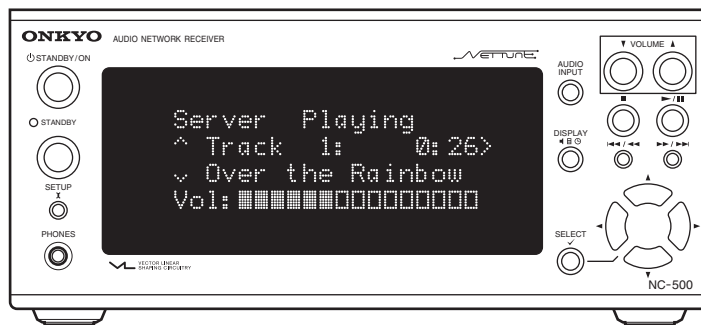


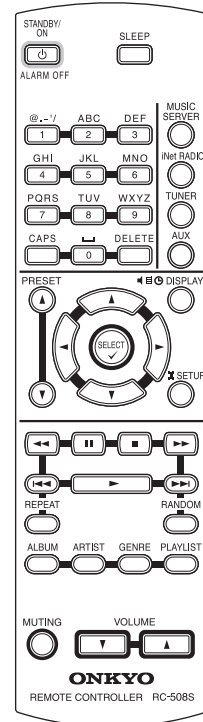
ONKYO SERVICE MANUAL

Audio Network Receiver MODEL NC-500




Silver model only

TUDD	120V AC, 60Hz
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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

Restoring the factory default settings:

To reset all the stored settings to the factory default conditions, while the power to the NC-500 is on, press and hold down the STOP button on the unit, and press STANDBY/ON button.

Specifications

Amplifier Section

Power output

FTC **15 watts per channel, min RMS, at 8 ohms, both channels driven 1 kHz, with no more than 0.1%**

DIN 2 × 17 watts at 6 Ω, 1 kHz
2 × 15 watts at 8 Ω, 1 kHz

Dynamic power output

2 × 27 watts at 6 Ω
2 × 24 watts at 8 Ω

Total harmonic distortion

0.1% at rated power

IM distortion

0.6% at rated power

Damping factor

30 at 8 Ω

Input Sensitivity and Impedance

TAPE/MD PLAY: 150 mV, 50 kΩ
LINE IN: 150 mV, 50 kΩ

Frequency and response

10 to 50,000 Hz +0/-3 dB

Signal to noise ratio

100 dB (IHF-A)

Muting

-60 dB

Tuner Section

Tuning range

FM: 87.50–108.00 MHz (100 kHz steps)
(U.S. & Canadian models)
87.5–108.00 MHz (50 kHz steps)
(Other area models)
AM: 530–1710 kHz (10 kHz steps)
(U.S. & Canadian models)
522–1611 kHz (9 kHz steps)
(Other area models)

Usable sensitivity

FM: Mono 11.2 dBf,
1.0 μV (75 Ω IHF)
0.9 μV (75 Ω DIN)
Stereo 17.2 dBf,
2.0 μV (75 Ω IHF)
23.0 μV (75 Ω DIN)
AM: 30 μV

50 dB Quieting sensitivity

FM: Mono 17.2 dBf, 2.0 μV (75 Ω)
Stereo 37.2 dBf, 20.0 μV (75 Ω)

Capture ratio

FM: 2.0 dB

Image rejection ratio

FM: 40 dB (U.S. & Canadian models)
85 dB (Other area models)
AM: 40 dB

IF rejection ratio

FM: 90 dB
AM: 40 dB

Signal to noise ratio

FM: Mono 73 dB, IHF
Stereo 67 dB, IHF
AM: 40 dB

Selectivity

FM: 50 dB DIN
(±300 kHz at 40 kHz Devi.)

AM Suppression Ratio

50 dB

Harmonic distortion

FM: Mono 0.2%
Stereo 0.3%
AM: 0.7 %

Frequency response

FM: 30–15,000 Hz (±1.5 dB)


Stereo separation

FM: 45 dB at 1,000 Hz
30 dB at 100 to 10,000 Hz

Stereo threshold

FM: 17.2 dBf, 2.0 μV (75 Ω)

OPERATING INSTRUCTIONS SAFETY PRECAUTIONS

	WARNING RISK OF ELECTRIC SHOCK DO NOT OPEN	
AVIS	RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR	
<p>WARNING : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER(OR BACK). NO USER-SERVICEABLE PART INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		



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



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

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

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

ATTENTION : POUR EVITER LES CHOCS ELECTRIQUE, INTRODUIRE LA LAME LA PLUS LARGE DA LA FICHE DANS LA BORNE CORRESPONDANTE DA LA PRISE ET POUSSER JUSQU' AU FOND.

PRECAUTIONS

1. Replacing the fuses

For continued protection against risk fire, replace only with same type and same rating fuse.

