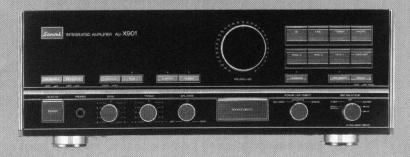
# SERVICE MANUAL

INTEGRATED STEREO AMPLIFIER

# **SANSUI AU-X701/X901**



#### CAUTION

- Parts identified by the 
   <u>↑</u> symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
- 2. 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.



SANSUI ELECTRIC CO., LTD.

#### SPECIFICATIONS

#### AU-X701

Power output

Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.005% total harmonic distortion.

100 watts per channel into 8 ohms.

Load impedance...... 4 to 16 ohms

Total harmonic distortion

..... less than 0.005% at or below rated min. RMS

power output

Intermodulation distortion

(60 Hz: 7 kHz = 4:1 SMPTE method)

......less than 0.005% at rated

power output

Frequency response (at 1 watt)

Overall (from CD)...... 1 to 300,000 Hz, +0 dB

-3 dB

RIAA curve deviation (PHONO-MM, 20 Hz to 20 kHz)

..... +0.2 dB, -0.2 dB

Input sensitivity and impedance (at 1 kHz) PHONO (MC)...... 300 μV/100 ohms

European models only

PHONO (MC TRANS)...... 160 μV/16 ohms

PHONO (MM)......... 2.5 mV/47 kohms

(Max. input capability: 210 mV at 1 kHz, less than

0.01% total harmonic distortion) CD, TUNER, LINE...... 150 mV/47 kohms

TAPE/DAT PLAY-1, 2, 3

..... 150 mV/47 kohms

PROCESSOR RETURN

...... 150 mV/47 kohms

Output level (1,000 Hz)

TAPE/DAT REC-1, 2, 3

...... 150 mV into 47 kohms

PROCESSOR SEND ..... 150 mV into 47 kohms

Signal to noise ratio (short-circuit, A-network)

PHONO (MM)..... 88 dB

CD, TUNER, LINE...... 110 dB

TAPE/DAT PLAY-1, 2, 3 ..... 110 dB

Controls and Filter

BASS ..... ±5 dB at 50 Hz

TREBLE..... ±5 dB at 15 kHz SUBSONIC ..... -3 dB at 16 Hz (6 dB/oct)

MUTING ..... -20 dB

LOUDNESS ..... +8 dB at 50 Hz

+6 dB at 10 kHz

(VOLUME: -30 dB position)

Power requirements ...... AC 120V/220V/240V,

50/60 Hz

For U.S.A. & Canada... AC 120V, 60 Hz

Power consumption ...... 380 watts 460 VA Rated

720 watts Maximum Dimensions ...... 448 mm (17-11/16") W

160 mm (6-9/16\*) H

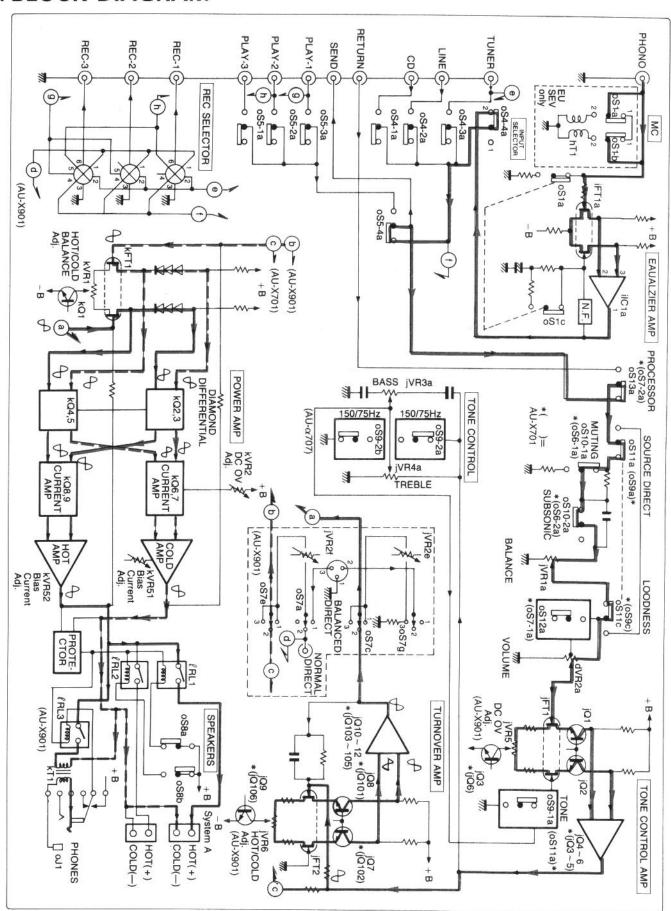
441 mm (17-3/8") D

Weight ...... 17.1 kg (37.7 lbs) net

19 kg (41.9 lbs) packed

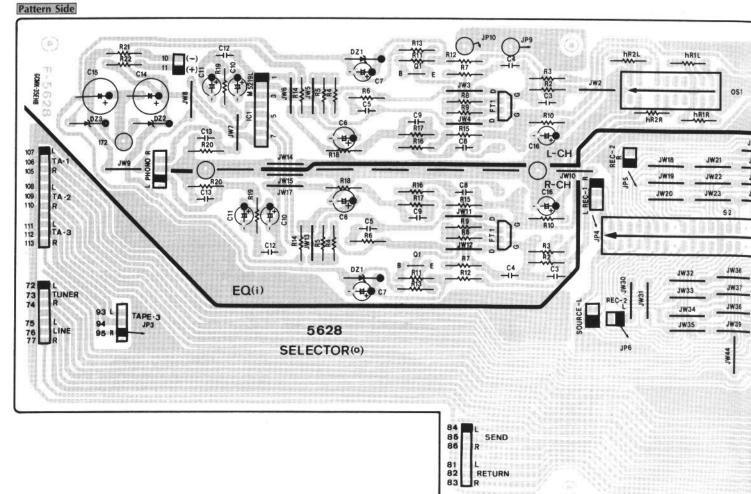
to be continued

# 1. BLOCK DIAGRAM

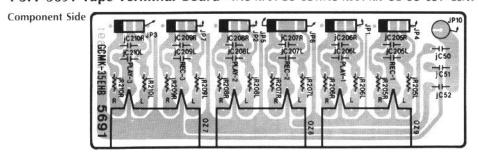


## 4. PARTS LOCATION ON BOARD

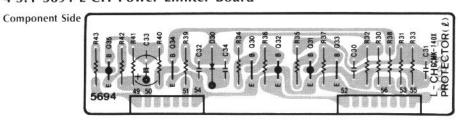
4-1. F-5628 EQ Amp & Input Terminal Board <AU-X701>

