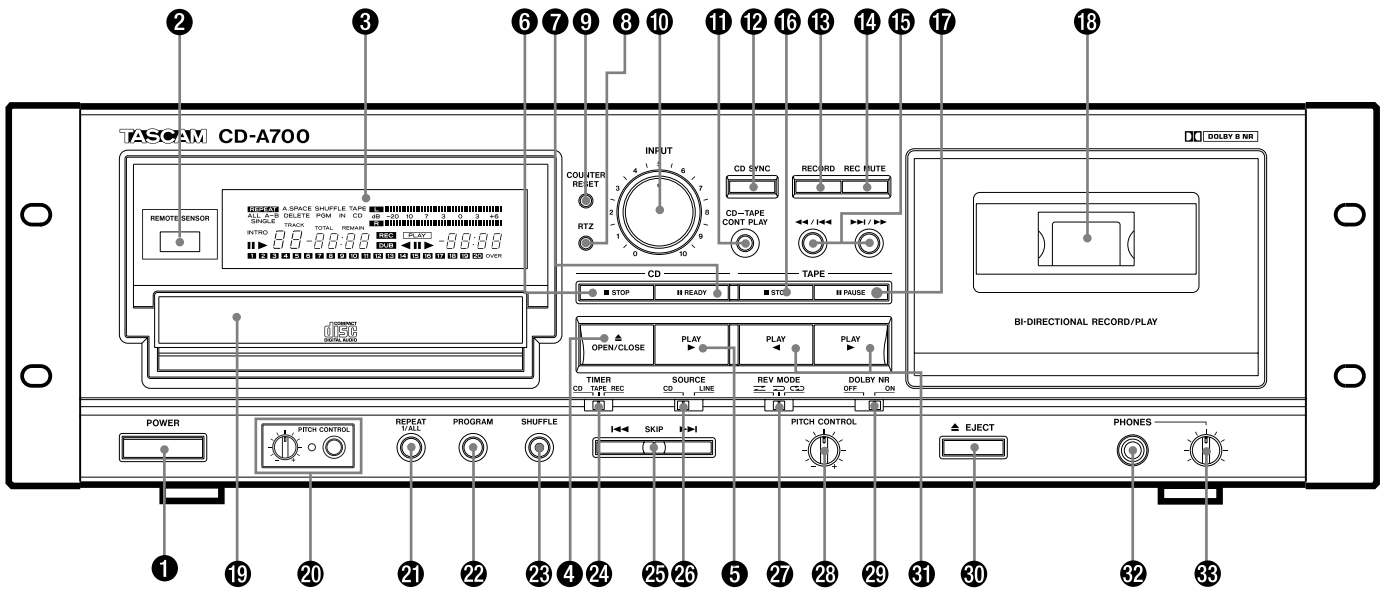
Be sure to connect the power cord to an AC outlet which supplies the correct voltage.

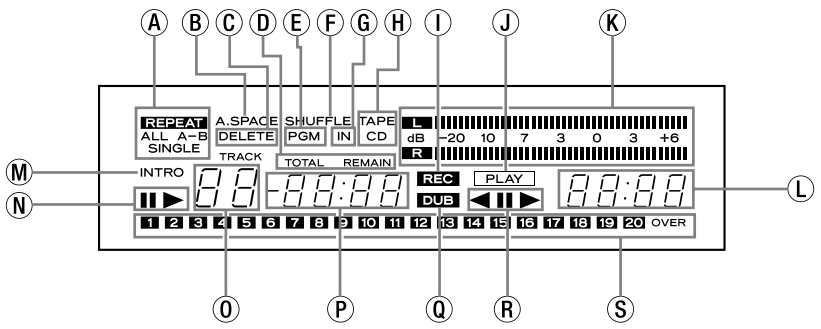
■ Headphones

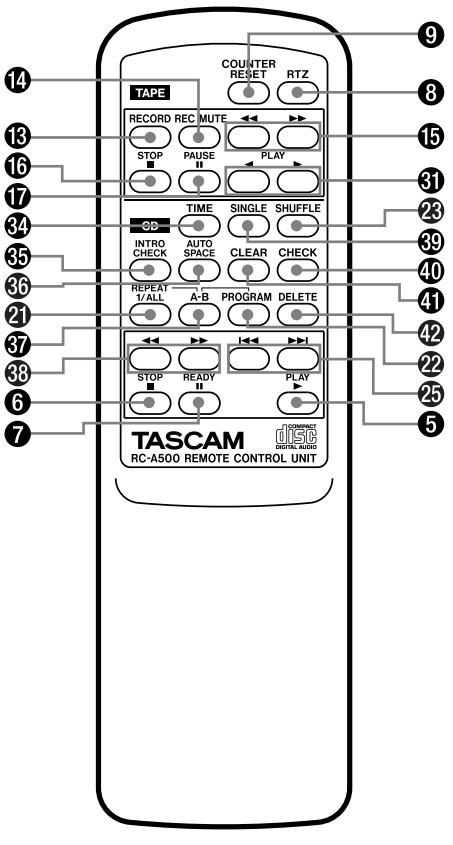
When using headphones, connect the headphone plug into the PHONES jack.

- Adjust the level of the signals output from the phones jack.

Name of Each Control







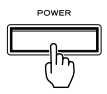
❶ POWER switch
❷ REMOTE SENSOR
❸ Multi-function display window
- Ⓐ REPEAT indicator
- Ⓑ Auto space indicator (A. SPACE)
- Ⓒ DELETE indicator
- Ⓓ Time mode indicator
- Ⓔ Program indicator (PGM)
- Ⓕ SHUFFLE indicator
- Ⓖ CD input indicator (IN)
- Ⓗ TAPE/CD indicator
- Ⓘ REC indicator
- Ⓙ Tape PLAY indicator
- Ⓚ Level meter
- Ⓛ Tape counter
- Ⓜ INTRO play indicator
- Ⓝ CD ready/play indicator (❚❚/►)
- Ⓞ Track indicator
- Ⓟ Time counter
- Ⓠ DUB indicator
- Ⓡ Tape reverse/pause/forward indicator (◄❚❚►)
- Ⓢ Music calendar

❹ OPEN/CLOSE button (⏏)
❺ CD PLAY button (►)
❻ CD STOP button (■)
❼ CD READY button (❚❚)
❽ Return-To-Zero button (RTZ)
❾ Counter reset button (COUNTER RESET)
❿ INPUT level control (INPUT)
⓫ Continuous play button (CD-TAPE CONT PLAY)
⓬ CD SYNC button
⓭ RECORD button
⓮ REC MUTE button
⓯ Rewind and fast forward/CPS buttons (◄◄/I◄◄ ►►I/►►)
⓰ TAPE STOP button (■)
⓱ TAPE PAUSE button (❚❚)
⓲ Cassette holder
⓳ Disc tray
⓴ CD PITCH CONTROL on/off button, knob and indicator
㉑ REPEAT 1/ALL button
㉒ PROGRAM button
㉓ SHUFFLE button
㉔ TIMER switch
㉕ SKIP buttons (I◄◄/►►I)
㉖ SOURCE switch
㉗ Reverse mode switch (REV MODE)
㉘ Tape PITCH CONTROL knob
㉙ DOLBY NR switch
㉚ EJECT button (⏏)
㉛ TAPE PLAY buttons (◄/►)
㉜ PHONES jack
㉝ Headphones level knob
㉞ TIME button
㉟ INTRO CHECK button
㊱ AUTO SPACE button
㊲ A-B button
㊳ CD SEARCH buttons (◄◄/►►)
㊴ SINGLE button
㊵ CHECK button
㊶ CLEAR button
㊷ DELETE button

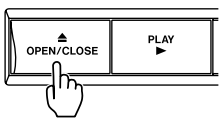
CD Player

Basic Operation

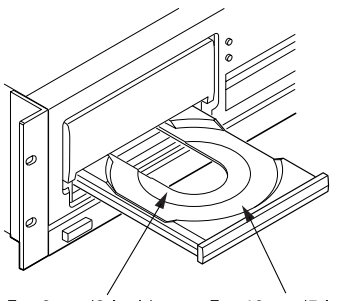
1. **Press the POWER switch.**



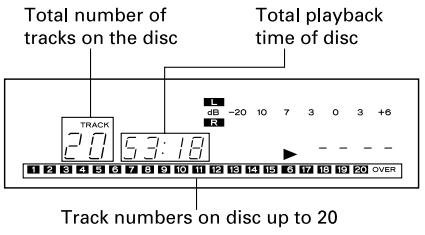
2. **Press the OPEN/CLOSE (⏏) button.**



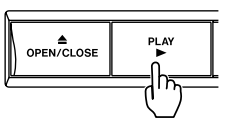
The disc tray will slide out. Place the disc gently on the tray with its label side facing upward. The disc is set within the disc guides at the center of the tray.



3. **Press the OPEN/CLOSE (⏏) button again.**
The disc tray will close.
Several seconds later, the following information is displayed.



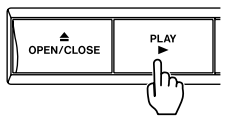
4. **Press the CD PLAY (►) button.**
Disc playback starts from the first track, and the ► (play) indicator will light.



- During playback, the number of the currently played track blinks on the music calendar.
- When tracks have been played, their numbers will disappear from the music calendar display.

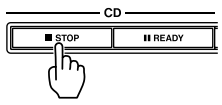
■ Even if the disc tray is open ...

When the CD PLAY (►) button is pressed:
The disc tray will close and playback starts from the first track.

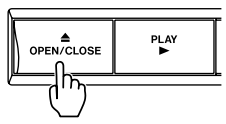


■ To stop playback

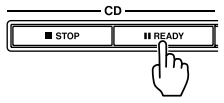
Press the **STOP (■)** button. The player enters the Stop mode.



To unload the disc:
Press the **OPEN/CLOSE (⏏)** button; playback stops and the disc tray will slide out, and all functions are reset to their initial settings.



To temporarily suspend playback (Ready mode):
Press the ❚❚ button. Playback stops at the current position and the ❚❚ indicator lights steadily. To resume playback from the same position, press the ► or ❚❚ button.



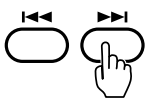
CAUTION :
- Do not force the tray by hand during opening and closing operations.

Music Search Operation

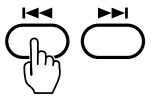
■ Music search using SKIP buttons (I◄◄/►►I)

The beginning of any track can be easily located using the I◄◄/►►I SKIP buttons. This operation is indicated clearly in the TRACK display.
- This operation is possible even in the Program Playback mode. However, only programmed tracks will be detected.

■ To skip to the next track
Press the ►►I button.
The player will skip ahead to the next track each time the ►►I button is pressed. The player can be advanced to the last track this way, but once the beginning of the last track is reached, the player will not advance even if the ►►I button is pressed.

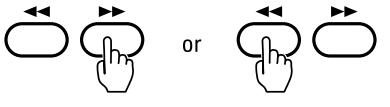


■ To skip back to the previous track
Press the I◄◄ button.
The player will skip back one track each time the I◄◄ button is pressed. If this button is pressed in the middle of a track, the player will skip back to the beginning of the current track. To make it skip back to the previous track, the button must be pressed twice.
In this way, the player can be returned to the beginning of the first track on the disc.



■ Music search using SEARCH buttons (◄◄/►►)

During playback or in the Ready mode, hold down the ►► button of the remote control or the ►►I button of the main unit to move the playing position quickly in the forward direction, and hold down the ◄◄ button of the remote control or the I◄◄ button of the main unit to move quickly in the reverse direction.
During the manual search operation, sound will be audible but the output level will be lowered. This lets you search for any required portion while checking the sound. When the desired position is reached, release the button to reenter the previous mode.



Program Playback

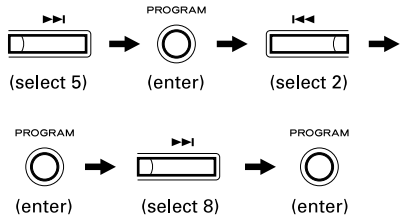
The program playback function allows you to program up to 20 tunes (tracks) for playback in any desired order.

■ Programming required tracks

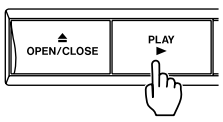
Example
To program tracks in the order 5 → 2 → 8 in the Stop mode.

1. **Press the STOP (■) button.**
2. **Press the PROGRAM button.**
   The player enters the Program mode. The PGM indicator lights in the display.

3. **Alternately press the ⏮ SKIP ⏭ button(s) and the PROGRAM button in the following order.**



4. **Press the CD PLAY (►) button.**
   Programmed playback starts from the first programmed track.



- Programming tracks is possible only when the player is in the Stop mode.
- The programmed contents will be held in memory even after programmed playback has been completed or when programmed playback is stopped by pressing the STOP (■) button.
- When the STOP (■) button is pressed in the stop mode, the contents of the program are erased.
- To release the program mode, press the PROGRAM button again.
- During program playback, the TOTAL REMAIN time display shows the total remaining time of the programmed tracks, from the current position.
- If a track with a number higher than 32 is being played, the remaining time will not be displayed in the time counter even when the TIME button is pressed. Instead, "nn:nn" will be indicated on the time indicator.

■ To display the total program time

In the Program mode, press the TIME button to display the total program time.
Pressing the TIME button again will return the CD player to the Program mode.

■ To review the program contents

1. **Press the CHECK button in the Program mode.**
   The first programmed track number will light and "P-01" will blink in the display.

2. **Each time the CHECK button is pressed, the next programmed track number will light.**
   "P-XX (Program number)" will blink in the display.

- When the last programmed track number is displayed, pressing the CHECK button will return the CD player to the Program mode, allowing you to add tracks to the program.
- The track numbers stored in the program memory will be displayed on the music calendar. However, please note that the calendar can handle only up to track 20. If higher track numbers are entered in the Program memory, the OVER indicator will light.

■ To cancel a programmed track

Pressing the CLEAR button will cancel the last programmed track.

■ Delete programming

This is the opposite to normal pro-gramming, and is used to program tracks which are not to be played. Use it when there are tracks on the disc you don't want to listen to.

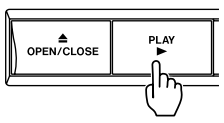
1. **Press the STOP (■) button.**
2. **Press the DELETE button.**
   The CD player enters the Delete Program mode.
   The "DELETE" and "PGM" indicators light in the display.
3. **Alternately press the ⏮ SKIP ⏭ button(s) and the PROGRAM button in any desired order.**
4. **Press the CD PLAY (►) button.**
   Delete-programmed playback starts.

- In the Delete-Program mode, pressing the TIME button will display the total time of the non-deleted tracks. Pressing the TIME button again will return the player to the Delete-Program mode.
- Pressing the CHECK button in the Delete-Program mode will display the first deleted track number.
  Each time the CHECK button is pressed, the next deleted track number will be displayed. When the last deleted track number is displayed, pressing the CHECK button will return the player to the Delete-Program mode, allowing you to delete other tracks.
- Pressing the CLEAR button will cancel the last delete-programmed track.
- Pressing the STOP (■) button when the player is stopped will clear the delete-program memory.

RANDOM Playback

1. **Press the SHUFFLE button in the Stop mode.**
   The SHUFFLE indicator lights in the display.

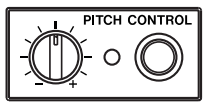
2. **Press the CD PLAY (►) button.**
   Tracks will be randomly selected and played back.



- Press the ►►I button with the random play function engaged to select a track at random. Press the I◄◄ button to replay the currently played track from its beginning.
- A track cannot be replayed after it has been played in this mode.
- To release the random play function while it is engaged, press the SHUFFLE button again. Tracks will play back in their normal designated order, starting from the currently played track.

Pitch Control

You can change the playback speed, allowing the pitch of the reproduced sound to be altered.



The PITCH CONTROL button is operational only in the stop mode. When the PITCH CONTROL button is pressed, the PITCH CONTROL indicator lights. By turning the PITCH CONTROL knob to the right, the playback speed becomes faster, resulting in a higher pitch. By turning it to the left, the playback speed becomes slower, resulting in a lower pitch.

- At the fully clockwise position, the playback speed is approx. 12 % faster.
- At the fully counterclockwise position, the playback speed is approx. 12 % slower.

Repeat Function

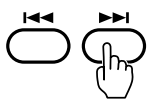
The repeat function allows repeat playback of any single track, the entire disc, or any desired portion on the disc designated by two (start and end) points.

- The repeat functions can be released by pressing the repeat button again.

■ To repeat one track (Single Repeat mode)

1. **Press the REPEAT 1/ALL button.**
   The REPEAT and SINGLE indicators light.

2. **Select the required track by pressing the I◄◄/►►I button.**
   The selected track is played, then when the end of the track is reached, the player will return to the beginning of the track and playback starts again. In this way, the selected track will be played back repeatedly.



■ To repeat an entire disc (All Repeat mode)

1. **Press the REPEAT 1/ALL button twice.**
   The REPEAT and ALL indicators light.
2. **Press the CD PLAY (►) button.**
   Playback starts and, when the end of the disc is reached, the player will return to the beginning of the first track, and then playback continues repeatedly.

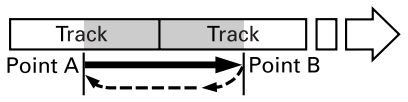
■ To repeat a designated section (A-B Repeat mode)

1. **Start playback from any point before the section to be designated.**
2. **Designate the point at which repeat playback should start (point A) by pressing the A-B button.**
   The REPEAT and A - indicators light and the B indicator blinks to show that point A has been entered.

3. **When the portion at which repeat playback should end is reached, press the A-B button again to designate point B.**
   The B indicator is changed to light steadily to show that the A-B repeat function has been activated.

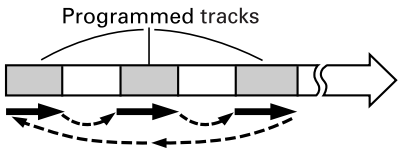
   The player automatically returns to point A and restarts playback.
   When play reaches point B, the player returns to point A and starts playback again, repeatedly.

- After designating point A, when quick searching point B, use the ►► or ►►I button instead of playing back normally.
- When the A-B button is pressed again during block repeat play, block repeat playback will be released.



■ Programmed repeat playback

The repeat function can be activated even in the Programmed Playback mode.
To repeat all the programmed tracks, press the REPEAT 1/ALL button twice. (At this time, check that the REPEAT and ALL indicators light.)



Time Counter Display

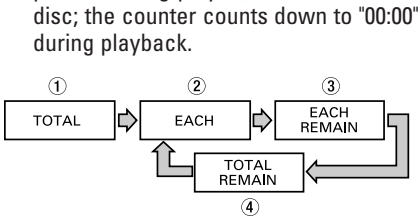
The time counter shows various time readouts, as follows.

① **Total disc playback time**
After the disc tray is closed with a disc loaded, the total disc playback time and total number of tracks on the disc are displayed.

② **Elapsed time display**
When playback begins, the elapsed time of the track being played is displayed in minutes and seconds.

③ **Remaining time display (REMAIN)**
Displayed when the TIME button is pressed once. This provides an easy check of the remaining time of the track being played.

④ **Total remaining time display (TOTAL REMAIN)**
Displayed when the TIME button is pressed twice. The time displayed is the total remaining playback time from the position being played, to the end of the disc; the counter counts down to "00:00" during playback.



- Displayed after the TIME button is pressed three times. The time displayed is the elapsed playback time ②.
- In Normal Playback mode, if a track with a number higher than 32 is being played, the remaining time will not be displayed in the time counter even when the TIME button is pressed. Instead, "nn:nn" will be indicated on the time indicator.

Auto Spacing

When this function is activated, an interval of approx. 4 seconds will be inserted between tracks automatically, so they are played back with a fixed spacing.
To activate this, press the AUTO SPACE button so that the A.SPACE indicator lights in the display.
When the AUTO SPACE button is pressed again, the indicator goes off and the auto spacing function is released.

Intro Check Function

The intro check function allows only the beginning of each track to be played for 10 seconds.

1. Press the INTRO CHECK button.
   The INTRO and ► indicators will be indicated.
2. Press the INTRO CHECK button again to clear the intro check function.

- The intro check function also works together with SHUFFLE, PROGRAM and REPEAT ALL functions.

Single Playback

1. Press the SINGLE button. The SINGLE indicator will light in the display.
2. Press the I◄◄/►►I SKIP buttons corresponding to the required track.
3. A single track will be played back, after which the player will enter the stop mode.

- To release the Single mode, press the SINGLE button again.

Cassette Deck Operation

Playback

1. Press the POWER switch ON.
2. Set the REV MODE switch to the required tape travel mode.

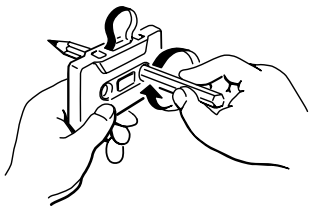
Setting	Tape Travel
	One side playing
	SIDE A → SIDE B → STOP
	→ SIDE A → SIDE B → The tape will stop after 5 cycles.

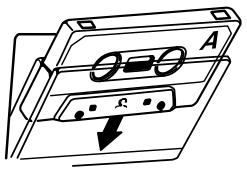
3. Load a pre-recorded cassette with its open edge facing down and side A facing toward you.
4. Select ON/OFF of the DOLBY NR system.
5. Press the ◄ or ► button to start playback.
6. Adjust the volume with the amplifier's volume control.

● To stop playback, press the STOP (■) button.

Loading a Cassette Tape

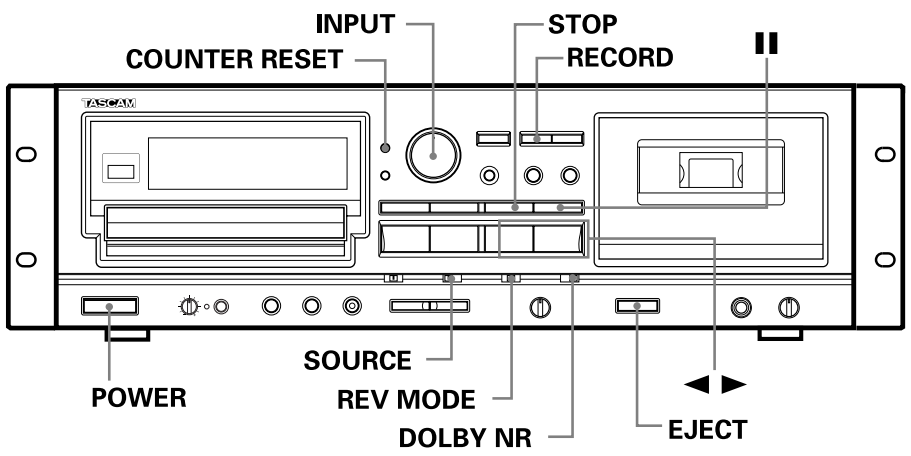
1. Use your finger or a pencil to turn the cassette's hub and take up any slack tape.
   Note: Avoid touching the tape. Fingerprints attract dust and dirt.
2. Press the EJECT button (⏏)* to open the cassette compartment door.
3. Load the cassette tape with its open edge facing down.
4. Gently close the compartment door.





***Notes:**

- The cassette holder cannot be opened during recording or playback.
- If the power has been switched off during play or recording, ejecting the cassette may be impossible. In such a case, switch the power on and press the eject button again.



Recording

1. Press the POWER switch ON.
2. Set the REV MODE switch.

● If you want to make a bi-directional recording, set the REV MODE switch to the ⇄ or ⇆ position.

● When starting to record with ◄, one side recording is performed.

● Set to the → position if recording is to be made on a single side of the tape.

3. Load a recordable cassette.

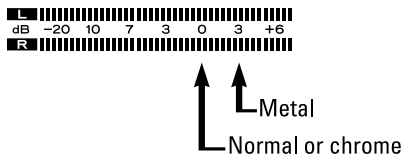
● Check that the safety tabs on the spine of the cassette are in place. If they have been broken off, block the holes with adhesive tape.

4. Select the SOURCE switch.

● When selecting "CD", the built-in CD player's output is selected as a source.

● When selecting "LINE", the external signal from "LINE INPUT" is selected as a source.

5. Select ON/OFF of the DOLBY NR system.
6. Press the RECORD button and the deck enters the Record-Pause mode (REC and ❚❚ indicators light).
7. Adjust the recording level with the INPUT level control so that the loudest sound to be recorded just makes the meters briefly reach around the "0 dB" point (for Normal or Chrome tapes) or the "+3 dB" point (for Metal tapes).



8. Press the PAUSE (❚❚) button again to start recording.

● To stop recording temporarily, press the PAUSE (❚❚) button. To restart the tape, press the PAUSE (❚❚) button or play (◄►) button. During the Record-Pause mode, if the button whose ◄, ► indicator is lit is pressed, recording will start; however, if the button whose ◄, ► indicator is not lit is pressed, only the tape direction will change; to restart the tape, press the button again.

● To stop recording, press the STOP (■) button.

Erasing

Anything previously recorded on the tape will automatically be erased when you make a new recording on it. It can also be erased by "recording" on it with the INPUT level control set to "0".

CAUTION

Recording pre-recorded tapes, records, or other published or broadcast material may infringe copyright laws. Check before recording.

Tape Counter

The tape counter counts up when the tape is moving forward and down when the tape is being rewound. The display can be cleared by pressing the COUNTER RESET button, which resets the counter index to "0000".

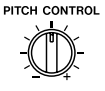
RTZ (Return To Zero) Function

By pressing the RTZ (Return To Zero) button, the tape will locate the "0000" point and stop.

- The RTZ function does not work when the tape counter indicates a number between "9996" and "0004".

Pitch Control

You can change the tape speed during playback, allowing to change the pitch of the reproduced sound.



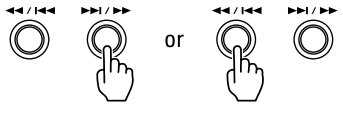
By turning the PITCH CONTROL to the right, the tape speed becomes faster, resulting in a higher pitch. By turning it to the left, the tape speed becomes slower, resulting in a lower pitch.

- At the fully clockwise position, the tape speed is approx. 12% faster .
- At the fully counterclockwise position, the tape speed is approx. 12% slower.

Fast Wind

In the Stop mode, the ◄◄ ►► buttons act as fast forward and rewind buttons.

- In the Playback mode, these buttons act as CPS buttons.



CPS (Computomatic Program Search)

CPS allows the selection and playback of any tune up to 15 tunes ahead or before the one being played. This function operates by detecting blank spaces of at least 4 seconds between tunes. These blanks can be created using the REC MUTE function.

Notes:

- In the following steps 1 and 2, to simplify the description, the explanation is given for "forward playback" (► direction). A similar procedure should be used for "reverse playback".
- The ►► (Fast Forward) and ◄◄ (Rewind) buttons act as CPS buttons during playback. This is why the main unit indicates "◄◄/I◄◄ ►►I/►►" for these buttons, while the remote control unit shows just "◄◄ ►►". In the following explanation, these buttons are described as just "◄◄" and "►►".

1. During forward playback, press the ◄◄ or ►► button repeatedly until the number of tunes to be skipped appears in the counter display. Use the ►► button for searching a tune following the current tune and ◄◄ button for a tune before the current tune. Refer to the chart "How to Select Any Required Tune Using CPS".
   - If, by using the ►► , the required CPS number setting is exceeded, use the ◄◄ button to count down the CPS number until the required CPS number is displayed.
   - When the ►► button is pressed, the next tune is counted as "1" and when the ◄◄ button is pressed, the current tune is counted as "1".
2. The tape is fast-wound to detect blanks between tunes until the required tune is reached. Then playback starts from the beginning of the designated tune.

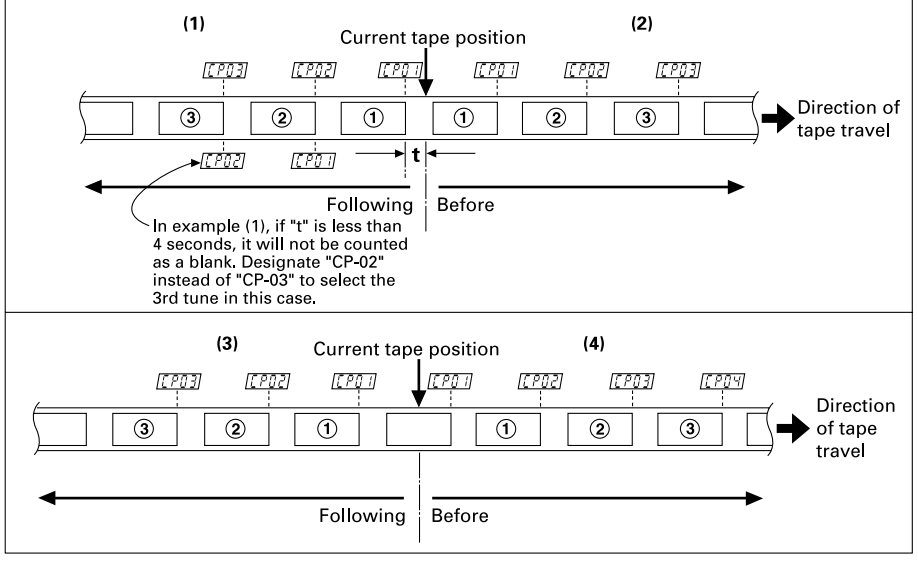
Notes on CPS

CPS operates by detecting and counting blanks of about 4 seconds, the standard interval between tunes. Therefore, with the following types of tapes, search functions may not work correctly.

- When the intervals between tunes cannot be detected.
  - – Intervals of less than 4 seconds.
  - – High levels of noise in intervals.
  - – Long low level sections (in classical music, etc.)

How to Select Any Required Tune Using CPS

Ex: See (1). To select the 3rd tune past the current tape position, select "CP03".



Record Muting Operation

■ Automatic spacing operation for 4-second blanks (during recording)

Press the REC MUTE button during recording. The tape movement continues and a blank space of about 4 seconds is recorded (the RECORD indicator blinks). The deck then enters the Record-Pause mode automatically (both the RECORD and PAUSE (❚❚) indicators light).
To restart recording, press the PAUSE button (the PAUSE indicator goes off).

■ **Automatic spacing operation for 4-second blanks (during record-pause)**
In the Record-Pause mode, pressing the REC MUTE button will initiate the above record-muting operation automatically. The deck then returns to the Record-Pause mode.

■ **For a blank of more than 4 seconds**
During recording, hold the REC MUTE button depressed for longer than 4 seconds. A blank space will be left as long as the button is pressed. Release the button to enter the Record-Pause mode. To restart recording, press the PAUSE (❚❚) button.

- During record muting operation (while the RECORD indicator is blinking), pressing the REC MUTE button again will release the record muting operation and recording will restart without stopping the tape.

Copying from CD to Tape

Using the CD SYNC function, a CD-to-tape copy can be done easily and simply.

1. Load a compact disc.
2. Load a recordable cassette.
3. Select ON/OFF of the DOLBY NR system.

- In the CD SYNC mode, the INPUT level control has no effect, as the recording level is automatically adjusted internally.

■ To record from the beginning of the tape

Press the CD SYNC button in the Stop mode.

The tape is rewound to the beginning of Side A and the counter is reset to "0000", while the CD player is in the Ready mode at the beginning of the first CD track.
After mute-recording for approx. 10 seconds (to avoid the leader tape), the cassette deck drops into the Recording mode while the CD player starts playback.

■ To record from any desired position of the tape

1. Move the tape to the desired position and press the STOP (■) button.

2. Press the RECORD button.
   The deck enters the Record-Pause mode.

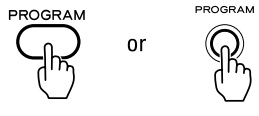
3. Press the CD SYNC button.
   CD-to-tape copying starts from the current tape position.

- While CD SYNC is engaged, only the STOP (CD), STOP (TAPE), OPEN/CLOSE and TIME buttons are operational.

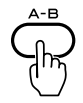
■ Designating CD tracks to be recorded on Side A or Side B (A-B Program Dubbing)

By using the A-B Program Dubbing function, you can designate CD tracks to be recorded on Side A or Side B.

1. Press the PROGRAM button.



2. Press the A-B button from the remote.



   "A-" blinks and "B" lights in the display, indicating that the CD player is now in the "Side A program" mode.

3. Program tracks to be recorded on Side A of the tape.

   Perform the procedures described in step 3 in the "Program Playback" section on page 8.

- To display the total program time, press the TIME button in the Program mode from the remote. It will help you to fit the total recording time to the tape length. Pressing the TIME button again will return the CD player to the Program mode.

4. Press the A-B button from the remote.

   "A-" lights and "B" blinks in the display, indicating that the CD player is now in the "Side B program" mode.

5. Program tracks to be recorded on Side B of the tape.

- Pressing the A-B button in the Side B Program mode will return the CD player to the Side A Program mode.

6. Press the CD SYNC button.

   The tape is rewound to the beginning of side A and the counter is reset to "0000", while the CD player is in the Ready mode at the first track of the Side A program.
   After mute-recording for approx. 10 seconds (to avoid the leader tape), the cassette deck drops into the Recording mode while the CD player starts the program playback.

- If you press the RECORD button before pressing the CD SYNC button, the recording will start from the current tape position (without rewinding the tape to the beginning).
- If the tape on Side A ends before 01:30 (1 minute 30 seconds) of the current CD track has been played, the recording of Side B will start with that track. (except with A-B Program Dubbing)
- When the CD player finishes playback, the CD SYNC mode is released.
- If the tape comes to the end of Side B before the CD player finishes playback, the CD SYNC mode is canceled.

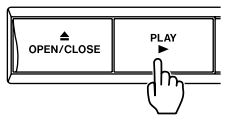
Continuous Playback between CD and Tape

In the Continuous Playback mode, once either the CD player or cassette deck finishes (or stops) playback, the other starts playback automatically.

1. Press CD-TAPE CONT PLAY button.

"TAPE" and "CD" blink in the display.

2. (For example) Press the CD PLAY (▶) button.



The CD player starts playback.
"CD" blinks in the display.

3. When the CD player stops, the cassette deck automatically starts playback.
"TAPE" blinks in the display.
Afterward, when one stops, the other starts.

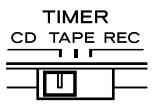
- Regardless of whether one machine (CD player or cassette deck) is stopped forcibly by pressing the STOP (■) button or automatically at the end of playback, the other machine starts playback.
- You may change the CD or tape while it is in the Stop mode.
- To release the Continuous Playback mode, press the CD-TAPE CONT PLAY button again.

Timer-controlled Operation

The unit has a timer controlled function. This lets you start playback or recording operations at any desired time when an optional audio timer is used.

■ Timer playback of CD or cassette

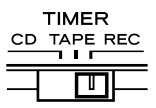
1. Connect the unit and your stereo system to an audio timer as shown in the diagram.
2. Set the power switches of all components to ON.
3. Load a disc or a prerecorded cassette.
4. Set the timer switch to the CD or TAPE position.



5. Set the audio timer to the required start (power on) and stop (power off) times. When this setting is completed, the power to all components will be switched off.
6. When the preset start time is reached, power will be supplied and playback will start automatically.

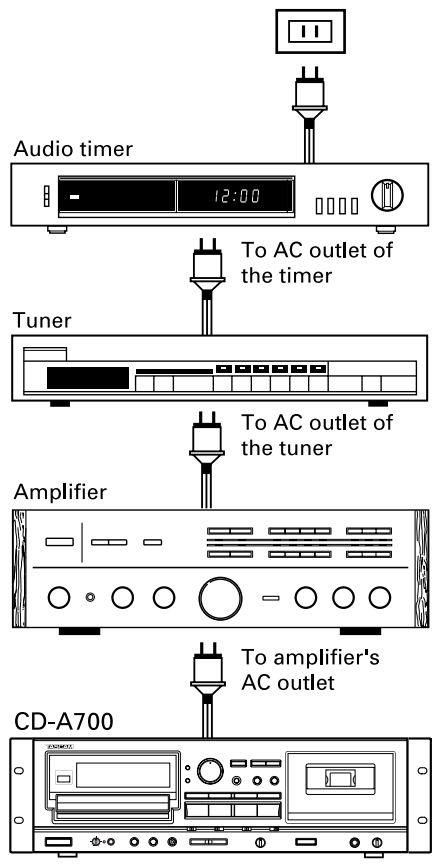
■ Timer recording

1. Select the amplifier's input which this deck is capable of recording.
2. Select the source to be recorded (FM, AM, etc.).
3. Load a recordable cassette and set the [TIMER] switch to [REC].



4. Set the audio timer to the required start (power on) and stop (power off) times. When this setting is completed, the power to all components will be switched off.
5. When the preset start time is reached, power will be supplied and recording will start automatically.

