XR-4890

SERVICE MANUAL

US Model
Canadian Model

Photo: XR-4890

Model Name Using Similar Mechanism	XR-C5100
Tape Transport Mechanism Type	MG-25F-136

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
13 watts for XR-4890 per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1 % total harmonic distortion.

Other specifications

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 18,000 Hz
Signal-to-noise ratio	

Cassette type	
TYPE II, IV	61 dB
TYPE I	58 dB

Tuner section

FM

Tuning range	87.5 – 107.9 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.4 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	30 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	35 W × 4 (at 4 ohms)

– Continued on next page –

FM/AM CASSETTE CAR STEREO

MICROFILM

SONY®

General

Outputs	Audio output Power antenna relay control lead Power amplifier control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 181 mm ($7\frac{1}{2} \times 2\frac{3}{8} \times 7\frac{1}{4}$ in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 164 mm ($7\frac{1}{4} \times 2\frac{1}{8} \times 6\frac{1}{2}$ in.) (w/h/d)
Mass	Approx. 1.2 kg (2 lb 10 oz)
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)
Optional accessories	Rotary commander RM-X4S

Design and specifications are subject to change without notice.

TABLE OF CONTENTS

Flexible Circuit Board Repairing

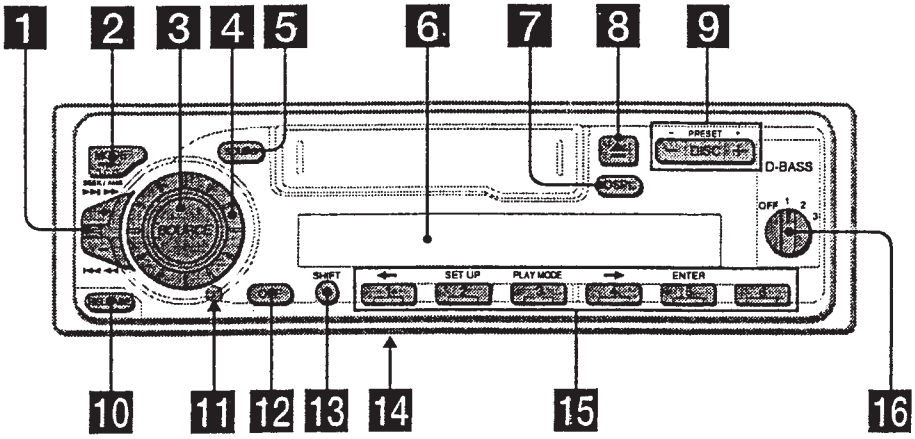
- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

This section is extracted from instruction manual.

Location of controls



Refer to the pages listed for details.

1 **SEEK/AMS (seek/Automatic Music Sensor/manual search) control 7, 9, 14**

2 **MODE (◄I►) button**

During tape playback:
Playback direction change 7

During radio reception:
BAND select 8, 9

3 **SOURCE (TAPE/TUNER) button 7, 8, 9, 13**

4 **Dial (volume/bass/treble/left-right/rear-front control) 6, 12**

5 **SOUND button 12**

6 **Display window**

7 **DSPL (display mode change) button 7, 9, 13, 14**

8 **⏏ (eject) button 7**

9 **PRST button**

During radio reception:
Preset stations select 9

10 **RELEASE (front panel release) button 5, 17**

11 **Reset button (located on the front side of the unit behind the front panel) 5**

12 **OFF button 5, 7**

13 **SHIFT button**

PLAY MODE **8, 9, 15**

SET UP **6, 12, 14**

14 **POWER SELECT switch (located on the bottom of the unit)**
See "POWER SELECT switch" in the Installation/Connections manual.

15 **Number buttons 9**

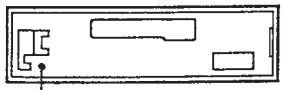
16 **D-BASS control 13**

4

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Remove the front panel and press the reset button with a pointed object, such as a ball-point pen.



Reset button

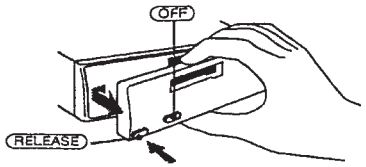
Note
Pressing the reset button will erase the clock setting and some memorized functions.

Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

1 Press (OFF).

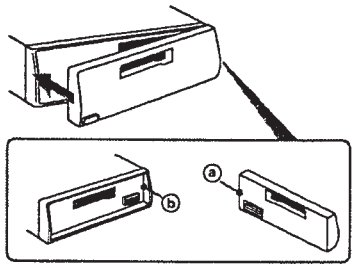
2 **Press (RELEASE), then slide the front panel a little to the left, and pull it off towards you.**



Notes
- *Be sure not to drop the panel when detaching it from the unit.*
- *If you detach the panel while the unit is still turned on, the power will turn off automatically to prevent the speakers from being damaged.*
- *When carrying the front panel with you, use the supplied front panel case.*

Attaching the front panel

Attach part ⓐ of the front panel to part ⓑ of the unit as illustrated and push the left side into position until it clicks.



Notes
- *Be sure not to attach the front panel upside down.*
- *Do not press the front panel too hard against the unit when attaching it.*
- *Do not press too hard or put excessive pressure on the display window of the front panel.*
- *Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight or where there may be a considerable rise in temperature.*

Caution alarm

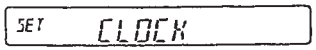
If you turn the ignition key switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds (only when the POWER SELECT switch on the bottom of the unit is set to the Ⓐ position).
If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.

Setting the clock

The clock uses a 12-hour digital indication.

Example: To set the clock to 10:08

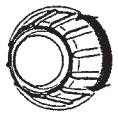
1 **Press (SHIFT), then press (2) (SET UP) repeatedly until "CLOCK" appears.**



❶ **Press (4) (→).**

The hour indication flashes.

❷ **Set the hour.**



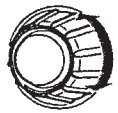
to go backward

to go forward

❸ **Press (4) (→).**

The minute indication flashes.

❹ **Set the minute.**



to go backward

to go forward

2 **Press (SHIFT).**

The clock starts.

3 **Press (SHIFT).**
After the clock setting is complete, the display returns to normal playback mode.

Note
If the POWER SELECT switch on the bottom of the unit is set to the Ⓑ position, turn the power on first, then set the clock.

Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are for tuner adjustments to be done only by service technicians.
- Choose the installation location carefully so that the unit will not interfere with normal driving.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to detach and attach the front panel

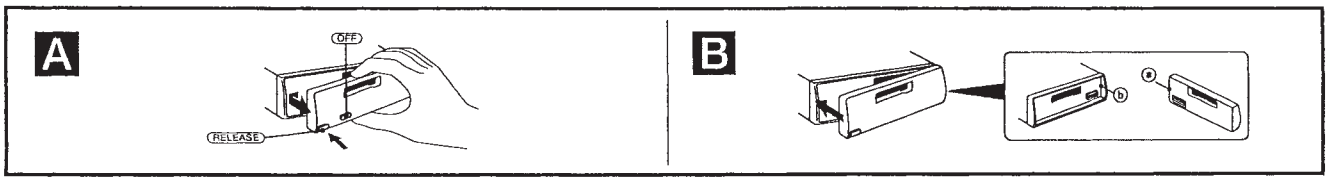
Before installing the unit, detach the front panel.

A To detach

Before detaching the front panel, be sure to press (OFF). Press (RELEASE), then slide the front panel a little to the left, and pull it off towards you.

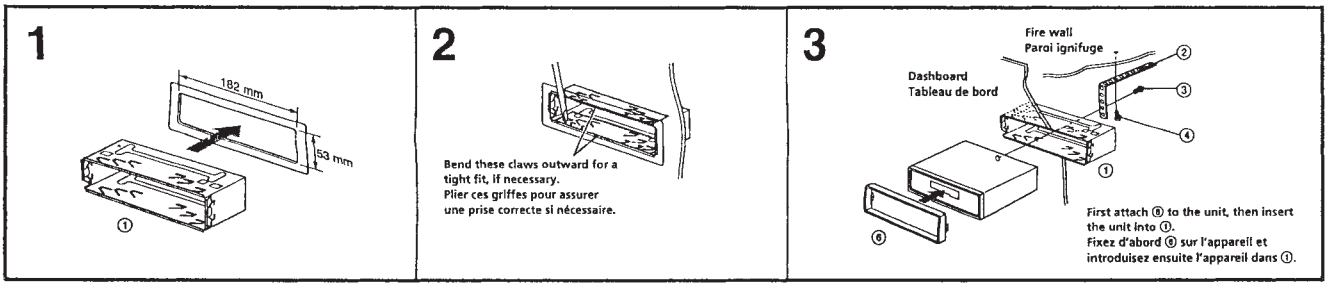
B To attach

Attach part ⓐ of the front panel to part ⓑ of the unit as illustrated and push the left side into position until it clicks.



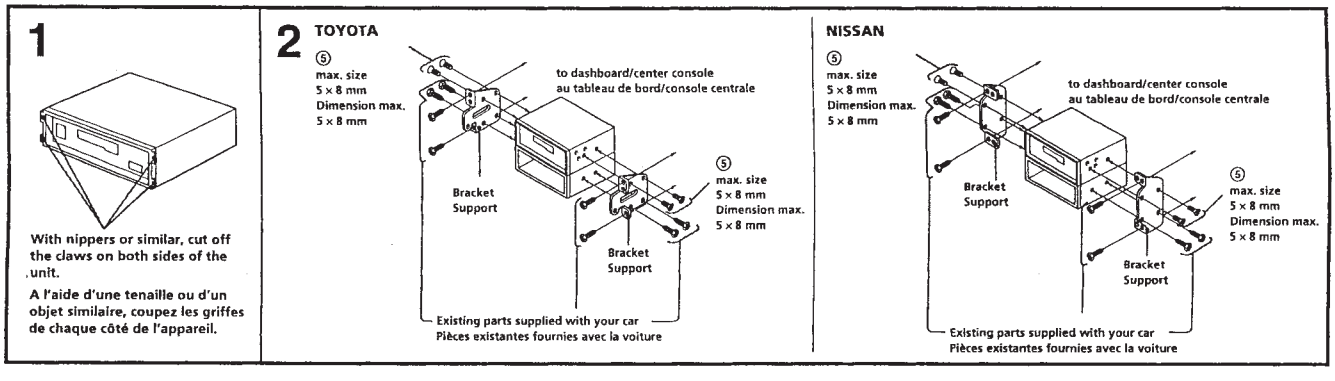
Mounting example

Installation in the dashboard



Mounting the unit in a Japanese car

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.



Note
To prevent malfunction, install only with the supplied screws ⑤.

Installation

Précautions

- Ne pas toucher les quatre orifices sur le panneau supérieur de l'appareil. Ils servent aux réglages du syntoniseur qui ne doivent être effectués que par un technicien.
- Choisir soigneusement l'emplacement d'installation pour que l'appareil ne gêne pas le chauffeur pendant la conduite.
- Eviter d'installer l'appareil dans un endroit exposé à des températures élevées, comme en plein soleil ou à proximité d'une bouche d'air chaud, ou à de la poussière, saleté ou vibrations violentes.
- Pour garantir un montage sûr, n'utiliser que le matériel fourni.

Réglage de l'angle de montage

Ajuster l'inclinaison à un angle inférieur à 20°.

Retrait et pose de la façade

Avant d'installer l'appareil, déposer la façade.

A Retrait

Avant de déposer la façade, ne pas oublier d'appuyer sur (OFF). Appuyer ensuite sur (RELEASE), puis faire glisser la façade légèrement vers la gauche et enlever la façade en tirant à soi.

B Pose

Fixez la partie ⓐ de la façade sur la partie ⓑ de l'appareil, comme indiqué sur l'illustration, puis poussez jusqu'au déclic.

Exemple de montage

Installation dans le tableau de bord

Installation de l'appareil dans une voiture japonaise

Cet appareil ne peut pas être installé dans certaines voitures japonaise. Consultez, dans ce cas, votre concessionnaire Sony.

Remarque
Pour éviter tout dysfonctionnement, utilisez uniquement les vis ⑤ pour le montage.

Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Be careful not to pinch any wires between a screw and the body of the car or this unit or between any moving parts such as the seat railing, etc.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

If your car has no accessory position on the ignition key switch

— POWER SELECT switch

The front panel illumination is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery to wear **if your car has no accessory position on the ignition key switch.** To avoid this battery wear, **set the POWER SELECT switch located on the bottom of the unit to the ⓪ position, then press the reset button.** The illumination is reset to stay off while the unit is not being played.

Notes

- *The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⓪ position.*
- *Do not use excessive force when changing the POWER SELECT switch.*

Reset button

When the installation and connections are complete, be sure to press the reset button with a ball-point pen, etc.

Connexions

Précautions

- Cet appareil est exclusivement conçu pour fonctionner sur une tension de 12 V CC avec masse négative.
- Veiller à ne pas coincer de fils entre une vis et la carrosserie de la voiture ou cet appareil ou encore entre des pièces mobiles comme les glissières des sièges, etc.
- Avant d'effectuer les connexions, débrancher la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Brancher les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres branchements.
- Veiller à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoires.
- **Rassembler tous les fils de terre en un point de masse commun.**
- Brancher le câble jaune à un circuit libre de la voiture dont la capacité nominale est supérieure à la capacité du fusible de l'appareil. Si vous branchez cet appareil en série avec d'autres composants stéréo, le circuit de la voiture auquel ils sont raccordés doit afficher une capacité nominale supérieure à la somme des capacités individuelles de chaque composant. S'il n'y a pas de circuits de voiture affichant une capacité égale à la capacité du fusible de l'appareil, brancher l'appareil directement à la batterie. Si aucun circuit de voiture n'est disponible pour connecter cet appareil, brancher l'appareil à un circuit de voiture supérieur à la capacité du fusible de l'appareil de telle sorte que si l'appareil grille son fusible, aucun autre circuit ne soit coupé.

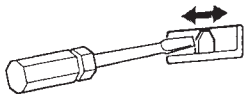
Si l'appareil est utilisé dans une voiture dont la clé de contact n'a pas de position accessoires

— Interrupteur POWER SELECT

L'éclairage de la façade est réglé en usine de manière à s'allumer même lorsque l'appareil ne fonctionne pas. Ce réglage risque cependant d'épuiser la batterie **si l'appareil est utilisé dans une voiture dont la clé de contact ne comporte pas de position accessoires.** Pour éviter d'épuiser la batterie, **régler l'interrupteur POWER SELECT situé sur le dessous de l'appareil sur la position ⓪ et appuyer ensuite sur la touche de réinitialisation.** L'éclairage est désormais réglé pour rester éteint quand l'appareil n'est pas utilisé.

Remarques

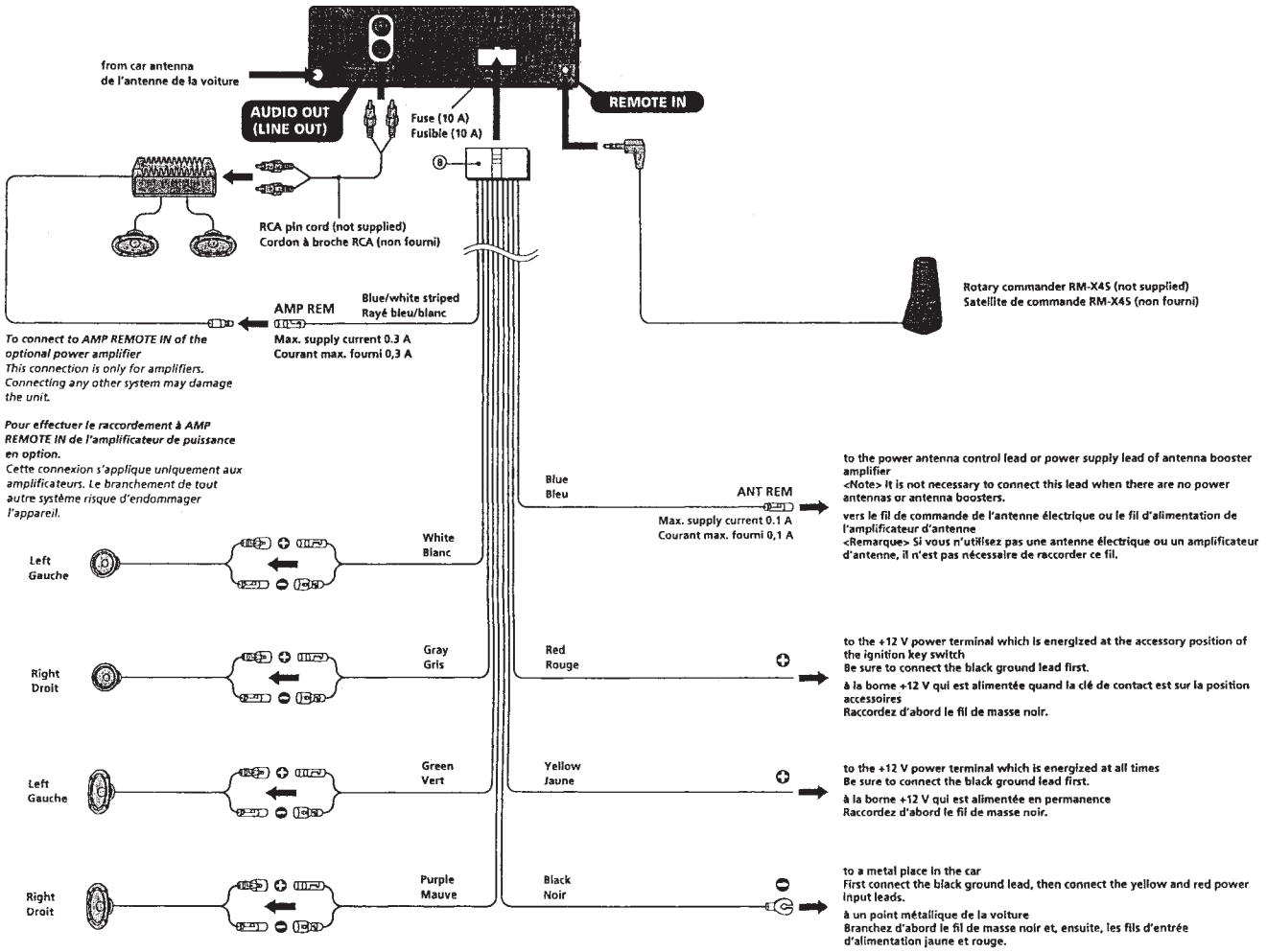
- *L'avertisseur de la façade n'est pas activé lorsque l'interrupteur POWER SELECT est réglé sur la position ⓪.*
- *N'exercez pas une pression excessive lorsque vous commutez l'interrupteur POWER SELECT.*



Touche de réinitialisation

Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo à bille, etc.