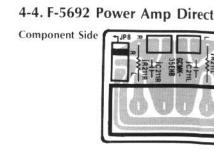


## 4-3. F-5691 Tape Terminal Board <AU-X701-EU-SEV/AU-X901-XX-UL-EU-SEV-CSA>

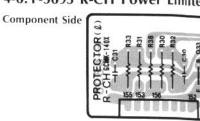


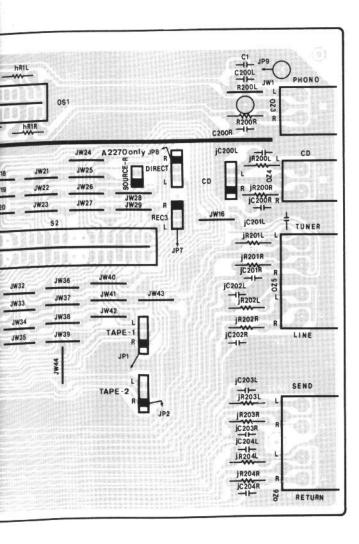
#### 4-5. F-5694 L-CH Power Limiter Board



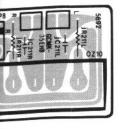


## 4-6. F-5695 R-CH Power Limite

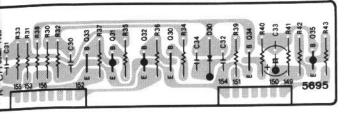




er Amp Direct Terminal Board <AU-X901>

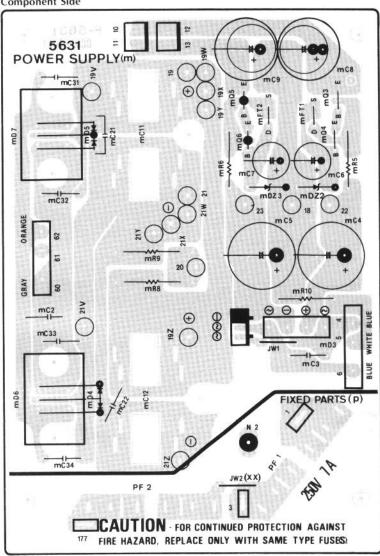


H Power Limiter Board

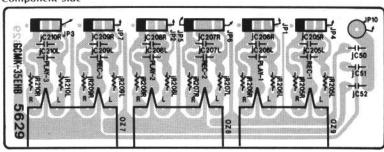


## 4-2. F-5631 Power Supply Board

Component Side

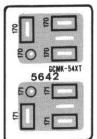


4-7. F-5629 Tape Terminal Board <AU-X701-XX+UL+CSA> Component Side

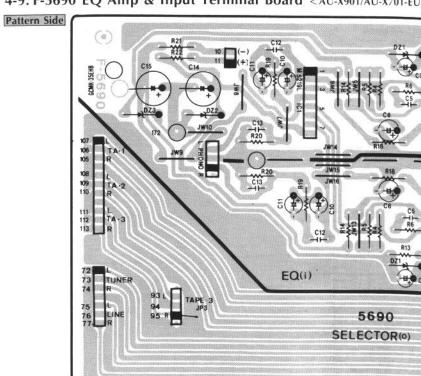


## 4-8. F-5642 AC Outet Board (EU, SEV)

Component Side

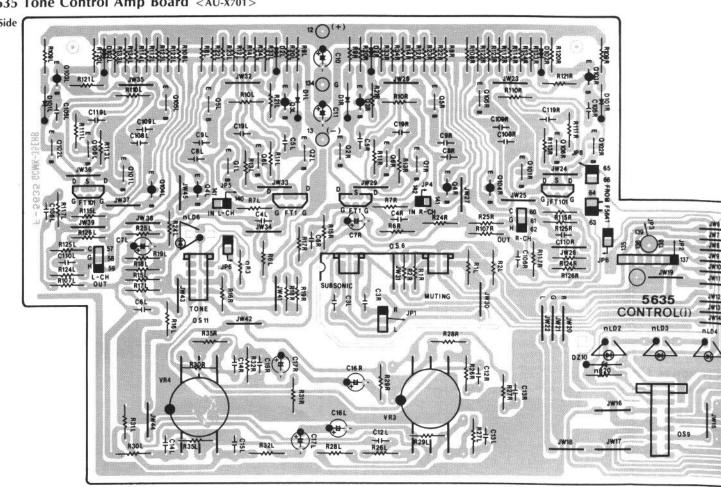


## 4-9. F-5690 EQ Amp & Input Terminal Board < AU-X901/AU-X701-EU-

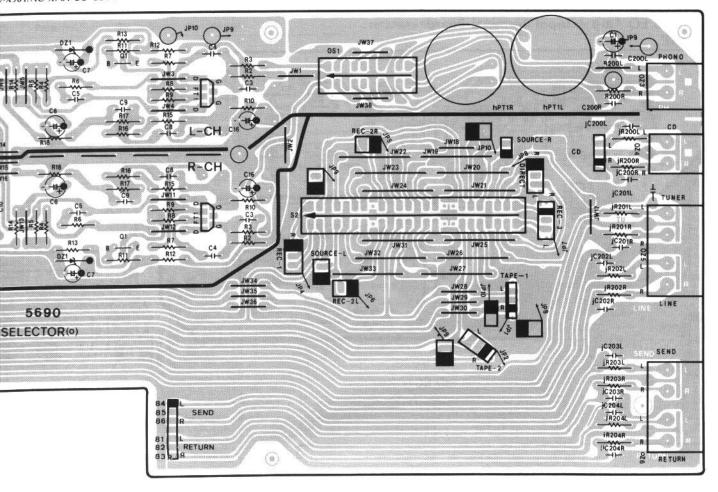


