

XR-U220/U330/U331 XR-U440RDS/U441RDS

SERVICE MANUAL

608



US Model
Canadian Model

XR-U220/U330

AEP Model

XR-U330/U331/U440RDS/U441RDS

Germany Model

XR-U440RDS

E Model

XR-U330

Photo: XR-U220

RTV servis Horvat

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www.rtv-horvat-dj.hr

Model Name Using Similar Mechanism	XR-7130/7140/7142/7600
Tape Transport Mechanism Type	MG-38ZS/38ZS1

SPECIFICATIONS

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	3.2 – 8 ohms
Maximum power output	20 W x 4 (at 4 ohms)* * Measured at 14.4 V

Cassette player section

Tape track	4-track 2-channel stereo
Frequency response	30 – 18,000 Hz

Signal-to-noise ratio

Cassette type	Dolby B NR on	Dolby NR off
TYPE II, IV	66 dB	58 dB
TYPE I	63 dB	55 dB

Wow and flutter 0.13% (WRMS)

Tuner section

FM	
Tuning range	XR-U220/U330 US, Canadian model 87.5 – 107.9 MHz XR-U330/U440RDS/U441RDS 87.5 – 108.0 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	12 dBf (75 ohms)
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 70 dB (mono)
Harmonic distortion at 1 kHz	0.5% (stereo), 0.3% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

AM (MW/LW)

Tuning range

XR-U220/U330	US, Canadian model 530 – 1,710 kHz
XR-U330:	European and other countries 531 – 1,602 kHz (at 9 kHz step) North and South American countries 530 – 1,620 kHz (at 10 kHz step)
	AM tuning interval 9 kHz/10 kHz switchable (except the model for European countries)
XR-U440RDS	531 – 1,602 kHz
XR-U331/U441RDS	MW: 531 – 1,602 kHz LW: 153 – 281 kHz

– Continued on next page –

FM/AM CASSETTE CAR STEREO
XR-U220/U330/U440RDS

FM/MW/LW CASSETTE CAR STEREO
XR-U331/U441RDS

SONY®



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Antenna terminal	External antenna connector
Intermediate frequency	450 kHz
Sensitivity	XR-U220/U330/U440RDS 35 μ V XR-U331/U441RDS MW: 35 μ V LW: 70 μ V

General

Output lead	Power antenna relay control lead
	Power amplifier control lead
Tone controls	Bass \pm 10 dB at 100 Hz
	Treble \pm 10 dB at 10 kHz
Loudness	+6 dB at 100 Hz
	+6 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 186 x 57 x 174 mm (w/h/d), not incl. projecting parts and controls
Mounting dimensions	Approx. 182 x 53 x 154 mm (w/h/d), not incl. projecting parts and controls
Weight	Approx. 1.4 kg
Accessories supplied	Mounting hardware (1 set) Power connecting cord (1) Front panel case (1)

Design and specifications subject to change without notice.

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SONY SERVICE MANUAL

*US Model
Canadian Model
XR-U220/U330*

*AEP Model
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*Germany Model
XR-U440RDS*

*E Model
XR-U330*

CORRECTION-1

Correct your service manual as shown below.

Page	INCORRECT			CORRECT
	No.	Part No.	Description	Description
64	*	62 3-377-597-01	SHEET (REFLECTOR) (U440RDS/U441RDS)	not supplied (included in Ref. No.65)
	*	62 3-377-597-11	SHEET (REFLECTOR) (EXCEPT U330 AEP GREEN/U440RDS/U441RDS)	not supplied (included in Ref. No.65)
	*	62 3-377-597-21	SHEET (REFLECTOR) (U330 AEP GREEN)	not supplied (included in Ref. No.65)
	*	63 3-377-581-01	PLATE (LCD), LIGHT GUIDE	not supplied (included in Ref. No.65)
	*	64 3-377-578-01	HOLDER (LCD)	not supplied (included in Ref. No.65)
65	*	108 3-375-383-01	HANGER, CASSETTE	not supplied
	*	111 3-375-384-01	HOLDER, CASSETTE	not supplied
69	*	3-377-581-01	PLATE (LCD), LIGHT GUIDE	not supplied
	*	3-377-597-01	SHEET (REFLECTOR)	not supplied

SECTION 1 GENERAL

This section is extracted from XR-U330/
U331 instruction manual.

Installation

Installation

Instalación

Montage

擺放位置

Precautions

- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust or excessive vibration.
- Use only the supplied mounting hardware to a safe and secure installation.
- Before installing the unit, detach the front panel.

Mounting angle adjustment
Adjust the mounting angle to less than 20°

Précautions

- Choisir soigneusement l'emplacement du montage de manière que l'appareil ne gêne normalement les mouvements du conducteur.
- Éviter d'installer l'appareil là où il serait exposé à des températures élevées, comme en plein soleil ou à proximité d'une source d'air chaud, à de la poussière ou des vibrations violentes.
- Pour garantir un montage sûr, n'utiliser que le matériel fourni.
- Avant d'installer l'appareil, déposer le panneau avant.

Réglage de l'angle de montage
Ajuster l'inclinaison à un angle inférieur à 20°

Precauciones

- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire caliente de calefacción, o a polvo suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, emplee solamente la ferrajería de montaje suministrada.
- Antes de instalar la unidad, extraiga el panel frontal.

Ajuste del ángulo de montaje
Ajuste el ángulo de montaje a menos de 20°

Voorzorgsmaatregelen

- Kies de plaats voor inbouw zorgvuldig en houd er rekening mee dat het apparaat de bestuurder van de auto vooral niet in de weg mag zitten.
- Monteer het apparaat niet op plaatsen waar het blootgesteld wordt aan hoge temperaturen zoals van direct zonlicht of de warme luchtstroom van de autoverwarming. Zorg dat het niet blootstaat aan stof, vuil of regen.
- Gebruik voor het veeg en stevig monteren van het apparaat uitsluitend de meegeleverde montageonderdelen.
- Voor het installeren van het apparaat dient u eerst het voorpaneel hiervan te verwijderen.

Inbouwhoek
Monteer het apparaat in een stand die niet meer dan 20° afwijkt van het horizontale vlak.

使用須知事項

- 本機請放在不礙於司機駕駛之處。
- 避免把本機放在高溫之處，如陽光直射、冷氣風扇、或氣流過多，或造成灰塵或油煙下墜等。
- 為了安全起見，安裝時請使用附屬的五金工具。
- 安裝前請先拆下前板。

安裝角度之調整
請在 20 度以內調整安裝角度。

How to Detach and Attach the Front Panel

To detach
Press the RELEASE button to open the front panel. Then pull it out.

To attach
Align the part A and B, and push the front panel until it clicks.

Dépose et fixation du panneau avant

Dépose
Appuyer sur la touche RELEASE pour ouvrir le panneau avant, puis le retirer.

Fixation
Aligner les points A et B, puis pousser sur le panneau jusqu'au clic.

Forma de extraer e Instalar el panel frontal

Para extraerlo
Presione la tecla RELEASE a fin de abrir el panel frontal, y tire de él hacia afuera.

Para instalarlo
Alinee las partes A y B; y presione el panel frontal hasta que chate.

Verwijderen en weer aanbrengen van het voorpaneel

Losmaken
Druk op de voorpaneel-ontgrendelings (RELEASE) toets het paneel naar voren springt en trek het voorpaneel los.

Aanbrengen
Houd de onderdelen A en B; richt tegenover elkaar, en druk het paneel tegen het apparaat tot het op zijn plaats vastklikt.

前板之拆卸

拆卸前板時
按「RELEASE」鍵以打開前板，并向外拉出。

重新安裝前板時
將 A 及 B 點對準，並把前板推向主機，直到聽到「嗒嗒」聲。



Mounting Example

Installation in the dashboard

Exemple de montage

Encastrement dans le tableau de bord

Ejemplo de montaje

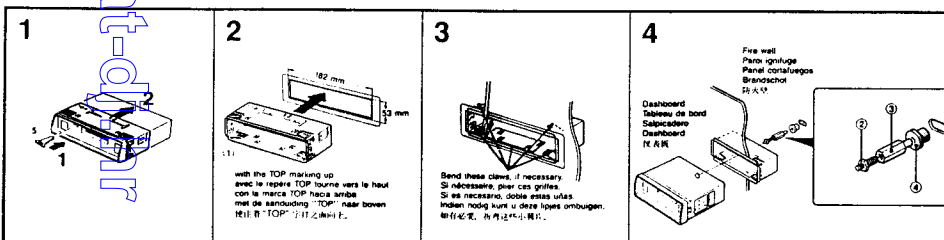
Instalación en el salpicadero

Montagevoorbeeld

Inbouw in het dashboard

安裝例子

安裝于儀表板時



Note: Keep the release key 5 in the safe place as you may need it in future to remove the unit from the car.
Remarque: Conserver la clé de libération 5; car elle peut être utile pour enlever l'appareil par la suite.
Nota: Cuando la llave liberadora 5 en un lugar seguro ya que puede necesitarla en el futuro para extraer la unidad del automóvil.
Opmerking: Bewaar de sleutel 5 op een veilige plaats, aangezien u deze nodig zult hebben wanneer u het apparaat uit het dashboard van de auto met u mee wilt nemen.

Speaker Connection Connexion des haut-parleurs Conexión de los altavoces Aansluiten van de luidsprekers 揚声器連接法

Notes on speaker connection:
• Use speakers with an impedance of 3.2 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.

Opmerkingen betreffende het aansluiten van de luidsprekers:
• Gebruik luidsprekers met een impedantie van 3.2 tot 8 Ohm en let op dat ze het vermogen van de versierter kunnen verwerken. Als dit wordt verzuimd, kunnen de luidsprekers ernstig beschadigd raken.
• Verbind in geen geval de aansluitingen van de luidsprekers met het chassis van de auto en sluit de aansluitingen van de rechter en linker luidspreker niet op elkaar aan.
• Probeer niet de luidsprekers parallel aan te sluiten.

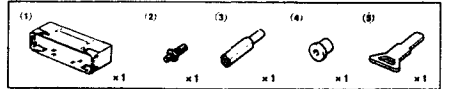
Remarques sur les connexions des haut-parleurs:
• Utilisez des haut-parleurs d'une impédance de 3.2 à 8 Ohms et d'une capacité de puissance suffisante, sinon les haut-parleurs risquent d'être endommagés.
• Ne pas raccorder les bornes des haut-parleurs au châssis du véhicule et ne pas raccorder les bornes du haut-parleur droit à celles du haut-parleur gauche.
• Ne pas essayer de connecter les haut-parleurs en parallèle.

Notas sobre las conexiones:
• Emplee altavoces con una impedancia de 3.2 a 8 Ohms, y con la capacidad de manejo de potencia adecuada, ya que de lo contrario podrían dañarse.
• No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los terminales del altavoz derecho a los del izquierdo.
• No intente conectar los altavoces en paralelo.

揚聲器連接時之注意事項:
• 揚聲器請使用阻值為 3.2 歐姆到 8 歐姆之間，且具有適合本機用之功率承受力。否則會損壞揚聲器。
• 不可把揚聲器連在車體或汽車底盤，也不可把左揚聲器與右揚聲器相連接。
• 不可平行連接揚聲器。

Supplied Mounting Hardware Matériel de montage fourni Ferritería de montaje suministrada Bijgeleverde montage-onderdelen 附属于本机的安装用工具

The numbers in the list are keyed to those in the instructions.
Les numéros de la liste correspondent à ceux mentionnés dans les procédures.
Los números de la lista corresponden a los de las instrucciones.
De numbers in de afbeelding verwijzen naar die in de montage-aanwijzingen.
Листовые номера соответствуют номерам в инструкции.



Caution

- The apparatus is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the red power lead only after all other leads are connected. And be sure to connect it to the positive 12 V power terminal which is energized when the ignition key is set to the accessory position.
- Run all ground wires to a common ground point.

Précautions

- Cet appareil est conçu pour fonctionner exclusivement sur courant continu de 12 volts avec masse négative.
- Avant de procéder aux connexions, débranchez la borne de masse à la masse de la batterie du véhicule pour éviter tout court-circuit.
- Branchez la borne de masse à la masse négative uniquement après que tous les autres fils ont été connectés. En outre, veillez à le raccorder à la borne d'alimentation positive de 12 V qui est énergisée quand la clé de contact est commutée sur la position accessoire.
- Rassemblez tous les fils de mise à la masse en un point de masse commun.

Precauciones

- Este aparato es diseñado para funcionar solamente con 12 V DC y negativo a masa.
- Antes de realizar las conexiones, desconecte el terminal de masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte el conductor de energía de alimentación sólo solamente después de haber conectado todos los demás conductores. 12 V de corriente continua debe ser suministrado a la pila de encendido en la posición de acceso.
- Conecte todos los conductores de puesta a masa a un punto común.

Waarschuwing

- De apparat is uitsluitend geschikt voor gebruik op gelijkspanning van een 12 volt auto-accu, negatief aarde.
- Alvorens te beginnen met het maken van aansluitingen, dient de aardterm van de auto-accu te worden losgemaakt. Dit om kortsluiting te voorkomen.
- Sluit de rode voedingsdraad pas aan nadat alle andere aansluitingen zijn gemaakt. Zorg ervoor dat deze aansluiting wordt aangevoerd door de draad van de accu-ontspanning in de "ACC" stand wordt gegeven.
- Sluit alle aardsdraden op een gemeenschappelijk aardspunt aan.

注意

- 本装置只可使用負極接線12V直流電源。正確地說，應先將汽車電池的接線拆開，以免短路。
- 在連接電源線之前，應先將汽車電池的正極與負極的接線拆開，以免短路。
- 所有接線必須先接好其他所有接線，然後才將電源線接至汽車電池的ACC點。
- 所有接地線必須連到同一個接地點。

When the Unit is Used in a Car with No Accessory Position on the Ignition Key

— POWER SELECT Switch
The illumination on the front panel is not being played. However, this setting may cause some car battery wear if the unit is used in a car with no accessory position on the ignition key. To avoid this battery wear when using the unit in such a car, set the POWER SELECT switch located on the bottom of the unit to the OFF position, then press the reset button on the front panel of the unit. The illumination will stay off while the unit is not being played.

Note
The caution flash for the front panel is not activated when the POWER SELECT switch is set to the OFF position (except the model for European countries).

Quand l'appareil est utilisé dans une voiture dont la clé de contact ne possède pas de position accessoire

— Interrupteur POWER SELECT
L'éclairage du panneau avant est réglé en mode de façon à l'allumer même quand l'appareil ne fonctionne pas. Cependant, ce réglage risque d'endommager la batterie si l'appareil est utilisé dans une voiture dont la clé de contact ne possède pas de position accessoire. Pour éviter ce dommage, commutateur l'interrupteur POWER SELECT situé sur le socle de l'appareil sur OFF, puis appuyer sur la touche de réinitialisation sur le panneau avant. L'éclairage est restera pour rester éteint quand l'appareil n'est pas utilisé.

Remarque
Quand l'interrupteur POWER SELECT est commuté sur OFF, l'avertisseur du panneau avant ne fonctionne pas (sauf le modèle destiné aux pays européens).

Cuando vaya a emplear la unidad en un automóvil con llave de encendido sin posición para accesorios

— Interruptor POWER SELECT
La iluminación del panel frontal ha sido ajustada en la fábrica para que esté activada incluso aunque la unidad no se encuentre en reproducción. Sin embargo, en este ajuste puede producirse cierta descarga de la batería del automóvil si emplea la unidad en un automóvil con llave de encendido sin posición para accesorios. Para evitar esta descarga de la batería en un automóvil de este tipo, ponga el selector POWER SELECT, situado en el panel inferior, a la posición OFF, y después presione el botón de reposición del panel frontal de la unidad. La iluminación permanecerá desactivada mientras la unidad no se encuentre en reproducción.

Nota
La alarma de aviso para el panel frontal no se activará cuando el selector POWER SELECT está en OFF (excepto al modelo para Europa).

Als het contactslot van uw auto geen "ACC" stand heeft

— Stroomkeuzeschakelaar (POWER SELECT)
Het apparaat is in de fabriek zo ingesteld dat de verlichting van het voorpaneel altijd aan is, zelfs al is het apparaat niet ingeschakeld. Als het apparaat echter wordt gereproduceerd in een auto waar het contactslot geen "ACC" stand heeft, kan dit leiden tot onnodige uitputting van de accu. Om dit te vermijden, stel u de stroomkeuzeschakelaar (POWER SELECT) aan de onderkant van het apparaat in de "OFF" stand, en vervolgens drukt u op terugknopje in het apparaat. De verlichting van het voorpaneel wordt nu juist zal het apparaat niet is ingeschakeld.

Opmerking
Zolang de stroomkeuzeschakelaar (POWER SELECT) in de "OFF" stand staat, wordt de waarschuwingslamp op het voorpaneel van het apparaat niet (behalve het model voor Europa).

若要在汽车点火钥匙没有辅助位置的汽车里使用本装置 — POWER SELECT 开关

前照灯的照明在出厂时使用汽车电池的ACC点。然而，在这种情况下，可能会导致汽车电池的过度放电。为了避免这种情况，当在汽车没有ACC点的汽车中使用本装置时，请将位于装置底部的POWER SELECT开关调到OFF位置，然后按下装置前面的复位按钮。照明将在装置不工作时保持关闭。

注意
POWER SELECT 开关调到 OFF 位置，前照灯的警告灯不会点亮（除非是欧洲型号）。

If the AM Frequency Allocation is 10 kHz Interval in Your Country (except the model for European countries)

The AM broadcast interval is factory set to 9 kHz in US. If the frequency allocation system of your country is based on 10 kHz interval, set the 9/10kHz switch located on the bottom of the unit to the 10k position.

Si l'intervalle d'accord AM de votre pays est de 10 kHz (sauf pour le modèle destiné aux pays européens)

L'intervalle d'accord AM a été réglé sur 9 kHz en usine. Si le système d'allocation de fréquence de votre pays est basé sur un intervalle de 10 kHz, placez l'interrupteur 9/10k, situé sur le socle de l'appareil, sur la position 10k.

Si el intervalo de asignación de frecuencias de AM de su país es de 10 kHz (excepto el modelo para Europa)

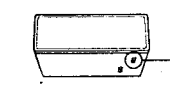
El intervalo de asignación de AM ha sido ajustado en fábrica a 9 kHz. Si el sistema de asignación de frecuencias de su país se basa en un intervalo de 10 kHz, ponga el interruptor 9/10k, situado en la base de la unidad, en la posición 10k.

Als de AM frequentietoewijzing in uw land is gebaseerd op een 10 kHz interval (behalve het model voor Europa)

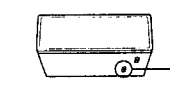
Het afsteminterval in de fabriek ingesteld op 9 kHz. Mocht de frequentietoewijzing in uw land echter gebaseerd zijn op een afsteminterval van 10 kHz, zet dan de 9/10k schakelaar aan de onderkant van het apparaat op "10k".

若当地的 AM 频率配置为 10kHz 间隔时 (欧洲机型除外)

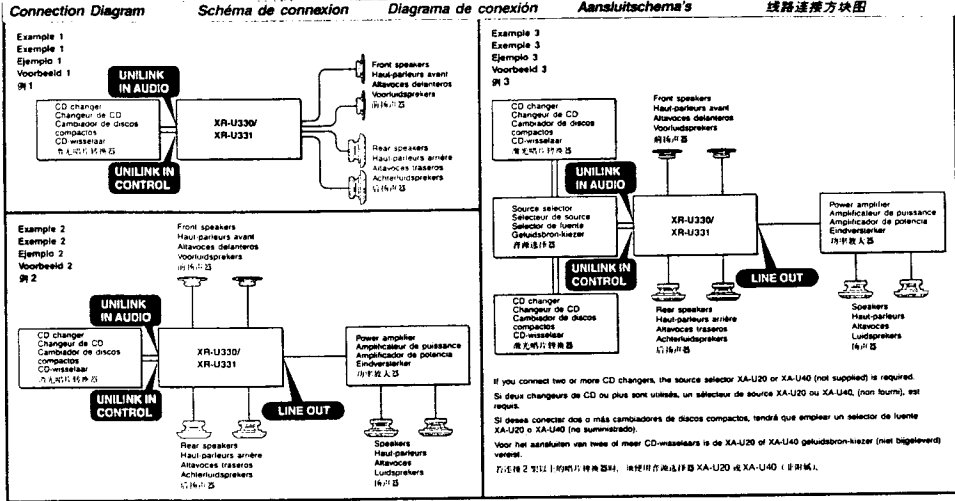
通常，AM 廣播間隔在工廠設定為 9kHz。若當地的 AM 廣播間隔為 10kHz 時，請將位於裝置底部的 9/10kHz 開關，調整至 10kHz 位置。



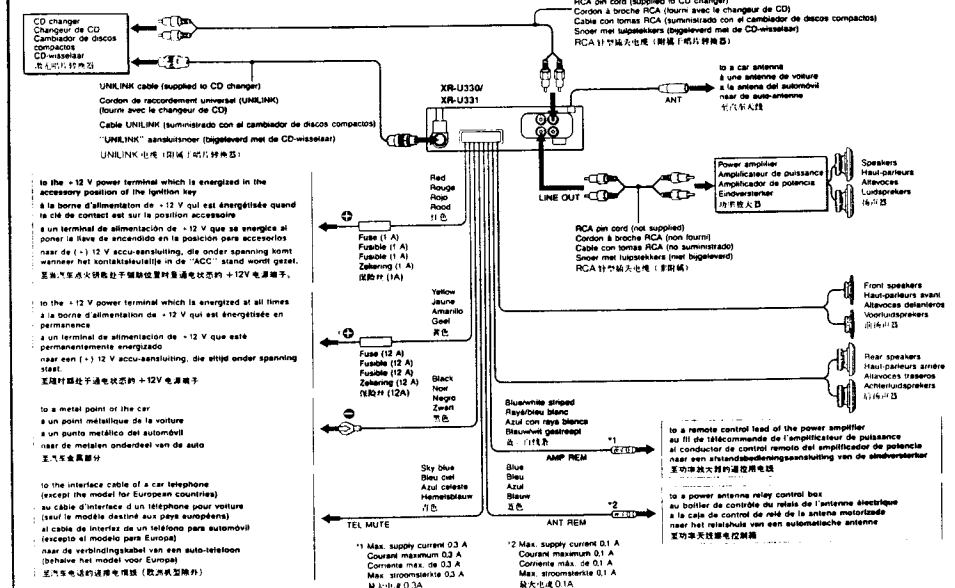
Use a ballpoint pen or a similar object to select the position of the switch.
Utiliser un stylo à bille ou un objet similaire pour choisir la position de l'interrupteur.
Empiege un bolígrafo u otro objeto similar para cambiar la posición del selector.
用球珠筆或類似物件來調整開關位置。



Use a ballpoint pen or a similar object to select the position of the switch.
Utiliser un stylo à bille ou un objet similaire pour choisir la position de l'interrupteur.
Empiege un bolígrafo u otro objeto similar para cambiar la posición del selector.
用球珠筆或類似物件來調整開關位置。



Connections of Example 2 / Connexions de l'exemple 2 / Conexiones del ejemplo 2 / Volledige aansluitingen bij voorbeeld 2 / 例 2 的线路连接图



Press the reset button on the front panel after completing the connections.
Les connexions achevées, appuyer sur la touche de réinitialisation sur le panneau avant.
Después de haber finalizado las conexiones, presione el botón de reposición del panel frontal.
Druk op het maken van alle aansluitingen op de terugknopje op het voorpaneel van dit apparaat.

Notes on the control leads:
The power antenna control lead (blue) supplies a 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.

Remarques sur les fils de contrôle:
Le fil de contrôle de l'antenne motorisée (bleu) fournit un courant continu de 12 volts quand le tuner est mis sous tension, ou quand la fonction ATA (Automatic Tuner Activation) est activée.
Une antenne électrique sans boîtier de relais ne peut être utilisée avec cet appareil.

Notas sobre los conductores de control:
El conductor de la antena motorizada (azul) suministra +12 V CC cuando se conecta la alimentación del sintonizador o cuando activa la función de activación automática de sintonización (ATA).
Con una unidad no podrá emplearse una antena motorizada desprovista de caja de relé.

Opmerkingen betreffende de bestuursaansluitingen:
Het aansluitpunt voor de automatische antenne (blauw) levert +12 V gelijkspanning als de tuner wordt ingeschakeld of als de ATA (automatische lufre-schakelafname) is vertrokken.
Met dit apparaat is het niet mogelijk een automatische antenne zonder relaisbox te gebruiken.

关于控制线路:
接电源线的控制线，提供 ATA 功能时，提供 12V 直流电源。
没有继电器盒的电源天线，不能与本装置一起使用。
本装置不能接没有继电器盒的电源天线。
使用时，请确保电源天线的正确使用。

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Precautions

- Before operating the unit for the first time or after replacing the car battery, press the reset button on the front panel with a ball-point pen etc., and then start operating the unit.
- If your car was parked in direct sunlight resulting in a considerable rise in temperature inside the car, allow the unit to cool off before operating it.
- If no power is being supplied to the unit, check the connections first. If everything is in order, check the fuse.

If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

Notes on Cassettes

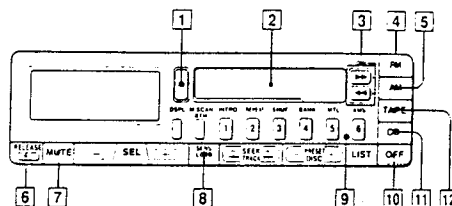
Cassette care

- Avoid touching the tape surface of a cassette, as any dirt or dust will contaminate the heads.
- Keep cassettes away from equipment with built-in magnets such as speakers and amplifiers, as erasure or distortion on the recorded tape could occur.
- Do not expose cassettes to direct sunlight, extremely cold temperatures or moisture.
- The cassette shell may become warm when the tape is played back for a long period of time because of the built-in power amplifier. However, this is not a sign of a malfunction.

Note on cassettes longer than 90 minutes

The use of cassettes longer than 90 minutes is not recommended except for long continuous play. The tapes used for these cassettes are very thin and tends to be stretched easily. Frequent playing and stopping operation for these tapes may cause them to be pulled into the cassette deck mechanism.

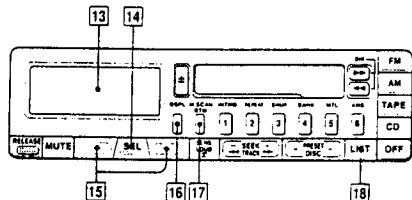
Location and Function of Controls



Refer to the pages in ● for details.

- 1 **EJECT** button (●)
Press to stop tape playback and eject the cassette.
- 2 **Cassette insertion door**
- 3 **Fast Winding** (fast winding) buttons/DIR (tape transport direction change) buttons (●)
- 4 **FM** (radio on) button (●)
- 5 **AM** (radio on) button (XR-U330) (●)
MW/LW (radio on/band select) button (XR-U331) (●)
- 6 **RELEASE** button (●)
- 7 **MUTE** button
Press to mute the sound momentarily. Press again to restore the same volume level. This button will be also canceled in the following cases:
— when the **OFF** button is pressed
— when ejecting a cassette by pressing the **EJECT** button during tape playback
- 8 **SENS/LOUD** (sensitivity/loudness/Dolby NR) button (●) (●)
Press for more than two seconds to reinforce the bass and treble especially when listening at a low volume level. To cancel this mode press it again for more than two seconds.
- 9 **Reset** button
Press this button when you use this unit for the first time, when you have changed the car battery or when the buttons of this unit do not function.
- 10 **OFF** button
- 11 **CD** (disc play/CD changer select) button (●) (●)
- 12 **TAPE** (tape playback) button (●)

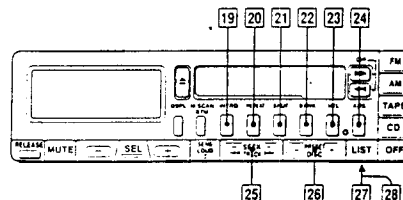
Location and Function of Controls



- 13 **Display window**
- 14 **SEL** (control mode select) button
Press to select the desired control mode: **BAS** (bass), **TRE** (treble), **BAL** (balance), **FAD** (fader) or **VOL** (volume).
- 15 **BAL** buttons
Controlling the bass/treble/balance/fader/volume
- 16 **DSPL** (display change/time setting) button (●) (●) (●) (●) (●)
- 17 **M.SCAN/BTM** (memory scan/best tuning memory) button (●) (●)
- 18 **LIST** (custom-file list) button (●) (●)

Display window	Control mode	Press []	
		Press []	Press []
BAS	Bass control	For less bass	For more bass
TRE	Treble control	For less treble	For more treble
BAL	Balance control	To decrease the right-speakers' volume	To decrease the left-speakers' volume
FAD	Fader control	To decrease the rear-speakers' volume	To decrease the front-speakers' volume
VOL	Volume control	For less volume	For more volume

The **BAL** buttons normally function as the volume control. Adjust the level within three seconds after selecting the desired control mode with the **SEL** button. Otherwise the mode will go back to the volume control mode.



	During tape playback	During disc play	During radio reception
19	—	INTRO (track cue play) button (●)	Preset number buttons (●) (●)
20	—	REPEAT (repeat play) button (●)	
21	—	SHUF (shuffle play) button (●)	
22	—	BANK button (●)	
23	MTL (metal/C-O2) button (●)	—	
24	AMS (Automatic Music Sensor) button (●)	—	
25	—	TRACK (disc track change) button (●)	SEEK (automatic tuning) button (●)
26	—	DISC (disc change/manual search) button (●) (●)	PRESET (preset search/manual tuning) button (●) (●)

- 27 **POWER SELECT** switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the Installation/Connections manual.
- 28 **9K/10K SELECT** switch (located on the bottom of the unit) (except the model for European countries)
See "9K/10K SELECT Switch" in the Installation/Connections manual.

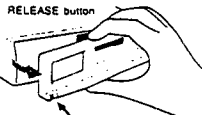
Muting a beep sound

Press the **SEL** button while pressing the **DISC** button. To obtain the beep sound again, press these buttons once more.

Detaching and Attaching the Front Panel

Detaching the Front Panel

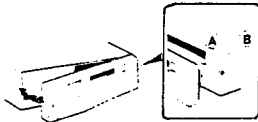
Before detaching the front panel, be sure to press the OFF button first. Then press the RELEASE button to open up the front panel and detach the panel by pulling it towards you as illustrated.



Be sure not to drop the panel when detaching it from the unit.

Attaching the Front Panel

Apply the right hand side of the front panel to the unit by attaching the part A of the front panel to the part B of the unit as illustrated and push until it clicks.



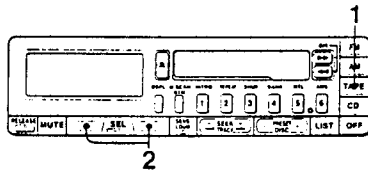
Do not press hard or give excessive pressure to the display window of the front panel.

Caution alarm (except the model for European countries)
If you turn the ignition key to the OFF position without removing the front panel, the caution alarm will be activated and a beep sound will be heard for a few seconds (only when the POWER SELECT switch is set to the ON position).

- Notes**
- Make sure that the front panel is the right way up when attaching it to the unit as it cannot be attached upside down.
 - Do not press the front panel hard against the unit when attaching it to the unit. It can be easily attached by pressing it lightly against the unit.
 - Never leave the detached front panel in your car if it is parked in direct sunlight as there could be a considerable rise in temperature inside the car.
 - When you carry the front panel with you, put it in the supplied front panel case.
 - The display window may become warm while the unit is being operated; however, this is not a sign of a malfunction.

10

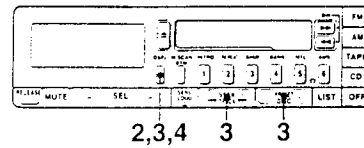
Listening to the Tape Playback



- 1 Insert a cassette to start playback.**
If a cassette is already inserted, press the TAPE button.
- 2 Adjust the volume.**

12

Setting the Clock



The clock has a 12-hour digital indication.

For example, set it to 10:08.

- 1 Turn the ignition key to the ON position.**
- 2 Press the DSPL button if the clock indication does not come on.**
- 3 Press the DSPL button for more than two seconds.**

While holding down the DSPL button:
Press to set the hour digits.
(to go back) (to go forward)
Press to set the minute digits.
(to go back) (to go forward)
- 4 The clock starts activating when you take your finger off the DSPL button.**

Note
If the POWER SELECT switch of the unit is set to the OFF position, the clock cannot be set unless the power is turned on. Set the clock after you turn on the radio, start CD play or play back a tape.

11

Other Operations

To wind the tape rapidly

Direction indicator	To advance	To rewind
	Depress	Depress
	Depress	Depress

To resume playback, press or lightly, so as not to depress it.

To listen to the reverse side of the cassette

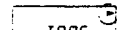


To eject the cassette



Getting the clock indication during tape playback. Press the DSPL button. Press it again to return to the previous indication.

Tape transport direction indication



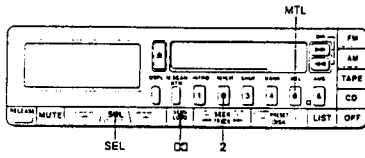
The side facing up is being played.



The side facing down is being played.

13

Listening to the Tape Playback

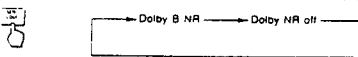


Listening to the CrO₂ (TYPE II) or Metal (TYPE IV) Tapes



The "MTL" indication appears on the display window. To listen to the normal (TYPE I) tapes, press the button again.

Listening to a Tape Recorded in the Dolby NR System



The Dolby noise reduction system reduces the hiss noises which occur during tape playback in the treble and bass areas. This system emphasizes the treble area during the recording and returns it to the original level at the playback. Therefore, when you listen to the tapes which are recorded in the Dolby B NR system, be sure to use the Dolby B NR system during a playback as well.

Note: The **LOUD** button also functions as the **LOUD** button if it is kept pressed for more than two seconds.

Note: The **ATA** will not function while the unit is in the **AMS** mode.