Connection example
Exemple de raccordement



Notes on the control leads
- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation) function.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Be sure to connect passive speakers to these terminals.*

Remarques sur les fils de contrôle
- *Le fil de commande de l'antenne électrique (bleu) fournit une alimentation de + 12 V CC lorsque vous mettez le syntoniseur sous tension ou que vous sélectionnez la fonction d'activation automatique (ATA) de la radio.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

Connexion pour la conservation de la mémoire
Lorsque le fil d'entrée d'alimentation jaune est raccordé, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur la connexion des haut-parleurs
- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder pas les bornes du système de haut-parleur au châssis de la voiture, et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Ne pas connecter de haut-parleurs actifs (équipés d'un amplificateur intégré) aux bornes de haut-parleur de l'appareil. Les haut-parleurs actifs risquent sinon d'être endommagés. Veiller par conséquent à raccorder des haut-parleurs passifs à ces bornes.*

Connection diagram
Schémas de connexion

Equipment used in illustrations (not supplied)
Appareils utilisés dans les illustrations (non fournis)

Front speaker
Haut-parleur frontal

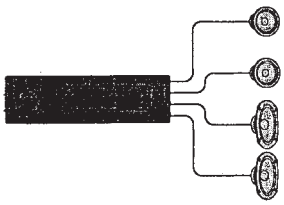
Power amplifier
Amplificateur de puissance

Rear speaker
Haut-parleur arrière

Note
For connecting two or more changers, the source selector XA-C30 (optional) is necessary.

Remarque
Dans le cas du raccordement de deux changeurs ou plus, le sélecteur de source XA-C30 (optionnel) est indispensable.

A



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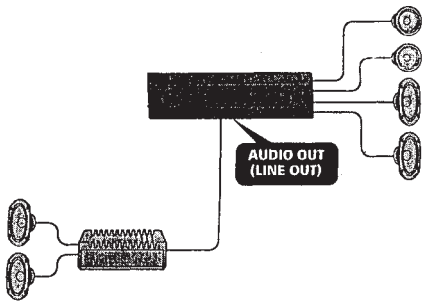


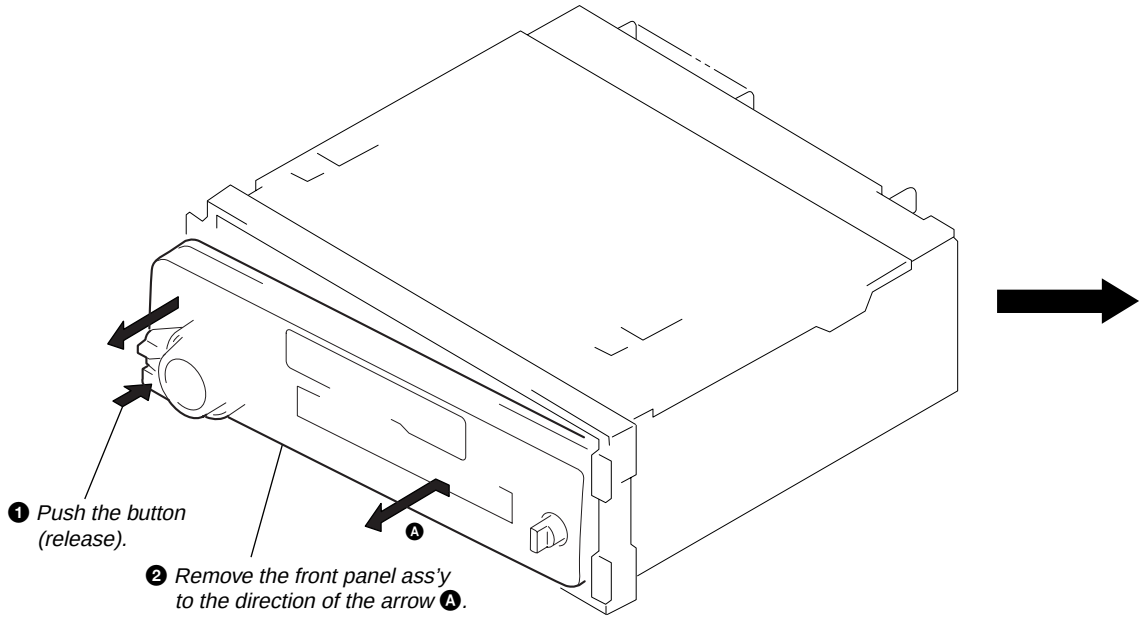
Notes
- *Be sure to connect the ground cord, before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Remarques
- *Raccordez d'abord le fil de masse avant de connecter l'amplificateur.*
- *Si vous raccordez un amplificateur de puissance et que vous n'utilisez pas l'amplificateur intégré, le bip sonore est désactivé.*

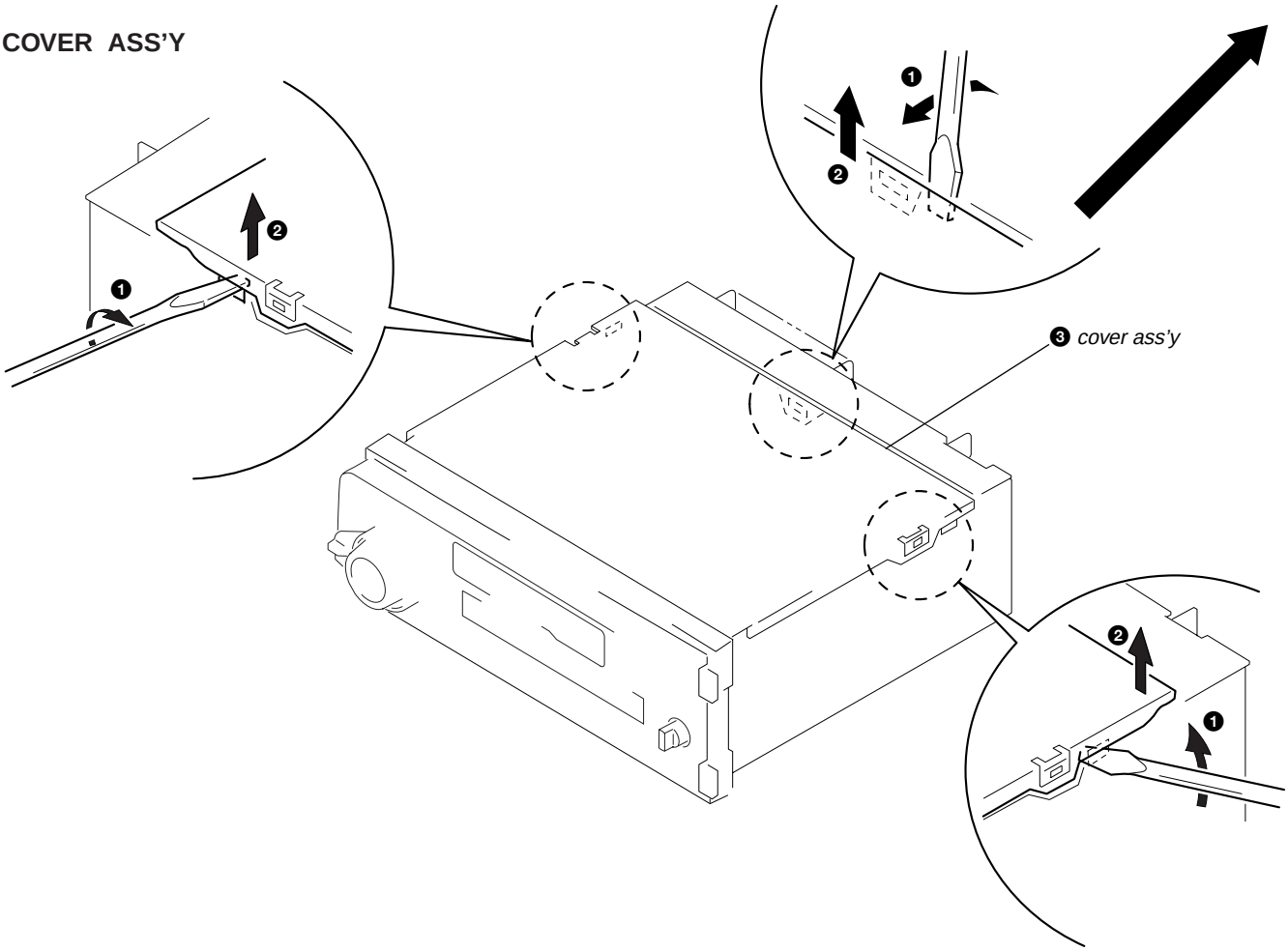
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

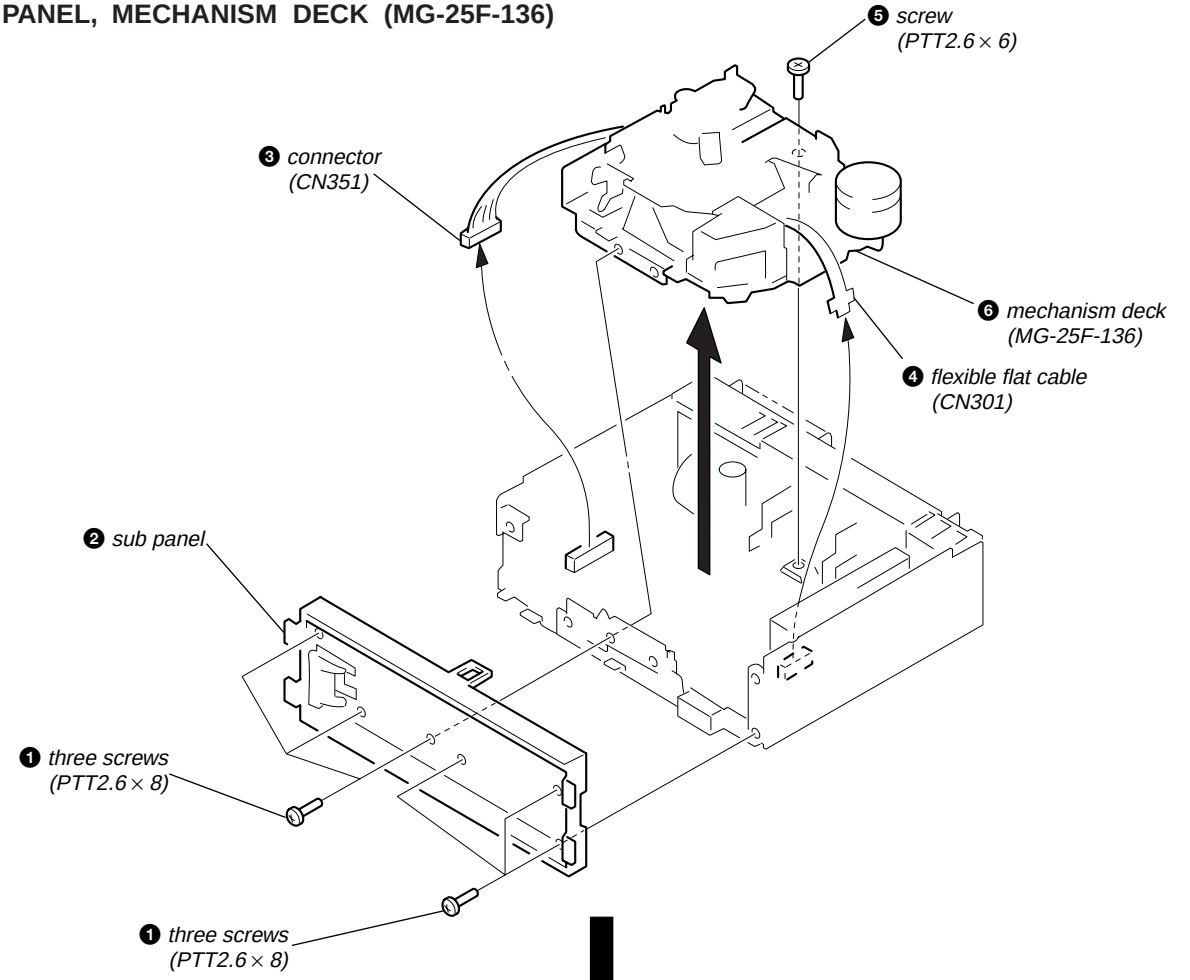
FRONT PANEL ASS'Y



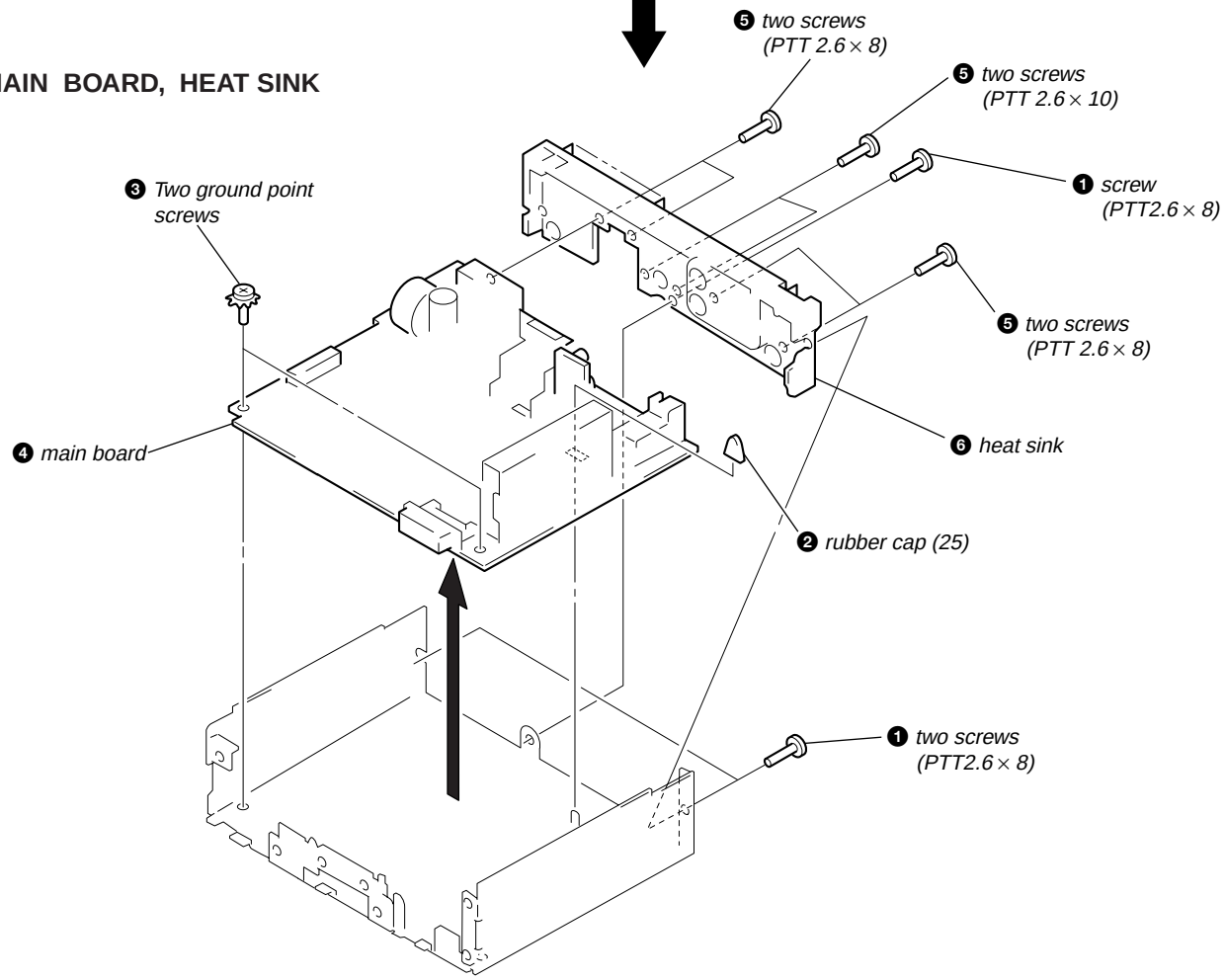
COVER ASS'Y



SUB PANEL, MECHANISM DECK (MG-25F-136)