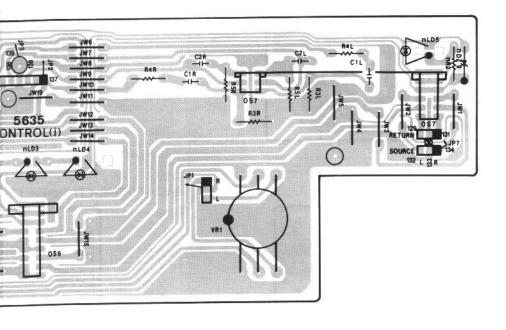
## 4-10. F-5635 Tone Control Amp Board <AU-X701>

Component Side



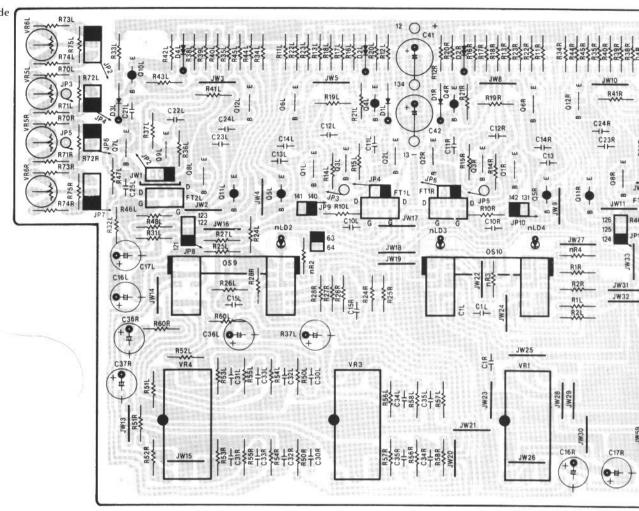
#### -X901/AU-X701-EU•SEV>





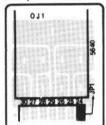
#### 4-11. F-5643 Tone Control Amp Board <AU-X901>

Component Side



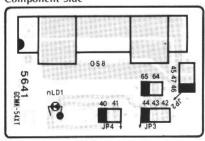
#### 4-13. F-5640 Head Phones Board

Component Side



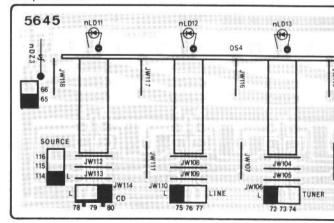
#### 4-15. F-5641 SP SW. Board

Component Side



## 4-14. F-5645 Input Selector Board <AU-X901>

Component Side



X901

JW103

TUNER

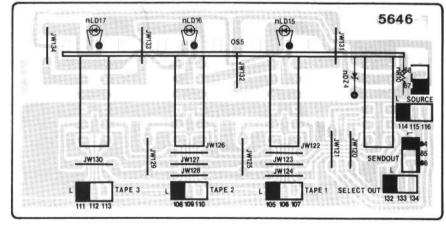
#### 4-12. F-5644 Volume Board <AU-X901>

Component Side 137 120 138 135 139 136 5644 JVR2

4-16. F-5646 Tape Selector Board <AU-X901>

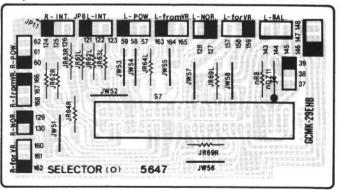
Component Side

139 135



SELECT IN

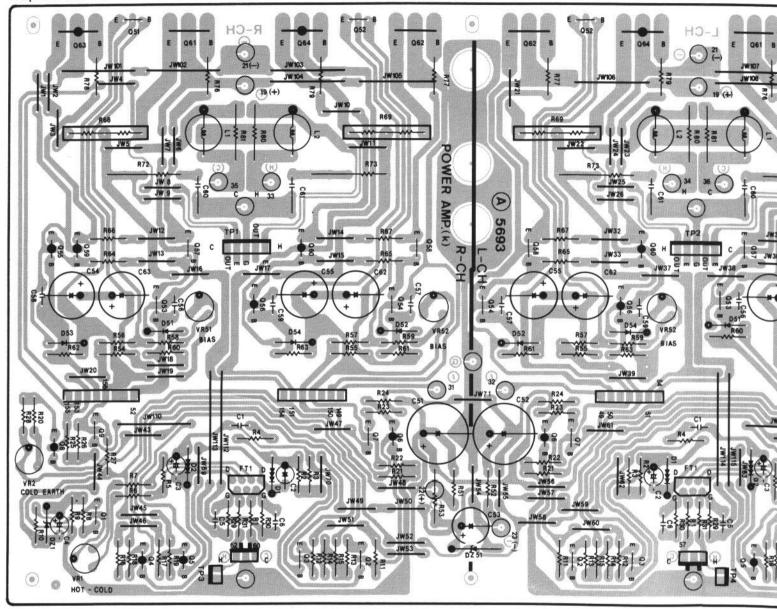
#### 4-17. F-5647 Power Amp Direct SW. Board <AU-X901> Component Side