CIRCUIT No.	PART No.	DESCRIPTION
F911 <UD>	252166	6.3A-UL/T-237

CAUTION

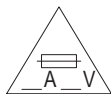


FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.



THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL

ATTENTION



AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.



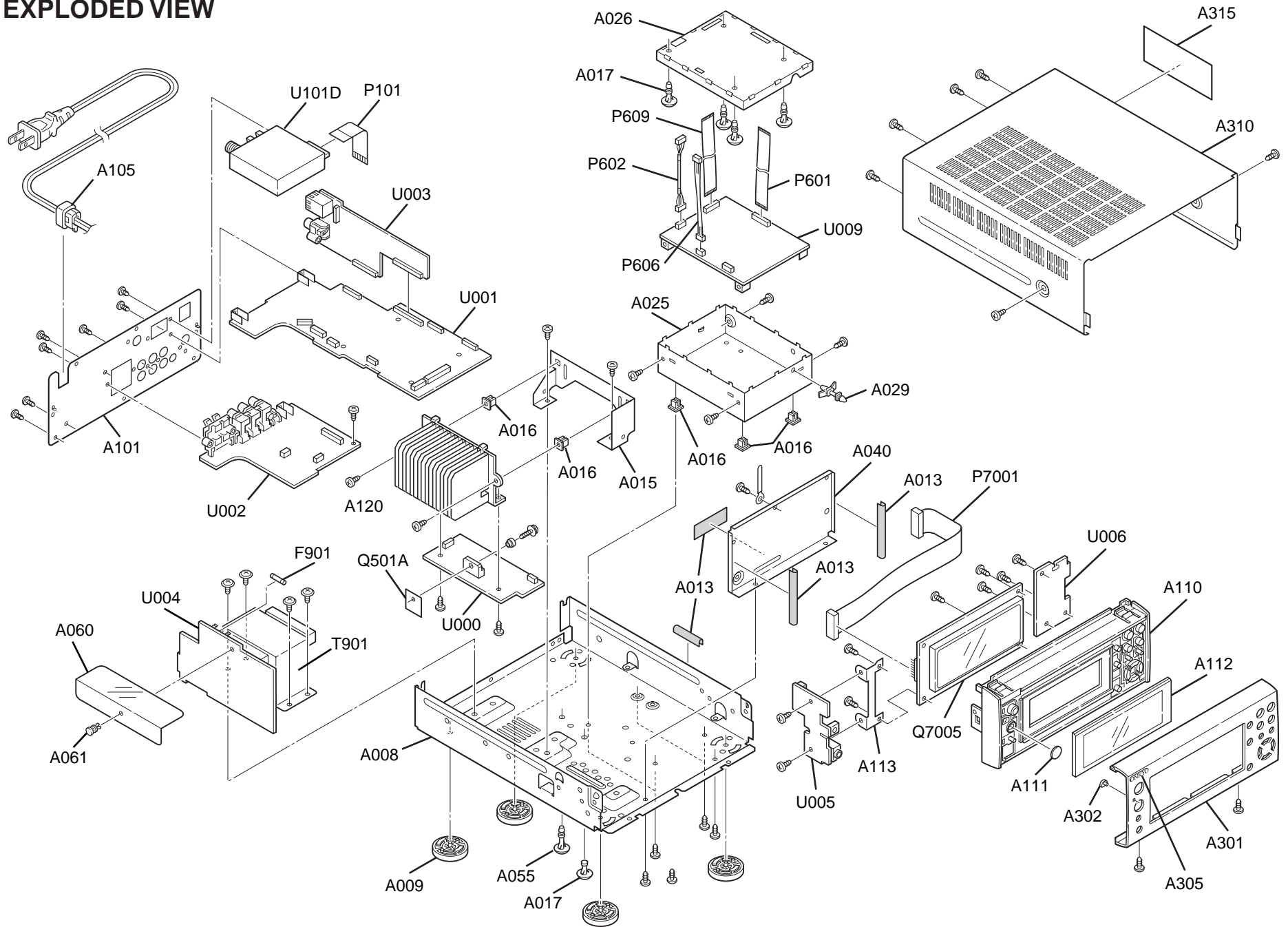
CE SYMBOLE INDIQUE QUE LE FUSIBLE UTILISE EST E LENT. POUR UNE PROTECTION PERMANENTE, N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST INDIQUE LA QU LE PRESENT SYMBOLE EST APPOSE.

2. Safety-check out (Only U.S.A. model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel.

Specifications: 3.3Mohm+/-10% at 500V.