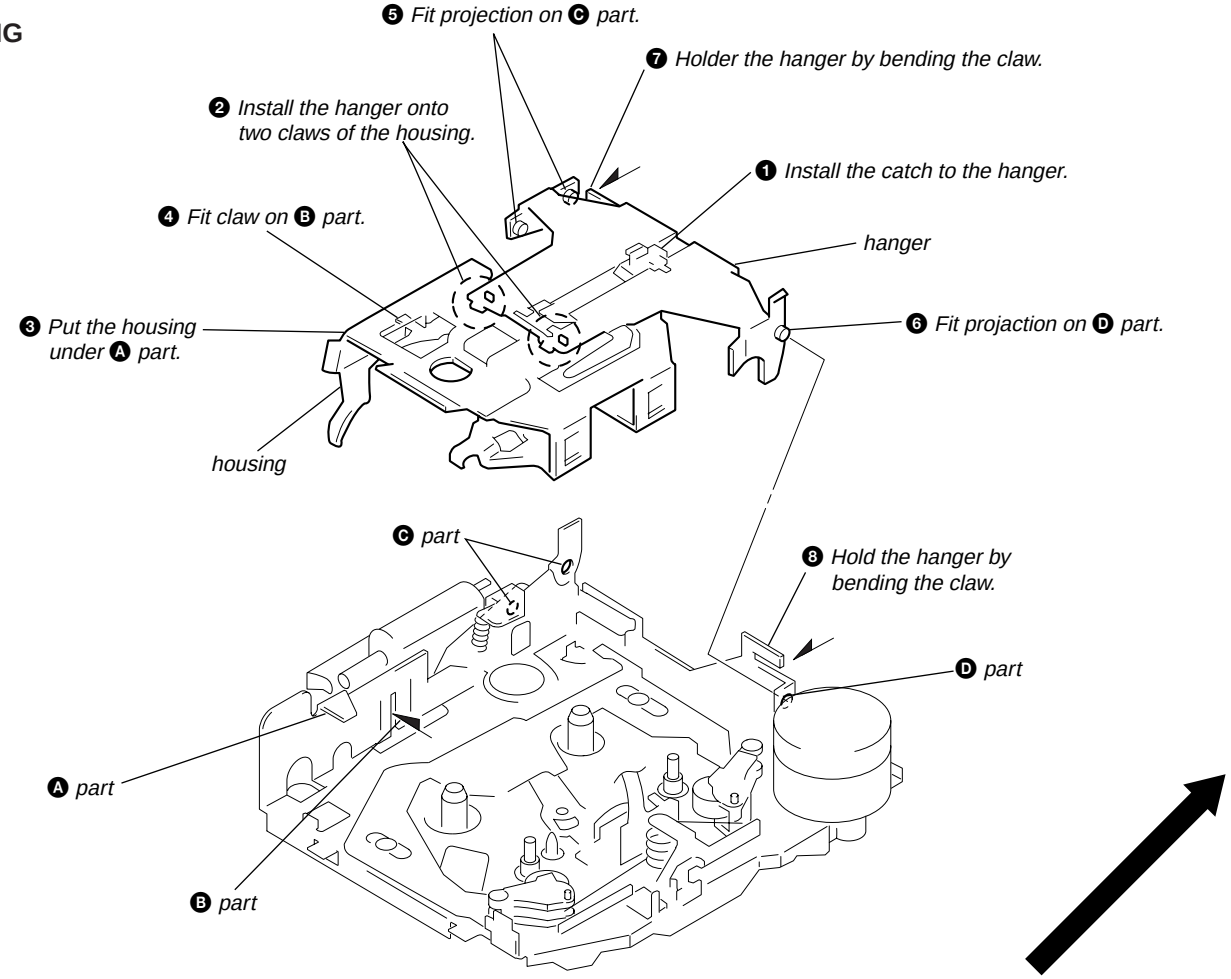
MAIN BOARD, HEAT SINK



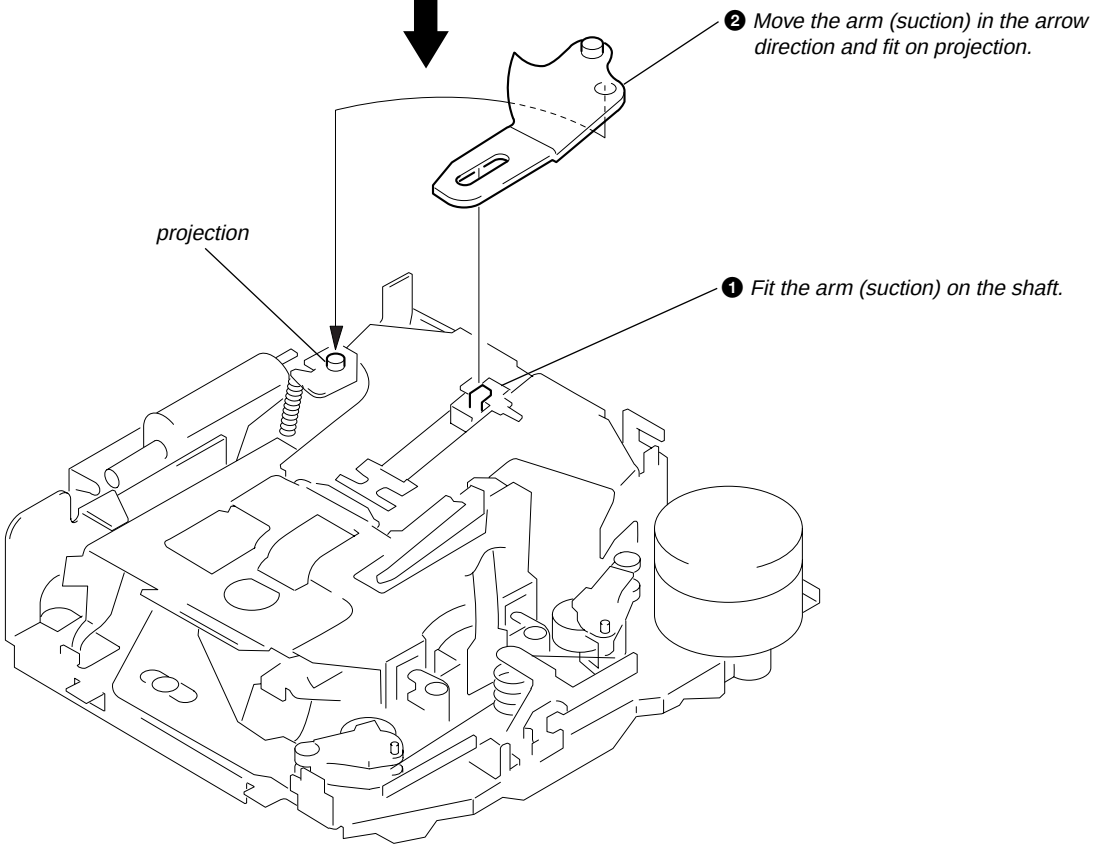
SECTION 3
ASSEMBLY OF MECHANISM DECK

Note: Follow the assembly procedure in the numerical order given.

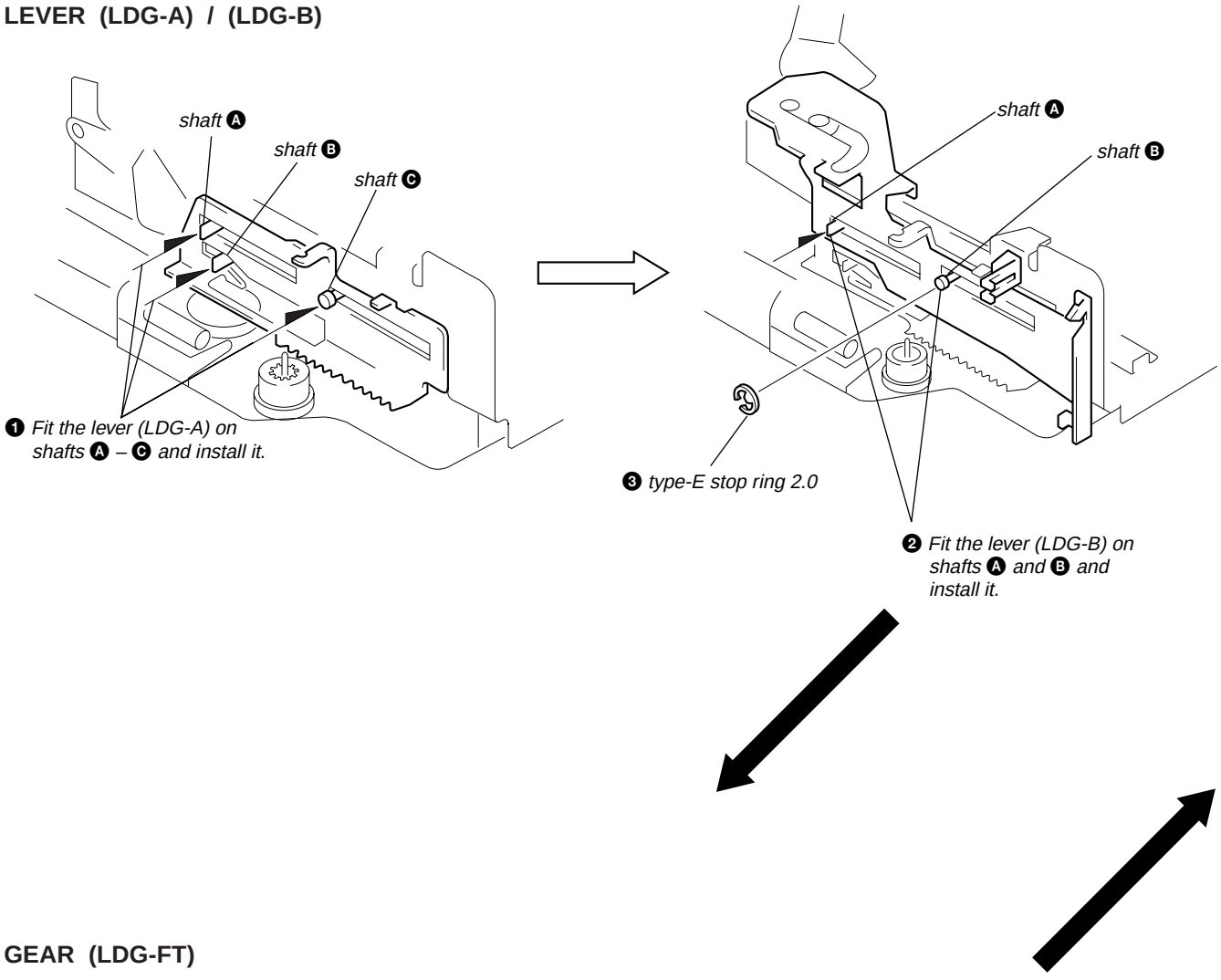
HOUSING



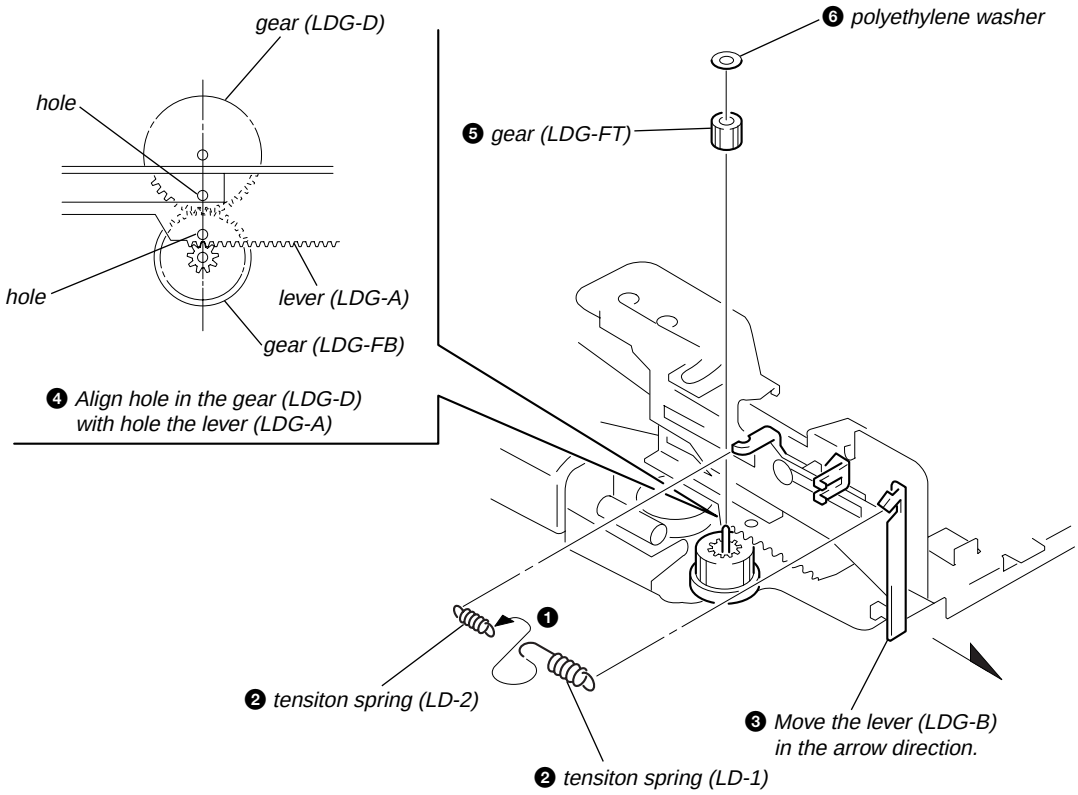
ARM (SUCTION)



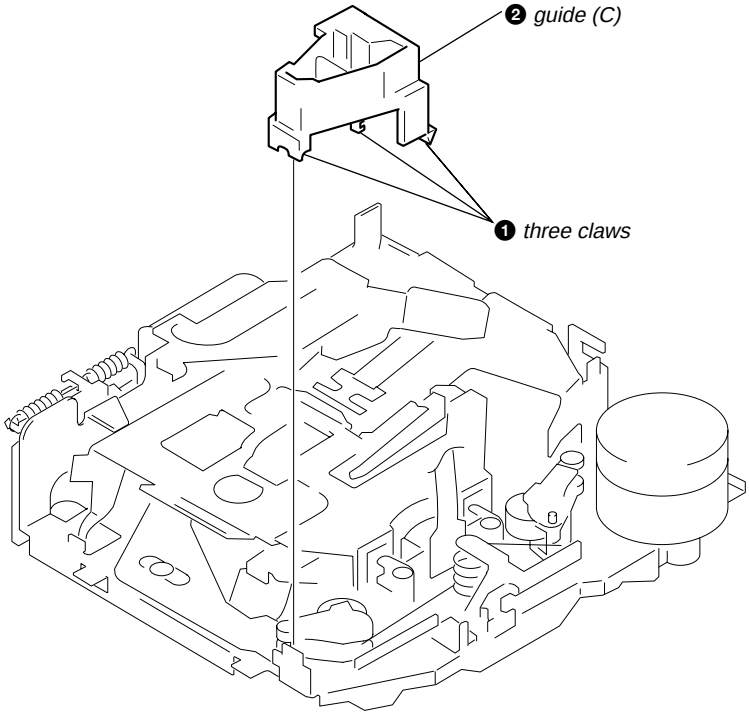
LEVER (LDG-A) / (LDG-B)



