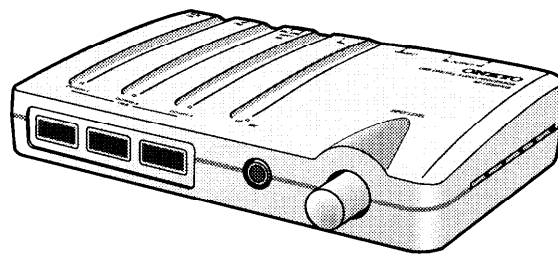


# ONKYO® SERVICE MANUAL

Ref NO. 3684

Apr. 2001

## USB Digital Audio Processor MODEL MSE-U33HB



### Features

- High-Quality Audio with the USB Interface
- High-Quality Digital Recording from Analog Sources
- Equipped with 3-Port USB Hub functionality
- Bundled with the stereo digital audio editing software Peak LE™ 2.5
- Bundled with the revolutionary VJ (Video Jockey) software Rhythmic Circle FUSE

### Main specifications

Type	USB digital audio processor
Connection method	USB (Universal Serial Bus Ver. 1.1)
Sampling rate	48 kHz or less
Frequency characteristics	0.3 Hz to 20 kHz (Line out +0/-0.5 dB)
Signal-to-noise ratio	100 dB (A-filter)
Total harmonic distortion	0.002% (1 kHz, 0 dB)
Output level	1.0 Vrms
Line input level	250 mVrms
Microphone input sensitivity	17 mVrms
Power supply	DC 7.5 V, 1500 mA (exclusive adapter)
Current dissipation	126 mA
Dimensions (W x H x D)	130 x 29.6 x 105 mm / 5 1/8" x 1 3/16" x 4 1/8"
Weight	0.2 kg / 0.4 lbs

\* Specifications and features are subject to change without notice.

## Accessories

The MSE-U33HB comes supplied with the accessories shown below. Make sure that these accessories are present at the time of purchase. The number in parenthesis is the quantity of that accessory.

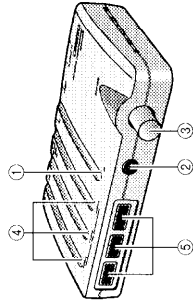
- USB digital audio processor (1)
- RCA-pin cord (1)
- This instruction manual (1)
- Installation CD-ROM (1)  
For the contents, refer to the file "Menu.html" on the CD-ROM.
- USB cable (1)
- AC adapter (1)
- Warranty and user registration card (1)
- Peak LE registration card (1)
- Quick setup guide (1)

## System requirements

- Power Macintosh or PowerBook standard-equipped with a USB port, iMAC, or iBook
- 20 MB or greater free hard drive space (FUSE requires additional 200 MB)
- 64 MB or greater RAM (128 MB or greater is recommended)
- CD-ROM drive (or equivalent)
- Mac OS 9.0.4 + Multimedia Update 1.0 or above (Mac OS 9.1 or later is recommended)

## Part names

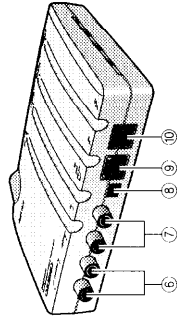
Front side



Front side

- ① Status indicator (USB UP)
- ② Monaural microphone input jack (MIC)
- ③ Input level adjustment dial (INPUT LEVEL)
- ④ Status indicators (USB DOWN)
- ⑤ USB down ports (USB DOWN-1/DOWN-2/DOWN-3)

Rear side



Rear side

- ⑥ Line output jack (OUTPUT L/R)
- ⑦ Line input jack (INPUT L/R)
- ⑧ Microphone/line input selector (MIC LINE INPUT SEL)
- ⑨ USB up port (USB)
- ⑩ DC input terminal (DC IN 7.5 V)

## Making the connections

### ■ Before making the connections

Before connecting the MSE-U33HB to your Macintosh computer, be sure to verify that the conditions given below are fulfilled.

### Mac OS operation system

Verify that the Mac OS 9.0.4 + Multimedia Update 1.0 or above operating system (Mac OS 9.1 or later is recommended) boots up properly on your Macintosh computer.

\* The MSE-U33HB will not operate properly in a Mac OS 9.0 or earlier environment. If your current operating system is Mac OS 9.0, then you will need to upgrade to Mac OS 9.0.4 + Multimedia Update 1.0 or later. For information regarding system software upgrades, refer to the instruction manual that came with your Macintosh.

### About your CD-ROM drive

The software required to setup your USB digital audio processor is contained on a CD-ROM, so a CD-ROM drive is necessary for installation of software and proper operation. Before beginning the setup procedures, make sure that your CD-ROM drive operates properly.


### Caution:

Macintosh computers that are not standard-equipped with a USB port are not supported by the MSE-U33HB. If a USB port was added by an expansion board or some other means, then the proper operation of the MSE-U33HB is not guaranteed.


Even with Macintosh computers that satisfy the above requirements, differences in design specifications for the various Macintosh series' and differences in user environments may cause the MSE-U33HB to not operate properly. For updates on operation restrictions and confirmation information, consult the Onkyo home page listed at the back of this manual.

## Connecting the MSE-U33HB

### ■ Connecting to your Macintosh computer

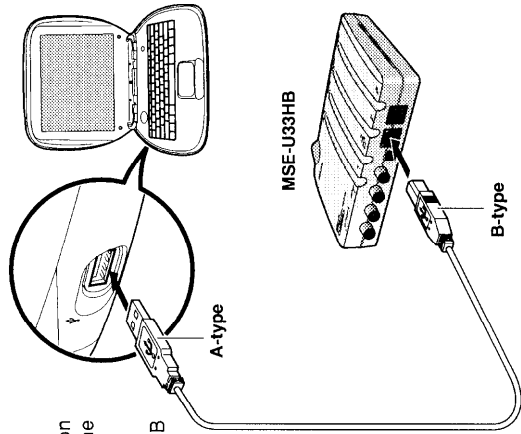
1. Connect the A-type plug (  ) of the supplied USB cable to your Macintosh computer.