EXPLODED VIEW



A B C D

SCHEMATIC DIAGRAMS

Network Circuit Section - 1/2

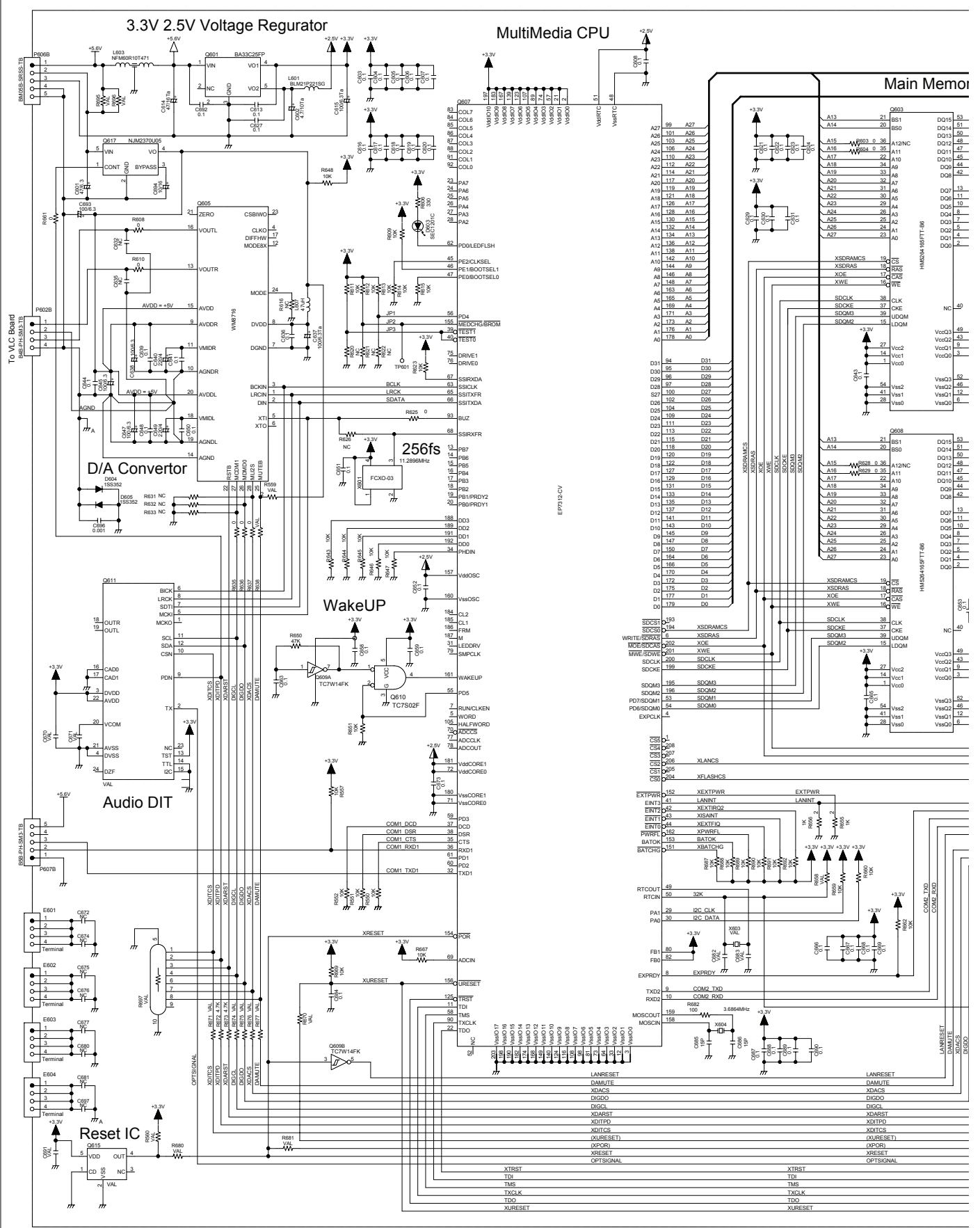
1

2

3

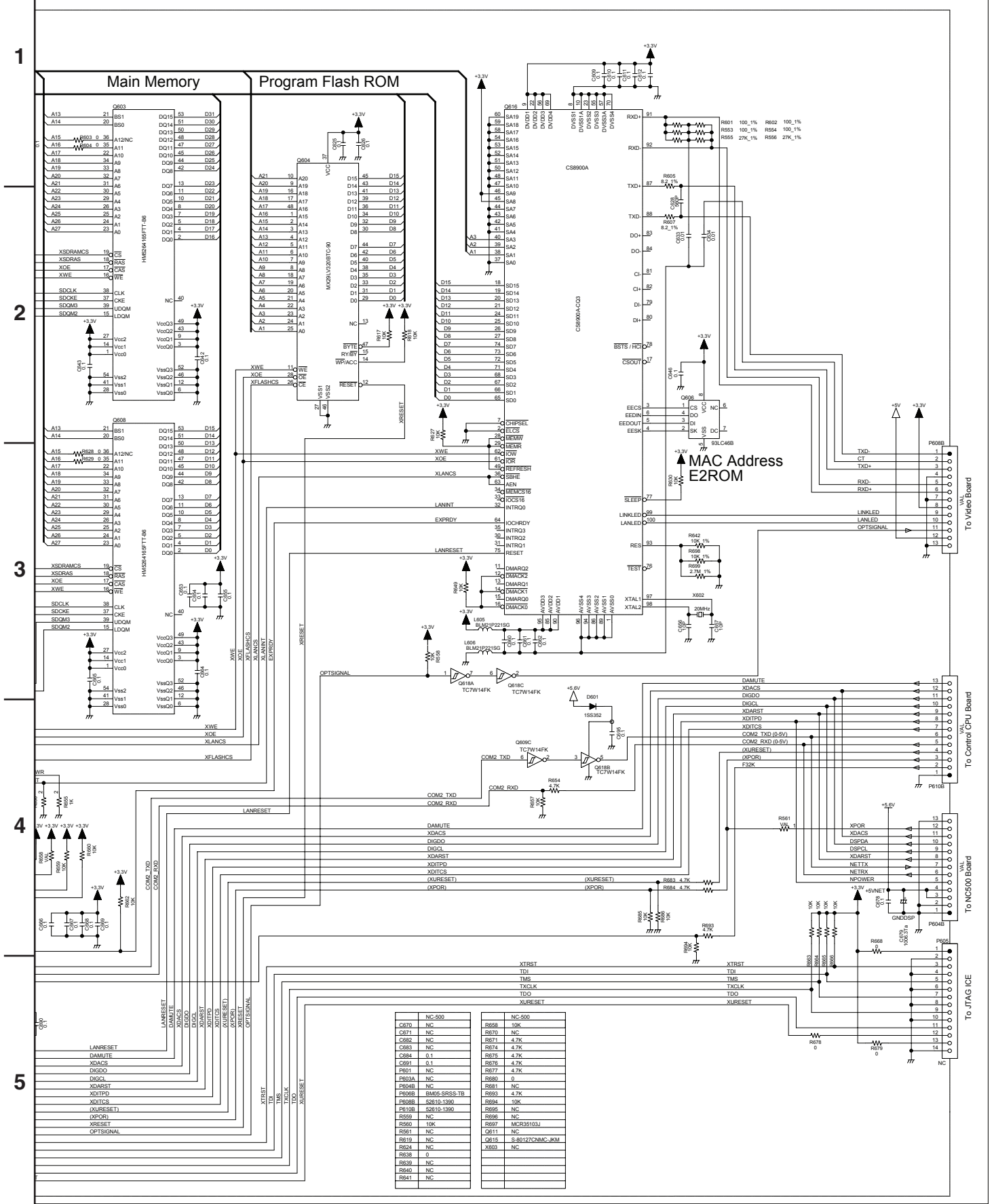
4

5



SCHEMATIC DIAGRAMS

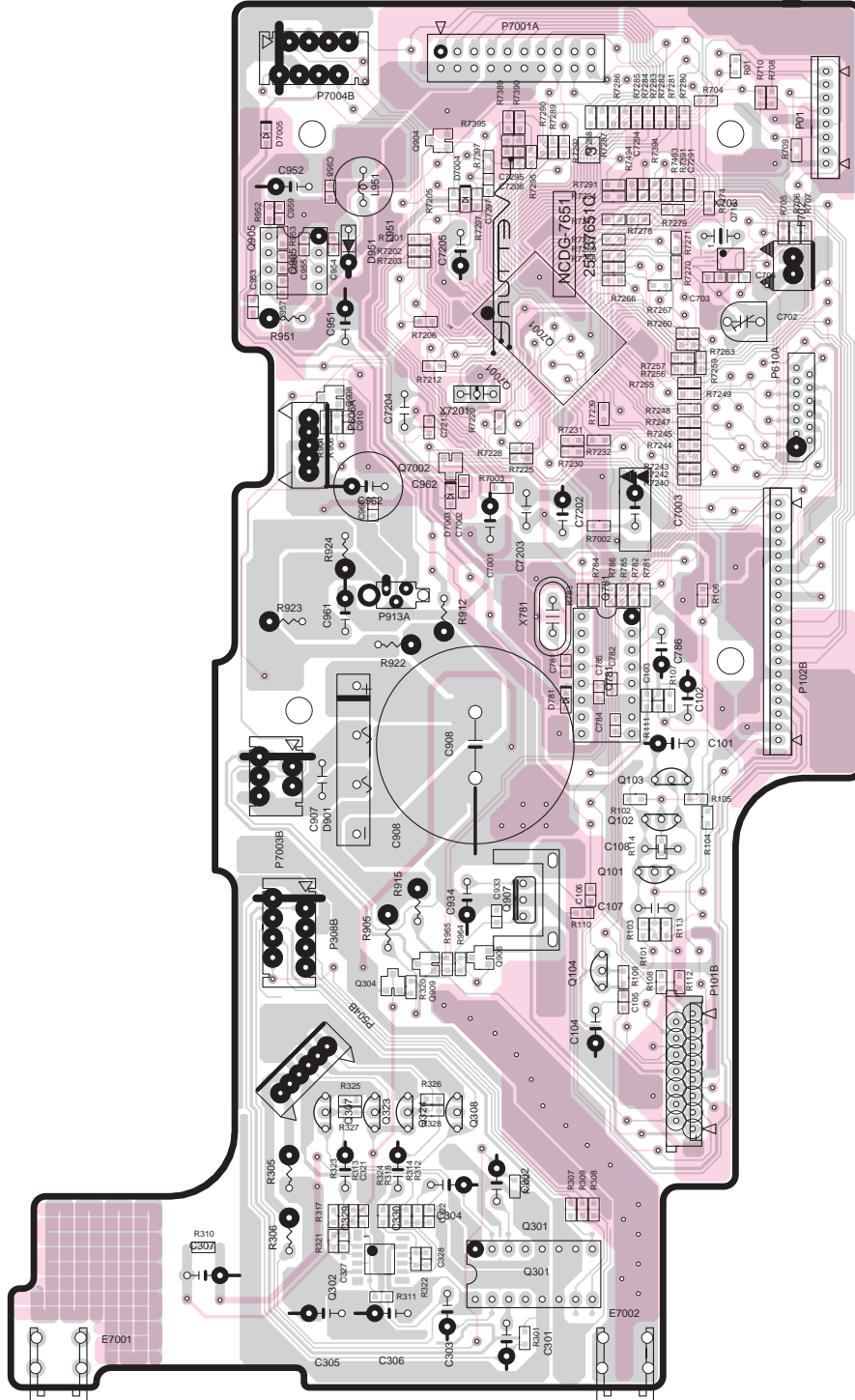
Network Circuit Section - 2/2



NC-500		NC-500	
C270	NC	D858	10K
C271	NC	D859	10K
C882	NC	R870	NC
C883	NC	R871	4.7K
C884	0.1	R872	4.7K
C885	0.1	R873	4.7K
C886	0.1	R874	4.7K
C887	0.1	R875	4.7K
C888	0.1	R876	4.7K
C889	0.1	R877	4.7K
C890	0.1	R878	4.7K
C891	0.1	R879	4.7K
C892	0.1	R880	4.7K
C893	0.1	R881	4.7K
C894	0.1	R882	4.7K
C895	0.1	R883	4.7K
C896	0.1	R884	4.7K
C897	0.1	R885	4.7K
C898	0.1	R886	4.7K
C899	0.1	R887	4.7K
C900	0.1	R888	4.7K
C901	0.1	R889	4.7K
C902	0.1	R890	4.7K
C903	0.1	R891	4.7K
C904	0.1	R892	4.7K
C905	0.1	R893	4.7K
C906	0.1	R894	4.7K
C907	0.1	R895	4.7K
C908	0.1	R896	4.7K
C909	0.1	R897	4.7K
C910	0.1	R898	4.7K