Timer Connection



Troubleshooting

Basic troubleshooting of this unit is similar to troubleshooting of any other electrical or electronic equipment. Always check the most obvious possible causes first. To give you a few ideas of what to look for, check the following:

Problem	Probable cause	Remedy
General		
No power when POWER is pressed.	Power plug not inserted securely.	Plug in securely.
Hum.	Pin-cord plug not connected securely.	Re-connect plug securely.
Noise in tuner.	Too close to tuner.	Keep a reasonable distance between them or switch off the power of this unit.
No audio output.	Connection to stereo system is incorrect.	Check connections.
Remote control unit operation is impossible.	POWER switch set to OFF.	Set switch to ON.
	Batteries not inserted in remote control.	Insert batteries.
CD player		
No playback when disc is loaded.	Disc loaded with label side down.	Load with label side up.
	Disc dirty.	Clean disc surface.
No audio output.	Connection to stereo system is incorrect.	Check connections.
No CD output.	The cassette deck is in Playback mode.	Stop the deck. Or connect the CD output with the amplifier.
A single track can only be played.	SINGLE button engaged.	Press button to disengage it.
No program playback.	PROGRAM button not pressed.	Press button to display PGM.
Mistracking (sound jumping).	Player receiving vibration or shock.	Change the installation position of this unit.
	Disc dirty.	Clean disc surface.
Strange sound.	The CD PITCH CONTROL has been changed.	Set the CD PITCH CONTROL pot to the center position.
Cassette deck		
Low sound quality.	The heads are dirty.	Clean the heads.
	The heads are magnetized.	Demagnetize the heads using the TEAC E-3.
	The position of the DOLBY NR switch is not correct.	Change the position.
Strange sound.	The PITCH CONTROL has been changed.	Set the PITCH CONTROL pot to the center position.
Impossible to record.	The SOURCE switch is set to an inappropriate input.	Set the SOURCE switch to the appropriate input (CD/LINE).
	The record protection tabs of the cassette are broken off.	Put adhesive tape on the tab hole.
	The heads are dirty.	Clean the heads.
	Recording level is too low.	Turn the INPUT level control pot to the right.

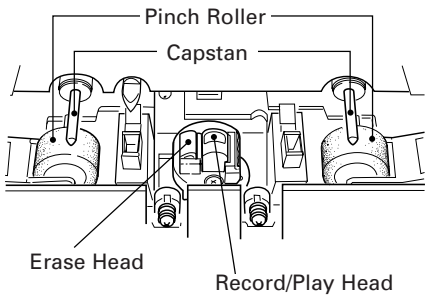
Maintenance

The heads and tape path should be cleaned and demagnetized periodically.

Cleaning tape path

- Apply head cleaning fluid* to a cotton bud or soft cloth, and lightly rub the heads, capstan and all metal parts in the tape path.
- Also clean the pinch roller using rubber cleaning fluid*.

* Both are available in TEAC Tape Cleaning Kits HC-2 and RC-2 in the U.S.A. or TZ-261 in other areas.



Demagnetizing heads

Be sure that the power is off, then demagnetize the heads using a TEAC E-3 demagnetizer. For details of its use, read its instructions.

Specifications

CD player section

(Audio)
Number of channels: 2
Frequency response: 20 - 20,000 Hz ± 0.5 dB
Signal-to-noise ratio: 90 dB
Total harmonic distortion: 0.02% (1 kHz)
Wow and flutter:
Unmeasurable (quartz accuracy)
Channel separation: 75 dB
Pitch control: Approx. ±12 %
Output (RCA): 2 Vrms
Output (XLR): +20 dBu
Digital filter: 4-times oversampling
Analog filter: 3rd order

Cassette section

Track system: 4-track 2-channel stereo
Heads: Record/playback x 1 (rotary reverse), erase x 1
Type of tape: Cassette tape C-60, C-90
Tape speed: 4.76 cm/sec.
Pitch control: Approx. ±12 %
Motor: DC servo motor x 1
Wow and flutter: 0.08% (W. RMS)
Frequency response (overall):
50 – 15,000 Hz ± 3 dB, metal
50 – 15,000 Hz ± 3 dB, chrome
50 – 14,000 Hz ± 3 dB, normal
Signal-to-noise ratio (overall):
69 dB (DOLBY NR off, 3% THD level, weighted), 69 dB (DOLBY NR on, over 5 kHz)
Fast winding time: Approx. 120 sec. (with C-60)

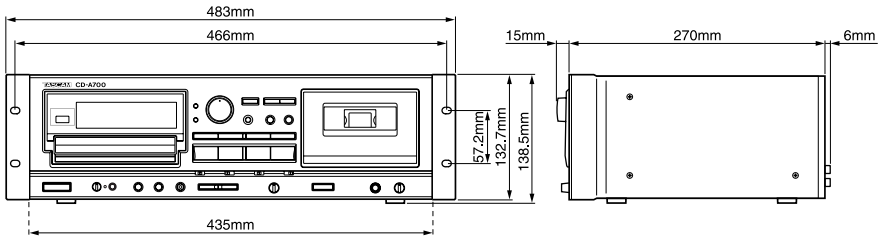
Input (RCA):
–9 dBu (input impedance of 50 kohms)
Input (XLR):
+4 dBu (input impedance of 10 kohms)
Line output (RCA):
–4.5 dBu (output impedance of 400 ohms)
Line output (XLR):
+4 dBu (output impedance of 150 ohms)
Headphones: 5 mW/32 ohms

General

Power requirements:
120/230 V AC, 50–60 Hz
(U.S.A./Canada/General export model)
230 V AC, 50 Hz (Europe/U.K. model)
240 V AC, 50 Hz (Australia model)
Power consumption: 15 W
Dimensions (W x H x D):
483 x 138.5 x 270 mm (19" x 5-1/4" x 10-5/8")
Weight: 6.6 kg (14.1 lbs.)

Standard accessories:
Wireless remote control RC-A500,
Battery (SUM-3, "AA", "R6" type) x 2,
Rack mounting screw kit

- Improvements may result in specification or feature changes without notice.
- Photos and illustrations may differ slightly from production models.



IMPORTANT (for U.K. Customers)

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.
If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.
If this product is not provided with a mains plug, or one has to be fitted, then follow the instructions given below:

IMPORTANT. DO NOT make any connection to the larger terminal which is marked with the letter E or by the safety earth symbol ⏚ or coloured GREEN or GREEN-and-YELLOW.
The wires in the mains lead on this product are coloured in accordance with the following code:

BLUE: NEUTRAL
BROWN: LIVE

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
When replacing the fuse only a correctly rated approved type should be used and be sure to re-fit the fuse cover.
IF IN DOUBT — CONSULT A COMPETENT ELECTRICIAN.

For U.S.A.

TO THE USER

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential area. This device generates and uses radio frequency energy and if not installed and used in accordance with the instructions, it may cause interference to radio or TV reception. If this unit does cause interference with TV or radio reception you can try to correct the interference by one or more of the following measures:

a) Reorient or relocate the receiving antenna.
b) Increase the separation between the equipment and the receiver.
c) Plug the equipment into a different outlet so that it is not on the same circuit as the receiver.
If necessary, consult the dealer or an experienced radio/TV technician for additional suggestions.

CAUTION:
Changes or modifications to this equipment not expressly approved by TEAC CORPORATION for compliance could void the user's authority to operate this equipment.

For CANADA

AC POWER CORD CONNECTION

CAUTION:
TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

CORDE DE CONNEXION CA

ATTENTION:
POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

TEAC CORPORATION	3-7-3, Nakacho, Musashino-shi, Tokyo 180-8550, Japan Phone: (0422) 52-5082
TEAC AMERICA, INC.	7733 Telegraph Road, Montebello, California 90640 Phone: (323) 726-0303
TEAC CANADA LTD.	340 Brunel Road, Mississauga, Ontario L4Z 2C2, Canada Phone: 905-890-8008
TEAC MEXICO, S.A. De C.V	Privada De Corina, No.18, Colonia Del Carmen Coyoacon, Mexico DF 04100 Phone: 5-658-1943
TEAC UK LIMITED	5 Marlin House, Marlins Meadow, The Croxley Centre, Watford, Herts. WD1 8YA, U.K. Phone: 01923-819699
TEAC DEUTSCHLAND GmbH	Bahnstrasse 12, 65205 Wiesbaden-Erbenheim, Germany Phone: 0611-71580
TEAC FRANCE S. A.	17 Rue Alexis-de-Tocqueville, CE 005 92182 Antony Cedex, France Phone: 01.42.37.01.02
TEAC BELGIUM NV/SA	P.A. TEAC Nederland BV, Perkinsbaan 11a, 3439 ND Nieuwegein, Netherlands Phone: 0031-30-6048115
TEAC NEDERLAND BV	Perkinsbaan 11a, 3439 ND Nieuwegein, Netherlands Phone: 030-6030229
TEAC AUSTRALIA PTY., LTD. A.C.N. 005 408 462	106 Bay Street, Port Melbourne, Victoria 3207, Australia Phone: (03) 9644-2442
TEAC ITALIANA S.p.A.	Via C. Cantù 11, 20092 Cinisello Balsamo, Milano, Italy Phone: 02-66010500

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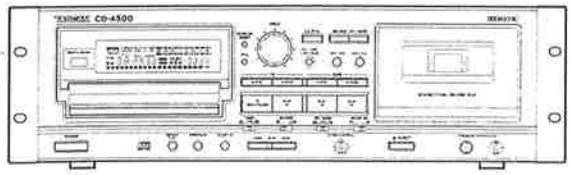
TASCAM
TEAC Professional Division



SERVICE MANUAL

CD-A500

COMPACT disc DIGITAL AUDIO

Compact Disc Player/Reverse Cassette Deck

CONTENTS

NOTES

- PC boards shown are viewed from parts side.
- Parts marked with ＊ require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
  [K]:KOREA [E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

目　次

注　意

- プリント基板図は部品面が示されています。
- ＊印の部品は納期が若干かかります。
  あらかじめご了承ください。
- 分解図に部番のない部品及び品番のない部品は供給しません。
- 標準の抵抗、コンデンサーは省略してあります。
  回路図を参照してください。
- ⚠印は安全重要部品です。
  交換する時は必ずティアック指定の部品を使用してください。
- 仕向先
  [J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
  [K]:KOREA [E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

Effective : July, 1998

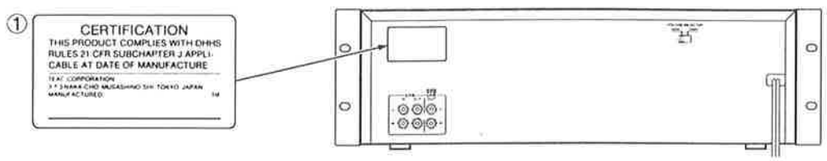
D00439100A

1 SAFETY INFORMATION

SAFETY INFORMATION

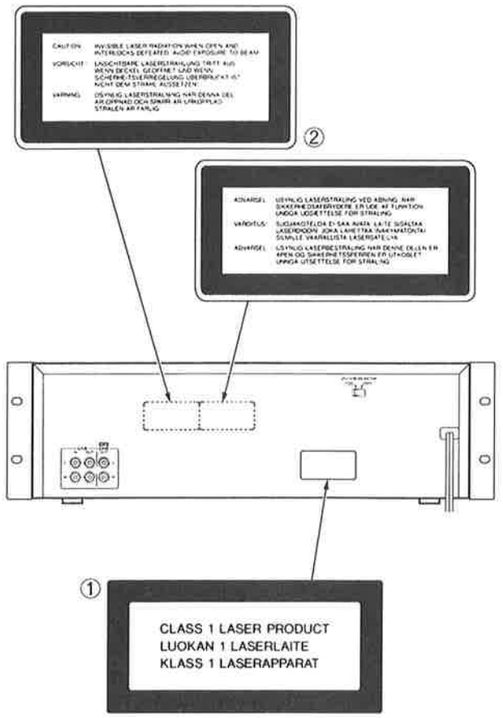
This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as class 1 laser product. There is not hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings.
The label required in this regulation is shown ①.

CAUTION
USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.



Optical pickup: Type : KSS-212B
Manufacturer : SONY Corporation
Laser output : Less than 0.4 mW on the objective lens
Wavelength : 760 – 800 nm

• CAUTION • ACHTUNG • OBSERVERA • ADVARSEL



① THIS LABEL IS ATTACHED TO THE PLACE AS ILLUSTRATED TO INFORM THAT THE APPARATUS CONTAINS A LASER COMPONENT.

① DIESE AUFKLEBEMARKE IST AN DEM IN DER ABBILDUNG GEZEIGTEN ORT ANGEBRACHT UM DARAUF HINZUWEISEN, DASS IM INNERN DES GERÄTS EINE LASER-KOMPONENTE BEFINDET.

① PÅSKRIFTEN SITTER PÅ APPARATEN SOM VISAS SOM UPPMANING OM ATT APPARATEN OMFATTAR EN INBYGGD LASERKOMPONENT.

① DETTE MÆRKAT ER ANBRAGT SOM VIST I ILLUSTRATIONEN FOR AT ADVARE BRUGEREN OM AT APPARATET INDEHOLDER EN LASERKOMPONENT.

② DETTE MÆRKAT ER SOM VIST PÅ ILLUSTRATIONEN ANBRAGT PÅ INDERSIDEN AF TOPDÆKSLET FOR AT ADVARE BRUGEREN OM AT YDERLIGERE FREMTRÆNGEN VIL VÆRE FORBUNDET MED FARE FOR AT UDSÆTTE SIG FOR LASERSTRÅLING.

ADVARSEL- BETJENING AF ANDRE KONTROLLER OG REGULATORER ELLER BENYTTELSE AF ANDRE FREMGANGSMÅDER END BESKREVET HERI ER FORBUNDET MED FARE FOR USDÆTTELSE FOR LASERSTRÅLING.

VARNIG: APPARATEN INNEHÅLLER LASER KOMPONENT MED STRÅLNING ÖVERSTIGANDE KLASS 1

"ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING NAR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING."

"VAROITUS! SUOJAKOTELOA EI SAA AVATA. LAITE SISÄLTÄÄ LASERDIODIN. JOKA LÄHETTÄÄ (NÄKYMÄTÖNTÄ) SILMILLE VAARALLISTA LASERSÄTEILYÄ".

ADVARSEL: USYNLIG LASERBESTRÅLING NÅR DENNE DELEN ER ÅPEN OG SIKKERHETSSPERREN ER UTKOBLET UNNGÅ UTSETTELSE FOR STRÅLING.

CD-A500

2 SPECIFICATIONS
仕 様

CD SECTION

AUDIO
Number of Channels: 2
Frequency Response: 10 – 20,000Hz ± 0.5dB
Signal to Noise Ratio: 90dB
Dynamic Range: 90dB
Total Harmonic Distortion: 0.02% (1kHz)
Wow and Flutter: Unmeasurable (Quartz accuracy)
Channel Separation: 75dB
Output: 2Vrms
Digital Filter: 4-times oversampling
Analog Filter: 3rd order

PICK UP
Type: Optical 3-Beam laser pickup
Objective Lens: 2-dimensional parallel drive
Laser Type: GaAlAs type semiconductor laser
Wave Length: 780nm

SIGNAL FORMAT
Sampling Frequency: 44.1kHz
Quantization Bit: 16-bit linear/channel
Channel Bit Rate: 4.3218Mb/sec.
Channel Modulation Code: EFM
Error Correction: CIRC

CASSETTE SECTION

Track System: 4-track 2-channel stereo
Heads: Record/playback × 1 (Rotary reverse), Erase × 1
Type of Tape: Cassette tape C-60, C-90
Tape Speed: 4.76cm/sec.
Motor: DC servo motor × 1
Wow and Flutter: 0.08% (W. RMS)
Frequency response (Overall):
50-15,000Hz ± 3dB, Metal tape
50-15,000Hz ± 3dB, CrO_2 tape
50-14,000Hz ± 3dB, Normal tape
Signal - to - Noise Ratio (Overall):
59dB (DOLBY NR off, 3% THD Level, Weighted),
69dB (DOLBY NR on, over 5kHz)
Fast Winding Time: Approx. 120 sec. with C-60
Input: Line ; 87mV (Input impedance of 50k ohms or more)
Outputs: Line ; 0.46V
(Load impedance of 50k ohms or more)
Headphones ; 1mW/8ohms

CD部

〈オーディオ〉

オーディオチャンネル数	2チャンネル
周波数特性	10～20,000Hz ± 0.5dB
SN比	90dB
ダイナミックレンジ	90dB
高調波歪率	0.02%(1kHz)
ワウ・フラッター	測定限界値以下(水晶発振精度)
チャンネルセパレーション	75dB
出力	2Vrms
デジタルフィルター	4倍オーバーサンプリング デジタルフィルター
アナログフィルター	3次アナログフィルター

〈ピックアップ〉

方式	光学式3ビーム
対物レンズ駆動方式	2次元平行駆動
光源	半導体レーザー
波長	780nm

〈信号フォーマット〉

標本化周波数	44.1kHz
量子化ビット数	16ビット・リニア/チャンネル
伝送レート	4.3218Mb/sec
変調方式	EFM
エラー訂正方式	CIRC

カセット部

トラック形式	4トラック2チャンネル ステレオ
ヘッド構成	録音/再生ヘッド×1(回転リバース式), 消去ヘッド×1
使用テープ	C-60, C-90タイプ カセットテープ
テープ速度	4.76cm/sec
モーター	DCサーボモーター×1
ワウ・フラッター	0.08%(W. RMS)
周波数特性(総合)	メタル：50～15,000Hz ± 3dB クローム：50～15,000Hz ± 3dB ノーマル：50～14,000Hz ± 3dB
SN比(総合)	59dB(ドルビーOUT, 3%THDレベルWTD) 69dB(ドルビーIN, 5kHz以上)
早巻時間	約120秒(C-60テープ)
入力	ライン：87mV (入力インピーダンス50kΩ以上)
出力	ライン：0.46V (負荷インピーダンス50kΩ以上) ヘッドホン：1mW/8Ω

GENERAL

Power Requirements:
120/230V AC, 50-60Hz
(U.S.A./Canada/General Export model)
230V AC, 50Hz (Europe/U.K. model)
240V AC, 50Hz (Australia model)
Power Consumption: 14W
Dimensions (W × H × D):
483 × 133 × 270mm
(19″ × 5-1/4″ × 10-5/8″)
Weight: 6.4kg (14.1 lbs.)
Standard Accessories:
Remote control unit (RC-A500) × 1,
Battery (SUM-3, "AA", "R6" type) × 2,
Rack mounting screw kit

●Improvements may result in specification or feature changing without notice.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

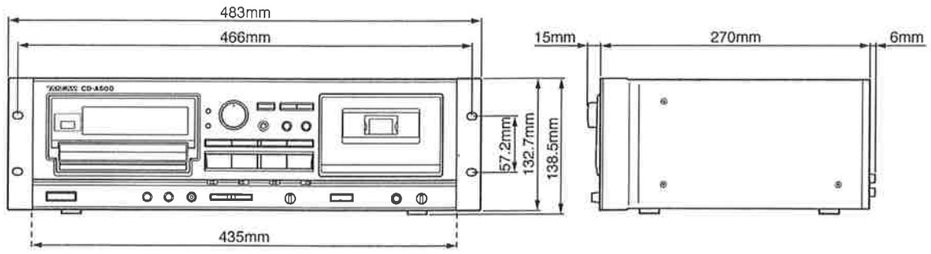
"DOLBY" and the double-D symbol ⊡⊡ are trademarks of Dolby Laboratories Licensing Corporation.

一般

電源	100V AC, 50-60Hz
消費電力	14W
外形寸法	483 × 133 × 270mm (W × H × D)
質量	6.4kg
付属品	●リモコン(RC-A500) × 1
	●乾電池(単3) × 2
	●ラックマウントビスキット

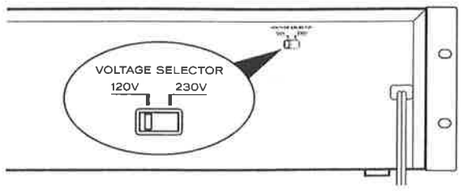
●仕様および外観は、改善のため予告なく変更することがあります。

ドルビーノイズリダクションはドルビーラボラトリーズライセンシングコーポレーションからの実施権に基づき製造されています。
ドルビー, DOLBY及びダブルD記号 ⊡⊡ はドルビーラボラトリーズライセンシングコーポレーションの登録商標です。



Voltage Conversion

Be sure to remove the power cord from the AC outlet before repositioning the voltage converter switch.
1. Locate the voltage selector on the rear panel.
2. Using a flat-bladed screwdriver, set to the appropriate 230 V or 120 V position according to your area.



3 ADJUSTMENT AND CHECKS (CD SECTION)
調整と確認（CD部）

1. Handling the pickup assembly

●Before servicing the pickup assembly be sure to prevent electrostatic-inducer destruction by grounding not only test equipment in use but also yourself.
＊Electrostatic charge drastically shortens the operating life of the laser diode or possibly results in its destruction.
●Hold the slide base when handling the pick-up. (Fig. 3-1)
●LD terminals are factory-strapped before shipment to protect LD from electrostatic discharges during transportation. (Fig. 3-2) After connector insertion, unstrap the LD terminal with a soldering iron.
The temperature of the soldering iron tip must be 320℃ or below (30W) and the unstrapping should be performed quickly.
●Don't disassemble the pickup ass'y.
●Don't apply shock to the pickup ass'y.
●Don't place the assembly in a place subject to excessive dust, heat or moisture.
●The LD chip is manufactured from GaAs and GaAlAs, which contains toxic As (Arsenic). Parts removed in servicing should be disposed of with due care.

1. ピックアップASSYの取扱

●ピックアップASSYを取り扱う場合は、測定器などに確実なアースを取ると共に、人体アースを行ない、静電破壊を十分防止してください。
＊レーザーダイオードは、静電気が加わると寿命が著しく低下したり、または破損しますので十分注意してください。
●ピックアップASSYの取り扱いは、スライドベースを持って行なってください。(Fig. 3-1)
●LDの端子は、出荷時に輸送による静電破壊防止のためショートされています。(Fig. 3-2) ショート部の解放はコネクターを差し込んだ後、半田ゴテで行なってください。
半田ゴテは、コテ先温度が320℃以下(30W)のものを使用し、すみやかに行ってください。
●ピックアップASSY本体の調整および分解などはしないでください。
●ピックアップASSYに落下・衝撃は加えないでください。
●ゴミ・ホコリなどの発生する場所、高温・多湿の場所は避けてください。
●LDのチップはGaAs + GaAlAsで有毒なAsを含んでいます。サービスパーツの不良品は指定の方法で廃棄処理をしてください。

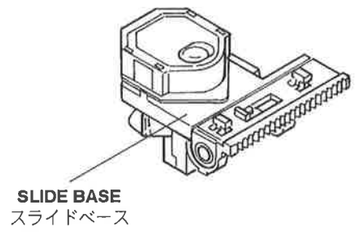


Fig. 3-1

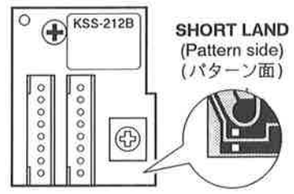


Fig. 3-2

2. Objective

●Never look directly into the LD or observe the laser beam through another lens or mirror.
●Don't touch the objective with fingers.
●If objective becomes dirty, playback will deteriorate. To clean the objective, moisten a good cleaning tissue, such as made by KODAK, in isopropyl alcohol and wipe the objective gently. Wipe off and excess fluid with a dry cleaning tissue.

2. 対物レンズについて

●動作中のLDを直視したり、あるいは他のレンズやミラーを介して光束を観察すると危険ですから絶対に行なわないでください。
●レンズには手を触れないでください。
●レンズに汚れが付くと再生能力が低下しますので、次のように清掃してください。
レンズクリーニングペーパー（KODAK社製など）に、イソプロピールアルコール（I.P.A）を浸して清掃をし、液が残らないように必ず拭きとってください。

3-1 SERVO ADJUSTMENT

TEST DISC : MCD-111

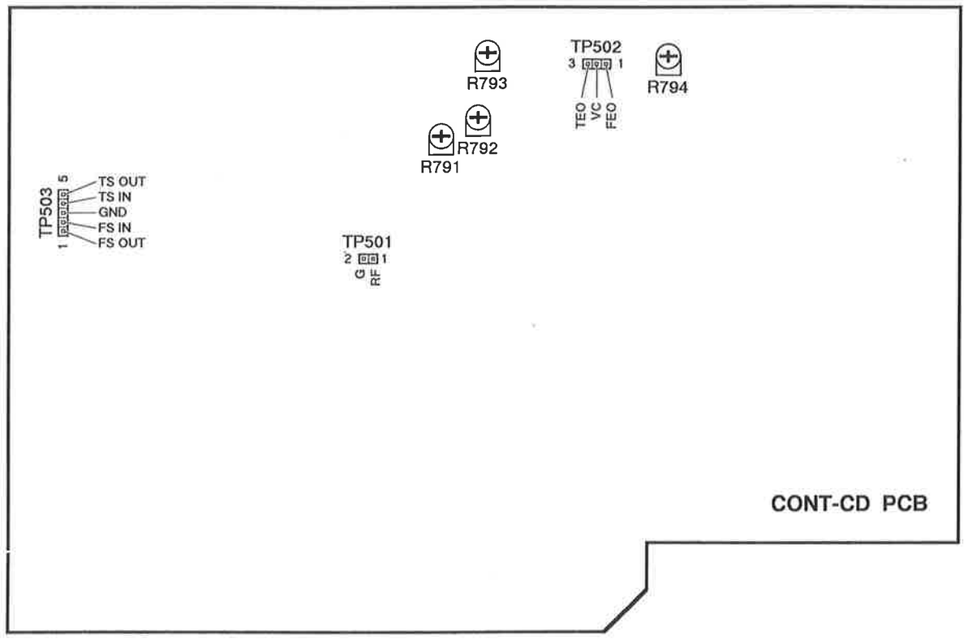


Fig. 3-3

3-1-1 Checking the pickup actuator operation

Before loading the disc, turn the power ON and check that the pickup actuator moves up and down three times. (If the pickup is not at inside on the disc, perform the above operation after moving the pickup to the inside.)

3-1-2 Tracking balance adjustment

1. Connect the oscilloscope between TP502 pin 3 (TEO) and TP503 pin 3 (GND), and press and hold the SKIP (⏮ or ⏭) button. (Oscilloscope : AC range)
2. Adjust R792 (TR BAL) so that the upper and lower amplitudes of the tracking error signal waveform become equal above and below 0V.

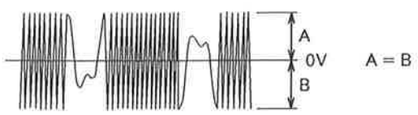


Fig. 3-4

3-1 サーボ調整

テストディスク : MCD-111

3-1-1 ピックアップアクチュエーター動作チェック

電源ON時ピックアップアクチュエーターが3回上下動すること。(ピックアップが最内周にないときは、最内周に移動後上記動作すること。) ディスクは装着しない。

3-1-2 トラッキングバランス調整

1. TP502の3番ピン(TEO)とTP503の3番ピン(GND)間にオシロスコープを接続し、SKIPボタン(⏮ または ⏭)を押し続ける。(オシロスコープ : ACレンジ)
2. トラッキングエラー信号の波形が0Vを中心に振れるようR792 (TR BAL)を調整する。

3-1-3 Focus balance adjustment

1. Connect the oscilloscope between TP501 pin 1 (RF) and pin 2 (G). (AC range)
2. In the play mode, and adjust R791 (FC BAL) so that the waveform on the oscilloscope becomes maximum.
3. After the adjustment, check the voltage between TP502 pin 1 (FEO) and pin 2 (VC) to make sure the difference in voltage between Play mode and Stop mode is 80mV or less.
   If reading values are out of spec, adjust R791 again.

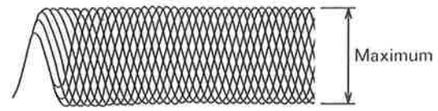


Fig. 3-5

3-1-4 Focus gain adjustment

1. Apply 1.3kHz/10Vp-p to TP503 pin 2 (FS IN) from an external OSC via 50kΩ resistor.
2. Play the track 4, and adjust R794 (FC GAIN) so that phase at TP503 pin 1 (FS OUT) is 90° with respect to that of the external OSC.

Fig. 3-6

3-1-5 Tracking gain adjustment

1. Apply 1.9kHz/10Vp-p to TP503 pin 4 (TS IN) from an external OSC via 50kΩ resistor.
2. Play the track 4, and adjust R793 (TR GAIN) so that phase at TP503 pin 5 (TS OUT) is 90° with respect to that of the external OSC.

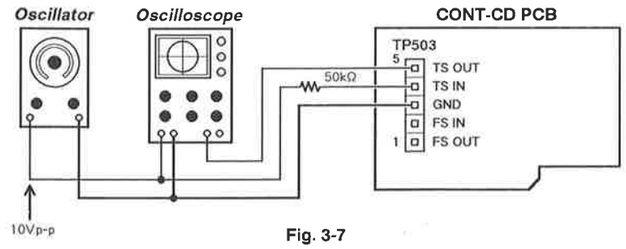


Fig. 3-7

3-1-3 フォーカスバランス調整

1. TP501の1番ピン(RF)と2番ピン(G)間にオシロスコープを接続する。(ACレンジ)
2. PLAY状態でオシロスコープの波形が最大になるようにR791 (FC BAL)を調整する。
3. 調整後、TP502の1番ピン(FEO)と2番ピン(VC)間の電圧を測定し、再生中と停止中の差が80mV以下であることを確認する。もし規格に入らない場合は再度R791を調整する。

3-1-4 フォーカスゲイン調整

1. 外部OSCより50kΩの抵抗を介して1.3kHz/10Vp-pの信号をTP503の2番ピン(FS IN)に入力する。
2. 4曲目を再生し、TP503の1番ピン(FS OUT)と外部OSCとの位相が90°になるようにR794 (FC GAIN)を調整する。

3-1-5 トラッキングゲイン調整

1. 外部OSCより50kΩの抵抗を介して1.9kHz/10Vp-pの信号をTP503の4番ピン(TS IN)に入力する。
2. 4曲目を再生し、TP503の5番ピン(TS OUT)と外部OSCとの位相が90°になるようにR793 (TR GAIN)を調整する。

3-2 AUDIO CHECK オーディオチェック

ITEM 項目	DISC: MCD-111 TRACK No.	DISC: MCD-111 FREQUENCY/LEVEL	SPECIFICATIONS 規格	REMARKS 備考
1. Output level 出力レベル	2	1kHz, 0dB	2 ± 0.5Vrms	CD LINE OUT
2. Channel level difference チャンネルレベル差	2	1kHz, 0dB	0.5dB or less	
3. Harmonic distortion 高調波歪率	2	1kHz, 0dB	0.03 % or less	400Hz HPF in 20kHz LPF in
4. Frequency response 周波数特性	3~6	20Hz~20kHz, 0dB	Within ± 1.0dB	reference level: 1kHz
5. S/N ratio S/N比	7	− ∞ dB	83dB or better	IHF-A
6. Channel separation チャンネルセパレーション	8, 10	1kHz, 0dB	70dB or better	IHF-A
7. Emphasis effect エンファシス効果	13	16kHz, − 20dB	− 20 ± 1.0dB	reference level: 1kHz

4 ADJUSTMENT AND CHECKS (CASSETTE SECTION)

調整と確認（カセット部）

4-1 MECHANICAL ADJUSTMENT

4-1-1 Wow and flutter (playback method)

1. Connect a wow-and-flutter meter to the deck as shown in Fig. 4-1.
2. Load and play a TEAC MTT-111N test tape.
3. In both FWD and REV play modes, check that the readings on the wow-and-flutter meter is within 0.19 % (WRMS).

4-1 機構部の調整

4-1-1 ワウ・フラッタ (再生法)

1. Fig. 4-1のようにワウ・フラッタメーターを接続する。
2. テストテープMTT-111Nを再生する。
3. FWD, REV両方向で、ワウ・フラッタ値が0.19 % (WRMS) 以下であることを確認する。

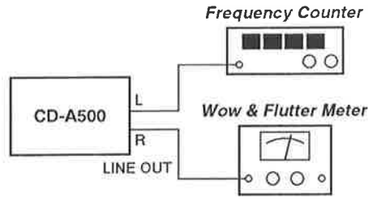


Fig. 4-1

4-1-2 Tape speed

1. Connect a frequency counter to the deck as shown in Fig. 4-1.
2. Load a TEAC MTT-111N test tape and play in FWD direction.
3. Adjust R190 (Fig. 4-2) on the TAPE PCB to get the adjustment value of 2,980 to 3,020Hz.
4. Play in REV direction and make sure the adjustment value is 2,925 to 3,075Hz.

Note:
Make sure the PITCH CONTROL knob is positioned at the center.

4-1-2 テープスピード

1. Fig. 4-1のように周波数カウンターを接続する。
2. テストテープMTT-111NをFWD方向で再生する。
3. 周波数値が3,000 ± 20Hzとなるように TAPE PCBのR190 (Fig. 4-2) を調整する。
4. REV方向を再生し、周波数値が3,000 ± 75Hzであることを確認する。

注意：
PITCH CONTROLつまみがセンターになっていること。

4-1-3 Pitch control variable range

1. In 4-1-2, when the PITCH CONTROL knob is rotated to the − side, make sure the frequency becomes 2,700 Hz or lower, and make sure it becomes 3,300Hz or higher when the knob is rotated to the + side.

4-1-3 ピッチコントロール可変幅

1. 4-1-2の状態で、PITCH CONTROLつまみを−方向に回したとき、周波数が2,700Hz以下、+方向に回したとき、3,300Hz以上になることを確認する。

4-2 ELECTRICAL ADJUSTMENT

4-2-1 Precautions

- Before performing adjustments and checks clean and demagnetize the entire tape path.
- In general, adjustments and checks are made in the order of Lch then Rch. Double REF. Nos. indicate Lch /Rch. (Example ; R11/R21)
- 0dB is referenced to 0.775V.
- The AC voltmeter used in the procedures must have an input impedance of 1MΩ or more.
- Unless specified otherwise, adjustments and checks are made in FWD direction.