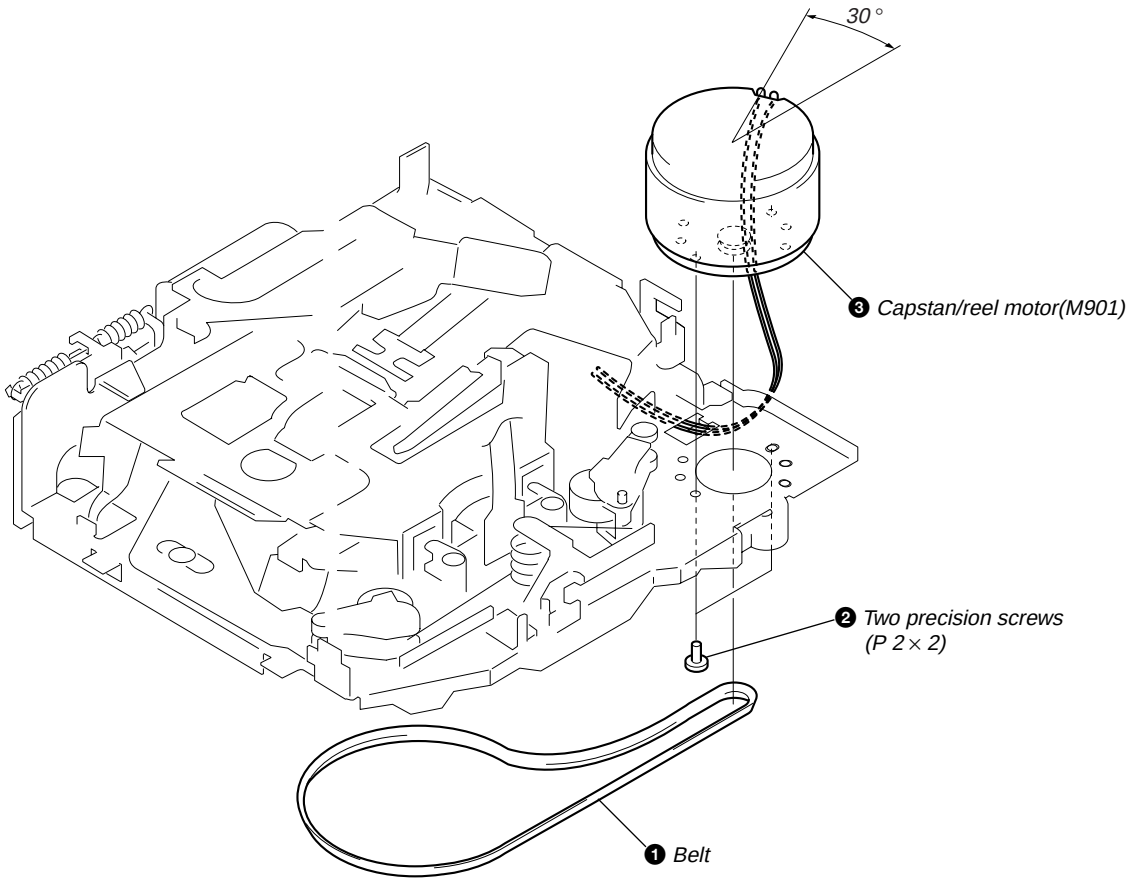
GEAR (LDG-FT)



GUIDE (C)



MOUNTING POSITION OF CAPSTAN/REEL MOTOR (M901)



SECTION 4
MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistene swab:
   playback head pinch roller
   rubber belt capstan
   idlers
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the power supply voltage unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	30 – 65 g•cm (0.42 – 0.90 oz·inch)
Forward Back Tension	CQ-102C	0.5 – 4.5 g•cm (0.01 – 0.06 oz·inch)
Reverse	CQ-102RC	30 – 65 g•cm (0.42 – 0.90 oz·inch)
Reverse Back Tension	CA-102RC	0.5 – 4.5 g•cm (0.01 – 0.06 oz·inch)
FF, REW	CQ-201B	60 – 200 g•cm (0.83 – 2.78 oz·inch)

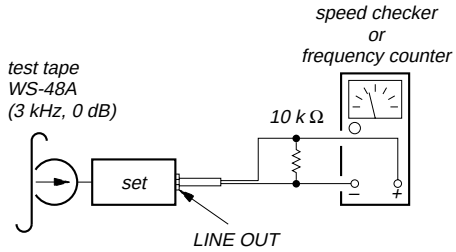
• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 90 g (more than 3.18 oz)
Reverse	CQ-403R	more than 90 g (more than 3.18 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

TAPE DECK SECTION | 0 dB=0.775 V

Tape Speed Adjustment
Setting:



Procedure:
1. Put the set into the PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the speed checker or frequency counter becomes in specification.

Specification: Constant speed

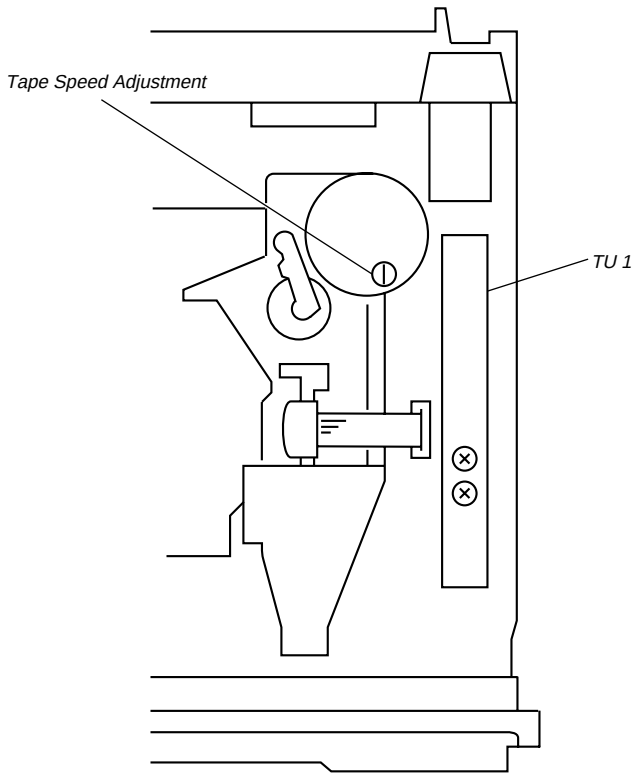
Speed checker	Frequency counter
–1.5 to +2.5%	2,955 to 3,075 Hz

TUNER SECTION | 0 dB=1 µV

The tuner section has no adjustment.

Adjustment Location:

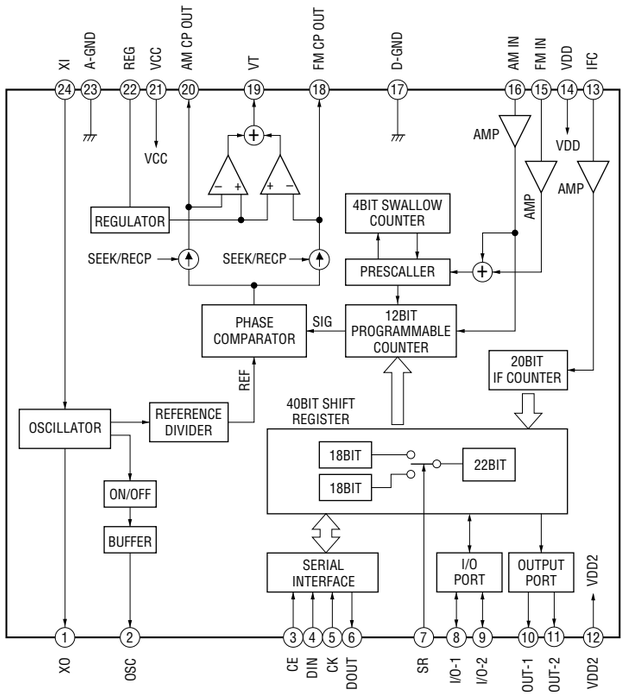
– SET UPPER VIEW –



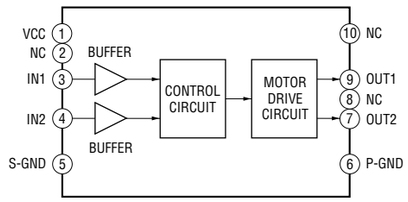
SECTION 6
DIAGRAMS

• IC Block Diagrams – MAIN Board –

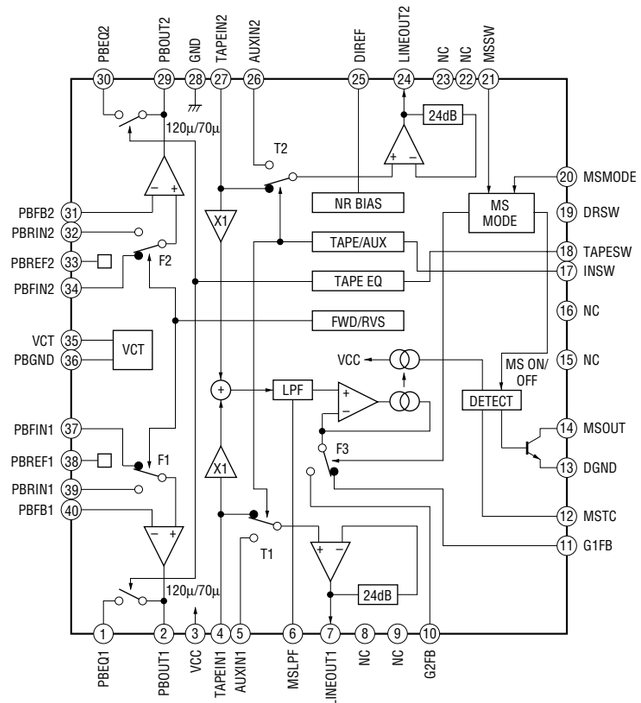
IC21 TB2118F (EL)