C911	0.1	R899	4.7K
C912	0.1	R900	4.7K
C913	0.1	R901	4.7K
C914	0.1	R902	4.7K
C915	0.1	R903	4.7K
C916	0.1	R904	4.7K
C917	0.1	R905	4.7K
C918	0.1	R906	4.7K
C919	0.1	R907	4.7K
C920	0.1	R908	4.7K
C921	0.1	R909	4.7K
C922	0.1	R910	4.7K
C923	0.1	R911	4.7K
C924	0.1	R912	4.7K
C925	0.1	R913	4.7K
C926	0.1	R914	4.7K
C927	0.1	R915	4.7K
C928	0.1	R916	4.7K
C929	0.1	R917	4.7K
C930	0.1	R918	4.7K
C931	0.1	R919	4.7K
C932	0.1	R920	4.7K
C933	0.1	R921	4.7K
C934	0.1	R922	4.7K
C935	0.1	R923	4.7K
C936	0.1	R924	4.7K
C937	0.1	R925	4.7K
C938	0.1	R926	4.7K
C939	0.1	R927	4.7K
C940	0.1	R928	4.7K
C941	0.1	R929	4.7K
C942	0.1	R930	4.7K
C943	0.1	R931	4.7K
C944	0.1	R932	4.7K
C945	0.1	R933	4.7K
C946	0.1	R934	4.7K
C947	0.1	R935	4.7K
C948	0.1	R936	4.7K
C949	0.1	R937	4.7K
C950	0.1	R938	4.7K
C951	0.1	R939	4.7K
C952	0.1	R940	4.7K
C953	0.1	R941	4.7K
C954	0.1	R942	4.7K
C955	0.1	R943	4.7K