**Note:**  
If there are two or more USB ports on your computer, you can connect the cable to any one of them.

2. Connect the B-type plug (  ) to the USB port on the MSE-U33HB.

**Note:**  
Decrease the volume of the speakers before connecting or disconnecting the plug.

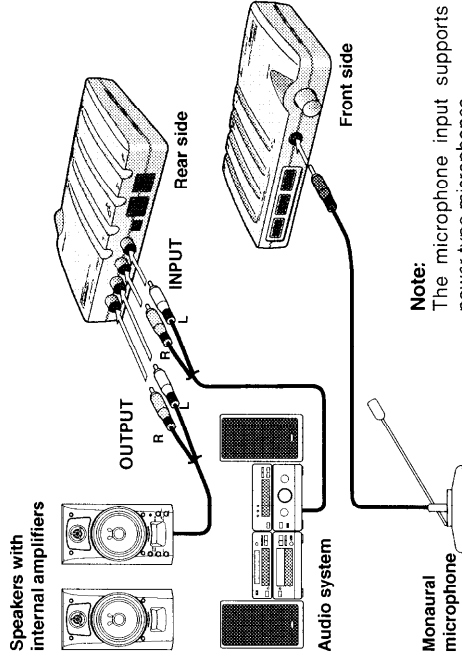
\* The location and number of USB ports on your computer may differ from the figure shown here. The figure shown here is one example.



## Connecting to other devices

Before connecting devices that do not use the USB interface, be sure to first turn off all the devices.

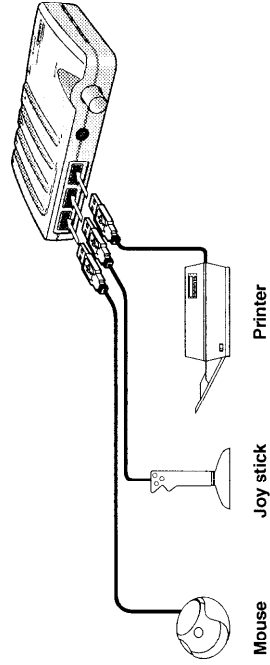
- Connecting to your audio system
- Connecting a microphone
- Connecting to speakers with internal amplifiers



**Note:**  
The microphone input supports plug-in power type microphones.

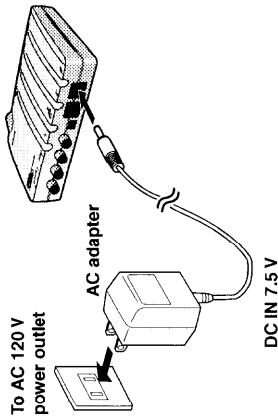
- Connecting other devices that have USB ports (i.e. mouses, joy sticks, and printers)

Before making any connections or disconnections, turn down the speaker volumes.



### ■ Connecting the AC adapter

To supply power to the USB device connected to the USB down port of the MSE-U33HB, be sure to connect the AC adapter.



**Caution:**  
The supplied AC adapter is for exclusive use with the MSE-U33HB. Do not use it with other devices. Also, do not use other AC adapters with the MSE-U33HB for they may damage the unit or cause other malfunctions.

## Troubleshooting

### Device is not recognized.

- Faulty connection.
- Referring to pages 8 to 9, make sure that devices are connected properly with USB cables.
- Problem with hub used for connection.
- If you are using a hub, make sure that hub is working properly.

### No sound is heard.

- Mute is turned on.
- Go to Output tab in Sound Control Panel and deselect Mute checkbox.
- Output level is too low.
- Go to Output tab in Sound Control Panel and raise volume level to an appropriate level.
- Another audio output device is being used.
- Go to Output tab in Sound Control Panel and select USB Audio in Choose a device for sound output field.
- Problem with external amplifier or speaker.
- Make sure that your external amplifier and speakers are properly connected to line output jacks. Also, check power supply and volume for external amplifier and speakers.

### Left and right outputs are wrong.

- Set balance to the middle setting.
- Adjust using balance slide bar in QuickTime player (or the software you are using).
- There is a problem with external amplifier or speakers.
- Check balance at the external amplifier and speakers.

### Audio is not output from CD-ROM drive.

- If your system does not support the digital audio output stream from the CD-ROM drive, audio will not be output from CD-ROM using USB interface. In this case, connect the audio output from the CD-ROM drive (e.g. headphones output) to the line input and adjust the volume to an appropriate level.

### Background music for games is not heard.

- CD audio is used for background music.
- See "Audio is not output from the CD-ROM drive" above.

### Microphone audio cannot be input.

- Selection of sound input device is mistaken.
- Open Output of the Sound Control Panel and select USB Audio from the Choose a device for sound output field.
- Faulty microphone connection.
- Properly connect the microphone.

## Troubleshooting

### Microphone audio cannot be input. (continued)

- Microphone is not compatible.
- Refer to page 9 and connect a compatible microphone.
- Microphone/line input selector is set to line input.
- Set to microphone input.
- Input level adjustment dial is at minimum.
- Adjust level to an appropriate level.

### Line audio cannot be input.

- Selection of sound input device is mistaken.
- Open Output of the Sound Control Panel and select USB Audio from the Choose a device for sound output field.
- Faulty line input connection.
- Properly connect line input from external device.
- Audio is not properly output from external device.
- Make sure that audio is output from external device.
- Microphone/line input selector is set to microphone input.
- Set to line input.
- Input level adjustment dial is at minimum.
- Adjust the level to an appropriate level.