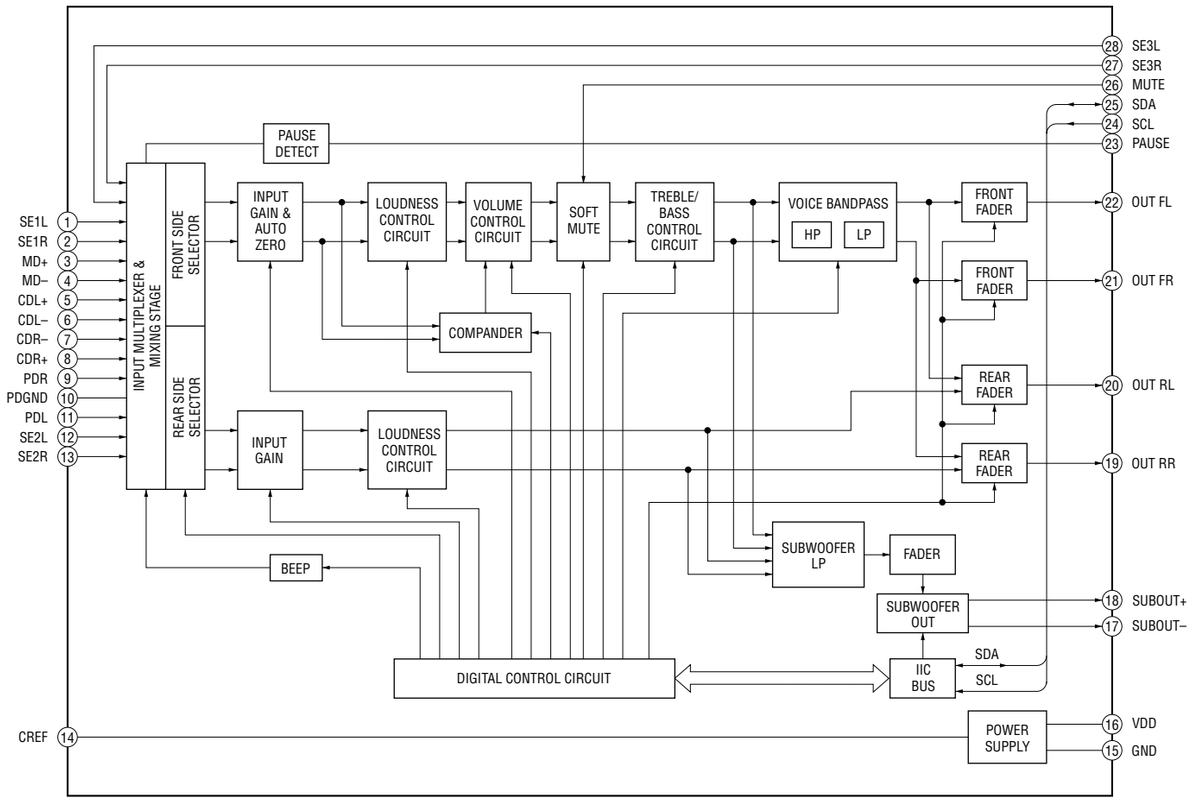
IC351 LB1930M-TLM



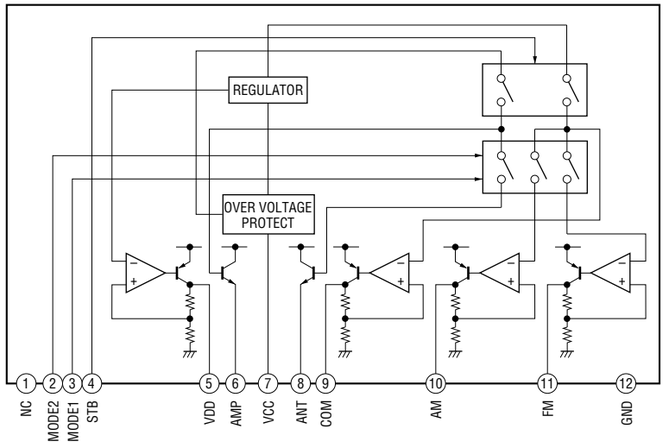
IC301 CXA2509AQ-T4



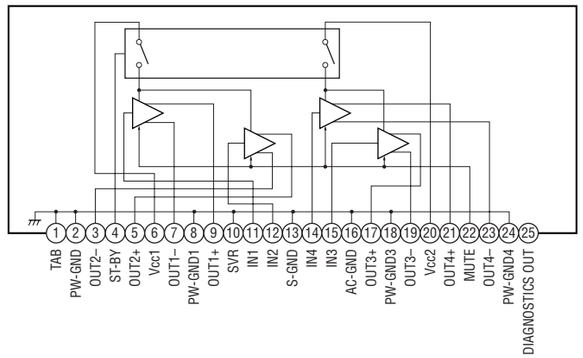
IC331 TDA7462D



IC661 BA3918-V2



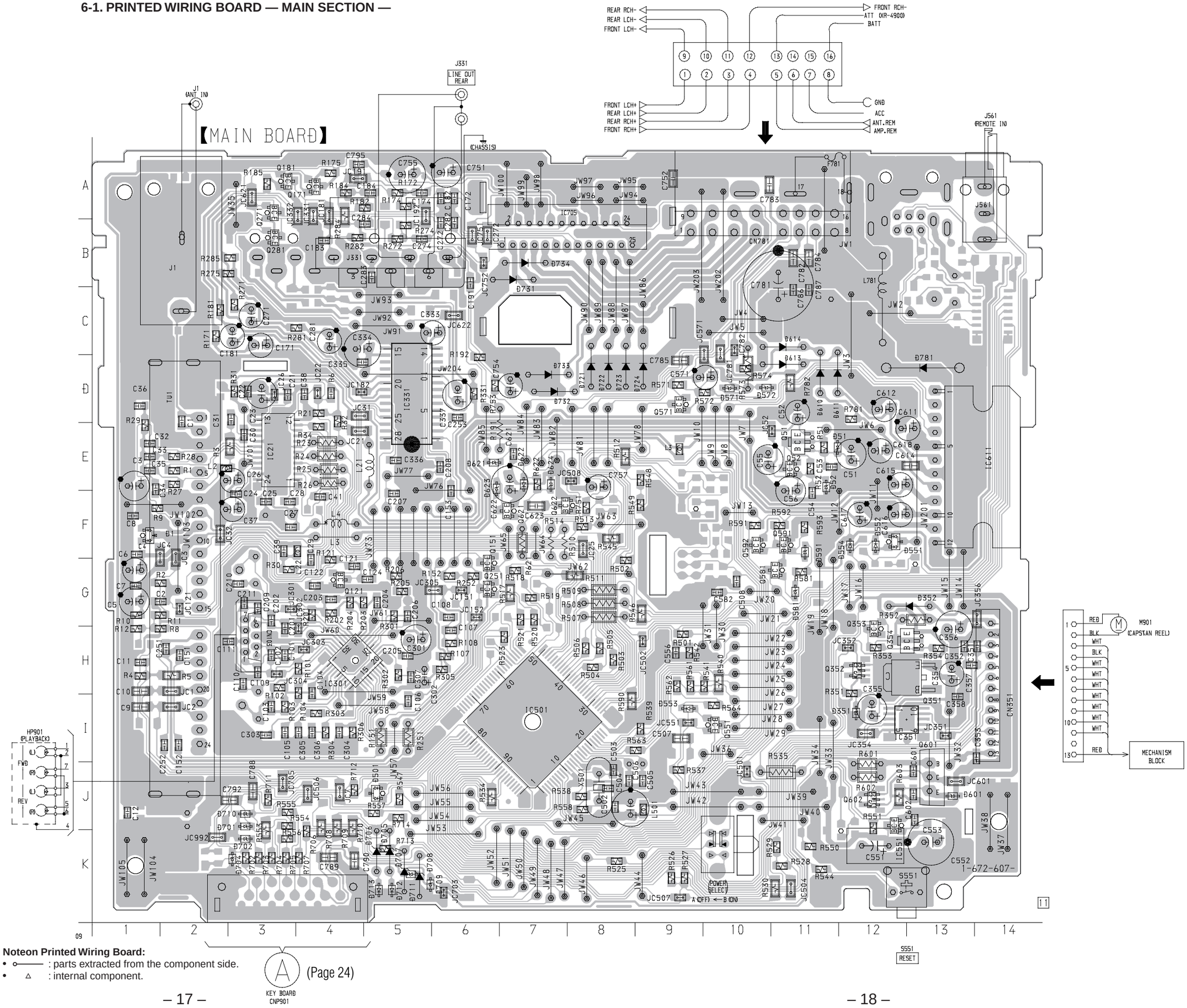
IC751 TDA7385



6-1. PRINTED WIRING BOARD — MAIN SECTION —

• **Semiconductor Location**

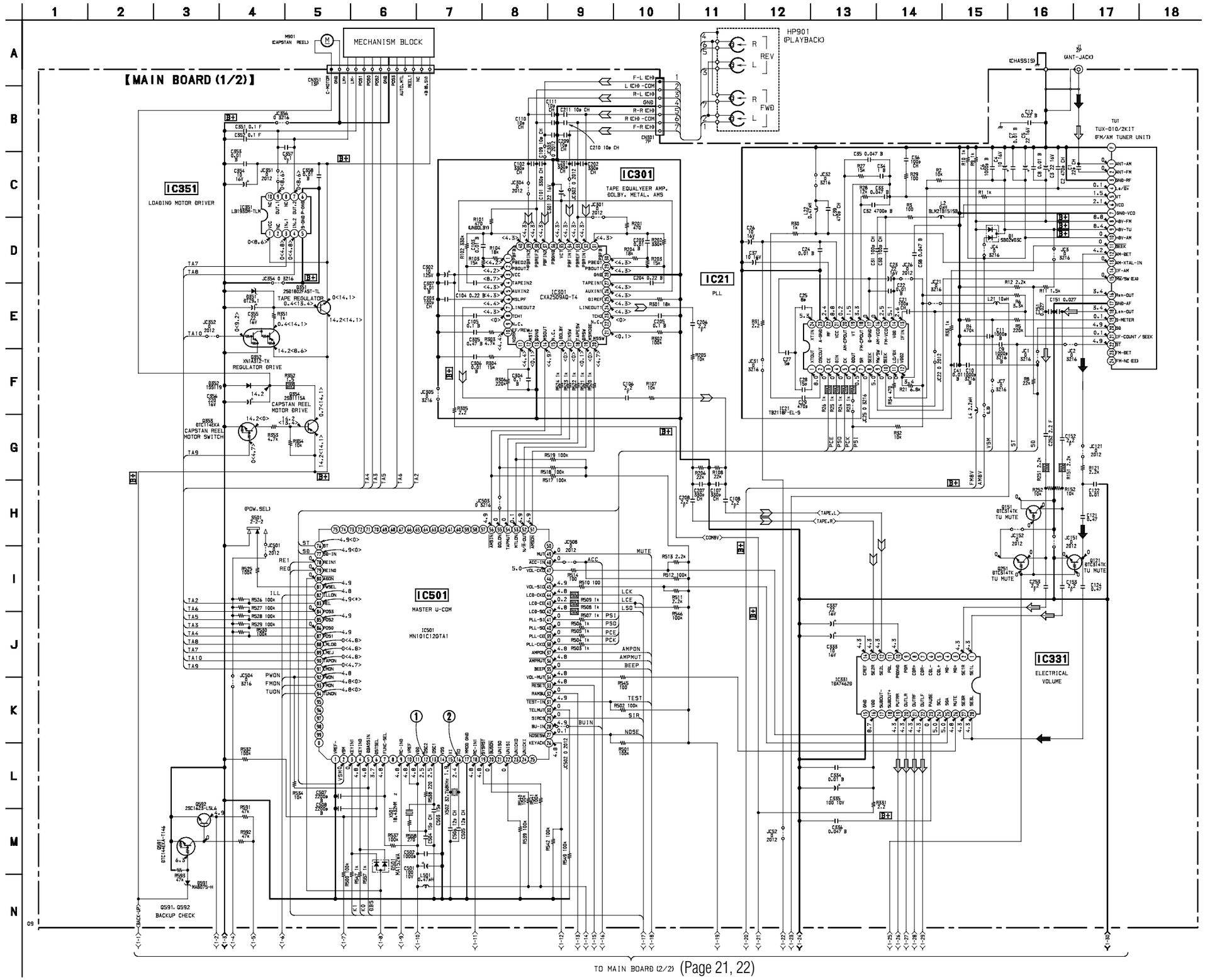
Ref. No.	Location
D1	F-1
D51	E-11
D52	E-11
D351	I-12
D352	G-13
D501	J-5
D551	F-12
D552	F-12
D553	I-9
D554	F-12
D571	D-10
D572	D-10
D581	G-11
D588	E-9
D591	F-11
D601	J-13
D610	D-11
D611	D-11
D613	D-11
D614	C-11
D621	E-6
D622	E-7
D623	E-6
D624	E-7
D701	J-3
D702	K-3
D704	K-3
D705	K-5
D706	K-5
D707	K-5
D708	K-5
D709	K-5
D710	J-3
D711	K-5
D712	K-5
D713	K-5
D721	D-8
D722	D-8
D723	D-8
D724	D-9
D731	B-7
D732	D-7
D733	D-7
D734	B-7
D781	D-13
IC21	E-3
IC301	H-4
IC331	D-5
IC351	I-12
IC501	I-7
IC551	J-12
IC611	E-14
IC751	B-7
Q51	E-11
Q52	E-11
Q121	G-4
Q151	G-6
Q171	A-4
Q181	A-3
Q251	G-6
Q271	A-3
Q281	B-3
Q351	H-13
Q352	H-12
Q353	H-12
Q354	H-12
Q551	I-10
Q571	D-9
Q581	G-11
Q583	F-9
Q591	F-11
Q592	F-10
Q601	J-13
Q602	J-12
Q621	F-7
Q622	F-7



Noteon Printed Wiring Board:

- ○——— : parts extracted from the component side.
- △ : internal component.

6-2. SCHEMATIC DIAGRAM — MAIN (1/2) SECTION — • Refer to page 15 for IC Block Diagrams.



• **Waveforms**

① 2.8Vp-p
18.432MHz
IC501 ⑫ OSC2

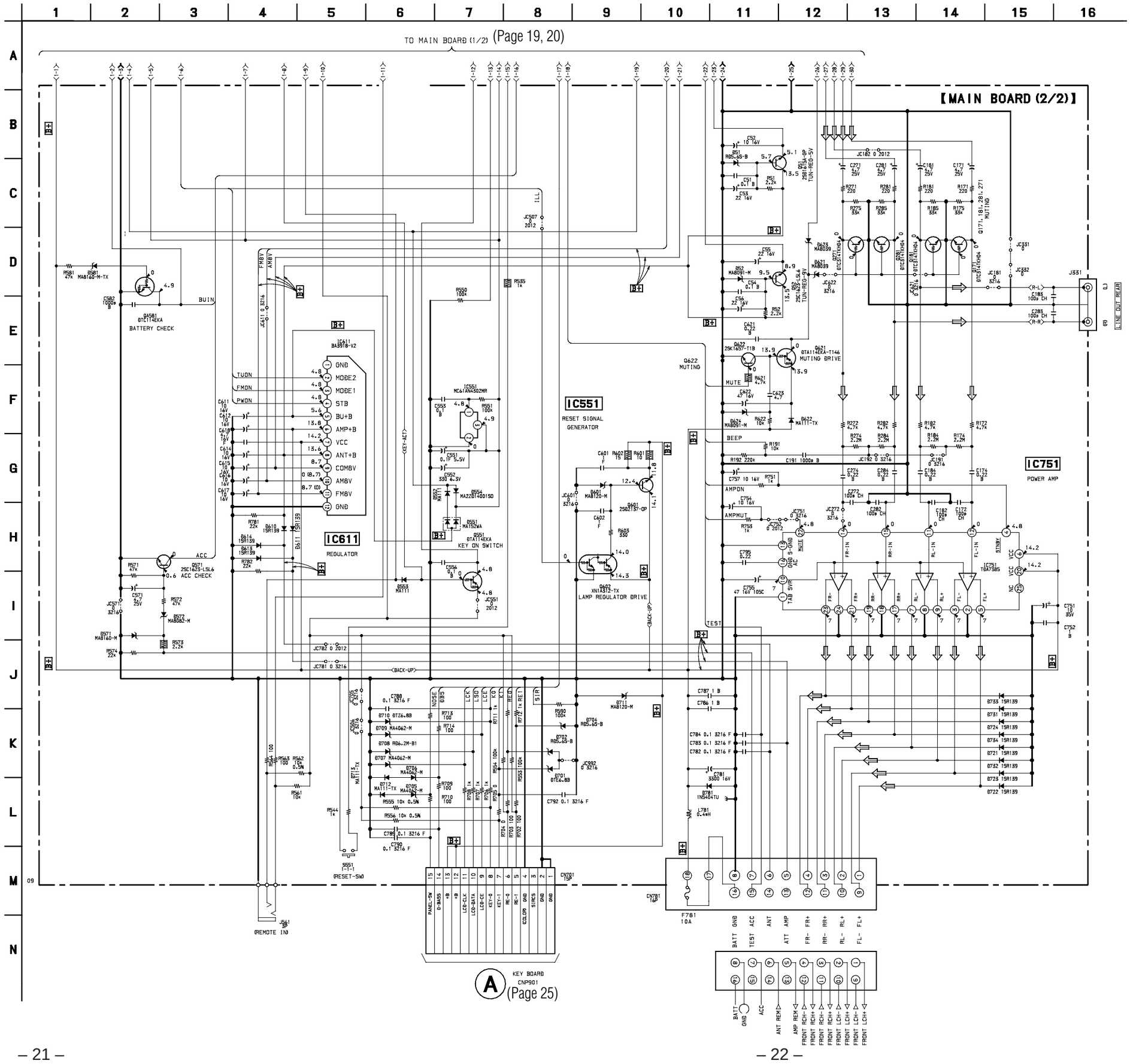
② 5.0Vp-p
32.768MHz
IC501 ⑯ XO

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  < > : TAPE PLAYBACK
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM (MW)
  ⇨ : TAPE PLAYBACK

6-3. SCHEMATIC DIAGRAM — MAIN (2/2) SECTION —

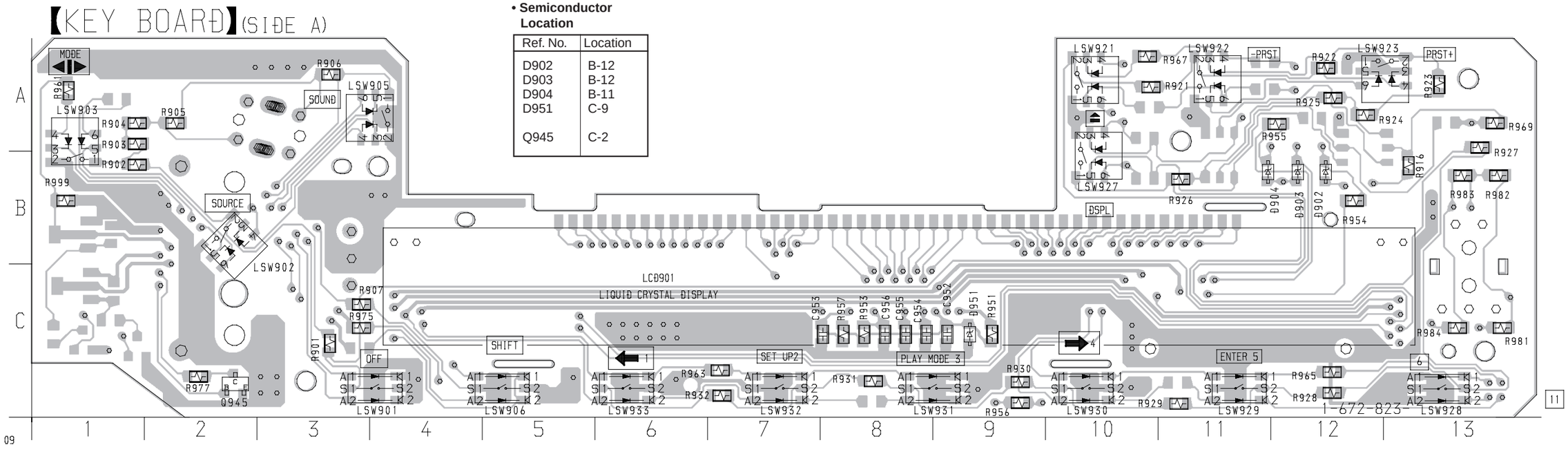
• Refer to page 15 for IC Block Diagrams.



Note on Schematic Diagram:

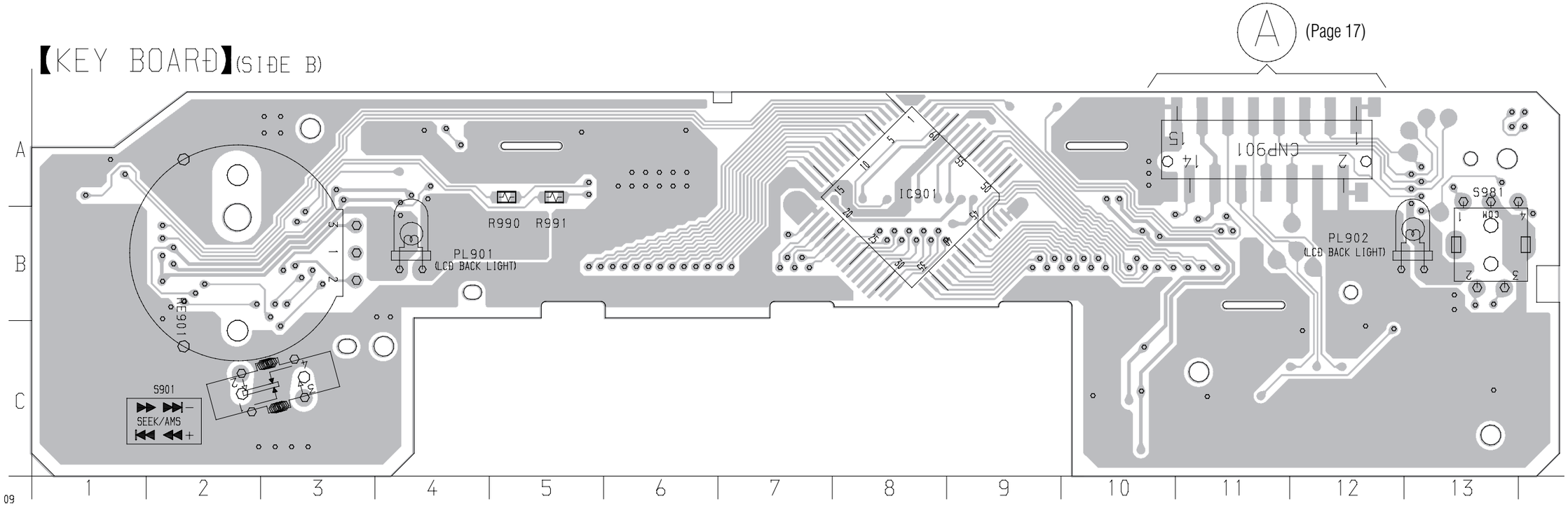
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  < > : TAPE PLAYBACK
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM (MW)
  Σ : TAPE PLAYBACK
- Abbreviation
  CND : Canadian model.