C956	0.1	R944	4.7K
C957	0.1	R945	4.7K
C958	0.1	R946	4.7K
C959	0.1	R947	4.7K
C960	0.1	R948	4.7K
C961	0.1	R949	4.7K
C962	0.1	R950	4.7K
C963	0.1	R951	4.7K
C964	0.1	R952	4.7K
C965	0.1	R953	4.7K
C966	0.1	R954	4.7K
C967	0.1	R955	4.7K
C968	0.1	R956	4.7K
C969	0.1	R957	4.7K
C970	0.1	R958	4.7K
C971	0.1	R959	4.7K
C972	0.1	R960	4.7K
C973	0.1	R961	4.7K
C974	0.1	R962	4.7K
C975	0.1	R963	4.7K
C976	0.1	R964	4.7K
C977	0.1	R965	4.7K
C978	0.1	R966	4.7K
C979	0.1	R967	4.7K
C980	0.1	R968	4.7K
C981	0.1	R969	4.7K
C982	0.1	R970	4.7K
C983	0.1	R971	4.7K
C984	0.1	R972	4.7K
C985	0.1	R973	4.7K
C986	0.1	R974	4.7K
C987	0.1	R975	4.7K
C988	0.1	R976	4.7K
C989	0.1	R977	4.7K
C990	0.1	R978	4.7K
C991	0.1	R979	4.7K
C992	0.1	R980	4.7K
C993	0.1	R981	4.7K
C994	0.1	R982	4.7K
C995	0.1	R983	4.7K
C996	0.1	R984	4.7K
C997	0.1	R985	4.7K
C998	0.1	R986	4.7K
C999	0.1	R987	4.7K
C1000	0.1	R988	4.7K