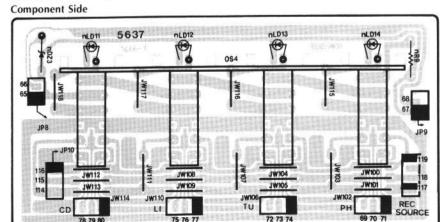
14

## 4-18. F-5693 Power Amp Board

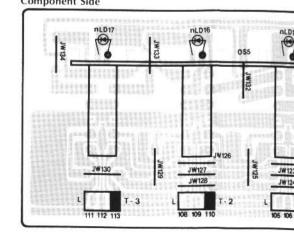
Component Side

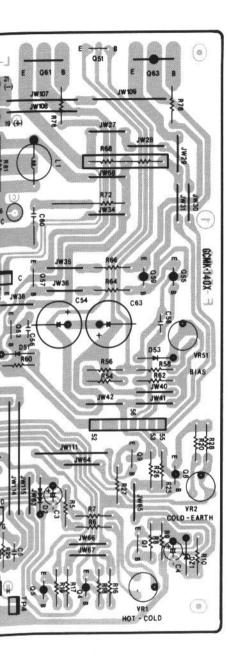


## 4-20. F-5637 Input Selector Board <AU-X701>

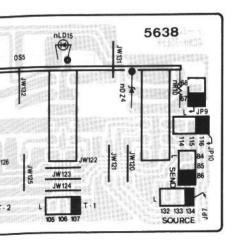


4-21. F-5638 Tape Selector Board < AU-X701 Component Side

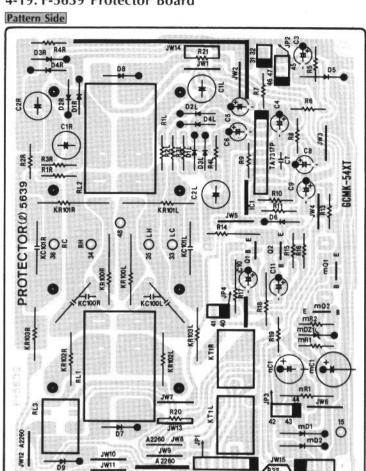




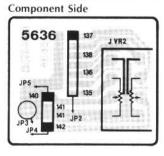
rd <AU-X701>