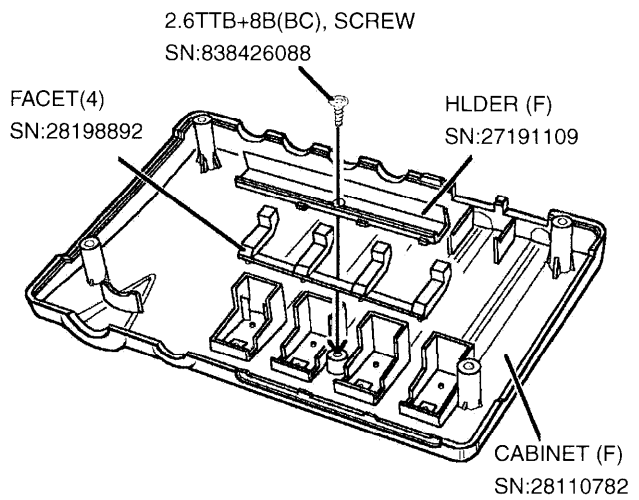
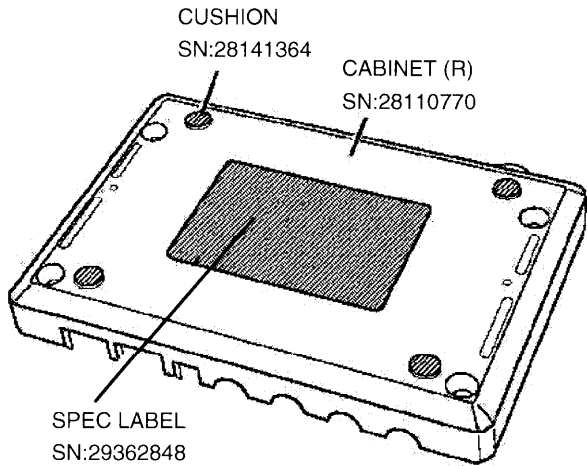
### Audio cuts out.

- Under excessive load during audio input or output.
- During recording, do not perform operations that will overload the CPU.
- Other USB device is being connected during input or output.
- Connecting or disconnecting USB devices during playback or recording will cause audio to cut in and out.
- Virtual memory is being used.
- Open Memory Control Panel and turn off virtual memory.

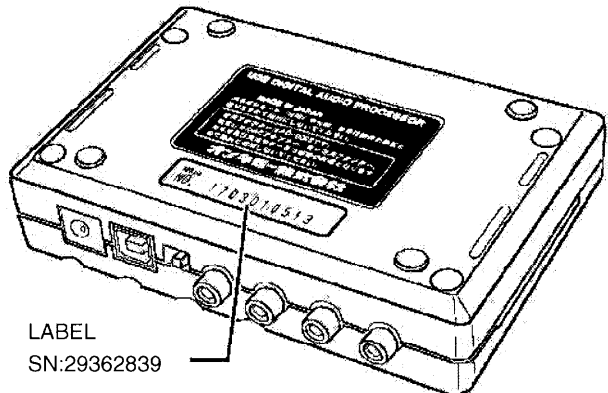
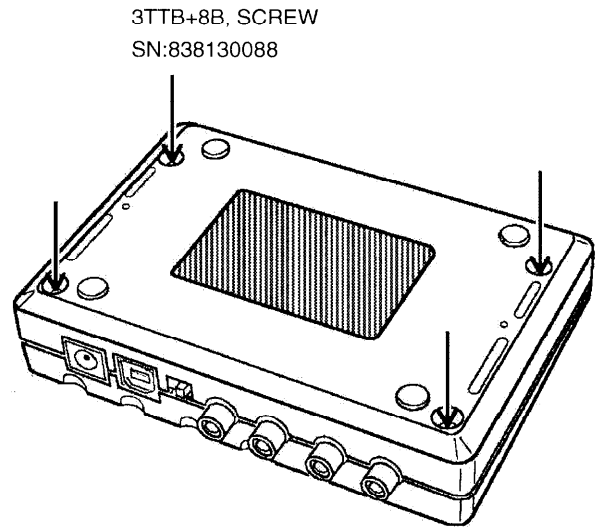
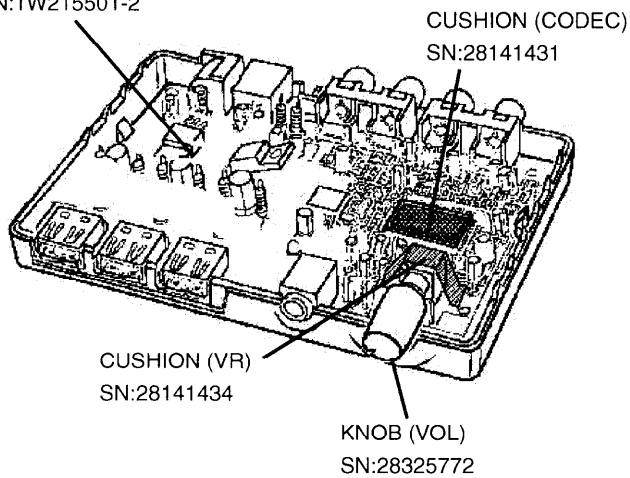
### Excessive noise.

- Television or other device that creates a strong magnetic field is placed nearby.
- Place sufficiently far away from the television or other device.
- \* Recordings that you make are for your private use. Copyright laws strictly forbid any other uses without first receiving express permission from the copyright owner.