4-2 アンプ部の調整

4-2-1 注意

- アンプ部の調整・確認の前に、テープ走行系の消磁と清掃を行なってください。
- 特に指定のない限り、調整はLch, Rchの順序で行なってください。尚、R11/R21のように記されている回路番号はLch/Rchを示します。
- 0dB=0.775V
- 測定に使用するレベル計の入力インピーダンスは1MΩ以上のものを使用してください。
- 特に指定のない場合、調整および確認はFWD方向で行なってください。

4-2-2 Adjustment locations 調整個所

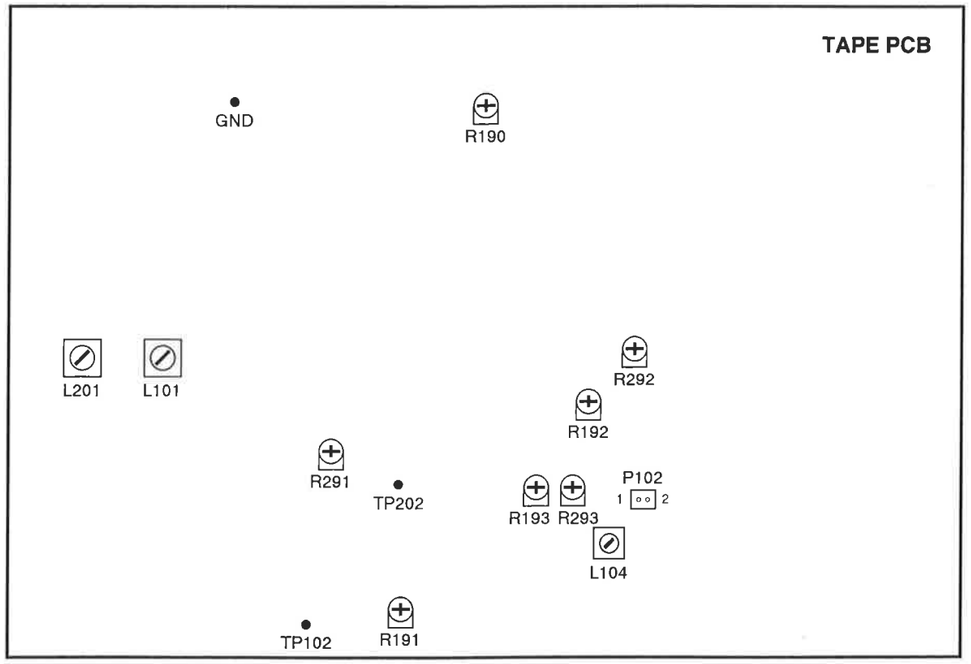
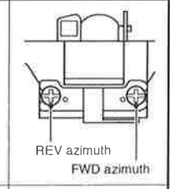
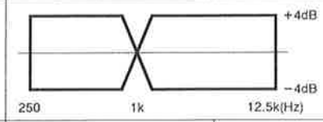


Fig. 4-2

4-2-3 Playback performance 再生系

Deck settings:
Mode : PLAY
DOLBY NR Switch : OFF
PITCH CONTROL : Center

TEAC test tapes:
MTT-150C : For Dolby level calibration
MTT-25702 : For playback frequency response check NORMAL tape
MTT-5513 : For S/N check NORMAL tape

ITEM 項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUSTMENTS 調整個所	MEASURING POINTS, RESULT 測定個所・調整値	REMARKS 備考
1. Head azimuth adjustment アジマス調整	Connection : Fig. 4-4 Adjust in FWD, REV respectively FWD、REVそれぞれ調整	MTT-25702 (12.5kHz)	Azimuth screws アジマス調整ねじ	LINE OUT : Maximum output level at L & R-ch Phase : within 45° Lch、Rchとも出力最大位 相 : 45° 以内	
2. DOLBY level ドルビーレベル	Connection : Fig. 4-5	MTT-150C	R191/R291	TP102/TP202 : −30dB (24.5mV)	
3. Playback output level 再生出力レベル	Connection : Fig. 4-3 FWD/REV PLAY	MTT-150C	Check	LINE OUT : −4.5 ± 1.5dB (388mV～549mV)	Ref. output level 基準出力レベル
4. Meter level メーターレベル		MTT-150C	Check	Level meter : 0dB position +0/−1dot	
5. PHONES output level PHONES 出力レベル	Connection : Fig. 4-6 LEVEL control : MAX	MTT-150C	Check	PHONES : −6 ± 3dB (275mV～549mV)	32Ω load 32Ω負荷
6. Playback frequency response 再生周波数特性	Connection : Fig. 4-3 FWD/REV PLAY	MTT-25702	Check		
7. Playback S/N ratio 再生S/N比	Connection : Fig. 4-3 FWD/REV PLAY	MTT-5513 Playback the leader tape portion リーダーテープ部を再生	Check	46dB min.	Ratio of ref. level to noise 基準出力レベルとノイズの比

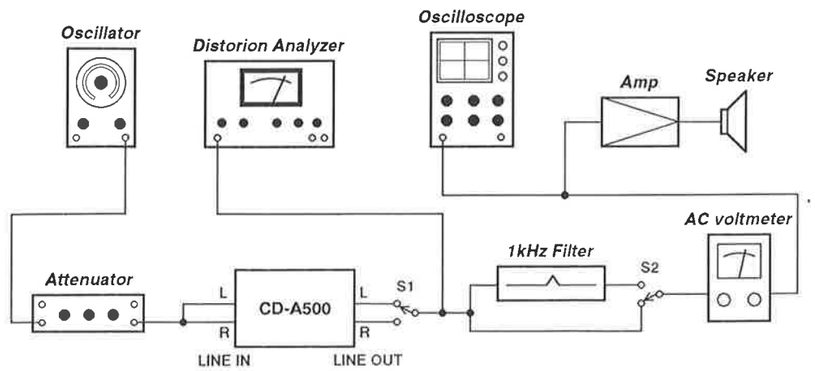


Fig. 4-3 Basic test setup

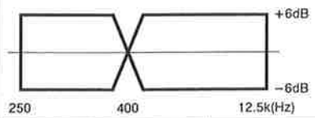
4-2-4 Recording performance 録音系

Deck settings:

Mode : REC／PLAY
DOLBY NR Switch : OFF
PITCH CONTROL : Center
SOURCE Switch : LINE

TEAC recording test tapes:

MTT-5513 : For NORMAL
MTT-5563 : For CrO_2
MTT-5572 : For METAL

ITEM 項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUSTMENTS 調整個所	MEASURING POINTS, RESULT 測定個所・調整値	REMARKS 備考
8. Min. LINE input level ライン最小入力レベル	Connection : Fig. 4-3 INPUT control : Max. Mode : REC-PAUSE	LINE IN : 400Hz/－19dB (87mV)	Check	LINE OUT : －4.5 ± 3dB (327mV～652mV)	
9. Specified LINE input level ライン規定入力レベル	Connection : Fig. 4-3 Mode : REC-PAUSE	LINE IN : 400Hz/－9dB (275mV)	INPUT control	LINE OUT : －4.5dB (462mV)	After adjusting, do not move (Specific position) 調整後は動かさないこと(規定位置)
10. Bias osc frequency バイアス発振周波数	Connection : Fig. 4-7 TAPE : MTT-5513 Mode : REC-PAUSE	LINE IN : No signal 無信号	L104	P102 Pin 1 : 85kHz	
11. Record bias 録音バイアス	Connection : Fig. 4-3 TAPE : MTT-5513	LINE IN : 250Hz/10kHz －34dB (15.5mV)	R193／R293	LINE OUT : Nearly equal level at both frequencies 両周波数の録再出力が同レベル（± 0.5dB）	
12. MPX filter MPXフィルター	Connection : Fig. 4-3 TAPE : MTT-5513	LINE IN : 19kHz/－12dB (195mV)	L101／L201	30dB min.	Ratio of ref. level to signal 基準出力レベルに対する比
13. Record level 録音レベル	Connection : Fig. 4-3 TAPE : MTT-5513	LINE IN : 400Hz/－9dB (275mV)	R192／R292	LINE OUT : －4.5 ± 1dB (411mV～518mV)	
	TAPE : MTT-5563 MTT-5572 FWD／REV direction		Check	－4.5 ± 1.5dB (388mV～549mV)	
14. Total harmonic distortion 総合歪率	Connection : Fig. 4-3 TAPE : MTT-5513 MTT-5563 MTT-5572	LINE IN : 400Hz/－12dB (195mV)	Check	NORMAL : 2.0 % or less CrO_2 : 2.5 % or less METAL : 3.0 % or less	
15. Overall frequency response 録再周波数特性	Connection : Fig. 4-3 TAPE : MTT-5513 MTT-5563 MTT-5572 FWD／REV direction	LINE IN : 250Hz～12.5kHz －34dB (15.5mV)	Check		
16. Overall S/N ratio 総合S／N比	Connection : Fig. 4-3 TAPE : MTT-5513 MTT-5563 MTT-5572 FWD／REV direction	LINE IN : No signal 無信号	Check	NORMAL : 45dB min. CrO_2 : 46dB min. METAL : 46dB min.	Ratio of ref. level to noise 基準出力レベルとノイズの比

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ITEM 項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUSTMENTS 調整個所	MEASURING RESULT 調整値	REMARKS 備考
17. Erase efficiency 消去率	Connection : Fig. 4-3 TAPE : MTT-5572 1kHz B.P.F in FWD／REV direction	LINE IN : 1kHz/＋1dB (870mV)	Check	65dB min.	Ratio of the 1kHz recorded portion to the erased portion. 未消去部分と消去部分の比
18. REC MUTE function REC MUTE効果	Connection : Fig. 4-3 TAPE : MTT-5572 1kHz B.P.F in	LINE IN : 1kHz/＋1dB (870mV)	Check	55dB min.	Ratio of the 1kHz recorded portion to the "REC MUTE"portion. 録音部分と"REC MUTE"部分の比
19. Channel seperation チャンネルセパレーション	Connection : Fig. 4-3 TAPE : MTT-5563 1kHz B.P.F in FWD／REV direction	LINE IN : Lch 1kHz/－9dB (275mV) Rch No signal 無信号	Check	35dB min.	Ratio of Lch (1kHz) to Rch (no signal). Lch(1kHz)とRch(無信号)の比
20. Adjacent track crosstalk トラック間クロストーク	Connection : Fig. 4-3 TAPE : MTT-5572	LINE IN : Lch No signal 無信号 Rch 125Hz/-9dB (275mV)	Check	40dB min.	Invert tape and play Rch track. Check leckage level against the output reference of previously recorded portion. テープを反転して再生した時のRch出力レベルの比
21. CD DUBBING function CD DUBBING機能	Connection : Fig. 4-3 SOURCE switch : CD CD DUBBING sw : on TAPE : MTT-5513	MCD-111 Track 21 (1kHz/－10dB)	Check	LINE OUT : －7 ± 1.5dB (291mV～411mV)	

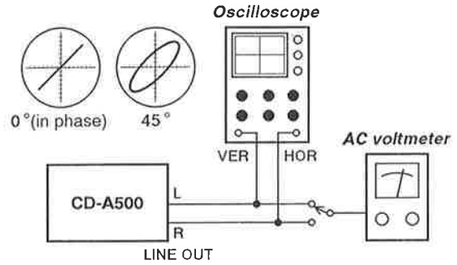


Fig. 4-4 Test setup for azimuth check

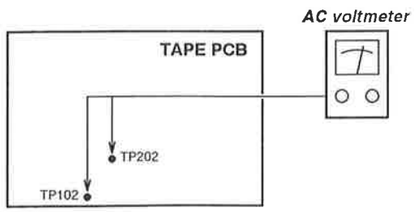


Fig. 4-5 Test setup for DOLBY level adjustment

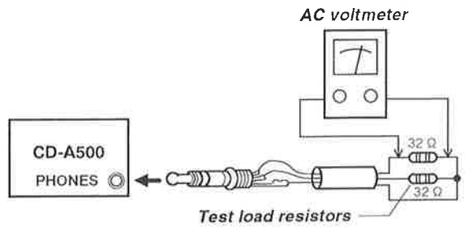


Fig. 4-6 Test setup for PHONES check

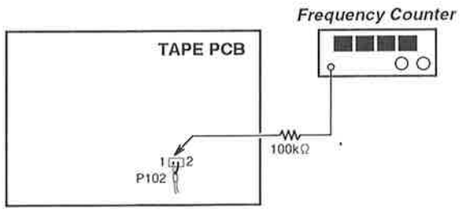


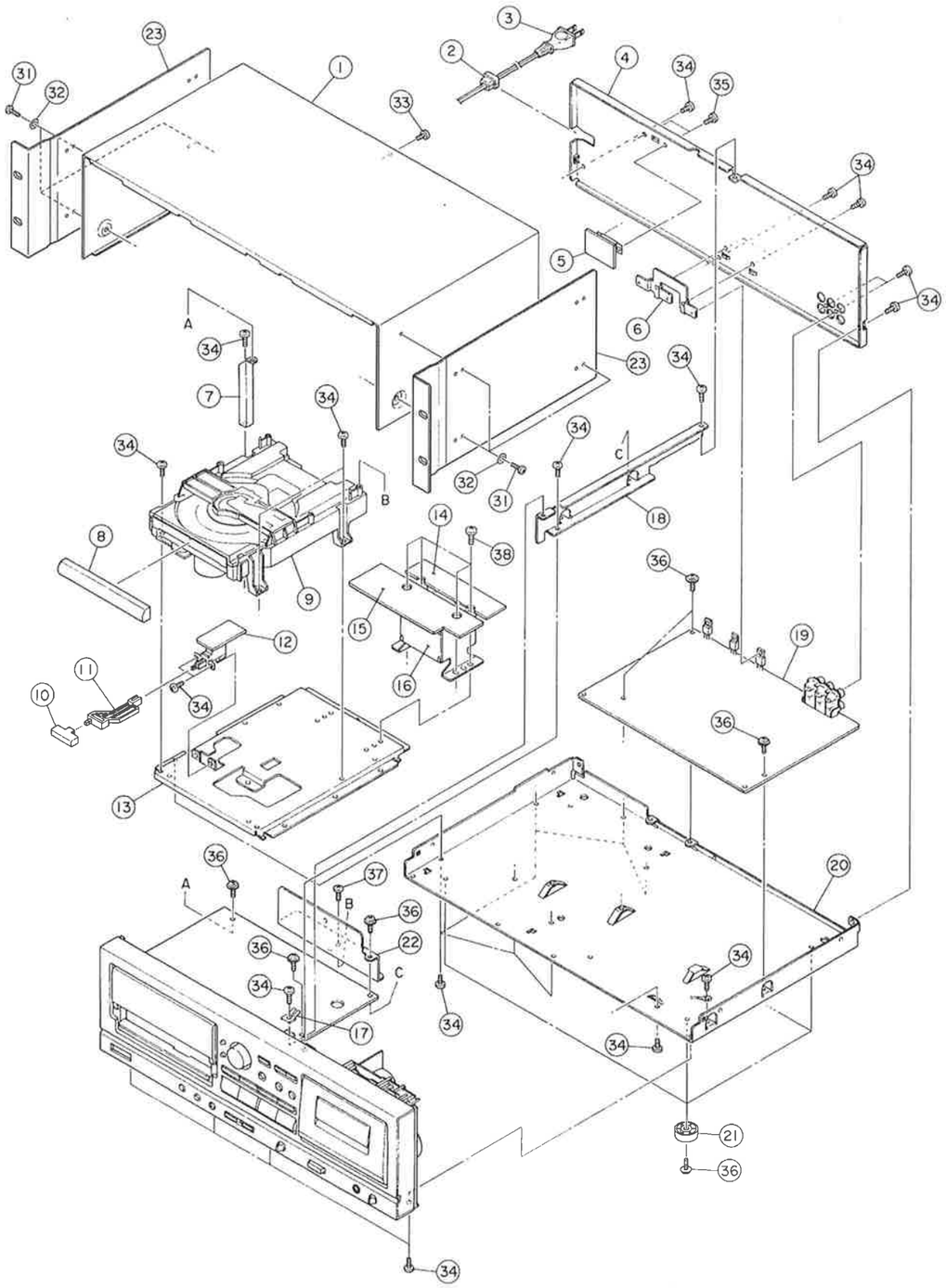
Fig. 4-7 Test setup for bias OSC adjustment

CD-A500

5 EXPLODED VIEWS AND PARTS LIST

分解図とパーツリスト

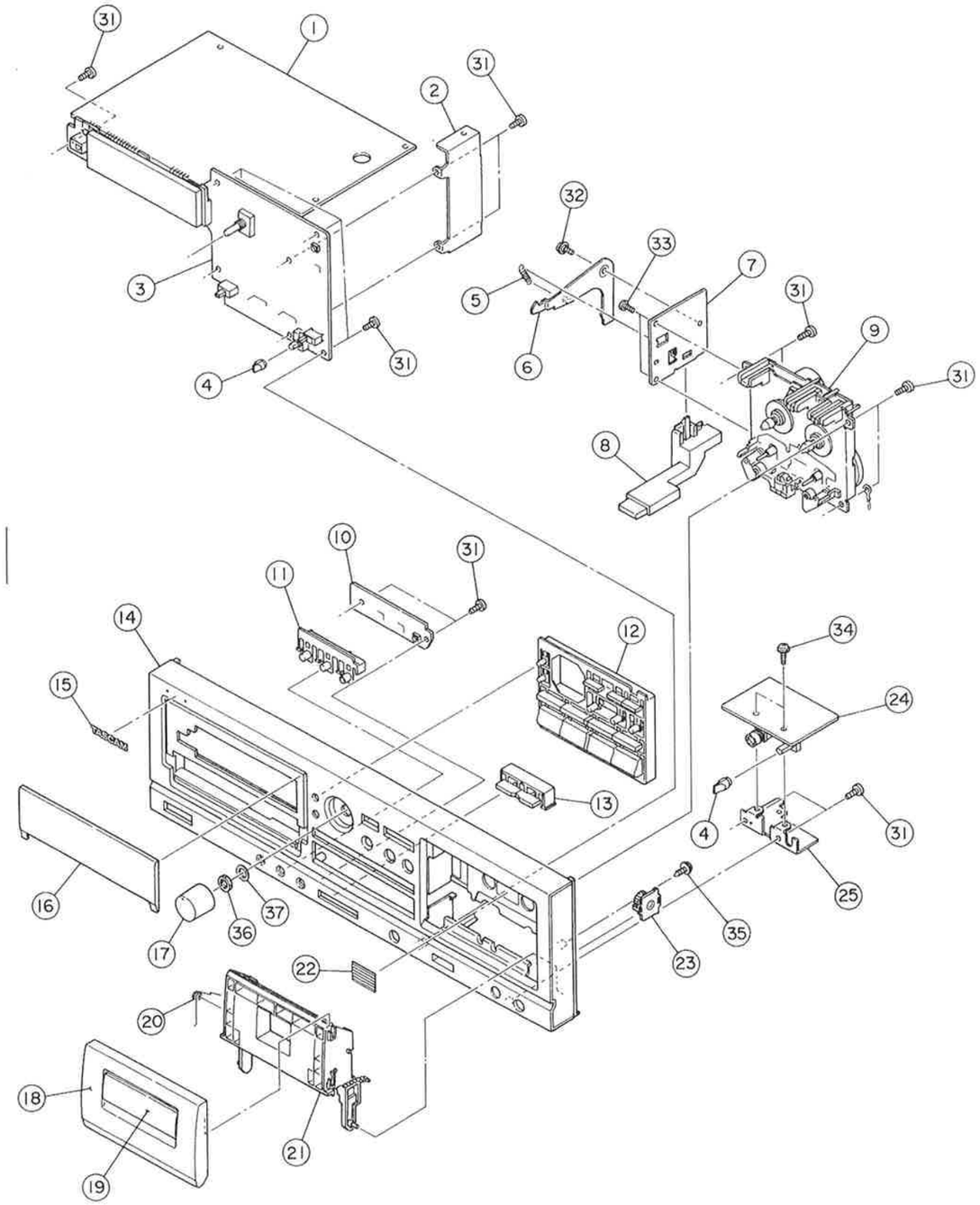
EXPLODED VIEW-1



EXPLODED VIEW-1

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	*3M0026000A	BONNET	
1- 2	⚠*3M000880	BUSHING, #2271	
1- 3	⚠*3E006330	POWER CORD [K]	
	⚠*3E000340	POWER CORD [E]	
	⚠*3E000350	POWER CORD [UK]	
	⚠*3E000360	POWER CORD [A]	
	⚠*3E002120	POWER CORD [J]	
	⚠*3E002970	POWER CORD, SPT-2 [US, C, GE]	
1- 4	*3M0025800B	REAR PANEL [J, K, E, UK, A]	
	*3M0025810B	REAR PANEL [US, C, GE]	
1- 5	*3E9506500A	PCB ASSY, SELECT SW [US, C, GE]	
1- 6	*3M0025900A	PLATE, IC	
1- 7	*3M0025500A	BRACKET, PCB(C)	
1- 8	*3M0024310A	PANEL, TRAY	
1- 9	*3M0027400A	CD MECHA ASSY, KSL-212BCM	
1-10	3M0030500B	BUTTON, POWER	
1-11	*3M0025000A	ROD, POWER SW	
1-12	*3E9506400B	PCB ASSY, POWER SW	
1-13	*3M0025700A	BASE, CD MECHA	
1-14	*3E9506200A	PCB ASSY, TRANS-B	
1-15	*3E9506100B	PCB ASSY, TRANS-A [J]	
	*3E9506110B	PCB ASSY, TRANS-A [US, C, GE]	
	*3E9506120B	PCB ASSY, TRANS-A [K, E, UK]	
	*3E9506130B	PCB ASSY, TRANS-A [A]	
1-16	⚠ 3E0041700A	TRANS, ALL S-1515	
1-17	*3M0030300A	PLATE, EARTH	
1-18	*3M0025300B	BRACKET, PCB(A)	
1-19	*3E9506600B	PCB ASSY, TAPE	
1-20	*3M0025200A	MAIN CHASSIS	
1-21	*3M001950	FOOT, 21MM	
1-22	*3M0030400B	SHIELD PLATE	
1-23	*3M0026600B	RACK MOUNTING	
1-31	*3B0001810A	SCREW, J, S M3X10(BLK)	
1-32	*3M002020	WASHER, FIBER 3X8X0.3T(BLK)	
1-33	*3B0003808A	SCREW, VPC M3X8(BLK)	
1-34	*3B0005708A	SCREW, BPB M3X8(BLK)	
1-35	*3B0004408A	SCREW, BPS M3X8(BLK) [US, C, GE]	
1-36	*3B0001306A	SCREW, J, S M3X6	
1-37	*3B0000808A	SCREW, BPP M3X8	
1-38	*3B0005408A	SCREW, BPB M4X8	

EXPLODED VIEW-2



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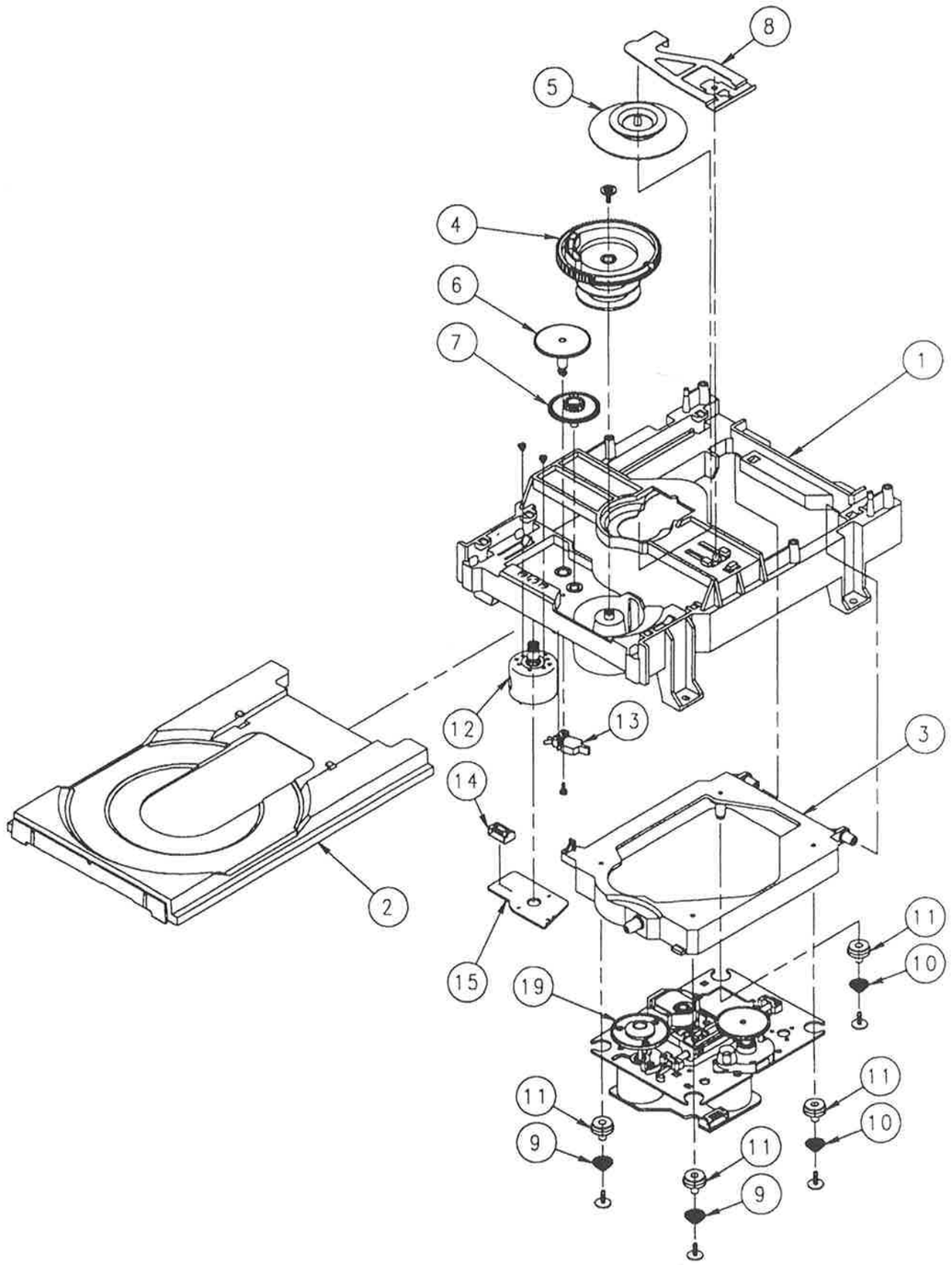
EXPLODED VIEW-2

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2- 1	*3E9505800B	PCB ASSY, CONT-CD	
2- 2	*3M0025400A	BRACKET, PCB(B)	
2- 3	*3E9505900B	PCB ASSY, FRONT	
2- 4	3M0024800A	KNOB, PHONE VOLUME	
2- 5	*3M0010600A	TORSION SPRING, EJECT	
2- 6	*3M0030000A	HOOK, EJECT B	
2- 7	*3M0030100A	BRACKET, EJECT B	
2- 8	3M0025100A	BUTTON, EJECT	
2- 9	*3M0010200A	MECH ASSY, R/P CMAL2Z063A — M02285000A.	
2-10	*3E9506300B	PCB ASSY, KEY A	
2-11	3M0024400A	BUTTON, DIA 6.5	
2-12	3M0024210A	BUTTON, MAIN	
2-13	3M0024500A	BUTTON, SKIP	
2-14	*3M0024110A	FRONT PANEL	
2-15	*5720254101	NAME PLATE, TASCAM	
2-16	*3M0024910A	WINDOW, FL DISPLAY	
2-17	3M0024610A	KNOB, REC VOLUME	
2-18	3M0026410A	LID, DOOR	
2-19	3M0026500A	WINDOW, LID	
2-20	*3M0010500B	TORSION SPRING, CASE II	
2-21	3M0011100A	CASE, LEAD	
2-22	*9260205700	PLATE, REFLECT	
2-23	*9260077301	DAMPER(SD-385)	
2-24	*3E9510600A	PCB ASSY, PHONE	
2-25	*3M0025600A	BRACKET, PHONE	
2-31	*3B0000808A	SCREW, BPP M3X8	
2-32	*3M0010700A	SCREW, 4X1.3S	
2-33	*3B0000004A	SCREW, BPS M2.6X4	
2-34	*3B0001306A	SCREW, J, S M3X6	
2-35	*3B0002308A	SCREW, J P M3X8(BLK)	
2-36	*3M001340	NUT, VR M9	
2-37	*3M001350	PLAIN WASHER, VR M9.1	

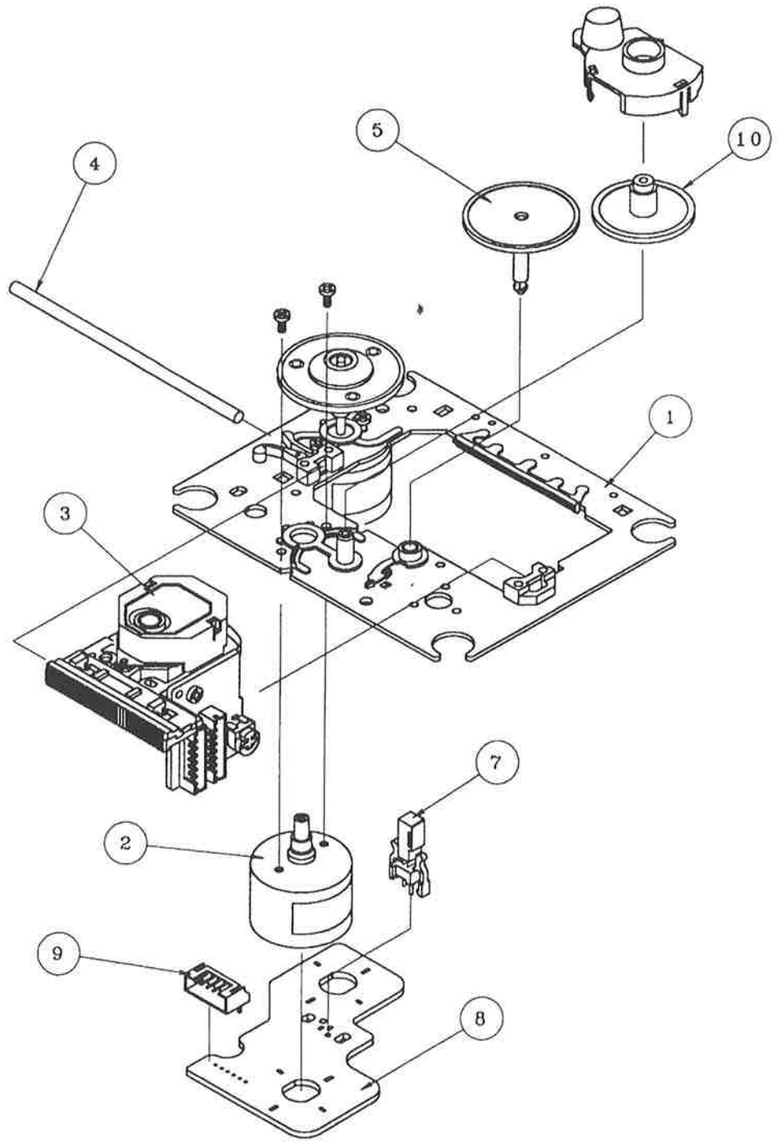
EXPLODED VIEW-3



EXPLODED VIEW-3 (KSL-212BCM)

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
3- 1	*9A06688400	LU CHASSIS	
3- 2	9A06688500	TRAY	
3- 3	*9A06688600	SUB CHASSIS AS ABS	
3- 4	9A06688700	CAM GEAR	
3- 5	9A06688800	CHUCKING PULLY	
3- 6	9A06688900	GEAR(X)	
3- 7	9A06689000	GEAR(Y)	
3- 8	*9A06689100	CHUCKING SPRING	
3- 9	*9A06689200	COIL SPRING(FRONT)	
3-10	*9A06689300	COIL SPRING(BACK)	
3-11	9A06689400	INSULATOR	
3-12	9A06689500	LOADING MOTOR ASSY	
3-13	9A06689600	LEAF SWITCH	
3-14	*9A06689700	CONNECTOR PIN(SUPER SMALL SIZE)	
3-15	*9A06689900	LOADING MOTOR PWB	
3-19	----------	DRIVE UNIT, KSM-212BCM	

EXPLODED VIEW-4

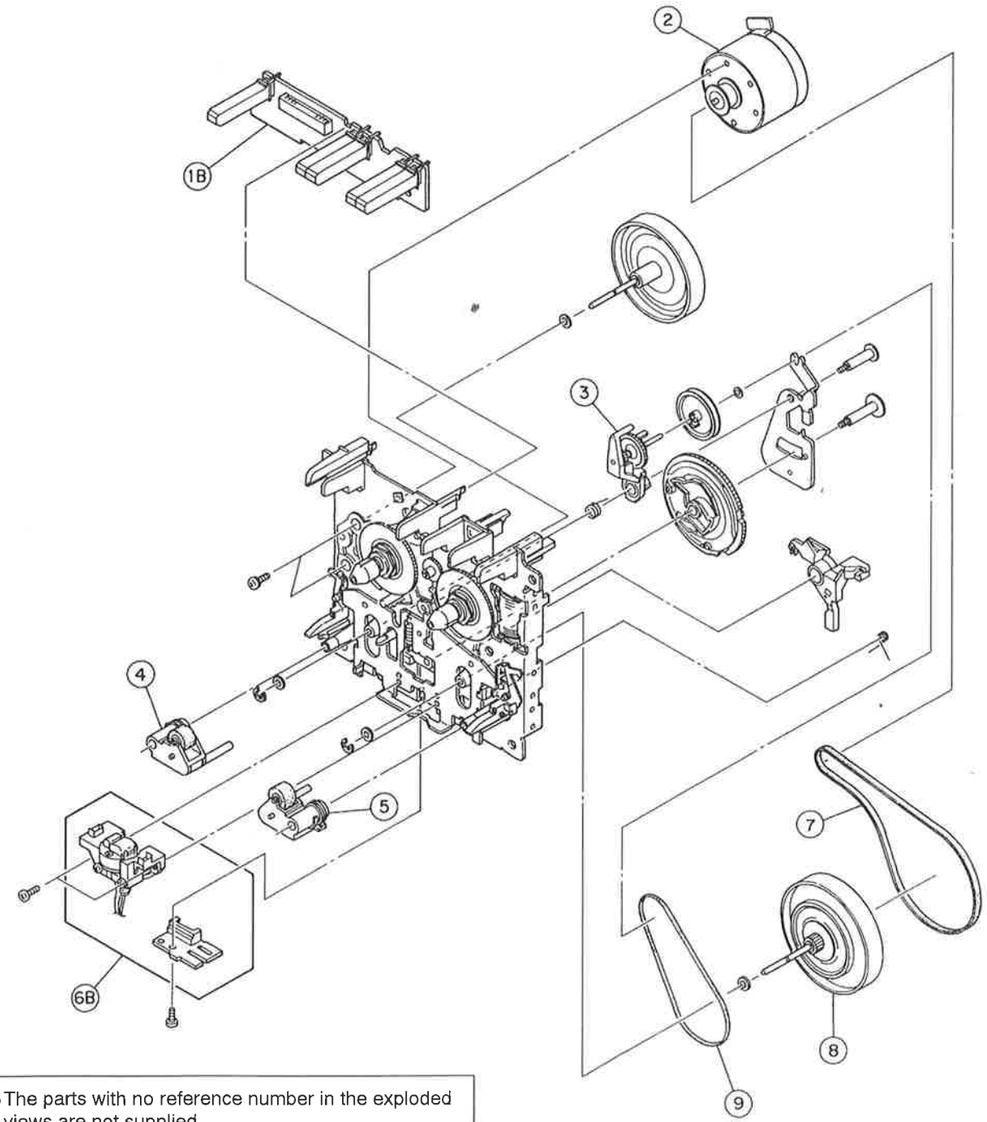


EXPLODED VIEW-4 (KSM-212BCM)

REF. NO.	PARTS NO.	DESCRIPTION
4- 1	*9A06690300	MOTOR CHASSIS ASSY, MBRP
4- 2	9A06690400	MOTOR GEAR ASSY
4- 3	9A06690500	OPTICAL DEVICE, KSS-212B(RP)
4- 4	*9A06690600	SLED SHAFT(S)
4- 5	9A06690700	GEAR(A)(S)
4- 7	9A06690900	LEAF SWITCH
4- 8	*9A06691000	MOTOR(6P)(S)PCB
4- 9	*9A06691100	CONNECTOR PIN 6P
4-10	9A06691200	GEAR(B)(RP)

CD-A500

EXPLODED VIEW-5



● The parts with no reference number in the exploded views are not supplied.
● 分解図に部番のない部品は供給できません。

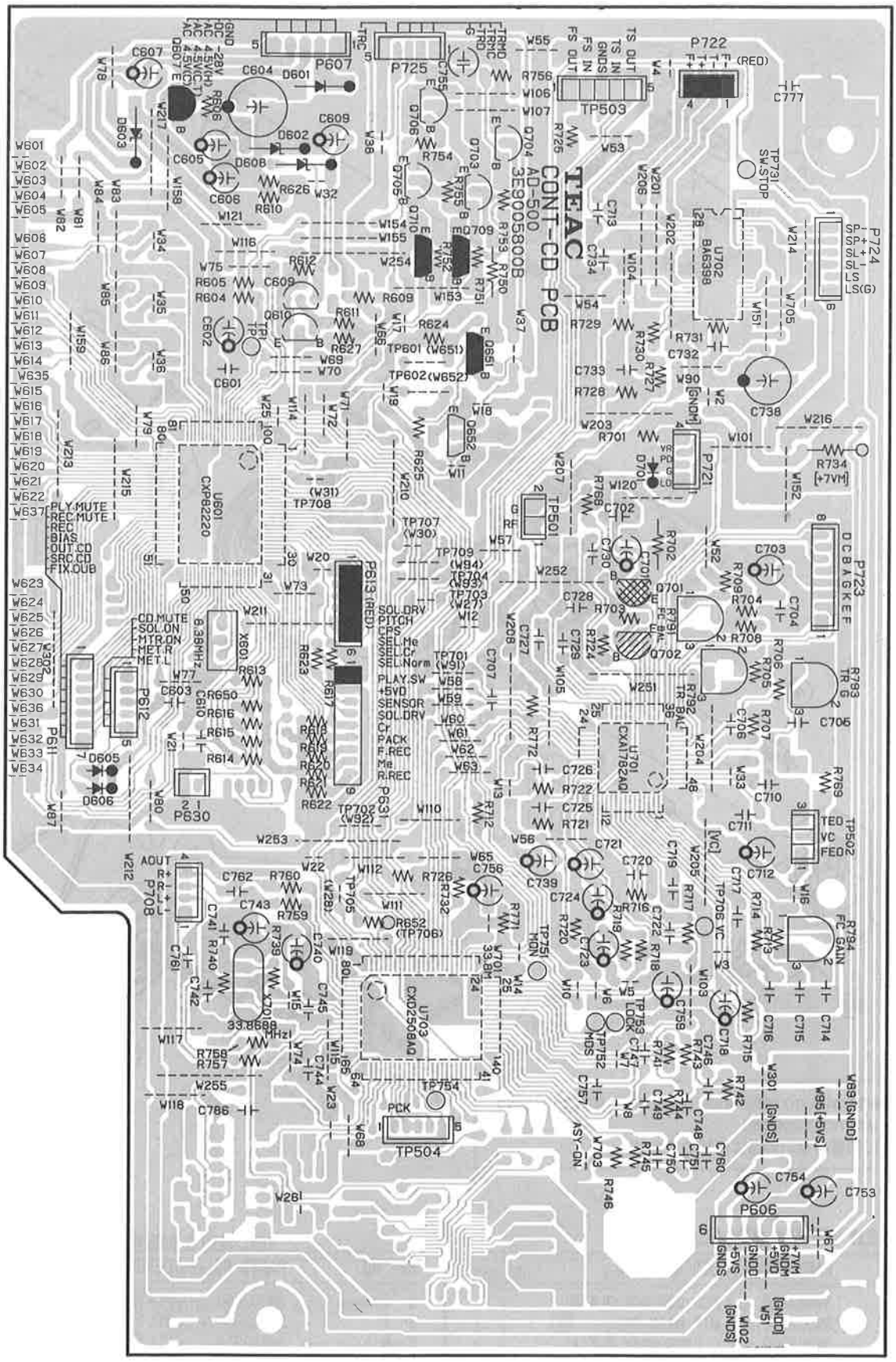
EXPLODED VIEW-5 (CMAL2Z063A)