6-4. PRINTED WIRING BOARD — PANEL SECTION —



• **Semiconductor Location**

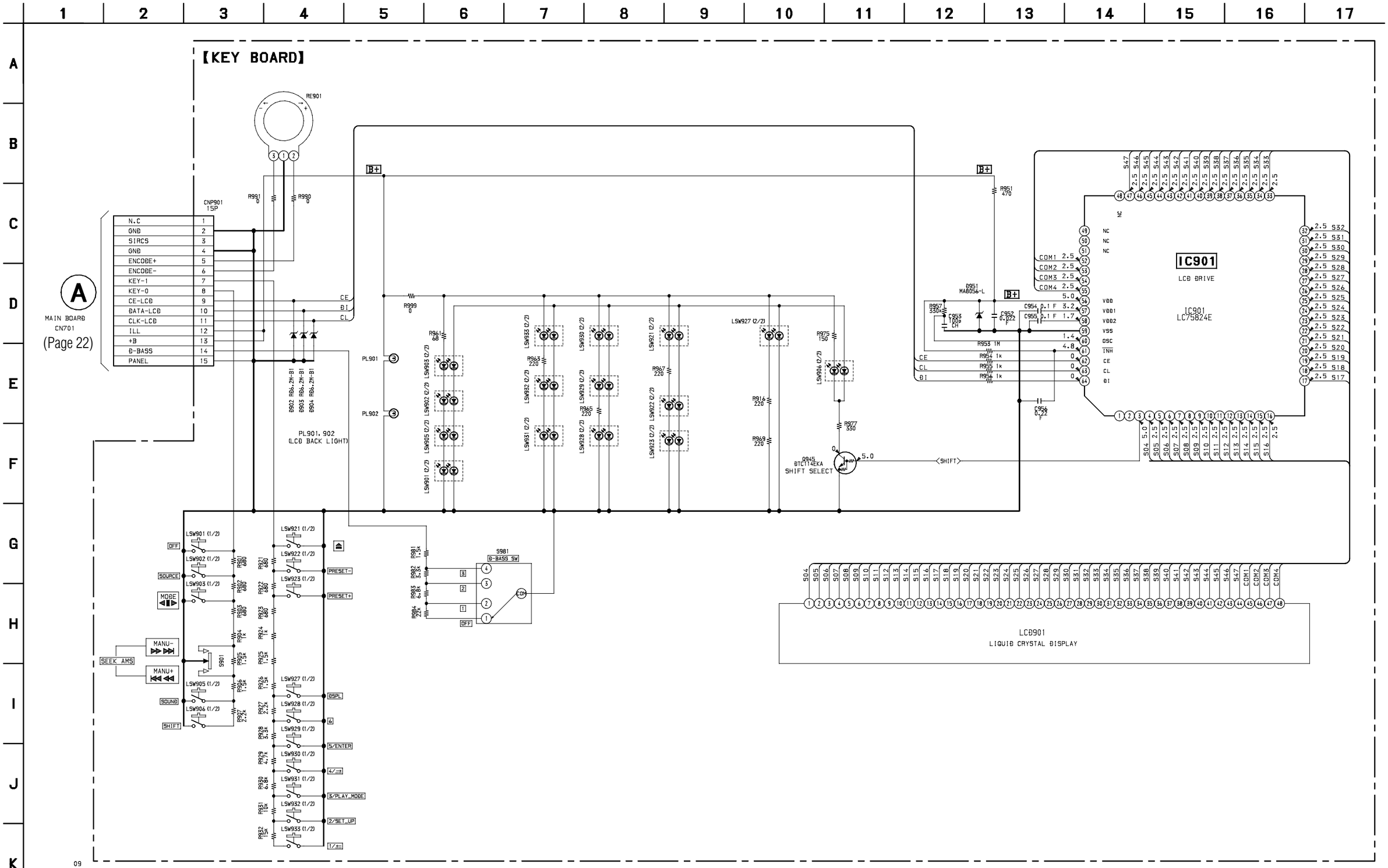
Ref. No.	Location
D902	B-12
D903	B-12
D904	B-11
D951	C-9
Q945	C-2



• **Semiconductor Location**

Ref. No.	Location
IC901	A-8

Note:
- ○——— : parts extracted from the component side.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.



Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B + : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  < > : TAPE PLAYBACK
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM (MW)
  ⧐ : TAPE PLAYBACK

6-6. IC PIN FUNCTION DESCRIPTION

• IC501 MASTER U-COM (MN101C12GTA1/MN101C12GTB)

Pin No.	Pin Name	I/O	Function
1	AVREF-	–	Basic voltage (- side) of AD conversion input
2	VSM	I	FM/AM common signal meter A/D conversion input terminal
3	KEYIN1	I	KEY (AD conversion) input
4	KEYIN0	I	
5	DBAS IN	I	Position detecting AD input terminal of D-BASS
6	DSTSEL	I	Terminal for setting to select the value of destination
7	FUNC-SEL	I	Function selecting (AD conversion) input
8	NCO	O	Not used
9	RCIN0	I	Rotary commander (AD conversion) input
10	AVREF+	I	Basic voltage (+side) of AD conversion input
11	VDD	–	Power supply
12	OSC OUT	–	Radiator (18.432 MHz) connecting terminal
13	OSC IN	–	
14	GND	–	Ground
15	XT IN	–	Sub clock (for clock) radiator (32 kHz) connecting terminal
16	XT OUT	–	
17	GND	–	Ground
18	RCIN1	I	Rotary commander shift input
19	$\overline{\text{SYSRST}}$	O	SYSTEM RESET control output
20	$\overline{\text{BUSON}}$	O	BUS ON control output
21	UNISO	O	Serial data output
22	UNISI	I	Serial data input
23	UNICKO	O	Serial clock output
24	UNICKI	I	Serial clock input
25	NCO	O	Not used
26	KEYACK	I	Key input acknowledge
27	$\overline{\text{NOSESW}}$	I	Removing/attaching front panel detection input
28	BU_IN	I	BACK-UP detection input terminal
29	SIRCS	I	Remote control input
30	TELMUT	I	TELEPHONE MUTE detection input
31	$\overline{\text{TESTIN}}$	I	Test mode setting input terminal
32	RAMBU	I	Reset detection input of RAM
33	$\overline{\text{RESET}}$	I	Reset input terminal
34	VOLMUT	O	Not used
35	BEEP	O	Control output for buzzer
36	$\overline{\text{AMPMUT}}$	O	Power amplifier mute control output terminal
37	AMPON	O	Power amplifier STANDBY control terminal
38	PLLCKD	O	PLL CLK output terminal
39	PLLCE	O	PLL CE output terminal
40	PLLSO	O	PLL DATA output terminal
41	PLLSI	I	PLL DATA input terminal
42	LCDSD	O	LCD serial data output
43	LCDCE	O	LCD chip enable output terminal
44	LCDCKD	O	LCD serial clock output
45	VOLSO	O	Electrical volume serial data output
46	NCO	O	Not used
47	VOLCKO	O	Electrical volume serial data output
48	$\overline{\text{ACCIN}}$	I	Accessory power supply detection input
49	MUT	O	System MUTE control output

Pin No.	Pin Name	I/O	Function
50	NCO	O	Not used
51	$\overline{\text{AMSON}}$	O	“L” is output in AMS mode
52	$\overline{\text{NROUT}}$	O	FOR/REV control output
53	MTLON	I/O	Metal control input/output
54	TAPMUT	O	Tape mute control output
55	DOLON	I/O	Dolby control input/output
56	$\overline{\text{AMSIN}}$	I	Input to detect existence of song during AMS mode
57 to 75	NCO	O	Not used
76	ST	I/O	Combination stereo input and monaural output
77	SD_IN	I	SIGNAL DETECTOR input terminal
78	REIN 1	I	Rotary encoder input terminal
79	REIN 0	I	
80	$\overline{\text{AD ON}}$	O	Power supply control output of AD conversion
81	PW SEL	I	Power selection initialise
82	ILLON	O	Illumination power supply control output
83	REL	I	Input to detect rotation of reel table
84	POS3	I	Tape position signal detection input
85	POS2	I	
86	POS0	I	
87	POS1	I	
88	LM LOD	O	Loading motor control output (to a direction of loading)
89	LM EJ	O	Loading motor control output (to a direction of ejection)
90	TAPON	O	TAPE power supply control output When ‘on’ is output, “H” is output, otherwise when ‘off’ is output, “L” is output.
91	CM ON	O	Capstan motor control signal output terminal of TAPE
92	PW ON	O	System power supply control output
93	FM ON	O	FM power supply control output terminal
94	TUNON	O	TUNER power supply control output terminal
95	DAVSS	–	Ground
96 to 99	NCO	O	Not used
100	DAVDD	–	Not used (Power supply for DA converter)

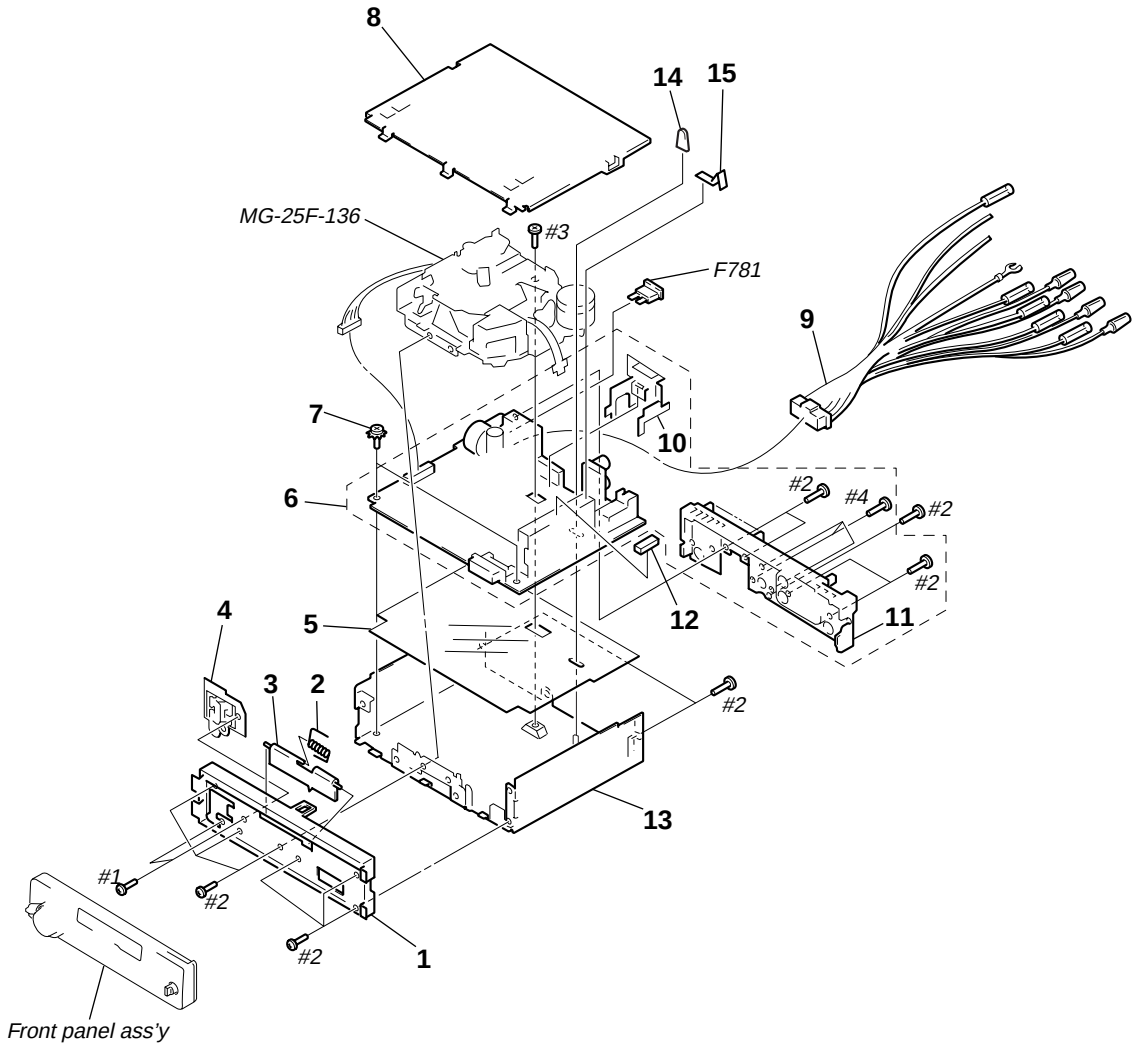
SECTION 7
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . . (RED)
  ↑ ↑
  Parts color Cabinets color
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

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

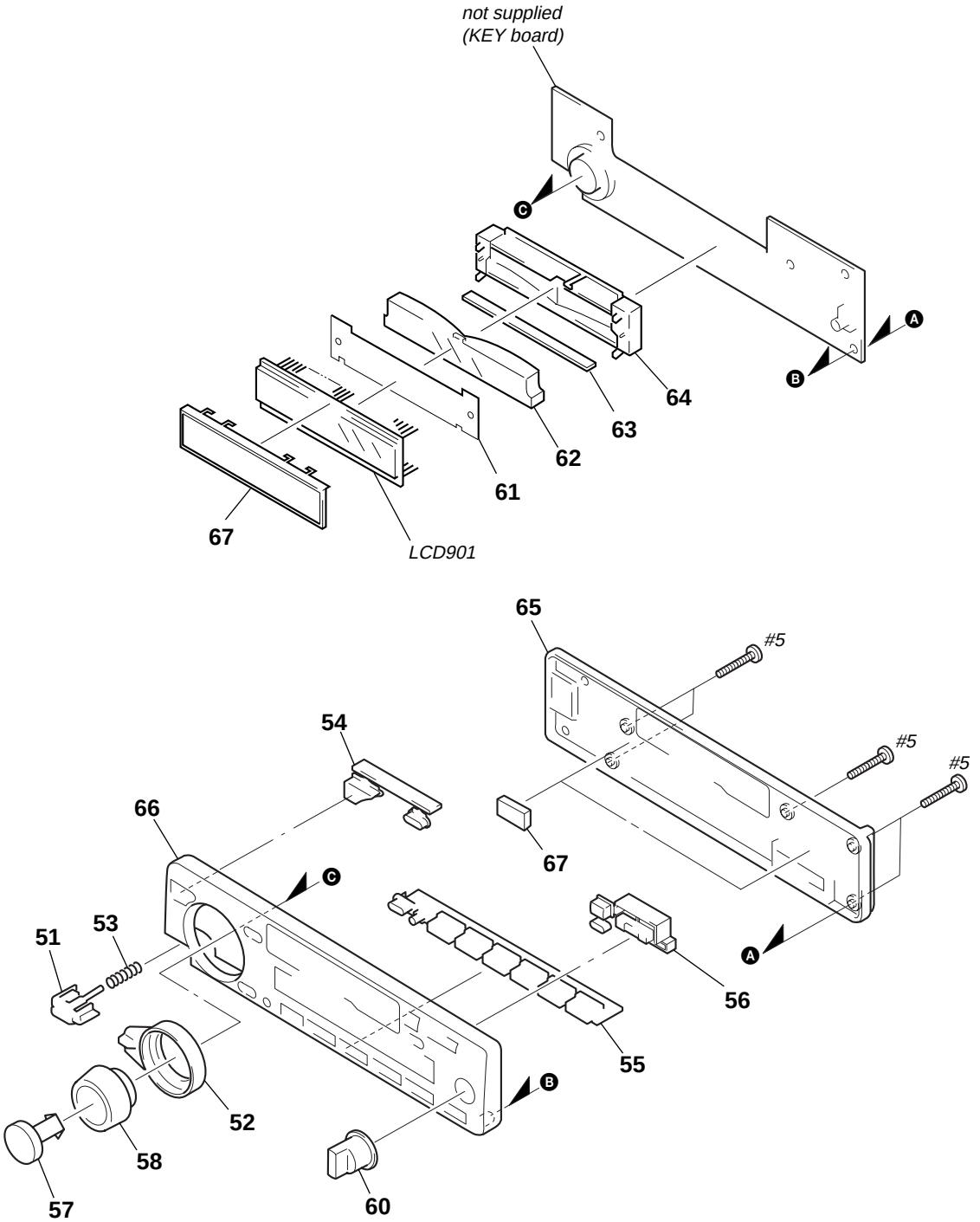
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

(1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	3-031-022-01	PANEL, SUB	
2	3-935-003-01	SPRING, TORSION	
3	3-027-437-21	DOOR, CASSETTE	
4	X-3370-437-1	LOCK ASSY	
* 5	3-033-846-01	INSULATED PLATE	
* 6	A-3317-387-A	MAIN BOARD, COMPLETE	
7	3-915-923-01	SCREW, GROUND POINT	
* 8	X-3373-270-1	COVER ASSY	
9	1-776-207-31	CORD (WITH CONNECTOR)(POWER)	
* 10	3-018-390-01	BRACKET (IC)	
* 11	3-031-026-01	HEAT SINK	
12	3-935-014-01	CUSHION (U)	
* 13	3-009-813-41	CHASSIS	
14	3-012-859-01	CAP (25), RUBBER	
15	3-937-650-01	PLATE (C), GROUND	
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE)(10A)	
TU1	A-3220-689-A	TUNER UNIT TUX-010/2	