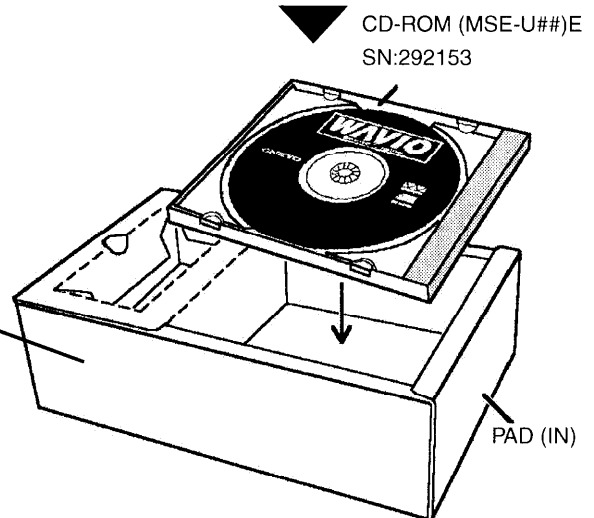
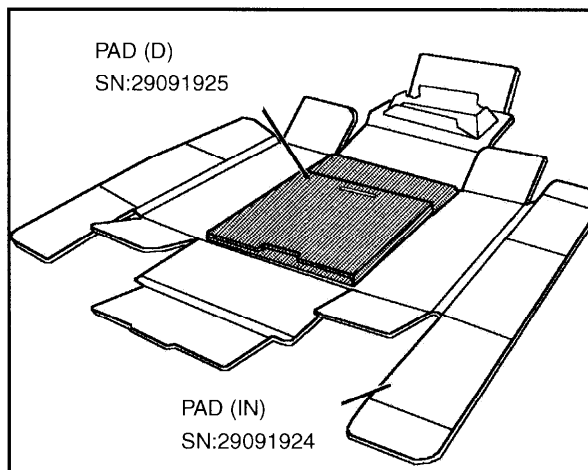
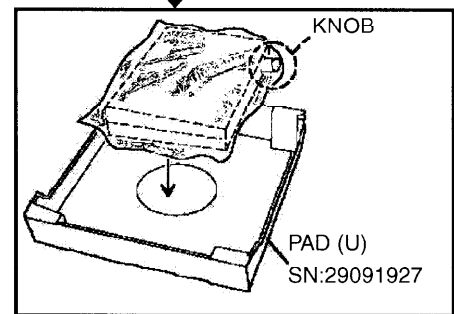
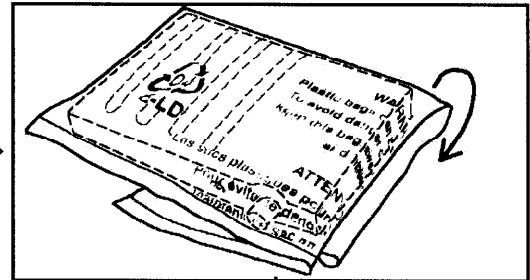
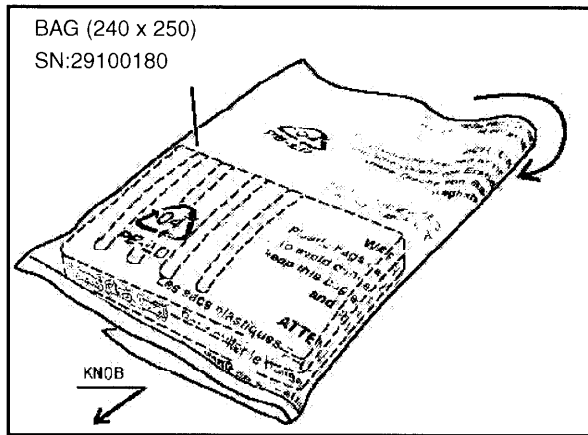
# Assembly



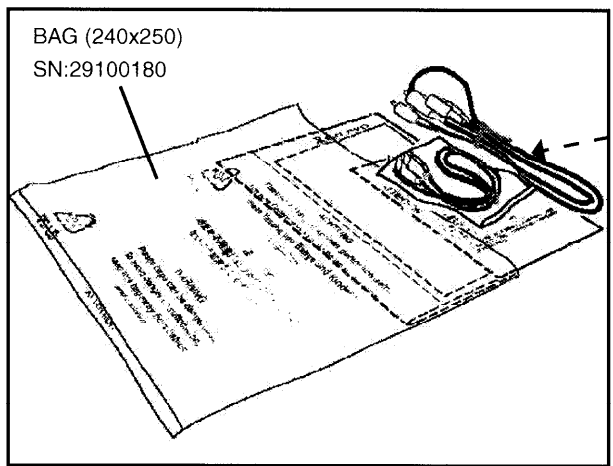
PC BOARD AS (included CUSHION(CODEC) and CUSHION(VR))  
NAAR-6901-2  
SN:1W215501-2