REF. NO.	PARTS NO.	DESCRIPTION
5- 1B	3M002890	PCB CONTROL BLK(B)
5- 2	3M002870	MTR MAIN BLK (S)
5- 3	3M002900	CLUTCH ASSY BLK(A)
5- 4	3M002930	ROLLER PINCH BLK L
5- 5	3M002920	ROLLER PINCH BLK R
5- 6B	3M002860	PLATE HD BLK B
5- 7	3M002950	BELT MAIN
5- 8	3M002910	CLUTCH ASSY BLK(B)
5- 9	3M002940	F/R BELT

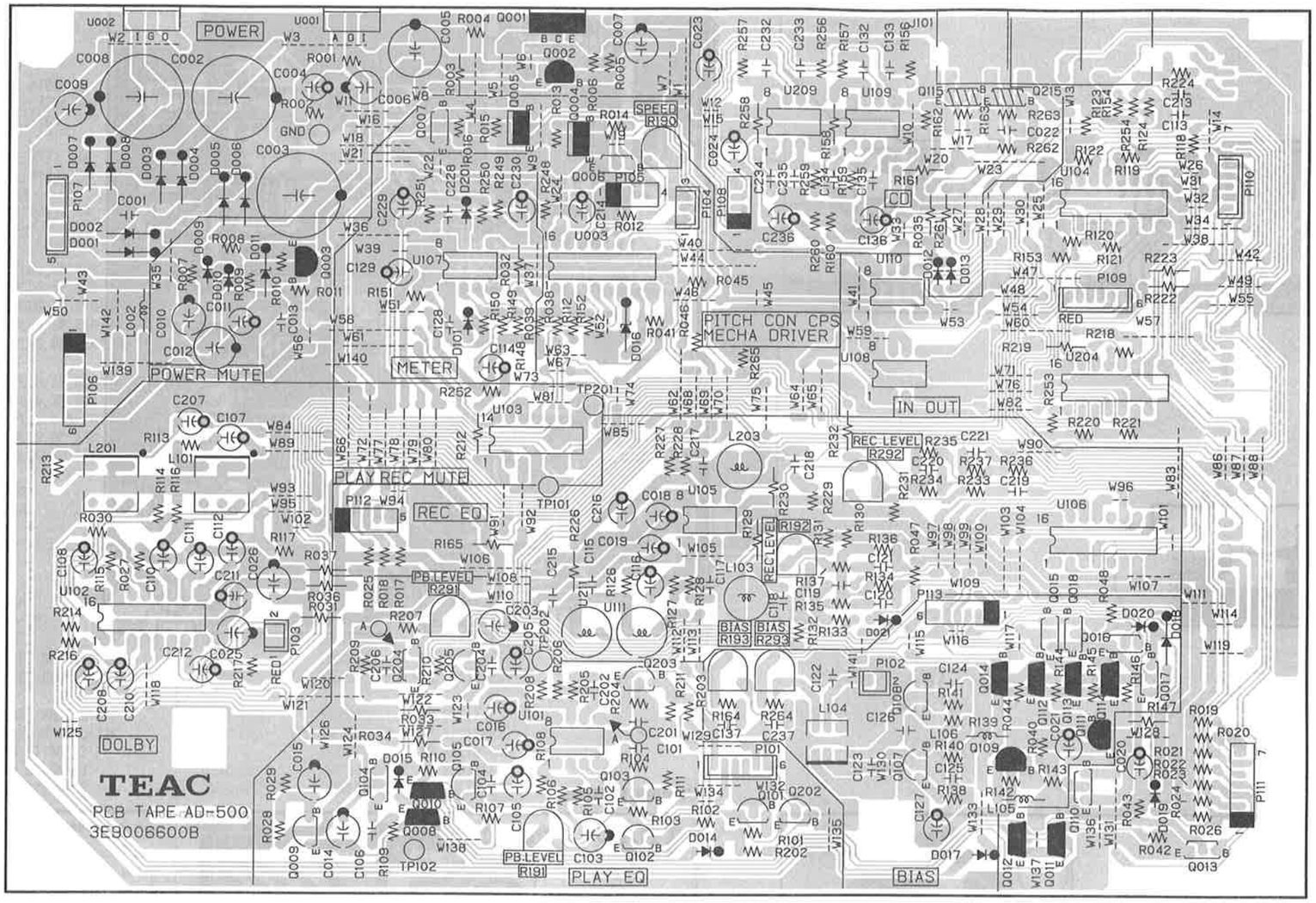
6 PC BOARDS AND PARTS LIST

基板図とパーツリスト

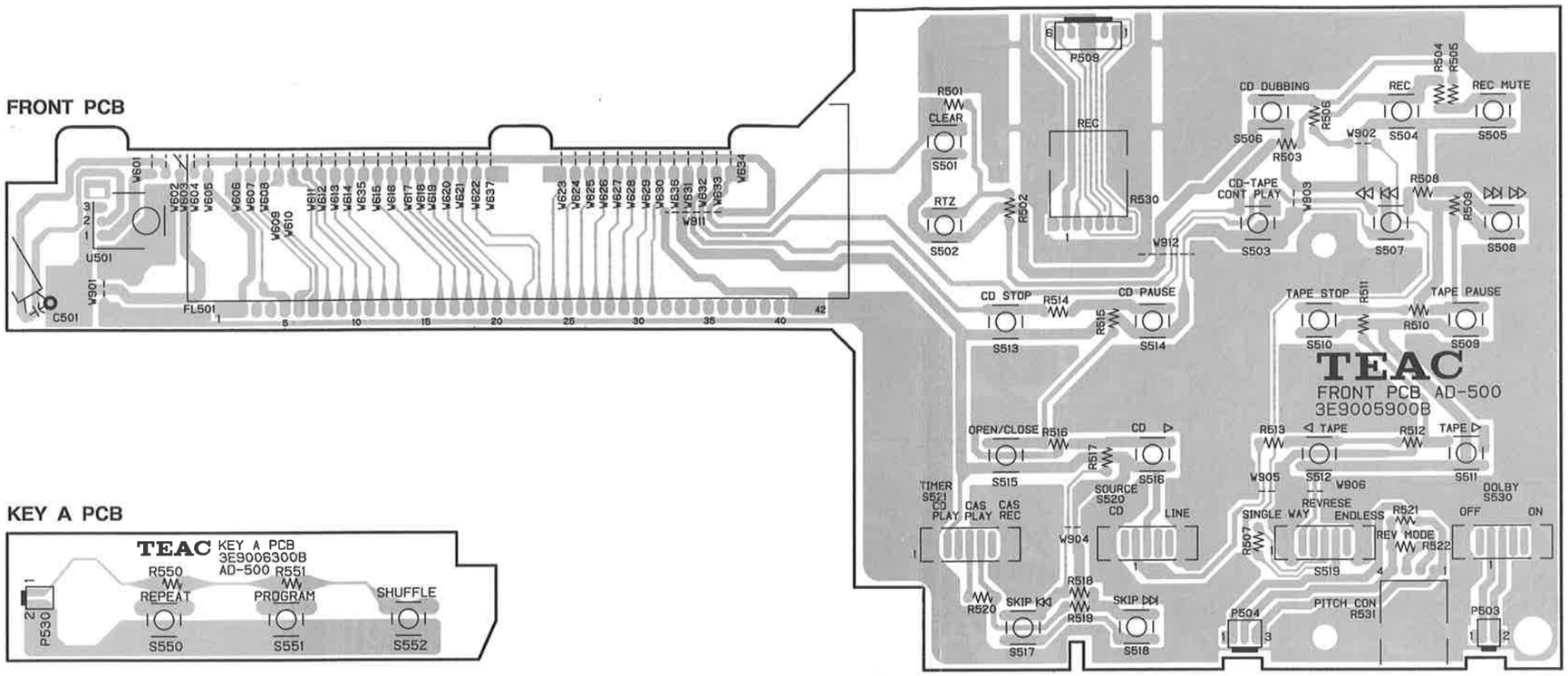
CONT-CD PCB



TAPE PCB

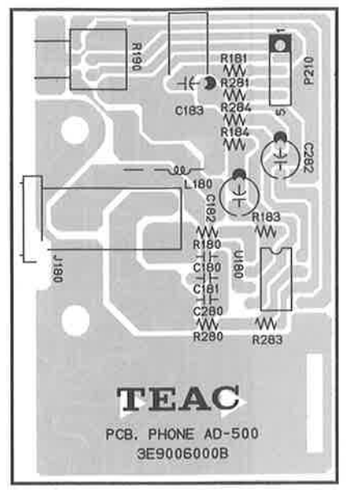

POWER
POWER MUTE
METER
PLAY REC MUTE
REC EQ
PB LEVEL
R291
PB LEVEL
R191
PLAY EQ
PITCH CON CPS
MECHA DRIVER
SPEED
R190
CD
IN OUT
REC LEVEL
R292
REC LEVEL
R192
BIAS
R193
BIAS
R293
BIAS
DOLBY
TEAC
PCB TAPE AD-500
3E9006600B

FRONT PCB

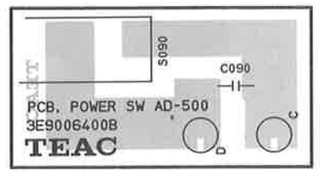


KEY A PCB

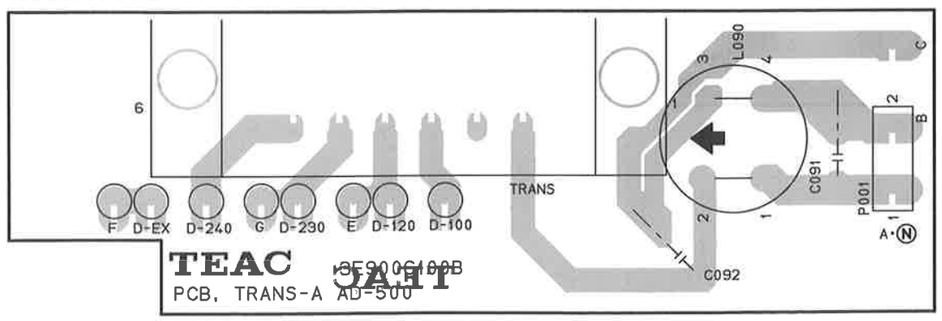
PHONE PCB



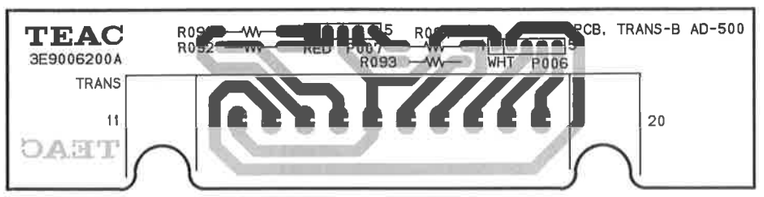
POWER SW PCB



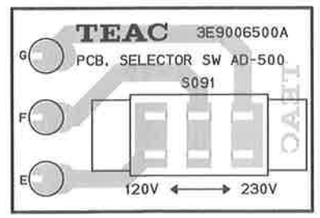
TRANS-A PCB



TRANS-B PCB



SELECTOR SW PCB



CONT-CD PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9505800B	PCB ASSY, CONT-CD
	*3E9005800B	PCB, CONT-CD
C604	⚠ 3C000940	CE, 35V 470UF M
C607	⚠ 3C000560	CE, 35V 47UF M
D601	⚠ 3S000031	DIODE, 1N4003-TR
D602	⚠ 3S000691	ZENER DIODE, MTZJ 24B
D603	⚠ 3S000671	ZENER DIODE, MTZJ4. 3B
D605, 606	3S000241	DIODE, 1SS133
D608	3S000671	ZENER DIODE, MTZJ4. 3B
D701	3S000241	DIODE, 1SS133
P606	3E001180	CONNECTOR PLUG, 6P B6B-EH-A
P607	3E001170	CONNECTOR PLUG, 5P B5B-EH-A
P611	3E000710	CONNECTOR PLUG, 7P B7B-PH-K
P612, 725	3E000690	CONNECTOR PLUG, 5P B5B-PH-K
P613	3E003850	CONNECTOR PLUG, B6B-PH(RED)
P630	3E000660	CONNECTOR PLUG, 2P B2B-PH-K
P708, 721	3E000680	CONNECTOR PLUG, 4P B4B-PH-K
P722	3E003830	CONNECTOR PLUG, B4B-PH(RED)
P723	3E000720	CONNECTOR PLUG, 8P B8B-PH-K
P724	3E000700	CONNECTOR PLUG, 6P B6B-PH-K
Q607	⚠ 3S000020	TR, 2SA1015GR
Q609, 610	3S000000	TR, 2SC1815GR
Q651	3S000301	TR, DTA124ES
Q652	3S000291	TR, DTC124ES
Q701	3S000701	TR, 2SA854R
Q702	3S000000	TR, 2SC1815GR
Q703-706	3S000721	TR, 2SC1741R-SPT
Q709, 710	3S000301	TR, DTA124ES
R791	3R004600	VR, SEMI-FIXED RH0615-22K
R792	3R004630	VR, SEMI-FIXED RH0615-220K
R793	3R004610	VR, SEMI-FIXED RH0615-47K
R794	3R004600	VR, SEMI-FIXED RH0615-22K
TP501	3E003780	HEADER, 2PIN 87156-02
TP502	3E003790	HEADER, 3PIN 87156-03
TP503	3E003800	HEADER, 5PIN 87156-05
U601	3S0007500A	IC, CXP82220-137Q
U701	3S000620	IC, CXA1782BQ
U702	3S000600	IC, BA6398FP
U703	3S000630	IC, CXD2508AQ
X601	3E003680	RESONATOR, CST8. 38MTW
X701	3E004340	X'TAL, 33. 8688MHZ

TAPE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506600B	PCB ASSY, TAPE
	*3E9006600B	PCB, TAPE
C002, 003	⚠ 3C001200	CE, 16V 3300UF M
C008	⚠ 3C001200	CE, 16V 3300UF M
C010	⚠ 3C000330	CE, 16V 10UF M
D001-008	⚠ 3S000031	DIODE, 1N4003-TR
D009, 010	⚠ 3S000241	DIODE, 1SS133
D011	3S000671	ZENER DIODE, MTZJ4. 3B
D012-015	3S000241	DIODE, 1SS133
D016	3S001521	ZENER DIODE, MTZ3. 9B

TAPE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
D017	3S000241	DIODE, 1SS133
D018	3S000031	DIODE, 1N4003-TR
D019-021	3S000241	DIODE, 1SS133
D101, 201	3S000241	DIODE, 1SS133
J101	3E003750	JACK, RCA RJ-1074-09-0353A
J190	3R004720	VR, SEMI-FIXED TB067A-6. 8K
J191, 291	3R004530	VR, SEMI-FIXED RH0615-100
J192, 292	3R004590	VR, SEMI-FIXED RH0615-10K
J193, 293	3R004610	VR, SEMI-FIXED RH0615-47K
L002	3E003711	COIL, 10UH EC24-100K-T2
L101, 201	3E003730	FILTER, MPX LPF FXD2
L103, 203	3E003690	COIL, #7159 8. 2MH
L104	3E0042800A	TRANS, BIAS OSC 85KHZ
L105, 106	3E003711	COIL, 10UH EC24-100K-T2
P101	3E000700	CONNECTOR PLUG, 6P B6B-PH-K
P102	3E000660	CONNECTOR PLUG, 2P B2B-PH-K
P103	3E003810	CONNECTOR PLUG, B2B-PH(RED)
P104	3E000670	CONNECTOR PLUG, 3P B3B-PH-K
P107	3E001170	CONNECTOR PLUG, 5P B5B-EH-A
P109	3E003850	CONNECTOR PLUG, B6B-PH(RED)
P110	3E000690	CONNECTOR PLUG, 5P B5B-PH-K
Q001	⚠ 3S000820	TR, 2SB1655E
Q002, 003	⚠ 3S000020	TR, 2SA1015GR
Q004, 005	3S000320	TR, 2SA1237TV2Q
Q006, 007	3S000291	TR, DTC124ES
Q008, 010	3S000301	TR, DTA124ES
Q009	3S000000	TR, 2SC1815GR
Q011, 012	3S000301	TR, DTA124ES
Q013	3S000291	TR, DTC124ES
Q014	3S000301	TR, DTA124ES
Q015, 016	3S000291	TR, DTC124ES
Q017, 018	3S000291	TR, DTC124ES
Q101	3S000000	TR, 2SC1815GR
Q102, 202	3S000000	TR, 2SC1815GR
Q103, 203	3S000000	TR, 2SC1815GR
Q104, 204	3S000741	TR, DTC143TS
Q105, 205	3S000000	TR, 2SC1815GR
Q107, 108	3S000000	TR, 2SC1815GR
Q109, 111	3S000020	TR, 2SA1015GR
Q110	3S000291	TR, DTC124ES
Q112-114	3S000301	TR, DTA124ES
Q115, 215	3S000731	TR, 2SD2144S
U001	⚠ 3S000250	IC, NJM317F
U002	⚠ 3S000650	IC, NJM7805FA
U003	3S000810	IC, TC4053BP
U101	3S000280	IC, UPC4570C
U102	3S000040	IC, CXA1101P
U103	3S000430	IC, BU4066BC
U104, 204	3S000810	IC, TC4053BP
U105	3S000260	IC, NJM4558D
U106	3S000470	IC, TC4052BP
U107, 108	3S000260	IC, NJM4558D
U109, 209	3S000280	IC, UPC4570C
U110	3S000260	IC, NJM4558D
U111, 211	3E003740	FILTER, BIAS TRAP 85KHZ

FRONT PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9505900B	PCB ASSY, FRONT
	*3E9005900B	PCB, FRONT
	*3M0024700A	HOLDER, FL DISPLAY
FL501	3E0036400A	FL DISPLAY, VFD BJ484GK
R530	3R003910	VAR REG, 10KAX2 RK14K12D
R531	3R003980	VAR REG, 5KB RK11K113 CC
S501-518	3E002070	SW, TACT SKQSAB HMR-187
S519, 521	3E002210	SW, SLIDE 2X3 AAA-00231402
S520, 530	3E003760	SW, SLIDE 2X2 AAA-00221269
U501	3S000760	REMOCON. SENSOR, SBX1976-52

KEY A PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506300B	PCB ASSY, KEY A
	*3E9006300B	PCB, KEY A
S550-552	3E002070	SW, TACT SKQSAB HMR-187

PHONE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9510600A	PCB ASSY, PHONE
	*3E9006000B	PCB, PHONE
J180	3E002160	JACK, JY-6313-01-030
L180	3E003721	COIL, 100UH EC24-101K-T2
R190	3R003920	VAR REG, 50KAX2 RK09K12A
U180	3S000840	IC, BA4560

POWER SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506400B	PCB ASSY, POWER SW
	*3E9006400B	PCB, POWER SW
C090	⚠ 3E004300	S. KILLER, CS12-F2GA472MYAS
S090	⚠ 3E003770	SW, POWER SDDLD1-A2-F-1

TRANS-A PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506100B	PCB ASSY, TRANS-A [J]
	*3E9506110B	PCB ASSY, TRANS-A [US, C, GE]
	*3E9506120B	PCB ASSY, TRANS-A [K, E, UK]
	*3E9506130B	PCB ASSY, TRANS-A [A]
	*3E9006100B	PCB, TRANS-A
C091, 092	⚠ 3C007820	CQ, 0.022UF ECQU2A223MN T1
L090	⚠ 3E004290	COIL, 1MH/1.5A FKOB160MH16
P001	3E002170	TERMINAL LAPPING, 2P[K, E, UK, A]

TRANS-B PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506200A	PCB ASSY, TRANS-B
	*3E9006200A	PCB, TRANS-B

SELECTOR SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506500A	PCB ASSY, SELECT SW[US, C, GE]
	*3E9006500A	PCB, SELECTOR SW
S091	⚠ 3E002110	SW, SLIDE SL13B-022

CD-A500

7 INCLUDED ACCESSORIES
付属品

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	*3D0017000A	OWNER'S MANUAL, JAPANESE [J]	
	*3D0017100A	OWNER'S MANUAL, E/F/G/I/S [EXCEPT J]	English, French, German, Italian, Spanish
	*3E0063500A	REMOTE CONTROL UNIT, RC-A500	
	*3E003660	BATTERY, UM-3(2P X ED)	
	*3M0028300A	RACK MOUNT SCREW KIT ASSY	

CD-A500

TASCAM
TEAC Professional Division

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	仙台営業所	☎ (022) 227-1501(代)	〒980－0811 仙台市青葉区1番町2－5－5	中央ビル
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	大宮サービス	☎ (048) 642-4551	〒331－0052 大宮市三橋2－8－46	
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TASCAM
TEAC Professional Division

CD-A500/CD-A700

SERVICE MANUAL

REVISION

追補版

The circuit diagrams and PC board in this sheet are provided for model CD-A500 serial No.0720001 and higher, and model CD-A700 serial No.0520001 and higher.

ここに記載されている回路図と基板図は、CD-A500のシリアルNo:0720001以降及び、CD-A700のシリアルNo:0520001以降に適用されます。

Revision information

変更内容

1.In order to change the CD section into a digital-servo circuit, CONT-CD PCB was changed.completely.
CD部をデジタルサーボ回路に変更の為、CONT-CD PCBを全面的に変更しました。

2.The above involves the following modifications:
上記変更に伴い下記が変更されています。

<CD-A500>

PCBA,GATHER JPN [J]	3E95105-00F	→	3E95105-00G	
PCBA,GATHER EXTC [US.C.GE]	3E95105-10F	→	3E95105-10G	
PCBA,GATHER EUR [K.E.UK]	3E95105-20F	→	3E95105-20G	
PCBA,GATHER AUS [A]	3E95105-30F	→	3E95105-30G	
PCBA,GATHER JOINT AD-500	3E95396-00A	→	deleted（廃止）	

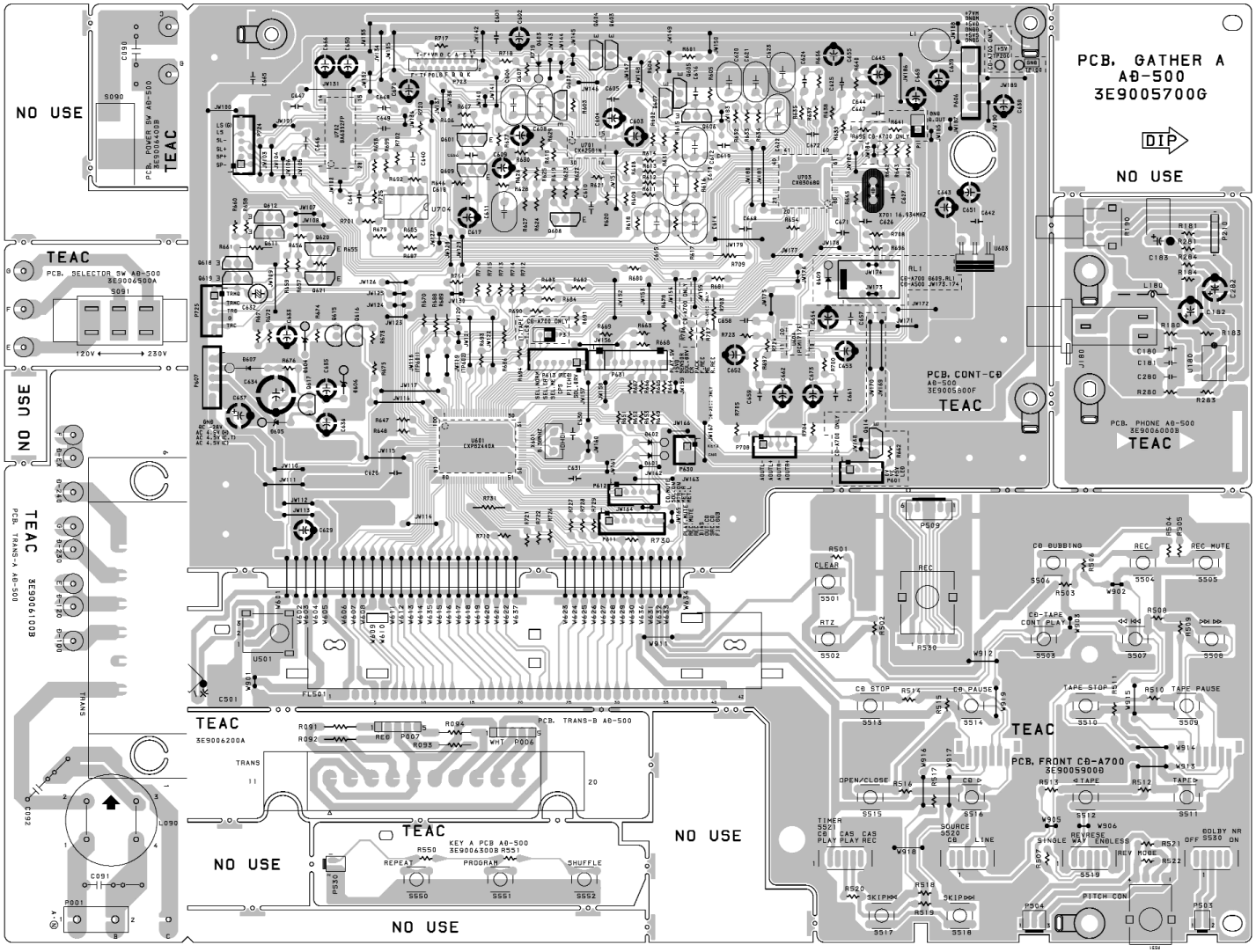
<CD-A700>

PCBA,GATHER A JPN [J]	3E95206-00D	→	3E95206-00F	
PCBA,GATHER A EXTC [US.C.GE]	3E95206-10F	→	3E95206-10G	
PCBA,GATHER A EUR [K.E.UK]	3E95206-20F	→	3E95206-20G	
PCBA,GATHER A AUS [A]	3E95206-30F	→	3E95206-30G	
PCBA,GATHER (B) CD-A700	3E95207-00B	→	3E95207-00C	(PCB JOINT → All No Mount) (PCB BAL → P8/P9 No Mount)

Effective : July, 2004

PC BOARDS AND PARTS LIST
基板図とパーツリスト

GATHER A PCB (PCB CONT-CD , PCB FRONT , PCB PHONE , PCB POWER , PCB SELECTOR SW , PCB TRANS-A , PCB TRANS-B , KEY PCB)



GATHER PCB ASSY CD-A500

REF.NO.		PARTS NO.	DESCRIPTION
		* 3E95105-00G	PCBA,GATHER JPN [J]
		* 3E95105-10G	PCBA,GATHER EXTC [US.C.GE]
		* 3E95105-20G	PCBA,GATHER EUR [K.E.UK]
		* 3E95105-30G	PCBA,GATHER AUS [A]
			PCB ASSY,CONT-CD AD-500
C634	⚠	3C000950	CE, 50V 470UF M
D601		3S000241	DI, 1SS133 T-77
D602		3S000241	DI, 1SS133 T-77
D603		3S000241	DI, 1SS133 T-77
D604		3S000671	ZDI, MTZJ4.3B T-77
D605		3S000671	ZDI, MTZJ4.3B T-77
D606	⚠	3S000691	ZDI, MTZJ24B T-77
D607	⚠	3S000031	DI, 1N4003 TAPING W= 52MM
L1		3E029480	COIL,RCH-875 100UH
P606		3E001180	CONNECT PLUG 6P B6B-EH-A
P607		3E001170	CONNECT PLUG 5P B5B-EH-A
P611		3E010390	CONNECT PLUG B 7B-PH-K-S
P612		3E010370	CONNECT PLUG B 5B-PH-K-S
P613		3E003850	CONNECTOR,PLUG B6B-PH RED
P630		3E010340	CONNCT PLUG B 2B-PH-K-S
P631		3E00403-00A	CABLE ASSY, AD500 TDM-631
P708		3E010360	CONNCT PLUG B 4B-PH-K-S
P723		3E014210	CONNECT,16FMN-BTRK
P724		3E010380	CONNECT PLUG B 6B-PH-K-S
P725		3E010370	CONNECT PLUG B 5B-PH-K-S
Q601		3S000701	TR, 2SA854R TP
Q603		3S002450	TR,DTC114ESTP
Q604		3S002450	TR,DTC114ESTP
Q608		3S002450	TR,DTC114ESTP
Q609		3S000002	TR, 2SC1815GR TP
Q611		3S000301	TR, DTA124ES TP
Q612		3S000301	TR, DTA124ES TP
Q615		3S000002	TR, 2SC1815GR TP
Q616		3S000002	TR, 2SC1815GR TP
Q617	⚠	3S000022	TR, 2SA1015GR TP
Q618		3S000721	TR, 2SC1741R-SPT TP
Q619		3S000721	TR, 2SC1741R-SPT TP
Q620		3S000721	TR, 2SC1741R-SPT TP
Q621		3S000721	TR, 2SC1741R-SPT TP
U601		3S00942-00A	IC,CXP82432A-188Q
U601		3D00621-00A	SOFTWARE 500/700 VER 1.00
U603		3S009390	IC,BA033ST
U604		3S009384	IC,PCM1717E
U701		3S003304	IC,CXA2581N-T4
U702		3S009434	IC,BA6392FP
U703		3S006404	IC,CXD3068Q
U704		3S005680	IC,NJM2904D
X601		3E003680	RESO,CE,CST8.38MTW 3P
X701		3E021130	XTAL 16.9344MHZ
		3E02152-00A	EARTH PLATE B GND-8

GATHER PCB ASSY CD-A500

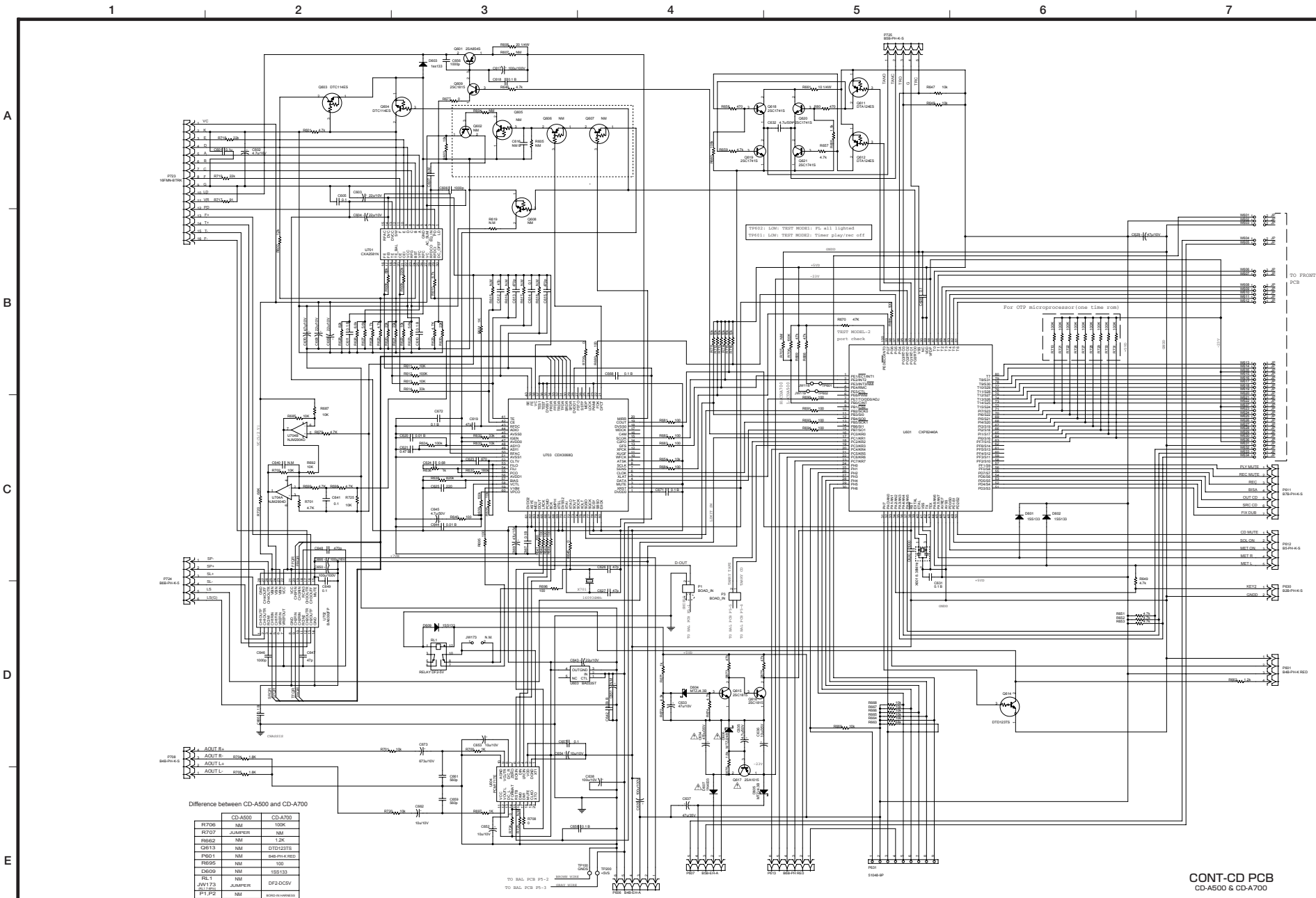
REF.NO.		PARTS NO.	DESCRIPTION
			PCB ASSY,FRONT AD-500
FL501		3E01062-10A	DISPLAY,FL SVAC09MM18
P503		3E00404-01A	CABLE ASSY, AD500 103-503
P504		3E00405-01A	CABLE ASSY, AD500 104-504
P509		3E00406-01A	CABLE ASSY, AD500 109-
509R530		3R004890	VAR RES,10KAX2 RK14K12D
R531		3R003980	VAR REG, 5KB RK11K113 CC
S501 S502		3E029700	SW,TACT SKHHAM2520
S503 S504		3E029700	SW,TACT SKHHAM2520
S505 S506		3E029700	SW,TACT SKHHAM2520
S507 S508		3E029700	SW,TACT SKHHAM2520
S509 S510		3E029700	SW,TACT SKHHAM2520
S511 S512		3E029700	SW,TACT SKHHAM2520
S513 S514		3E029700	SW,TACT SKHHAM2520
S515 S516		3E029700	SW,TACT SKHHAM2520
S517 S518		3E029700	SW,TACT SKHHAM2520
S519 S521		3E014570	SW,SLIDE TKR-0023/474
S520 S530		3E014560	SW,SLIDE TKR-0022/473
U501		3S000760	REMOCON.SENSOR,SBX1976-52
		3M00247-00A	HOLDER,FL(1) AD500
		3M00247-01A	HOLDER,FL(2) AD500
		3M00247-02A	HOLDER,FL(3) AD500
			PCB ASSY,PHONE CD-A500
J180		E0073670	JACK,JY-6313-01-030
L180		3E003721	COIL,100UH EC24-101K-T2
P210		3E00407-01A	CABLE ASSY, AD500 110-210
R190		3R003920	VAR REG, 50KAX2 RK09K12A
U180		3S000840	IC, BA4560
			PCB ASSY,TRANS-A JP AD500
			PCB ASSY,TRANS-A EX AD500
			PCB ASSY,TRANS-A EU AD500
			PCB ASSY,TRANS-A AS AD500
P001		3E002170	PIN,TERMINAL LAPPING 2P
C091 C092	⚠	3C007820	CQ,0.022UF ECQU2A223MN T1
L090	⚠	3E004290	COIL,1MH/1.5A FKOB160MH16
			PCB ASSY,TRANS-B AD500
P006		3E00878-01A	CABLE ASSY AD-500 607-006
P007		3E00879-01A	CABLE ASSY AD-500 107-007
			PCB ASSY,KEY A AD-500
P530		3E00408-01A	CABLE ASSY, AD500 630-530
S550 S551		3E029700	SW,TACT SKHHAM2520
S552		3E029700	SW,TACT SKHHAM2520
			PCB ASSY,POWER SW AD-500
C090	⚠	3E004300	S.KILLER,CS12-F2GA472MYAS
S090	⚠	3E003770	SW, POWER SDDLD1-A2-F-1
			PCB ASSY,SELECT SW AD-500
S091	⚠	3E002110	SW,SLIDE SL13B-022