#### 4-19. F-5639 Protector Board



## 4-22. F-5636 Volume Board <AU-x701>



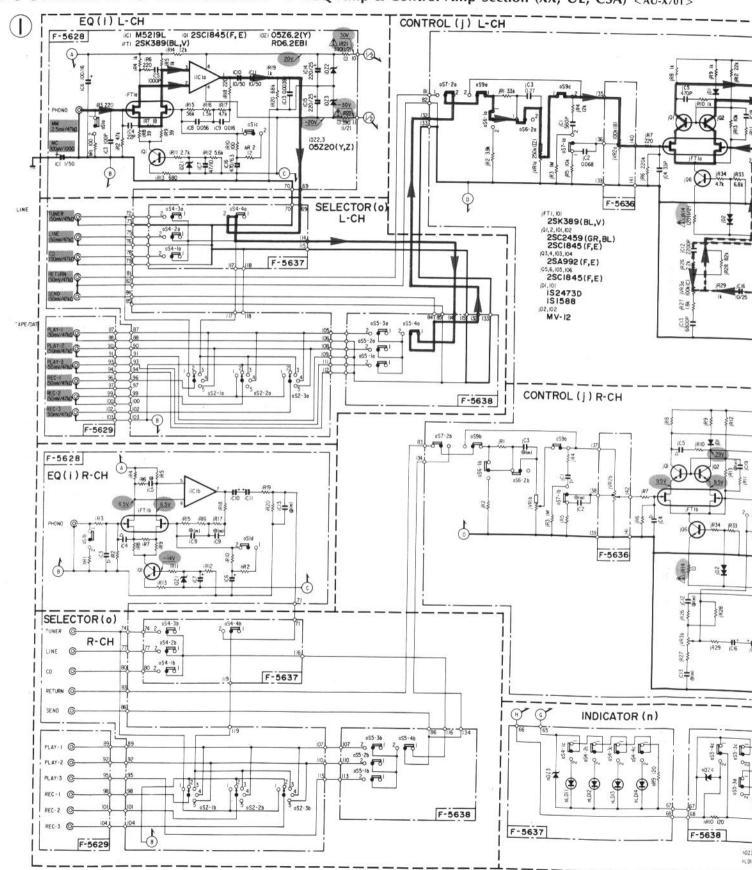
Α

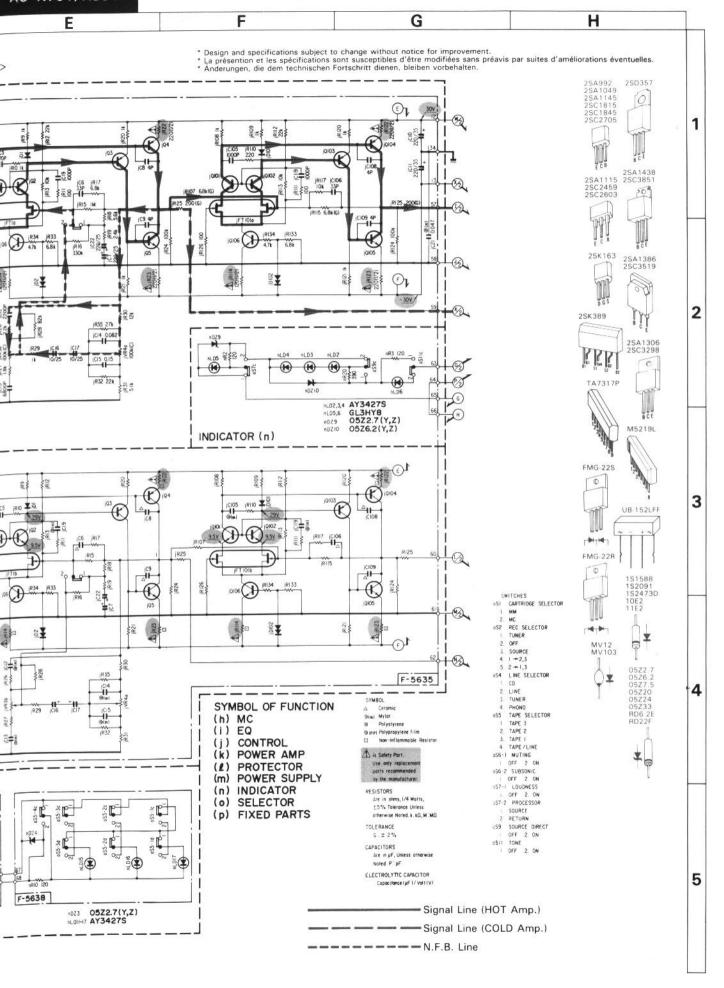
В

С

ח

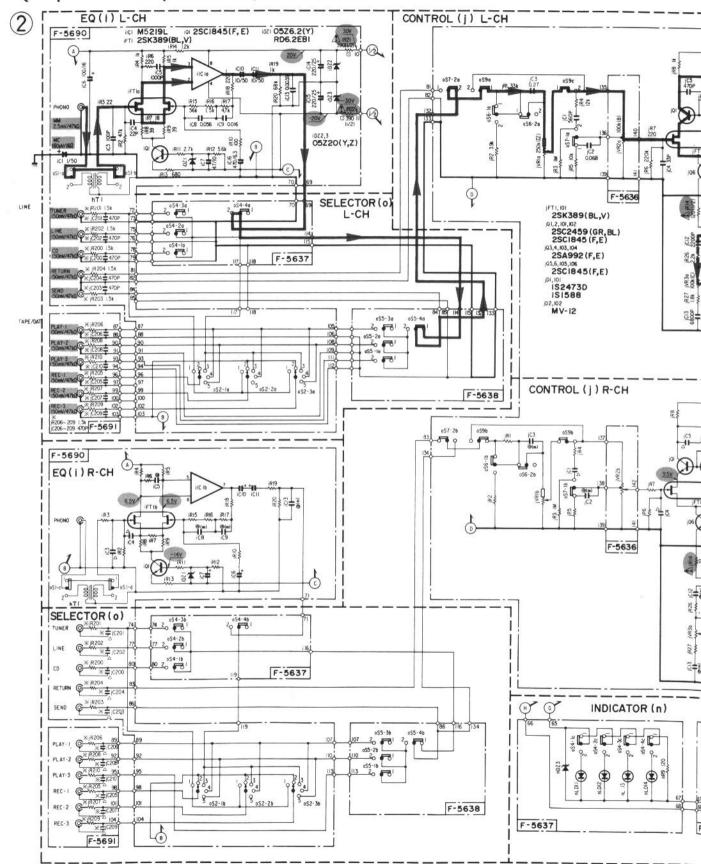
# 6. SCHEMATIC DIAGRAM 6-1. EQ Amp & Control Amp Section (XX, UL, CSA) <AU-X701>





A B C D

## 6-2. EQ Amp & Control Amp Section (EU, SEV) <AU-X701>



ELECTROLYTIC CAPACITOR

F-5638

nDZ3 05Z2.7(Y,Z)