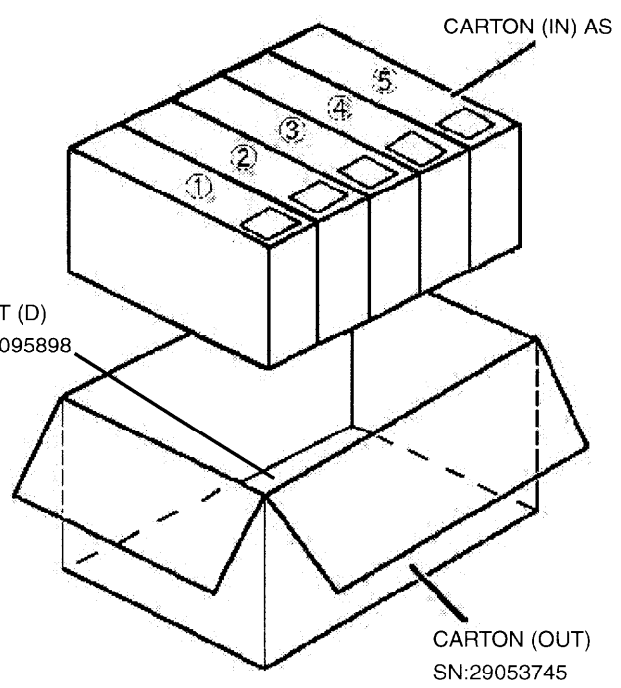
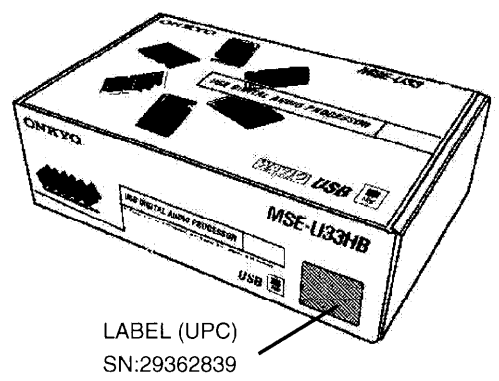
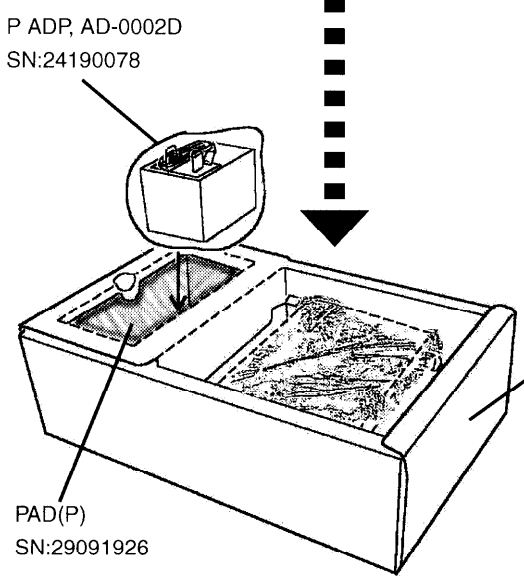
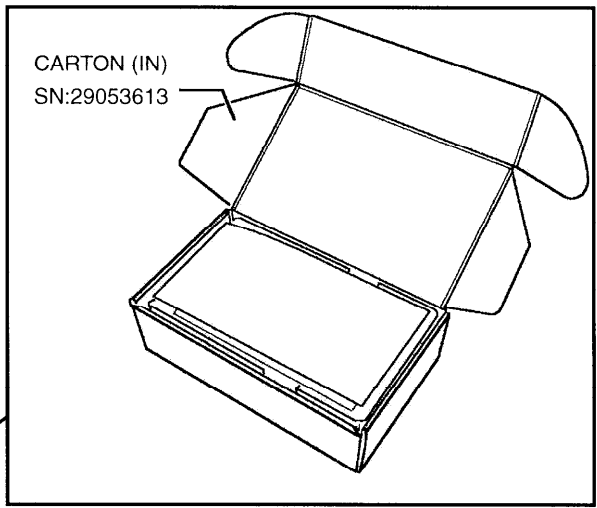
# Packing



# Packing



- INST SHEET, RegistMSEU33 (SN:29355355)
- INST SHEET, Quick MSEU33 (SN:29355353)
- INS MANUAL (SN:29342920)
- CORD AS, USB-1M (SN:2010384)
- PIN CORD AS-0.8M (SN:2010385)
- WRNTY CARD (SN:29365090)