GATHER A PCB ASSY CD-A700

REF.NO.		PARTS NO.	DESCRIPTION
		* 3E95206-00E	PCBA,GATHER A JPN [J]
		* 3E95206-10E	PCBA,GATHER A EXTC [US.C.GE]
		* 3E95206-20E	PCBA,GATHER A EUR [K.E.UK]
		* 3E95206-30E	PCBA,GATHER A AUS [A]
			PCBA,CONT-CD CD-A700
C634	⚠	3C000950	CE, 50V 470UF M
D601		3S000241	DI, 1SS133 T-77
D602		3S000241	DI, 1SS133 T-77
D603		3S000241	DI, 1SS133 T-77
D604		3S000671	ZDI, MTZJ4.3B T-77
D605		3S000671	ZDI, MTZJ4.3B T-77
D606	⚠	3S000691	ZDI, MTZJ24B T-77
D607	⚠	3S000031	DI, 1N4003 TAPING W= 52MM
D609		3S000241	DI, 1SS133 T-77
L1		3E029480	COIL,RCH-875 100UH
P1,P2		3E014860	CONNECT,PLG B5B-PH-K YEL
P601		3E003830	CONNECTOR,PLUG B4B-PH RED
P606		3E001180	CONNECT PLUG 6P B6B-EH-A
P607		3E001170	CONNECT PLUG 5P B5B-EH-A
P611		3E010390	CONNECT PLUG B 7B-PH-K-S
P612		3E010370	CONNECT PLUG B 5B-PH-K-S
P613		3E003850	CONNECTOR,PLUG B6B-PH RED
P630		3E010340	CONNCT PLUG B 2B-PH-K-S
P631		3E00403-00A	CABLE ASSY, AD500 TDM-631
P708		3E010360	CONNCT PLUG B 4B-PH-K-S
P723		3E014210	CONNECT,16FMN-BTRK
P724		3E010380	CONNECT PLUG B 6B-PH-K-S
P725		3E010370	CONNECT PLUG B 5B-PH-K-S
Q601		3S000701	TR, 2SA854R TP
Q603		3S002450	TR,DTC114ESTP
Q604		3S002450	TR,DTC114ESTP
Q608		3S002450	TR,DTC114ESTP
Q609		3S000002	TR, 2SC1815GR TP
Q611		3S000301	TR, DTA124ES TP
Q612		3S000301	TR, DTA124ES TP
Q614		3S002672	TR,DTD123TS TP
Q615		3S000002	TR, 2SC1815GR TP
Q616		3S000002	TR, 2SC1815GR TP
Q617	⚠	3S000022	TR, 2SA1015GR TP
Q618		3S000721	TR, 2SC1741R-SPT TP
Q619		3S000721	TR, 2SC1741R-SPT TP
Q620		3S000721	TR, 2SC1741R-SPT TP
Q621		3S000721	TR, 2SC1741R-SPT TP
RL1		3E013010	RELAY 5V DF2-DC5V
U601		3S00942-00A	IC,CXP82432A-188Q
U601		3D00621-00A	SOFTWARE 500/700 VER 1.00
U603		3S009390	IC,BA033ST
U604		3S009384	IC,PCM1717E
U701		3S003304	IC,CXA2581N-T4
U702		3S009434	IC,BA6392FP
U703		3S006404	IC,CXD3068Q
U704		3S005680	IC,NJM2904D
X601		3E003680	RESO,CE,CST8.38MTW 3P

GATHER A PCB ASSY CD-A700

REF.NO.	PARTS NO.	DESCRIPTION
X701	3E021130	XTAL 16.9344MHZ
	3E01124-01B	UCOM WIRE ASSY CD-A700
	3E01125-01B	FS WIRE ASSY CD-A700
	3E02152-00A	EARTH PLATE B GND-8
		PCBA FRONT CD-A700
FL501	3E01062-10A	DISPLAY,FL SVAC09MM18
P503	3E00404-01A	CABLE ASSY, AD500 103-503
P504	3E00405-01A	CABLE ASSY, AD500 104-504
P506	3E007880	CONNECTOR ,B 6B-PH-SM3-TB
P507	3E011440	CONNECTOR,B 6B-PH-SM3(YL)
P509	3E00406-01A	CABLE ASSY, AD500 109-509
R530	3R004890	VAR RES,10KAX2 RK14K12D
R531	3R003980	VAR REG, 5KB RK11K113 CC
S501 S502	3E029700	SW,TACT SKHHAM2520
S503 S504	3E029700	SW,TACT SKHHAM2520
S505 S506	3E029700	SW,TACT SKHHAM2520
S507 S508	3E029700	SW,TACT SKHHAM2520
S509 S510	3E029700	SW,TACT SKHHAM2520
S511 S512	3E029700	SW,TACT SKHHAM2520
S513 S514	3E029700	SW,TACT SKHHAM2520
S515 S516	3E029700	SW,TACT SKHHAM2520
S517 S518	3E029700	SW,TACT SKHHAM2520
S519 S521	3E014570	SW,SLIDE TKR-0023/474
S520 S530	3E014560	SW,SLIDE TKR-0022/473
U501	3S000760	REMOCON.SENSOR,SBX1976-52
	3M00247-00A	HOLDER,FL(1) AD500
	3M00247-01A	HOLDER,FL(2) AD500
	3M00247-02A	HOLDER,FL(3) AD500
		PCB ASSY,PHONE CD-A500
J180	E0073670	JACK,JY-6313-01-030
P210	3E00407-01A	CABLE ASSY, AD500 110-210
R190	3R003920	VAR REG, 50KAX2 RK09K12A
U180	3S000840	IC, BA4560
		PCB ASSY,TRANS-A JP AD500
		PCB ASSY,TRANS-A EX AD500
		PCB ASSY,TRANS-A EU AD500
		PCB ASSY,TRANS-A AS AD500
C091 C092	3C007820	CQ,0.022UF ECQU2A223MN T1
L090	3E004290	COIL,1MH/1.5A FKOB160MH16
P001	3E002170	PIN,TERMINAL LAPPING 2P
		PCB ASSY,TRANS-B AD500
P006	3E00878-01A	CABLE ASSY AD-500 607-006
P007	3E00879-01A	CABLE ASSY AD-500 107-007
		PCB ASSY,POWER SW AD-500
S090	3E003770	SW, POWER SDDLD1-A2-F-1
C090	3E004300	S.KILLER,CS12-F2GA472MYAS
		PCB ASSY,SELECT SW AD-500
S091	3E002110	SW,SLIDE SL13B-022



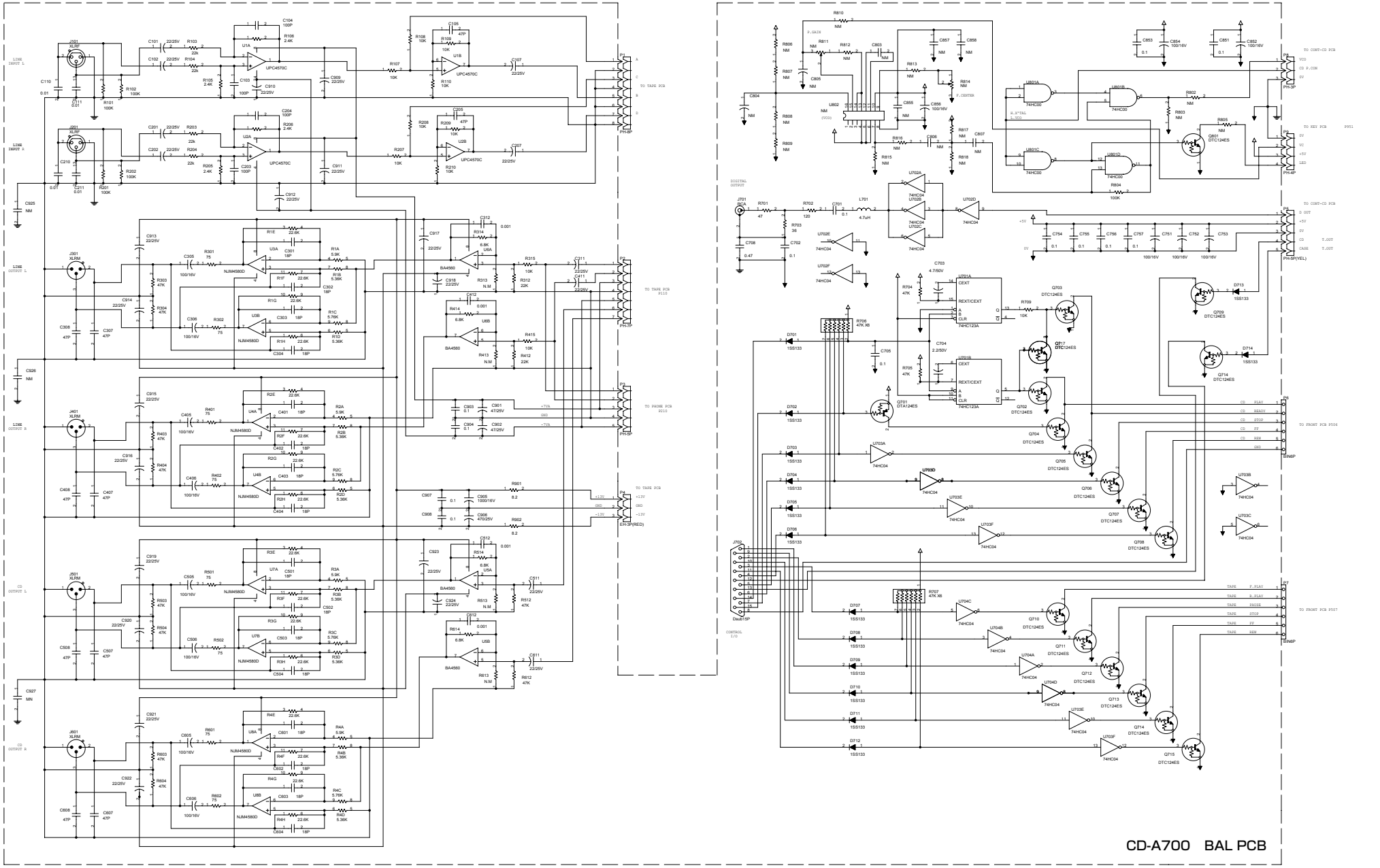
Difference between CD-A500 and CD-A700

	CD-A500	CD-A700
R706	NM	100K
R707	JUMPER	NM
R662	NM	1.2K
Q613	NM	DTD123TS
P601	NM	B4B-PH-K RED
R695	NM	100
D609	NM	1SS133
RL1 JW173	NM JUMPER	DF2-DC5V
P1,P2	NM	
TP100	NM	
TP200	NM	

CONT-CD PCB
CD-A500 & CD-A700

Compact Disc Player/Reverse Cassette Deck **CD-A500 & CD-A700**

2nd Issue; July 2004


1
2
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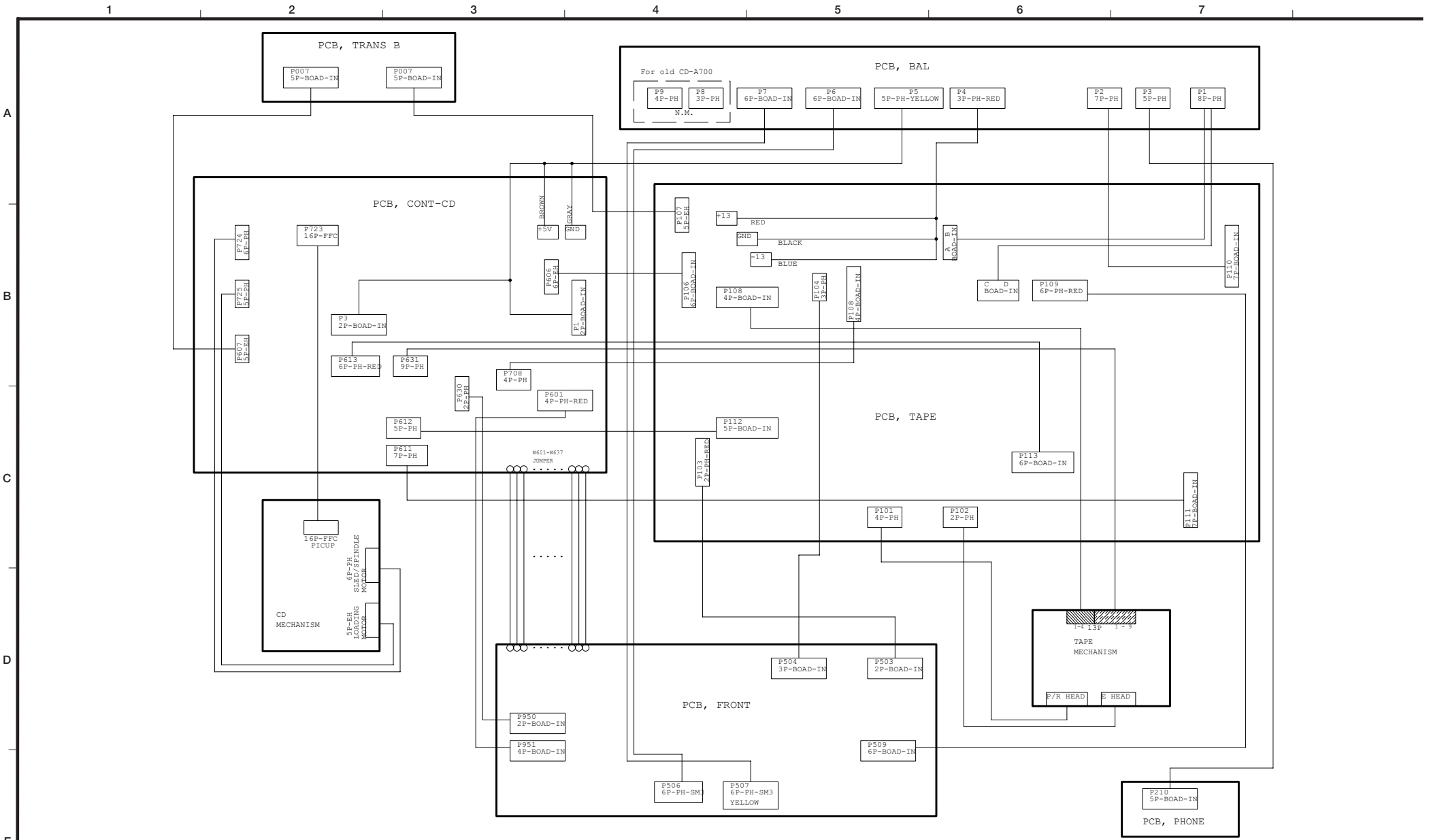
A
B
C
D
E
CD-A700 BAL PCB

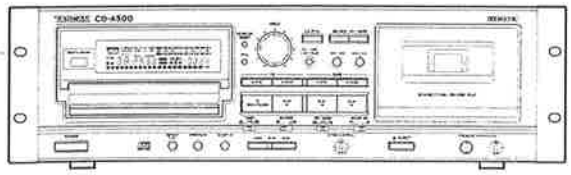


CD-A700 WIRING DIAGRAM

Compact Disc Player/Reverse Cassette Deck **CD-A500 & CD-A700**

2nd Issue; July 2004

TASCAM
TEAC Professional Division



SERVICE MANUAL

CD-A500

COMPACT disc DIGITAL AUDIO

Compact Disc Player/Reverse Cassette Deck

CONTENTS

NOTES

- PC boards shown are viewed from parts side.
- Parts marked with ＊ require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
  [K]:KOREA [E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

目　次

注　意

- プリント基板図は部品面が示されています。
- ＊印の部品は納期が若干かかります。
  あらかじめご了承ください。
- 分解図に部番のない部品及び品番のない部品は供給しません。
- 標準の抵抗、コンデンサーは省略してあります。
  回路図を参照してください。
- ⚠印は安全重要部品です。
  交換する時は必ずティアック指定の部品を使用してください。
- 仕向先
  [J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
  [K]:KOREA [E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

Effective : July, 1998

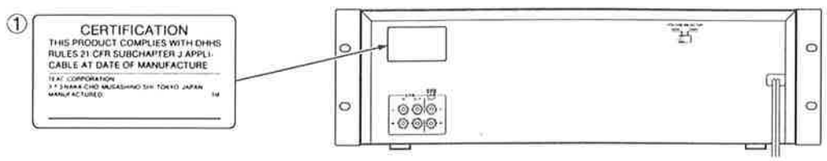
D00439100A

1 SAFETY INFORMATION

SAFETY INFORMATION

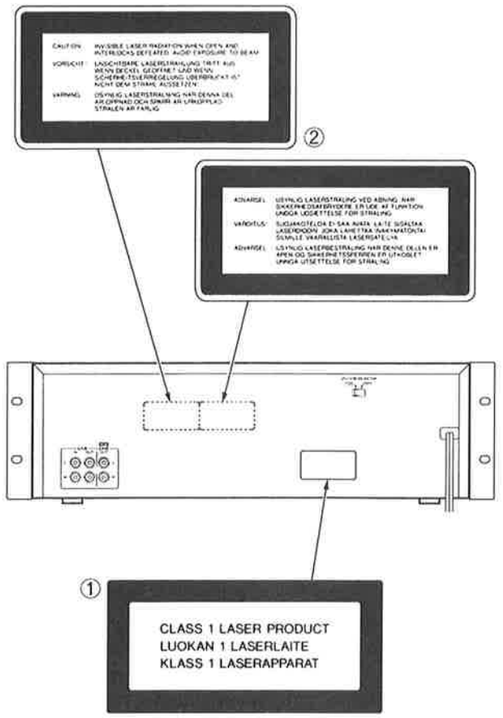
This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as class 1 laser product. There is not hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings.
The label required in this regulation is shown ①.

CAUTION
USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.



Optical pickup: Type : KSS-212B
Manufacturer : SONY Corporation
Laser output : Less than 0.4 mW on the objective lens
Wavelength : 760 – 800 nm

• CAUTION • ACHTUNG • OBSERVERA • ADVARSEL



① THIS LABEL IS ATTACHED TO THE PLACE AS ILLUSTRATED TO INFORM THAT THE APPARATUS CONTAINS A LASER COMPONENT.

① DIESE AUFKLEBEMARKE IST AN DEM IN DER ABBILDUNG GEZEIGTEN ORT ANGEBRACHT UM DARAUF HINZUWEISEN, DASS IM INNERN DES GERÄTS EINE LASER-KOMPONENTE BEFINDET.

① PÅSKRIFTEN SITTER PÅ APPARATEN SOM VISAS SOM UPPMANING OM ATT APPARATEN OMFATTAR EN INBYGGD LASERKOMPONENT.

① DETTE MÆRKAT ER ANBRAGT SOM VIST I ILLUSTRATIONEN FOR AT ADVARE BRUGEREN OM AT APPARATET INDEHOLDER EN LASERKOMPONENT.

② DETTE MÆRKAT ER SOM VIST PÅ ILLUSTRATIONEN ANBRAGT PÅ INDERSIDEN AF TOPDÆKSLET FOR AT ADVARE BRUGEREN OM AT YDERLIGERE FREMTRÆNGEN VIL VÆRE FORBUNDET MED FARE FOR AT UDSÆTTE SIG FOR LASERSTRÅLING.

ADVARSEL- BETJENING AF ANDRE KONTROLLER OG REGULATORER ELLER BENYTTELSE AF ANDRE FREMGANGSMÅDER END BESKREVET HERI ER FORBUNDET MED FARE FOR USDÆTTELSE FOR LASERSTRÅLING.

VARNIG: APPARATEN INNEHÅLLER LASER KOMPONENT MED STRÅLNING ÖVERSTIGANDE KLASS 1

"ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING NAR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING."

"VAROITUS! SUOJAKOTELOA EI SAA AVATA. LAITE SISÄLTÄÄ LASERDIODIN. JOKA LÄHETTÄÄ (NÄKYMÄTÖNTÄ) SILMILLE VAARALLISTA LASERSÄTEILYÄ".

ADVARSEL: USYNLIG LASERBESTRÅLING NÅR DENNE DELEN ER ÅPEN OG SIKKERHETSSPERREN ER UTKOBLET UNNGÅ UTSETTELSE FOR STRÅLING.

CD-A500

2 SPECIFICATIONS
仕 様

CD SECTION

AUDIO
Number of Channels: 2
Frequency Response: 10 – 20,000Hz ± 0.5dB
Signal to Noise Ratio: 90dB
Dynamic Range: 90dB
Total Harmonic Distortion: 0.02% (1kHz)
Wow and Flutter: Unmeasurable (Quartz accuracy)
Channel Separation: 75dB
Output: 2Vrms
Digital Filter: 4-times oversampling
Analog Filter: 3rd order

PICK UP
Type: Optical 3-Beam laser pickup
Objective Lens: 2-dimensional parallel drive
Laser Type: GaAlAs type semiconductor laser
Wave Length: 780nm

SIGNAL FORMAT
Sampling Frequency: 44.1kHz
Quantization Bit: 16-bit linear/channel
Channel Bit Rate: 4.3218Mb/sec.
Channel Modulation Code: EFM
Error Correction: CIRC

CASSETTE SECTION

Track System: 4-track 2-channel stereo
Heads: Record/playback × 1 (Rotary reverse), Erase × 1
Type of Tape: Cassette tape C-60, C-90
Tape Speed: 4.76cm/sec.
Motor: DC servo motor × 1
Wow and Flutter: 0.08% (W. RMS)
Frequency response (Overall):
50-15,000Hz ± 3dB, Metal tape
50-15,000Hz ± 3dB, CrO_2 tape
50-14,000Hz ± 3dB, Normal tape
Signal - to - Noise Ratio (Overall):
59dB (DOLBY NR off, 3% THD Level, Weighted),
69dB (DOLBY NR on, over 5kHz)
Fast Winding Time: Approx. 120 sec. with C-60
Input: Line ; 87mV (Input impedance of 50k ohms or more)
Outputs: Line ; 0.46V
(Load impedance of 50k ohms or more)
Headphones ; 1mW/8ohms

CD部

〈オーディオ〉

オーディオチャンネル数	2チャンネル
周波数特性	10～20,000Hz ± 0.5dB
SN比	90dB
ダイナミックレンジ	90dB
高調波歪率	0.02%(1kHz)
ワウ・フラッター	測定限界値以下(水晶発振精度)
チャンネルセパレーション	75dB
出力	2Vrms
デジタルフィルター	4倍オーバーサンプリング デジタルフィルター
アナログフィルター	3次アナログフィルター

〈ピックアップ〉

方式	光学式3ビーム
対物レンズ駆動方式	2次元平行駆動
光源	半導体レーザー
波長	780nm

〈信号フォーマット〉

標本化周波数	44.1kHz
量子化ビット数	16ビット・リニア/チャンネル
伝送レート	4.3218Mb/sec
変調方式	EFM
エラー訂正方式	CIRC

カセット部

トラック形式	4トラック2チャンネル ステレオ
ヘッド構成	録音/再生ヘッド×1(回転リバース式), 消去ヘッド×1
使用テープ	C-60, C-90タイプ カセットテープ
テープ速度	4.76cm/sec
モーター	DCサーボモーター×1
ワウ・フラッター	0.08%(W. RMS)
周波数特性(総合)	メタル：50～15,000Hz ± 3dB クローム：50～15,000Hz ± 3dB ノーマル：50～14,000Hz ± 3dB
SN比(総合)	59dB(ドルビーOUT, 3%THDレベルWTD) 69dB(ドルビーIN, 5kHz以上)
早巻時間	約120秒(C-60テープ)
入力	ライン：87mV (入力インピーダンス50kΩ以上)
出力	ライン：0.46V (負荷インピーダンス50kΩ以上) ヘッドホン：1mW/8Ω

GENERAL

Power Requirements:
120/230V AC, 50-60Hz
(U.S.A./Canada/General Export model)
230V AC, 50Hz (Europe/U.K. model)
240V AC, 50Hz (Australia model)
Power Consumption: 14W
Dimensions (W × H × D):
483 × 133 × 270mm
(19″ × 5-1/4″ × 10-5/8″)
Weight: 6.4kg (14.1 lbs.)
Standard Accessories:
Remote control unit (RC-A500) × 1,
Battery (SUM-3, "AA", "R6" type) × 2,
Rack mounting screw kit

●Improvements may result in specification or feature changing without notice.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

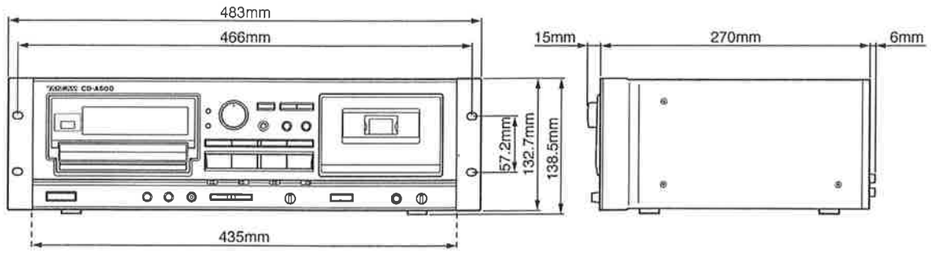
"DOLBY" and the double-D symbol ⊡⊡ are trademarks of Dolby Laboratories Licensing Corporation.

一般

電源	100V AC, 50-60Hz
消費電力	14W
外形寸法	483 × 133 × 270mm (W × H × D)
質量	6.4kg
付属品	●リモコン(RC-A500) × 1
	●乾電池(単3) × 2
	●ラックマウントビスキット

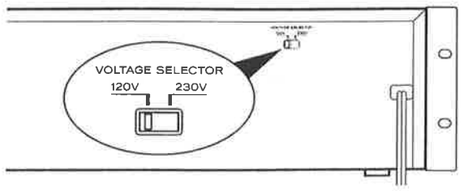
●仕様および外観は、改善のため予告なく変更することがあります。

ドルビーノイズリダクションはドルビーラボラトリーズライセンシングコーポレーションからの実施権に基づき製造されています。
ドルビー, DOLBY及びダブルD記号 ⊡⊡ はドルビーラボラトリーズライセンシングコーポレーションの登録商標です。



Voltage Conversion

Be sure to remove the power cord from the AC outlet before repositioning the voltage converter switch.
1. Locate the voltage selector on the rear panel.
2. Using a flat-bladed screwdriver, set to the appropriate 230 V or 120 V position according to your area.



3 ADJUSTMENT AND CHECKS (CD SECTION)
調整と確認（CD部）

1. Handling the pickup assembly

●Before servicing the pickup assembly be sure to prevent electrostatic-inducer destruction by grounding not only test equipment in use but also yourself.
＊Electrostatic charge drastically shortens the operating life of the laser diode or possibly results in its destruction.
●Hold the slide base when handling the pick-up. (Fig. 3-1)
●LD terminals are factory-strapped before shipment to protect LD from electrostatic discharges during transportation. (Fig. 3-2) After connector insertion, unstrap the LD terminal with a soldering iron.
The temperature of the soldering iron tip must be 320℃ or below (30W) and the unstrapping should be performed quickly.
●Don't disassemble the pickup ass'y.
●Don't apply shock to the pickup ass'y.
●Don't place the assembly in a place subject to excessive dust, heat or moisture.
●The LD chip is manufactured from GaAs and GaAlAs, which contains toxic As (Arsenic). Parts removed in servicing should be disposed of with due care.

1. ピックアップASSYの取扱

●ピックアップASSYを取り扱う場合は、測定器などに確実なアースを取ると共に、人体アースを行ない、静電破壊を十分防止してください。
＊レーザーダイオードは、静電気が加わると寿命が著しく低下したり、または破損しますので十分注意してください。
●ピックアップASSYの取り扱いは、スライドベースを持って行なってください。(Fig. 3-1)
●LDの端子は、出荷時に輸送による静電破壊防止のためショートされています。(Fig. 3-2) ショート部の解放はコネクターを差し込んだ後、半田ゴテで行なってください。
半田ゴテは、コテ先温度が320℃以下(30W)のものを使用し、すみやかに行ってください。
●ピックアップASSY本体の調整および分解などはしないでください。
●ピックアップASSYに落下・衝撃は加えないでください。
●ゴミ・ホコリなどの発生する場所、高温・多湿の場所は避けてください。
●LDのチップはGaAs + GaAlAsで有毒なAsを含んでいます。サービスパーツの不良品は指定の方法で廃棄処理をしてください。

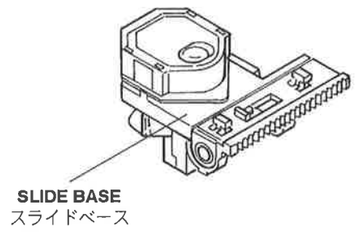


Fig. 3-1

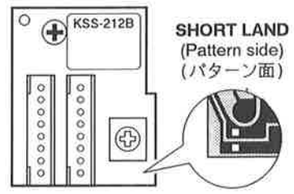


Fig. 3-2

2. Objective

●Never look directly into the LD or observe the laser beam through another lens or mirror.
●Don't touch the objective with fingers.
●If objective becomes dirty, playback will deteriorate. To clean the objective, moisten a good cleaning tissue, such as made by KODAK, in isopropyl alcohol and wipe the objective gently. Wipe off and excess fluid with a dry cleaning tissue.

2. 対物レンズについて

●動作中のLDを直視したり、あるいは他のレンズやミラーを介して光束を観察すると危険ですから絶対に行なわないでください。
●レンズには手を触れないでください。
●レンズに汚れが付くと再生能力が低下しますので、次のように清掃してください。
レンズクリーニングペーパー（KODAK社製など）に、イソプロピールアルコール（I.P.A）を浸して清掃をし、液が残らないように必ず拭きとってください。

3-1 SERVO ADJUSTMENT

TEST DISC : MCD-111

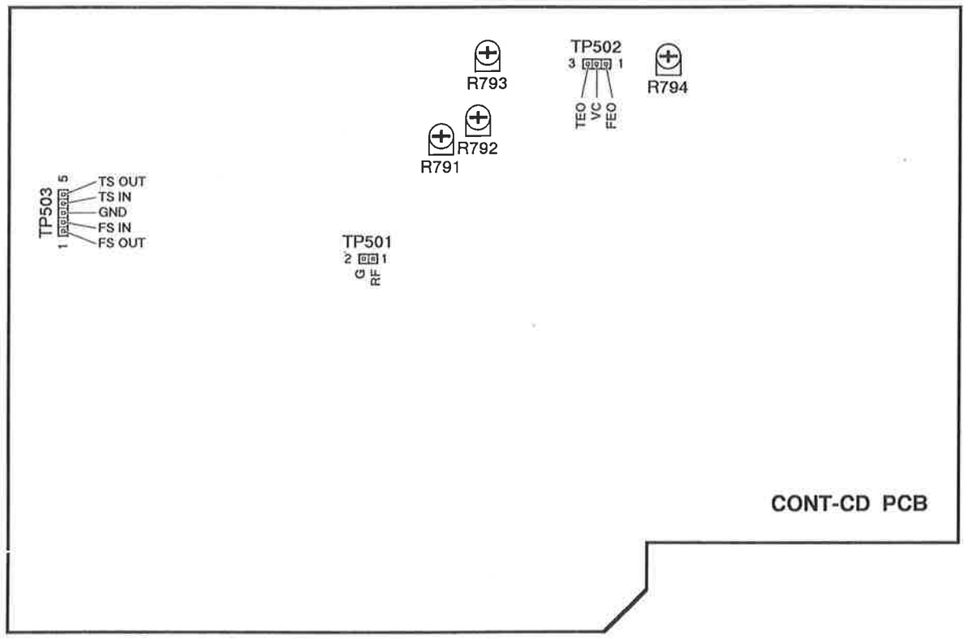


Fig. 3-3

3-1-1 Checking the pickup actuator operation

Before loading the disc, turn the power ON and check that the pickup actuator moves up and down three times. (If the pickup is not at inside on the disc, perform the above operation after moving the pickup to the inside.)

3-1-2 Tracking balance adjustment

1. Connect the oscilloscope between TP502 pin 3 (TEO) and TP503 pin 3 (GND), and press and hold the SKIP (⏮ or ⏭) button. (Oscilloscope : AC range)
2. Adjust R792 (TR BAL) so that the upper and lower amplitudes of the tracking error signal waveform become equal above and below 0V.

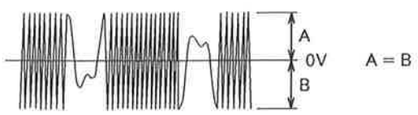


Fig. 3-4

3-1 サーボ調整

テストディスク : MCD-111

3-1-1 ピックアップアクチュエーター動作チェック

電源ON時ピックアップアクチュエーターが3回上下動すること。(ピックアップが最内周にないときは、最内周に移動後上記動作すること。) ディスクは装着しない。

3-1-2 トラッキングバランス調整

1. TP502の3番ピン(TEO)とTP503の3番ピン(GND)間にオシロスコープを接続し、SKIPボタン(⏮ または ⏭)を押し続ける。(オシロスコープ : ACレンジ)
2. トラッキングエラー信号の波形が0Vを中心に振れるようR792 (TR BAL)を調整する。

3-1-3 Focus balance adjustment

1. Connect the oscilloscope between TP501 pin 1 (RF) and pin 2 (G). (AC range)
2. In the play mode, and adjust R791 (FC BAL) so that the waveform on the oscilloscope becomes maximum.
3. After the adjustment, check the voltage between TP502 pin 1 (FEO) and pin 2 (VC) to make sure the difference in voltage between Play mode and Stop mode is 80mV or less.
   If reading values are out of spec, adjust R791 again.

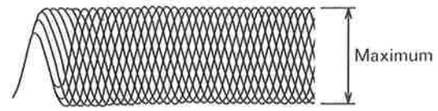


Fig. 3-5

3-1-4 Focus gain adjustment

1. Apply 1.3kHz/10Vp-p to TP503 pin 2 (FS IN) from an external OSC via 50kΩ resistor.
2. Play the track 4, and adjust R794 (FC GAIN) so that phase at TP503 pin 1 (FS OUT) is 90° with respect to that of the external OSC.

Fig. 3-6

3-1-5 Tracking gain adjustment

1. Apply 1.9kHz/10Vp-p to TP503 pin 4 (TS IN) from an external OSC via 50kΩ resistor.
2. Play the track 4, and adjust R793 (TR GAIN) so that phase at TP503 pin 5 (TS OUT) is 90° with respect to that of the external OSC.

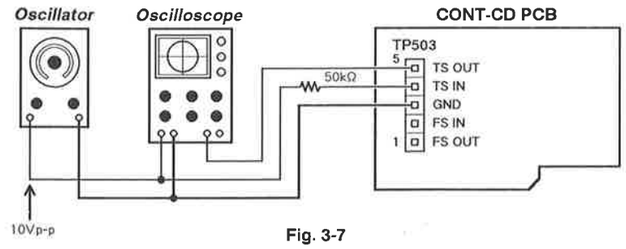


Fig. 3-7

3-1-3 フォーカスバランス調整

1. TP501の1番ピン(RF)と2番ピン(G)間にオシロスコープを接続する。(ACレンジ)
2. PLAY状態でオシロスコープの波形が最大になるようにR791 (FC BAL)を調整する。
3. 調整後、TP502の1番ピン(FEO)と2番ピン(VC)間の電圧を測定し、再生中と停止中の差が80mV以下であることを確認する。もし規格に入らない場合は再度R791を調整する。

3-1-4 フォーカスゲイン調整

1. 外部OSCより50kΩの抵抗を介して1.3kHz/10Vp-pの信号をTP503の2番ピン(FS IN)に入力する。
2. 4曲目を再生し、TP503の1番ピン(FS OUT)と外部OSCとの位相が90°になるようにR794 (FC GAIN)を調整する。

3-1-5 トラッキングゲイン調整

1. 外部OSCより50kΩの抵抗を介して1.9kHz/10Vp-pの信号をTP503の4番ピン(TS IN)に入力する。
2. 4曲目を再生し、TP503の5番ピン(TS OUT)と外部OSCとの位相が90°になるようにR793 (TR GAIN)を調整する。

3-2 AUDIO CHECK オーディオチェック

ITEM 項目	DISC: MCD-111 TRACK No.	DISC: MCD-111 FREQUENCY/LEVEL	SPECIFICATIONS 規格	REMARKS 備考
1. Output level 出力レベル	2	1kHz, 0dB	2 ± 0.5Vrms	CD LINE OUT
2. Channel level difference チャンネルレベル差	2	1kHz, 0dB	0.5dB or less	
3. Harmonic distortion 高調波歪率	2	1kHz, 0dB	0.03 % or less	400Hz HPF in 20kHz LPF in
4. Frequency response 周波数特性	3~6	20Hz~20kHz, 0dB	Within ± 1.0dB	reference level: 1kHz
5. S/N ratio S/N比	7	− ∞ dB	83dB or better	IHF-A
6. Channel separation チャンネルセパレーション	8, 10	1kHz, 0dB	70dB or better	IHF-A
7. Emphasis effect エンファシス効果	13	16kHz, − 20dB	− 20 ± 1.0dB	reference level: 1kHz

4 ADJUSTMENT AND CHECKS (CASSETTE SECTION)

調整と確認（カセット部）

4-1 MECHANICAL ADJUSTMENT

4-1-1 Wow and flutter (playback method)

1. Connect a wow-and-flutter meter to the deck as shown in Fig. 4-1.
2. Load and play a TEAC MTT-111N test tape.
3. In both FWD and REV play modes, check that the readings on the wow-and-flutter meter is within 0.19 % (WRMS).