Capacitance (µF1/Val1(VI

---- N.F.B. Line

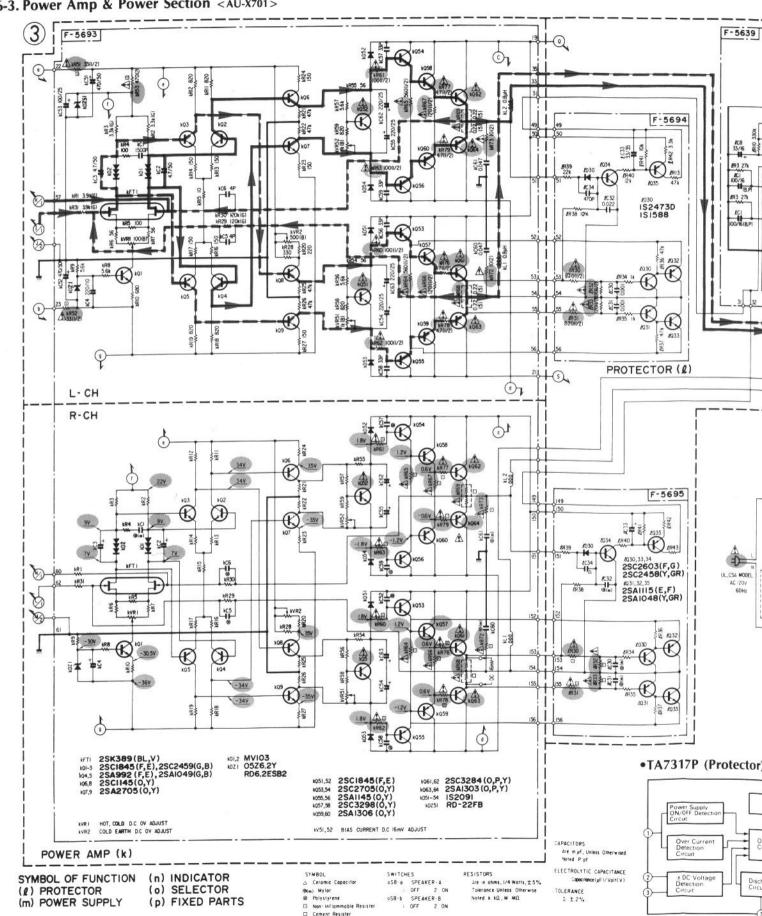
\* FTZ MODEL only

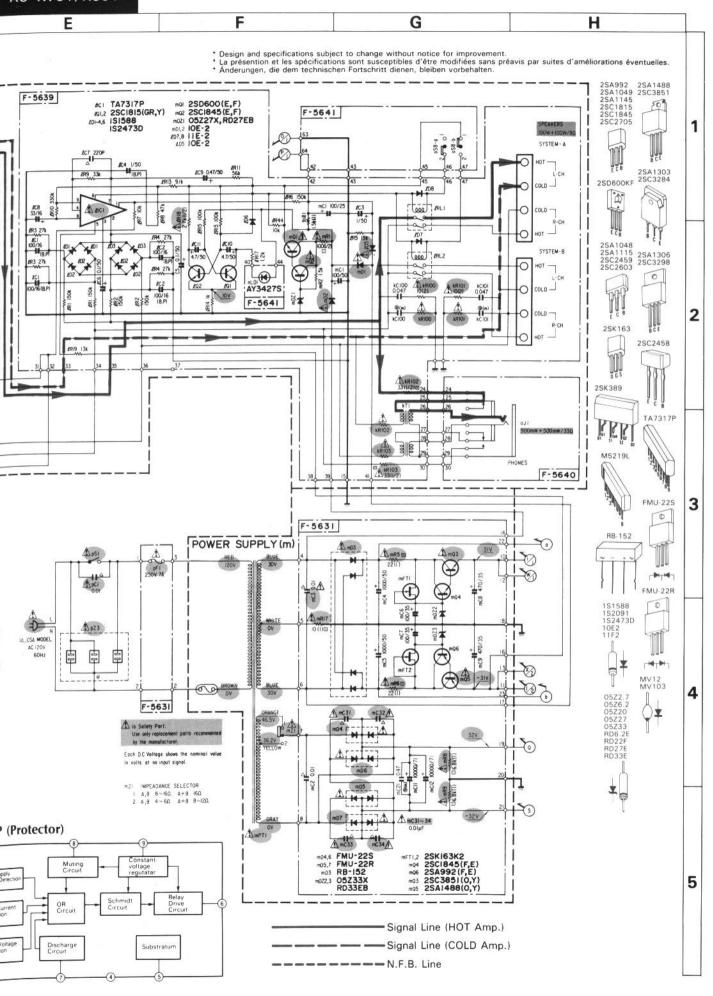
Signal Line (HOT Amp.)Signal Line (COLD Amp.)

5

C D A

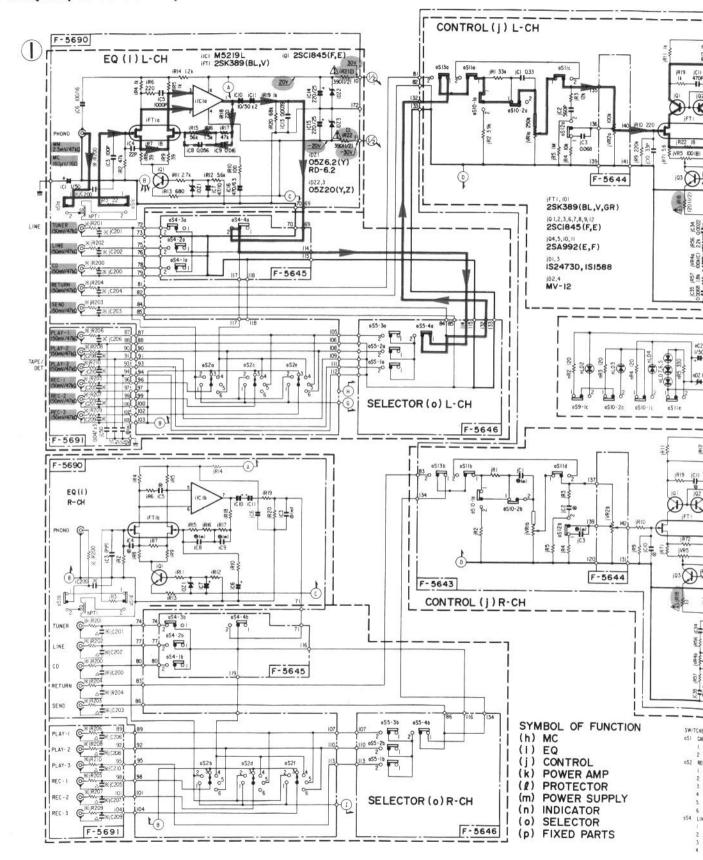
## 6-3. Power Amp & Power Section <AU-X701>