Turning on the Radio while the Tape is Being Fast-wound — ATA Function

Press the preset number button 2 while pressing the SEL button.



The tuner turns on automatically when you depress the **ATA** button during tape playback. To cancel, press the preset number button 2 while pressing the SEL button.

Locating the Beginning of a Track

—AMS Function

Press the **AMS** button, then depress the **TRACK** button to refer to the following table.

indicator	Cassette side being played	Desired selection	
		Next track	Current track
▶	Side facing upwards	Depress ▶▶	Depress ◀◀
<	Side facing downwards	Depress ◀◀	Depress ▶▶

The **AMS** may not function properly and the track starting positions may not be located in the following cases:

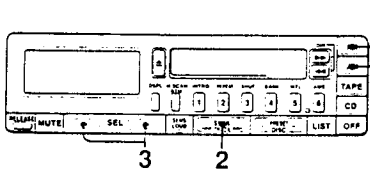
- Tapes which contain noises between the tracks are used.
- Tapes which contain less than four seconds blank spaces in between the tracks are used.
- When you depress the **TRACK** button immediately before or after the track which you wish to locate.

The unit may consider the followings as the blank spaces between the tracks and start playback:

- Long silent music sections on a track.
- Quiet sections or a continuous low volume sound on a track.
- Tracks which contain a gradual increase and decrease of the sound volume.

Searching for the Stations Automatically

—Automatic Tuning



If you do not know the frequency of the station you wish to tune in, it is useful to use the Automatic Tuning function.

1 Select the desired band.

FM or AM (M/W/LW)
XR-U330 XR-U331

The FM band changes in the following order:
FM1 → FM2 → FM3

2 Press the SEEK button.

SEEK TRACK (left) SEEK TRACK (right)

For lower frequencies For higher frequencies

The scanning stops when a station is received. Press the button repeatedly until the desired station is received.

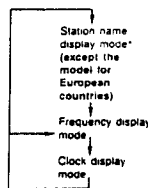
3 Adjust the volume.

While receiving FM broadcasting

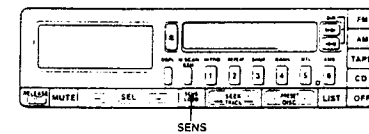
ST 87.50

The "ST" indication will appear when an FM stereo program with sufficient signal strength is tuned in. The program will be received in stereo.

Getting the clock indication while listening to the radio. Press the **DISP** button. Each time you press the button, the display mode changes as follows:

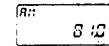


*Refer to page 24 for the station name display mode



Avoiding the Automatic Tuning from Stopping on Stations Too Frequently —Local Seek Mode

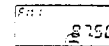
Press the **SENS** button lightly to get the "LCL" indication.



The mode changes to the local seek mode where only the stations with relatively strong signals are tuned in. It functions only when the Automatic Tuning is in operation.

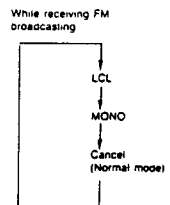
If FM Stereo Broadcasting is Difficult to Receive—Monaural Mode

Press the **MONO** button lightly to get the "MONO" indication.

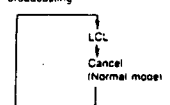


The sound improves, but it will become monaural

Each time you press the **SENS** button, the mode changes as follows:



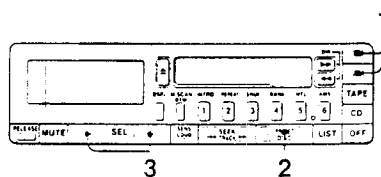
While receiving AM (M/W, LW) broadcasting



Note: The **SENS** button also functions as the **LOUD** button if it is kept pressed for more than two seconds.

Tuning in by Adjusting the Frequency

—Manual Tuning



Use the Manual Tuning function if you know the frequency of the desired station.

- 1 Select the desired band.**

FM or AM (MWLW)
XR-U330 XR-U331

The FM band changes in the following order:
FM1 → FM2 → FM3
- 2 Press the PRESET button for more than 0.5 second.**

PRESET DISC (left) PRESET DISC (right)

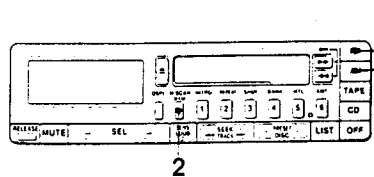
For lower frequencies For higher frequencies
- 3 Adjust the volume.**

VOLUME knob

PREVENTING ACCIDENTS! While you are driving, the use of the Automatic Tuning and the BTM function is recommended in favor of the Manual Tuning.

Memorizing the Stations Automatically

—BTM (Best Tuning Memory) Function



1 Clearest receiving stations are automatically searched and memorized on each band (FM1, FM2, FM3 and AM (MW, LW)). Up to 6 stations on each band can be stored on the preset number buttons 1 to 6 in the order of frequency.

- 1 Select the desired band.**

FM or AM (MWLW)
XR-U330 XR-U331

The FM band changes in the following order:
FM1 → FM2 → FM3
- 2 Keep the BTM button pressed for more than two seconds.**

M SCAN BTM button

Note
The receivable frequencies of FM1, FM2 and FM3 are the same.

The BTM function

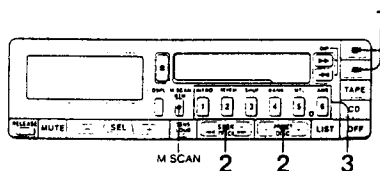
The BTM function searches all the receivable stations within the currently selected band and memorizes the ones in good receiving conditions in sequence from the lowest frequency.

How to memorize the stations on the preset number buttons

- When there is no preset number indicated on the display window, all the preset number buttons set in the currently selected band will be filled with the memories
- When there is a preset number indicated on the display window, the unit will memorize the stations on the preset number buttons from the one currently being displayed. For example, when you choose FM2 and preset number 3 is being displayed, the operation will start from the preset number 3 on FM2 and stops at the preset number 6 on FM3

Note
There may be cases where there are not enough receivable stations due to the lack of stations in the vicinity or weak broadcasting signals. In such cases, the BTM operation may stop without all the buttons being occupied with memories.

Memorizing Only the Desired Stations



Up to 6 stations on each band (FM1, FM2, FM3 and AM (MW, LW)) can be stored in the memory in order of your choice.

For example, to store a station on the preset number button 1:

- 1 Select the desired band.**

FM or AM (MWLW)
XR-U330 XR-U331

The FM band changes in the following order:
FM1 → FM2 → FM3
- 2 Tune in the station which you wish to store on the preset number button.**

SEEK TRACK or PRESET DISC
- 3 Keep the preset number button pressed for about two seconds.**

Memo button

87.50

Repeat the same procedure to store other stations.

Each preset number button has only one memory for a band. The previously memorized station will be erased when you enter a new station of the same band on the same preset number button.

The number of the preset number button of which you are pressing now comes on the display window. When the "MEM" indication comes on, the station is stored in the memory and the operation is now completed. The "MEM" indication will turn off after a while.

Checking in Order, All the Stations Stored in the Memory — Memory Scan Function

M SCAN BTM button

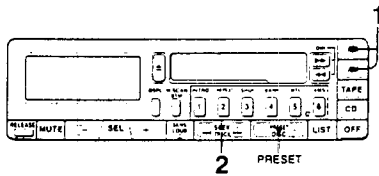
(Press lightly)

The tuner will receive in order, all the stations stored in the memory for five seconds each.

To cancel
Press the M.SCAN button lightly once more. The memory scan will be canceled and you will be able to listen to the station currently being received.

Note
There may be cases in which even the stations stored in the memory cannot be received due to weak signals in the vicinity of your car.

Receiving Stations Stored in the Memory



1 Select the desired band.

FM or AM (MWLW)

XR-U330 XR-U331

The FM band changes in the following order:
FM1 → FM2 → FM3

2 Press the preset number lightly on which the desired station is to be stored.

1/2/3/4/5/6

Notes

- There may be cases in which even the stations stored in the memory cannot be received due to weak signals in the vicinity of your car.
- If you keep pressing the preset number button for more than two seconds, the currently received station will be memorized. To receive the previously memorized station, make sure that the preset number button is pressed only lightly.

Receiving in Order the Stations Stored in the Memory—Preset Search Function

The number will advance in the following order:

1 → 2 → ... → 5 → 6 → 1 → 2 → ...

(Press lightly)

The number will reverse in the following order:

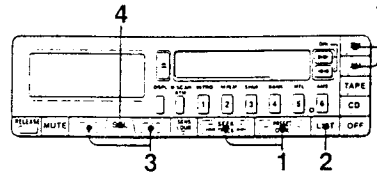
6 → 5 → ... → 2 → 1 → 6 → 5 → ...

(Press lightly)

22

Displaying the Name of Each Station

—Station Memo Function (except the model for European countries)



You can store the names of radio stations in the memory of the tuner. The name of station can be displayed on the display window while it is tuned in.

Storing the Station Names to the Memory

1 Tune in a station whose name you wish to register.

2 Press the LIST button for more than two seconds to enter the name edit mode.

LIST

Name edit mode

3 Press either the \leftarrow or \rightarrow button to select the desired characters and numbers.

Each time you press the \leftarrow or \rightarrow button, characters will come on in the following order:

\leftarrow → _ _ - A - B - C - ... → X - Y - Z - 0 - 1 - 2 - 3 - ...

\rightarrow → _ _ - (-) - _ _ - _ _ - _ _ - 9 - ...

4 Press the SEL button after locating the desired character or number.

SEL

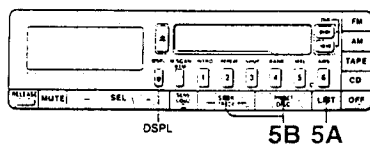
The flashing part will move to the next space on the right. Repeat steps 3 and 4 to enter the entire name. Up to eight characters can be used per name.

Notes

- If you press the SEL button when the eighth character (flashes: right character) is flashing, the flashing part will go back to the first character (flashes: left character).
- If you wish to put a blank space after a character, select the " " under-bar.

23

Displaying the Name of Each Station



5 To register the name, use one of the following two methods.

A Press the LIST button for more than two seconds.

LIST

The unit will go back to the normal mode.

B Tune in another station by pressing the SEEK or PRESET button and repeat the procedures.

SEEK TRACK or PRESET DISC

You can also change the band and repeat the process.

Notes

- If you turn off the tuner before you complete this procedure, the name you have just entered will not be registered.
- You can store up to 40 names, but if you try to enter more, the "FULL" indication will come on the display window and you will not be able to register them. You can register more names after erasing some of the existing names.

Displaying the Station Names

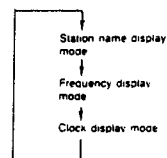
While listening to the radio, press the DSPL button.

DSPL

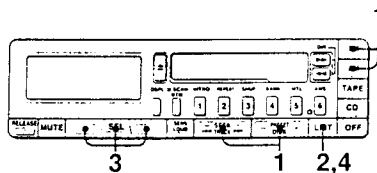
HP:ISS

If the name of the station is not registered, "....." will come on the display window.

Each time you press the DSPL button while listening to the radio, the display mode changes cyclically as follows:



Editing the Registered Station Names



The names you have already put onto the radio stations can be altered or erased.

Changing the Station Names

1 Tune in the station whose name you wish to change.

2 Press the LIST button for more than two seconds to enter the name edit mode.

LIST

The currently received station will appear on the display window.

3 Press the SEL button to make the part you wish to edit flash. Select the characters or numbers using the \leftarrow or \rightarrow button.

SEL

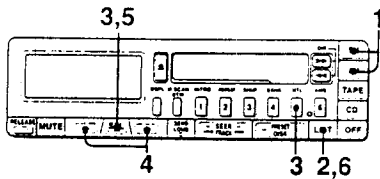
Tune in other stations using the SEEK or PRESET button and repeat step 3, if necessary.

4 Press the LIST button for more than two seconds.

LIST

The new station names are registered.

Editing the Registered Station Names



Erasing the Station Names

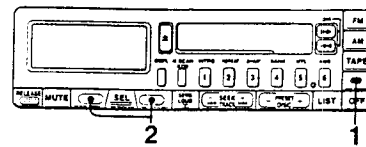
- 1 Turn the radio on and tune in any station.
- 2 Press the LIST button for more than two seconds to enter the name edit mode.
The currently received station will appear on the display window.
- 3 Press the preset number button 5 while pressing the SEL button.
The station names stored in the memory of the tuner will appear on the display window in the same order as they were registered*.
- 4 Press the ← or → button to search for the names you wish to erase.
Repeat the steps 4 and 5 to erase the other station names.
- 5 Press the SEL button for more than two seconds to erase the displayed name.
Repeat the steps 4 and 5 to erase the other station names.
- 6 Press the LIST button for more than two seconds.
The unit will go back to the normal mode.

The alternative method to erase the name You can erase a name by selecting eight "—"s (underbars) as described in step 3 of "Changing the Station Names" (page 25)

* If you have erased some of the names before, they will not come on in the same order as they were registered.

Listening to the CD Play

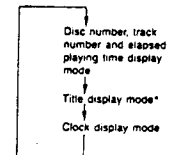
— When Optional Sony CD Changers are Connected



- 1 Press the CD button.
CD play will start.
Disc number Elapsed playing time
- 2 Adjust the volume.

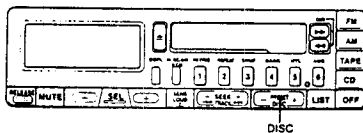
If the unit is set in the normal playing mode, after the end of a disc, the disc with the next number shown will be automatically played. If two or more CD changers are connected, after the end of the last disc, the first disc in the CD changer with the next number shown will be played. The order of the CD play can be rearranged by changing the playing modes. For details, see "Playing in Other Modes" (page 31)

Getting the clock display while listening to a disc Press the DSPL button. Each time you press the button, the display mode will change cyclically as follows:



* It is necessary to put titles onto the discs in advance. See page 34 for details.

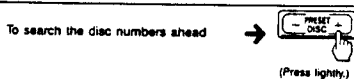
Locating a Desired Disc, Track or Part of a Track



You can use this function to quickly locate your desired disc, track or part of a track.

Searching Your Desired Discs in Turn — Disc Search

Press the DISC button lightly during CD play.



You can search a disc by displaying the titles of the discs registered with the Disc Memo Function. For details, see page 34.

Note Make sure that you press the DISC button lightly. If you keep it pressed, the unit will enter the Manual Search mode.

Listening to the Discs in Another CD Changer (when two or more CD changers are connected)

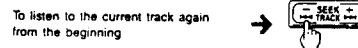
Press the CD button during CD play.



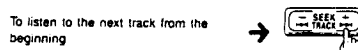
The CD changer number changes.

Locating the Beginning of a Track

Press the TRACK button during CD play.



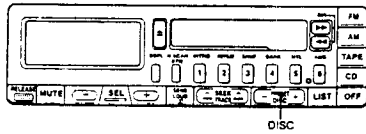
If the button is kept pressed, the beginnings of the previous tracks will be located.



If the button is kept pressed, the beginnings of the succeeding tracks will be located.

Note When you keep pressing the TRACK button and come to either the beginning or the end of a disc, you will not be able to go any further.

Locating a Desired Disc, Track or Part of a Track



DISC

Searching for a Desired Part of Track
—Manual Search

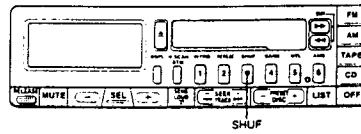
Keep the DISC button pressed during CD play.

To go back → (Keep on pressing.)

To go ahead → (Keep on pressing.)

The elapsed playing time of the track will be displayed on the display window during the manual search.

Playing in Other Modes



SHUF

Playing the Discs Randomly
—Shuffle Play Functions

Playing the tracks on the currently selected disc randomly —Disc shuffle play

Press the button to get the "SHUF 1" indication during CD play.

When all the tracks on a disc have been played, it will proceed on to the next disc.

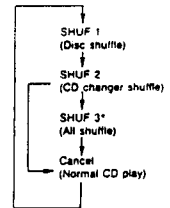
Playing every track on every disc in the currently selected CD changer randomly—CD changer shuffle play

Press the button to get the "SHUF 2" indication during CD play.

Playing randomly every track on every disc in all the connected CD changers—All shuffle play (when two or more CD changers are connected)

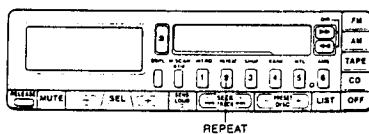
Press the button to get the "SHUF 3" indication during CD play.

The function of the SHUF button changes cyclically as follows:



* All shuffle play (SHUF 3) mode functions only when two or more CD changers are connected to the unit. When only one changer is connected, the "SHUF 3" indication will not be displayed. In this case, if you press the SHUF button again while the "SHUF 2" indication is being displayed, the shuffle play will be canceled.

Playing in Other Modes



REPEAT

Playing a Disc Repeatedly —Repeat Play Functions

Playing the currently selected track repeatedly —Track repeat

Press the button to get the "REP 1" indication during CD play.

When the track is over, the CD play will be repeated from the beginning of that track.

Playing the currently selected disc repeatedly —Disc repeat

Press the button to get the "REP 2" indication during CD play.

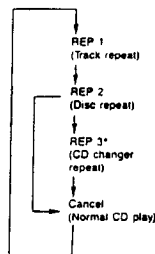
When the last track of the currently selected disc is over, the CD play will be repeated from the beginning of that disc.

Playing the discs in the currently selected CD changer repeatedly—CD changer repeat (when two or more CD changers are connected)

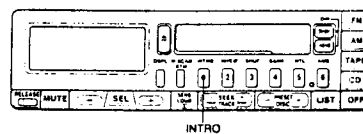
Press the button to get the "REP 3" indication during CD play.

When the last disc of the currently selected CD changer is over, the CD play will be repeated starting from the first disc in the currently selected CD changer.

The function of the REPEAT button changes cyclically as follows:



* CD changer repeat (REP 3) mode functions only when two or more CD changers are connected to the unit. When only one changer is connected, the "REP 3" indication will not be displayed. In this case, if you press the REPEAT button again while the "REP 2" indication is being displayed, the repeat play will be canceled.



INTRO

Searching for a Desired Track by Listening to the First 10 Seconds of Each Track
—Intro Scan Function

Press the button during CD play.

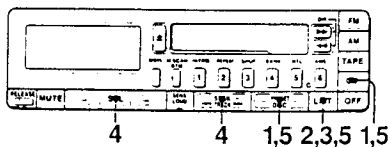
The first 10 seconds of all the tracks on the currently selected disc will be played in order.

When the first 10 seconds of the last track on a disc is played, it will move on to the next disc.

When the first 10 seconds of the last disc in the first CD changer has been played, the first disc in the next CD changer will be played (only when two or more CD changers are connected).

When you find the desired track Press the INTRO button once more. The intro scan function will be canceled and you can continue to listen to the track.

Playing Selected Tracks on a Disc – Bank Function



You can listen to only the desired tracks by using this function.

Setting the Play and Skip Modes on the Discs

- 1** Play the disc to which you wish to set these modes.
- 2** Press the LIST button for more than two seconds and put the titles onto the discs.

See page 34 for details about putting on a title. If the title has already been registered, proceed to step 3.
- 3** Press the LIST button lightly to enter the PLAY/SKIP edit mode.

When the unit enters the PLAY/SKIP edit mode, the indication on the display window will look like the illustration below.
- 4** Press the TRACK button to select the track number you wish to skip and press the SEL button.

The indication changes from "PLAY" to "SKIP". If you wish to return to "PLAY", press the SEL button again.

Repeat the operation in this step to set either the "PLAY" or "SKIP" mode on all the tracks.

Notes

- When the title is not registered, you cannot enter the PLAY/SKIP edit mode even if you press the LIST button.
- You can only set the "SKIP" mode onto up to 24 tracks. If a disc has more than 24 tracks, you will not be able to set the SKIP mode on the tracks after the 24th track.
- You cannot set the SKIP mode onto all of the tracks on a disc.

- 5** To register the settings, use one of the following methods ① through ④.

 - ① Press the LIST button for more than two seconds.

The unit will go back to the normal CD playing mode.
 - ② Press the LIST button lightly.

The unit re-enters the name edit mode. See page 34.

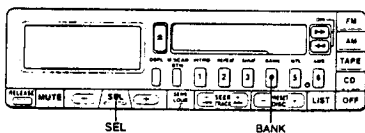
(Press lightly.)
 - ③ Press the DISC button lightly.

You can change the disc and continue to put the titles onto the discs.

(Press lightly.)
 - ④ Press the CD button (only when two or more CD changers are connected).

You can go to the next CD changer and the unit will go back to the normal playing mode.

Playing Selected Tracks on a Disc

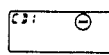


You can listen to only the desired tracks by using this function.

Playing with the Bank Function

To play the tracks with "PLAY" settings

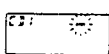
Press the BANK button during CD play.



The "BANK" indication will come on the display window. The unit will start playing the tracks with "PLAY" settings which have been set by the PLAY/SKIP mode.

To play the tracks with "SKIP" settings

Press the BANK button while pressing the SEL button.

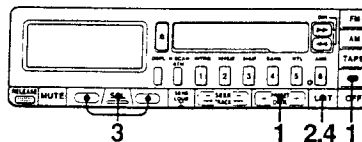


The "BANK" indication will flash on the display window. The unit starts playing the tracks with "SKIP" settings which have been set by the PLAY/SKIP mode.

To go back to the normal playing mode, Press the BANK button again.

To go back to the normal playing mode, Press the BANK button while pressing the SEL button.

Editing a Custom File



When you change the title, the PLAY/SKIP settings of the Bank function will not be erased at the same time.

Changing the Title and the PLAY/SKIP Settings

- 1** Play the disc you wish to edit.
- 2** Press the LIST button for more than two seconds to enter the name edit mode.

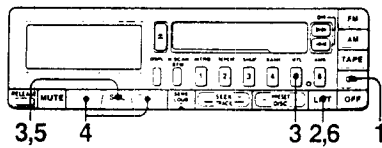
The title of the currently played disc will appear on the display window.
- 3** Press the SEL button to make the part you wish to edit flash. Select the characters and numbers using the or button.

If you wish to change the titles of other discs, repeat steps 1 through 3 on the discs after changing them with the DISC or CD button.
- 4** Press the LIST button for more than two seconds.

Now the new title is registered.








Note
If you wish to change the Bank function settings of the Bank function, press the LIST button lightly to enter the PLAY/SKIP mode while the unit is in the name edit mode in step 2. While checking the disc and track numbers on the display window, change the setting by the TRACK and SEL buttons. Press the LIST button lightly again and the unit will enter the name edit mode again.

Editing a Custom File



If you erase the title, the PLAYSKIP settings of the Bank function will be erased as well.

Erasing a Title

- | | |
|----------|--|
| 1 | Select the CD changer and play any disc. |
| 2 | Press the LIST button for more than two seconds to enter the name edit mode.
 The title of the currently played disc will appear on the display window. |
| 3 | Press the preset number button 5 while pressing the SEL button.
  |
| 4 | Press the  or  button to search for the title you wish to erase.
The titles stored in the CD changer currently selected will appear on the display window in the same order as they were registered*. |
| 5 | Press the SEL button for more than two seconds after the title you wish to erase is displayed.
 Repeat steps 4 and 5 on other titles, if necessary. |
| 6 | Press the LIST button for more than two seconds.
 Now the title and the PLAYSKIP settings are erased. The unit will go back to the normal CD playing mode. |

The alternative method to erase a title
You can erase a title by selecting eight "5" (underbars) as described in step 3 of "Changing the Title and the PLAYSKIP Settings" (page 41)

* If you have erased some of the titles before, they will not come on in the same order as they were registered.

Maintenance

Fuse Replacement

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after the replacement, there may be an internal malfunction. In this case, consult your nearest Sony dealer.

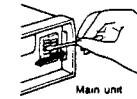
Warning
Use the specified amperage fuse. Use of a higher amperage fuse may cause serious damage.

Cleaning the Head and the Tape Path

Prolonged use may contaminate the tape head and the tape path. Contamination causes sound drop-outs in playback. Clean the tape head and the tape path every two weeks to enjoy optimum hi-fi stereo sound. Use a commercially available cleaning cassette.

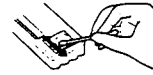
Cleaning the Connectors

The unit may not function properly if the connectors between the unit and the front panel get contaminated with dirt. In order to prevent this from happening, open up the front panel by pressing the RELEASE button then detach it and clean the connectors from time to time.



Main unit

Clean the connectors with a cotton swab as illustrated. Be sure to clean them in the direction of the arrow.



Back of the front panel

SECTION 2 ADJUSTMENTS

2-1. MECHANICAL ADJUSTMENT

PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before adjustment:

PB head	Pinch roller
Idler	Rubber belt
Capstan	
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4 V).

Torque Measurement

Measure the torque at a supply voltage of 14.4 V DC.

Mode	Torque meter	Meter reading
FWD	CQ-102C	25 to 55 g•cm (0.35 to 0.77 oz•inch)
REV	CQ-102RC	25 to 55 g•cm (0.35 to 0.77 oz•inch)
FF, REW	CQ-201B	50 to 150 g•cm (0.7 to 2.1 oz•inch)
Back Tension	CQ-102C	1.5 to 4 g•cm (0.02 to 0.05 oz•inch or less)

0 db = 0.775 V

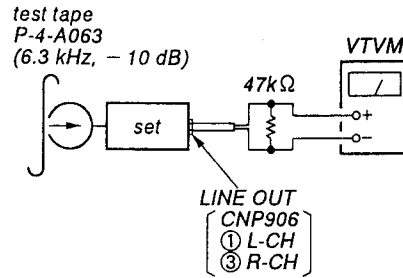
2-2. ELECTRICAL ADJUSTMENTS

DECK SECTION

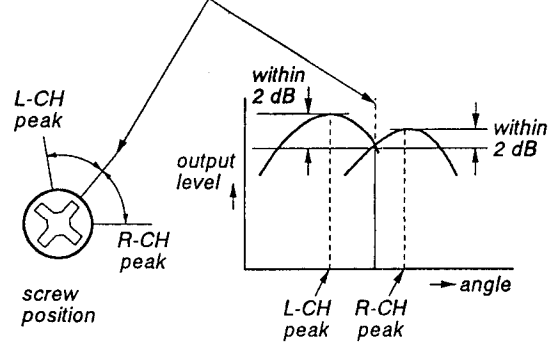
PB Head Vertical Adjustment

Procedure:

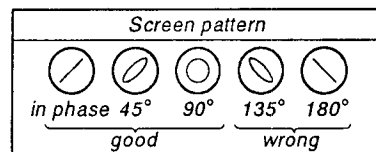
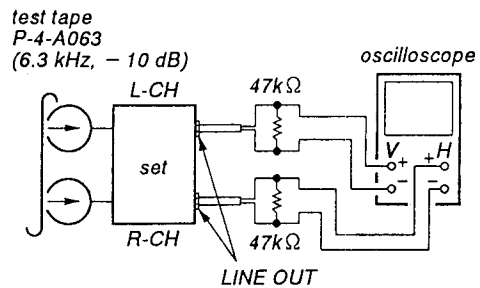
1. Put the set into the FWD PB mode.



2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 2 dB.

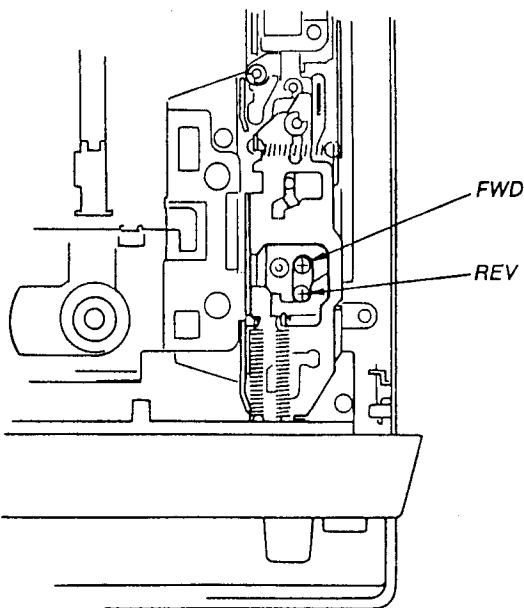


3. Check the phase in the PB mode.



4. Repeat the above adjustment for the REV PB mode.
5. Check that output level difference between FWD PB mode and REV PB mode is within 4 dB μ .

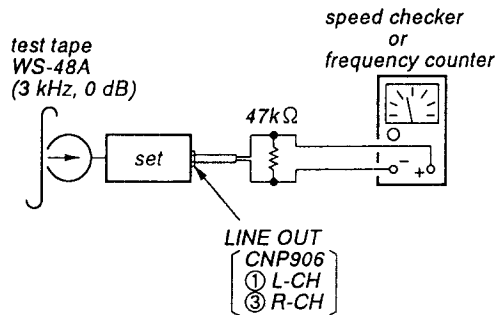
Adjustment Location:



Capstan Motor Tape Speed Adjustment

Procedure:

1. Put the set into the FWD PB mode.



Specification: Constant speed

Speed checker	Frequency counter
- 1.5 to +2.5%	3,000 ± 75 Hz

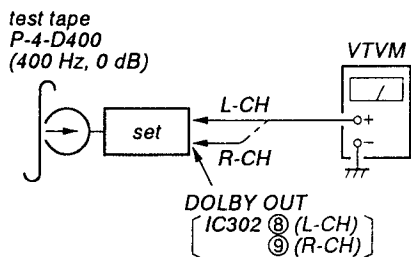
Adjust so that the frequency difference between the FWD and REV modes is within 1.5% (45 dB).

Adjustment Location: Capstan/Reel Motor

DOLBY NR Level Adjustment (Except U220)

Setting:

- DOLBY NR switch: OFF
- METAL switch: OFF



Procedure:

1. Put the set into the FWD PB mode.
2. Adjust RV301 (L-CH) and so that VTVM reading is -6 ± 1.5 dB.
3. Put the set into the FWD PB mode.
4. Adjust RV401 (L-CH) and so that VTVM reading is -6 ± 1.5 dB. (-6 ± 1.5 dB: approx. 0.35 to 0.54 V)

Adjustment Location: Main board

TUNER SECTION

Cautions during repair

When the front end is defective, replace it by a new one because its internal block is difficult to repair.

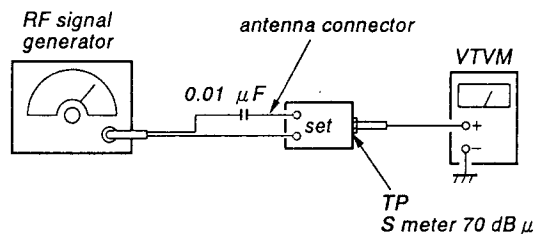
Make the Test Mode.

1. Set the "OFF" condition.
2. Push [4] button.
3. Push [5] button.
4. Press [1] button for two seconds. Then the display indicates 5 patterns and stops. The test mode is set.

FM Signal Meter (70 dB) Adjustment

Setting:

BAND switch : FM



- Carrier frequency: 97.9 MHz (US/Canadian)
98.0 MHz (AEP/E/G)
- Output level: 70 dB (3.15 mV)
- Modulation: 1 kHz, 75 kHz deviation

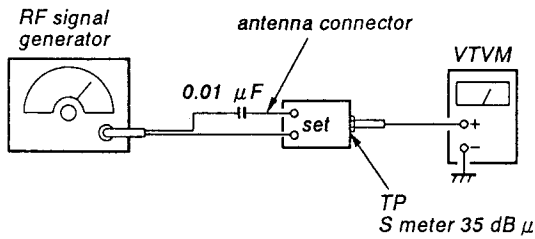
Procedure:

Adjust with RV2 to 4.0 ± 0.1 V reading on VTVM.

FM Signal Meter (35 dB) Adjustment

Setting:

BAND switch : FM



Carrier frequency: 97.9 MHz (US/Canadian)
 98.0 MHz (AEP/E/G)
 Output level: 35 dB (56.2 μV)
 Modulation: 1 kHz, 75 kHz deviation

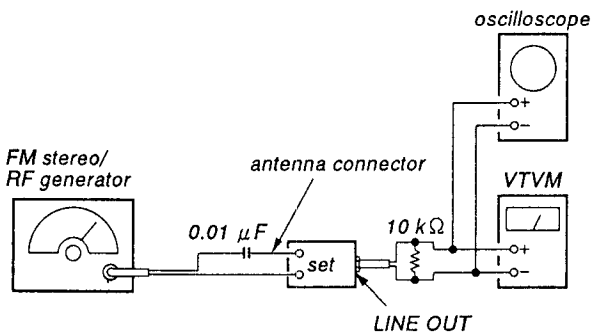
Procedure:

Adjust with RV9 to 2.0 ± 0.1 V (IC201 pin ② voltage value × 0.375 ± 0.1 V) reading on VTVM.

FM Carrier Leakage Adjustment

Setting:

BAND switch : FM



Carrier frequency: 97.9 MHz (US/Canadian)
 98.0 MHz (AEP/E/G)
 Output level: 60 dB (1 mV)
 Modulation: main; 1 kHz, 33.75 kHz deviation
 sub; 1 kHz, 33.75 kHz deviation
 19 kHz pilot; 7.5 kHz deviation

Procedure:

1. Check the waveform on the oscilloscope screen becomes as follows when turning RV3.

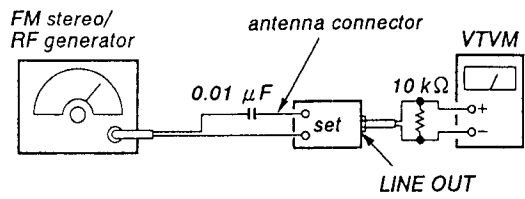


2. Set the modulation 19 kHz pilot.
3. Adjust with RV3 so that the 19 kHz signal becomes minimum on both channels L and R.

FM Stereo Separation (70 dB) Adjustment

Setting:

BAND switch : FM



Carrier frequency: 97.9 MHz (US/Canadian)
 98.0 MHz (AEP/E/G)
 Output level: 70 dB (3.15 mV)
 Modulation: main; 1 kHz, 33.75 kHz deviation
 sub; 1 kHz, 33.75 kHz deviation
 19 kHz pilot; 7.5 kHz deviation

Procedure:

Adjust RV4 for a best stereo separation at a LINE OUT.
 More than 28 dB is good.