4-1 機構部の調整

4-1-1 ワウ・フラッタ (再生法)

1. Fig. 4-1のようにワウ・フラッタメーターを接続する。
2. テストテープMTT-111Nを再生する。
3. FWD, REV両方向で、ワウ・フラッタ値が0.19 % (WRMS) 以下であることを確認する。

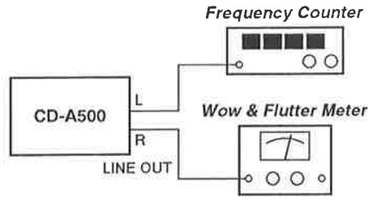


Fig. 4-1

4-1-2 Tape speed

1. Connect a frequency counter to the deck as shown in Fig. 4-1.
2. Load a TEAC MTT-111N test tape and play in FWD direction.
3. Adjust R190 (Fig. 4-2) on the TAPE PCB to get the adjustment value of 2,980 to 3,020Hz.
4. Play in REV direction and make sure the adjustment value is 2,925 to 3,075Hz.

Note:
Make sure the PITCH CONTROL knob is positioned at the center.

4-1-2 テープスピード

1. Fig. 4-1のように周波数カウンターを接続する。
2. テストテープMTT-111NをFWD方向で再生する。
3. 周波数値が3,000 ± 20Hzとなるように TAPE PCBのR190 (Fig. 4-2) を調整する。
4. REV方向を再生し、周波数値が3,000 ± 75Hzであることを確認する。

注意：
PITCH CONTROLつまみがセンターになっていること。

4-1-3 Pitch control variable range

1. In 4-1-2, when the PITCH CONTROL knob is rotated to the − side, make sure the frequency becomes 2,700 Hz or lower, and make sure it becomes 3,300Hz or higher when the knob is rotated to the + side.

4-1-3 ピッチコントロール可変幅

1. 4-1-2の状態で、PITCH CONTROLつまみを−方向に回したとき、周波数が2,700Hz以下、+方向に回したとき、3,300Hz以上になることを確認する。

4-2 ELECTRICAL ADJUSTMENT

4-2-1 Precautions

- Before performing adjustments and checks clean and demagnetize the entire tape path.
- In general, adjustments and checks are made in the order of Lch then Rch. Double REF. Nos. indicate Lch /Rch. (Example ; R11/R21)
- 0dB is referenced to 0.775V.
- The AC voltmeter used in the procedures must have an input impedance of 1MΩ or more.
- Unless specified otherwise, adjustments and checks are made in FWD direction.

4-2 アンプ部の調整

4-2-1 注意

- アンプ部の調整・確認の前に、テープ走行系の消磁と清掃を行なってください。
- 特に指定のない限り、調整はLch, Rchの順序で行なってください。尚、R11/R21のように記されている回路番号はLch/Rchを示します。
- 0dB=0.775V
- 測定に使用するレベル計の入力インピーダンスは1MΩ以上のものを使用してください。
- 特に指定のない場合、調整および確認はFWD方向で行なってください。

4-2-2 Adjustment locations 調整個所

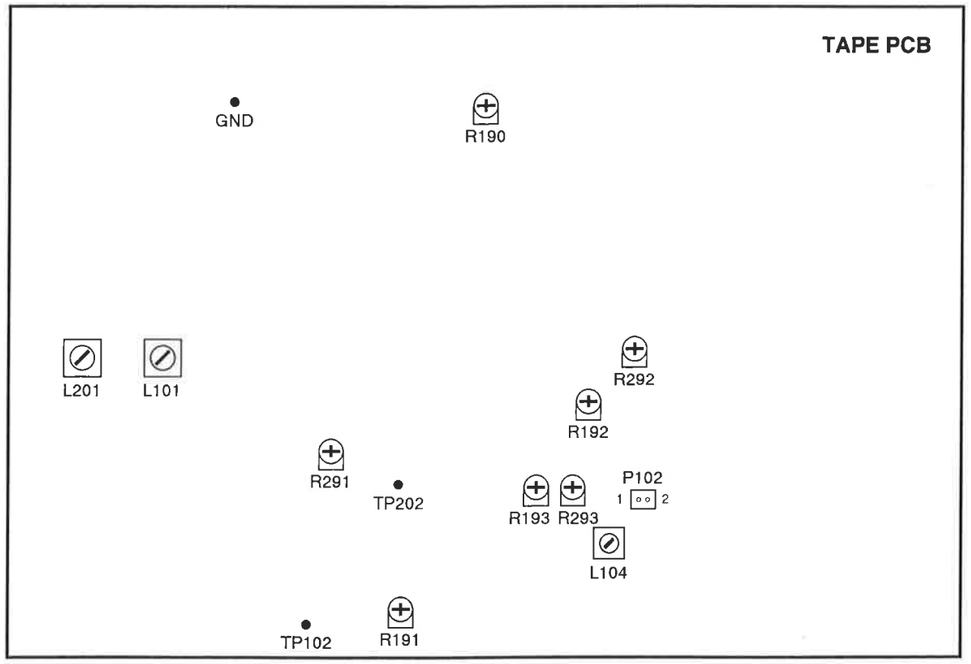
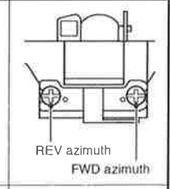
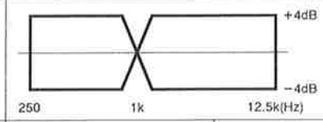


Fig. 4-2

4-2-3 Playback performance 再生系

Deck settings:
Mode : PLAY
DOLBY NR Switch : OFF
PITCH CONTROL : Center

TEAC test tapes:
MTT-150C : For Dolby level calibration
MTT-25702 : For playback frequency response check NORMAL tape
MTT-5513 : For S/N check NORMAL tape

ITEM 項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUSTMENTS 調整個所	MEASURING POINTS, RESULT 測定個所・調整値	REMARKS 備考
1. Head azimuth adjustment アジマス調整	Connection : Fig. 4-4 Adjust in FWD, REV respectively FWD、REVそれぞれ調整	MTT-25702 (12.5kHz)	Azimuth screws アジマス調整ねじ	LINE OUT : Maximum output level at L & R-ch Phase : within 45° Lch、Rchとも出力最大位 相 : 45° 以内	
2. DOLBY level ドルビーレベル	Connection : Fig. 4-5	MTT-150C	R191/R291	TP102/TP202 : −30dB (24.5mV)	
3. Playback output level 再生出力レベル	Connection : Fig. 4-3 FWD/REV PLAY	MTT-150C	Check	LINE OUT : −4.5 ± 1.5dB (388mV～549mV)	Ref. output level 基準出力レベル
4. Meter level メーターレベル		MTT-150C	Check	Level meter : 0dB position +0/−1dot	
5. PHONES output level PHONES 出力レベル	Connection : Fig. 4-6 LEVEL control : MAX	MTT-150C	Check	PHONES : −6 ± 3dB (275mV～549mV)	32Ω load 32Ω負荷
6. Playback frequency response 再生周波数特性	Connection : Fig. 4-3 FWD/REV PLAY	MTT-25702	Check		
7. Playback S/N ratio 再生S/N比	Connection : Fig. 4-3 FWD/REV PLAY	MTT-5513 Playback the leader tape portion リーダーテープ部を再生	Check	46dB min.	Ratio of ref. level to noise 基準出力レベルとノイズの比

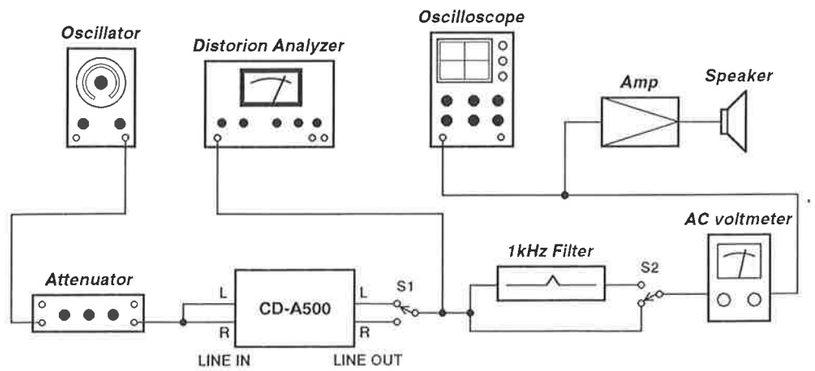


Fig. 4-3 Basic test setup

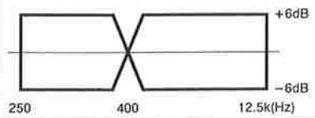
4-2-4 Recording performance 録音系

Deck settings:

Mode : REC／PLAY
DOLBY NR Switch : OFF
PITCH CONTROL : Center
SOURCE Switch : LINE

TEAC recording test tapes:

MTT-5513 : For NORMAL
MTT-5563 : For CrO_2
MTT-5572 : For METAL

ITEM 項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUSTMENTS 調整個所	MEASURING POINTS, RESULT 測定個所・調整値	REMARKS 備考
8. Min. LINE input level ライン最小入力レベル	Connection : Fig. 4-3 INPUT control : Max. Mode : REC-PAUSE	LINE IN : 400Hz/－19dB (87mV)	Check	LINE OUT : －4.5 ± 3dB (327mV～652mV)	
9. Specified LINE input level ライン規定入力レベル	Connection : Fig. 4-3 Mode : REC-PAUSE	LINE IN : 400Hz/－9dB (275mV)	INPUT control	LINE OUT : －4.5dB (462mV)	After adjusting, do not move (Specific position) 調整後は動かさないこと(規定位置)
10. Bias osc frequency バイアス発振周波数	Connection : Fig. 4-7 TAPE : MTT-5513 Mode : REC-PAUSE	LINE IN : No signal 無信号	L104	P102 Pin 1 : 85kHz	
11. Record bias 録音バイアス	Connection : Fig. 4-3 TAPE : MTT-5513	LINE IN : 250Hz/10kHz －34dB (15.5mV)	R193／R293	LINE OUT : Nearly equal level at both frequencies 両周波数の録再出力が同レベル（± 0.5dB）	
12. MPX filter MPXフィルター	Connection : Fig. 4-3 TAPE : MTT-5513	LINE IN : 19kHz/－12dB (195mV)	L101／L201	30dB min.	Ratio of ref. level to signal 基準出力レベルに対する比
13. Record level 録音レベル	Connection : Fig. 4-3 TAPE : MTT-5513	LINE IN : 400Hz/－9dB (275mV)	R192／R292	LINE OUT : －4.5 ± 1dB (411mV～518mV)	
	TAPE : MTT-5563 MTT-5572 FWD／REV direction		Check	－4.5 ± 1.5dB (388mV～549mV)	
14. Total harmonic distortion 総合歪率	Connection : Fig. 4-3 TAPE : MTT-5513 MTT-5563 MTT-5572	LINE IN : 400Hz/－12dB (195mV)	Check	NORMAL : 2.0 % or less CrO_2 : 2.5 % or less METAL : 3.0 % or less	
15. Overall frequency response 録再周波数特性	Connection : Fig. 4-3 TAPE : MTT-5513 MTT-5563 MTT-5572 FWD／REV direction	LINE IN : 250Hz～12.5kHz －34dB (15.5mV)	Check		
16. Overall S/N ratio 総合S／N比	Connection : Fig. 4-3 TAPE : MTT-5513 MTT-5563 MTT-5572 FWD／REV direction	LINE IN : No signal 無信号	Check	NORMAL : 45dB min. CrO_2 : 46dB min. METAL : 46dB min.	Ratio of ref. level to noise 基準出力レベルとノイズの比

CD-A500

ITEM 項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUSTMENTS 調整個所	MEASURING RESULT 調整値	REMARKS 備考
17. Erase efficiency 消去率	Connection : Fig. 4-3 TAPE : MTT-5572 1kHz B.P.F in FWD／REV direction	LINE IN : 1kHz/＋1dB (870mV)	Check	65dB min.	Ratio of the 1kHz recorded portion to the erased portion. 未消去部分と消去部分の比
18. REC MUTE function REC MUTE効果	Connection : Fig. 4-3 TAPE : MTT-5572 1kHz B.P.F in	LINE IN : 1kHz/＋1dB (870mV)	Check	55dB min.	Ratio of the 1kHz recorded portion to the "REC MUTE"portion. 録音部分と"REC MUTE"部分の比
19. Channel seperation チャンネルセパレーション	Connection : Fig. 4-3 TAPE : MTT-5563 1kHz B.P.F in FWD／REV direction	LINE IN : Lch 1kHz/－9dB (275mV) Rch No signal 無信号	Check	35dB min.	Ratio of Lch (1kHz) to Rch (no signal). Lch(1kHz)とRch(無信号)の比
20. Adjacent track crosstalk トラック間クロストーク	Connection : Fig. 4-3 TAPE : MTT-5572	LINE IN : Lch No signal 無信号 Rch 125Hz/-9dB (275mV)	Check	40dB min.	Invert tape and play Rch track. Check leckage level against the output reference of previously recorded portion. テープを反転して再生した時のRch出力レベルの比
21. CD DUBBING function CD DUBBING機能	Connection : Fig. 4-3 SOURCE switch : CD CD DUBBING sw : on TAPE : MTT-5513	MCD-111 Track 21 (1kHz/－10dB)	Check	LINE OUT : －7 ± 1.5dB (291mV～411mV)	

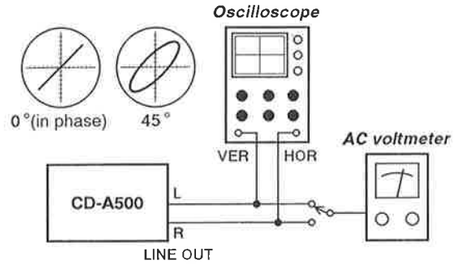


Fig. 4-4 Test setup for azimuth check

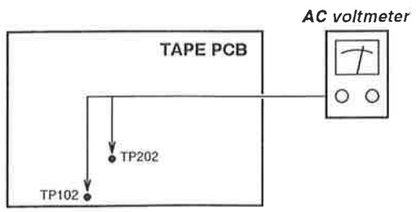


Fig. 4-5 Test setup for DOLBY level adjustment

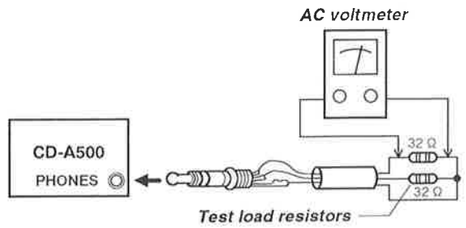


Fig. 4-6 Test setup for PHONES check

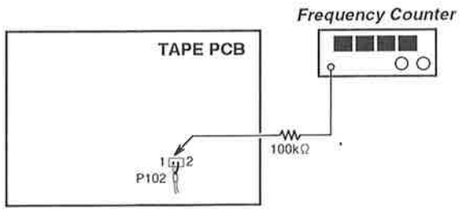


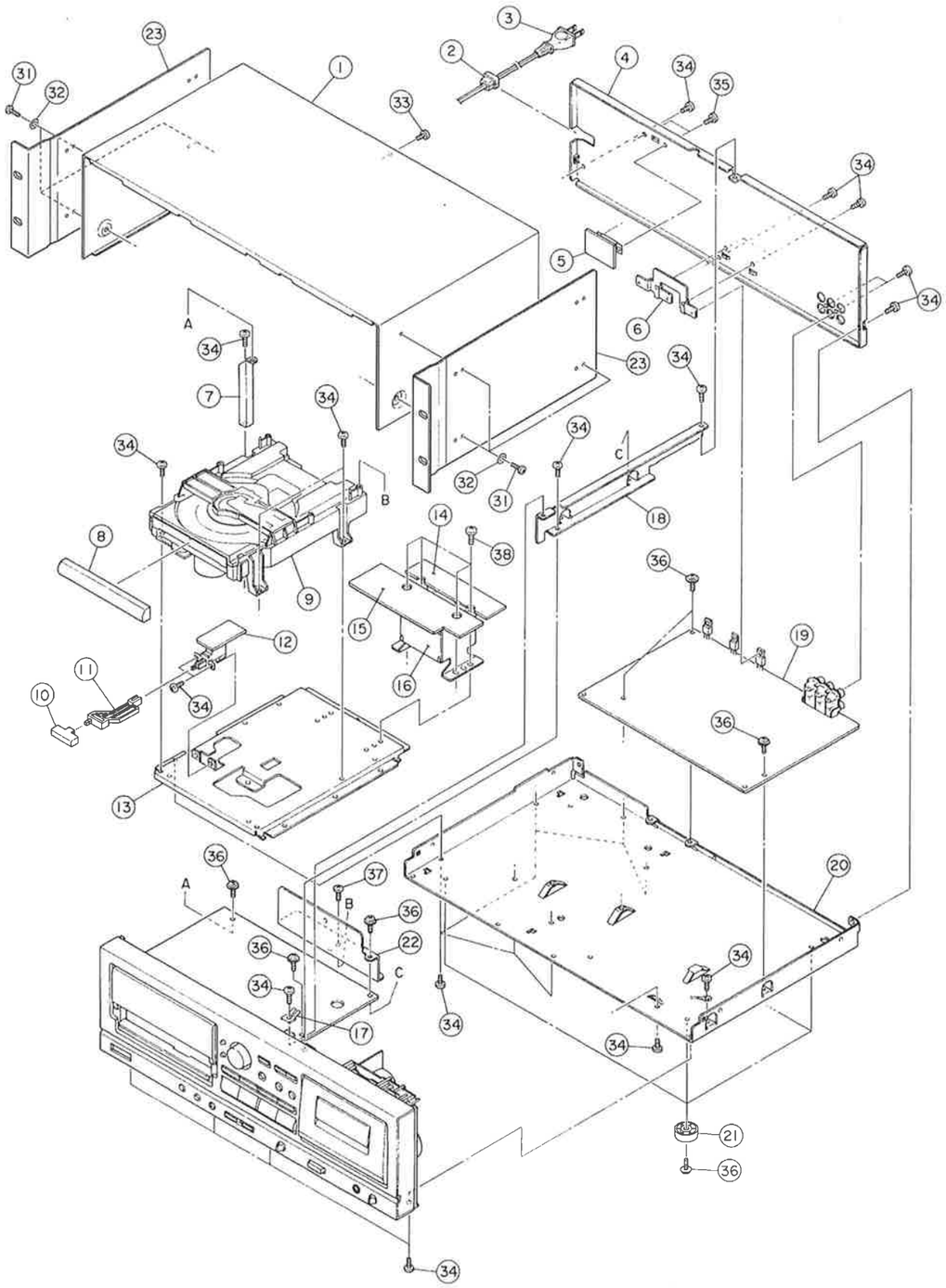
Fig. 4-7 Test setup for bias OSC adjustment

CD-A500

5 EXPLODED VIEWS AND PARTS LIST

分解図とパーツリスト

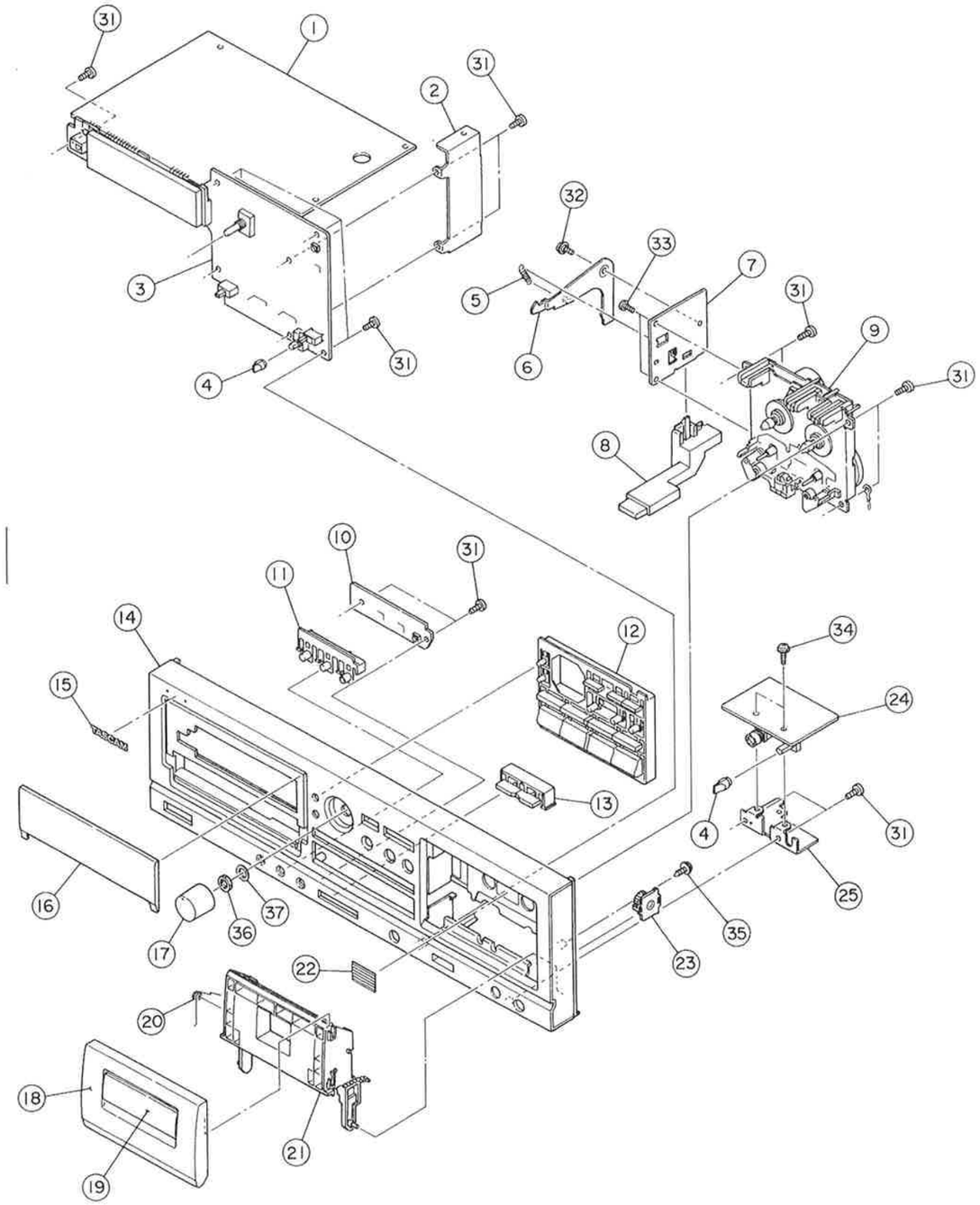
EXPLODED VIEW-1



EXPLODED VIEW-1

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	*3M0026000A	BONNET	
1- 2	⚠*3M000880	BUSHING, #2271	
1- 3	⚠*3E006330	POWER CORD [K]	
	⚠*3E000340	POWER CORD [E]	
	⚠*3E000350	POWER CORD [UK]	
	⚠*3E000360	POWER CORD [A]	
	⚠*3E002120	POWER CORD [J]	
	⚠*3E002970	POWER CORD, SPT-2 [US, C, GE]	
1- 4	*3M0025800B	REAR PANEL [J, K, E, UK, A]	
	*3M0025810B	REAR PANEL [US, C, GE]	
1- 5	*3E9506500A	PCB ASSY, SELECT SW [US, C, GE]	
1- 6	*3M0025900A	PLATE, IC	
1- 7	*3M0025500A	BRACKET, PCB(C)	
1- 8	*3M0024310A	PANEL, TRAY	
1- 9	*3M0027400A	CD MECHA ASSY, KSL-212BCM	
1-10	3M0030500B	BUTTON, POWER	
1-11	*3M0025000A	ROD, POWER SW	
1-12	*3E9506400B	PCB ASSY, POWER SW	
1-13	*3M0025700A	BASE, CD MECHA	
1-14	*3E9506200A	PCB ASSY, TRANS-B	
1-15	*3E9506100B	PCB ASSY, TRANS-A [J]	
	*3E9506110B	PCB ASSY, TRANS-A [US, C, GE]	
	*3E9506120B	PCB ASSY, TRANS-A [K, E, UK]	
	*3E9506130B	PCB ASSY, TRANS-A [A]	
1-16	⚠ 3E0041700A	TRANS, ALL S-1515	
1-17	*3M0030300A	PLATE, EARTH	
1-18	*3M0025300B	BRACKET, PCB(A)	
1-19	*3E9506600B	PCB ASSY, TAPE	
1-20	*3M0025200A	MAIN CHASSIS	
1-21	*3M001950	FOOT, 21MM	
1-22	*3M0030400B	SHIELD PLATE	
1-23	*3M0026600B	RACK MOUNTING	
1-31	*3B0001810A	SCREW, J, S M3X10(BLK)	
1-32	*3M002020	WASHER, FIBER 3X8X0.3T(BLK)	
1-33	*3B0003808A	SCREW, VPC M3X8(BLK)	
1-34	*3B0005708A	SCREW, BPB M3X8(BLK)	
1-35	*3B0004408A	SCREW, BPS M3X8(BLK) [US, C, GE]	
1-36	*3B0001306A	SCREW, J, S M3X6	
1-37	*3B0000808A	SCREW, BPP M3X8	
1-38	*3B0005408A	SCREW, BPB M4X8	

EXPLODED VIEW-2

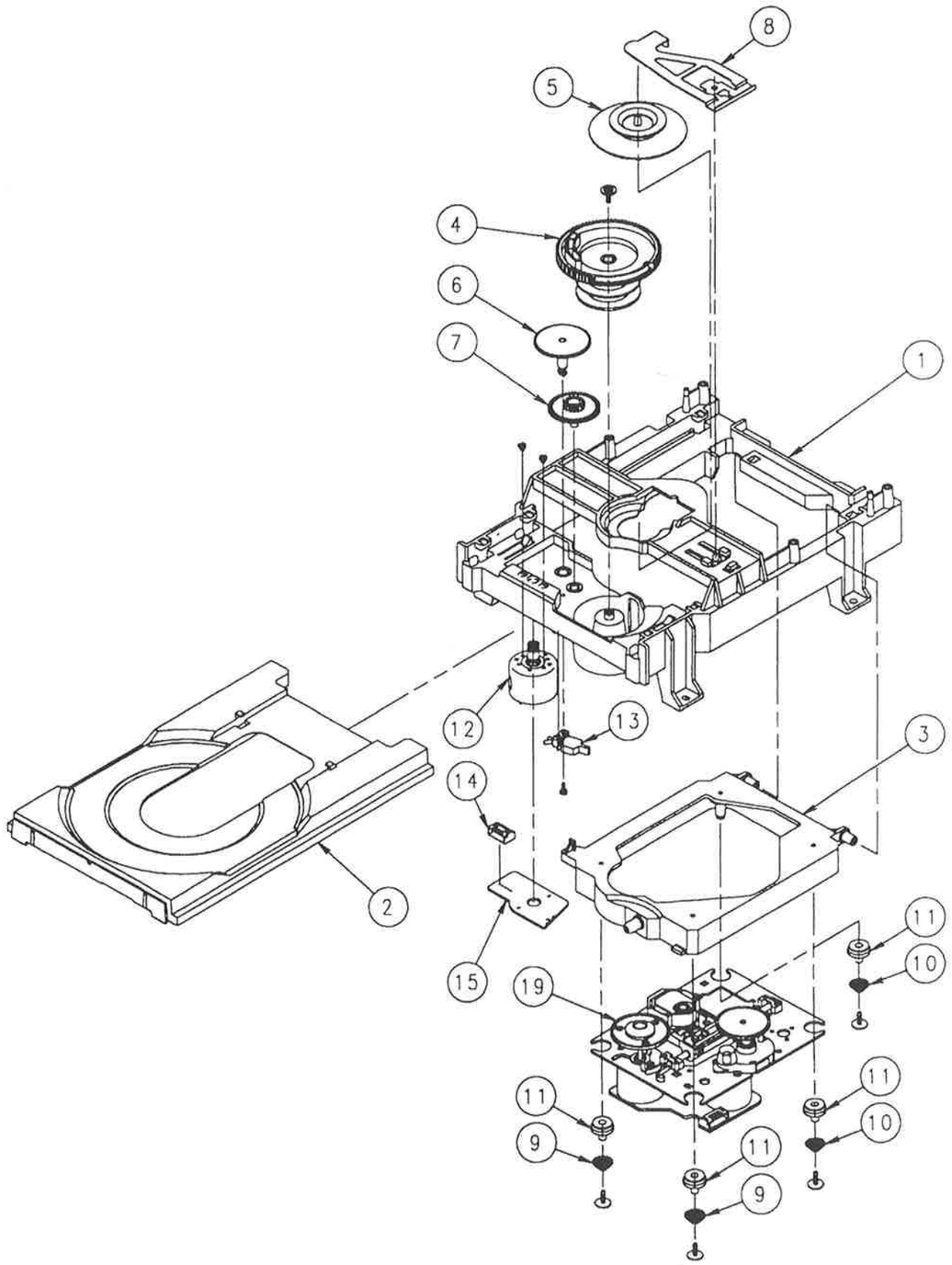


CD-A500

EXPLODED VIEW-2

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2- 1	*3E9505800B	PCB ASSY, CONT-CD	
2- 2	*3M0025400A	BRACKET, PCB(B)	
2- 3	*3E9505900B	PCB ASSY, FRONT	
2- 4	3M0024800A	KNOB, PHONE VOLUME	
2- 5	*3M0010600A	TORSION SPRING, EJECT	
2- 6	*3M0030000A	HOOK, EJECT B	
2- 7	*3M0030100A	BRACKET, EJECT B	
2- 8	3M0025100A	BUTTON, EJECT	
2- 9	*3M0010200A	MECH ASSY, R/P CMAL2Z063A — M02285000A.	
2-10	*3E9506300B	PCB ASSY, KEY A	
2-11	3M0024400A	BUTTON, DIA 6.5	
2-12	3M0024210A	BUTTON, MAIN	
2-13	3M0024500A	BUTTON, SKIP	
2-14	*3M0024110A	FRONT PANEL	
2-15	*5720254101	NAME PLATE, TASCAM	
2-16	*3M0024910A	WINDOW, FL DISPLAY	
2-17	3M0024610A	KNOB, REC VOLUME	
2-18	3M0026410A	LID, DOOR	
2-19	3M0026500A	WINDOW, LID	
2-20	*3M0010500B	TORSION SPRING, CASE II	
2-21	3M0011100A	CASE, LEAD	
2-22	*9260205700	PLATE, REFLECT	
2-23	*9260077301	DAMPER(SD-385)	
2-24	*3E9510600A	PCB ASSY, PHONE	
2-25	*3M0025600A	BRACKET, PHONE	
2-31	*3B0000808A	SCREW, BPP M3X8	
2-32	*3M0010700A	SCREW, 4X1.3S	
2-33	*3B0000004A	SCREW, BPS M2.6X4	
2-34	*3B0001306A	SCREW, J, S M3X6	
2-35	*3B0002308A	SCREW, J P M3X8(BLK)	
2-36	*3M001340	NUT, VR M9	
2-37	*3M001350	PLAIN WASHER, VR M9.1	

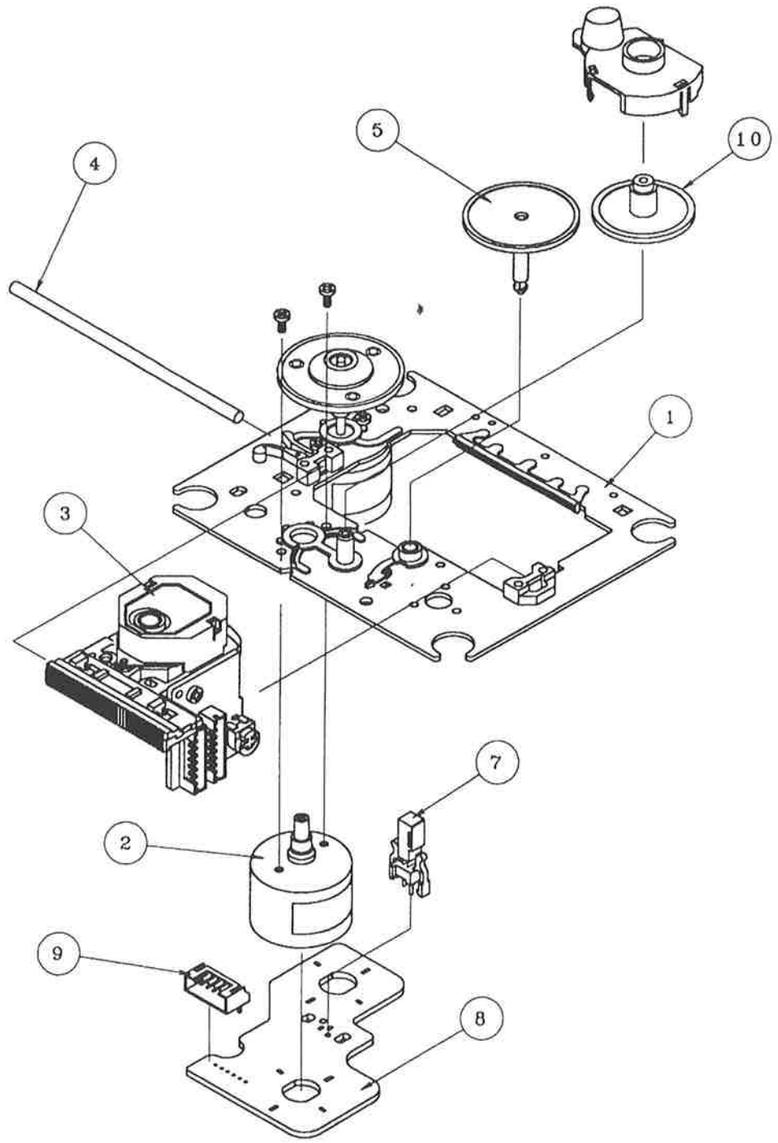
EXPLODED VIEW-3



EXPLODED VIEW-3 (KSL-212BCM)

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
3- 1	*9A06688400	LU CHASSIS	
3- 2	9A06688500	TRAY	
3- 3	*9A06688600	SUB CHASSIS AS ABS	
3- 4	9A06688700	CAM GEAR	
3- 5	9A06688800	CHUCKING PULLY	
3- 6	9A06688900	GEAR(X)	
3- 7	9A06689000	GEAR(Y)	
3- 8	*9A06689100	CHUCKING SPRING	
3- 9	*9A06689200	COIL SPRING(FRONT)	
3-10	*9A06689300	COIL SPRING(BACK)	
3-11	9A06689400	INSULATOR	
3-12	9A06689500	LOADING MOTOR ASSY	
3-13	9A06689600	LEAF SWITCH	
3-14	*9A06689700	CONNECTOR PIN(SUPER SMALL SIZE)	
3-15	*9A06689900	LOADING MOTOR PWB	
3-19	----------	DRIVE UNIT, KSM-212BCM	

