

Service Manual

Stereo Integrated DC Amplifier



SU-V2

[E], [EG], [XGF], [XGH], [EB],
[XE], [XA], [XAL]

SU-V2(K)

[E], [EG], [XGH], [EB],
[XE], [XA], [XAL]

* The cabinet, front panel and knob are available in black color and silver types. The black type model is provided with (K) in the Service Manual.

Areas

- * [E] and [EG] are available in Scandinavia and European except Belgium, United Kingdom, Switzerland Holland and France.
- * [XGF] is available in France.
- * [XGH] is available in Holland.
- * [EB] is available in Belgium.
- * [XE] is available in United Kingdom.
- * [XA] is available in Asia, Latin America, Middle East and Africa.
- * [XAL] is available in Australia.

TECHNICAL SPECIFICATIONS (DIN 45 500)

Specifications are subject to change without notice for further improvement.

AMPLIFIER SECTION

20 Hz~20 kHz continuous power output both channels driven	2 × 45W (4Ω) 2 × 40W (8Ω)	Damping factor	25 (4Ω), 50 (8Ω)
40 Hz~16 kHz continuous power output both channels driven	2 × 45W (4Ω) 2 × 40W (8Ω)	Input sensitivity and impedance	
1 kHz continuous power output both channels driven	2 × 55W (4Ω) 2 × 45W (8Ω)	PHONO	2.5 mV/47kΩ
Total harmonic distortion		TUNER, AUX	150 mV/27kΩ
rated power at 20 Hz~20 kHz	0.03% (4Ω) 0.02% (8Ω)	TAPE 1 REC/PLAY	180 mV/33kΩ
rated power at 40 Hz~16 kHz	0.03% (4Ω) 0.02% (8Ω)	TAPE	150 mV/27kΩ
rated power at 1 kHz	0.02% (4Ω) 0.02% (8Ω)	PHONO maximum input voltage (1 kHz, RMS)	150 mV
half power at 20 Hz~20 kHz	0.015% (8Ω)	S/N	
half power at 1 kHz	0.003% (8Ω)	rated power (4Ω)	
-26 dB power at 1 kHz	0.1% (4Ω)	PHONO	73 dB (IHF, A: 80 dB)
50 mW power at 1 kHz	0.15% (4Ω)	TUNER, AUX	85 dB (IHF, A: 95 dB)
Intermodulation distortion		-26 dB power (4Ω)	
rated power at 250 Hz: 8 kHz=4:1, 4Ω	0.03%	PHONO	63 dB
rated power at 60 Hz: 7 kHz=4:1, SMPTE, 8Ω	0.02%	TUNER, AUX	63 dB
Power bandwidth		50 mW power (4Ω)	
both channels driven, -3 dB		PHONO	60 dB
(THD 0.03%) 5 Hz~30 kHz (4Ω)		TUNER, AUX	60 dB
(THD 0.02%) 5 Hz~30 kHz (8Ω)		Frequency response	
Residual hum and noise	0.5 mV	PHONO	RIAA standard curve ±0.8 dB (30 Hz~15 kHz)
		TUNER, AUX, TAPE	5 Hz~100 kHz (-3 dB) +0 dB, -0.3 dB (20 Hz~20 kHz)
		Tone controls	
		BASS	50 Hz, +10 dB~ -10 dB
		TREBLE	20 kHz, +10 dB~ -10 dB
		Subsonic filter	30 Hz, -6 dB/oct.
		High-cut filter	7 kHz, -6 dB/oct.
		Loudness control (volume at -30 dB)	50 Hz, +9 dB
		Output voltage and impedance	
		REC OUT	150 mV
		TAPE 1 REC/PLAY	30 mV/82kΩ
		Channel balance, AUX 250 Hz~6,300 Hz	±1 dB
		Channel separation, AUX 1 kHz	52 dB

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

Headphones output level and impedance	420 mV/330Ω
Load impedance	
MAIN or REMOTE	4Ω~16Ω
MAIN and REMOTE	8Ω~16Ω

Dimensions (W×H×D)	430 × 142 × 257 mm (16-15/16" × 5-19/32" × 10-1/8")
Weight	6.9 kg (15.2 lb.)