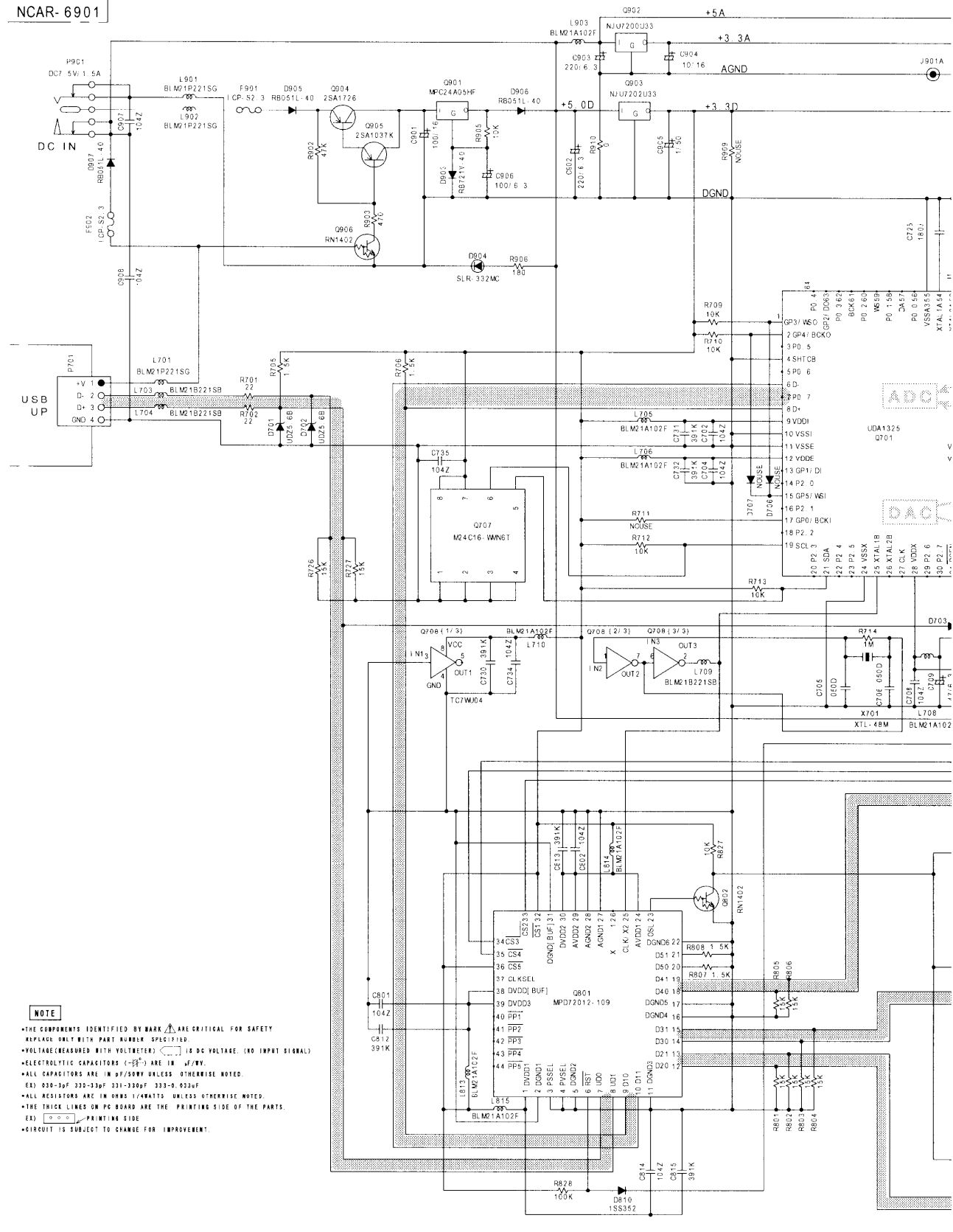


# SCHEMATIC DIAGRAM

MSE-U33HB

## MODEL NO. MSE-U33HB SCHEMATIC DIAGRAM

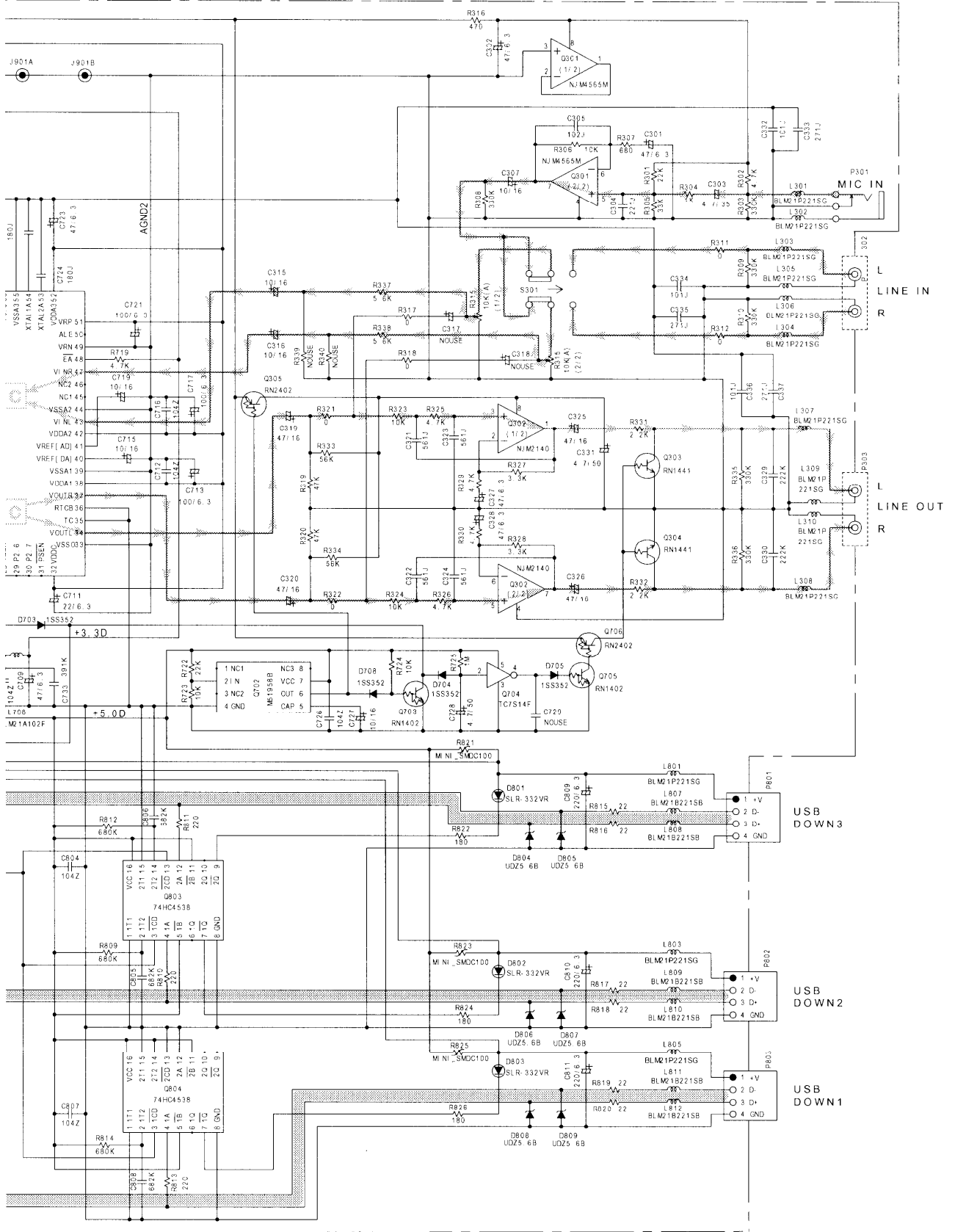
NCAR-6901



**NOTE**

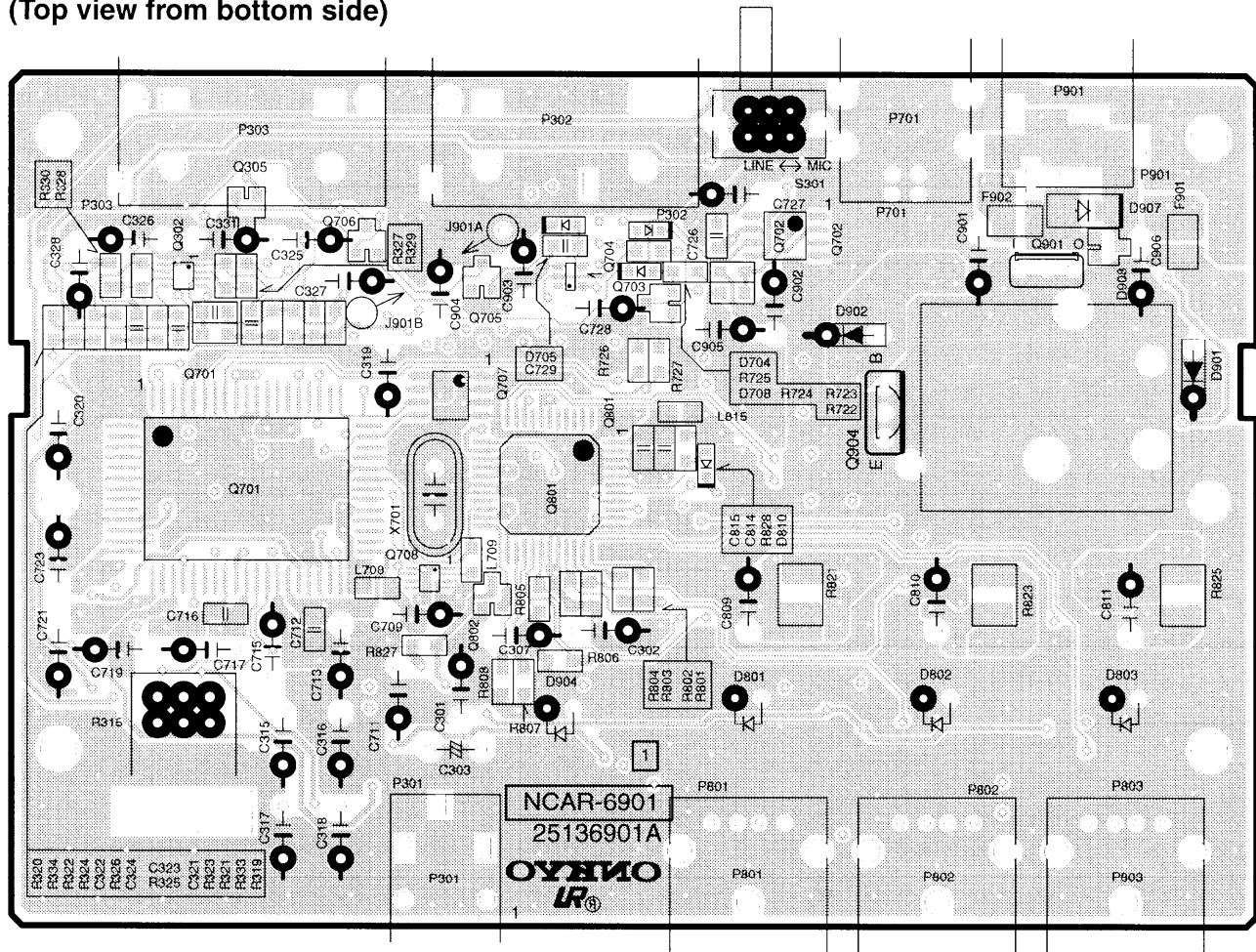
- THE COMPONENTS IDENTIFIED BY MARK ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) IS DC VOLTAGE. (NO INPUT SIGNAL).
- ELECTROLYTIC CAPACITORS () ARE IN  $\mu\text{F}$  UNLESS OTHERWISE NOTED.
- ALL CAPACITORS ARE IN pF UNLESS OTHERWISE NOTED.
- EX) 030-30F 330-330pF 331-330pF 333-0.033uF
- ALL RESISTORS ARE IN OHMS  $\frac{1}{4}$ WATT UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
- EX) PRINTING SIDE
- MICROKIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.