EXPLODED VIEW-4

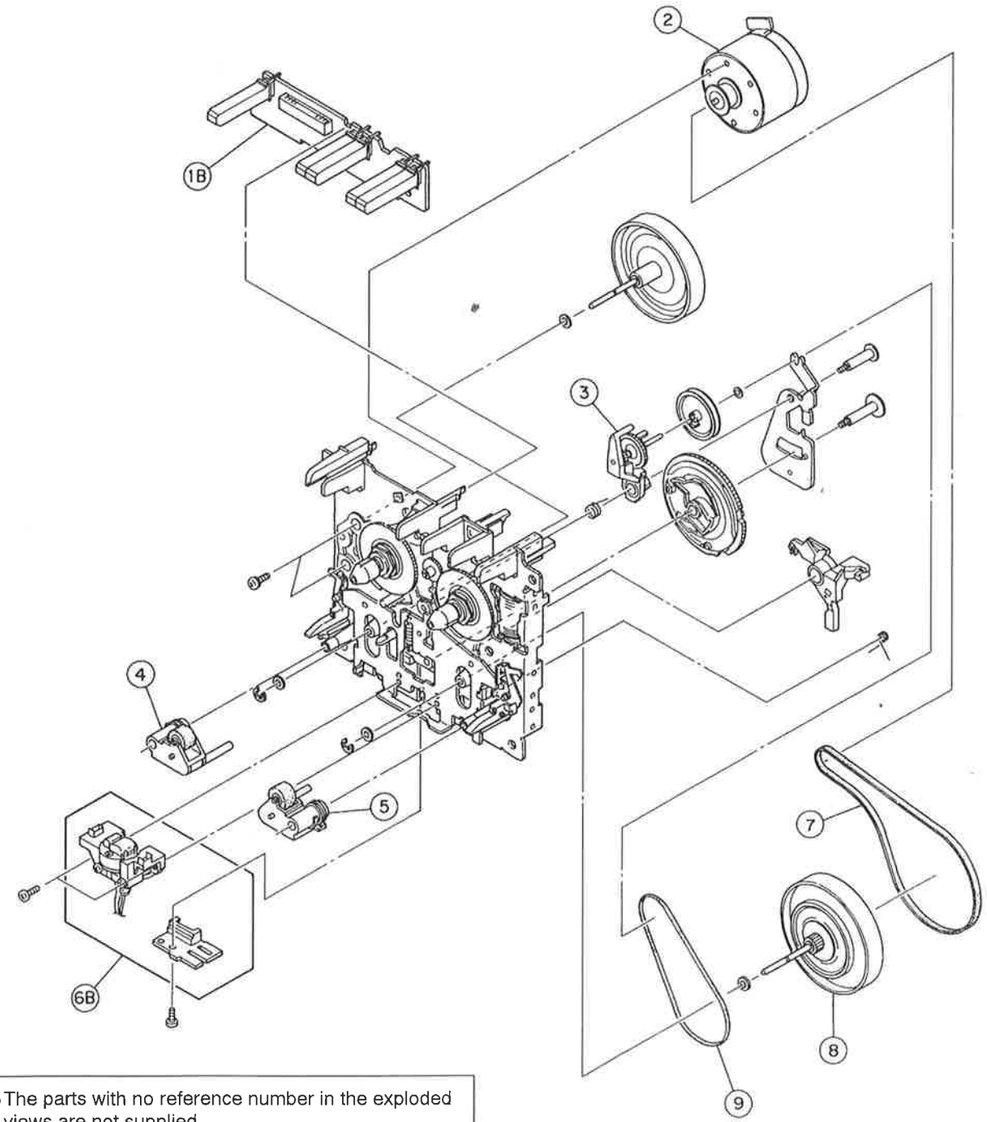


EXPLODED VIEW-4 (KSM-212BCM)

REF. NO.	PARTS NO.	DESCRIPTION
4- 1	*9A06690300	MOTOR CHASSIS ASSY, MBRP
4- 2	9A06690400	MOTOR GEAR ASSY
4- 3	9A06690500	OPTICAL DEVICE, KSS-212B(RP)
4- 4	*9A06690600	SLED SHAFT(S)
4- 5	9A06690700	GEAR(A)(S)
4- 7	9A06690900	LEAF SWITCH
4- 8	*9A06691000	MOTOR(6P)(S)PCB
4- 9	*9A06691100	CONNECTOR PIN 6P
4-10	9A06691200	GEAR(B)(RP)

CD-A500

EXPLODED VIEW-5



● The parts with no reference number in the exploded views are not supplied.
● 分解図に部番のない部品は供給できません。

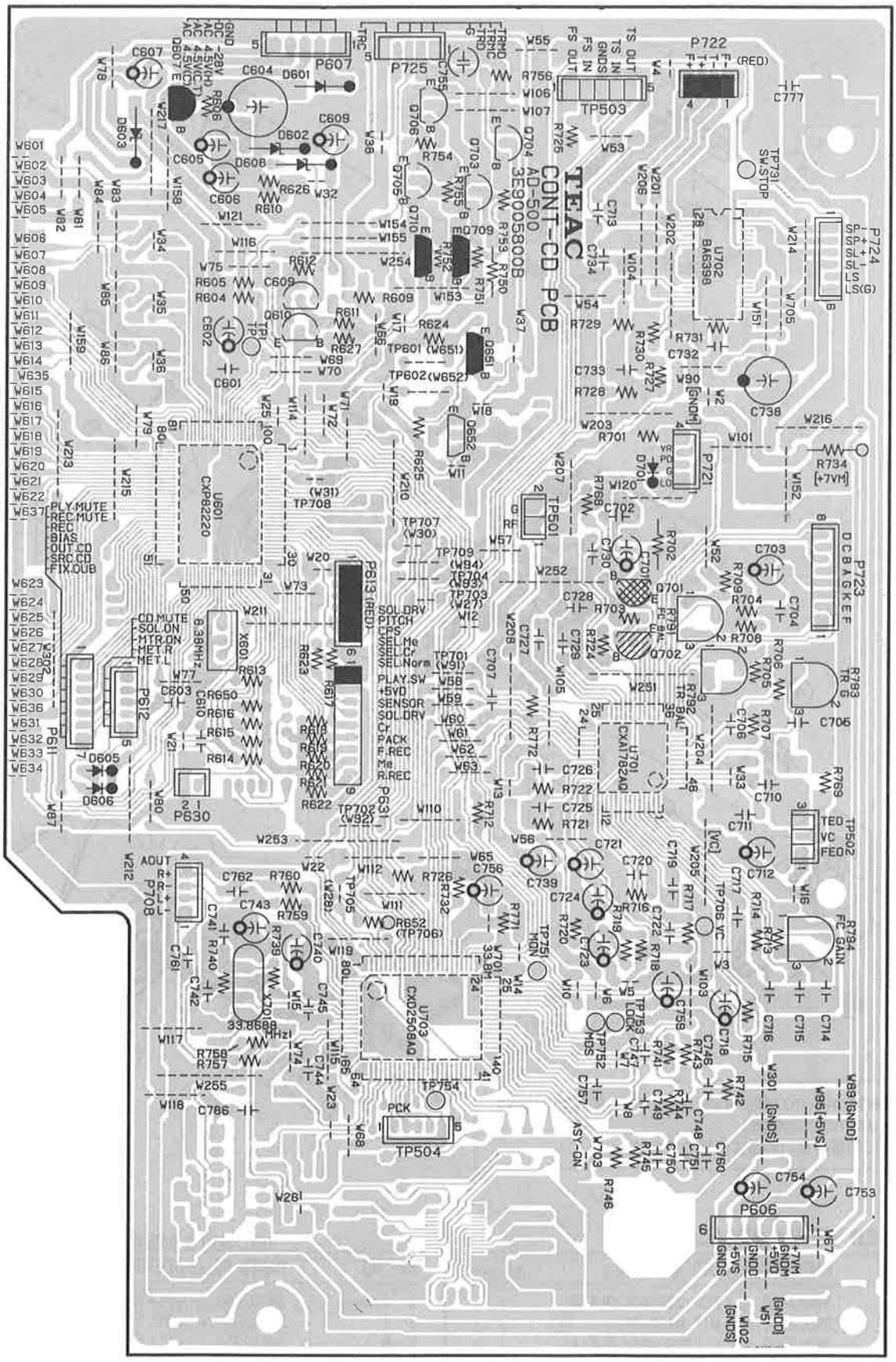
EXPLODED VIEW-5 (CMAL2Z063A)

REF. NO.	PARTS NO.	DESCRIPTION
5- 1B	3M002890	PCB CONTROL BLK(B)
5- 2	3M002870	MTR MAIN BLK (S)
5- 3	3M002900	CLUTCH ASSY BLK(A)
5- 4	3M002930	ROLLER PINCH BLK L
5- 5	3M002920	ROLLER PINCH BLK R
5- 6B	3M002860	PLATE HD BLK B
5- 7	3M002950	BELT MAIN
5- 8	3M002910	CLUTCH ASSY BLK(B)
5- 9	3M002940	F/R BELT

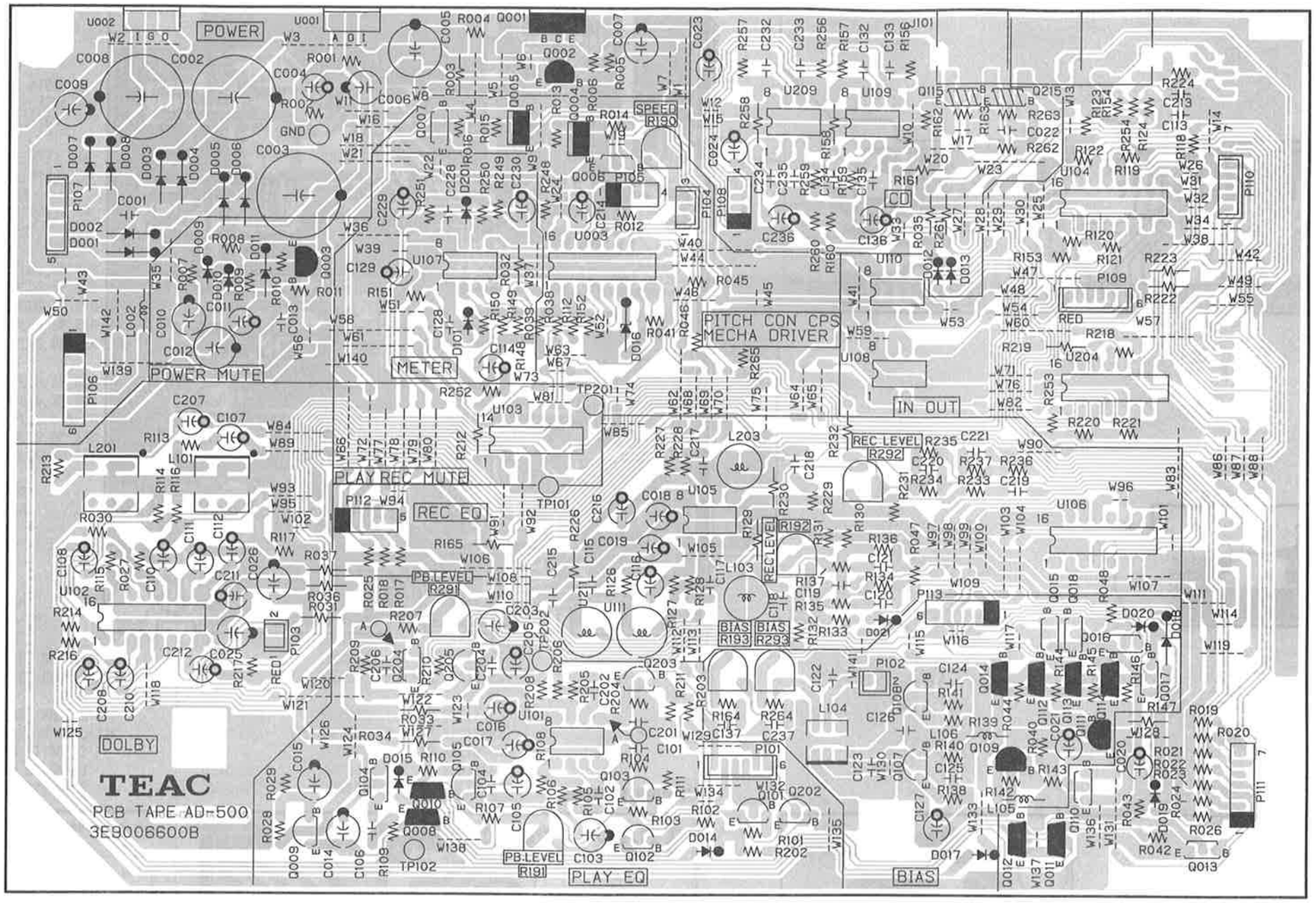
6 PC BOARDS AND PARTS LIST

基板図とパーツリスト

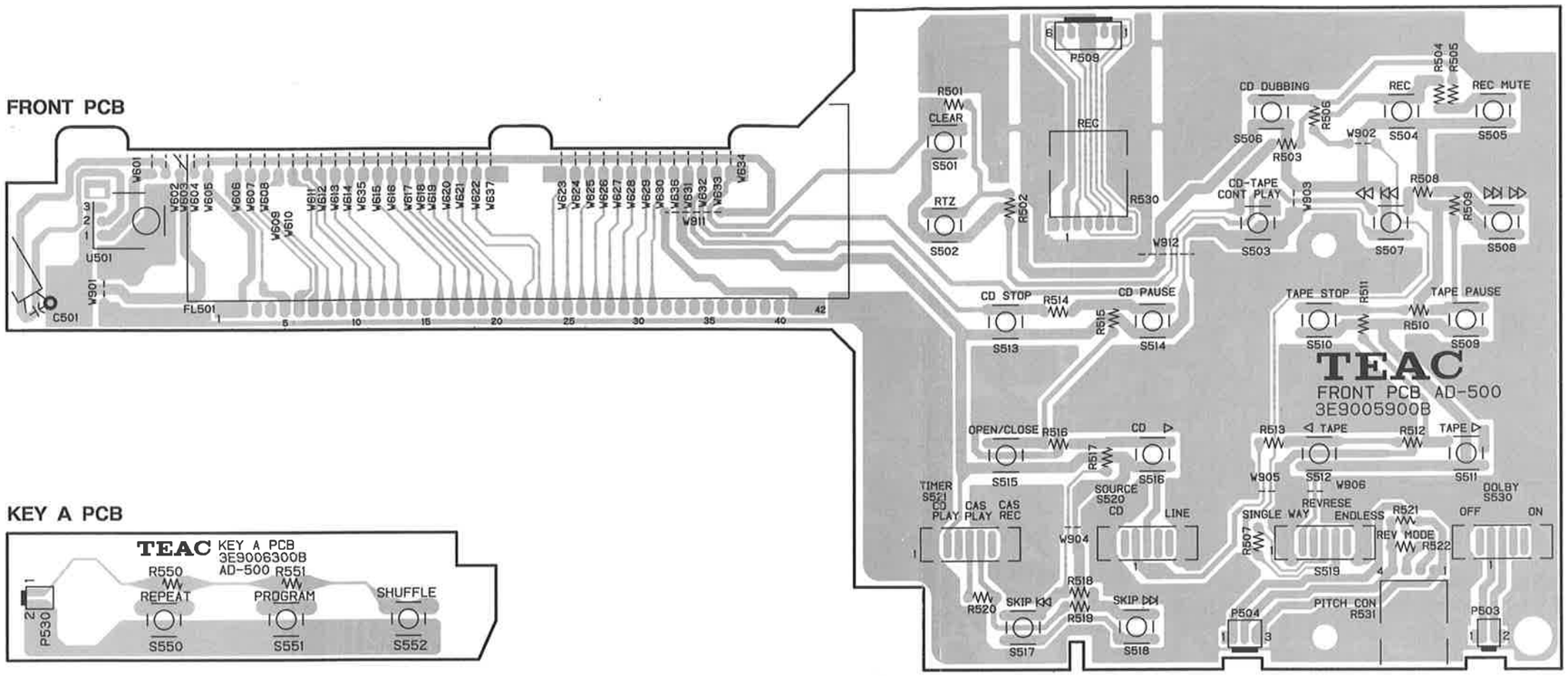
CONT-CD PCB



TAPE PCB

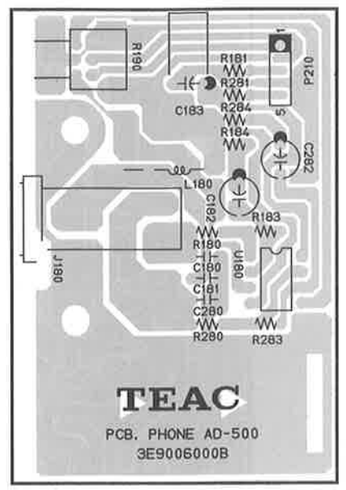

POWER
POWER MUTE
METER
PLAY REC MUTE
REC EQ
PB LEVEL
R291
PB LEVEL
R191
PLAY EQ
PITCH CON CPS
MECHA DRIVER
SPEED
R190
CD
IN OUT
REC LEVEL
R292
REC LEVEL
R192
BIAS
R193
BIAS
R293
BIAS
DOLBY
TEAC
PCB TAPE AD-500
3E9006600B

FRONT PCB

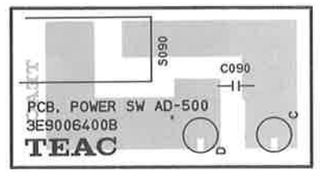


KEY A PCB

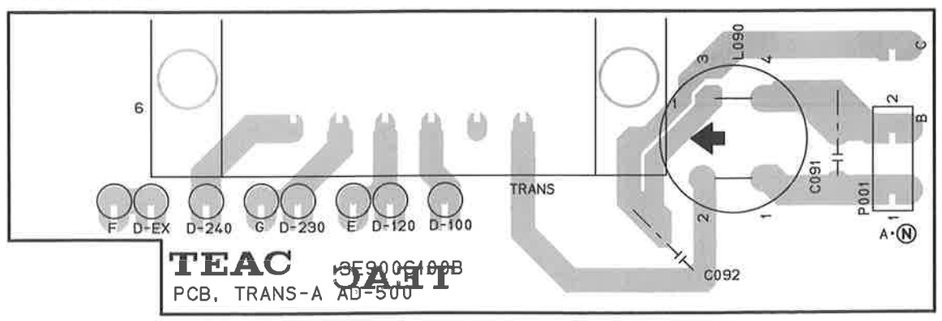
PHONE PCB



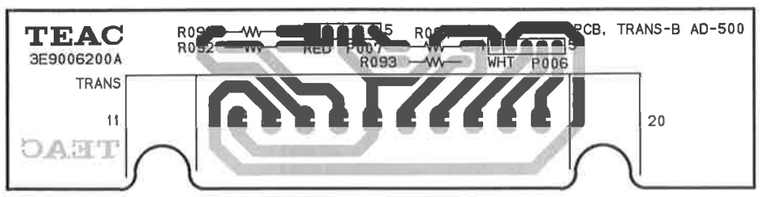
POWER SW PCB



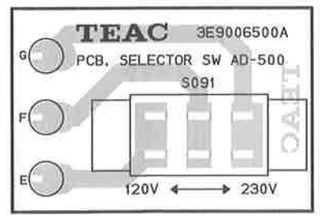
TRANS-A PCB



TRANS-B PCB



SELECTOR SW PCB



CONT-CD PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9505800B	PCB ASSY, CONT-CD
	*3E9005800B	PCB, CONT-CD
C604	⚠ 3C000940	CE, 35V 470UF M
C607	⚠ 3C000560	CE, 35V 47UF M
D601	⚠ 3S000031	DIODE, 1N4003-TR
D602	⚠ 3S000691	ZENER DIODE, MTZJ 24B
D603	⚠ 3S000671	ZENER DIODE, MTZJ4. 3B
D605, 606	3S000241	DIODE, 1SS133
D608	3S000671	ZENER DIODE, MTZJ4. 3B
D701	3S000241	DIODE, 1SS133
P606	3E001180	CONNECTOR PLUG, 6P B6B-EH-A
P607	3E001170	CONNECTOR PLUG, 5P B5B-EH-A
P611	3E000710	CONNECTOR PLUG, 7P B7B-PH-K
P612, 725	3E000690	CONNECTOR PLUG, 5P B5B-PH-K
P613	3E003850	CONNECTOR PLUG, B6B-PH(RED)
P630	3E000660	CONNECTOR PLUG, 2P B2B-PH-K
P708, 721	3E000680	CONNECTOR PLUG, 4P B4B-PH-K
P722	3E003830	CONNECTOR PLUG, B4B-PH(RED)
P723	3E000720	CONNECTOR PLUG, 8P B8B-PH-K
P724	3E000700	CONNECTOR PLUG, 6P B6B-PH-K
Q607	⚠ 3S000020	TR, 2SA1015GR
Q609, 610	3S000000	TR, 2SC1815GR
Q651	3S000301	TR, DTA124ES
Q652	3S000291	TR, DTC124ES
Q701	3S000701	TR, 2SA854R
Q702	3S000000	TR, 2SC1815GR
Q703-706	3S000721	TR, 2SC1741R-SPT
Q709, 710	3S000301	TR, DTA124ES
R791	3R004600	VR, SEMI-FIXED RH0615-22K
R792	3R004630	VR, SEMI-FIXED RH0615-220K
R793	3R004610	VR, SEMI-FIXED RH0615-47K
R794	3R004600	VR, SEMI-FIXED RH0615-22K
TP501	3E003780	HEADER, 2PIN 87156-02
TP502	3E003790	HEADER, 3PIN 87156-03
TP503	3E003800	HEADER, 5PIN 87156-05
U601	3S0007500A	IC, CXP82220-137Q
U701	3S000620	IC, CXA1782BQ
U702	3S000600	IC, BA6398FP
U703	3S000630	IC, CXD2508AQ
X601	3E003680	RESONATOR, CST8. 38MTW
X701	3E004340	X'TAL, 33. 8688MHZ

TAPE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506600B	PCB ASSY, TAPE
	*3E9006600B	PCB, TAPE
C002, 003	⚠ 3C001200	CE, 16V 3300UF M
C008	⚠ 3C001200	CE, 16V 3300UF M
C010	⚠ 3C000330	CE, 16V 10UF M
D001-008	⚠ 3S000031	DIODE, 1N4003-TR
D009, 010	⚠ 3S000241	DIODE, 1SS133
D011	3S000671	ZENER DIODE, MTZJ4. 3B
D012-015	3S000241	DIODE, 1SS133
D016	3S001521	ZENER DIODE, MTZ3. 9B

TAPE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
D017	3S000241	DIODE, 1SS133
D018	3S000031	DIODE, 1N4003-TR
D019-021	3S000241	DIODE, 1SS133
D101, 201	3S000241	DIODE, 1SS133
J101	3E003750	JACK, RCA RJ-1074-09-0353A
J190	3R004720	VR, SEMI-FIXED TB067A-6. 8K
J191, 291	3R004530	VR, SEMI-FIXED RH0615-100
J192, 292	3R004590	VR, SEMI-FIXED RH0615-10K
J193, 293	3R004610	VR, SEMI-FIXED RH0615-47K
L002	3E003711	COIL, 10UH EC24-100K-T2
L101, 201	3E003730	FILTER, MPX LPF FXD2
L103, 203	3E003690	COIL, #7159 8. 2MH
L104	3E0042800A	TRANS, BIAS OSC 85KHZ
L105, 106	3E003711	COIL, 10UH EC24-100K-T2
P101	3E000700	CONNECTOR PLUG, 6P B6B-PH-K
P102	3E000660	CONNECTOR PLUG, 2P B2B-PH-K
P103	3E003810	CONNECTOR PLUG, B2B-PH(RED)
P104	3E000670	CONNECTOR PLUG, 3P B3B-PH-K
P107	3E001170	CONNECTOR PLUG, 5P B5B-EH-A
P109	3E003850	CONNECTOR PLUG, B6B-PH(RED)
P110	3E000690	CONNECTOR PLUG, 5P B5B-PH-K
Q001	⚠ 3S000820	TR, 2SB1655E
Q002, 003	⚠ 3S000020	TR, 2SA1015GR
Q004, 005	3S000320	TR, 2SA1237TV2Q
Q006, 007	3S000291	TR, DTC124ES
Q008, 010	3S000301	TR, DTA124ES
Q009	3S000000	TR, 2SC1815GR
Q011, 012	3S000301	TR, DTA124ES
Q013	3S000291	TR, DTC124ES
Q014	3S000301	TR, DTA124ES
Q015, 016	3S000291	TR, DTC124ES
Q017, 018	3S000291	TR, DTC124ES
Q101	3S000000	TR, 2SC1815GR
Q102, 202	3S000000	TR, 2SC1815GR
Q103, 203	3S000000	TR, 2SC1815GR
Q104, 204	3S000741	TR, DTC143TS
Q105, 205	3S000000	TR, 2SC1815GR
Q107, 108	3S000000	TR, 2SC1815GR
Q109, 111	3S000020	TR, 2SA1015GR
Q110	3S000291	TR, DTC124ES
Q112-114	3S000301	TR, DTA124ES
Q115, 215	3S000731	TR, 2SD2144S
U001	⚠ 3S000250	IC, NJM317F
U002	⚠ 3S000650	IC, NJM7805FA
U003	3S000810	IC, TC4053BP
U101	3S000280	IC, UPC4570C
U102	3S000040	IC, CXA1101P
U103	3S000430	IC, BU4066BC
U104, 204	3S000810	IC, TC4053BP
U105	3S000260	IC, NJM4558D
U106	3S000470	IC, TC4052BP
U107, 108	3S000260	IC, NJM4558D
U109, 209	3S000280	IC, UPC4570C
U110	3S000260	IC, NJM4558D
U111, 211	3E003740	FILTER, BIAS TRAP 85KHZ

FRONT PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9505900B	PCB ASSY, FRONT
	*3E9005900B	PCB, FRONT
	*3M0024700A	HOLDER, FL DISPLAY
FL501	3E0036400A	FL DISPLAY, VFD BJ484GK
R530	3R003910	VAR REG, 10KAX2 RK14K12D
R531	3R003980	VAR REG, 5KB RK11K113 CC
S501-518	3E002070	SW, TACT SKQSAB HMR-187
S519, 521	3E002210	SW, SLIDE 2X3 AAA-00231402
S520, 530	3E003760	SW, SLIDE 2X2 AAA-00221269
U501	3S000760	REMOCON. SENSOR, SBX1976-52

KEY A PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506300B	PCB ASSY, KEY A
	*3E9006300B	PCB, KEY A
S550-552	3E002070	SW, TACT SKQSAB HMR-187

PHONE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9510600A	PCB ASSY, PHONE
	*3E9006000B	PCB, PHONE
J180	3E002160	JACK, JY-6313-01-030
L180	3E003721	COIL, 100UH EC24-101K-T2
R190	3R003920	VAR REG, 50KAX2 RK09K12A
U180	3S000840	IC, BA4560

POWER SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506400B	PCB ASSY, POWER SW
	*3E9006400B	PCB, POWER SW
C090	⚠ 3E004300	S. KILLER, CS12-F2GA472MYAS
S090	⚠ 3E003770	SW, POWER SDDLD1-A2-F-1

TRANS-A PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506100B	PCB ASSY, TRANS-A [J]
	*3E9506110B	PCB ASSY, TRANS-A [US, C, GE]
	*3E9506120B	PCB ASSY, TRANS-A [K, E, UK]
	*3E9506130B	PCB ASSY, TRANS-A [A]
	*3E9006100B	PCB, TRANS-A
C091, 092	⚠ 3C007820	CQ, 0.022UF ECQU2A223MN T1
L090	⚠ 3E004290	COIL, 1MH/1.5A FKOB160MH16
P001	3E002170	TERMINAL LAPPING, 2P[K, E, UK, A]

TRANS-B PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506200A	PCB ASSY, TRANS-B
	*3E9006200A	PCB, TRANS-B

SELECTOR SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9506500A	PCB ASSY, SELECT SW[US, C, GE]
	*3E9006500A	PCB, SELECTOR SW
S091	⚠ 3E002110	SW, SLIDE SL13B-022

CD-A500

7 INCLUDED ACCESSORIES
付属品

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	*3D0017000A	OWNER'S MANUAL, JAPANESE [J]	
	*3D0017100A	OWNER'S MANUAL, E/F/G/I/S [EXCEPT J]	English, French, German, Italian, Spanish
	*3E0063500A	REMOTE CONTROL UNIT, RC-A500	
	*3E003660	BATTERY, UM-3(2P X ED)	
	*3M0028300A	RACK MOUNT SCREW KIT ASSY	

CD-A500

TASCAM
TEAC Professional Division

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TEAC TECHNICAL INFORMATION

CD-A500/AD-500, CD Mecha Assy

No. **0013**
DATE 26th May 2000

To maintain steady parts supply for the production, CD Mecha Assy (Ref 1-9) has been changed from KSL-212BCM (original) to KSL-213BCM (new) on the following products:

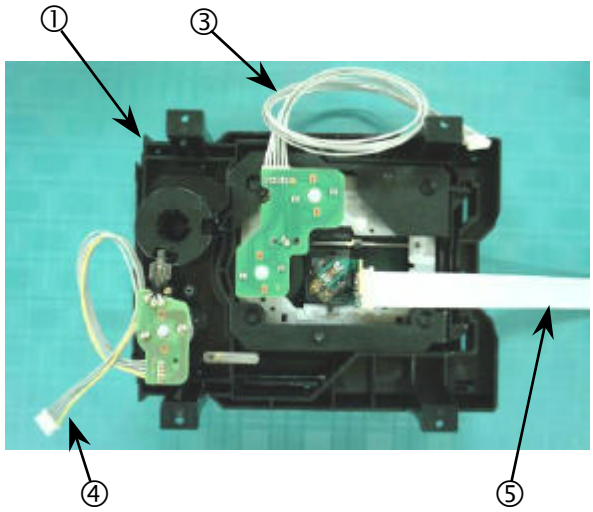
CD-A500 S/No. 0270001 and higher
AD-500 S/No. 0100001 and higher

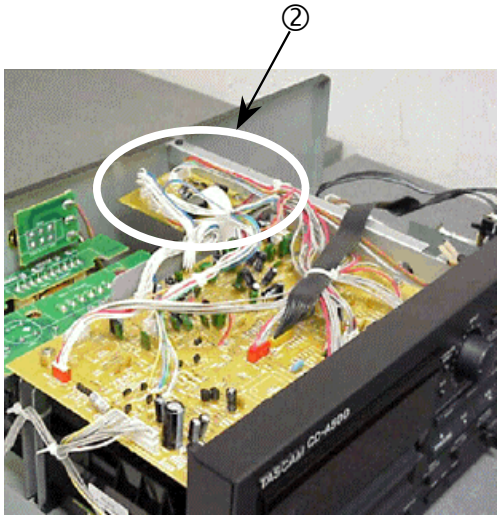
Notice:

1. The original and the new are incompatible.
2. Spare parts for the original are still available. No need to use the new to repair the earlier units.
3. Independent spares for the new are not supplied except Pickup Assy.
4. Pick up Assy used on the new is KSS-213V that cannot be supplied. Instead, use KSS-213C (**P/No. K0000320**). Both are completely the same. Only one difference is that a color of KSS-213V is violet while that of KSS-213C is black.

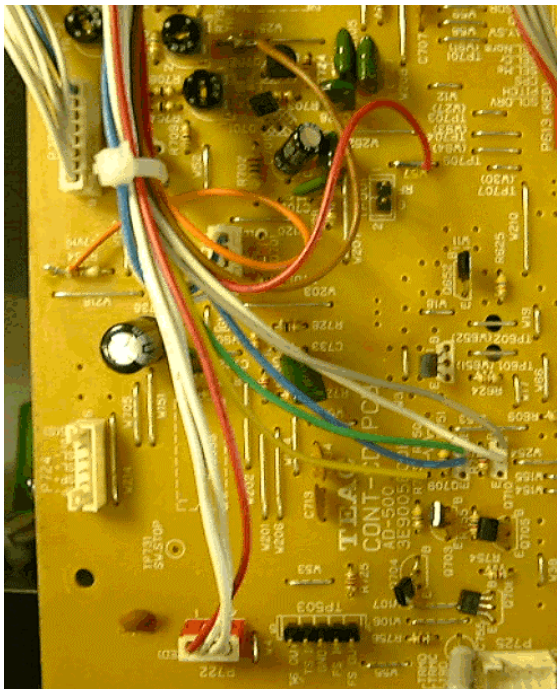
New parts

	Part Number	Description
①	**3M00611-00A**	CD Mecha Assy, KSL-213BCM
②	**3E9516200A**	KSS213C PCB Assy
③	**3E0041200A**	CABLE ASSY, AD500 CDM-724
④	**3E0041300A**	CABLE ASSY, AD500 CDM-725
⑤	**3E0091500A**	FFC 16P





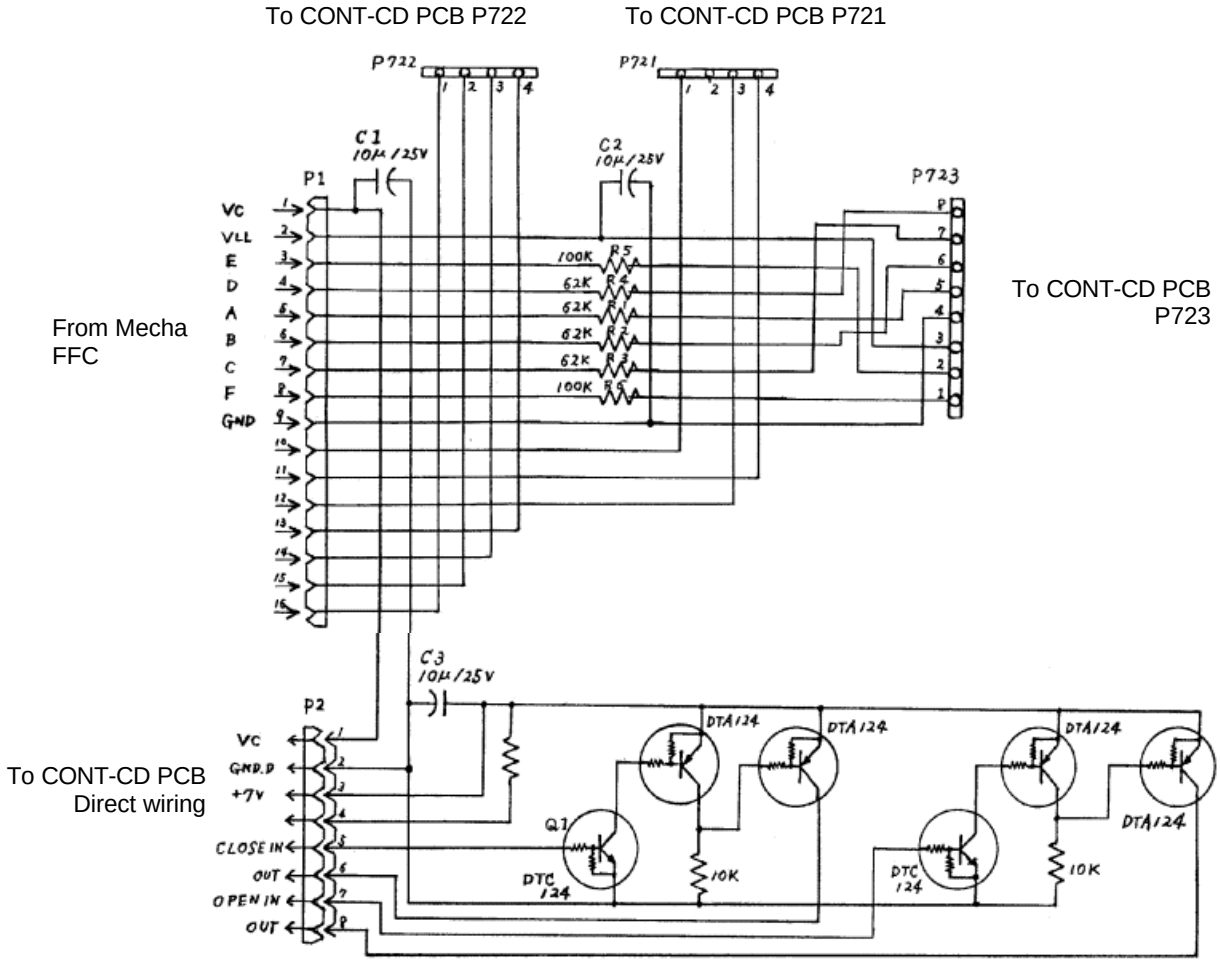
Wiring between CONT-CD PCB Assy and KSS213C PCB Assy



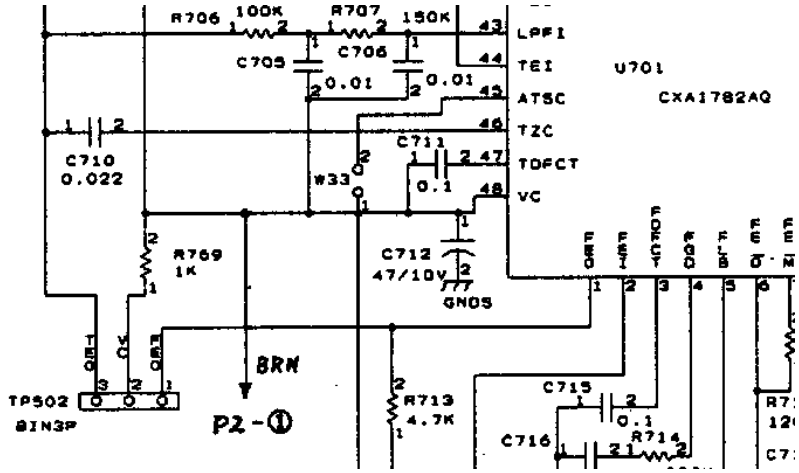
Q709/Q710/R750: eliminated.