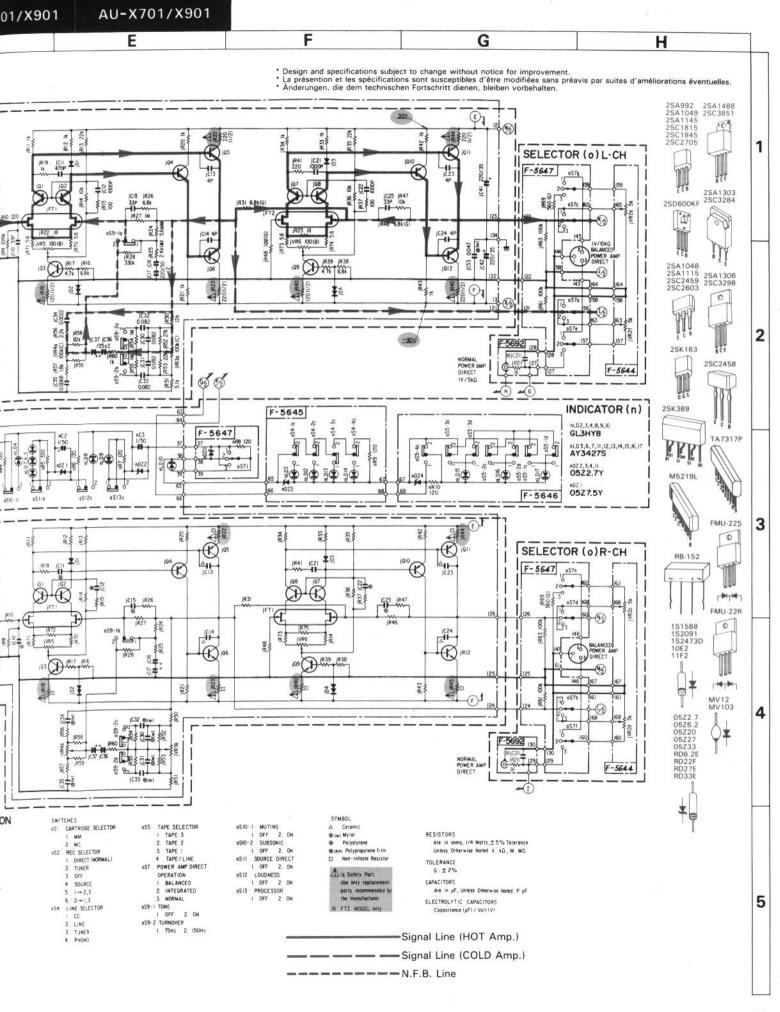




A B C D

#### 6-4. EQ Amp & Control Amp Section <AU-X901>





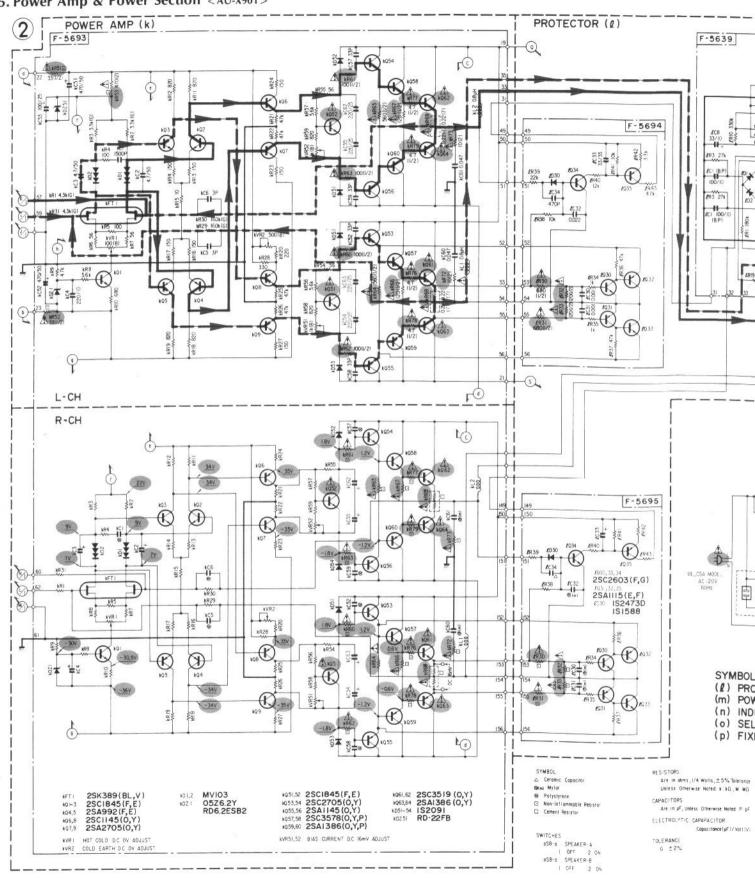
A

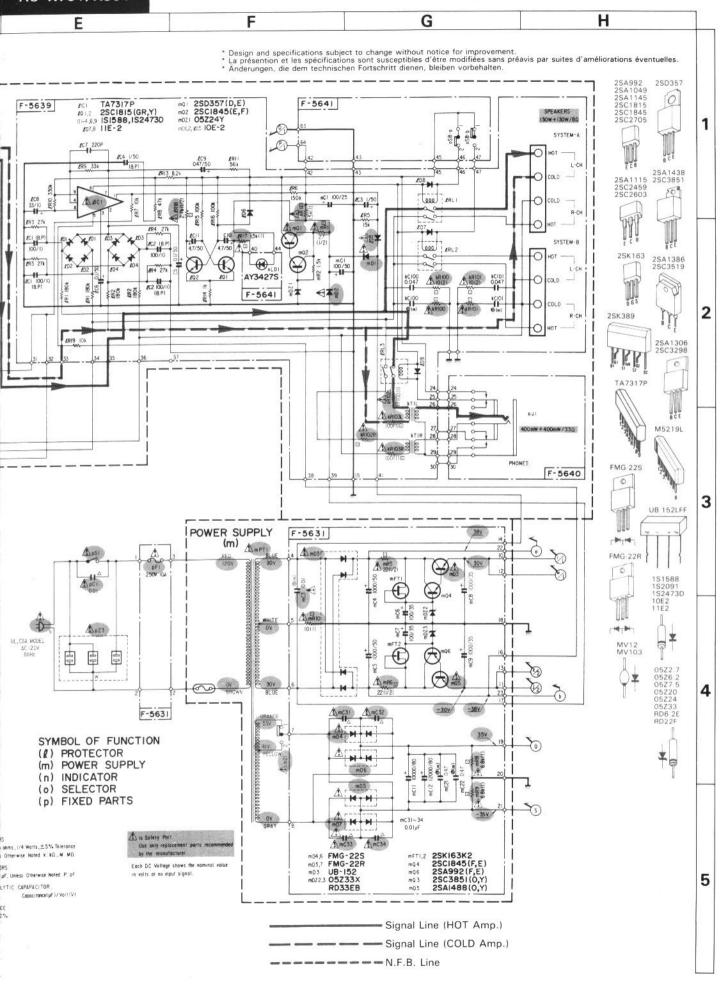
B

C

D

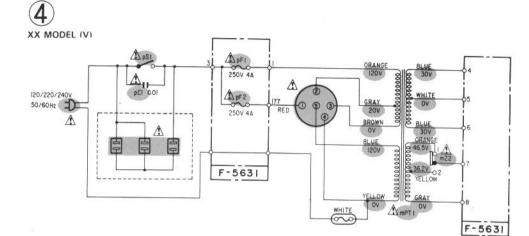
## 6-5. Power Amp & Power Section <AU-X901>