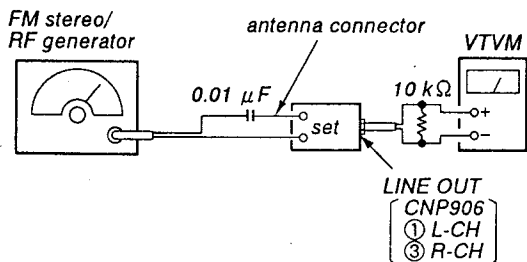
FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ [ⓑ] Adjust RV1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ [Ⓓ] Adjust RV1 for minimum reading.

L-CH Stereo separation: Ⓐ - Ⓑ[ⓑ]
 R-CH Stereo separation: Ⓒ - Ⓓ[Ⓓ]
 The separations of both channels should be equal.

FM Stereo Separation (50 dB) Adjustment

Setting:

BAND switch : FM



Carrier frequency: 97.9 MHz (US/Canadian)
 98.0 MHz (AEP/E/G)
 Output level: 50 dB (316 μV)
 Modulation: main; 1 kHz, 33.75 kHz deviation
 sub; 1 kHz, 33.75 kHz deviation
 19 kHz pilot; 7.5 kHz deviation

Procedure:

Adjust RV6 for a best stereo separation at a LINE OUT level of approximately -10dB.
 More than 23 dB is good.

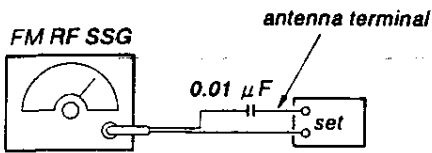
FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV1 for minimum reading.

L-CH Stereo separation: Ⓐ - Ⓑ
 R-CH Stereo separation: Ⓒ - Ⓓ
 The separations of both channels should be equal.

FM Auto Scan/Stop Level Adjustment

Setting:

BAND switch : FM

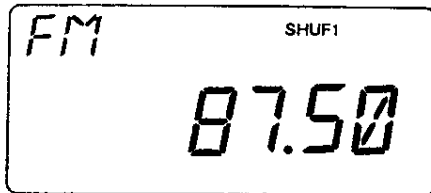


Carrier frequency: 97.9 MHz (US/Canadian)
 98.0 MHz (AEP/E/G)
 Output level: 25 dB (18 µV) (Except RDS model)
 22 dB (13 µV) (RDS model)
 Mode: mono, unmodulated

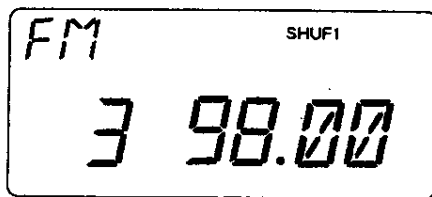
Procedure:

1. Set to the test mode. (See page 18.)
2. Push the tuner button and set to FM.

Display window



3. Push the preset **3** button.



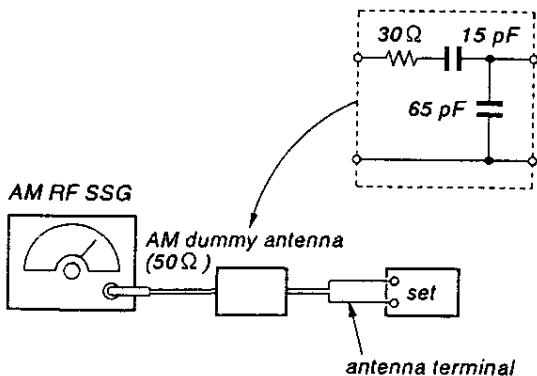
4. Adjust with the volume on TU10 so that the "FM" indication turns to "FM0" indication on the display windows.

AM (MW) Auto Scan/Stop Level Adjustment

Note: This adjustment should be made after FM auto scan stop level adjustment is completed.

Setting:

BAND switch : AM (MW)

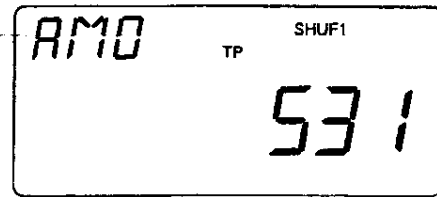


Frequency: 1,000 kHz (US/Canadian/E)
 999 kHz (AEP/E/G)
 Output level: 30 dB (31.8 µV)

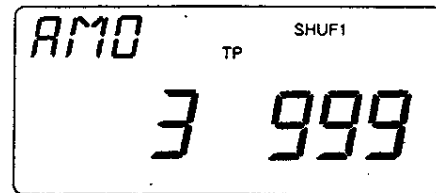
Procedure:

1. Set to the test mode. (See page 18.)
2. Push the tuner button and set to AM (MW).

Display window (EX.: 2 band model 9 kHz step when 10 kHz step; 530)

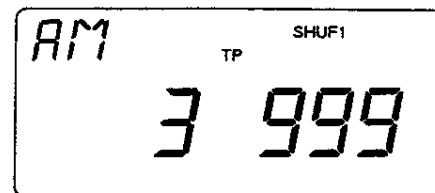


3. Push the preset **3** button.



(EX.: 2 band model 9 kHz step, when 10 kHz step; 1000)

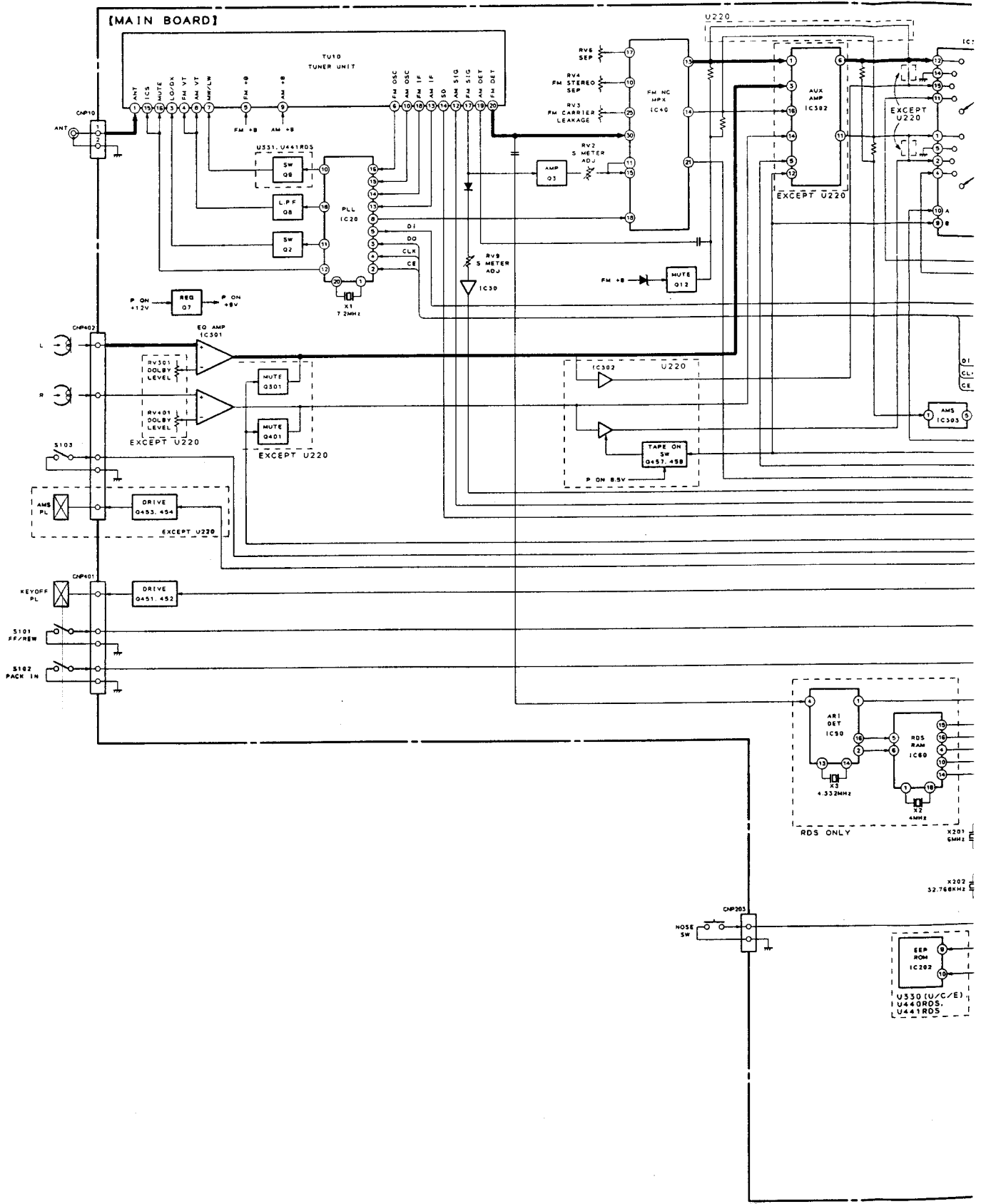
4. Press **M. SCAN BTM** button for about 2 seconds. Then "0" of AM0 (or MW0) and "TP" indications are off.

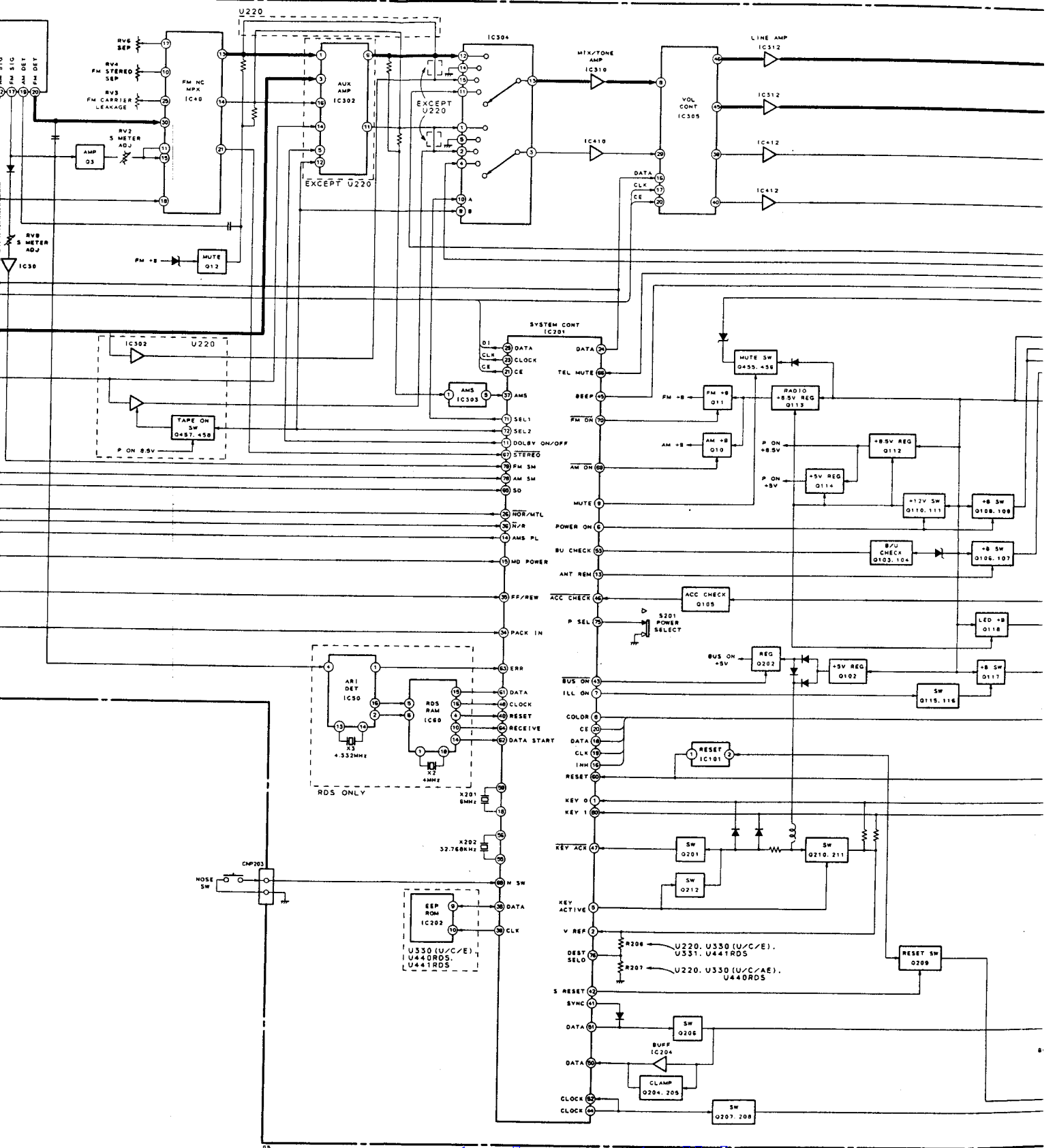


(EX.: 2 band model 9 kHz step, when 10 kHz step; 1000)

5. Adjust with the volume on TU10 so that the "AM (or MW)" indication turns to "AM0 (or MW0)" indication on the display windows.

3-1. BLOCK DIAGRAM





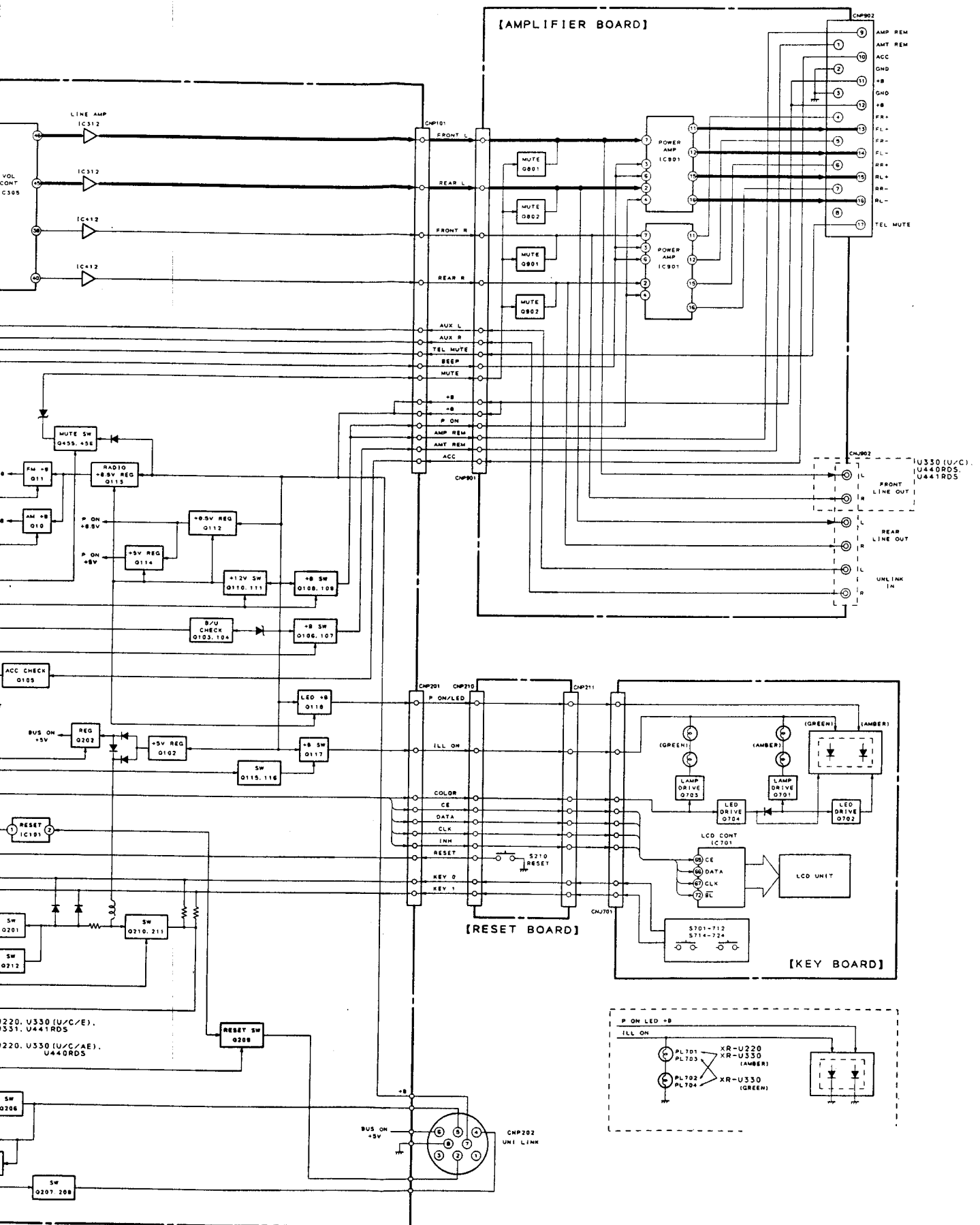
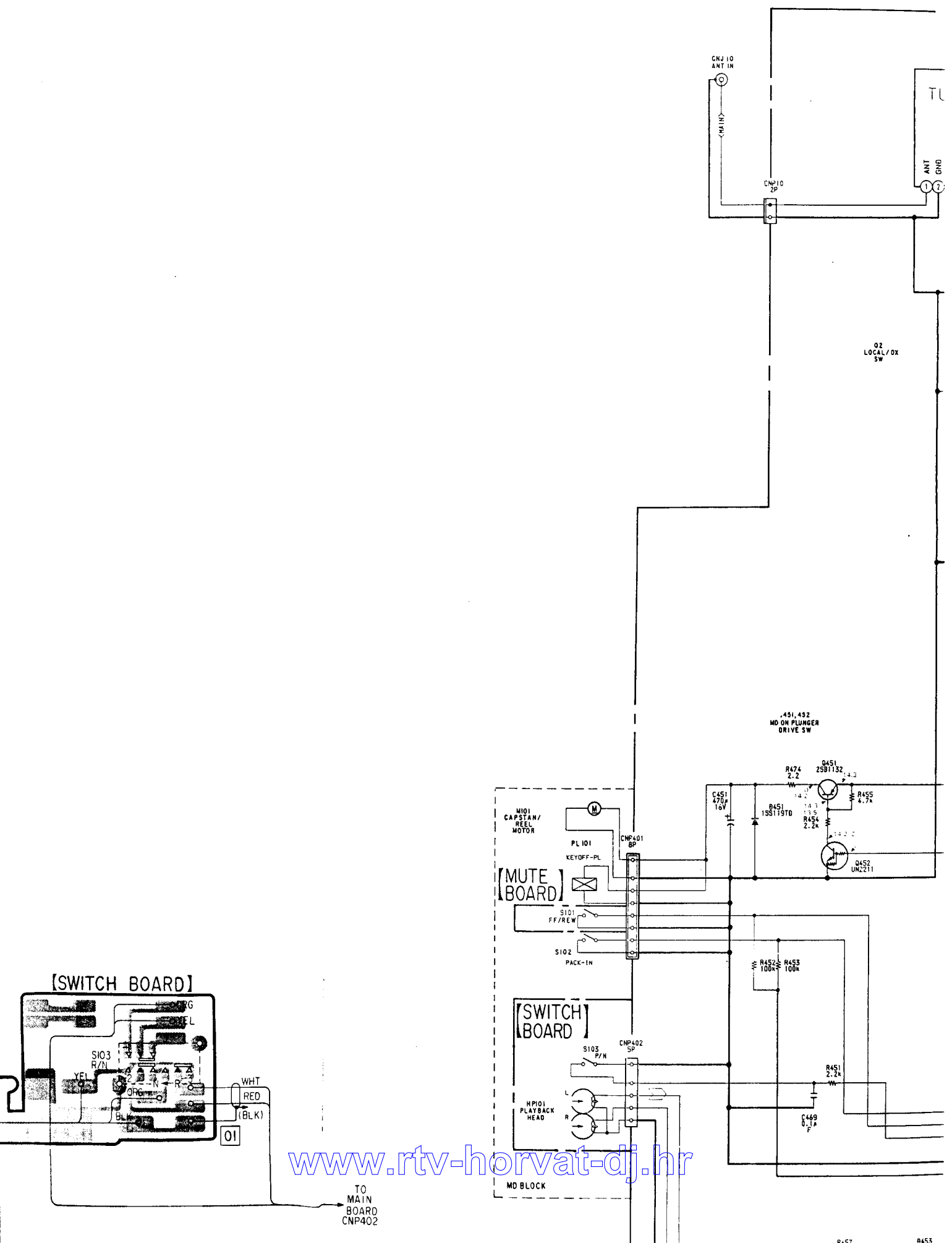
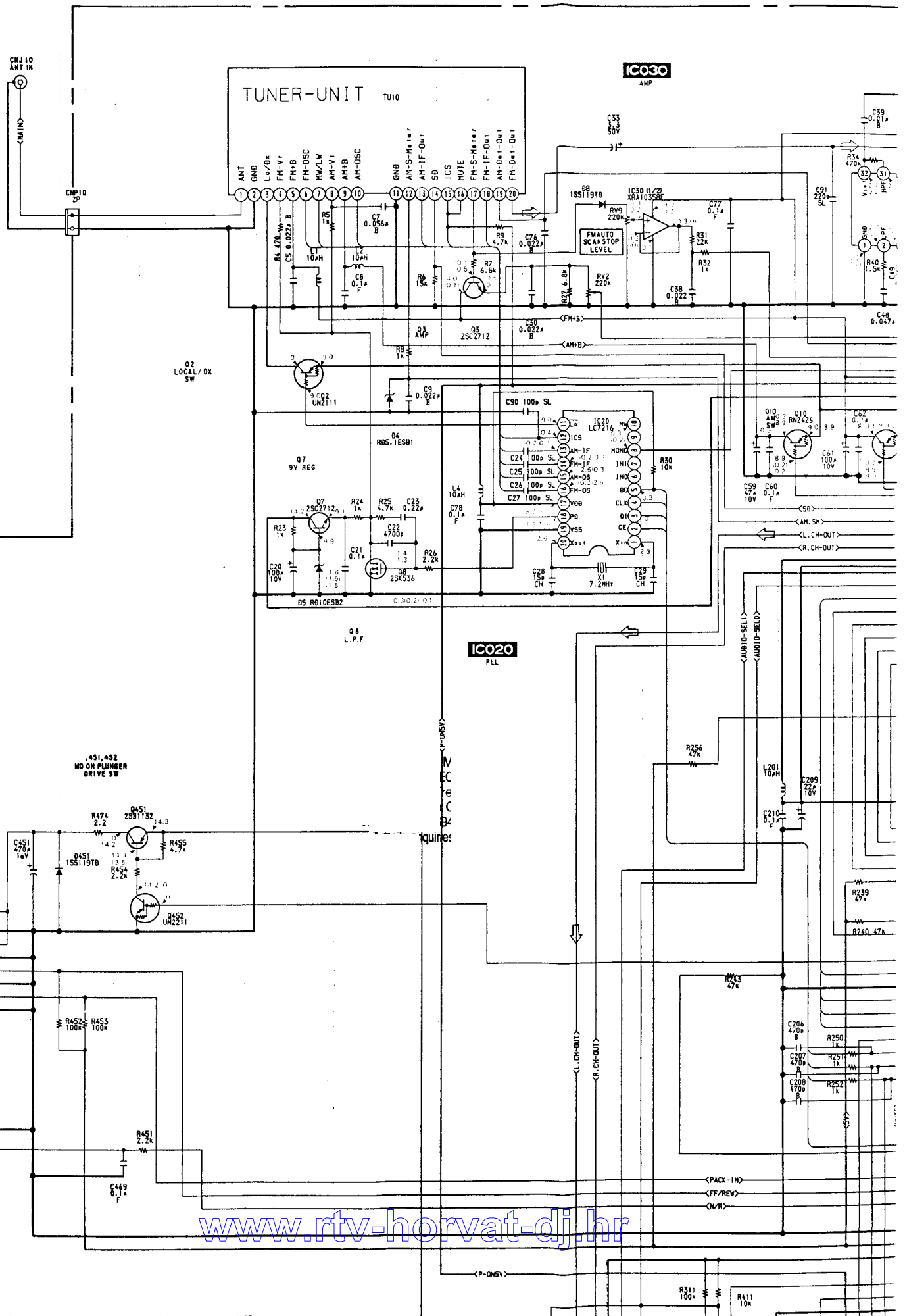


DIAGRAM (MAIN SECTION) XR-U220
Block Diagrams.

2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10



TO MAIN BOARD CNP402



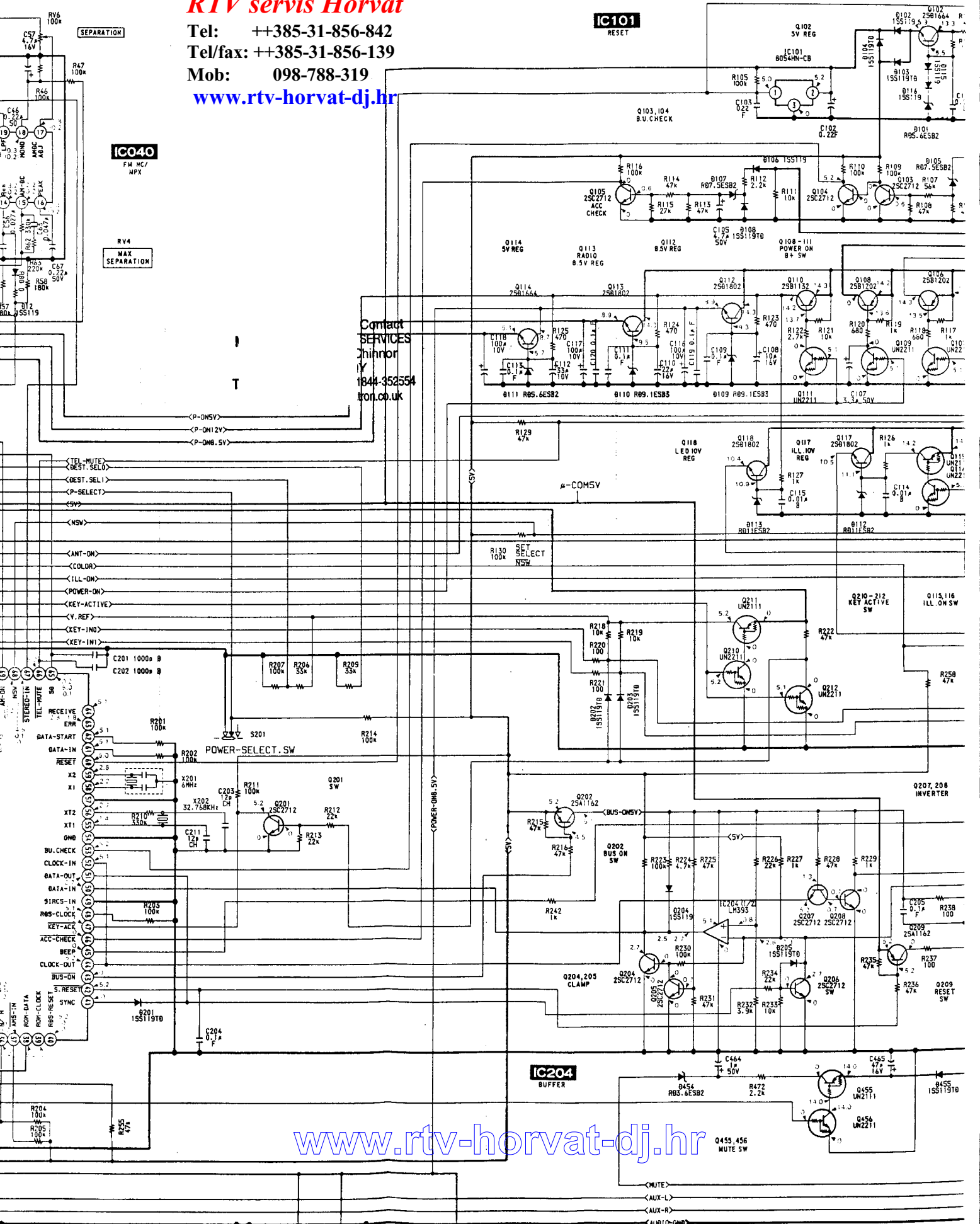
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Tel/fax: ++385-31-856-139

Mob: 098-788-319

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Contact
SERVICES
Jhinnor
IV
1844-352554
701.CO.UK

www.rtv-horvat-dj.hr

E

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


L

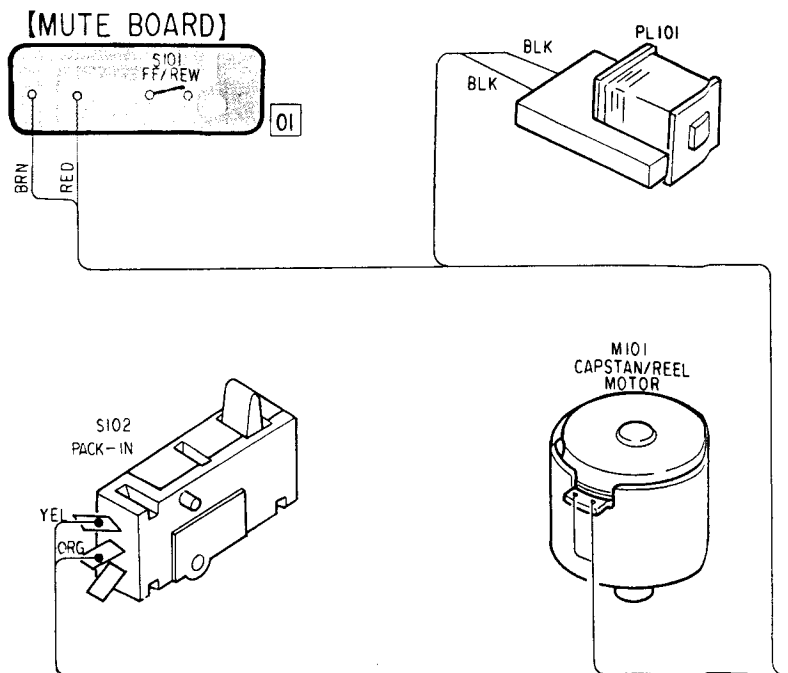
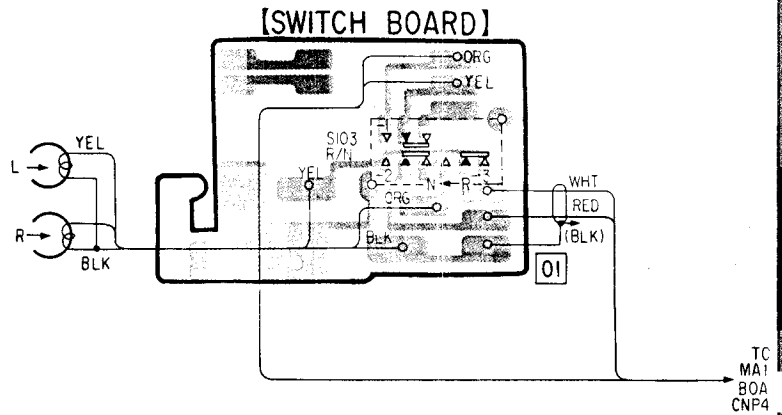
M

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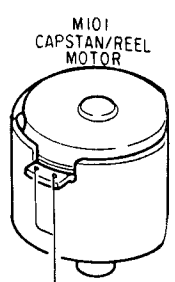
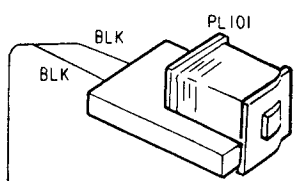
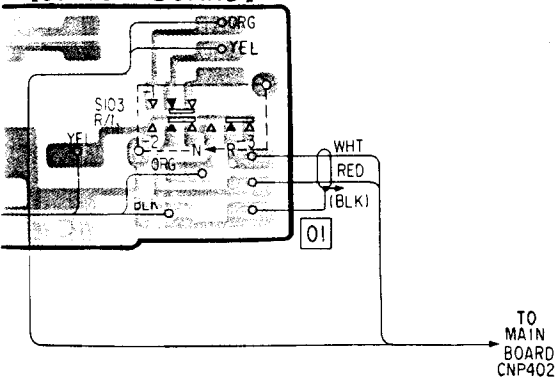
O

Note:

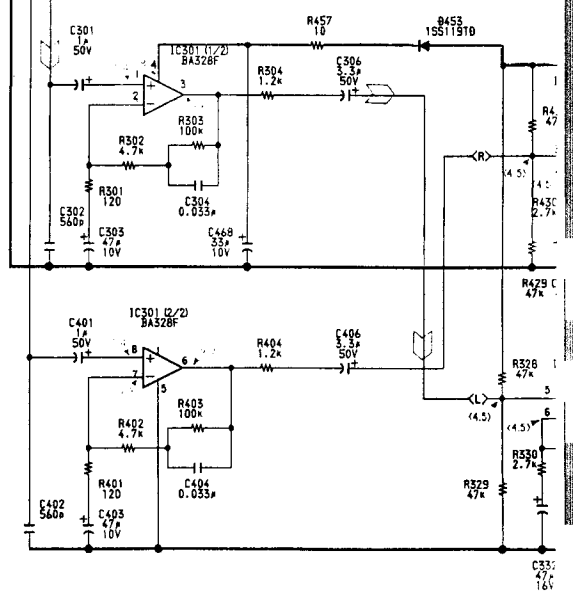
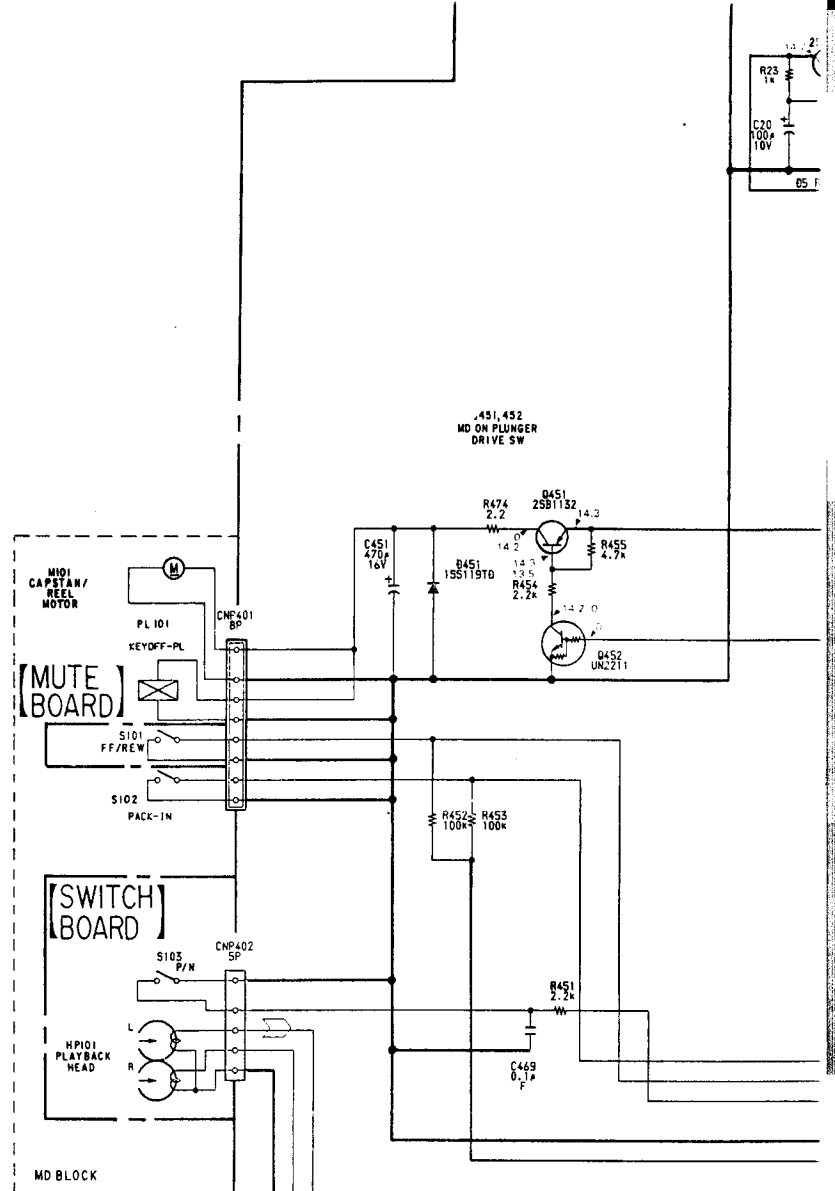
- All capacitors are in μF unless otherwise noted. pF: μpF
50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
- B : B + Line.
-  : adjustment for repair.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BAT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : Common
- () : AM
- < > : PB
- * : impossible to measure the voltage at the marked points.
- Voltages are taken with a VOM (10 M Ω /V).
Voltage variations may be noted due to normal production tolerances.
- Signal path.
 : FM  : PB



[SWITCH BOARD]

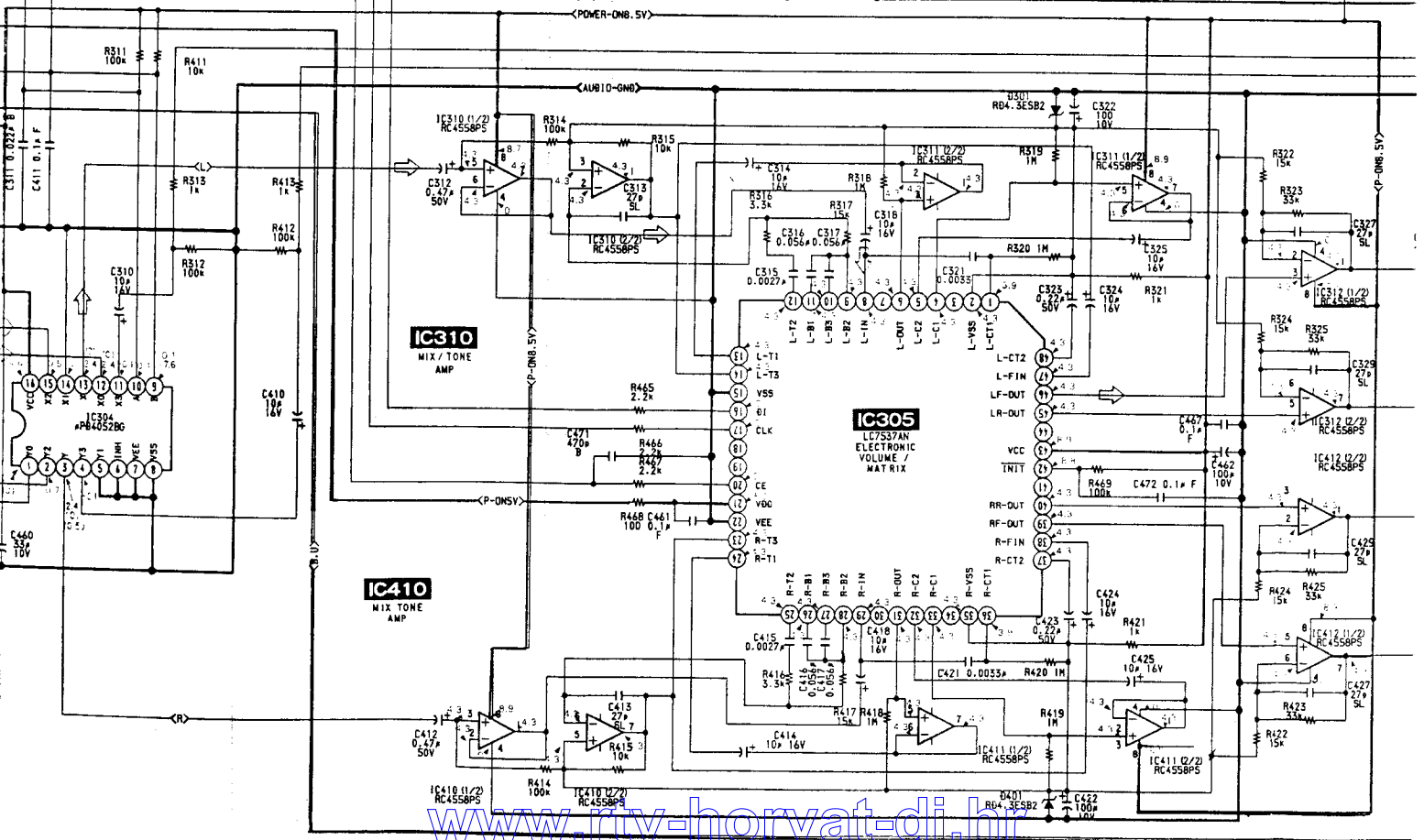
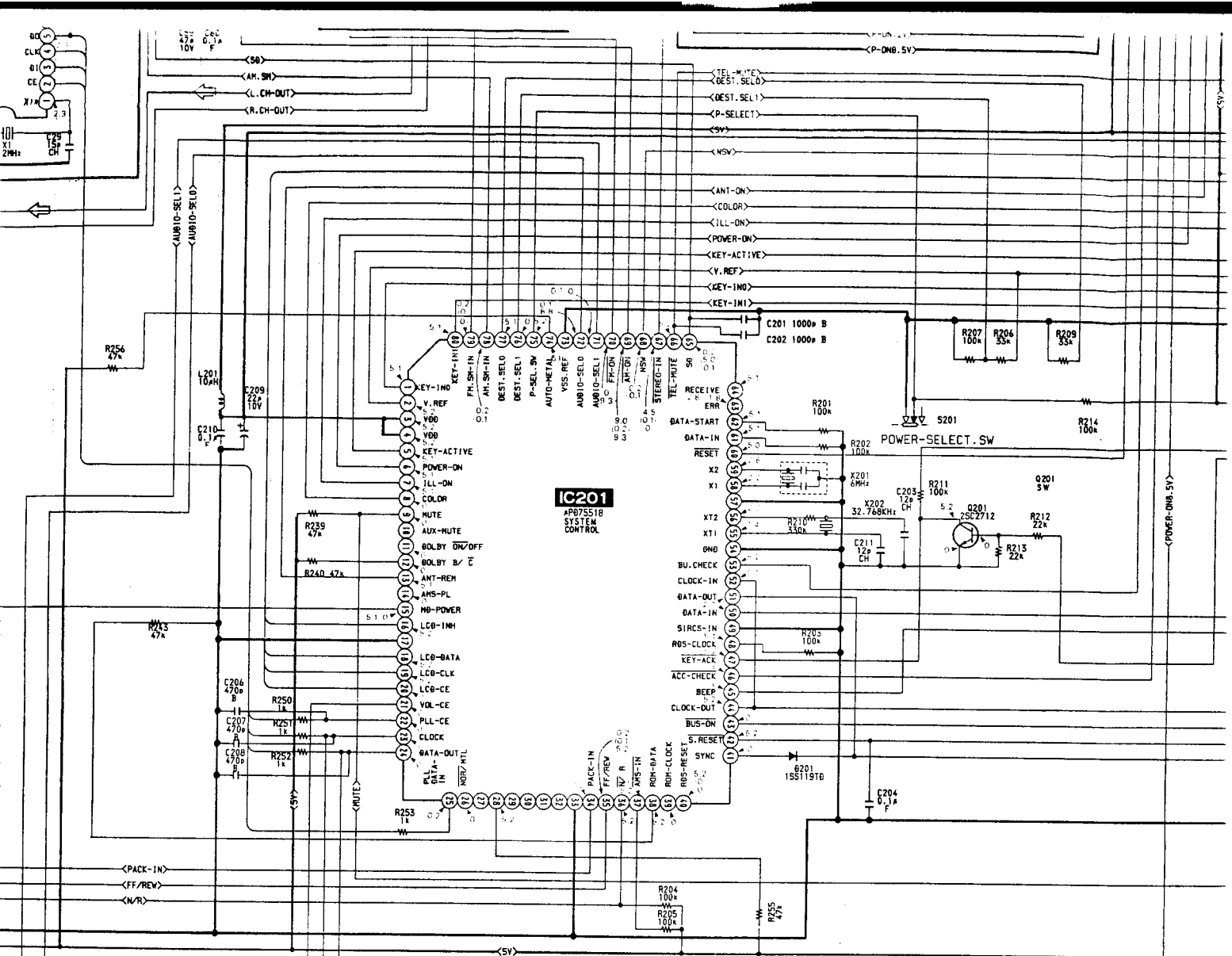


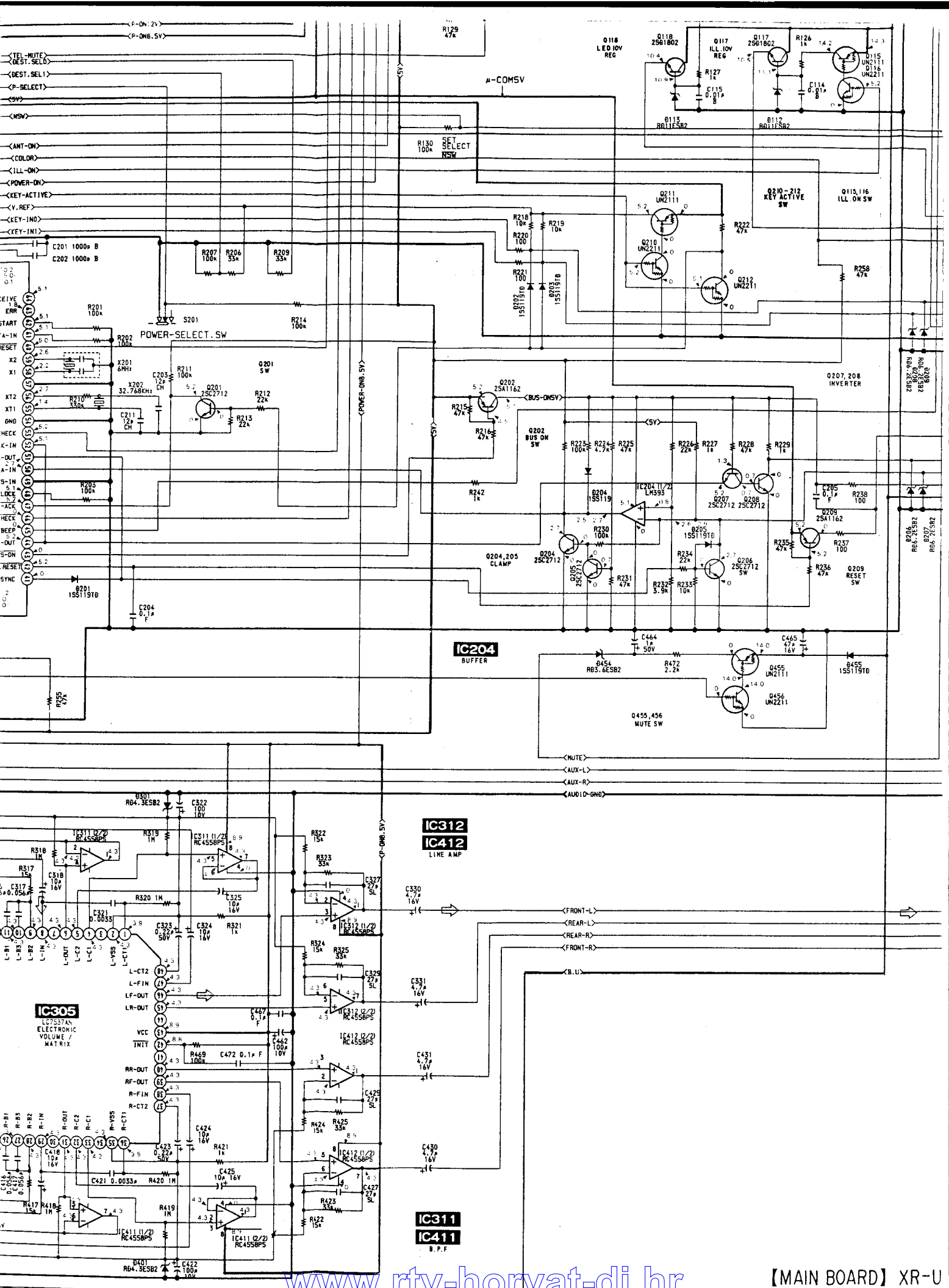
MAIN BOARD CNP401

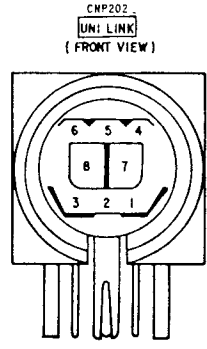
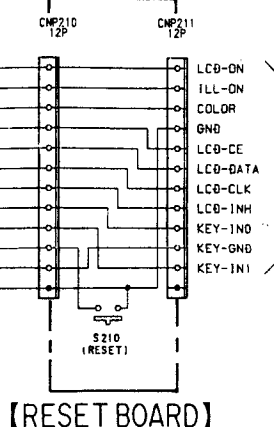
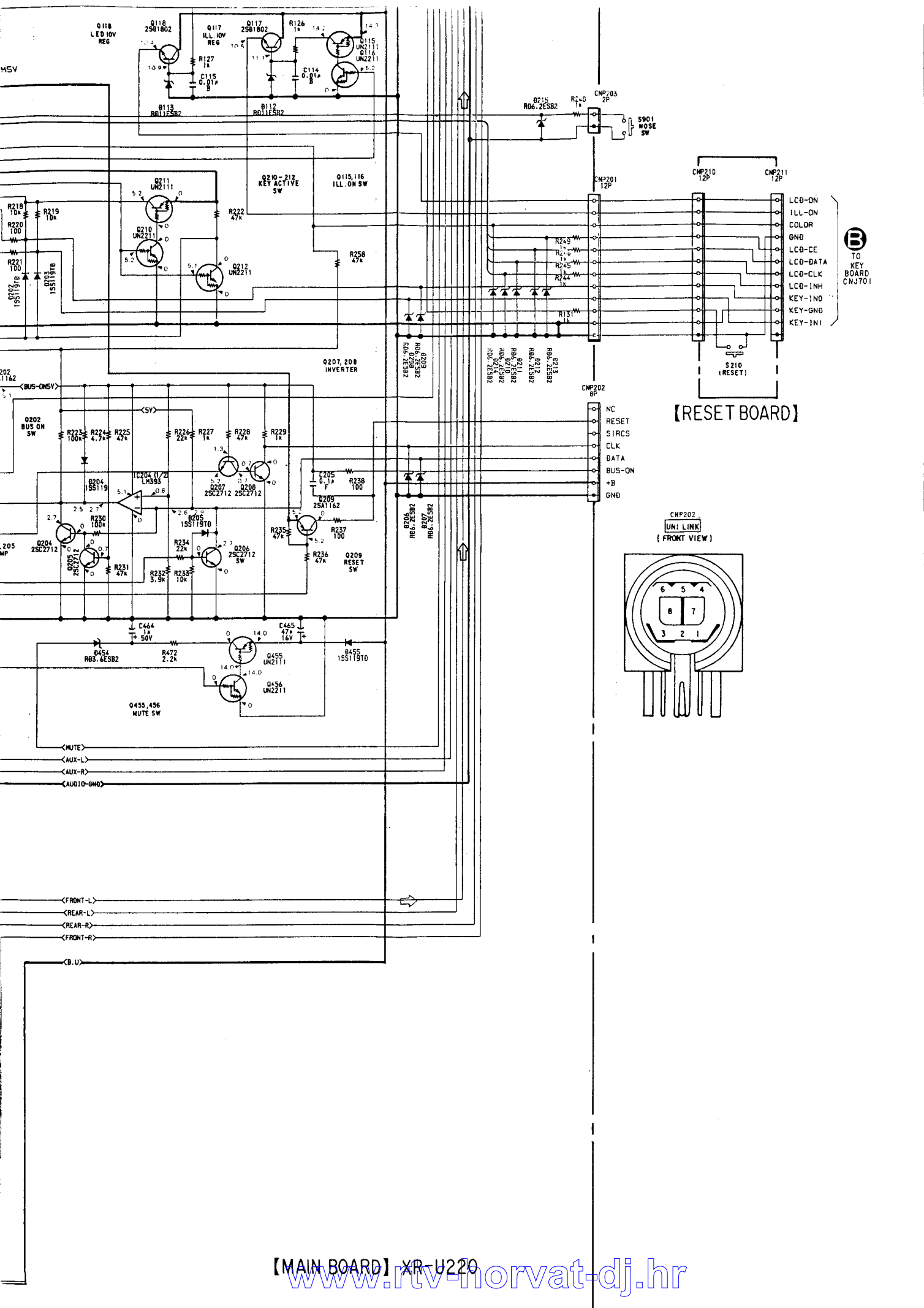


IC301 EQ AMP

IC30 AMP







【MAIN BOARD】XR-U220
www.rtv-norvat-dj.hr

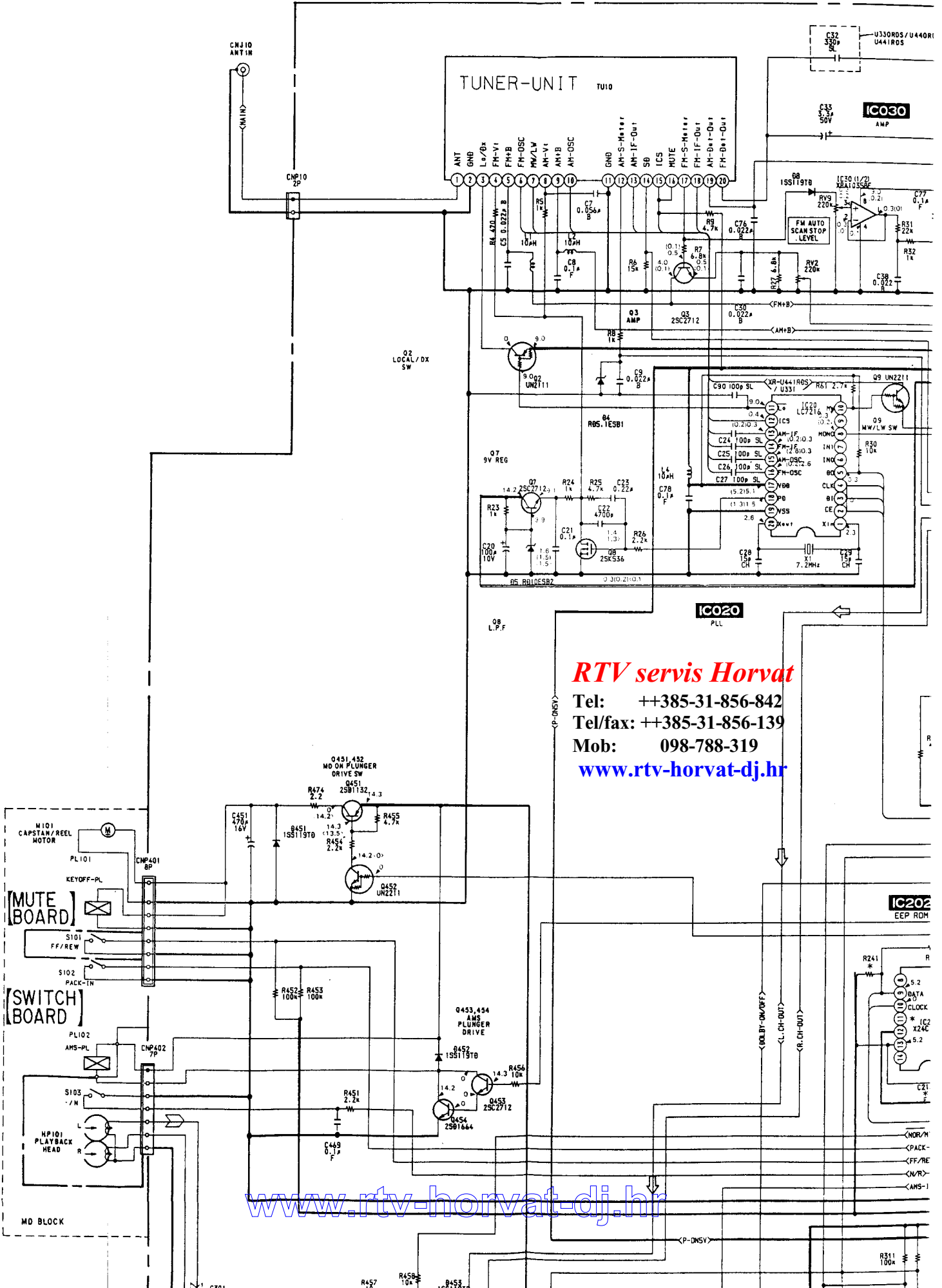
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3-4. SCHEMATIC DIAGRAM (MAIN SECTION) XR-U330/U331/U440RDS/U441RDS

• See page 25 for IC Block Diagrams.

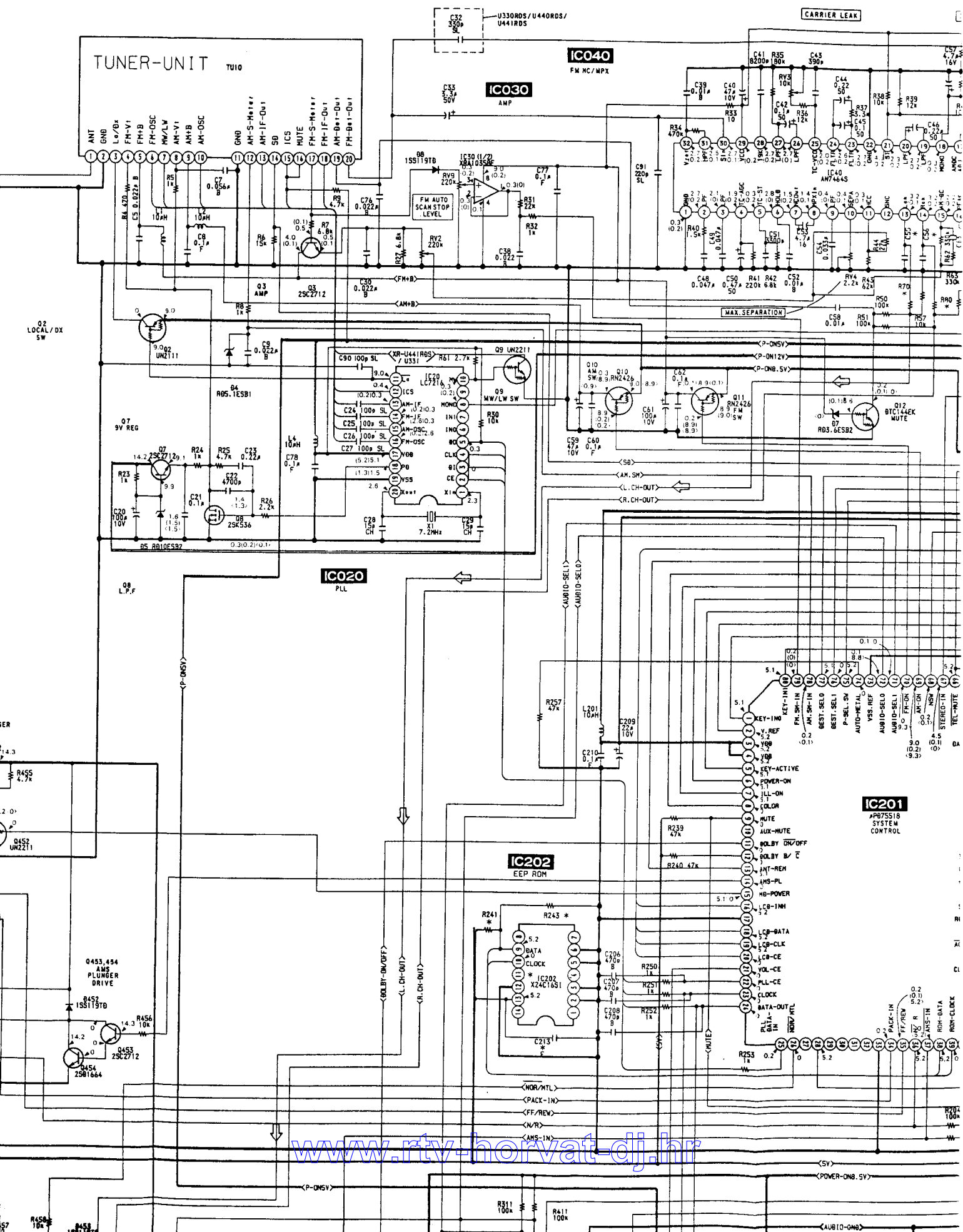
1 2 3 4 5 6 7 8

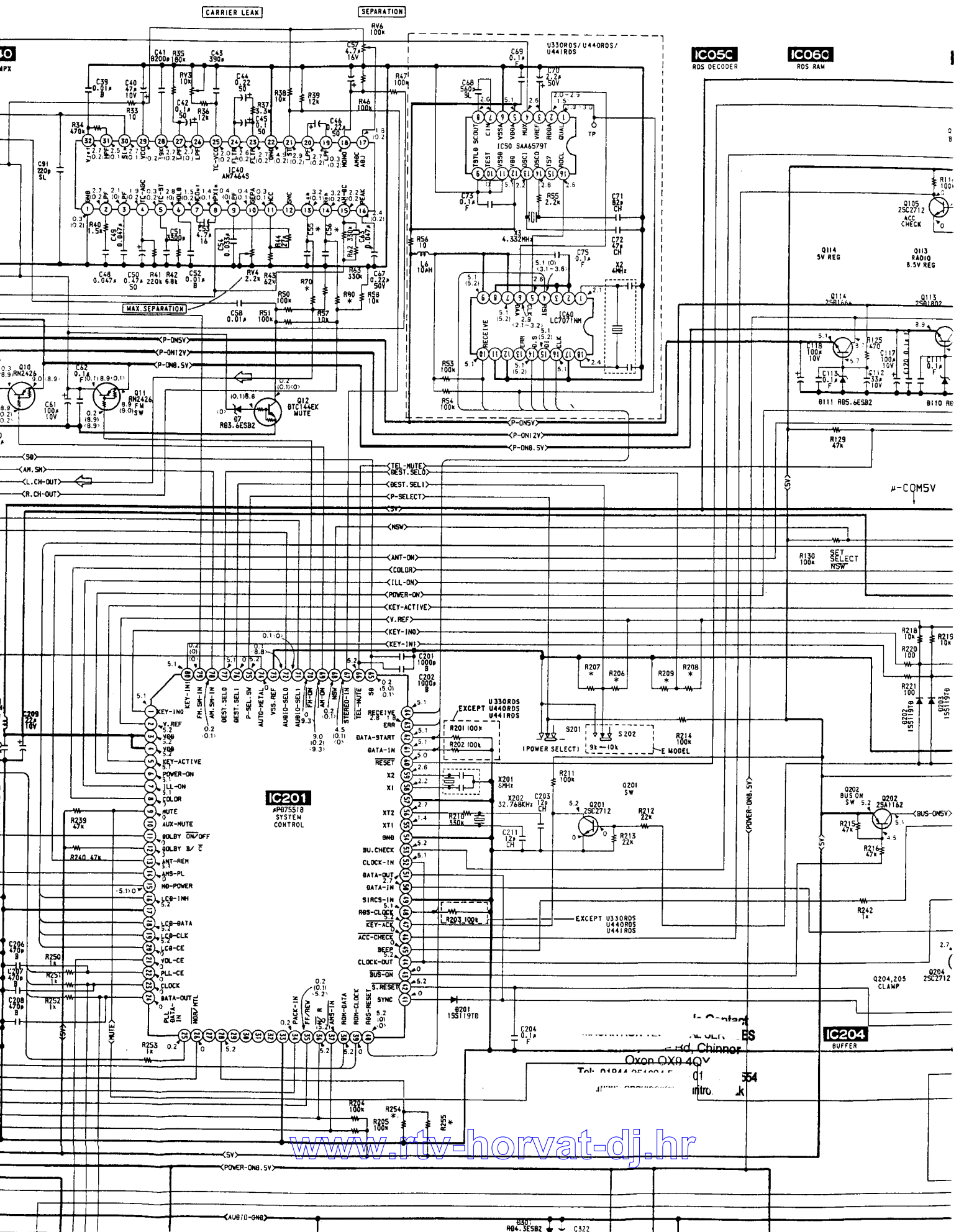
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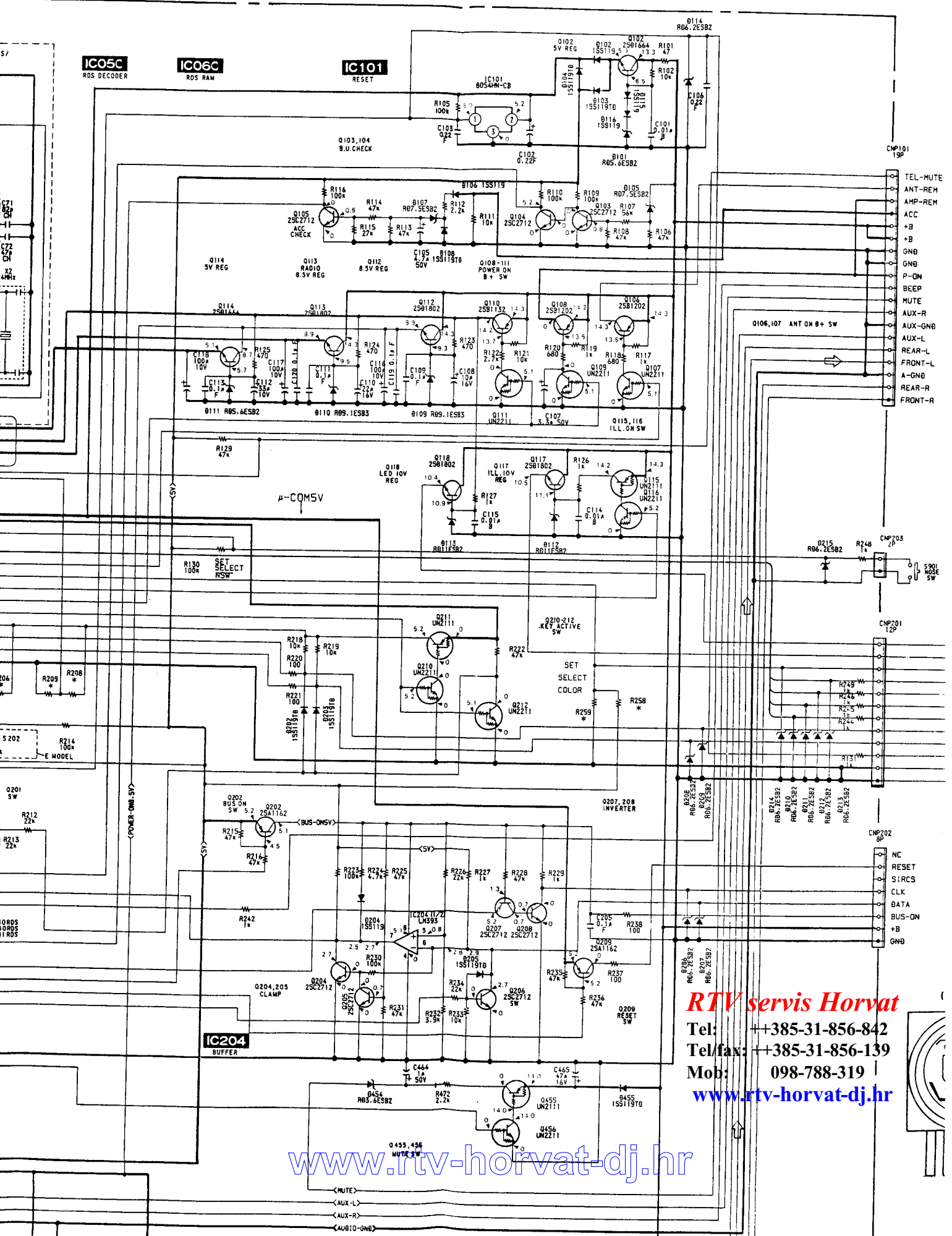
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 Tel/fax: ++385-31-856-139
 Mob: 098-788-319
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www.rtv-horvat-dj.hr