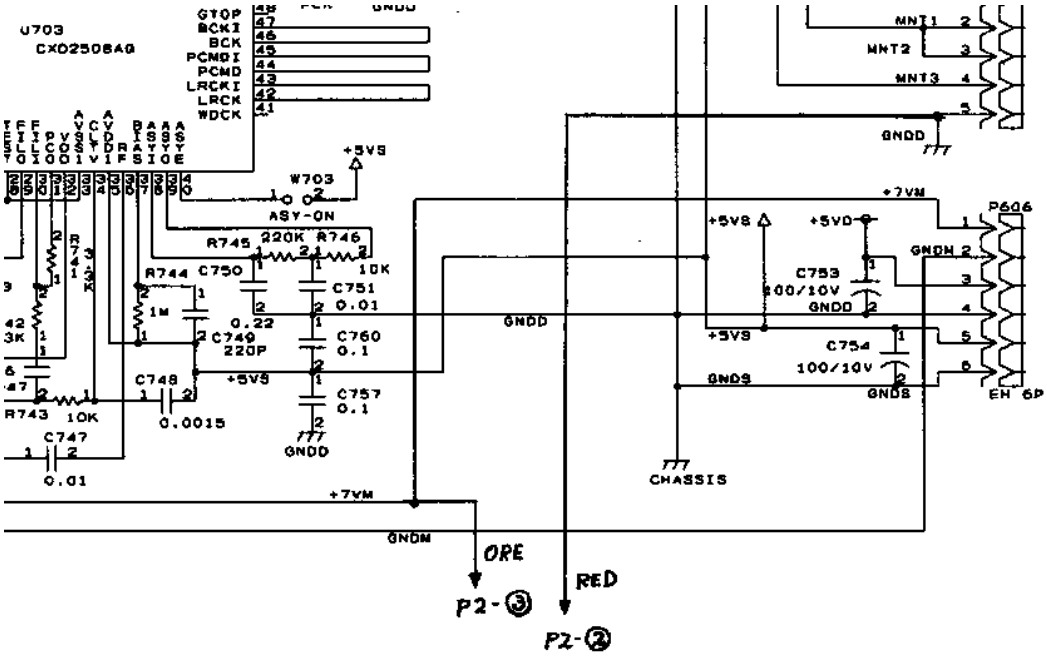
BRN → W251
RED → W57
ORG → R734 (outside)
YEL → R750 (Q703 side)
GRN → Q709-B
BLU → Q709-C
GLY → Q710-B
WHI → Q710-C

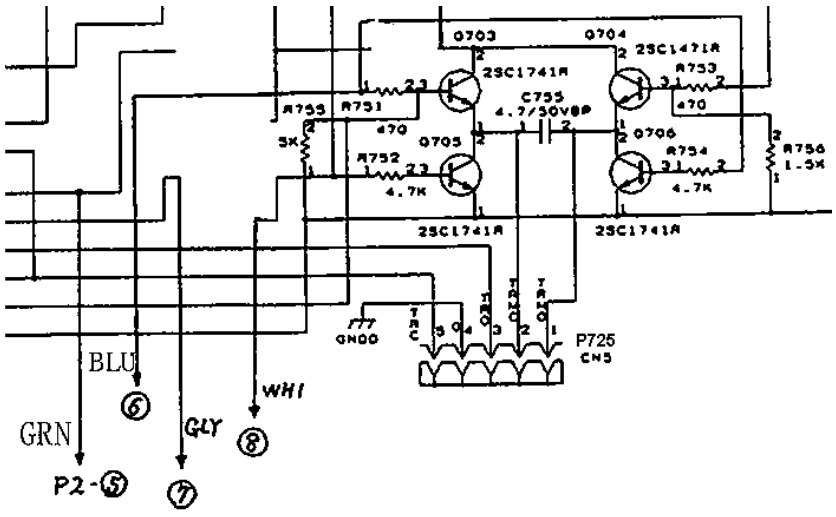
Circuit diagram, KSS213C PCB Assy



Circuit diagram, CONT-CD PCB Assy







Q709, Q710 and R750 have been eliminated.

TECHNICAL INFORMATION

TASCAM CD-A500/CD-A700, Change of CONT-CD PCB Assy

No. **0410**
DATE 15th September 2004

Sony's CXD2508Q (LSI for CD section) mounted on the CONT-CD PCB has been discontinued. Therefore, new CONT-CD PCB has been designed with the current generation of LSI that offers the digital servo system.

This change has been made on the following products:
- CD-A500 S/No. 0720001 and higher
- CD-A700 S/No. 0520001 and higher

For the details, refer to a supplement service manual.

Note 1
Old and new CONT-CD PCB Assy are compatible on the unit that has the WSL-2130CCM (current CD mech). Refer to Tech-Info No. 0319/0322 for the details of the WSL-2130CCM.

Note 2
CD-A700 has a CD Pitch Control function (CD-A500 does not have) and the circuit for it exists on the BAL AMP PCB. This circuit has been eliminated from the BAL AMP PCB and rebuilt on the New CONT-CD PCB Assy.
Consequently, wiring has been changed as follows. No new cables/parts are required to wire.

Original Wiring	New Wiring
BAL AMP (P8) ↔ CONT-CD (VCO/P.CON)	cable eliminated
BAL AMP (P9) ↔ KEY (P951)	CONT-CD (P601) ↔ KEY (P951) connected by original cable

TEAC

TECHNICAL INFORMATION

CD-A500/AD-500, Change of CD Mechanism (2)

No. **0323**
DATE 25th June 2003

As introduced in Tech-Info No. 0322, CD Mechanism has been changed to new, WSL-2130CCM.

With new mechanism WSL-2130CCM, there is a possibility that a heavy disc (like TEAC MCD-151 test disc that has a metal center ring) cannot be loaded enough causing automatic eject. Even if loaded, disc may not be clamped firmly then focus servo may not work correctly.

Therefore, driving current for loading motor has been increased by following change:
R755/R756 (CONT-CD PCB Assy) 1.5 kΩ → 3.3 kΩ (P/No. 3R000841)

This change has been made on the following products:
- CD-A500 S/No. 0581201 and higher
- AD-500 S/No. 0580701 and higher

TEAC **TECHNICAL INFORMATION**

CD-A500/AD-500, Change of CD Mechanism (1)

No. **0322**
DATE 25th June 2003

CD Mech Assy KSL-213BCM (SHINCO) is no longer available. Substitution is WSL-2130CCM (WEST LAKE). Old and new are incompatible then some changes are required to mount the new.

Outline of the Latest Change

New CD Mech Assy has been used on the following products:

- CD-A500 S/No. 0500281 and higher
- AD-500 S/No. 0500001 and higher

Mech Section	OLD		Qty	NEW		Qty
	3M00611-00A	CD Mech Assy KSL-213BCM	1	3M01296-00A	CD Mech Assy WSL-2130CCM	1
	3M00257-00A	BASE, CD MECH AD-500	1	3M00257-10A	BASE, CD MECH CD-A700	1
	3M00255-00A	BRACKET, PCB (C) AD-500	1	3M00793-00A	BRACKET, PCB (C) CD-A700	1
	3M002680	FIBER WASHER 7X3.2X0.8T	1		Removed	0
	3M00304-00C	SHIELD PLATE, AD500	1		Removed	0
			0	3M00876-00A	SHEET, BARRIER CD-A700	1
	3E00915-00A	FFC 16P P=1 L=360	1	3E01165-00A	FFC 16P P=1 L=160	1
	3E00413-01A	CABLE ASSY, AD500 CDM-725	1	3E01145-01A	CABLE ASSY CDA700 CDM-725	1
CONT-CD PCB Assy						
R750			0	3R001951	10 OHM	1
W902			0	3R003421	JUMPER RES, 5MM	1
W901 W903 W904	3R003421	JUMPER RES, 5MM	3		Removed	0
P721	3E010360	CONNCT PLUG B 4B-PH-K-S	1	3E010970	PIN HEADER, 4P	2
P722	3E003830	CONNCT PLUG B 4B-PH-RED	1			
P723	3E010400	CONNCT PLUG B 8B-PH-K-S	1	3E010980	PIN HEADER, 9P	1
Q709 Q710			0	3S000301	TR, DTA124ES	2
	3E00916-01B	8P WIRE ASSY P2	1		Removed	0
	3E95162-00A	PCBA, KSS213C	1		Removed	0
			0	3E95397-00A	PCBA JOINT AD500	1

History of the CD Mech Assy

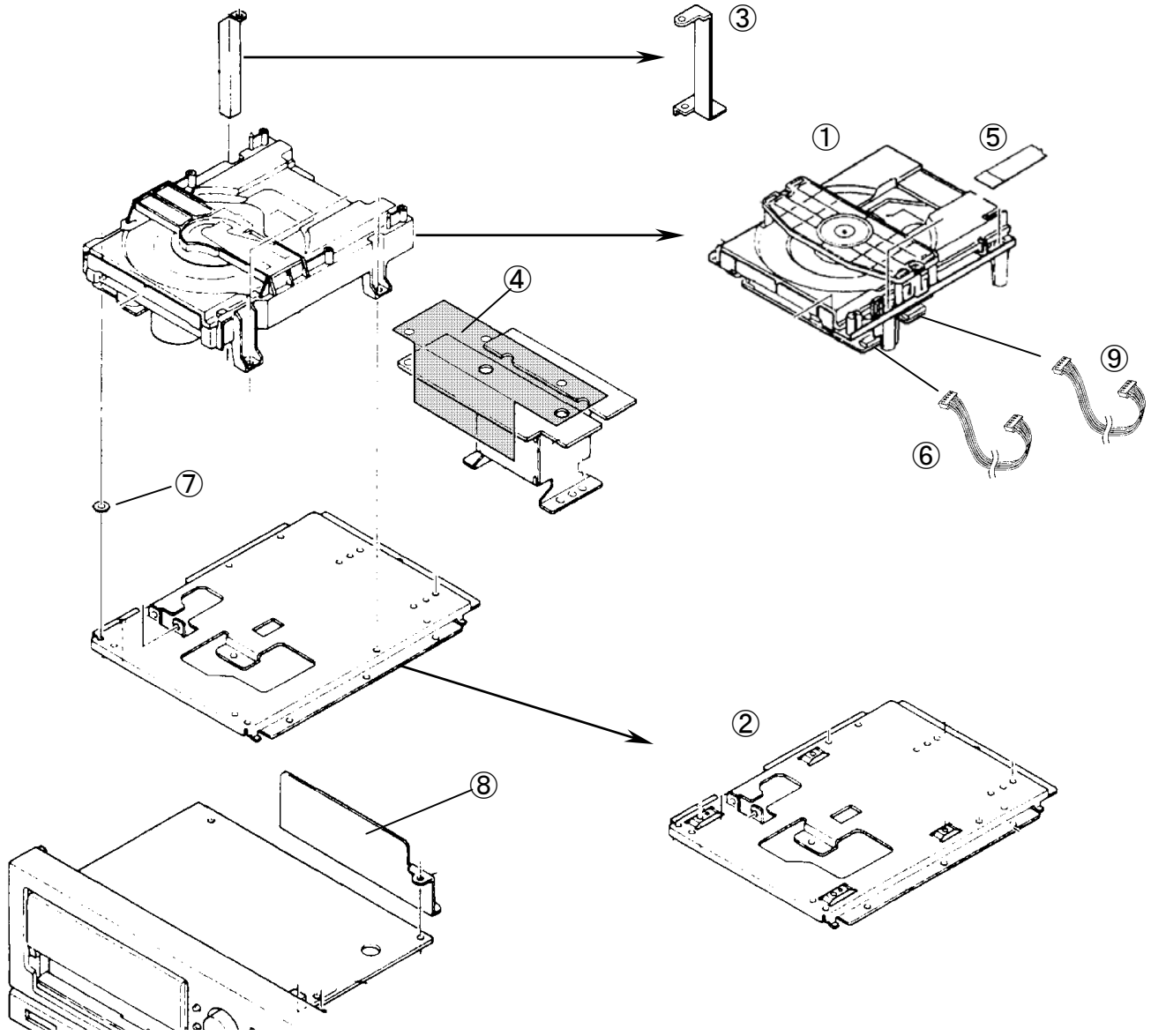
Original KSL-212BCM (SONY)
1st substitution KSL-213BCM (SHINCO) introduced by Tech-Info No. 0013
2nd substitution WSL-2130CCM (WEST LAKE) introduced by this info

For actual servicing on KSL-212BCM and KSL-213BCM, see following pages.

1. MECHANISM SECTION

	OLD		Qty	NEW (Parts Required)		Qty
①	3M00274-00A 3M00611-00A	CD Mech Assy KSL-212BCM (Original) CD Mech Assy KSL-213BCM (Tech-Info No. 0013)	1	3M01296-00A	CD Mech Assy WSL-2130CCM	1
②	3M00257-00A	BASE, CD MECH AD-500	1	3M00257-10A	BASE, CD MECH CD-A700	1
③	3M00255-00A	BRACKET, PCB (C) AD-500	1	3M00793-00A	BRACKET, PCB (C) CD-A700	1
④			0	3M00876-00A	SHEET, BARRIER CD-A700	1
⑤	3E00915-00A	FFC 16P P=1 L=360	1	3E01165-00A	FFC 16P P=1 L=160	1
⑥	3E00413-01A	Cable Assy, AD500 CDM-725	1	3E01145-01A	Cable Assy, CDA700 CDM-725	1
⑦	3M002680	FIBER WASHER 7X3.2X0.8T	1		Removed	0
⑧	3M00304-00C	SHIELD PLATE, AD500	1		Removed	0
⑨				3E00412-01A	Cable Assy, AD500 CDM-724	1

- Some units may not have ⑦ FIBER WASHER 7X3.2X0.8T.
- Fix ④ SHEET, BARRIER CD-A700 onto Trans PCB with using cable ties (way of CD-A700).
- ⑨ Cable Assy, AD500 CDM-724 is required for only the unit that has original KSL-212BCM.

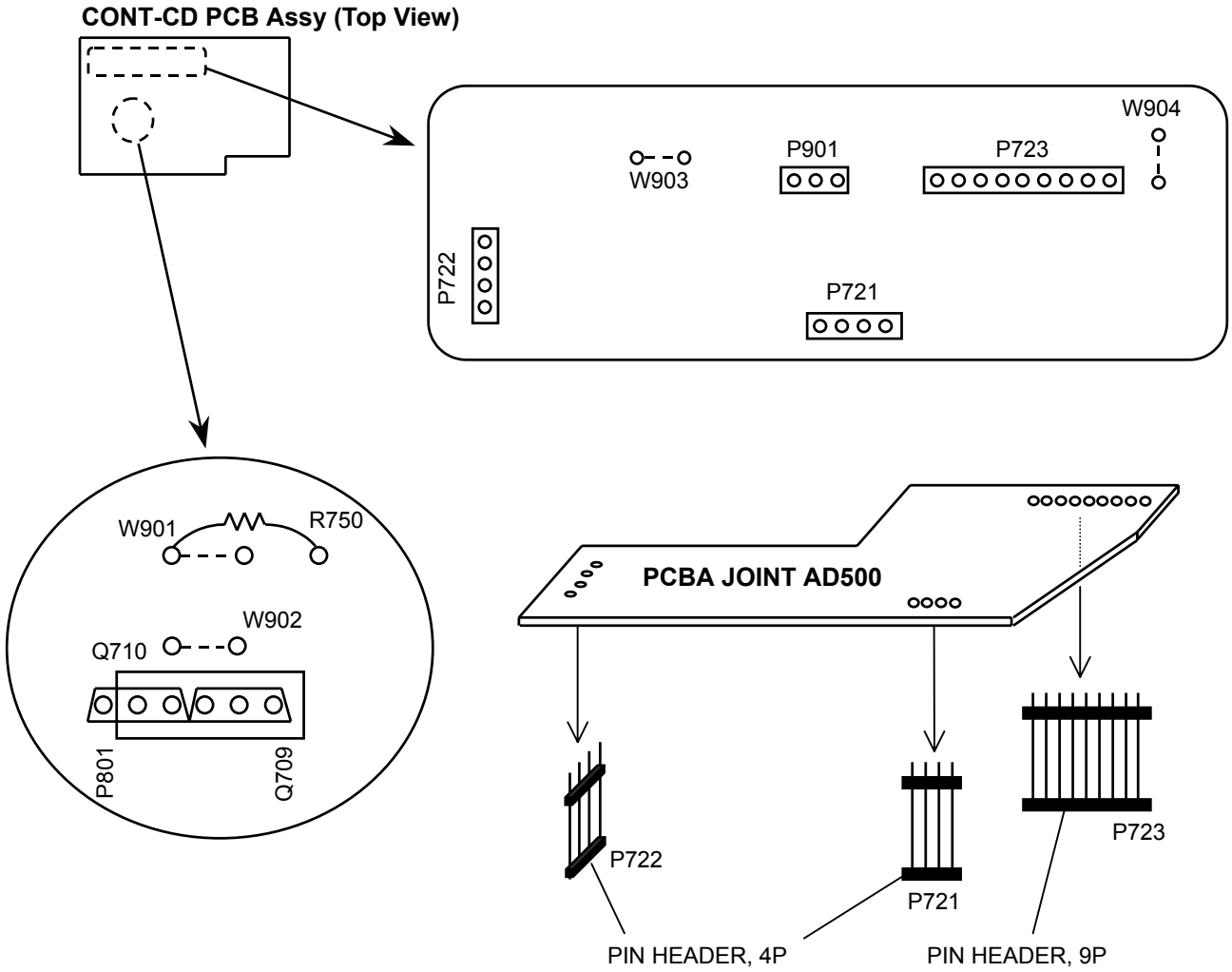


2. ELECTRICAL SECTION — WORK ON THE CONT-CD PCB Assy

2-1. Unit with CONT-CD PCB Assy (PCB Version E) and KSS213C PCB Assy

	OLD		Qty	NEW (Parts Required)		Qty
R750		Vacant	0	3R001951	10 OHM	1
W902		Vacant	0	3R003421	JUMPER RES, 5MM	1
W901 W903 W904	3R003421	JUMPER RES, 5MM	3		Removed	0
P721	3E010360	CONNCT PLUG B 4B-PH-K-S	1	3E010970	PIN HEADER, 4P	2
P722	3E003830	CONNCT PLUG B 4B-PH-RED	1			
P723	3E010400	CONNCT PLUG B 8B-PH-K-S	1	3E010980	PIN HEADER, 9P	1
Q709 Q710		Vacant		3S000301	TR, DTA124ES	2
	3E95162-00A	PCBA, KSS213C (P801/P901)	1		Removed	0
				3E95397-00A	PCBA JOINT AD500	1

Note:
1. KSS213C PCB Assy has been connected to CONT-CD PCB Assy (Version E) with connectors while younger version B to D have hard wiring (soldering).
2. R750/Q709/Q710 can be taken out of KSS213C PCB Assy. Move them to CONT-CD PCB Assy.

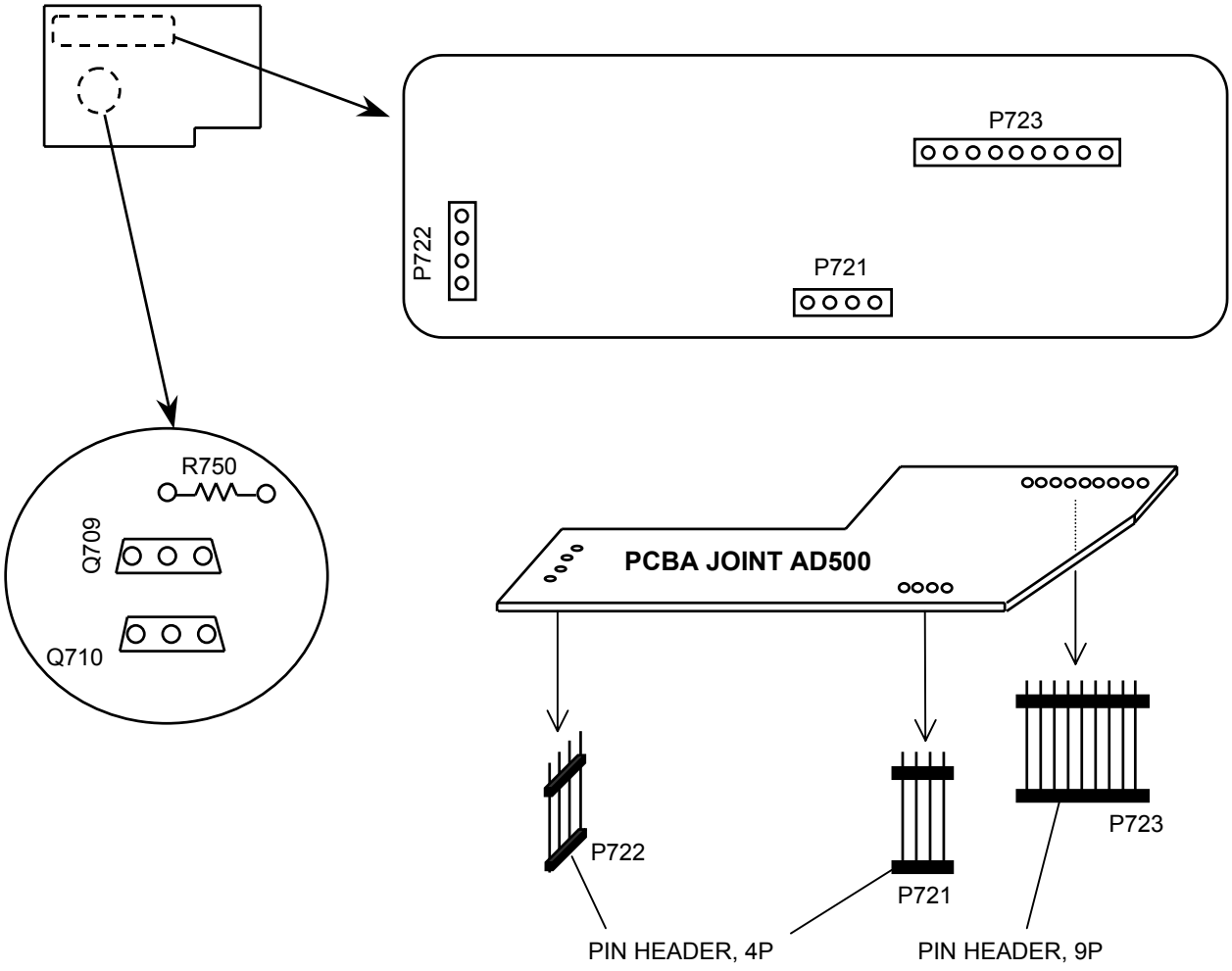


2-2. Unit with CONT-CD PCB Assy (PCB Version C & D) and KSS213C PCB Assy

	OLD		Qty	NEW (Parts Required)		Qty
R750		Vacant	0	3R001951	10 OHM	1
P721	3E010360	CONNCT PLUG B 4B-PH-K-S	1	3E010970	PIN HEADER, 4P	2
P722	3E003830	CONNCT PLUG B 4B-PH-RED	1			
P723	3E010400	CONNCT PLUG B 8B-PH-K-S	1	3E010980	PIN HEADER, 9P	1
Q709 Q710		Vacant		3S000301	TR, DTA124ES	2
	3E95162-00A	PCBA, KSS213C	1		Removed	0
				3E95397-00A	PCBA JOINT AD500	1

Note:
1. KSS213C PCB Assy has been connected to CONT-CD PCB Assy (Version B to D) with hard wiring (soldering) while version E has connectors.
2. R750/Q709/Q710 can be taken out of KSS213C PCB Assy. Move them to CONT-CD PCB Assy.

CONT-CD PCB Assy (Top View)

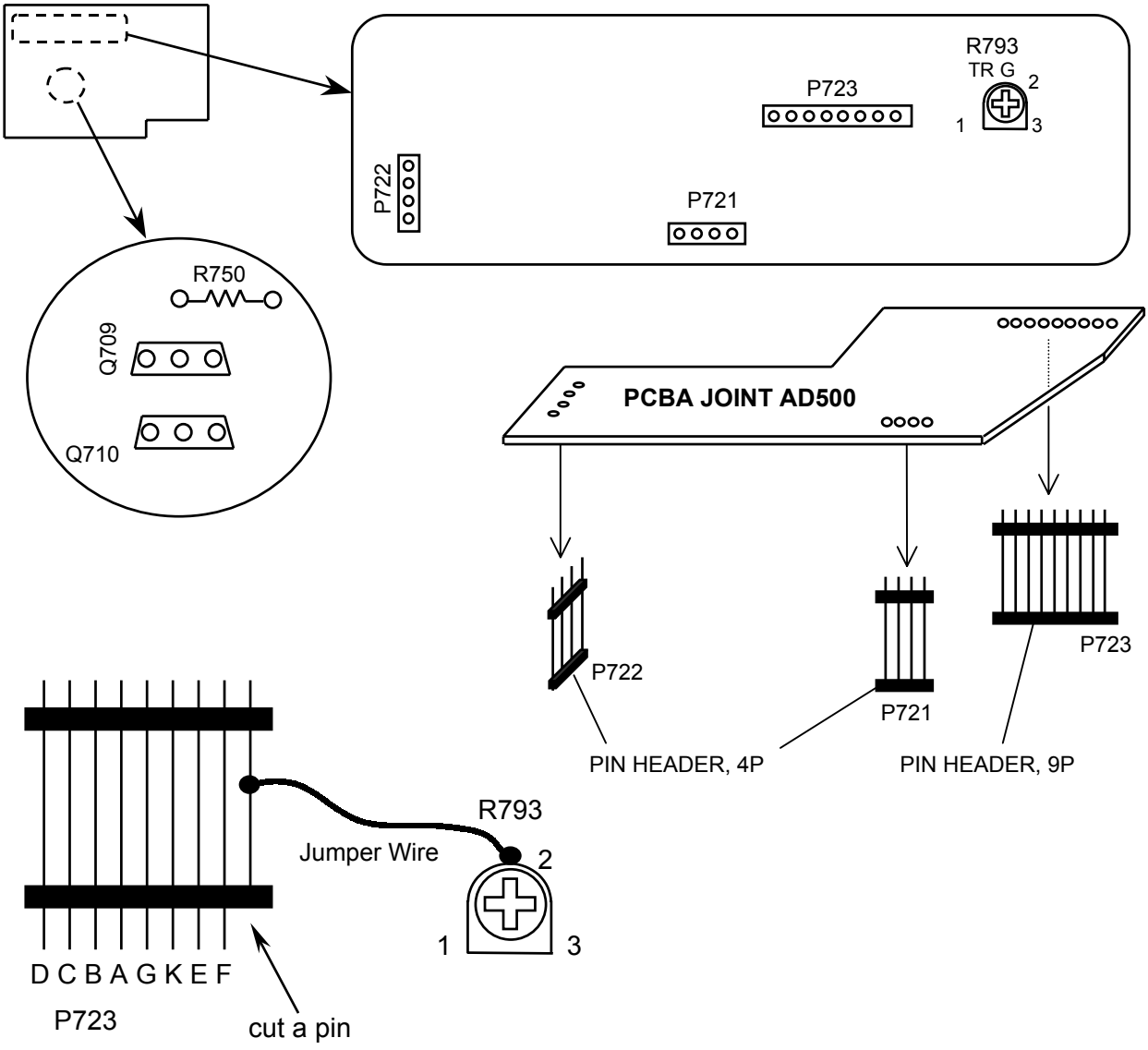


2-3. Unit with CONT-CD PCB Assy (PCB Version B) and KSS213C PCB Assy

	OLD		Qty	NEW (Parts Required)		Qty
R750		Vacant	0	3R001951	10 OHM	1
P721	3E010360	CONNCT PLUG B 4B-PH-K-S	1	3E010970	PIN HEADER, 4P	2
P722	3E003830	CONNCT PLUG B 4B-PH-RED	1			
P723	3E010400	CONNCT PLUG B 8B-PH-K-S	1	3E010980	PIN HEADER, 9P	1
Q709 Q710		Vacant		3S000301	TR, DTA124ES	2
	3E95162-00A	PCBA, KSS213C	1		Removed	0
				3E95397-00A	PCBA JOINT AD500	1

Note:
1. KSS213C PCB Assy has been connected to CONT-CD PCB Assy (Version B to D) with hard wiring (soldering) while version E has connectors.
2. R750/Q709/Q710 can be taken out of KSS213C PCB Assy. Move them to CONT-CD PCB Assy.

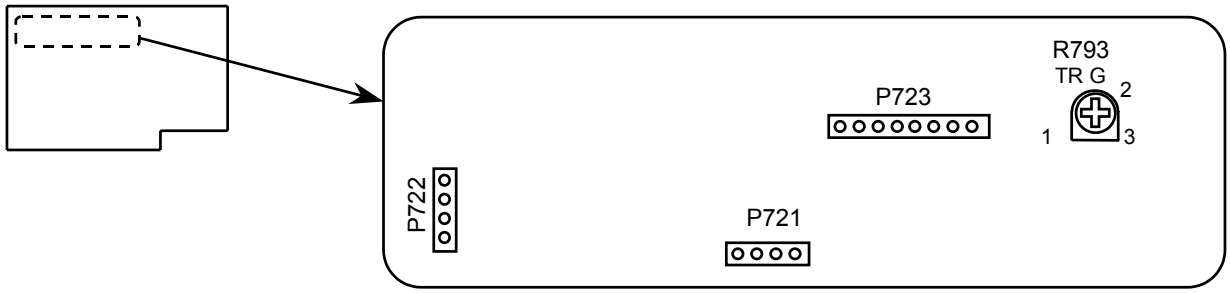
CONT-CD PCB Assy (Top View)

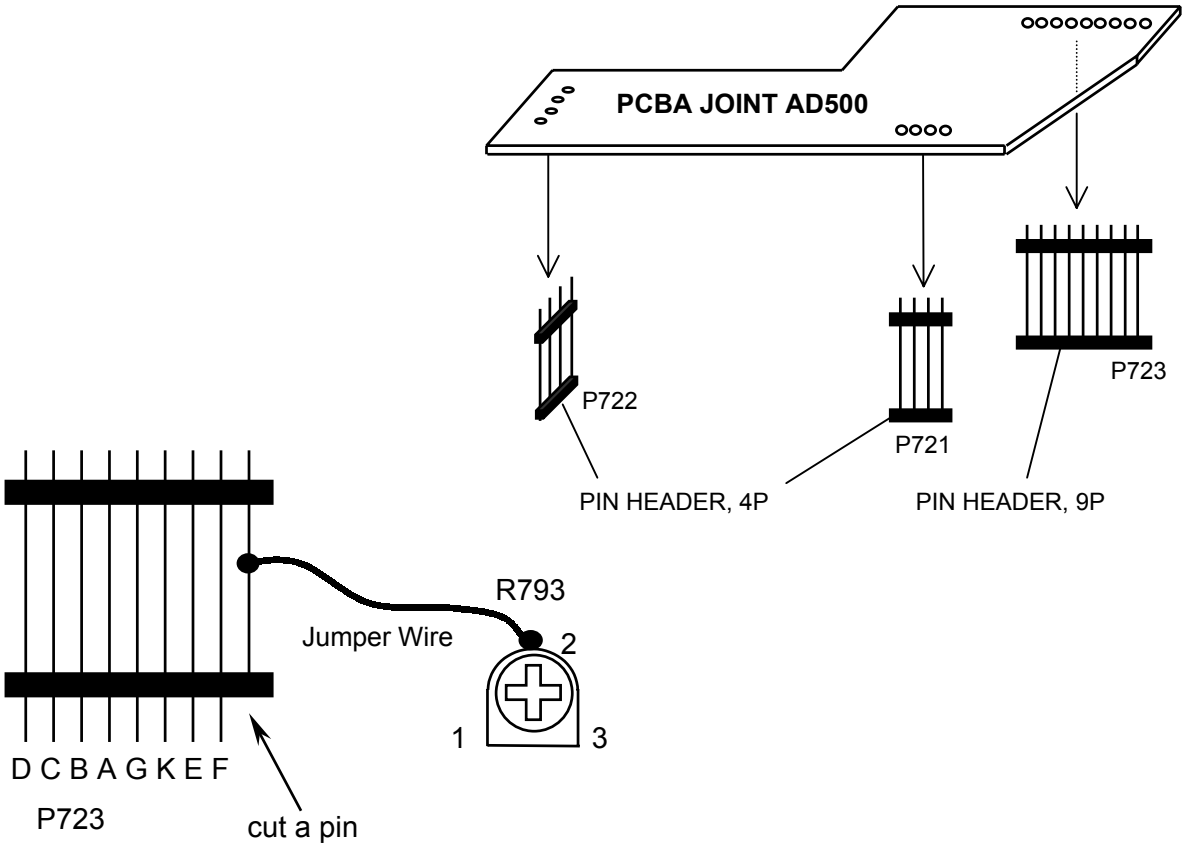


2-4. Unit with CONT-CD PCB Assy (PCB Version B) Very Beginning Unit

	OLD		Qty	NEW (Parts Required)		Qty
P721	3E010360	CONNCT PLUG B 4B-PH-K-S	1	3E010970	PIN HEADER, 4P	2
P722	3E003830	CONNCT PLUG B 4B-PH-RED	1			
P723	3E010400	CONNCT PLUG B 8B-PH-K-S	1	3E010980	PIN HEADER, 9P	1
				3E95397-00A	PCBA JOINT AD500	1

CONT-CD PCB Assy (Top View)





TECHNICAL INFORMATION

TASCAM CD-A700, Change of CD Mechanism

No. **0319**
DATE 20th June 2003

Original CD Mech Assy (KSL-2130CCM) is no longer available. New CD Mech Assy, WSL-2130CCM has been mounted on the products with S/No. 0310183 and higher.

Original	New
3M00790-00A, KSL-2130CCM	3M01296-00A, WSL-2130CCM

Note:
• Original and new mechanism are full-compatible.

Additional Change

With new mechanism, there is a possibility that a heavy disc (like TEAC MCD-151 test disc that has a metal center ring) cannot be loaded enough causing automatic eject. Even if loaded, disc may not be clamped firmly then focus servo may not work correctly.

Therefore, driving current for loading motor has been increased on the products with S/No. 0380001 and higher. By this change, tray speed is increased by about 10 %.

R755/R756 (CONT-CD PCB Assy) 1.5 kΩ → 3.3 kΩ (P/No. 3R000841)

TEAC

TECHNICAL INFORMATION

CD-A500/A630/A700, W-780R/790R/860R, Static Noise

No. **0113R**
DATE 16th July 2001

This is the revised edition of Tech-Info No. 0113. W-488R and W-600R have been added in the list.

In a low humidity environment, a low level static noise is heard on playback due to that the static electricity is accumulated on the capstan flywheels. New flywheels have been designed to have the conductivity.

Model	**Mechanism Assy with new flywheel**	**New Flywheel (FWD side)**	**New Flywheel (REV side)**
W-780R AD-500 CD-A500 CD-A700	3M00103-00B (P) 3M00102-00B (R/P)	9A083871-00	9A087523-00
W-790R W-860R	3M00542-00B (P) 3M00541-00B (R/P)	9A083871-00	9A087523-00
AD-600 CD-A630	3M01115-00B	9A087815-00	9A087521-00
DC-D6800	3M00686-00A	9A087813-00 (Deck 1 flywheel)	9A087812-00 (Deck 2 flywheel)
W-488R W-600R	3M00728-00B	9A087812-00 (Deck 2) 9A087813-00 (Deck 1)	9A087522-00 (Deck 2)

Following products have new flywheels.

W-488R	0210001 and higher
W-600R	0210001 and higher
W-780R	No production
W-790R	0330001 and higher
W-860R	0340001 and higher
AD-500	0480001 and higher
AD-600	0040001 and higher
CD-A500	0340001 and higher
CD-A630	0040001 and higher
CD-A700	No production
DC-D6800	No production

TEAC

TECHNICAL INFORMATION

CD-A500/A630/A700, W-780R/790R/860R, Static Noise

No. **0113**
DATE 05th July 2001

In a low humidity environment, a low level static noise is heard on playback due to that the static electricity is accumulated on the capstan flywheels. New flywheels have been designed to have the conductivity.

Model	**Mechanism Assy with new flywheel**	**New Flywheel (FWD side)**	**New Flywheel (REV side)**
W-780R AD-500 CD-A500 CD-A700	3M00103-00B (P) 3M00102-00B (R/P)	9A083871-00	9A087523-00
W-790R W-860R	3M00542-00B (P) 3M00541-00B (R/P)	9A083871-00	9A087523-00
AD-600 CD-A630	3M01115-00B	9A087815-00	9A087521-00
DC-D6800	3M00686-00A	9A087813-00 (Deck 1 flywheel)	9A087812-00 (Deck 2 flywheel)

Following products have new flywheels.

W-780R	No production
W-790R	0330001 and higher
W-860R	0340001 and higher
AD-500	0480001 and higher
AD-600	0040001 and higher
CD-A500	0340001 and higher
CD-A630	0040001 and higher
CD-A700	No production
DC-D6800	No production