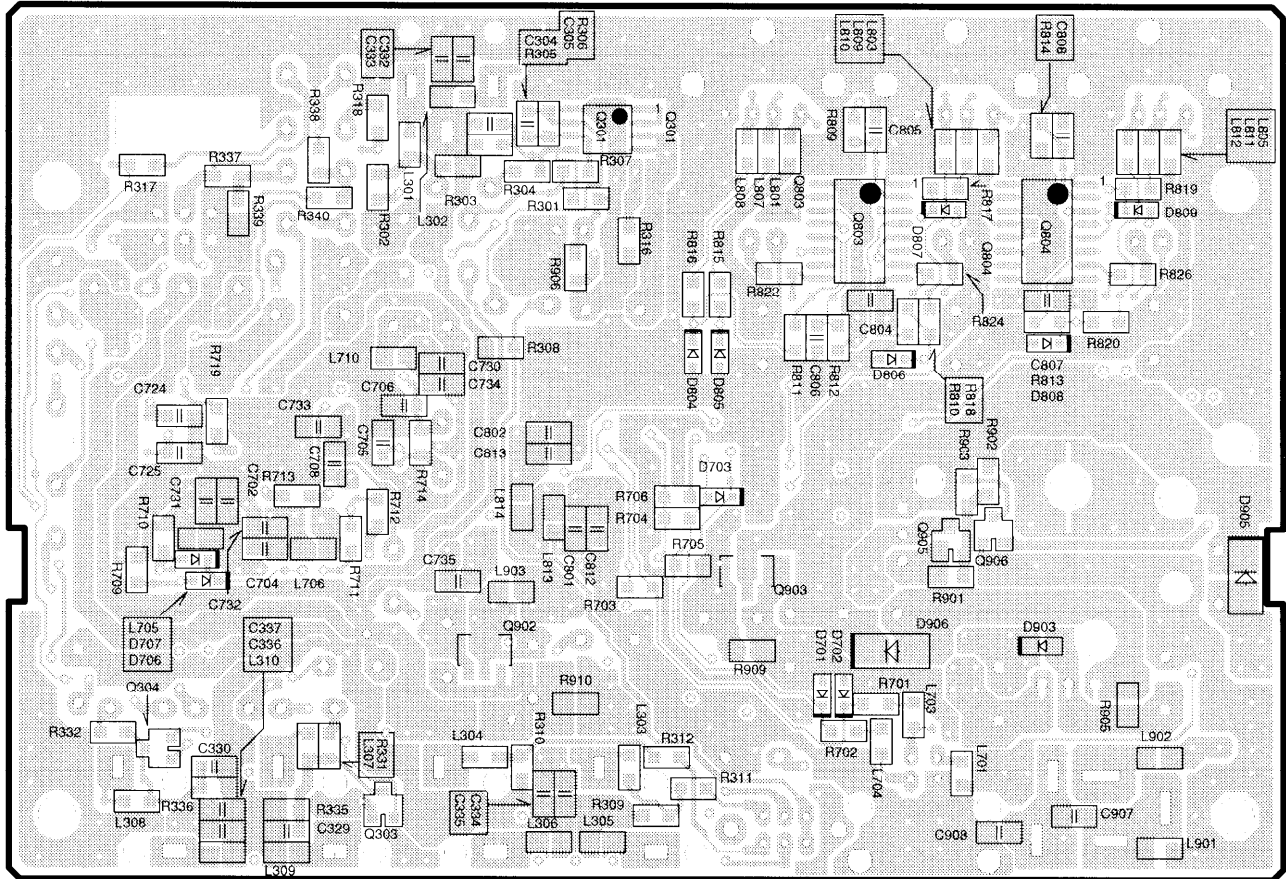
# PC board view and parts list

(Top view from bottom side)



Circuit Number	Part Number	Description	Circuit Number	Part Number	Description
D701, D702	224490560R2	UDZ5.6B, ZENER D	Q708	22240935R2	TC7WU04FU, IC
D703~D705, D708	223234R2 or 223269R2	ISS352, C-DIODE or ISS355, C-DIODE	Q801	22241504R3	MPD72012-109, IC
D801~D803	225338	SLR-332VR, LED	Q802	2214470R2	RN1402, TR
D804~D809	224490560R2	UDZ5.6B, ZENER D	Q803, Q804	222740115R2	TC74HC4538AF, IC
D810	223234R2 or 223269R2	ISS352, C-DIODE or ISS355, C-DIODE	Q901	22278005ANEC	MPC24A05HF, IC
D903	223267R2	RB751V-40, DIODE	Q902	22278033BR2JR	NJU7200U33, IC
D904	225332	SLR-332MC3F, LED	Q903	22278033CR2JR	NJU7202U33, IC
D905~D907	223265R2	RB051L-40, DIODE	Q904	2202314 or 2202315 or 2202313	2SA1726-Y, TR or 2SA1726-P, TR or 2SA1726-O, TR
Q301	22240581R2	NJM4565M, IC	Q905	2214640R0	2SA1037K, TR
Q302	22241311R2	NJM2140R, IC	Q906	2214470R2	RN1402, TR
Q303~Q304	2215410R2	RN1441, TR	<b>Trans Coil</b>		
Q305	2214530R2	RN2402, TR	L301~L310,	233454K220	NCH-1452 220K, CHOKE COIL
Q701	22241312R3	UDA1325H, IC	L701		
Q702	22241337R2	M51958BFP, IC	L703~L704	230947R2	BLM21B221SB, CHOKE COIL
Q703	2214470R2	RN1402, TR	L705, L706,	230948R2	BLM21A102F, CHOKE COIL
Q704	22241175R2	TC7S14F, IC	L708		
Q705	2214470R2	RN1402, TR	L709	230947R2	BLM21B221SB, CHOKE COIL
Q706	2214530R2	RN2402, TR	L710	230948R2	BLM21A102F, CHOKE COIL
Q707	22241509R2	M24C16-WMN6T, IC	L801L803,	233454K220	NCH-1452 220K, CHOKE COIL
			L805		

(Bottom view from top side)



Circuit Number	Part Number	Description	Circuit Number	Part Number	Description
L807~L812	230947R2	BLM21B221SB, CHOKE COIL	P801~P803	25052146	NSCT-4P2043, SOCKET
L813~L815	230948R2	BLM21A102F, CHOKE COIL	Q901	25045578	HEC2392-01-150, JACK
L901,L902	233454K220	NCH-1452 220K, CHOKE COIL	Q901A	27160442	SP211K, HEAT SINK
L903	230948R2	BLM21A102F, CHOKE COIL	Q901B	82143010	3P+10FN(BC), SCREW
X701	3010328	HC-49/U03 48.000MHZ, CRYSTAL	Q901C	863130 or 863430	N-3FN, NUT or N-3FN(BC), NUT
<b>Capacitor</b>			Q901D	871130	SW-3(SP-WASHER), SP WASHER
C901	354741019	CE04W16V-100M, ELECT C	Q315a	28141434	(VR), CUSHION
C902,C903	354721019	CE04W6.3V-220M, ELECT C	Q701a	28141431	(CODEC), CUSHION
C904	353741009	CE04W16V-10M(S), ELECT C	S301	25065581	NSS-22203, SLIDE SW
C906	354741019	CE04W16V-100M, ELECT C			
C907,C908	337621040R1	CK732FH-104Z, C-CERA C			
<b>Resistor</b>					
R902	433124734R1	RN72K2A-473JE, C-CARBON R			
R903	433124714R1	RN72K2A-471JE, C-CARBON R			
R905	433121034R1	RN72K2A-103JE, C-CARBON R			
R906	433121814R1	RN72K2A-181JE, C-CARBON R			
R910	433120004R1	RN72K2A-000JE, C-CARBON R			
<b>Switch, Terminal</b>					
F901,F902	252226R2	ICP S2.3, FUSE			
P301	25045579	YKB21-5181, JACK			
P302,P303	25045577	NPJ-2PDRW391, PIN JACK			
P701	25052145	NSCT-4P2042, SOCKET			

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