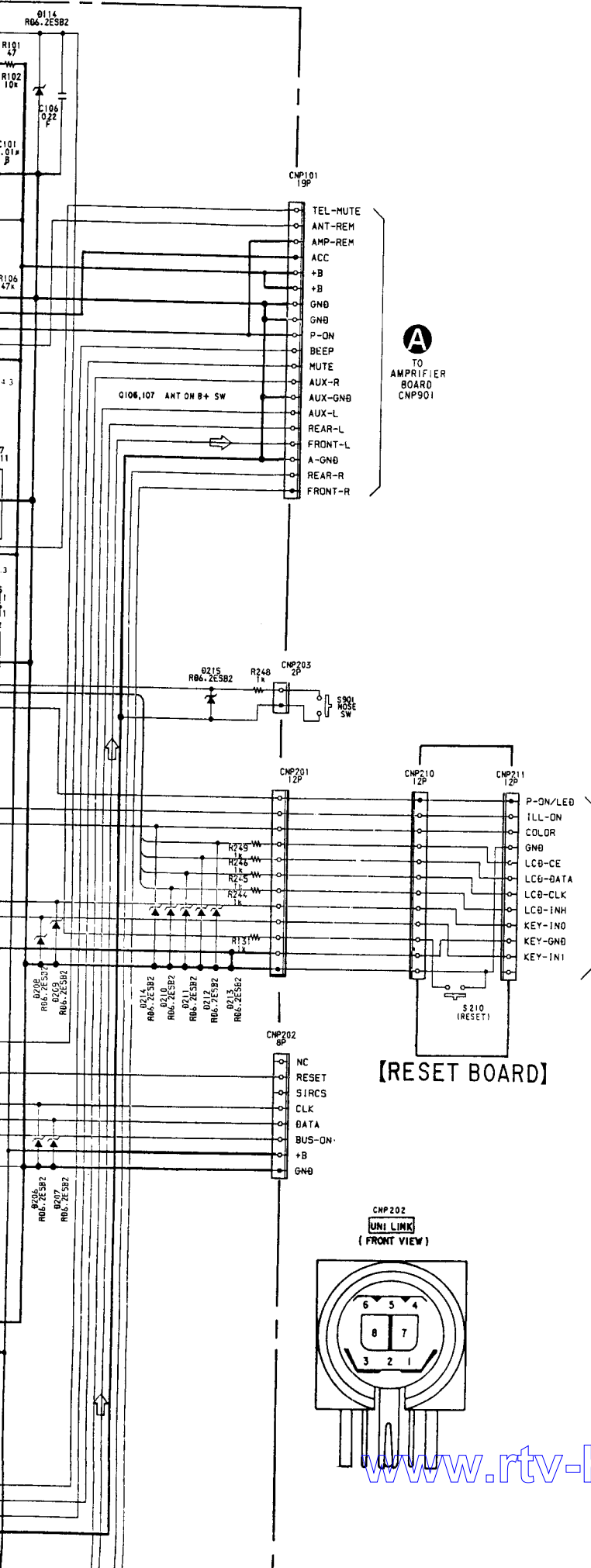


Oxon QX9 40V
 Tel: 01044 264001
 intro. 554



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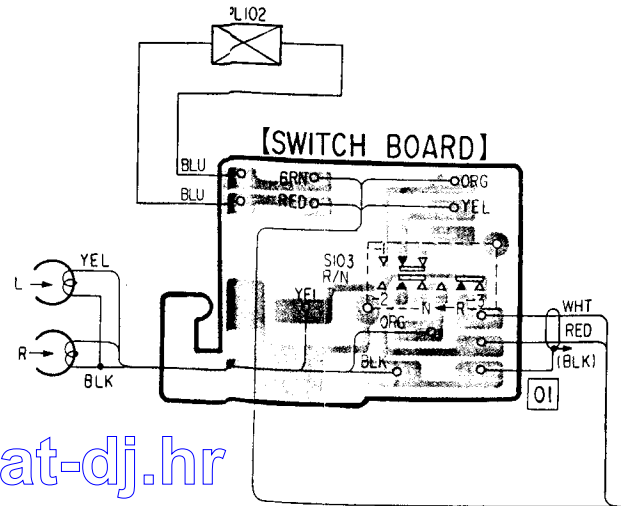


(A)
TO
AMPLIFIER
BOARD
CNP901

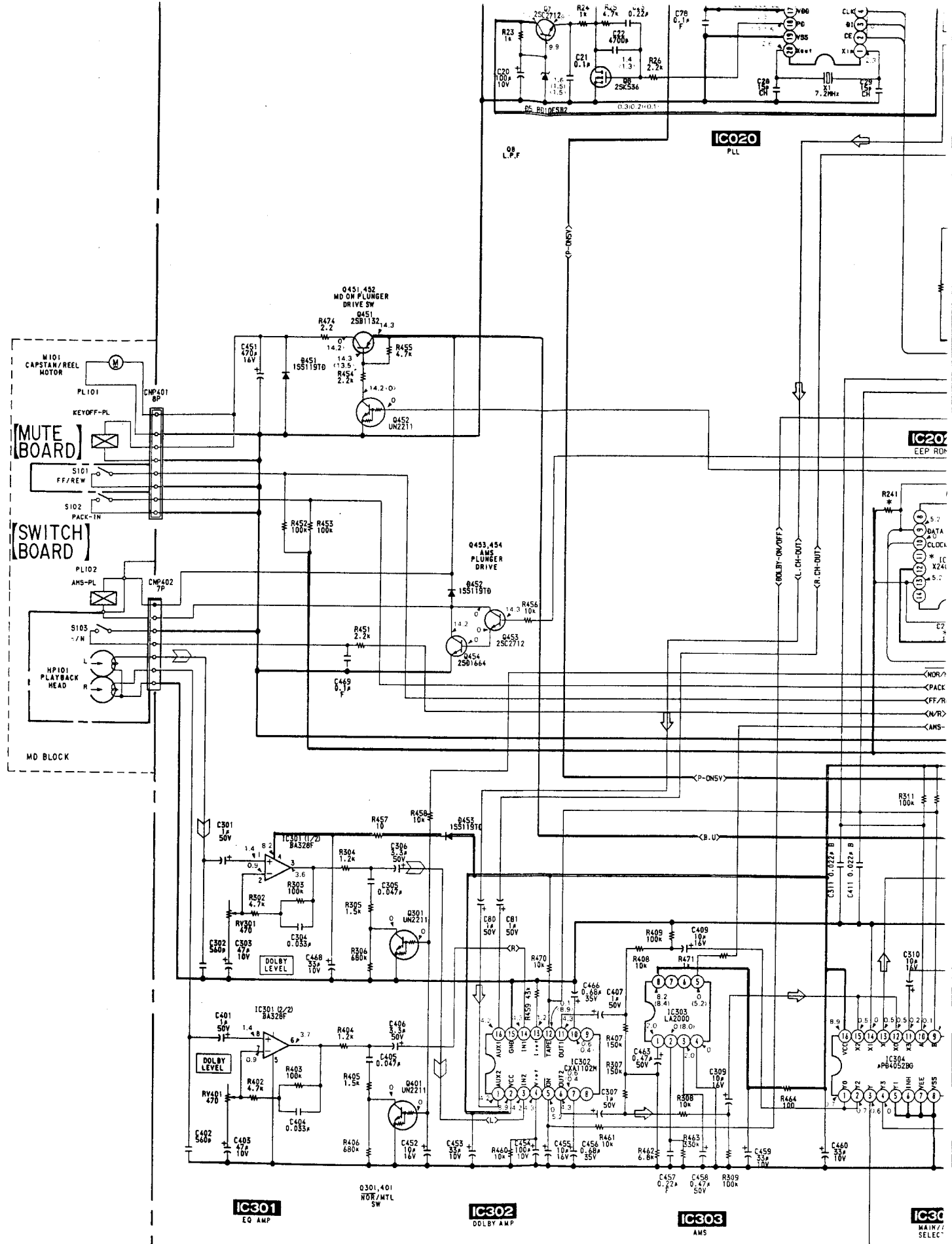
(B)
TO
KEY
BOARD
CNJ701

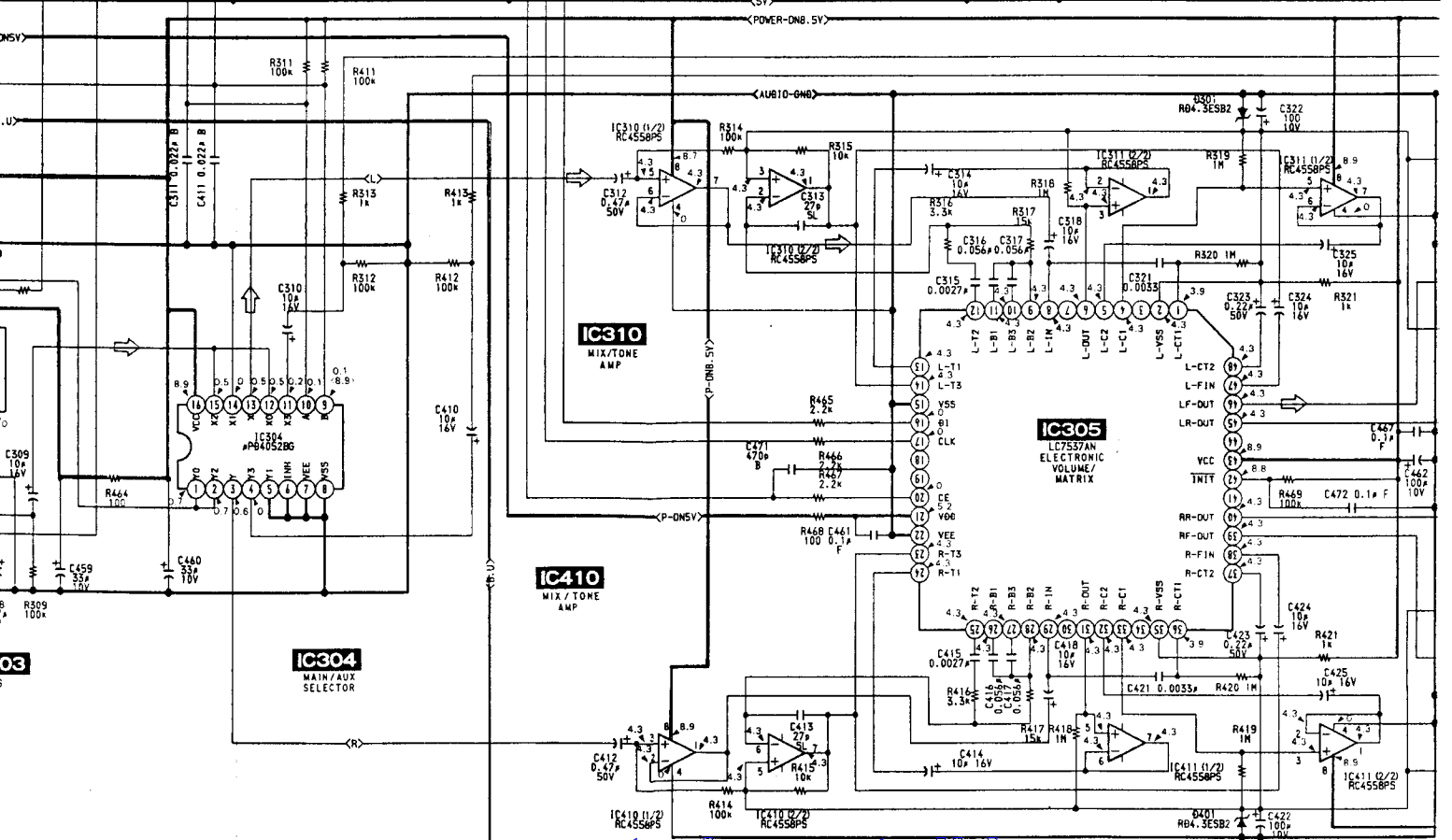
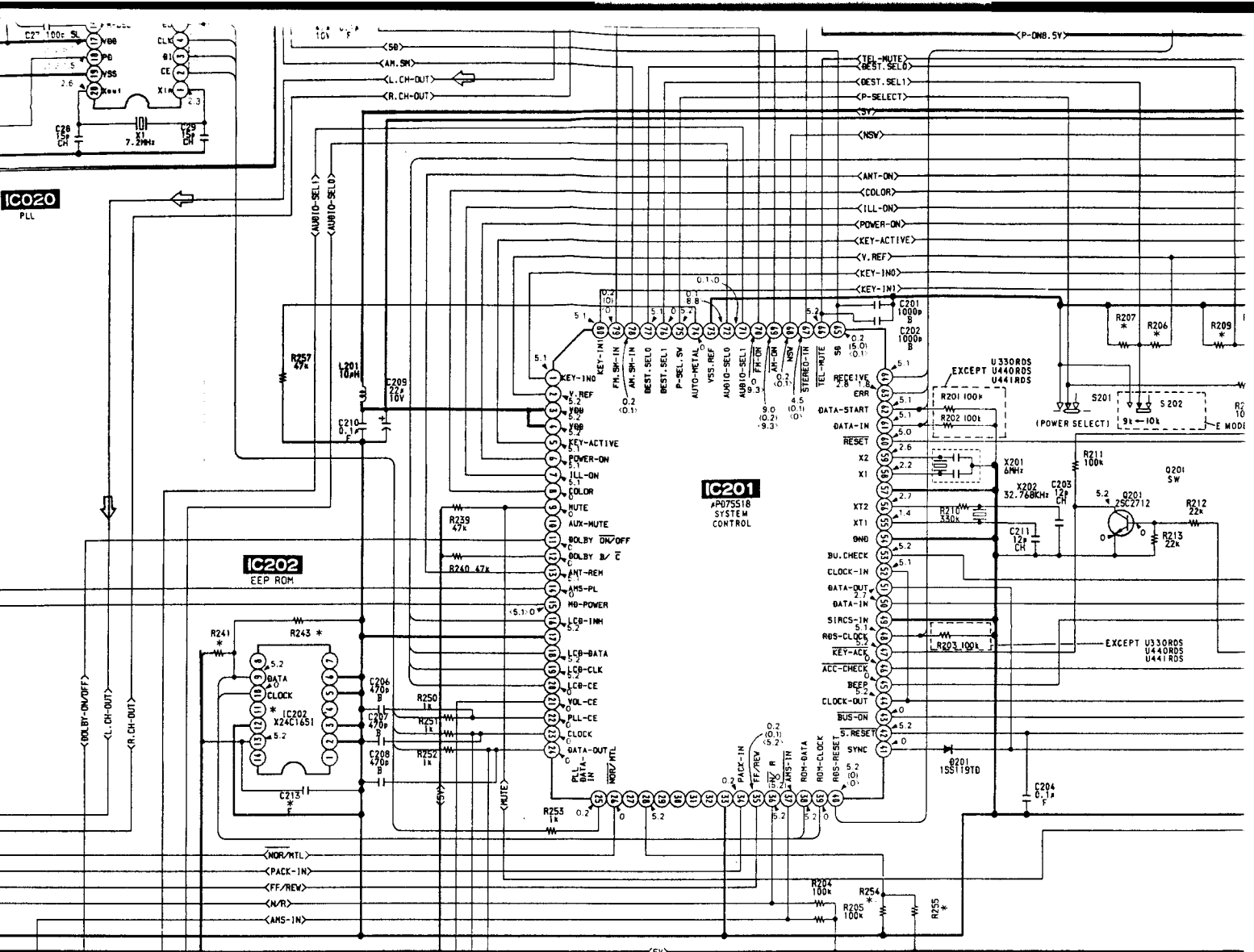
[RESET BOARD]

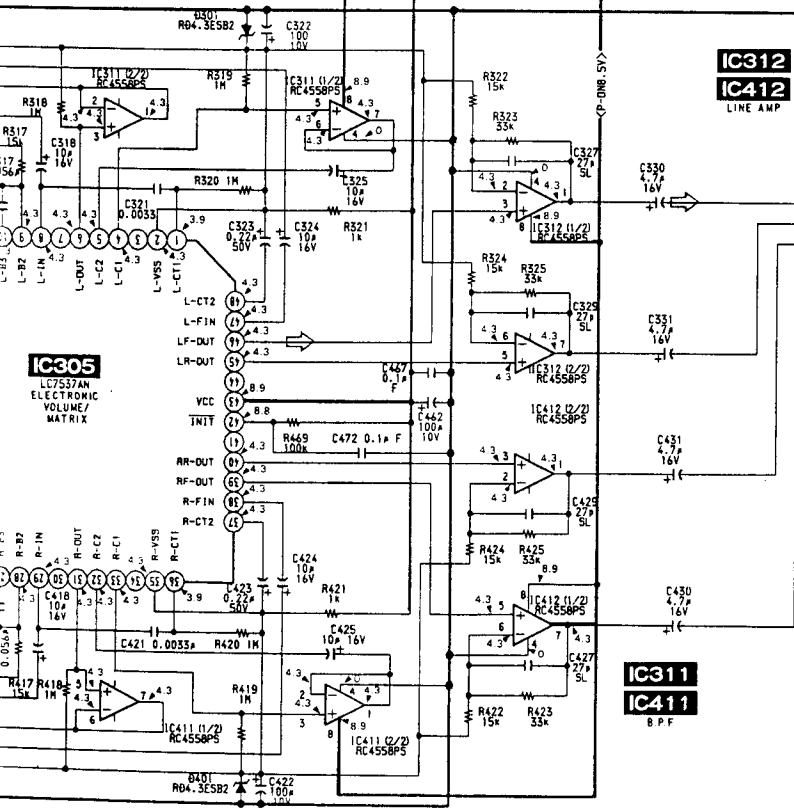
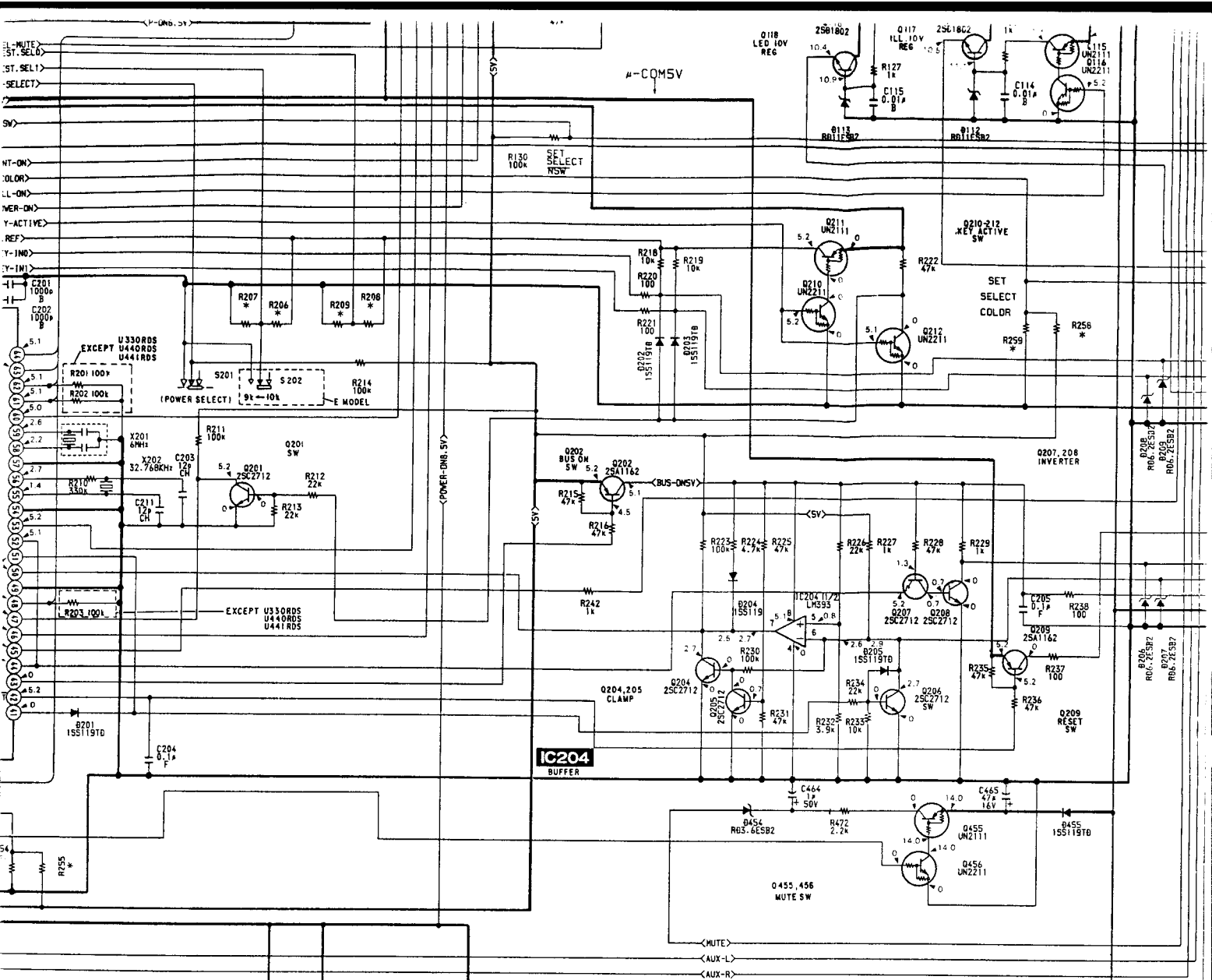
[SWITCH BOARD]



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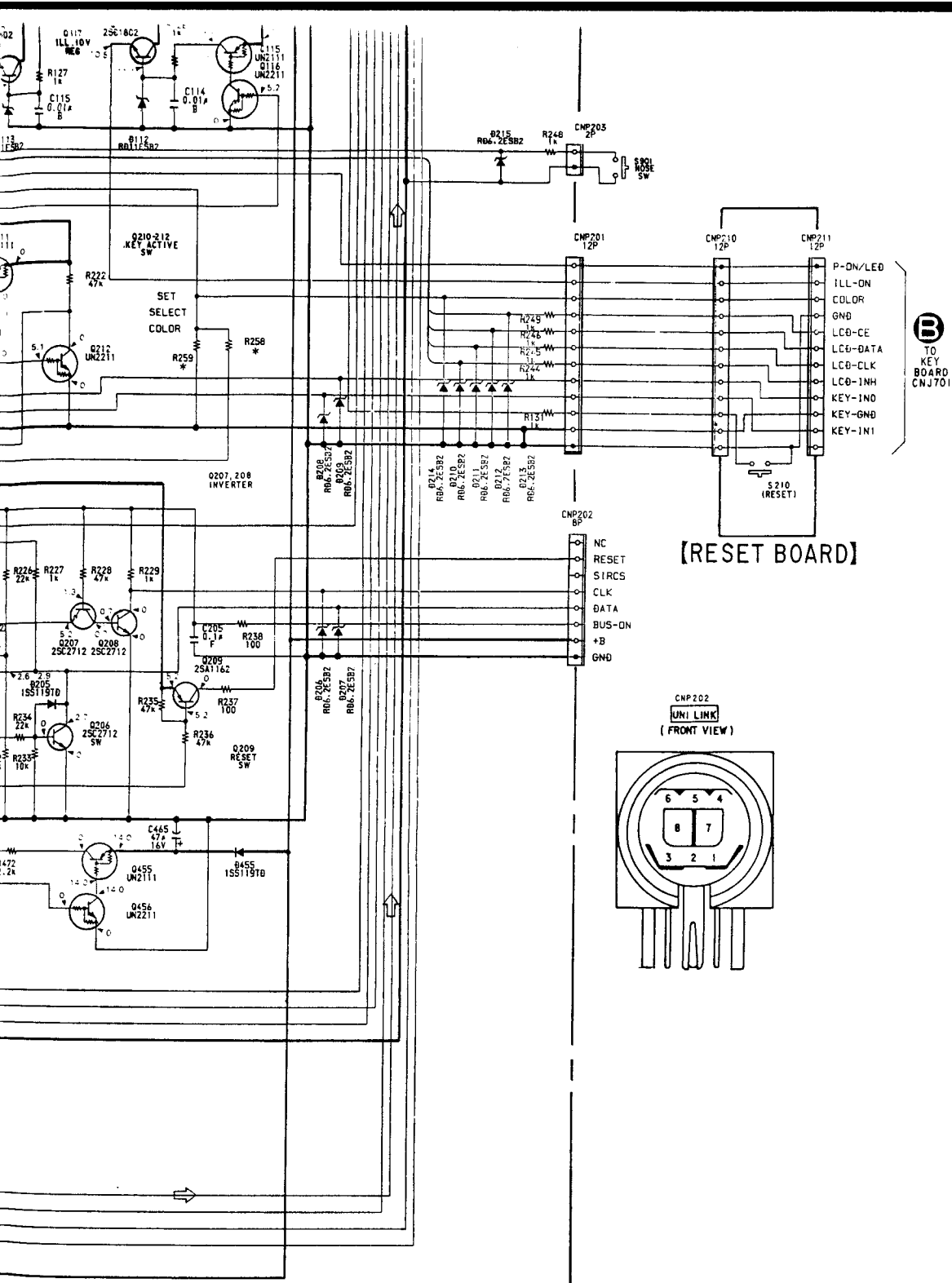




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***DIFFERENT (MARKE *) PARTS LIST**

Model	U330	U331	U440RDS	U4					
Ref. No.	US/CANADIAN	AEP	E	AEP	GERMANY	0.015	0.015	0.015	0.015
C55	0.027	0.018	0.018	0.018	0.015	0.015	0.015	0.015	0.015
C56	0.027	0.018	0.018	0.018	0.015	0.015	0.015	0.015	0.015
IC202	MOUNTED	NOT MOUNTED	MOUNTED	NOT MOUNTED	MOUNTED	MOUNTED	MOUNTED	MOUNTED	MOUNTED
Q9	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED
R50	150k	100k	100k	100k	100k	100k	100k	100k	100k
R51	150k	100k	100k	100k	100k	100k	100k	100k	100k
R61	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	2.7k	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED
R70	120k	62k	62k	62k	62k	62k	62k	62k	62k
R80	120k	62k	62k	62k	62k	62k	62k	62k	62k
R206	33k	NOT MOUNTED	33k	33k	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED
R207	100k	33k	NOT MOUNTED	NOT MOUNTED	33k	33k	33k	33k	NOT MOUNTED
R208	NOT MOUNTED	NOT MOUNTED	100k	NOT MOUNTED	33k	33k	33k	33k	NOT MOUNTED
R209	33k	33k	100k	33k	x	x	x	x	x
R241	47k	NOT MOUNTED	47k	NOT MOUNTED	47k	47k	47k	47k	47k
R243	NOT MOUNTED	47k	NOT MOUNTED	47k	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED
R254	47k	NOT MOUNTED	47k	NOT MOUNTED	47k	47k	47k	47k	47k
R255	NOT MOUNTED	47k	NOT MOUNTED	47k	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED
R256	47k	47k	47k	47k	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED
R258	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	47k	47k	47k	47k	47k
R259	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	47k	47k	47k	47k	47k

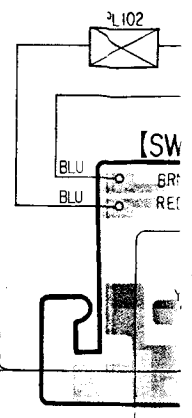
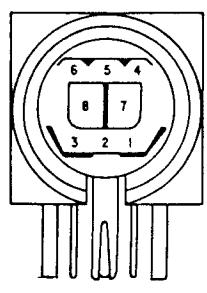


(B)
TO
KEY
BOARD
CNJ701

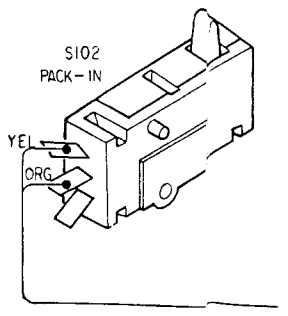
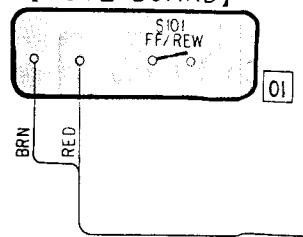
[RESET BOARD]

- CNP202 8P
- NC
- RESET
- SIRCS
- CLK
- DATA
- BUS-ON
- +B
- GND

CNP202
[UNI LINK]
(FRONT VIEW)



[MUTE BOARD]

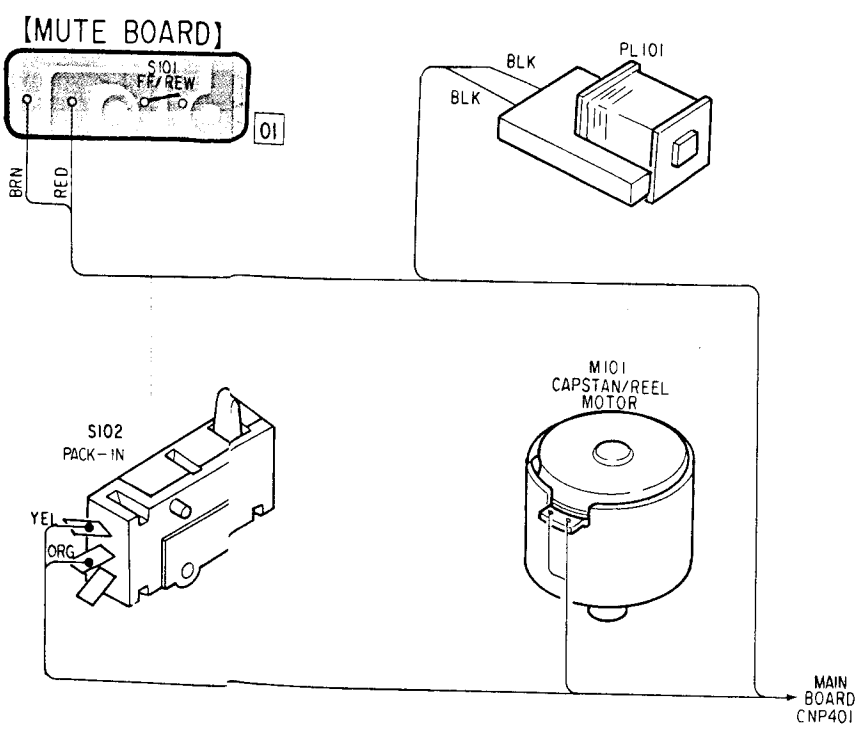
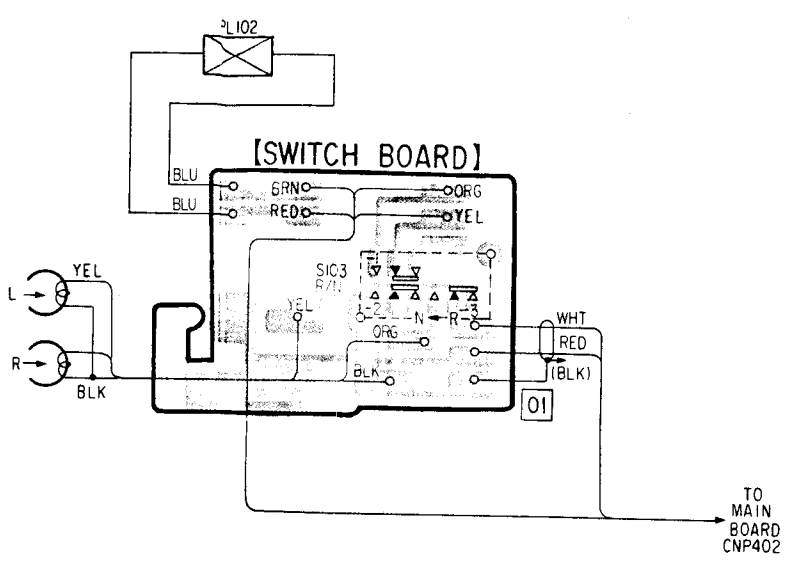


PARTS LIST

U330		U331		U440RDS		U441RDS	
AEP	E	AEP	GERMANY	AEP	GERMANY	AEP	GERMANY
0.01B	0.01B	0.01B	0.01B	0.01B	0.01B	0.01B	0.01B
0.01B	0.01B	0.01B	0.01B	0.01B	0.01B	0.01B	0.01B
NOT MOUNTED	MOUNTED	NOT MOUNTED	MOUNTED	NOT MOUNTED	MOUNTED	NOT MOUNTED	MOUNTED
100k	100k	100k	100k	100k	100k	100k	100k
100k	100k	100k	100k	100k	100k	100k	100k
NOT MOUNTED	NOT MOUNTED	2.7k	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	2.7k	NOT MOUNTED
62k	62k	62k	62k	62k	62k	62k	62k
62k	62k	62k	62k	62k	62k	62k	62k
NOT MOUNTED	33k	33k	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	33k	NOT MOUNTED
33k	INC	MOUNTED	NOT MOUNTED	33k	33k	33k	NOT MOUNTED
NOT MOUNTED	100k	NOT MOUNTED	33k	33k	33k	33k	33k
NOT MOUNTED	100k	33k	33k	x	x	x	x
NOT MOUNTED	47k	NOT MOUNTED	47k	47k	47k	47k	47k
47k	INC	MOUNTED	47k	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED
NOT MOUNTED	47k	NOT MOUNTED	47k	NOT MOUNTED	47k	NOT MOUNTED	47k
47k	NOT MOUNTED	47k	NOT MOUNTED	47k	47k	NOT MOUNTED	NOT MOUNTED
47k	NOT MOUNTED	47k	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED
NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	47k	47k	NOT MOUNTED	NOT MOUNTED
NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	NOT MOUNTED	47k	47k	NOT MOUNTED	NOT MOUNTED

[MAIN BOARD]