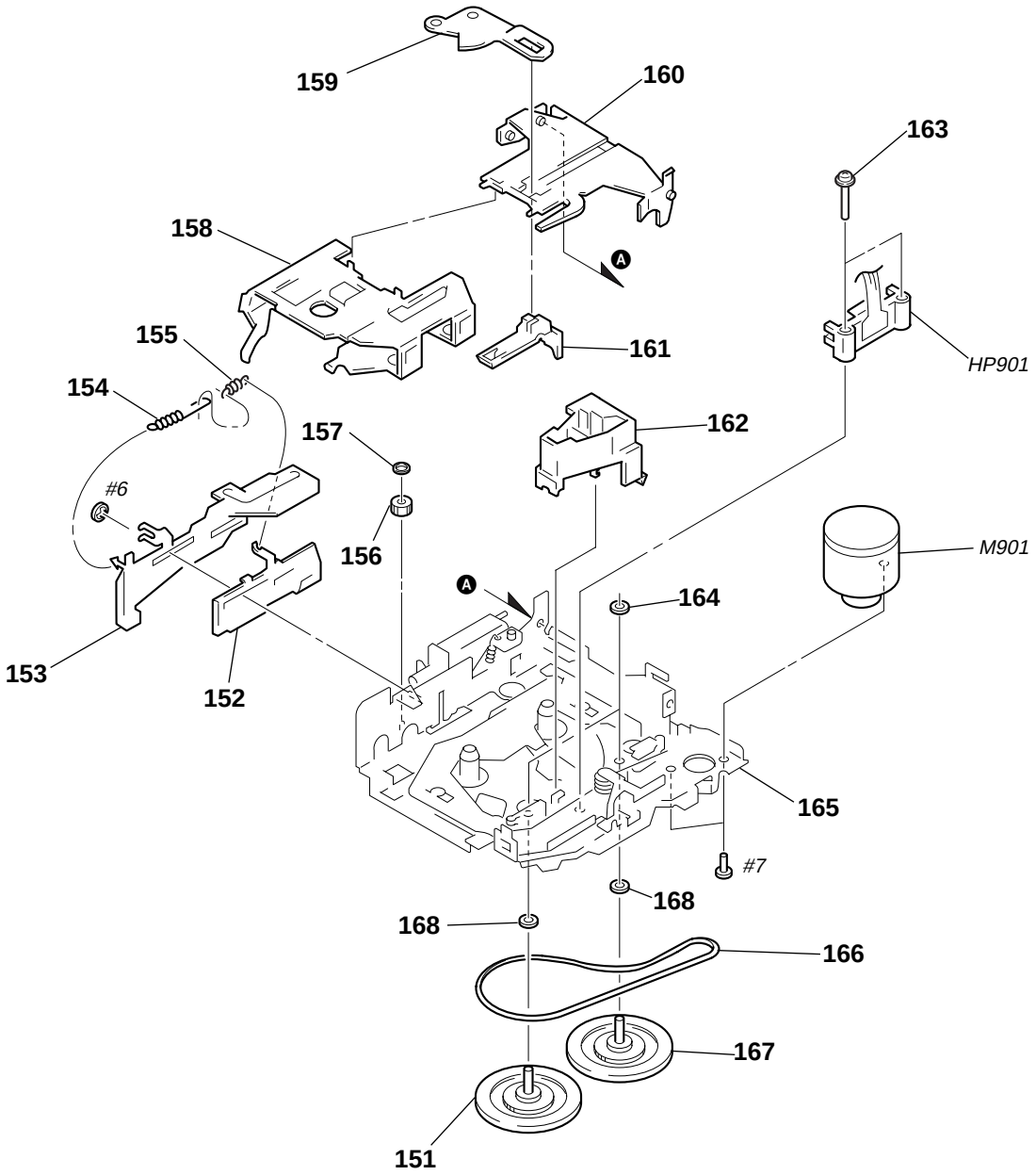
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-030-838-01	BUTTON (RELEASE)	
52	3-030-832-01	LEVER (S/A)	
53	3-932-475-01	SPRING (RELEASE)	
54	3-030-834-01	BUTTON (M/S)	
55	3-030-835-01	BUTTON (1-6)	
56	3-031-027-11	BUTTON (P/P/A)	
57	3-030-831-01	BUTTON (SOURCE)	
58	3-030-830-01	KNOB (VOL)	
60	3-030-837-01	BUTTON (D-BASS)	
* 61	3-030-839-01	SHEET (REFLECTOR)	

Ref. No.	Part No.	Description	Remark
* 62	3-030-824-01	PLATE, LIGHT GUIDE	
63	1-694-508-11	CONDUCTIVE BOARD, CONNECTION	
* 64	3-030-825-01	HOLDER (LCD)	
65	3-030-827-01	PANEL, FRONT BACK	
66	X-3377-055-1	FRONT PANEL ASSY	
* 67	3-030-840-01	PLATE (B), GROUND	
LCD901	1-803-496-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION (MG-25F-136)



Ref. No.	Part No.	Description	Remark
151	A-3291-667-A	CLUTCH (FR) ASSY	
152	3-019-130-01	LEVER (LDG-A)	
153	3-019-131-01	LEVER (LDG-B)	
154	3-020-539-01	SPRING (LD-1), TENSION	
155	3-020-540-01	SPRING (LD-2), TENSION	
156	3-020-542-01	GEAR (LOADING FT)	
157	3-341-753-11	WASHER, POLYETHYLENE	
158	3-020-533-01	HOUSING	
159	3-020-532-01	ARM (SUCTION)	
160	3-020-534-01	HANGER	

Ref. No.	Part No.	Description	Remark
161	3-933-346-01	CATCHER	
162	3-933-344-01	GUIDE (C)	
163	3-014-798-01	SCREW (HEAD), SPECIAL	
164	3-364-151-01	WASHER	
165	A-3301-267-A	CHASSIS, ASSY (G)	
166	3-017-302-01	BELT (25)	
167	3-936-853-01	FLYWHEEL (F)	
168	3-701-437-21	WASHER	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	

SECTION 8
ELECTRICAL PARTS LIST

KEY

Note:

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

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

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

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: µ , for example:
  uA...: µ A..., uPA...: µ PA..., uPB...: µ PB..., uPC...: µ PC..., uPD...: µ PD...
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- Abbreviation
  CND : Canadian model

Ref. No.	Part No.	Description			Remark
		KEY BOARD			
		**********			
	1-694-508-11	CONDUCTIVE BOARD, CONNECTION			
*	3-030-824-01	PLATE, LIGHT GUIDE			
*	3-030-825-01	HOLDER (LCD)			
*	3-030-839-01	SHEET (REFLECTOR)			
*	3-030-840-01	PLATE (B), GROUND			
		< CAPACITOR >			
C952	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C953	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C954	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C955	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C956	1-164-222-11	CERAMIC CHIP	0.22uF		25V
		< CONNECTOR >			
CNP901	1-785-775-11	PIN, CONNECTOR 15P			
		< DIODE >			
D902	8-719-105-99	DIODE RD6.2M-B1			
D903	8-719-105-99	DIODE RD6.2M-B1			
D904	8-719-105-99	DIODE RD6.2M-B1			
D951	8-719-422-49	DIODE MA8056-L			
		< IC >			
IC901	8-759-366-34	IC LC75824E			
		< LIQUID CRYSTAL DISPLAY >			
LCD901	1-803-496-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< SWITCH >			
LSW901	1-771-609-11	SWITCH, TACTILE (WITH LED)(OFF)			
LSW902	1-762-619-21	SWITCH, KEY BOARD (WITH LED)(SOURCE)			
LSW903	1-762-619-21	SWITCH, KEY BOARD (WITH LED)(MODE ◄II►)			
LSW905	1-762-619-21	SWITCH, KEY BOARD (WITH LED)(SOUND)			
LSW906	1-762-619-21	SWITCH, KEY BOARD (WITH LED)(SHIFT)			
LSW921	1-762-619-21	SWITCH, KEY BOARD (WITH LED)(EJECT ⏏)			
LSW922	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (PRESET/-)			
LSW923	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (PRESET/+)			
LSW927	1-762-619-21	SWITCH, KEY BOARD (WITH LED)(DSPL)			
LSW928	1-771-609-11	SWITCH, TACTILE (WITH LED)(6)			
LSW929	1-771-609-11	SWITCH, TACTILE (WITH LED)(5/ENTER)			
LSW930	1-771-609-11	SWITCH, TACTILE (WITH LED)(4/→)			
LSW931	1-771-609-11	SWITCH, TACTILE (WITH LED)(3/PLAY MODE)			
LSW932	1-771-609-11	SWITCH, TACTILE (WITH LED)(2/SET UP)			
LSW933	1-771-609-11	SWITCH, TACTILE (WITH LED)(1/←)			

Ref. No.	Part No.	Description			Remark
		< PILOT LAMP >			
PL901	1-517-633-21	LAMP, PILOT			
PL902	1-517-633-21	LAMP, PILOT			
		< TRANSISTOR >			
Q945	8-729-900-53	TRANSISTOR DTC114EK			
		< RESISTOR >			
R901	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R902	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R903	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R904	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R905	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R906	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R907	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R916	1-216-033-00	METAL CHIP	220	5%	1/10W
R921	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R922	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R923	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R924	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R925	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R926	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R927	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R928	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R929	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R930	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R931	1-208-806-11	RES,CHIP	10K	2%	1/10W
R932	1-208-810-11	RES,CHIP	15K	2%	1/10W
R951	1-216-041-00	METAL CHIP	470	5%	1/10W
R953	1-216-121-00	RES,CHIP	1M	5%	1/10W
R954	1-216-049-11	RES,CHIP	1K	5%	1/10W
R955	1-216-049-11	RES,CHIP	1K	5%	1/10W
R956	1-216-049-11	RES,CHIP	1K	5%	1/10W
R957	1-216-109-00	METAL CHIP	330K	5%	1/10W
R961	1-216-021-00	METAL CHIP	68	5%	1/10W
R963	1-216-033-00	METAL CHIP	220	5%	1/10W
R965	1-216-033-00	METAL CHIP	220	5%	1/10W
R967	1-216-033-00	METAL CHIP	220	5%	1/10W
R969	1-216-033-00	METAL CHIP	220	5%	1/10W
R975	1-216-029-00	METAL CHIP	150	5%	1/10W
R977	1-216-037-00	METAL CHIP	330	5%	1/10W
R981	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R982	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R983	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R984	1-216-081-00	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R990	1-216-295-00	SHORT	0		
R991	1-216-295-00	SHORT	0		
R999	1-216-295-00	SHORT	0		
		< ROTARY ENCODER >			
RE901	1-475-014-11	ENCODER, ROTARY			
		< SWITCH >			
S901	1-771-290-11	SWITCH, SLIDE (SEEK/AMS/MENU +-)			
S981	1-762-937-11	SWITCH, ROTARY (D-BASS)			
**********					
*	A-3317-387-A	MAIN BOARD, COMPLETE			
		**********			
*	3-018-390-01	BRACKET (IC)			
*	3-031-026-01	HEAT SINK			
	7-685-794-09	SCREW +PTT 2.6X10 (S)			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C3	1-124-234-00	ELECT	22uF	20%	16V
C4	1-124-233-11	ELECT	10uF	20%	16V
C5	1-124-234-00	ELECT	22uF	20%	16V
C6	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C7	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C8	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C9	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V
C10	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V
C11	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C12	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C21	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C22	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C24	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C25	1-163-091-00	CERAMIC CHIP	8PF		50V
C26	1-124-233-11	ELECT	10uF	20%	16V
C27	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
C28	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C29	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C30	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C31	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C32	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C33	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C34	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C35	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C36	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C37	1-124-233-11	ELECT	10uF	20%	16V
C38	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C39	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C41	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C51	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C52	1-124-233-11	ELECT	10uF	20%	16V
C53	1-124-234-00	ELECT	22uF	20%	16V
C54	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C55	1-124-234-00	ELECT	22uF	20%	16V
C56	1-124-234-00	ELECT	22uF	20%	16V

Ref. No.	Part No.	Description			Remark
C101	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C102	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C103	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C104	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C105	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C106	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C107	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C108	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C109	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C110	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C111	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C121	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C122	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C124	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C151	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V
C152	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C153	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C171	1-126-163-11	ELECT	4.7uF	20%	50V
C172	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C174	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C181	1-126-163-11	ELECT	4.7uF	20%	50V
C182	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C183	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C184	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C191	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C201	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C202	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C203	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C204	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C205	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C206	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C207	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C208	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C209	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C210	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C211	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C251	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V
C252	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C253	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C271	1-126-163-11	ELECT	4.7uF	20%	50V
C272	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C274	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C281	1-126-163-11	ELECT	4.7uF	20%	50V
C282	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C283	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C284	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C301	1-124-234-00	ELECT	22uF	20%	16V
C303	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C304	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C305	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C306	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C307	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C333	1-124-233-11	ELECT	10uF	20%	16V
C334	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C335	1-124-584-00	ELECT	100uF	20%	10V
C336	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C337	1-124-234-00	ELECT	22uF	20%	16V

MAIN

Ref. No.	Part No.	Description			Remark
C351	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C352	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C353	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C354	1-124-233-11	ELECT	10uF	20%	16V
C355	1-124-234-00	ELECT	22uF	20%	16V
C356	1-126-934-11	ELECT	220uF	20%	16V
C357	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C358	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C501	1-124-584-00	ELECT	100uF	20%	10V
C502	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C503	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C504	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C505	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C506	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C507	1-163-213-00	CERAMIC CHIP	0.0022uF	5%	50V
C508	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C551	1-125-710-11	DOUBLE LAYER	0.1F	0	5.5V
C552	1-128-057-11	ELECT	330uF	20%	6.3V
C553	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C556	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C571	1-126-163-11	ELECT	4.7uF	20%	50V
C582	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C601	1-164-346-11	CERAMIC CHIP	1uF		16V
C602	1-164-346-11	CERAMIC CHIP	1uF		16V
C611	1-124-233-11	ELECT	10uF	20%	16V
C612	1-124-233-11	ELECT	10uF	20%	16V
C614	1-124-233-11	ELECT	10uF	20%	16V
C615	1-124-233-11	ELECT	10uF	20%	16V
C616	1-124-233-11	ELECT	10uF	20%	16V
C617	1-124-233-11	ELECT	10uF	20%	16V
C618	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C621	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C622	1-124-589-11	ELECT	47uF	20%	16V
C623	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C751	1-126-096-11	ELECT	10uF	20%	35V
C752	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C754	1-124-233-11	ELECT	10uF	20%	16V
C755	1-124-589-11	ELECT	47uF	20%	16V
C757	1-124-233-11	ELECT	10uF	20%	16V
C781	1-126-936-11	ELECT	3300uF	20%	16V
C782	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C783	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C784	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C786	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C787	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C788	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C789	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C790	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C792	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C795	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
		< CONNECTOR >			
CN301	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P			
* CN351	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P			
CN701	1-785-774-11	PLUG, CONNECTOR 15P			
CN781	1-774-701-11	PIN, CONNECTOR 16P			

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D1	8-719-991-65	DIODE SB02W03C	
D51	8-719-158-15	DIODE RD5.6S-B	
D52	8-719-422-97	DIODE MA8091-M	
D351	8-719-977-22	DIODE DTZ9.1	
D352	8-719-911-19	DIODE 1SS119	
D501	8-719-400-20	DIODE MA152WA	
D551	8-719-400-20	DIODE MA152WA	
D552	8-719-404-50	DIODE MA111-TX	
D553	8-719-404-50	DIODE MA111-TX	
D554	8-719-072-70	DIODE MA2ZD14001S0	
D571	8-719-057-80	DIODE MA8160-M-TX	
D572	8-719-420-14	DIODE MA8082-M	
D581	8-719-057-80	DIODE MA8160-M-TX	
D591	8-719-422-76	DIODE MA8075-M	
D601	8-719-423-32	DIODE MA8120-M	
D610	8-719-970-02	DIODE 1SR139-400	
D611	8-719-970-02	DIODE 1SR139-400	
D613	8-719-970-02	DIODE 1SR139-400	
D614	8-719-970-02	DIODE 1SR139-400	
D621	8-719-422-12	DIODE MA8039	
D622	8-719-404-50	DIODE MA111-TX	
D623	8-719-422-12	DIODE MA8039	
D624	8-719-422-97	DIODE MA8091-M	
D701	8-719-977-12	DIODE DTZ6.8B	
D702	8-719-158-15	DIODE RD5.6S-B	
D704	8-719-158-15	DIODE RD5.6S-B	
D705	8-719-035-74	DIODE MA4062-M(TA)	
D706	8-719-035-74	DIODE MA4062-M(TA)	
D707	8-719-035-74	DIODE MA4062-M(TA)	
D708	8-719-105-99	DIODE RD6.2M-B1	
D709	8-719-035-74	DIODE MA4062-M(TA)	
D710	8-719-977-12	DIODE DTZ6.8B	
D711	8-719-423-32	DIODE MA8120-M	
D712	8-719-404-50	DIODE MA111-TX	
D713	8-719-404-50	DIODE MA111-TX	
D721	8-719-970-02	DIODE 1SR139-400	
D722	8-719-970-02	DIODE 1SR139-400	
D723	8-719-970-02	DIODE 1SR139-400	
D724	8-719-970-02	DIODE 1SR139-400	
D731	8-719-970-02	DIODE 1SR139-400	
D732	8-719-970-02	DIODE 1SR139-400	
D733	8-719-970-02	DIODE 1SR139-400	
D734	8-719-970-02	DIODE 1SR139-400	
D781	8-719-049-38	DIODE 1N5404TU	
		< IC >	
IC21	8-759-573-79	IC TB2118F(EL)	
IC21	8-759-586-59	IC TB2118F-EL-S	
IC301	8-752-079-78	IC CXA2509AQ-T4	
IC331	8-759-572-10	IC TDA7462D	
IC351	8-759-527-33	IC LB1930M-TLM	
IC501	8-759-585-76	IC MN101C12GTA2	
IC551	8-759-574-61	IC XC61AN4302MR	
IC611	8-759-347-49	IC BA3918-V2	
IC751	8-759-490-74	IC TDA7384	
IC751	8-759-572-08	IC TDA7385	