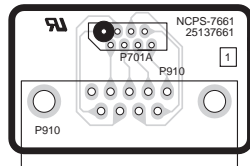
Printed circuit board view - 2

3:DG7651

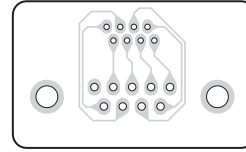


Printed circuit board view - 1

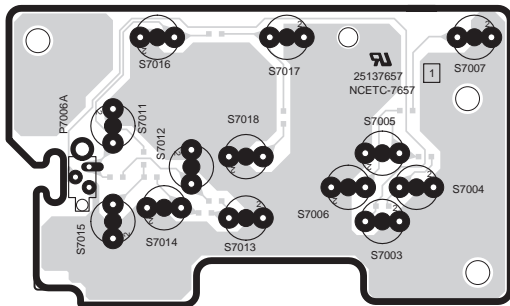
1:PS-7661 Component side



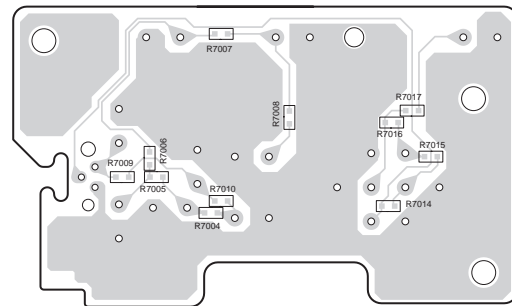
1:PS-7661 Soldering side



2:ETC-7657 Component side

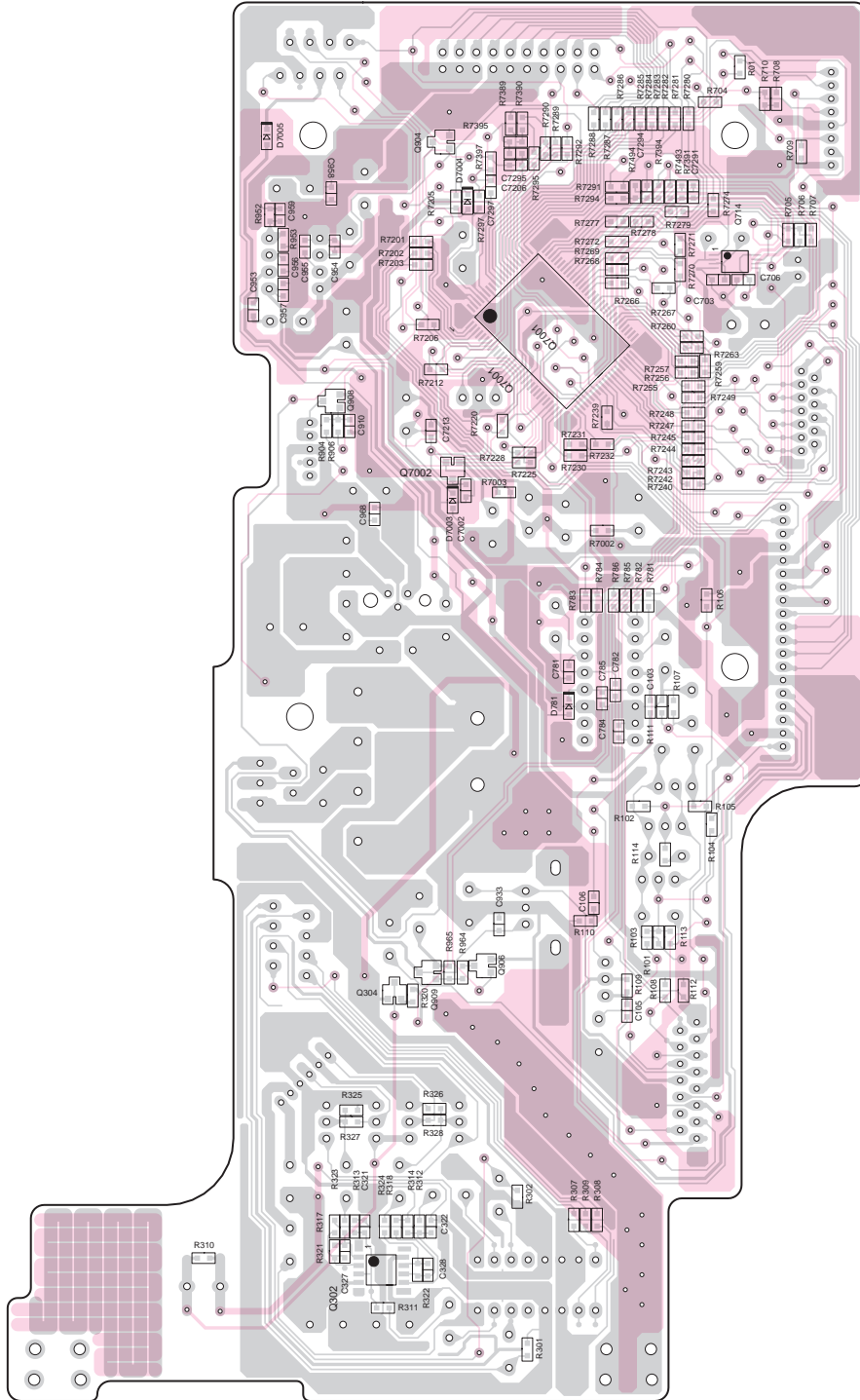


2:ETC-7657 Soldering side



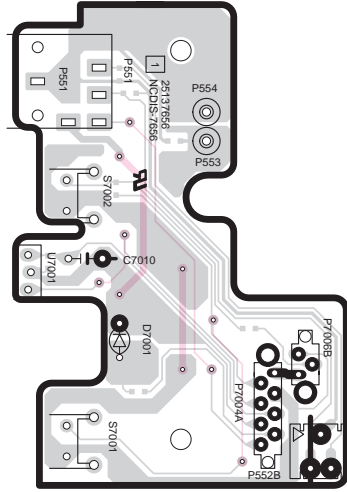
Printed circuit board view - 2-2

3:DG-7651 Soldering side

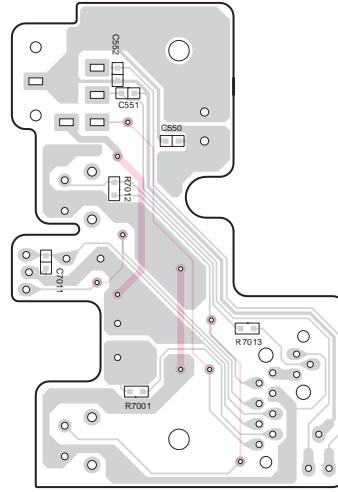


Printed circuit board - 3

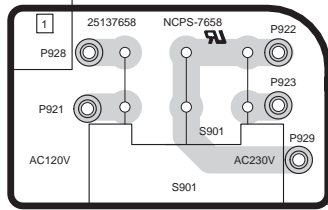
4:DIS-7656 component side



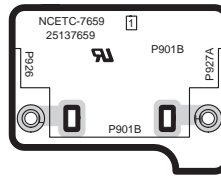
4:DIS-7656 Soldering side



5:PS-7658 Component side

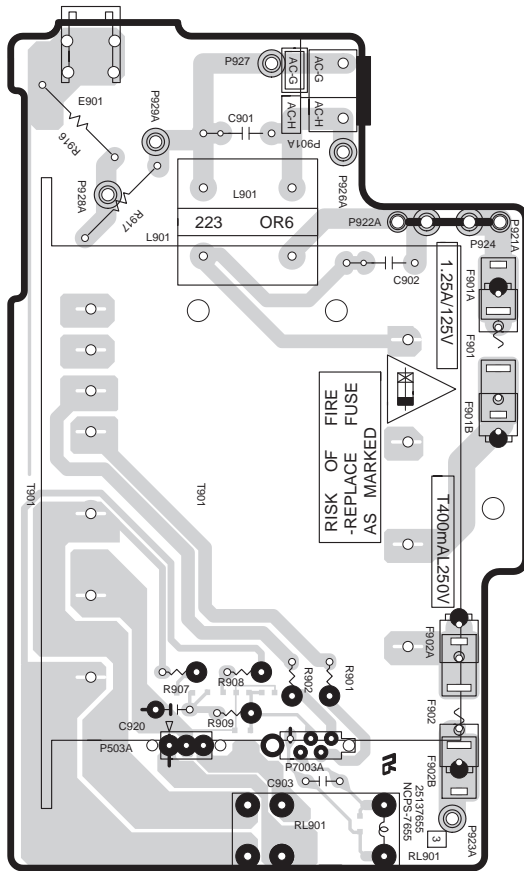


6:ETC-7659 Component side

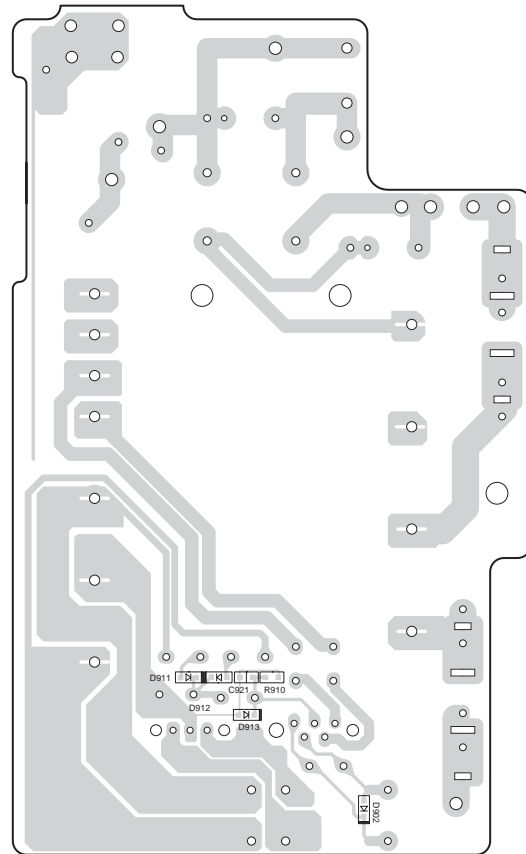


Printed circuit board view - 4

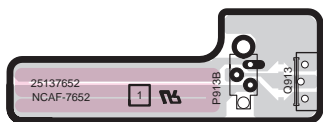
7:PS-7655 Component side



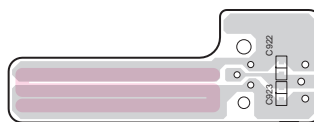
7:PS-7655 Soldering side





8:AF-7652 Component side



8:AF-7652 Soldering side



OPERATING INSTRUCTIONS SAFETY PRECAUTIONS

	WARNING RISK OF ELECTRIC SHOCK DO NOT OPEN	
AVIS	RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR	