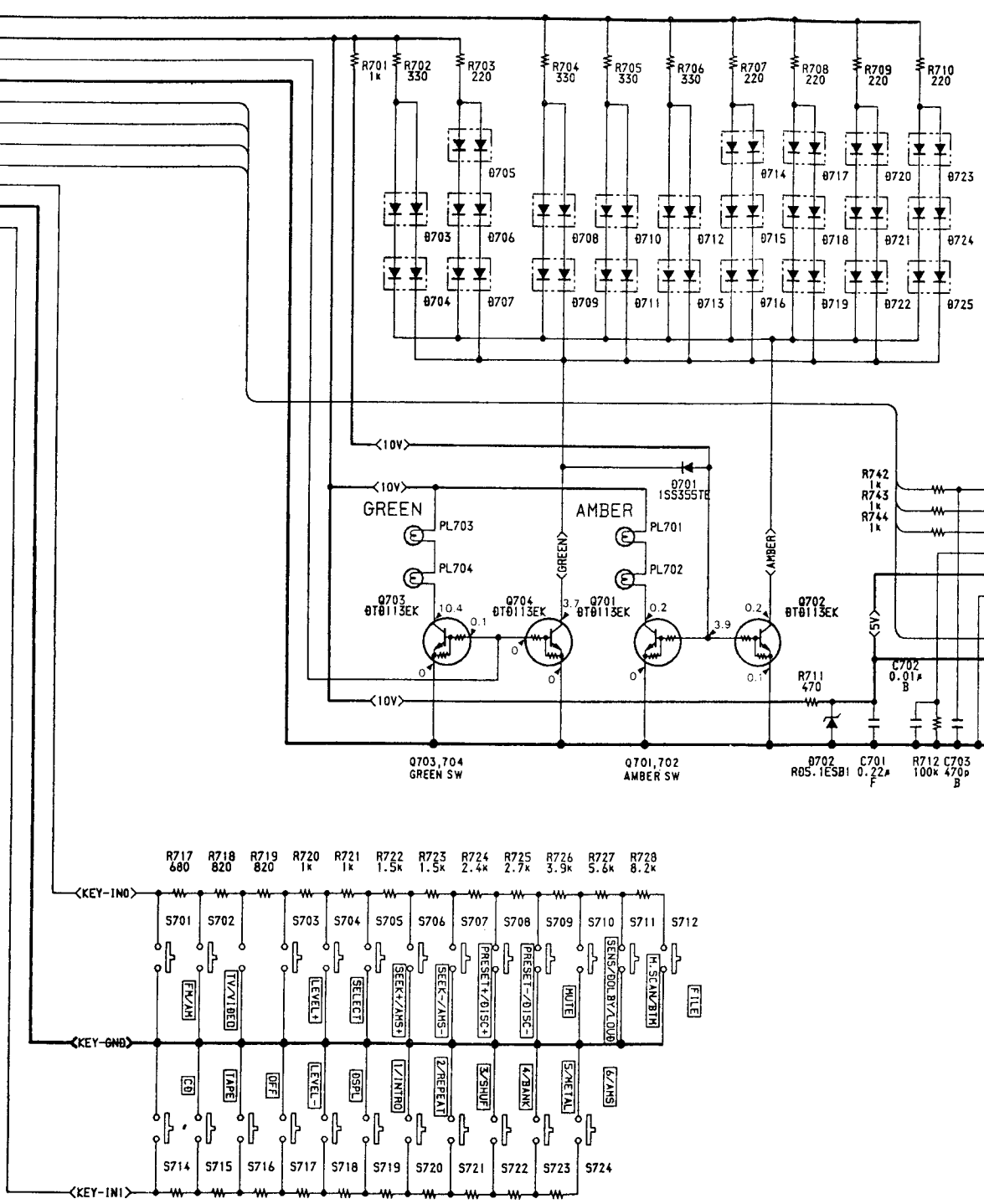
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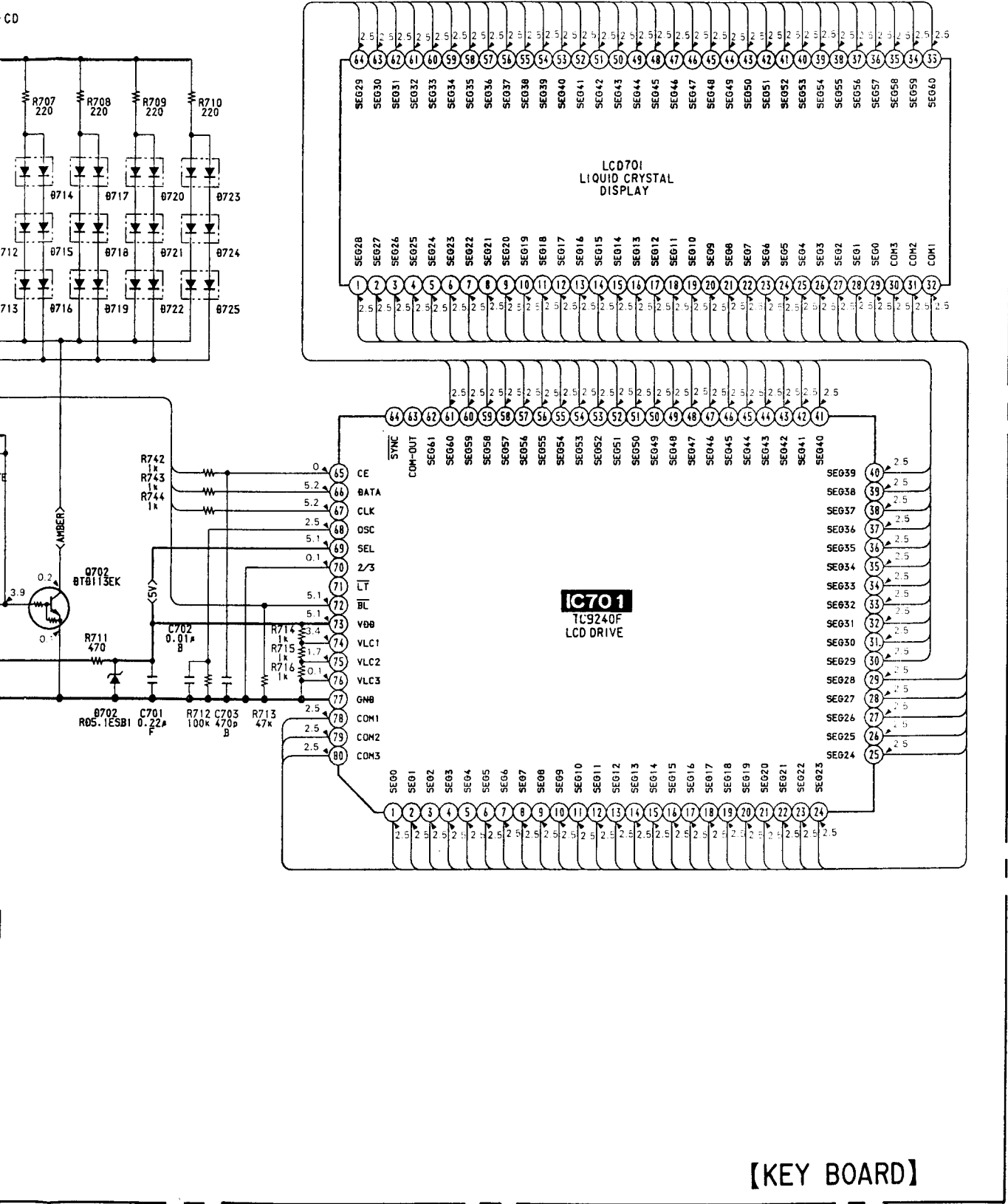
0703 - 725 CL - I55Y/PG - CD

P-ON/LED+B	1
ILL-ON	2
COLOR	3
GND	4
LC0-CE	5
LC0-DATA	6
LC0-CLK	7
LC0-INH	8
KEY-INO	9
KEY-GND	10
KEY-INI	11
	12

CNJ701



00H 10 21 30 40 4E 5E 6C 7E 8E 9F B0 C0



[KEY BOARD]

1 2 3 4 5 6 7 8 9 10 11 12 13 14

A B C D E F G H I J

A B C D E F G H I J

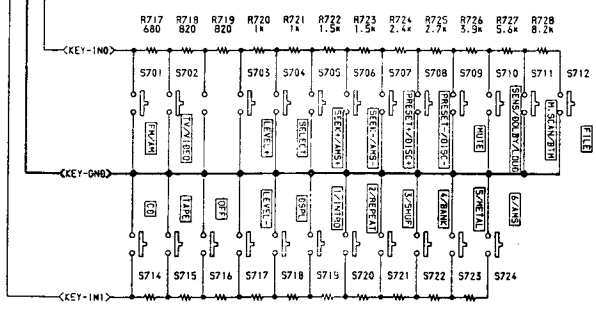
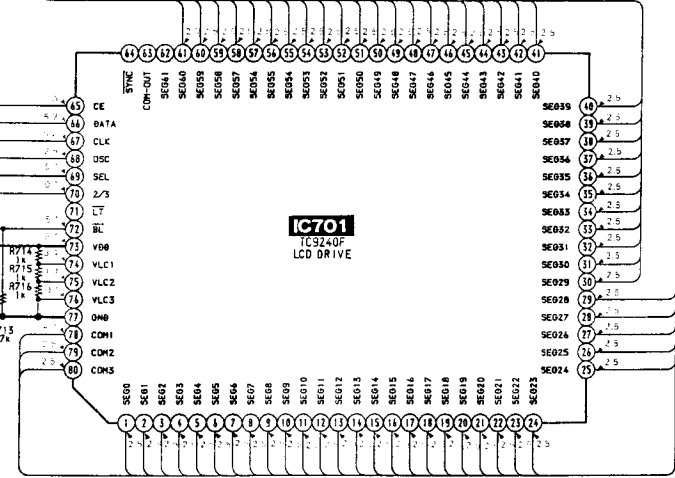
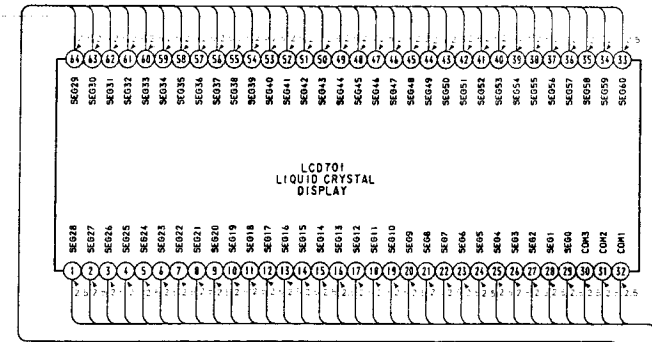
D703 - 725
CL-150Y - CD AMBER MODEL
CL-150PG - CD GREEN MODEL

P-ON/LED+B	1
ILL-ON	2
GND	3
LCB-CE	4
LCB-DATA	5
LCB-CLK	6
LCB-IN	7
KEY-INO	8
KEY-GND	9
KEY-INI	10
KEY-INI	11
	12

CN701

PL701	PL703
PL702	PL704
XR-U330/1	GREEN
XR-U330	AMBER
XR-U220	

LCD BACK LIGHT



00H 10 21 30 40 4E 5E 6C 7E 8E 9F B0 C0



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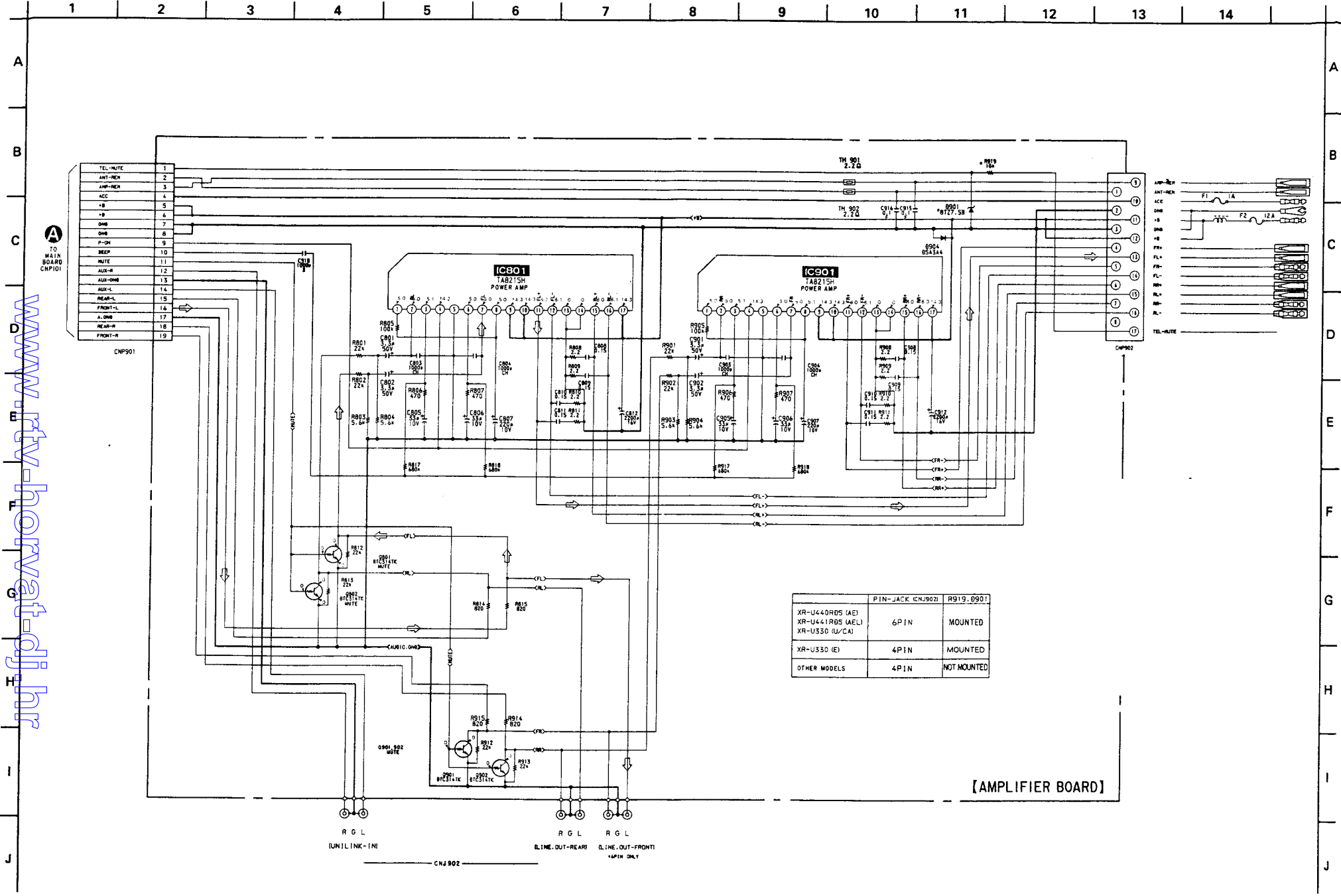
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Mob: 098-788-319

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[KEY BOARD]



	PIN-JACK (CNJ902)	R919, R901
XR-U440RDS (AE)		
XR-U441RDS (AEL)	6PIN	MOUNTED
XR-U330 (U/CA)		
XR-U330 (E)	4PIN	MOUNTED
OTHER MODELS	4PIN	NOT MOUNTED

[AMPLIFIER BOARD]

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SECTION 4 EXPLODED VIEWS

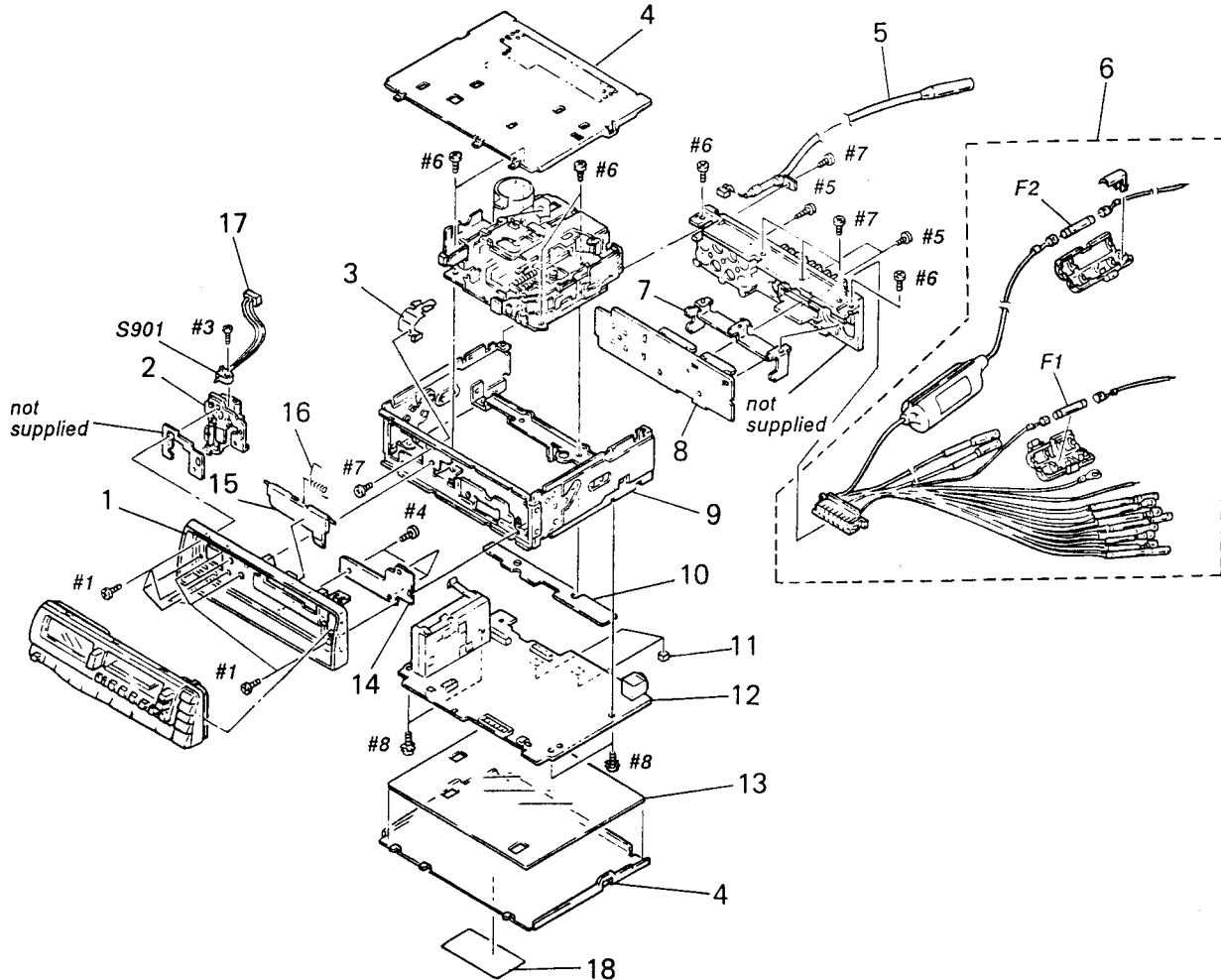
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) ... (RED)

↑
↑

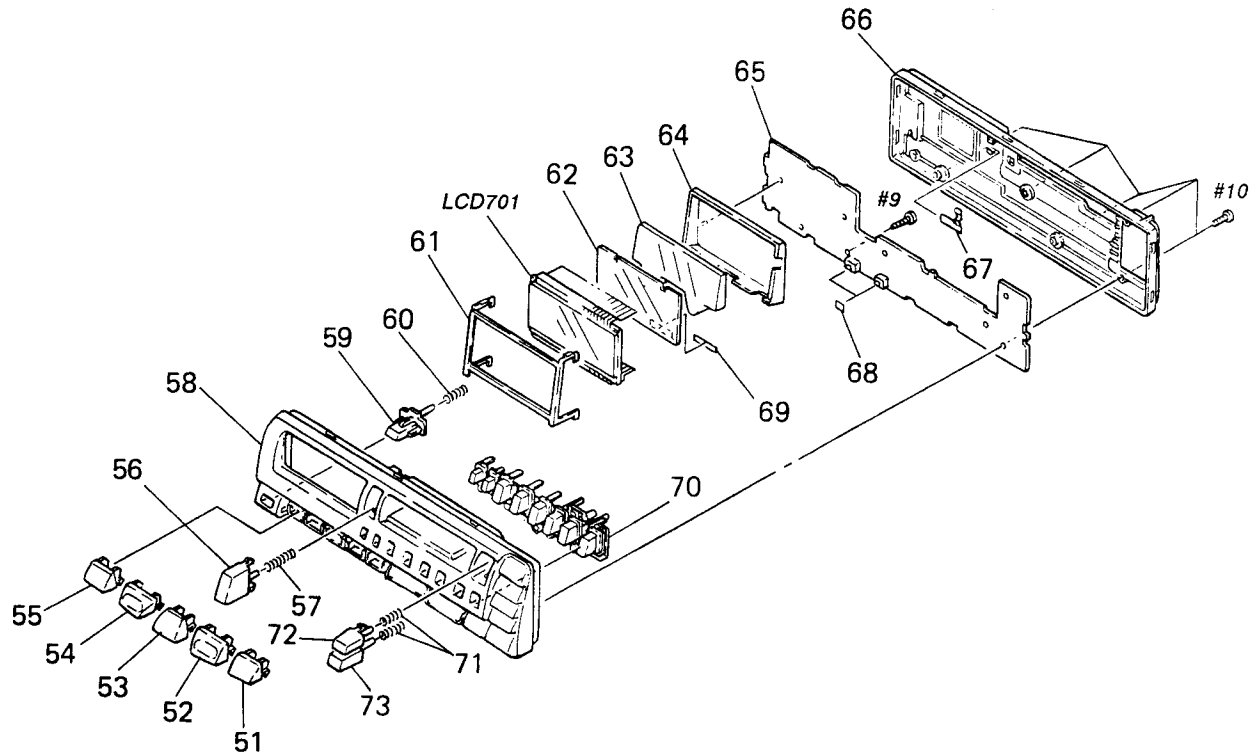
 Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

(1) GENERAL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-377-601-01	PANEL, SUB		13	3-377-593-11	INSULATOR	
* 1	3-377-609-01	PANEL, SUB		14	1-643-119-11	RESET BOARD (U330/U330RDS/U331)	
2	X-3364-564-1	LOCK ASSY		14	1-643-674-11	RESET BOARD (U440RDS/U441RDS)	
* 3	3-377-825-01	PLATE, LOCK		14	1-643-678-11	RESET BOARD (U220)	
* 4	3-377-591-01	COVER		15	3-378-541-01	DOOR, CASSETTE (U330)	
5	1-574-339-11	CORD (WITH CONNECTOR)		15	3-378-541-11	DOOR, CASSETTE (U440RDS)	
6	1-690-742-11	CORD (WITH CONNECTOR) (U330:E/U440RDS:AEP/U441RDS)		15	3-378-541-21	DOOR, CASSETTE (U441RDS)	
* 7	3-377-590-01	BRACKET (1C)		15	3-378-541-31	DOOR, CASSETTE (U331)	
* 8	A-3273-919-A	AMPLIFIER BOARD, COMPLETE (U440RDS:G)		15	3-378-541-41	DOOR, CASSETTE (U220)	
* 8	A-3273-923-A	AMPLIFIER BOARD, COMPLETE (U440RDS:AEP/U441RDS)		16	3-377-892-01	SPRING (C DOOR) TORSION	
* 8	A-3273-930-A	AMPLIFIER BOARD, COMPLETE (U330:AEP/U331)		* 17	1-563-470-11	HOUSING, CONNECTOR 2P	
* 8	A-3273-937-A	AMPLIFIER BOARD, COMPLETE (U220)		* 18	3-378-558-01	LABEL, MODEL NUMBER (E) (U330:E)	
* 8	A-3273-970-A	AMPLIFIER BOARD, COMPLETE (U330:US, CND)		* 18	3-378-559-01	LABEL, MODEL NUMBER (U) (U220:US)	
* 8	A-3273-973-A	AMPLIFIER BOARD, COMPLETE (U330:E)		* 18	3-378-560-01	LABEL, MODEL NUMBER (CA) (U220:CND)	
* 9	X-3364-495-1	CHASSIS ASSY		* 18	3-378-563-01	LABEL, MODEL NUMBER (U440RDS:AEP)	
* 10	3-379-684-01	PLATE, INSULATION		* 18	3-378-564-01	LABEL, MODEL NUMBER (AEL) (U441RDS)	
11	9-911-841-XX	CUSHION, CASSETTE LID		* 18	3-378-565-01	LABEL, MODEL NUMBER (U) (U330:US)	
* 12	A-3273-917-A	MAIN BOARD, COMPLETE (U440RDS:G)		* 18	3-378-566-01	LABEL, MODEL NUMBER (CA) (U330:CND)	
* 12	A-3273-921-A	MAIN BOARD, COMPLETE (U440RDS: AEP)		* 18	3-378-567-01	LABEL, MODEL NUMBER (AE) (U330:AEP:AMBER)	
* 12	A-3273-927-A	MAIN BOARD, COMPLETE (U330:AEP)		* 18	3-378-568-01	LABEL, MODEL NUMBER (AE) (U330:AEP GREEN)	
* 12	A-3273-934-A	MAIN BOARD, COMPLETE (U220)		* 18	3-378-569-01	LABEL, MODEL NUMBER (AEL) (U331)	
* 12	A-3273-966-A	MAIN BOARD, COMPLETE (U331)		* 18	3-378-584-01	LABEL, MODEL NUMBER (AE6) (U440RDS:G)	
* 12	A-3273-968-A	MAIN BOARD, COMPLETE (U330:US, CND)		F1	1-532-414-11	FUSE, GLASS TUBE 1A	
* 12	A-3273-971-A	MAIN BOARD, COMPLETE (U330:E)		F2	1-532-678-11	FUSE, GLASS TUBE 12A	
* 12	A-3273-979-A	MAIN BOARD, COMPLETE (U441RDS)		S901	1-570-771-11	SWITCH	

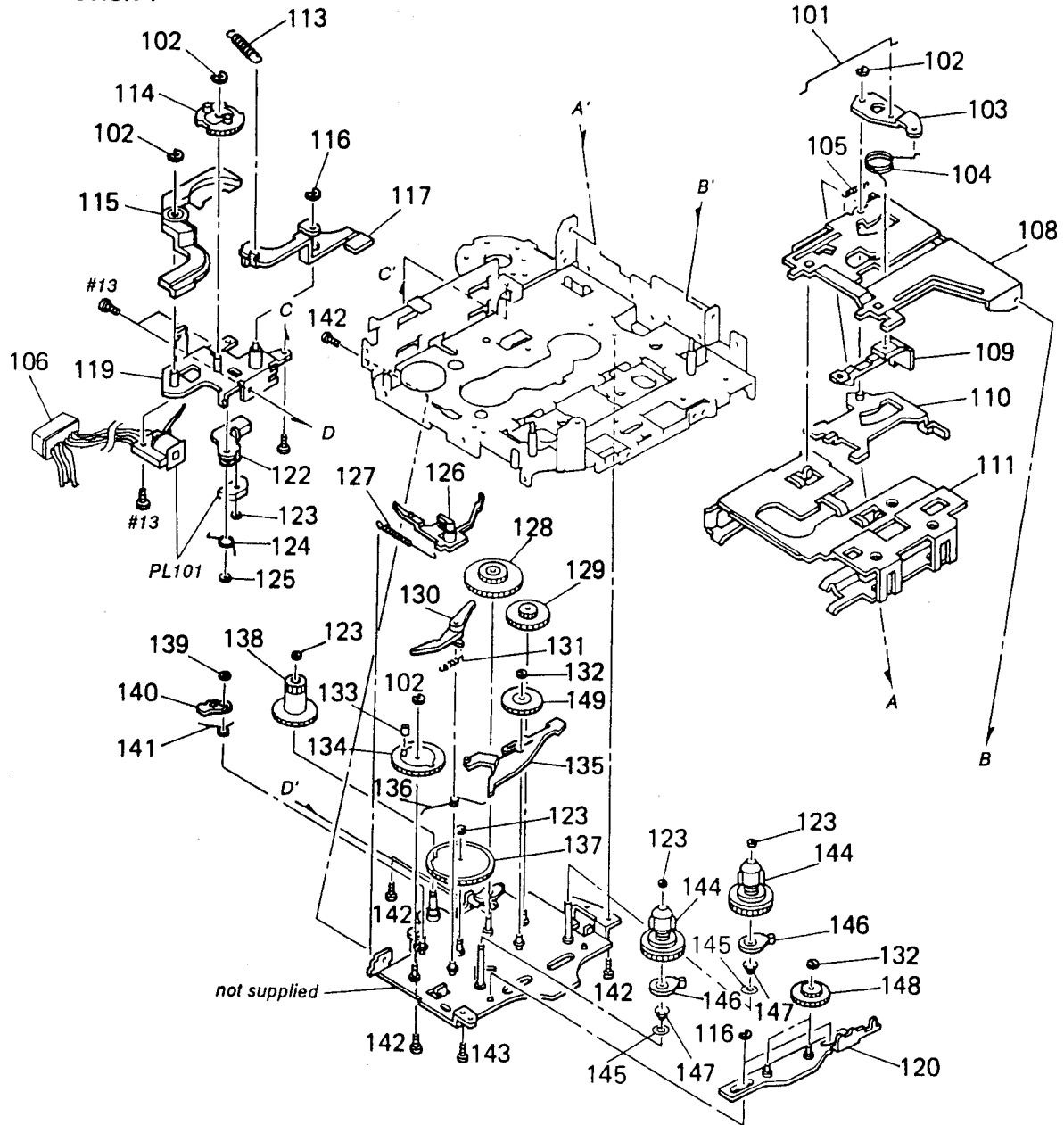
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-377-567-12	BUTTON (LOUD)	
52	3-377-570-01	BUTTON (+)	
53	3-377-568-01	BUTTON (SELECT)	
54	3-377-569-01	BUTTON (-)	
55	3-377-573-01	BUTTON (MUTE)	
56	X-3364-782-1	BUTTON ASSY, EJECT	
57	3-378-540-01	SPRING (EJECT)	
58	X-3364-822-1	PANEL SUB ASSY, FRONT (U331)	
58	X-3364-823-1	PANEL SUB ASSY, FRONT (U220)	
58	X-3364-826-1	PANEL SUB ASSY, FRONT (U440RDS)	
58	X-3364-827-1	PANEL SUB ASSY, FRONT (U441RDS)	
58	X-3364-828-1	PANEL SUB ASSY, FRONT (U330;UC, CND)	
58	X-3364-829-1	PANEL SUB ASSY, FRONT (U330;AEP, E)	
59	3-377-577-01	BUTTON (RELEASE)	
60	3-375-373-01	SPRING (RELEASE)	
* 61	3-377-576-01	COVER (LCD)	
* 62	3-377-597-01	SHEET (REFLECTOR) (U440RDS/U441RDS)	
* 62	3-377-597-11	SHEET (REFLECTOR) (EXCEPT U330 AEP GREEN/U440RDS/U441RDS)	
* 62	3-377-597-21	SHEET (REFLECTOR) (U330 AEP GREEN)	

Ref. No.	Part No.	Description	Remark
* 63	3-377-581-01	PLATE (LCD). LIGHT GUIDE	
* 64	3-377-578-01	HOLDER (LCD)	
* 65	A-3273-929-A	KEY BOARD, COMPLETE (U330:EXCEPT AEP GREEN/U331)	
* 65	A-3273-932-A	KEY BOARD, COMPLETE (U330:AEP GREEN)	
* 65	A-3273-938-A	KEY BOARD, COMPLETE (U220)	
* 65	A-3273-924-A	KEY BOARD, COMPLETE (U440RDS/U441RDS)	
66	3-377-600-01	PANEL, FRONT BACK	
67	3-377-826-01	PLATE (F-S), GROUND	
68	3-322-226-21	SPACER A	
69	3-380-311-01	SHEET, LCD	
70	3-377-602-01	BUTTON (PRESET)	
71	3-375-372-01	SPRING (F/R)	
72	3-377-603-01	BUTTON (FF)	
73	3-377-607-01	BUTTON (REW)	
LCD701	1-809-595-11	DISPLAY PANEL, LIQUID CRYSTAL (U330RDS/U440RDS/U441RDS)	
LCD701	1-809-595-21	DISPLAY PANEL, LIQUID CRYSTAL (U220/U330/U331)	