Ref. No.	Part No.	Description		Remark
		< JACK >		
J1	1-764-808-21	JACK (ANT)		
J331	1-774-698-11	JACK, PIN 2P		
J561	1-566-822-41	JACK		
		< JUMPER RESISTOR >		
JC1	1-216-296-00	SHORT	0	
JC2	1-216-296-00	SHORT	0	
JC3	1-216-296-00	SHORT	0	
JC4	1-216-296-00	SHORT	0	
JC7	1-216-296-00	SHORT	0	
JC21	1-216-296-00	SHORT	0	
JC22	1-216-295-00	SHORT	0	
JC25	1-216-296-00	SHORT	0	
JC26	1-216-295-00	SHORT	0	
JC31	1-216-296-00	SHORT	0	
JC32	1-216-296-00	SHORT	0	
JC52	1-216-295-00	SHORT	0	
JC121	1-216-295-00	SHORT	0	
JC151	1-216-295-00	SHORT	0	
JC152	1-216-295-00	SHORT	0	
JC181	1-216-296-00	SHORT	0	
JC182	1-216-295-00	SHORT	0	
JC191	1-216-296-00	SHORT	0	
JC192	1-216-296-00	SHORT	0	
JC272	1-216-296-00	SHORT	0	
JC301	1-216-295-00	SHORT	0	
JC302	1-216-295-00	SHORT	0	
JC303	1-216-295-00	SHORT	0	
JC304	1-216-295-00	SHORT	0	
JC305	1-216-296-00	SHORT	0	
JC331	1-216-296-00	SHORT	0	
JC332	1-216-296-00	SHORT	0	
JC351	1-216-295-00	SHORT	0	
JC352	1-216-295-00	SHORT	0	
JC354	1-216-296-00	SHORT	0	
JC356	1-216-296-00	SHORT	0	
JC501	1-216-295-00	SHORT	0	
JC502	1-216-295-00	SHORT	0	
JC503	1-216-296-00	SHORT	0	
JC504	1-216-296-00	SHORT	0	
JC506	1-216-296-00	SHORT	0	
JC507	1-216-295-00	SHORT	0	
JC508	1-216-295-00	SHORT	0	
JC551	1-216-295-00	SHORT	0	
JC571	1-216-296-00	SHORT	0	
JC601	1-216-296-00	SHORT	0	
JC611	1-216-296-00	SHORT	0	
JC621	1-216-296-00	SHORT	0	
JC622	1-216-296-00	SHORT	0	
JC705	1-216-296-00	SHORT	0	
JC751	1-216-296-00	SHORT	0	
JC752	1-216-295-00	SHORT	0	
JC781	1-216-296-00	SHORT	0	
JC782	1-216-295-00	SHORT	0	
JC992	1-216-296-00	SHORT	0	

Ref. No.	Part No.	Description				Remark
		< JUMPER RESISTOR >				
JW1	7-685-793-09	SCREW +PTT 2.6X8 (S)				
JW2	7-685-793-09	SCREW +PTT 2.6X8 (S)				
		< COIL >				
L2	1-469-132-21	FERRITE	BLM21B1515B			
L3	1-410-501-11	INDUCTOR	2.2uH			
L4	1-410-501-11	INDUCTOR	2.2uH			
L21	1-410-509-11	INDUCTOR	10uH			
L22	1-410-989-11	INDUCTOR CHIP	0.47uH			
L781	1-411-669-12	INDUCTOR	0uH			
L781	1-411-669-21	INDUCTOR	0uH			
		< TRANSISTOR >				
Q51	8-729-106-68	TRANSISTOR	2SD1615A-GP			
Q52	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q121	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q151	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q171	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q181	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q251	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q271	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q281	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q351	8-729-015-11	TRANSISTOR	2SD1802FAST-TL			
Q352	8-729-020-67	TRANSISTOR	XN1A312-TX			
Q353	8-729-900-53	TRANSISTOR	DTC114EK			
Q354	8-729-106-60	TRANSISTOR	2SB1115A			
Q551	8-729-027-23	TRANSISTOR	DTA114EKA-T146			
Q571	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q581	8-729-900-53	TRANSISTOR	DTC114EK			
Q591	1-801-806-11	TRANSISTOR	DTC144EKA-T146			
Q592	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q601	8-729-423-99	TRANSISTOR	2SD2137-OP			
Q602	8-729-020-67	TRANSISTOR	XN1A312-TX			
Q621	8-729-027-23	TRANSISTOR	DTA114EKA-T146			
Q622	8-729-021-94	TRANSISTOR	2SK1657-T1B			
		< RESISTOR >				
R1	1-216-049-11	RES,CHIP	1K	5%	1/10W	
R2	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R3	1-216-174-00	RES,CHIP	100	5%	1/8W	
R4	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R5	1-216-254-00	RES,CHIP	220K	5%	1/8W	
R6	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R8	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R9	1-216-049-11	RES,CHIP	1K	5%	1/10W	
R10	1-216-049-11	RES,CHIP	1K	5%	1/10W	
R11	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R12	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R21	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R23	1-249-417-11	CARBON	1K	5%	1/4W	F
R24	1-249-417-11	CARBON	1K	5%	1/4W	F
R25	1-249-417-11	CARBON	1K	5%	1/4W	F
R26	1-249-417-11	CARBON	1K	5%	1/4W	F
R27	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R28	1-216-075-00	METAL CHIP	12K	5%	1/10W	

MAIN

Ref. No.	Part No.	Description			Remark
R29	1-216-025-00	RES,CHIP	100	5%	1/10W
R30	1-216-049-11	RES,CHIP	1K	5%	1/10W
R31	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R32	1-216-073-00	METAL CHIP	10K	5%	1/10W
R34	1-216-041-00	METAL CHIP	470	5%	1/10W
R51	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R52	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R101	1-216-041-00	METAL CHIP	470	5%	1/10W
R102	1-216-109-00	METAL CHIP	330K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-079-00	METAL CHIP	18K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-081-00	METAL CHIP	22K	5%	1/10W
R121	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R151	1-249-421-11	CARBON	2.2K	5%	1/4W F
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R171	1-216-033-00	METAL CHIP	220	5%	1/10W
R172	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R174	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R175	1-216-085-00	METAL CHIP	33K	5%	1/10W
R181	1-216-033-00	METAL CHIP	220	5%	1/10W
R182	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R184	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R185	1-216-085-00	METAL CHIP	33K	5%	1/10W
R191	1-249-429-11	CARBON	10K	5%	1/4W
R192	1-216-105-00	RES,CHIP	220K	5%	1/10W
R201	1-216-041-00	METAL CHIP	470	5%	1/10W
R202	1-216-109-00	METAL CHIP	330K	5%	1/10W
R203	1-216-077-00	METAL CHIP	15K	5%	1/10W
R204	1-216-079-00	METAL CHIP	18K	5%	1/10W
R205	1-216-073-00	METAL CHIP	10K	5%	1/10W
R206	1-216-081-00	METAL CHIP	22K	5%	1/10W
R251	1-249-421-11	CARBON	2.2K	5%	1/4W F
R252	1-216-073-00	METAL CHIP	10K	5%	1/10W
R271	1-216-033-00	METAL CHIP	220	5%	1/10W
R272	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R274	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R275	1-216-085-00	METAL CHIP	33K	5%	1/10W
R281	1-216-033-00	METAL CHIP	220	5%	1/10W
R282	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R284	1-216-278-11	RES,CHIP	2.2M	5%	1/8W
R285	1-216-085-00	METAL CHIP	33K	5%	1/10W
R301	1-208-812-11	RES,CHIP	18K	2%	1/10W
R302	1-216-097-00	RES,CHIP	100K	5%	1/10W
R303	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R304	1-216-077-00	METAL CHIP	15K	5%	1/10W
R305	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R306	1-216-105-00	RES,CHIP	220K	5%	1/10W
R331	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R351	1-216-049-11	RES,CHIP	1K	5%	1/10W
R352	1-249-383-11	CARBON	1.5	5%	1/6W F
R353	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R354	1-216-073-00	METAL CHIP	10K	5%	1/10W
R500	1-216-097-00	RES,CHIP	100K	5%	1/10W
R501	1-216-097-00	RES,CHIP	100K	5%	1/10W
R502	1-216-097-00	RES,CHIP	100K	5%	1/10W
R503	1-216-049-11	RES,CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R504	1-216-049-11	RES,CHIP	1K	5%	1/10W
R505	1-216-049-11	RES,CHIP	1K	5%	1/10W
R506	1-216-049-11	RES,CHIP	1K	5%	1/10W
R507	1-249-417-11	CARBON	1K	5%	1/4W F
R508	1-249-417-11	CARBON	1K	5%	1/4W F
R509	1-249-417-11	CARBON	1K	5%	1/4W F
R510	1-247-807-31	CARBON	100	5%	1/4W
R511	1-216-206-00	RES,CHIP	2.2K	5%	1/8W
R512	1-216-246-00	RES,CHIP	100K	5%	1/8W
R513	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R514	1-247-807-31	CARBON	100	5%	1/4W
R517	1-216-246-00	RES,CHIP	100K	5%	1/8W
R518	1-216-097-00	RES,CHIP	100K	5%	1/10W
R519	1-216-097-00	RES,CHIP	100K	5%	1/10W
R520	1-216-049-11	RES,CHIP	1K	5%	1/10W
R521	1-216-049-11	RES,CHIP	1K	5%	1/10W
R523	1-216-049-11	RES,CHIP	1K	5%	1/10W
R525	1-216-097-00	RES,CHIP	100K	5%	1/10W
R526	1-216-097-00	RES,CHIP	100K	5%	1/10W
R527	1-216-097-00	RES,CHIP	100K	5%	1/10W
R528	1-216-097-00	RES,CHIP	100K	5%	1/10W
R529	1-216-097-00	RES,CHIP	100K	5%	1/10W
R530	1-216-246-00	RES,CHIP	100K	5%	1/8W
R532	1-216-097-00	RES,CHIP	100K	5%	1/10W
R534	1-216-222-00	RES,CHIP	10K	5%	1/8W
R535	1-249-417-11	CARBON	1K	5%	1/4W F
R537	1-216-097-00	RES,CHIP	100K	5%	1/10W
R538	1-216-033-00	METAL CHIP	220	5%	1/10W
R539	1-216-097-00	RES,CHIP	100K	5%	1/10W
R540	1-216-246-00	RES,CHIP	100K	5%	1/8W
R541	1-216-097-00	RES,CHIP	100K	5%	1/10W
R542	1-216-097-00	RES,CHIP	100K	5%	1/10W
R544	1-216-049-11	RES,CHIP	1K	5%	1/10W
R545	1-216-174-00	RES,CHIP	100	5%	1/8W
R546	1-216-246-00	RES,CHIP	100K	5%	1/8W
R547	1-216-049-11	RES,CHIP	1K	5%	1/10W
R548	1-216-049-11	RES,CHIP	1K	5%	1/10W
R549	1-216-097-00	RES,CHIP	100K	5%	1/10W
R550	1-216-097-00	RES,CHIP	100K	5%	1/10W
R551	1-216-097-00	RES,CHIP	100K	5%	1/10W
R553	1-216-246-00	RES,CHIP	100K	5%	1/8W
R554	1-216-097-00	RES,CHIP	100K	5%	1/10W
R555	1-208-806-11	RES,CHIP	10K	0.50%	1/10W
R556	1-208-806-11	RES,CHIP	10K	0.50%	1/10W
R557	1-216-049-11	RES,CHIP	1K	5%	1/10W
R558	1-216-035-00	METAL CHIP	270	5%	1/10W
R561	1-216-073-00	METAL CHIP	10K	5%	1/10W
R562	1-208-806-11	RES,CHIP	10K	0.50%	1/10W
R563	1-216-025-00	RES,CHIP	100	5%	1/10W
R564	1-216-025-00	RES,CHIP	100	5%	1/10W
R571	1-216-089-00	RES,CHIP	47K	5%	1/10W
R572	1-216-089-00	RES,CHIP	47K	5%	1/10W
R573	1-249-421-11	CARBON	2.2K	5%	1/4W F
R574	1-216-081-00	METAL CHIP	22K	5%	1/10W
R581	1-216-089-00	RES,CHIP	47K	5%	1/10W
R590	1-216-246-00	RES,CHIP	100K	5%	1/8W
R591	1-216-089-00	RES,CHIP	47K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R592	1-216-089-00	RES,CHIP	47K	5%	1/10W
R593	1-216-089-00	RES,CHIP	47K	5%	1/10W
R601	1-249-393-11	CARBON	10	5%	1/4W F
R602	1-249-395-11	CARBON	15	5%	1/4W F
R603	1-216-186-00	RES,CHIP	330	5%	1/8W
R621	1-249-425-11	CARBON	4.7K	5%	1/4W F
R622	1-216-073-00	METAL CHIP	10K	5%	1/10W
R702	1-216-025-00	RES,CHIP	100	5%	1/10W
R703	1-216-025-00	RES,CHIP	100	5%	1/10W
R704	1-216-295-00	SHORT	0		
R705	1-216-295-00	SHORT	0		
R706	1-216-049-11	RES,CHIP	1K	5%	1/10W
R707	1-216-049-11	RES,CHIP	1K	5%	1/10W
R708	1-216-198-00	RES,CHIP	1K	5%	1/8W
R709	1-216-174-00	RES,CHIP	100	5%	1/8W
R710	1-216-174-00	RES,CHIP	100	5%	1/8W
R711	1-216-049-11	RES,CHIP	1K	5%	1/10W
R712	1-216-049-11	RES,CHIP	1K	5%	1/10W
R713	1-216-025-00	RES,CHIP	100	5%	1/10W
R714	1-216-025-00	RES,CHIP	100	5%	1/10W
R751	1-216-049-11	RES,CHIP	1K	5%	1/10W
R753	1-216-049-11	RES,CHIP	1K	5%	1/10W
R781	1-216-081-00	METAL CHIP	22K	5%	1/10W
R782	1-216-230-00	RES,CHIP	22K	5%	1/8W
		< SWITCH >			
S501	1-571-478-11	SWITCH, SLIDE (POWER SELECT)			
S551	1-692-431-21	SWITCH, TACTILE (RESET SW)			
		< TUNER >			
TU01	A-3220-689-A	TUNER UNIT TUX-010/2			
		< VIBRATOR >			
X501	1-781-294-21	VIBRATOR, CRYSTAL (18.432MHz)			
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			

****

MISCELLANEOUS
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9	1-776-207-31	CORD (WITH CONNECTOR)(POWER)
63	1-694-508-11	CONDUCTIVE BOARD, CONNECTION
507	1-776-207-31	CORD (WITH CONNECTOR)(POWER)
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE)(10A)
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)
LCD901	1-803-496-11	DISPLAY PANEL, LIQUID CRYSTAL
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)

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Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-865-814-11	MANUAL, INSTRUCTION (ENGLISH)(US)	
	3-865-814-21	MANUAL, INSTRUCTION (FRENCH)(CND)	
	3-865-815-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH,FRENCH)	
	X-3373-412-1	CASE (PANEL) ASSY	

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****
HARDWARE LIST
****

#1	7-621-772-10	SCREW +B 2X4
#2	7-685-793-09	SCREW +PTT 2.6X8 (S)
#3	7-685-792-09	SCREW +PTT 2.6X6 (S)
#4	7-685-794-09	SCREW +PTT 2.6X10 (S)
#5	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT
#6	7-624-104-04	STOP RING 2.0, TYPE -E
#7	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3

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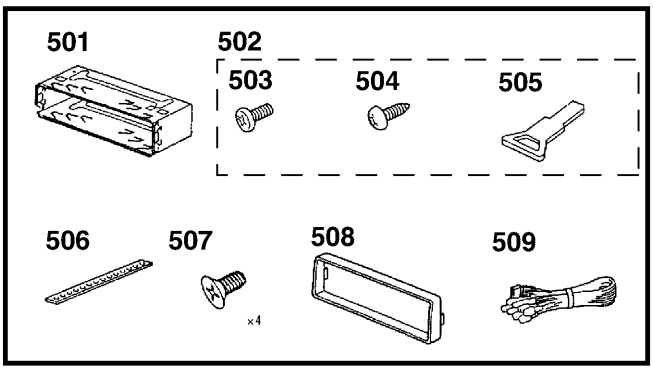
	PARTSFORINS	TALLATION AND CONNECTIONS
	**********	
501	3-916-161-31	FRAME ASSY
503	3-924-961-01	SUPPORT (ND), FITTING
504	X-3370-076-1	SCREW ASSY (KEY), FITTING
505	3-934-325-01	SCREW, +K (5X8) TAPPING
506	3-018-384-01	COLLAR
507	1-776-207-31	CORD (WITH CONNECTOR)(POWER)
511	3-915-917-01	SCREW (4X12), +T
512	7-682-560-04	SCREW +P 4X6
513	3-926-426-01	KEY



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