<p>WARNING : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER(OR BACK). NO USER-SERVICEABLE PART INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		



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



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

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

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

ATTENTION : POUR EVITER LES CHOCS ELECTRIQUE, INTRODUIRE LA LAME LA PLUS LARGE DA LA FICHE DANS LA BORNE CORRESPONDANTE DA LA PRISE ET POUSSER JUSQU' AU FOND.

PRECAUTIONS

1. Replacing the fuses

For continued protection against risk fire, replace only with same type and same rating fuse.

CIRCUIT No.	PART No.	DESCRIPTION
F911 <UD>	252166	6.3A-UL/T-237

CAUTION

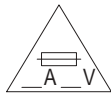


FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.



THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL

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2. Safety-check out (Only U.S.A. model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel.

Specifications: 3.3Mohm+/-10% at 500V.

Specifications

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FTC **15 watts per channel, min RMS, at 8 ohms, both channels driven 1 kHz, with no more than 0.1%**

DIN 2 × 17 watts at 6 Ω, 1 kHz
2 × 15 watts at 8 Ω, 1 kHz

Dynamic power output

2 × 27 watts at 6 Ω
2 × 24 watts at 8 Ω

Total harmonic distortion

0.1% at rated power

IM distortion

0.6% at rated power

Damping factor

30 at 8 Ω

Input Sensitivity and Impedance

TAPE/MD PLAY: 150 mV, 50 kΩ
LINE IN: 150 mV, 50 kΩ

Frequency and response

10 to 50,000 Hz +0/-3 dB

Signal to noise ratio

100 dB (IHF-A)

Muting

-60 dB

Tuner Section

Tuning range

FM: 87.50–108.00 MHz (100 kHz steps)
(U.S. & Canadian models)
87.5–108.00 MHz (50 kHz steps)
(Other area models)
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(U.S. & Canadian models)
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(Other area models)

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Stereo 17.2 dBf,
2.0 μV (75 Ω IHF)
23.0 μV (75 Ω DIN)
AM: 30 μV

50 dB Quieting sensitivity

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Capture ratio

FM: 2.0 dB

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FM: 40 dB (U.S. & Canadian models)
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