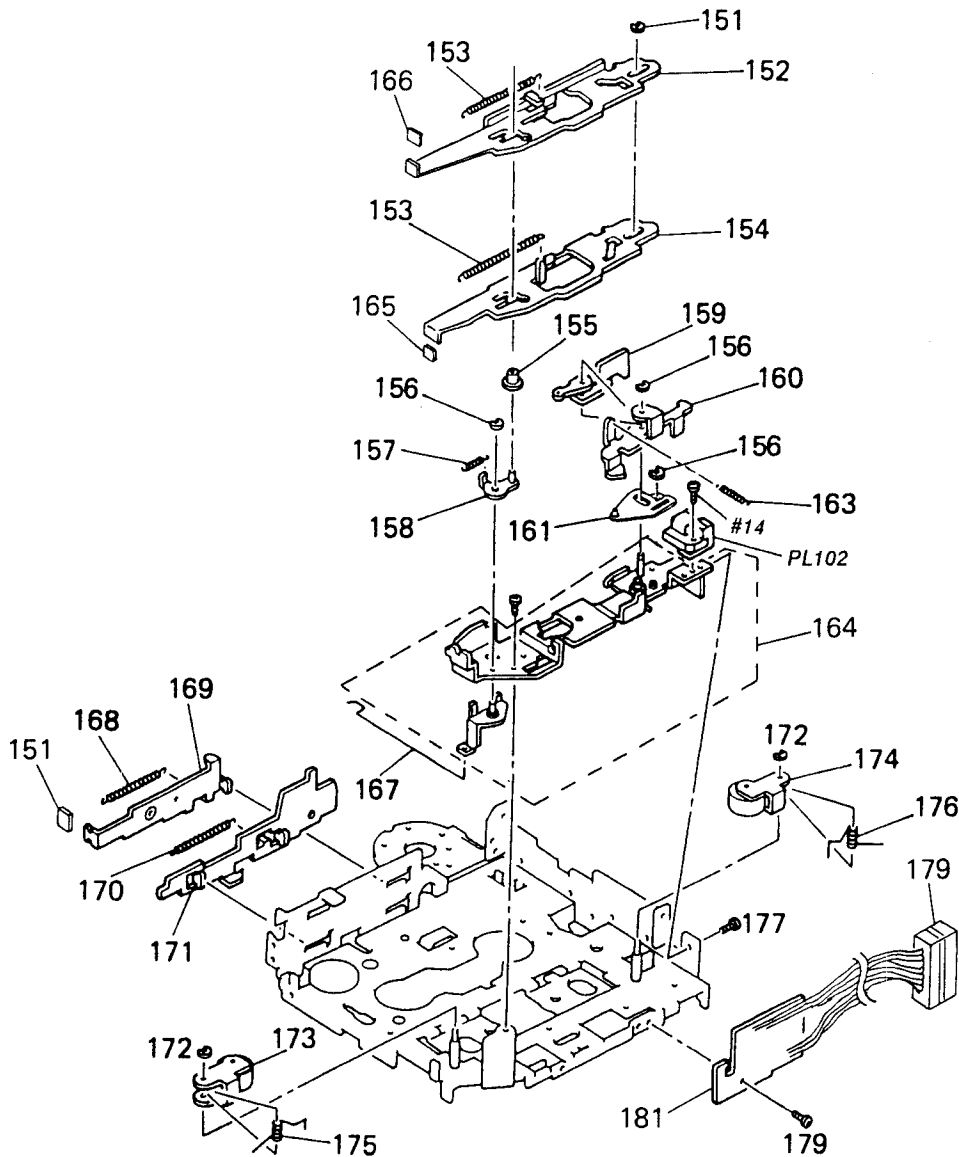
(3) MD SECTION-1



Ref. No.	Part No.	Description	Remark
101	3-392-969-01	LINK, RETURN	
• 103	3-392-932-01	PLATE, CENTER	
104	3-392-961-01	SPRING (B)	
105	3-392-953-01	SPRING	
• 106	3-379-122-01	CONNECTOR ASSY, 8P	
• 108	3-375-383-01	HANGER, CASSETTE	
109	3-392-972-01	HOOKER, TAPE	
• 110	3-392-921-01	LOCK ASSY, EJECT CAM	
• 111	3-375-384-01	HOLDER, CASSETTE	
113	3-397-436-01	SPRING, STAND-BY	
114	3-397-411-01	GEAR ASSY, STAND-BY	
115	3-397-462-01	ARM, REVERSE LOCK	
• 117	3-397-405-01	CAM ASSY, STAND-BY	
• 119	3-397-404-01	BRACKET ASSY, SOLENOID	
• 120	3-397-402-01	ARM (C) ASSY, F. R	
• 122	3-397-406-01	LOCK ASSY, STAND-BY GEAR	
123	3-676-387-00	POLY-SLIDER (DIA. 1.6)	
124	3-397-441-01	SPRING, STAND-BY GEAR LOCK	
125	3-570-615-11	POLY-WASHER (DIA. 1.2)	
126	3-397-460-01	RATCHET	
127	3-392-959-01	SPRING	
128	3-397-420-01	GEAR (B)	

Ref. No.	Part No.	Description	Remark
129	3-397-419-01	GEAR (A)	
130	3-392-989-02	ARM, GEAR LOCK	
131	3-392-949-02	SPRING	
132	3-570-615-00	POLY-WASHER (DIA. 1.2)	
133	3-392-944-01	COLLAR (SELECTOR GEAR)	
134	3-392-987-01	GEAR, SELECTOR	
135	3-397-459-01	ARM, SENSOR	
136	3-397-429-01	SPRING, DASH	
137	3-397-458-01	GEAR, DETECTION	
138	3-397-426-01	GEAR, ROAD	
139	3-559-408-11	WASHER, POLYETHYLENE, DIA. 1.2	
140	3-397-425-01	GEAR, SELECTOR LOCK	
141	3-397-440-01	SPRING, SELECTOR GEAR LOCK	
• 142	4-908-792-11	SCREW (B2X3), TAPPING, P1	
144	3-397-409-01	SPINDLE ASSY, REEL	
145	3-370-618-01	WASHER	
146	3-370-617-01	CAM ASSY, DETECTION	
147	3-370-619-01	SPRING, BACK TENSION	
148	3-397-422-01	GEAR, F. R	
149	3-397-421-01	GEAR, IDLE	
PL101	1-454-517-11		

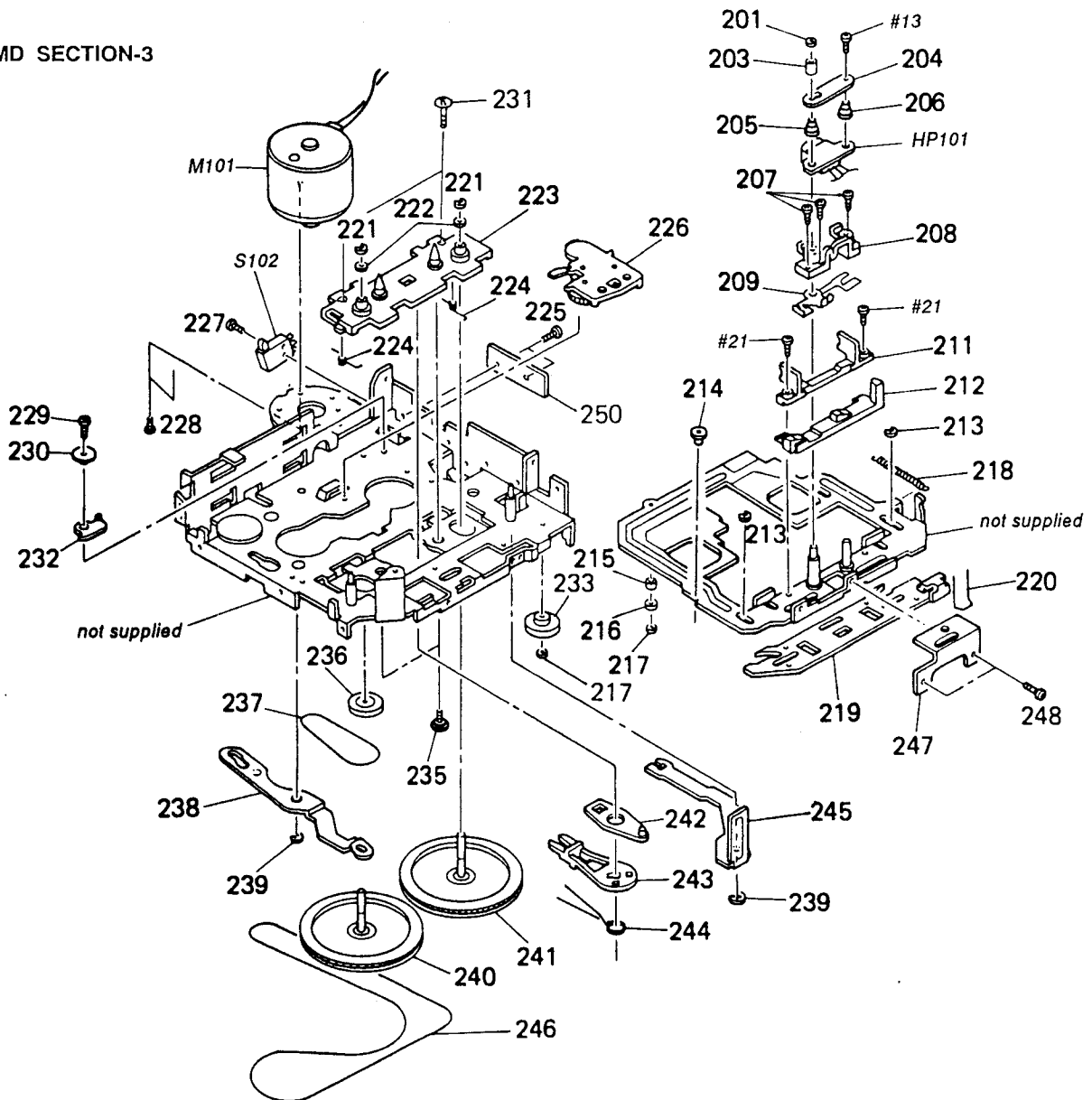
(4) MD SECTION-2



Ref. No.	Part No.	Description	Remark
* 151	3-379-140-01	BUTTON, EJECT	
* 152	3-379-125-01	LEVER (S), FF	
153	3-397-431-01	SPRING, FF/REW LEVER	
* 154	3-379-133-01	LEVER (S), REW	
155	3-392-994-01	ROLLER, PROGRAM	
157	3-397-439-01	SPRING, PROGRAM ARM	
159	3-392-903-01	ARM, RELEASE (EXCEPT U220)	
* 160	3-392-904-01	ARM (A), LOCK	
* 161	3-397-415-01	ARM (A) ASSY, F. R	
163	3-392-917-01	SPRING	
* 164	3-372-241-02	BRACKET ASSY (F), LEVER	
* 165	3-379-139-01	BUTTON, REW	
* 166	3-379-141-01	BUTTON, FF	

Ref. No.	Part No.	Description	Remark
167	3-372-243-01	LINK (B), SELECTOR	
168	3-397-437-01	SPRING, EJECT LEVER	
* 169	3-379-144-01	LEVER (S), EJECT-	
170	3-397-438-01	SPRING, EJECT CAM	
* 171	3-397-417-01	CAM ASSY, EJECT	
173	3-375-378-01	ARM (R) ASSY, PINCH	
174	3-375-377-01	ARM (F) ASSY, PINCH	
175	3-392-958-01	SPRING (R)	
176	3-392-957-01	SPRING (F)	
* 179	3-379-121-01	CONNECTOR ASSY, 7P (EXCEPT U220)	
179	3-379-123-01	CONNECTOR ASSY, 5P (U220)	
* 181	3-397-444-01	SWITCH BOARD	
PL102	1-454-464-12	SOLENOID, PLUNGER (EXCEPT U220)	

(5) MD SECTION-3



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-676-387-00	POLY-SLIDER (DIR. 1.6)		226	3-397-410-01	ARM ASSY, T. U	
203	3-392-943-01	ROLLER, FF (EXCEPT U220)		227	3-318-203-11	SCREW (B1. 7X6), TAPPING	
203	3-392-998-01	ROLLER (A), FF (U220)		* 230	3-397-427-01	COLLAR, MUTE ARM	
* 204	3-392-930-01	RETAINER, SPRING		231	3-318-204-81	SCREW (M1. 7X3), TAPPING	
205	3-397-433-01	SPRING (B), ADJUSTOR ARM		232	3-372-244-01	ARM (N), MUTE	
206	3-397-432-01	SPRING (A), ADJUSTOR ARM		233	3-392-941-01	PULLEY (A), IDLE	
207	3-375-379-01	SCREW, AZIMUTH		235	3-392-918-01	SCREW, EJECT HOOK	
* 208	3-379-142-01	ARM (B), ADJUSTOR		236	3-397-418-01	GEAR, PULLEY	
209	3-377-908-01	SHIM (X), ADJUSTOR		237	3-397-442-01	BELT, SUB	
211	3-392-984-01	GUIDE, TAPE		* 238	3-392-979-01	LEVER, REVERSE	
212	3-377-909-01	LINK (X), ADJUSTOR		240	3-397-413-01	FLYWHEEL ASSY (BR)	
214	3-397-428-01	COLLAR, H P		241	3-397-412-01	FLYWHEEL ASSY (BF)	
215	3-392-942-01	ROLLER (B), H P		* 242	3-397-408-01	ARM (D) ASSY, F. R	
216	3-392-945-01	ROLLER (A), H P		243	3-397-461-01	ARM, FF	
217	3-570-615-00	POLY-WASHER (DIA. 1.2)		244	3-397-435-01	SPRING, FF ARM	
218	3-392-952-01	SPRING		* 245	3-397-455-01	ARM (B), F. R	
* 219	3-397-401-01	ARM (A) ASSY, FR SELECTION		246	3-397-443-01	BELT, MAIN	
220	3-392-962-01	SPRING		* 247	3-397-463-01	REINFORCEMENT	
221	3-590-768-00	RING (A), E		248	3-397-464-01	SCREW, REINFORCEMENT FITTING	
222	3-701-437-11	POLY-SLIDER (A)		250	3-375-376-01	MUTE BOARD	
* 223	3-375-381-01	BRACKET ASSY (X), CM		HP101	1-543-717-11	HEAD, MAGNETIC (PLAYBACK)	
224	3-392-963-01	SPRING (R)		M101	X-3365-046-1	MOTOR ASSY (CAPSTAN/REEL)	
225	3-318-204-91	SCREW (M1. 7X4), TAPPING		S102	1-554-790-21	SWITCH, POWER (PACK IN)	

SECTION 5

ELECTRICAL PARTS LIST

AMPLIFIER

NOTE:

- 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 and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable

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

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

Ref. No.	Part No.	Description	Remark
*	A-3273-919-A	AMPLIFIER BOARD, COMPLETE (U440RDS; G)	
*	A-3273-923-A	AMPLIFIER BOARD, COMPLETE (U440RDS; AEP/U441RDS)	
*	A-3273-930-A	AMPLIFIER BOARD, COMPLETE (U330; AEP/U331)	
*	A-3273-937-A	AMPLIFIER BOARD, COMPLETE (U220)	
*	A-3273-970-A	AMPLIFIER BOARD, COMPLETE (U330; US, CND)	
*	A-3273-973-A	AMPLIFIER BOARD, COMPLETE (U330; E)	
*	3-377-590-01	BRACKET (IC)	
< CAPACITOR >			
C801	1-128-113-11	ELECT 3.3uF	20% 50V
C802	1-128-113-11	ELECT 3.3uF	20% 50V
C803	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C804	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C805	1-128-112-11	ELECT 33uF	20% 10V
C806	1-128-112-11	ELECT 33uF	20% 10V
C807	1-126-335-11	ELECT 220uF	20% 10V
C808	1-106-224-00	MYLAR 0.15uF	5% 100V
C809	1-106-224-00	MYLAR 0.15uF	5% 100V
C810	1-106-224-00	MYLAR 0.15uF	5% 100V
C811	1-106-224-00	MYLAR 0.15uF	5% 100V
C812	1-128-355-91	ELECT 2200uF	20% 16V
C901	1-128-113-11	ELECT 3.3uF	20% 50V
C902	1-128-113-11	ELECT 3.3uF	20% 50V
C903	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C904	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C905	1-128-112-11	ELECT 33uF	20% 10V
C906	1-128-112-11	ELECT 33uF	20% 10V
C907	1-126-335-11	ELECT 220uF	20% 10V
C908	1-106-224-00	MYLAR 0.15uF	5% 100V
C909	1-106-224-00	MYLAR 0.15uF	5% 100V
C910	1-106-224-00	MYLAR 0.15uF	5% 100V
C911	1-106-224-00	MYLAR 0.15uF	5% 100V
C912	1-128-355-91	ELECT 2200uF	20% 16V

Ref. No.	Part No.	Description	Remark
C915	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C916	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C918	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
< JACK >			
CNJ902	1-691-683-31	JACK, PIN 4P (U220/U330; AEP/U331/U440RDS; G)	
CNJ902	1-691-684-31	JACK, PIN 6P (U330; US, CND/U440RDS; AEP/U441RDS)	
< CONNECTOR >			
CNP901	1-691-883-21	PLUG, CONNECTOR 19P	
CNP902	1-691-685-11	CONNECTOR 17P	
< DIODE >			
D901	8-719-977-16	DIODE DT7.5B (U330; US, CND, E/U440RDS; AEP/U441RDS)	
D904	8-719-989-16	DIODE 1S2472	
< IC >			
IC801	8-759-243-27	IC TA8215H	
IC901	8-759-243-27	IC TA8215H	
< TRANSISTOR >			
Q801	8-729-920-21	TRANSISTOR DTC314TKH04	
Q802	8-729-920-21	TRANSISTOR DTC314TKH04	
Q901	8-729-920-21	TRANSISTOR DTC314TKH04	
Q902	8-729-920-21	TRANSISTOR DTC314TKH04	
< RESISTOR >			
R801	1-216-081-00	METAL CHIP 22K 5%	1/10W
R802	1-216-081-00	METAL CHIP 22K 5%	1/10W
R803	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R804	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R805	1-216-097-00	METAL CHIP 100K 5%	1/10W
R806	1-216-041-00	METAL CHIP 470 5%	1/10W
R807	1-216-041-00	METAL CHIP 470 5%	1/10W
R808	1-216-134-00	METAL CHIP 2.2 5%	1/8W
R809	1-216-134-00	METAL CHIP 2.2 5%	1/8W
R810	1-216-134-00	METAL CHIP 2.2 5%	1/8W

AMPLIFIER **KEY**

Ref. No.	Part No.	Description	Remark		
R811	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R812	1-216-081-00	METAL CHIP	22K	5%	1/10W
R813	1-216-081-00	METAL CHIP	22K	5%	1/10W
R814	1-216-047-00	METAL CHIP	820	5%	1/10W
R815	1-216-047-00	METAL CHIP	820	5%	1/10W
R817	1-216-117-00	METAL CHIP	680K	5%	1/10W
R818	1-216-117-00	METAL CHIP	680K	5%	1/10W
R901	1-216-081-00	METAL CHIP	22K	5%	1/10W
R902	1-216-081-00	METAL CHIP	22K	5%	1/10W
R903	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R904	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R905	1-216-097-00	METAL CHIP	100K	5%	1/10W
R906	1-216-041-00	METAL CHIP	470	5%	1/10W
R907	1-216-041-00	METAL CHIP	470	5%	1/10W
R908	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R909	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R910	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R911	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R912	1-216-081-00	METAL CHIP	22K	5%	1/10W
R913	1-216-081-00	METAL CHIP	22K	5%	1/10W
R914	1-216-047-00	METAL CHIP	820	5%	1/10W
R915	1-216-047-00	METAL CHIP	820	5%	1/10W
R917	1-216-117-00	METAL CHIP	680K	5%	1/10W
R918	1-216-117-00	METAL CHIP	680K	5%	1/10W
R919	1-216-073-00	METAL CHIP	10K	5%	1/10W
(U330; US, CND, E/U440RDS; AEP/U441RDS)					
< THERMISTOR >					
TH901	1-809-148-11	THERMISTOR, POSITIVE			
TH902	1-809-148-11	THERMISTOR, POSITIVE			

Ref. No.	Part No.	Description	Remark		
*	A-3273-924-A	KEY BOARD, COMPLETE (U440RDS/U441RDS)	*****		
*	A-3273-929-A	KEY BOARD, COMPLETE	*****		
(U330; EXCEPT AEP GREEN/U331)					
*	A-3273-932-A	KEY BOARD, COMPLETE (U330; AEP GREEN)	*****		
*	A-3273-938-A	KEY BOARD, COMPLETE (U220)	*****		
*	3-377-576-01	COVER (LCD)			
*	3-377-581-01	PLATE (LCD), LIGHT GUIDE			
*	3-377-597-01	SHEET (REFLECTOR)			
< CAPACITOR >					
C701	1-164-222-11	CERAMIC CHIP 0.22uF	25V		
C702	1-164-232-11	CERAMIC CHIP 0.01uF	50V		
C703	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	
< JACK >					
* CNJ701	1-691-557-11	PIN, CONNECTOR 12P			
< DIODE >					
D701	8-719-988-62	DIODE 1SS355 (U440RDS/U441RDS)			
D702	8-719-109-84	DIODE RD5.1ES-B1			
D703	8-719-987-41	LED CL-150Y-CD			
(EXCEPT U330; AEP GREEN/U440RDS/U441RDS)					
D703	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)			
D703	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)			
D704	8-719-987-41	LED CL-150Y-CD			
(EXCEPT U330; AEP GREEN/U440RDS/U441RDS)					
D704	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)			
D704	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)			
D705	8-719-987-41	LED CL-150Y-CD			
(EXCEPT U330; AEP GREEN/U440RDS/U441RDS)					
D705	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)			
D705	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)			
D706	8-719-987-41	LED CL-150Y-CD			
(EXCEPT U330; AEP GREEN/U440RDS/U441RDS)					
D706	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)			
D706	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)			
D707	8-719-987-41	LED CL-150Y-CD			
(EXCEPT U330; AEP GREEN/U440RDS/U441RDS)					
D707	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)			
D707	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)			
D708	8-719-987-41	LED CL-150Y-CD			
(EXCEPT U330; AEP GREEN/U440RDS/U441RDS)					
D708	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)			
D708	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)			

KEY

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D709	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		D721	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)	
D709	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		D721	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)	
D709	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)		D721	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)	
D710	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		D722	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)	
D710	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		D722	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)	
D710	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)		D722	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)	
D711	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		D723	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)	
D711	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		D723	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)	
D711	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)		D723	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)	
D712	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		D724	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)	
D712	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		D724	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)	
D712	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)		D724	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)	
D713	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		D725	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)	
D713	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		D725	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)	
D713	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)		D725	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)	
D714	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)				< IC >	
D714	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		IC701	8-759-246-16	IC TC9240F	
D714	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)				< LIQUID CRYSTAL DISPLAY >	
D715	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		LCD701	1-809-595-11	DISPLAY PANEL, LIQUID CRYSTAL (U440RDS/U441RDS)	
D715	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		LCD701	1-809-595-21	DISPLAY PANEL, LIQUID CRYSTAL (U220/U330/U331)	
D715	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)				< PILOT LAMP >	
D716	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		PL701	1-518-633-21	LAMP, PILOT (EXCEPT U330; AEP GREEN/U440RDS/U441RDS)	
D716	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		PL701	1-518-646-11	LAMP, PILOT (U440RDS/U441RDS)	
D716	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)		PL702	1-518-633-21	LAMP, PILOT (EXCEPT U330; AEP GREEN/U440RDS/U441RDS)	
D717	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		PL702	1-518-646-11	LAMP, PILOT (U440RDS/U441RDS)	
D717	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		PL703	1-518-648-11	LAMP, PILOT (U440RDS/U441RDS)	
D717	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)		PL703	1-518-699-01	LAMP, PILOT (U330; AEP GREEN)	
D718	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		PL704	1-518-648-11	LAMP, PILOT (U440RDS/U441RDS)	
D718	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		PL704	1-518-699-01	LAMP, PILOT (U330; AEP GREEN)	
D718	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)				< TRANSISTOR >	
D719	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		Q701	8-729-904-66	TRANSISTOR DTD113EK (U440RDS/U441RDS)	
D719	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)		Q702	8-729-904-66	TRANSISTOR DTD113EK (U440RDS/U441RDS)	
D719	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)		Q703	8-729-904-66	TRANSISTOR DTD113EK (U440RDS/U441RDS)	
D720	8-719-987-41	LED CL-150Y-CD (EXCEPT U330;AEP GREEN/U440RDS/U441RDS)		Q704	8-729-904-66	TRANSISTOR DTD113EK (U440RDS/U441RDS)	
D720	8-719-987-43	LED CL-150PG-CD (U330; AEP GREEN)					
D720	8-719-987-45	LED CL-155Y/PG-CD (U440RDS/U441RDS)					

Ref. No.	Part No.	Description	Remark		
< RESISTOR >					
R701	1-216-049-00	METAL CHIP	1K	5%	1/10W (U440RDS/U441RDS)
R702	1-216-037-00	METAL CHIP	330	5%	1/10W
R703	1-216-033-00	METAL CHIP	220	5%	1/10W
R704	1-216-037-00	METAL CHIP	330	5%	1/10W
R705	1-216-037-00	METAL CHIP	330	5%	1/10W
R706	1-216-037-00	METAL CHIP	330	5%	1/10W
R707	1-216-033-00	METAL CHIP	220	5%	1/10W
R708	1-216-033-00	METAL CHIP	220	5%	1/10W
R709	1-216-033-00	METAL CHIP	220	5%	1/10W
R710	1-216-033-00	METAL CHIP	220	5%	1/10W
R711	1-216-041-00	METAL CHIP	470	5%	1/10W
R712	1-216-097-00	METAL CHIP	100K	5%	1/10W
R713	1-216-089-00	METAL CHIP	47K	5%	1/10W
R714	1-216-049-00	METAL CHIP	1K	5%	1/10W
R715	1-216-049-00	METAL CHIP	1K	5%	1/10W
R716	1-216-049-00	METAL CHIP	1K	5%	1/10W
R717	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R718	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R719	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R720	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R721	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R722	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R723	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R724	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R725	1-216-661-11	METAL CHIP	2.7K	0.5%	1/10W
R726	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R727	1-216-669-11	METAL CHIP	5.6K	0.5%	1/10W
R728	1-216-673-11	METAL CHIP	8.2K	0.5%	1/10W
R732	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R733	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R734	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R735	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R736	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R737	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R738	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R739	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R740	1-216-661-11	METAL CHIP	2.7K	0.5%	1/10W
R741	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R742	1-216-049-00	METAL CHIP	1K	5%	1/10W
R743	1-216-049-00	METAL CHIP	1K	5%	1/10W
R744	1-216-049-00	METAL CHIP	1K	5%	1/10W
< SWITCH >					
S701	1-692-037-11	SWITCH, KEY BOARD (FM/AM)			
S702	1-692-037-11	SWITCH, KEY BOARD (AF/TA)			
S703	1-572-704-21	SWITCH, KEY BOARD (+)			
S704	1-572-704-21	SWITCH, KEY BOARD (SEL)			

Ref. No.	Part No.	Description	Remark		
S705	1-572-704-21	SWITCH, KEY BOARD (SEEK: +)			
S706	1-572-704-21	SWITCH, KEY BOARD (SEEK: -)			
S707	1-572-704-21	SWITCH, KEY BOARD (PRESET: +)			
S708	1-572-704-21	SWITCH, KEY BOARD (PRESET: -)			
S709	1-572-704-21	SWITCH, KEY BOARD (MUTE)			
S710	1-572-704-21	SWITCH, KEY BOARD (SENS/LOUD)			
S711	1-572-704-21	SWITCH, KEY BOARD (M. SCAN/BTM)			
S712	1-572-704-21	SWITCH, KEY BOARD (LIST)			
S714	1-692-037-11	SWITCH, KEY BOARD (CP)			
S715	1-692-037-11	SWITCH, KEY BOARD (TAPE)			
S716	1-692-037-11	SWITCH, KEY BOARD (OFF)			
S717	1-572-704-21	SWITCH, KEY BOARD (-)			
S718	1-572-704-21	SWITCH, KEY BOARD (DSPL)			
S719	1-572-704-21	SWITCH, KEY BOARD (1)			
S720	1-572-704-21	SWITCH, KEY BOARD (2)			
S721	1-572-704-21	SWITCH, KEY BOARD (3)			
S722	1-572-704-21	SWITCH, KEY BOARD (4)			
S723	1-572-704-21	SWITCH, KEY BOARD (5)			
S724	1-692-037-11	SWITCH, KEY BOARD (6)			

*	A-3273-917-A	MAIN BOARD, COMPLETE (U440RDS; G)			

*	A-3273-921-A	MAIN BOARD, COMPLETE (U440RDS; AEP)			

*	A-3273-927-A	MAIN BOARD, COMPLETE (U330; AEP)			

*	A-3273-934-A	MAIN BOARD, COMPLETE (U220)			

*	A-3273-968-A	MAIN BOARD, COMPLETE (U330; US, CND)			

*	A-3273-971-A	MAIN BOARD, COMPLETE (U330; E)			

*	A-3273-979-A	MAIN BOARD, COMPLETE (U441RDS)			

*	A-3273-966-A	MAIN BOARD, COMPLETE (U331)			

< CAPACITOR >					
C5	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C6	1-124-589-11	ELECT	47uF	20%	16V
C7	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C8	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C9	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C20	1-124-584-00	ELECT	100uF	20%	10V
C21	1-136-165-00	FILM	0.1uF	5%	50V
C22	1-130-479-00	MYLAR	0.0047uF	5%	50V
C23	1-136-169-00	FILM	0.22uF	5%	50V
C24	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C25	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C26	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C27	1-163-117-00	CERAMIC CHIP	100PF	5%	50V

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C28	1-163-097-00	CERAMIC CHIP	15PF 5% 50V	C76	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
C29	1-163-097-00	CERAMIC CHIP	15PF 5% 50V	C77	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C30	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V	C78	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C32	1-163-129-00	CERAMIC CHIP	330PF 5% 50V	C80	1-126-301-11	ELECT	1uF 20% 50V (EXCEPT U220)
			(U440RDS/U441RDS)	C81	1-126-301-11	ELECT	1uF 20% 50V (EXCEPT U220)
C33	1-126-162-11	ELECT	3.3uF 20% 50V	C90	1-163-117-00	CERAMIC	100P 5% 50V
C38	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V	C91	1-163-125-00	CERAMIC	220P 5% 50V
C39	1-164-232-11	CERAMIC CHIP	0.01uF 50V	C101	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C40	1-124-589-11	ELECT	47uF 20% 16V	C102	1-125-486-11	DOUBLE LAYERS	0.22F 5.5V
C41	1-110-362-11	MYLAR	0.0082uF 5% 50V	C103	1-163-081-00	CERAMIC CHIP	0.22uF 25V
C42	1-124-463-00	ELECT	0.1uF 20% 50V	C105	1-126-163-11	ELECT	4.7uF 20% 50V
C43	1-110-342-11	FILM	390PF 5% 50V	C106	1-163-081-00	CERAMIC CHIP	0.22uF 25V
C44	1-124-464-11	ELECT	0.22uF 20% 50V	C107	1-126-162-11	ELECT	3.3uF 20% 50V
C45	1-124-463-00	ELECT	0.1uF 20% 50V	C108	1-126-157-11	ELECT	10uF 20% 16V
C46	1-124-464-11	ELECT	0.22uF 20% 50V	C109	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C48	1-136-161-00	FILM	0.047uF 5% 50V	C110	1-124-234-00	ELECT	22uF 20% 16V
C49	1-136-161-00	FILM	0.047uF 5% 50V	C111	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C50	1-126-159-11	ELECT	0.47uF 20% 50V	C112	1-124-229-00	ELECT	33uF 20% 10V
C51	1-130-477-00	MYLAR	0.0033uF 5% 50V	C113	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C52	1-164-232-11	CERAMIC CHIP	0.01uF 50V	C114	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C53	1-126-288-11	ELECT	4.7uF 20% 16V	C115	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C54	1-163-157-00	FILM	0.022uF 5% 50V	C116	1-124-584-00	ELECT	100uF 20% 10V
C55	1-136-155-00	FILM	0.015uF 5% 50V (U440RDS)	C117	1-124-584-00	ELECT	100uF 20% 10V
C55	1-136-158-00	FILM	0.027uF 5% 50V	C118	1-124-584-00	ELECT	100uF 20% 10V
			(U220/U330; US, CND)	C119	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C56	1-136-155-00	FILM	0.015uF 5% 50V (U440RDS)	C120	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C56	1-136-156-00	FILM	0.018uF 5% 50V	C199	1-126-157-11	ELECT	10uF 20% 16V
			(U330; AEP, E/U330RDS/U331/U441RDS)	C201	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C57	1-126-288-11	ELECT	4.7uF 20% 16V	C202	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C58	1-136-171-00	FILM	0.33uF 5% 50V	C203	1-163-229-11	CERAMIC CHIP	12PF 5% 50V
C59	1-124-589-11	ELECT	47uF 20% 16V	C204	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C60	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C205	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C61	1-124-584-00	ELECT	100uF 20% 10V	C206	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
C62	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C207	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
C63	1-136-161-00	FILM	0.047uF 5% 50V	C208	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
C67	1-124-464-11	ELECT	0.22uF 20% 50V	C209	1-128-054-11	ELECT	22uF 20% 10V
C68	1-163-135-00	CERAMIC CHIP	560PF 5% 50V	C210	1-163-038-00	CERAMIC CHIP	0.1uF 25V
			(U440RDS/U441RDS)	C211	1-163-229-11	CERAMIC CHIP	12PF 5% 50V
C69	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C213	1-163-038-00	CERAMIC CHIP	0.1uF 25V (EXCEPT U220)
			(U440RDS/U441RDS)	C301	1-126-301-11	ELECT	1uF 20% 50V
C70	1-124-257-00	ELECT	2.2uF 20% 50V	C302	1-130-468-00	MYLAR	560PF 5% 50V
			(U440RDS/U441RDS)	C303	1-124-589-11	ELECT	47uF 20% 16V
C71	1-163-115-00	CERAMIC CHIP	82PF 5% 50V	C304	1-136-171-00	FILM	0.033uF 5% 50V
			(U440RDS/U441RDS)	C305	1-136-161-00	FILM	0.047uF 5% 50V (EXCEPT U220)
C72	1-163-243-11	CERAMIC CHIP	47PF 5% 50V	C306	1-126-157-11	ELECT	10uF 20% 16V
			(U440RDS/U441RDS)	C307	1-126-301-11	ELECT	1uF 20% 50V
C73	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C309	1-126-157-11	ELECT	10uF 20% 16V
			(U440RDS/U441RDS)	C310	1-126-157-11	ELECT	10uF 20% 16V
C75	1-163-038-00	CERAMIC CHIP	0.1uF 25V				
			(U440RDS/U441RDS)				