GENERAL

Power consumption	500W
Power supply	AC 50 Hz/60 Hz, 110V/120V/220V/240V

Note:

Total harmonic distortion is measured by the digital spectrum analyzer (HP. 3045 system).

TECHNISCHE DATEN (DIN 45 500)

Spezifikationen können infolge von verbesserungen ohne Ankündigung geändert werden.

VERSTÄRKERTEIL

Dauerton-Ausgangsleistung bei 20 Hz ~ 20 kHz	
beide Kanäle ausgesteuert	2 × 45W (4 Ω) 2 × 40W (8 Ω)
Dauerton-Ausgangsleistung bei 40 Hz ~ 16 kHz	
beide Kanäle ausgesteuert	2 × 45W (4 Ω) 2 × 40W (8 Ω)
Dauerton-Ausgangsleistung bei 1 kHz	
beide Kanäle ausgesteuert	2 × 55W (4 Ω) 2 × 45W (8 Ω)
Gesamtklirrfaktor	
Nennleistung bei 20 Hz ~ 20 kHz	0,03% (4 Ω) 0,02% (8 Ω)
Nennleistung bei 40 Hz ~ 16 kHz	0,03% (4 Ω) 0,02% (8 Ω)
Nennleistung bei 1 kHz	0,02% (4 Ω) 0,02% (8 Ω)
halbe Nennleistung bei 20 Hz ~ 20 kHz	0,015% (8 Ω)
halbe Nennleistung bei 1 kHz	0,003% (8 Ω)
-26 dB Leistung bei 1 kHz	0,1% (4 Ω)
50 mW Leistung bei 1 kHz	0,15% (4 Ω)
Intermodulationsfaktor	
Nennleistung bei 250 Hz: 8 kHz = 4:1, 4 Ω	0,03%
Nennleistung bei 60 Hz: 7 kHz = 4:1, nach SMPTE, 8 Ω	0,02%
Leistungsbandbreite	
beide Kanäle ausgesteuert bei -3 dB	(THD 0,03%) 5 Hz ~ 30 kHz (4 Ω) (THD 0,02%) 5 Hz ~ 30 kHz (8 Ω)
Restbrumm und Geräusch	0,5 mV
Dämpfungsfaktor	25 (4 Ω), 50 (8 Ω)
Eingangsempfindlichkeit und -impedanz	
Phono	2,5 mV/47 kΩ
Tuner, Aux	150 mV/27 kΩ
Tape 1 Aufnahme/Wiedergabe (TAPE 1 REC/PLAY)	180 mV/33 kΩ
Tape 2 (TAPE 2)	150 mV/27 kΩ
Maximale TA-Eingangsspannung (1 kHz, eff.)	150 mV
Geräuschabstand	
Nennleistung (4 Ω)	
Phono	73 dB (nach IHF, A: 80 dB)
Tuner, Aux	85 dB (nach IHF, A: 95 dB)

-26 dB Leistung (4 Ω)	
Phono	63 dB
Tuner, Aux	63 dB
50 mW Leistung (4 Ω)	
Phono	60 dB
Tuner, Aux	60 dB
Frequenzgang	
Phono	RIAA-Standardkurve ±0,8 dB (30 Hz ~ 15 kHz)
Tuner Aux, Tape	5 Hz ~ 100 kHz (-3 dB) +0 dB, -0,3 dB (20 Hz ~ 20 kHz)
Klangregler	
Baßregler (BASS)	50 Hz, +10 dB ~ -10 dB
Höhenregler (TREBLE)	20 kHz, +10 dB ~ -10 dB
Tiefenfilter	30 Hz, -6 dB/Okt.
Rauschfilter	7 kHz, -6 dB/Okt.
Gehörriichtige Lautstärkekorrektur (Loudness)	
(bei -30 dB Ausgangsleistung)	50 Hz, +9 dB
Ausgangsspannung und -impedanz	
Aufnahmeausgang (REC OUT)	150 mV
Tape 1 Aufnahme/Wiedergabe (TAPE 1 REC/PLAY)	30 mV/82 kΩ
Kanalabweichung (Aux, 250 Hz ~ 6300 Hz)	±1 dB
Übersprechdämpfung (Aux, 1 kHz)	52 dB
Kopfhörerpegel und -impedanz	420 mV/330 Ω
Lautsprecherimpedanz	
MAIN oder REMOTE	4 Ω ~ 16 Ω
MAIN und REMOTE	8 Ω ~ 16 Ω

ALLGEMEINE DATEN

Leistungsaufnahme	500 W
Netzspannung	Wechselstrom 50 Hz/60 Hz, 110V/120V/220V/240V
Abmessungen (B×H×T)	430 × 142 × 257 mm
Gewicht	6,9 kg

Bemerkung:

Der Gesamtklirrfaktor wurde mit einem digitalen Rauschspektrometer (Anlage HP. 3045) gemessen.