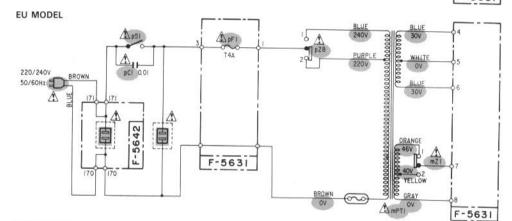


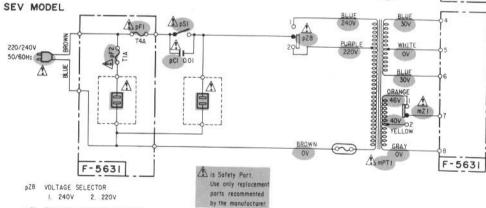


## 6-6. Power Supply (Primary Side) Section <AU-X701>

•AU-X701







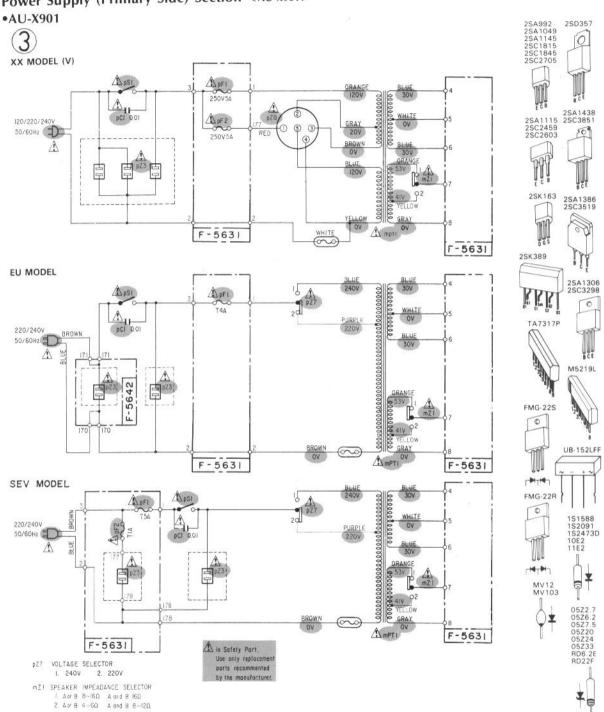
mZ1 SPEAKER IMPEADANCE SELECTOR
1. A+8 8~12Ω, A,8 4~16Ω
2. A+8 16Ω, A,8 8~16Ω

X901

G Н Ε

- Design and specifications subject to change without notice for improvement.
  La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
  Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

# 6-7. Power Supply (Primary Side) Section <AU-X901>



5

1

2

3

## 7. ADJUSTMENT

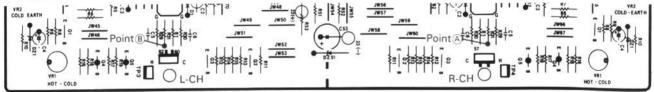
### 7-1. F-5693 Power Amp. Adjustment

STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS	
1.	Center DC 0V Adj. <l-ch></l-ch>	DC Voltge between Speaker Terminals COLD and GND <l-ch></l-ch>	kVR2L	DC 0V±3 mV	Set Speaker-A switch to "ON"     Set the POWER AMP DIREC	
2.	Center DC 0V Adj. <r-ch></r-ch>	DC Voltage between Speaker Terminals COLD and GND < R-ch >	kVR2R	DC 0V±3 mV		
3.	Hot/Cold Balance Adj. <l-ch></l-ch>	DC Voltage between Speaker Terminal HOT and GND. <l-ch></l-ch>	kVR1L	DC 0V ± 3 mV		
4.	Hot/Cold Balance Adj. < R-ch>	DC Voltage between Speaker Terminal HOT and GND. < R-ch>	kVR1R	DC 0V ± 3 mV		

#### 7-2. F-5643 Tone Control Amp. Adjustment <AU-X901>

STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS	
1.	Center DC 0V Adj. <l-ch></l-ch>	DC Voltge between F-5693 Point (A) (kR31) and Chassis (See Fig. 7-1)	jVR5L	DC 0V±3 mV	For this adjustment, remove the front panel.     Set the POWER AMP DIRECT switch to integrated position.     Set Speaker-A switch to "ON".	
2.	Center DC 0V Adj. <r-ch></r-ch>	DC Voltage between F-5693 Point® (kR31) and Chassis (See Fig. 7-1)	jVR5R	DC 0V±3 mV		
3.	Hot/Cold Balance Adj. <l-ch></l-ch>	DC Voltage between Speaker Terminals HOT and GND. <l-ch></l-ch>	jVR6L	DC 0V ± 3 mV		
4.	Hot/Cold Balance Adj. < R-ch>	DC Voltage between Speaker Terminals HOT and GND. <r-ch></r-ch>	jVR6R	DC 0V ± 3 mV		

#### Fig. 7-1 F-5693



#### 7-3. F-5693 Power Amp. Adjustment

- •Note: Perform this adjustment after the preheating (more than five minutes)
- \*Preheating
- 1. Arrange the connection as shown in Fig. 7-2.
  2. Set the output level of Audio OSC for obtaining 16.8V (35W) <AU-X701> or 20.6V (53W) <AU-X901> on the AC Volt Meter.
- 3. Set the Volume to minimum position after the preheating.

Fig. 7-2	UNIT	Terminal (A)		
20kHz O Sine Ware	CO H	DT 8	80 Los	be be
AUDIO OSC	VOLUME	MAX L		
	Input minal			0
				AC Volt Meter

Speakers

STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Bias Current Adj. <hot amp.="" l-ch="" of="" side=""></hot>	DC Voltage between both edges of kR69 < L-ch > (See Fig. 7-3)	kVR52L	DC 17mV±2 mV	(Bias Current), repeat procedures as stated in 7-1 & 7-2.
2.	Bias Current Adj. <cold amp.="" l-ch="" of="" side=""></cold>	DC Voltage between both edges of kR68 <l-ch> (See Fig. 7-3)</l-ch>	kVR51L	DC 17mV±2 mV	
3.	Bias Current Adj. <hot amp.="" of="" r-ch="" side=""></hot>	DC Voltage between both edges of kR69 < R-ch > (See Fig. 7-3)	kVR52R	DC 17mV ± 2 mV	
4.	Bias Current Adj. <cold amp.="" of="" r-ch="" side=""></cold>	DC Voltage between both edges of kR68 < R-ch > (See Fig. 7-3)	kVR51R	DC 17mV±2 mV	

## Fig. 7-3 F-5693