Ref. No.	Part No.	Description	Remark
C311	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C312	1-126-159-11	ELECT 0.47uF 20%	50V
C313	1-163-103-00	CERAMIC CHIP 27PF 5%	50V
C314	1-126-157-11	ELECT 10uF 20%	16V
C315	1-130-476-00	MYLAR 0.0027uF 5%	50V
C316	1-136-162-00	FILM 0.056uF 5%	50V
C317	1-136-162-00	FILM 0.056uF 5%	50V
C318	1-126-157-11	ELECT 10uF 20%	16V
C321	1-130-477-00	MYLAR 0.0033uF 5%	50V
C322	1-124-584-00	ELECT 100uF 20%	10V
C323	1-124-464-11	ELECT 0.22uF 20%	50V
C324	1-126-157-11	ELECT 10uF 20%	16V
C325	1-126-157-11	ELECT 10uF 20%	16V
C327	1-163-103-00	CERAMIC CHIP 27PF 5%	50V
C329	1-163-103-00	CERAMIC CHIP 27PF 5%	50V
C330	1-126-288-11	ELECT 4.7uF 20%	16V
C331	1-126-288-11	ELECT 4.7uF 20%	16V
C332	1-124-589-11	ELECT 47uF 20%	16V(U220)
C333	1-163-103-00	CERAMIC CHIP 27PF 5%	50V(U220)
C401	1-126-301-11	ELECT 1uF 20%	50V
C402	1-130-468-00	MYLAR 560PF 5%	50V
C403	1-124-589-11	ELECT 47uF 20%	16V
C404	1-136-171-00	FILM 0.033uF 5%	50V
C405	1-136-161-00	FILM 0.047uF 5%	50V (EXCEPT U220)
C406	1-126-157-11	ELECT 10uF 20%	16V
C407	1-126-301-11	ELECT 1uF 20%	50V
C409	1-126-157-11	ELECT 10uF 20%	16V
C410	1-126-157-11	ELECT 10uF 20%	16V
C411	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V (EXCEPT U220)
C411	1-163-038-00	CERAMIC CHIP 0.1uF	25V(U220)
C412	1-126-159-11	ELECT 0.47uF 20%	50V
C413	1-163-103-00	CERAMIC CHIP 27PF 5%	50V
C414	1-126-157-11	ELECT 10uF 20%	16V
C415	1-130-476-00	MYLAR 0.0027uF 5%	50V
C416	1-136-162-00	FILM 0.056uF 5%	50V
C417	1-136-162-00	FILM 0.056uF 5%	50V
C418	1-126-157-11	ELECT 10uF 20%	16V
C421	1-130-477-00	MYLAR 0.0033uF 5%	50V
C422	1-124-584-00	ELECT 100uF 20%	10V
C423	1-124-464-11	ELECT 0.22uF 20%	50V
C424	1-126-157-11	ELECT 10uF 20%	16V
C425	1-126-157-11	ELECT 10uF 20%	16V
C427	1-163-103-00	CERAMIC CHIP 27PF 5%	50V
C429	1-163-103-00	CERAMIC CHIP 27PF 5%	50V
C430	1-126-288-11	ELECT 4.7uF 20%	16V
C431	1-126-288-11	ELECT 4.7uF 20%	16V
C432	1-124-589-11	ELECT 47uF 20%	16V(U220)
C433	1-163-103-00	CERAMIC CHIP 27PF 5%	50V(U220)

Ref. No.	Part No.	Description	Remark
C451	1-126-935-11	ELECT 470uF 20%	16V
C452	1-126-157-11	ELECT 10uF 20%	16V (EXCEPT U220)
C453	1-124-229-00	ELECT 33uF 20%	10V
C454	1-124-584-00	ELECT 100uF 20%	10V (EXCEPT U220)
C454	1-163-038-00	CERAMIC CHIP 0.1uF	25V (U220)
C455	1-126-157-11	ELECT 10uF 20%	16V (EXCEPT U220)
C456	1-131-587-11	TANTALUM 0.68uF 5%	35V (EXCEPT U220)
C457	1-163-081-00	CERAMIC CHIP 0.22uF	25V (EXCEPT U220)
C458	1-126-159-11	ELECT 0.47uF 20%	50V (EXCEPT U220)
C459	1-124-229-00	ELECT 33uF 20%	10V (EXCEPT U220)
C460	1-124-229-00	ELECT 33uF 20%	10V
C461	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C462	1-124-584-00	ELECT 100uF 20%	10V
C463	1-126-159-11	ELECT 0.47uF 20%	50V (EXCEPT U220)
C464	1-126-301-11	ELECT 1uF 20%	50V
C465	1-124-589-11	ELECT 47uF 20%	16V
C466	1-131-587-11	TANTALUM 0.68uF 5%	35V (EXCEPT U220)
C467	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C468	1-124-229-00	ELECT 33uF 20%	10V
C469	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C471	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C472	1-163-038-00	CERAMIC CHIP 0.1uF	25V
< CONNECTOR >			
* CNP10	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	
* CNP101	1-691-882-21	SOCKET, CONNECTOR 19P	
* CNP201	1-573-386-11	CONNECTOR, BOARD TO BOARD 12P	
CNP202	1-580-907-11	PLUG, CONNECTOR	
* CNP203	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	
* CNP401	1-506-990-11	PIN, CONNECTOR (PC BOARD) 8P	
* CNP402	1-506-989-11	PIN, CONNECTOR (PC BOARD) 7P	
< TRIMMER >			
CT201	1-141-276-00	CAP, TRIMMER	
< DIODE >			
D4	8-719-109-84	DIODE RD5.1ES-B1	
D5	8-719-110-17	DIODE RD10ES-B2	
D7	8-719-109-69	DIODE RD3.6ES-B2	
D8	8-719-911-19	DIODE 1SS119	
D11	8-719-911-19	DIODE 1SS119 (U220)	
D12	8-719-911-19	DIODE 1SS119 (U220)	
D101	8-719-109-89	DIODE RD5.6ES-B2	
D102	8-719-911-19	DIODE 1SS119	
D103	8-719-911-19	DIODE 1SS119	
D104	8-719-911-19	DIODE 1SS119	
D105	8-719-110-03	DIODE RD7.5ES-B2	
D106	8-719-911-19	DIODE 1SS119	

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D107	8-719-110-03	DIODE RD7. 5ES-B2		IC305	8-759-820-15	IC LC7537AN	
D108	8-719-911-19	DIODE 1SS119		IC310	8-759-996-43	IC RC4558PS	
D109	8-719-110-14	DIODE RD9. 1ES-B3		IC311	8-759-996-43	IC RC4558PS	
D110	8-719-110-14	DIODE RD9. 1ES-B3		IC312	8-759-996-43	IC RC4558PS	
D111	8-719-109-89	DIODE RD5. 6ES-B2		IC410	8-759-996-43	IC RC4558PS	
D112	8-719-110-22	DIODE RD11ES-B2		IC411	8-759-996-43	IC RC4558PS	
D113	8-719-110-22	DIODE RD11ES-B2		IC412	8-759-996-43	IC RC4558PS	
D114	8-719-109-93	DIODE RD6. 2ES-B2				< COIL >	
D115	8-719-911-19	DIODE 1SS119		L1	1-410-509-11	INDUCTOR 10uH	
D116	8-719-911-19	DIODE 1SS119		L2	1-410-509-11	INDUCTOR 10uH	
D201	8-719-911-19	DIODE 1SS119		L4	1-410-509-11	INDUCTOR 10uH	
D202	8-719-911-19	DIODE 1SS119		L6	1-410-509-11	INDUCTOR 10uH (U440RDS,U441RDS)	
D203	8-719-911-19	DIODE 1SS119		L201	1-410-509-11	INDUCTOR 10uH	
D204	8-719-911-19	DIODE 1SS119				< TRANSISTOR >	
D205	8-719-911-19	DIODE 1SS119		Q2	8-729-424-08	TRANSISTOR UN2111	
D206	8-719-109-93	DIODE RD6. 2ES-B2		Q2	8-729-901-04	TRANSISTOR DTA114EK	
D207	8-719-109-93	DIODE RD6. 2ES-B2		Q3	8-729-230-49	TRANSISTOR 2SC2712-YG	
D208	8-719-109-93	DIODE RD6. 2ES-B2		Q7	8-729-230-49	TRANSISTOR 2SC2712-YG	
D209	8-719-109-93	DIODE RD6. 2ES-B2		Q8	8-729-809-71	TRANSISTOR 2SK536	
D210	8-719-109-93	DIODE RD6. 2ES-B2		Q9	8-729-421-22	TRANSISTOR UN2211 (U331/U441RDS)	
D211	8-719-109-93	DIODE RD6. 2ES-B2		Q10	8-729-011-95	TRANSISTOR RN-2426	
D212	8-719-109-93	DIODE RD6. 2ES-B2		Q11	8-729-011-96	TRANSISTOR RN-2426	
D213	8-719-109-93	DIODE RD6. 2ES-B2		Q12	8-729-901-01	TRANSISTOR DTC144EK	
D214	8-719-109-93	DIODE RD6. 2ES-B2		Q102	8-729-106-68	TRANSISTOR 2SD1615A-GP	
D215	8-719-109-93	DIODE RD6. 2ES-B2		Q103	8-729-230-49	TRANSISTOR 2SC2712-YG	
D301	8-719-109-75	DIODE RD4. 3ES-B2		Q104	8-729-230-49	TRANSISTOR 2SC2712-YG	
D401	8-719-109-75	DIODE RD4. 3ES-B2		Q105	8-729-230-49	TRANSISTOR 2SC2712-YG	
D451	8-719-911-19	DIODE 1SS119		Q106	8-729-822-84	TRANSISTOR 2SB1202FAST	
D452	8-719-911-19	DIODE 1SS119 (EXCEPT U220)		Q107	8-729-421-22	TRANSISTOR UN2211	
D453	8-719-911-19	DIODE 1SS119		Q108	8-729-822-84	TRANSISTOR 2SB1202FAST	
D454	8-719-109-69	DIODE RD3. 6ES-B2		Q109	8-729-421-22	TRANSISTOR UN2211	
D455	8-719-911-19	DIODE 1SS119		Q110	8-729-106-60	TRANSISTOR 2SB1115A	
		< IC >		Q111	8-729-421-22	TRANSISTOR UN2211	
IC20	8-759-823-81	IC LC7216M		Q112	8-729-807-12	TRANSISTOR 2SD1802S	
IC30	8-759-508-66	IC XRA10358F		Q113	8-729-807-12	TRANSISTOR 2SD1802S	
IC40	8-759-070-45	IC AN7464S		Q114	8-729-106-68	TRANSISTOR 2SD1615A-GP	
IC50	8-759-065-98	IC SAA6579T (U440RDS/U441RDS)		Q115	8-729-424-08	TRANSISTOR UN2111	
IC60	8-759-823-84	IC LC7071NM (U440RDS/U441RDS)		Q116	8-729-421-22	TRANSISTOR UN2211	
IC101	8-759-940-45	IC S-8054HN-CB		Q117	8-729-807-12	TRANSISTOR 2SD1802S	
IC201	8-759-082-40	IC uPD75518GF-047-3B9		Q118	8-729-807-12	TRANSISTOR 2SD1802S	
IC202	8-759-513-44	IC X24C16SI (U330; US, CND, E, U440RDS/U441RDS)		Q201	8-729-230-49	TRANSISTOR 2SC2712-YG	
IC204	8-759-998-92	IC LM393D		Q202	8-729-216-22	TRANSISTOR 2SA1162-G	
IC301	8-759-046-31	IC BA328F		Q204	8-729-230-49	TRANSISTOR 2SC2712-YG	
IC302	8-752-032-14	IC CXA1102M (EXCEPT U220)		Q205	8-729-230-49	TRANSISTOR 2SC2712-YG	
IC302	8-759-996-43	IC RC4558PS (U220)		Q206	8-729-230-49	TRANSISTOR 2SC2712-YG	
IC303	8-759-066-00	IC LA2000M (EXCEPT U220)		Q207	8-729-230-49	TRANSISTOR 2SC2712-YG	
IC304	8-759-106-22	IC uPD4052BG		Q208	8-729-230-49	TRANSISTOR 2SC2712-YG	

Ref. No.	Part No.	Description	Remark
Q209	8-729-216-22	TRANSISTOR 2SA1162-G	
Q210	8-729-421-22	TRANSISTOR UN2211	
Q211	8-729-424-08	TRANSISTOR UN2111	
Q212	8-729-421-22	TRANSISTOR UN2211	
Q301	8-729-421-22	TRANSISTOR UN2211 (EXCEPT U220)	
Q401	8-729-421-22	TRANSISTOR UN2211 (EXCEPT U220)	
Q451	8-729-106-60	TRANSISTOR 2SB1115A	
Q452	8-729-421-22	TRANSISTOR UN2211	
Q453	8-729-230-49	TRANSISTOR 2SC2712-G (EXCEPT U220)	
Q454	8-729-106-68	TRANSISTOR 2SD1615A-GP (EXCEPT U220)	
Q455	8-729-424-08	TRANSISTOR UN2111	
Q456	8-729-421-22	TRANSISTOR UN2211	
Q457	8-729-901-04	TRANSISTOR DTA114EK (U220)	
Q458	8-729-901-01	TRANSISTOR DTC114EK (U220)	
< RESISTOR >			
R4	1-216-041-00	METAL CHIP 470 5% 1/10W	
R5	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R6	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R7	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R8	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R9	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R23	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R24	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R25	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R26	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R27	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R30	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R31	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R32	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R33	1-216-001-00	METAL CHIP 10 5% 1/10W	
R34	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R35	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R36	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R37	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R38	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R39	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R40	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R41	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R42	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R43	1-216-092-00	METAL GLAZE 62K 5% 1/10W	
R44	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R46	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R47	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R50	1-216-097-00	METAL CHIP 100K 5% 1/10W	(EXCEPT U220/U330; US, CND)
R50	1-216-101-00	METAL CHIP 150K 5% 1/10W (U330; US, CND)	
R50	1-216-240-00	METAL CHIP 56K 5% 1/10W (U220)	

Ref. No.	Part No.	Description	Remark
R51	1-216-097-00	METAL CHIP 100K 5% 1/10W	(EXCEPT U220/U330; US, CND)
R51	1-216-101-00	METAL CHIP 150K 5% 1/10W (U330; US, CND)	
R51	1-216-240-00	METAL CHIP 56K 5% 1/10W (U220)	
R53	1-216-097-00	METAL CHIP 100K 5% 1/10W	(U440RDS/U441RDS)
R54	1-216-097-00	METAL CHIP 100K 5% 1/10W	(U440RDS/U441RDS)
R55	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	(U440RDS/U441RDS)
R56	1-216-001-00	METAL CHIP 10 5% 1/10W	(U440RDS/U441RDS)
R57	1-216-073-00	METAL CHIP 10K 5% 1/10W (EXCEPT U220)	
R57	1-216-252-00	METAL CHIP 180K 5% 1/10W (U220)	
R58	1-216-073-00	METAL CHIP 10K 5% 1/10W (EXCEPT U220)	
R58	1-216-252-00	METAL CHIP 180K 5% 1/10W (U220)	
R61	1-216-059-00	METAL CHIP 2.7K 5% 1/10W (U331/U441RDS)	
R62	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R63	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R70	1-216-092-00	METAL CHIP 62K 5% 1/10W	(EXCEPT U330; US, CND)
R70	1-216-099-00	METAL CHIP 120K 5% 1/10W (U330; US, CND)	
R80	1-216-092-00	METAL CHIP 62K 5% 1/10W	(EXCEPT U330; US, CND)
R80	1-216-099-00	METAL CHIP 120K 5% 1/10W (U330; US, CND)	
R101	1-216-017-00	METAL CHIP 47 5% 1/10W	
R102	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R105	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R106	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R107	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R108	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R109	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R110	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R111	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R112	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R113	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R114	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R115	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R116	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R117	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R118	1-220-150-11	METAL GLAZE 680 10% 1/2W	
R119	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R120	1-220-150-11	METAL GLAZE 680 10% 1/2W	
R121	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R122	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R123	1-216-041-00	METAL CHIP 470 5% 1/10W	
R124	1-216-041-00	METAL CHIP 470 5% 1/10W	
R125	1-216-041-00	METAL CHIP 470 5% 1/10W	
R126	1-216-049-00	METAL CHIP 1K 5% 1/10W	

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R127	1-216-049-00	METAL CHIP	1K 5% 1/10W	R237	1-216-174-00	METAL GLAZE	100 5% 1/8W
R129	1-216-089-00	METAL CHIP	47K 5% 1/10W	R238	1-216-174-00	METAL GLAZE	100 5% 1/8W
R130	1-216-097-00	METAL CHIP	100K 5% 1/10W	R239	1-216-089-00	METAL CHIP	47K 5% 1/10W
R131	1-216-049-00	METAL CHIP	1K 5% 1/10W	R240	1-216-089-00	METAL CHIP	47K 5% 1/10W
R201	1-216-097-00	METAL CHIP	100K 5% 1/10W (EXCEPT U440RDS/U441RDS)	R241	1-216-089-00	METAL CHIP	47K 5% 1/10W (U330; US, CND, E/U440RDS/U441RDS)
R202	1-216-097-00	METAL CHIP	100K 5% 1/10W (EXCEPT U440RDS/U441RDS)	R242	1-216-049-00	METAL CHIP	1K 5% 1/10W
R203	1-216-097-00	METAL CHIP	100K 5% 1/10W (EXCEPT U440RDS/U441RDS)	R243	1-216-089-00	METAL CHIP	47K 5% 1/10W (U220/U330; AEP/U331)
R204	1-216-097-00	METAL CHIP	100K 5% 1/10W	R244	1-216-049-00	METAL CHIP	1K 5% 1/10W
R205	1-216-097-00	METAL CHIP	100K 5% 1/10W	R245	1-216-049-00	METAL CHIP	1K 5% 1/10W
R206	1-216-085-00	METAL CHIP	33K 5% 1/10W (U220/U330; US, CND, E/U331/U441RDS)	R246	1-216-049-00	METAL CHIP	1K 5% 1/10W
R207	1-216-085-00	METAL CHIP	33K 5% 1/10W (U330; AEP/U330RDS/U440RDS)	R248	1-216-049-00	METAL CHIP	1K 5% 1/10W
R207	1-216-097-00	METAL CHIP	100K 5% 1/10W (U220/U330; US, CND)	R249	1-216-049-00	METAL CHIP	1K 5% 1/10W
R208	1-216-085-00	METAL CHIP	33K 5% 1/10W (U440RDS/U441RDS)	R250	1-216-049-00	METAL CHIP	1K 5% 1/10W
R208	1-216-097-00	METAL CHIP	100K 5% 1/10W (U330; E)	R251	1-216-049-00	METAL CHIP	1K 5% 1/10W
R209	1-216-085-00	METAL CHIP	33K 5% 1/10W (U220/U330; US, CND, AEP/U331)	R252	1-216-049-00	METAL CHIP	1K 5% 1/10W
R209	1-216-097-00	METAL CHIP	100K 5% 1/10W (U330; E)	R253	1-216-049-00	METAL CHIP	1K 5% 1/10W
R210	1-216-109-00	METAL CHIP	330K 5% 1/10W	R254	1-216-089-00	METAL CHIP	47K 5% 1/10W (U330; US, CND, E/U440RDS; E/U441RDS)
R211	1-216-097-00	METAL CHIP	100K 5% 1/10W	R255	1-216-089-00	METAL CHIP	47K 5% 1/10W (U220/U330; AEP/U331/U440RDS; G)
R212	1-216-081-00	METAL CHIP	22K 5% 1/10W	R256	1-216-089-00	METAL CHIP	47K 5% 1/10W (U220)
R213	1-216-081-00	METAL CHIP	22K 5% 1/10W	R257	1-216-089-00	METAL CHIP	47K 5% 1/10W
R214	1-216-097-00	METAL CHIP	100K 5% 1/10W	R258	1-216-089-00	METAL CHIP	47K 5% 1/10W (U220/U330/U331)
R215	1-216-089-00	METAL CHIP	47K 5% 1/10W	R259	1-216-089-00	METAL CHIP	47K 5% 1/10W (U440RDS/U441RDS)
R216	1-216-089-00	METAL CHIP	47K 5% 1/10W	R270	1-216-294-00	METAL CHIP	10M 5% 1/8W
R218	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R301	1-216-027-00	METAL CHIP	120 5% 1/10W (U220)
R219	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R302	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R220	1-216-025-00	METAL CHIP	100 5% 1/10W	R303	1-216-097-00	METAL CHIP	100K 5% 1/10W
R221	1-216-025-00	METAL CHIP	100 5% 1/10W	R304	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R222	1-216-089-00	METAL CHIP	47K 5% 1/10W	R305	1-216-053-00	METAL CHIP	1.5K 5% 1/10W (EXCEPT U220)
R223	1-216-097-00	METAL CHIP	100K 5% 1/10W	R306	1-216-117-00	METAL CHIP	680K 5% 1/10W (EXCEPT U220)
R224	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	R307	1-216-101-00	METAL CHIP	150K 5% 1/10W (EXCEPT U220)
R225	1-216-089-00	METAL CHIP	47K 5% 1/10W	R308	1-216-073-00	METAL CHIP	10K 5% 1/10W
R226	1-216-081-00	METAL CHIP	22K 5% 1/10W	R309	1-216-097-00	METAL CHIP	100K 5% 1/10W
R227	1-216-049-00	METAL CHIP	1K 5% 1/10W	R311	1-216-097-00	METAL CHIP	100K 5% 1/10W
R228	1-216-089-00	METAL CHIP	47K 5% 1/10W	R312	1-216-097-00	METAL CHIP	100K 5% 1/10W
R229	1-216-049-00	METAL CHIP	1K 5% 1/10W	R313	1-216-049-00	METAL CHIP	1K 5% 1/10W
R230	1-216-097-00	METAL CHIP	100K 5% 1/10W	R314	1-216-097-00	METAL CHIP	100K 5% 1/10W
R231	1-216-089-00	METAL CHIP	47K 5% 1/10W	R315	1-216-073-00	METAL CHIP	10K 5% 1/10W
R232	1-216-063-00	METAL CHIP	3.9K 5% 1/10W	R316	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R233	1-216-073-00	METAL CHIP	10K 5% 1/10W	R317	1-216-077-00	METAL CHIP	15K 5% 1/10W
R234	1-216-081-00	METAL CHIP	22K 5% 1/10W	R318	1-216-121-00	METAL CHIP	1M 5% 1/10W
R235	1-216-089-00	METAL CHIP	47K 5% 1/10W	R319	1-216-121-00	METAL CHIP	1M 5% 1/10W
R236	1-216-089-00	METAL CHIP	47K 5% 1/10W	R320	1-216-121-00	METAL CHIP	1M 5% 1/10W
				R321	1-216-049-00	METAL CHIP	1K 5% 1/10W

MAIN	MUTE
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Ref. No.	Part No.	Description	Remark
R322	1-216-077-00	METAL CHIP	15K 5% 1/10W
R323	1-216-085-00	METAL CHIP	33K 5% 1/10W
R324	1-216-077-00	METAL CHIP	15K 5% 1/10W
R325	1-216-085-00	METAL CHIP	33K 5% 1/10W
R328	1-216-089-00	METAL CHIP	47K 5% 1/10W(U220)
R329	1-216-089-00	METAL CHIP	47K 5% 1/10W(U220)
R330	1-216-059-00	METAL CHIP	2.7K 5% 1/10W(U220)
R331	1-216-085-00	METAL CHIP	33K 5% 1/10W(U220)
R401	1-216-027-00	METAL CHIP	120 5% 1/10W(U220)
R402	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R403	1-216-097-00	METAL CHIP	100K 5% 1/10W
R404	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R405	1-216-053-00	METAL CHIP	1.5K 5% 1/10W (EXCEPT U220)
R406	1-216-117-00	METAL CHIP	680K 5% 1/10W (EXCEPT U220)
R407	1-216-101-00	METAL CHIP	150K 5% 1/10W (EXCEPT U220)
R408	1-216-073-00	METAL CHIP	10K 5% 1/10W
R409	1-216-097-00	METAL CHIP	100K 5% 1/10W
R411	1-216-073-00	METAL CHIP	10K 5% 1/10W(U220)
R411	1-216-097-00	METAL CHIP	100K 5% 1/10W (EXCEPT U220)
R412	1-216-097-00	METAL CHIP	100K 5% 1/10W
R413	1-216-049-00	METAL CHIP	1K 5% 1/10W
R414	1-216-097-00	METAL CHIP	100K 5% 1/10W
R415	1-216-073-00	METAL CHIP	10K 5% 1/10W
R416	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R417	1-216-077-00	METAL CHIP	15K 5% 1/10W
R418	1-216-121-00	METAL CHIP	1M 5% 1/10W
R419	1-216-121-00	METAL CHIP	1M 5% 1/10W
R420	1-216-121-00	METAL CHIP	1M 5% 1/10W
R421	1-216-049-00	METAL CHIP	1K 5% 1/10W
R422	1-216-077-00	METAL CHIP	15K 5% 1/10W
R423	1-216-085-00	METAL CHIP	33K 5% 1/10W
R424	1-216-077-00	METAL CHIP	15K 5% 1/10W
R425	1-216-085-00	METAL CHIP	33K 5% 1/10W
R428	1-216-089-00	METAL CHIP	47K 5% 1/10W(U220)
R429	1-216-089-00	METAL CHIP	47K 5% 1/10W(U220)
R430	1-216-059-00	METAL CHIP	2.7K 5% 1/10W(U220)
R441	1-216-085-00	METAL CHIP	33K 5% 1/10W(U220)
R451	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R452	1-216-097-00	METAL CHIP	100K 5% 1/10W
R453	1-216-097-00	METAL CHIP	100K 5% 1/10W
R454	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R455	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R456	1-216-073-00	METAL CHIP	10K 5% 1/10W (EXCEPT U220)
R457	1-216-001-00	METAL CHIP	10 5% 1/10W
R458	1-216-073-00	METAL CHIP	10K 5% 1/10W (EXCEPT U220)
R459	1-216-690-11	METAL CHIP	43K 0.5% 1/10W (EXCEPT U220)
R460	1-216-073-00	METAL CHIP	10K 5% 1/10W (EXCEPT U220)
R461	1-216-073-00	METAL CHIP	10K 5% 1/10W (EXCEPT U220)
R462	1-216-069-00	METAL CHIP	6.8K 5% 1/10W (EXCEPT U220)

Ref. No.	Part No.	Description	Remark
R463	1-216-109-00	METAL CHIP	330K 5% 1/10W (EXCEPT U220)
R464	1-216-025-00	METAL CHIP	100 5% 1/10W (EXCEPT U220)
R465	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R466	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R467	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R468	1-216-025-00	METAL CHIP	100 5% 1/10W
R469	1-216-097-00	METAL CHIP	100K 5% 1/10W
R470	1-216-073-00	METAL CHIP	10K 5% 1/10W (EXCEPT U220)
R471	1-216-049-00	METAL CHIP	1K 5% 1/10W (EXCEPT U220)
R472	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R474	1-216-134-00	METAL CHIP	2.2 5% 1/8W
< VARIABLE RESISTOR >			
RV2	1-238-604-11	RES. ADJ. CARBON	220K
RV3	1-238-600-11	RES. ADJ. CARBON	10K
RV4	1-238-598-11	RES. ADJ. CARBON	2.2K
RV6	1-238-603-11	RES. ADJ. CARBON	100K
RV9	1-238-604-11	RES. ADJ. CARBON	220K
RV301	1-238-596-11	RES. ADJ. CARBON	470 (EXCEPT U220)
RV401	1-238-596-11	RES. ADJ. CARBON	470 (EXCEPT U220)
< SWITCH >			
S201	1-572-272-11	SWITCH, SLIDE	(POWER SELECT)
S202	1-572-272-11	SWITCH, SLIDE	(9K/10K) (E)
< TUNER >			
TU10	1-465-405-11	TUNER UNIT (FM/AM)	(U220/U330)
TU10	1-465-537-11	TUNER UNIT (FM/MW/LW)	(U331)
TU10	1-693-045-11	TUNER UNIT (FM/AM)	(U440RDS)
TU10	1-693-046-11	TUNER UNIT (FM/MW/LW)	(U441RDS)
< VIBRATOR >			
X1	1-567-848-11	VIBRATOR, CRYSTAL	
X2	1-567-819-11	VIBRATOR, CERAMIC	(4MHz) (U440RDS/U441RDS)
X3	1-579-242-11	VIBRATOR, CRYSTAL	(4.332MHz) (U440RDS/U441RDS)
X201	1-567-776-21	VIBRATOR, CERAMIC	(6MHz)
X202	1-579-532-11	VIBRATOR, CRYSTAL	(32.768MHz)

3-375-376-01 MUTE BOARD			

< SWITCH >			
S101	1-692-065-11	SWITCH, LEAF	(FF/REW)

RESET

SWITCH

Ref. No.	Part No.	Description	Remark
*	1-643-119-11	RESET BOARD (U330/U331) *****	
*	1-643-674-11	RESET BOARD (U440RDS/U441RDS) *****	
*	1-643-678-11	RESET BOARD (U220) *****	
		< CONNECTOR >	
* CNP210	1-573-387-11	CONNECTOR, BOARD TO BOARD 12P	
* CNP211	1-691-558-11	SOCKET, CONNECTOR 12P	
		< SWITCH >	
S210	1-572-474-11	SWITCH, TACTIL	

*	3-397-444-01	SWITCH BOARD *****	
		< SWITCH >	
S103	1-572-353-11	SWITCH, SLIDE (N/R)	

		MISCELLANEOUS *****	
5	1-574-339-11	CORD (WITH CONNECTOR)	
6	1-690-742-11	CORD (WITH CONNECTOR)	
* 17	1-563-470-11	HOUSING, CONNECTOR 2P	
F1	1-532-414-11	FUSE, GLASS TUBE 1A	
F2	1-532-678-11	FUSE, GLASS TUBE 12A	
HP101	1-543-717-11	HEAD, MAGNETIC (PLAYBACK)	
LCD701	1-809-595-11	DISPLAY PANEL, LIQUID CRYSTAL (U330RDS/U440RDS/U441RDS)	
LCD701	1-809-595-21	DISPLAY PANEL, LIQUID CRYSTAL (U220/U330/U331)	
M101	X-3365-046-1	MOTOR ASSY (CAPSTAN/REEL)	
PL101	1-454-517-11		
PL102	1-454-464-12	SOLENOID, PLUNGER (EXCEPT U220)	
S102	1-554-790-21	SWITCH, POWER (PACK IN)	
S901	1-570-771-11	SWITCH	

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS *****	
	1-690-741-11	CORD (WITH CONNECTOR) (U330; US, CND)	
	1-690-844-11	CORD (WITH CONNECTOR) (U220)	
	1-690-845-11	CORD (WITH CONNECTOR) (U330; AEP/U331/U440RDS; G)	
*	3-355-207-01	CARDBOARD (E)	
*	3-378-737-01	CUSHION (UPPER)	
*	3-378-738-01	CUSHION (LOWER)	
*	3-379-110-01	INDIVIDUAL CARTON (U220)	
*	3-379-112-01	INDIVIDUAL CARTON (U440RDS)	
*	3-379-114-01	INDIVIDUAL CARTON (U441RDS)	
*	3-379-151-01	INDIVIDUAL CARTON (U330; AEP, E)	
*	3-379-340-01	INDIVIDUAL CARTON (U331)	
*	3-379-401-01	INDIVIDUAL CARTON (U330; US, CND)	
*	3-379-855-01	CUSHION (M)	
	3-754-966-11	MANUAL, INSTRUCTION (U440RDS/U441RDS)	
	3-754-966-41	MANUAL, INSTRUCTION (U440RDS; AEP)	
	3-754-967-11	MANUAL, INSTRUCTION, INSTALL (U440RDS; AEP/U441RDS)	
	3-754-967-41	MANUAL, INSTRUCTION, INSTALL (U440RDS; AEP)	
	3-754-967-61	MANUAL, INSTRUCTION, INSTALL (U440RDS; G)	
	3-754-968-11	MANUAL, INSTRUCTION (U330; AEP, E/U331)	
	3-754-968-21	MANUAL, INSTRUCTION (U220/U330; US, CND)	
	3-754-968-41	MANUAL, INSTRUCTION (U330; AEP)	
	3-754-969-11	MANUAL, INSTRUCTION, INSTALL (U330; AEP, E/U331)	
	3-754-969-21	MANUAL, INSTRUCTION, INSTALL (U220)	
	3-754-969-31	MANUAL, INSTRUCTION, INSTALL (U330; US, CND)	
	3-754-969-41	MANUAL, INSTRUCTION, INSTALL (U330; AEP)	
	3-755-365-11	INSTRUCTION	
	X-3364-977-1	CASE ASSY (FOR FRONT PANEL ASSEMBLY)	

Ref. No. Part No. Description Remark

HARDWARE LIST

- #1 7-621-772-10 SCREW +B 2X4
- #2 7-624-101-01 STOP RING 1.2 (E TYPE)
- #3 7-627-853-57 PRECISION SCREW +P 2X5 TYPE3
- #4 7-685-132-19 SCREW +P 2.6X5 TYPE2 NON-SLIT
- #5 7-685-134-19 SCREW +P 2.6X8 TYPE2 NON-SLIT

- #6 7-621-770-87 SCREW +PTT 2.6X5 (S)
- #7 7-621-773-95 SCREW +PTT 2.6X6 (S)
- #8 7-621-770-67 SCREW(+PTT 2.6X8), GROUND POINT
- #9 7-685-104-19 SCREW +P 2X6 TYPE2 NON-SLIT
- #10 7-685-105-19 SCREW +P 2X8 TYPE2 NON-SLIT

- #11 7-621-255-10 SCREW +P 2X3
- #12 7-621-255-15 SCREW +P 2X3
- #13 7-621-255-20 SCREW +P 2X4
- #14 7-621-255-40 SCREW +P 2X6
- #15 7-621-775-08 SCREW +P 2.6X3

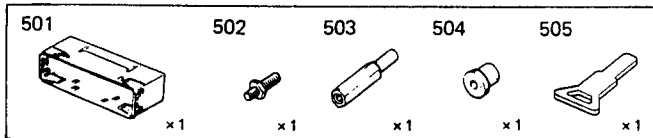
- #16 7-621-555-10 SCREW +K 2X3
- #17 7-621-591-00 SCREW +K 2X4
- #18 7-624-102-04 STOP RING 1.5, TYPE -E
- #19 7-624-104-04 STOP RING 2.0, TYPE -E
- #20 7-624-118-01 RING, RETAINING E-2.5

- #21 7-627-553-88 SCREW, PRECISION +P 2X7
- #22 7-621-255-25 SCREW +PTT 2X4 (S)

MOUNTING HARDWARE

- 501 X-3364-955-1 FRAME ASSY, FITTING
- 502 3-323-209-01 BOLT (4-5), STUD
- 503 3-323-210-01 ADJUSTOR, STUD BOLT
- 504 3-349-410-01 BUSHING
- * 505 3-379-363-01 KEY

• **MOUNTING HARDWARE**



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