DONNEES TECHNIQUES (DIN 45 500)

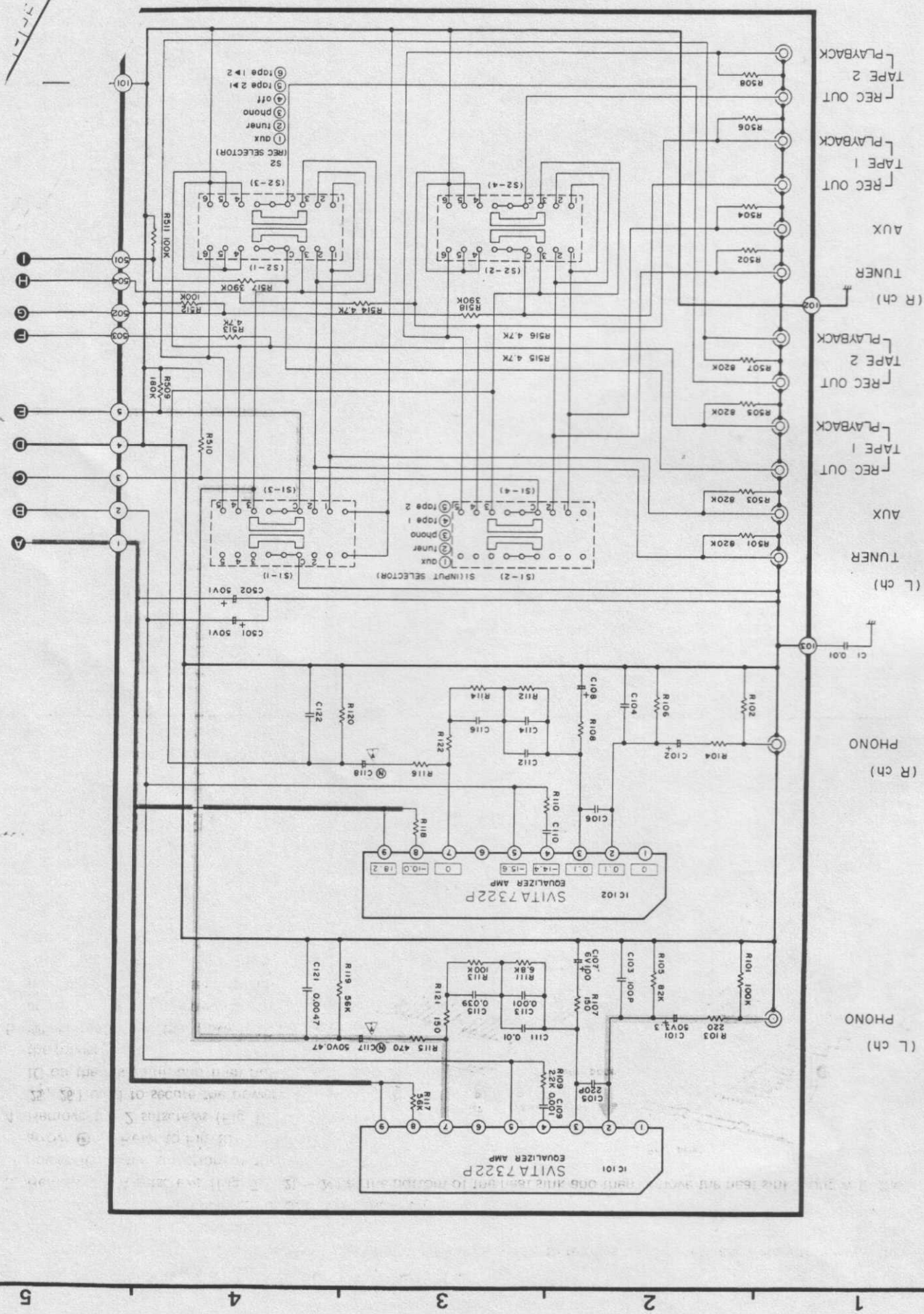
Sujet à changement sans préavis.

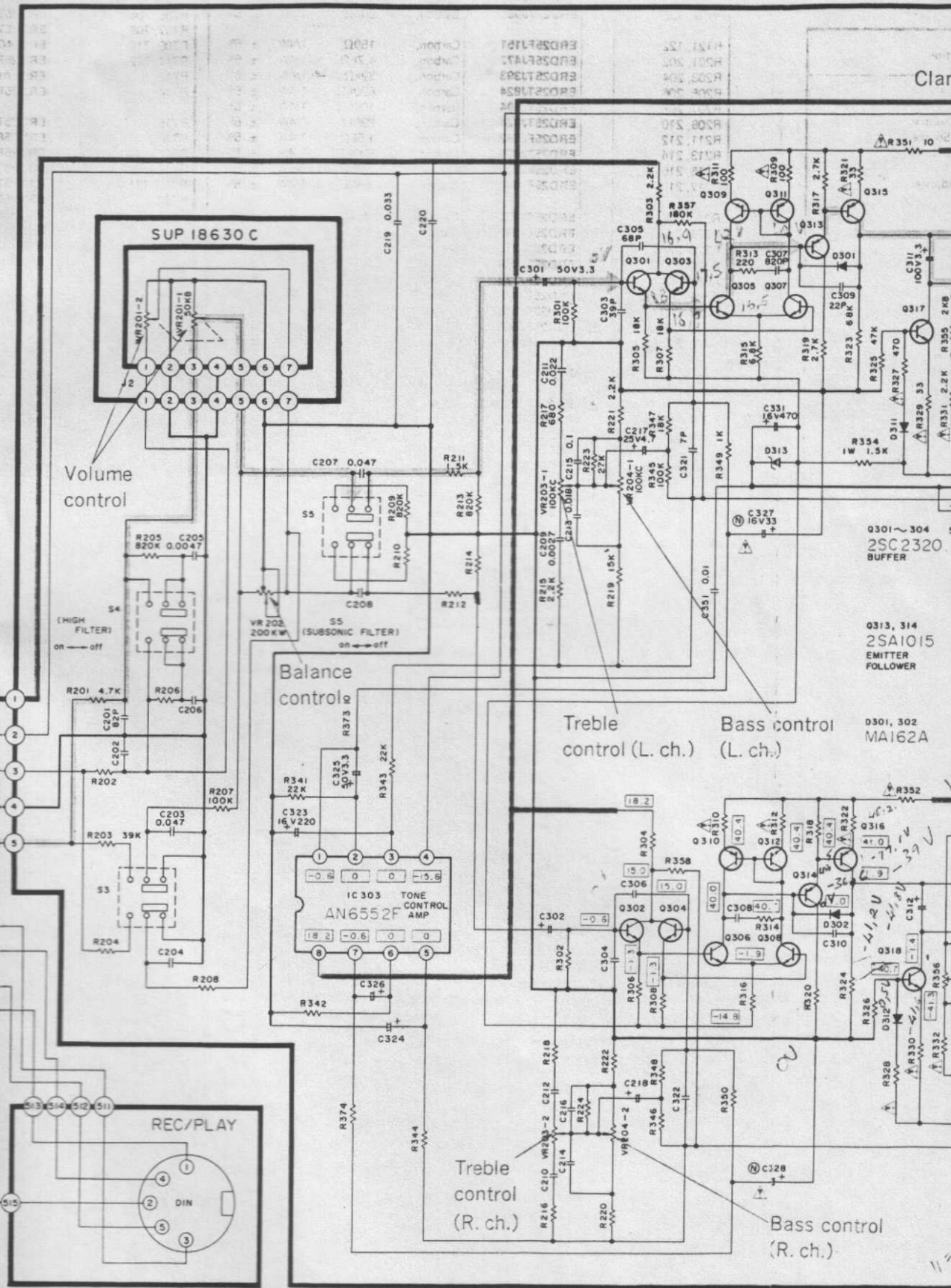
SECTION AMPLIFICATEUR

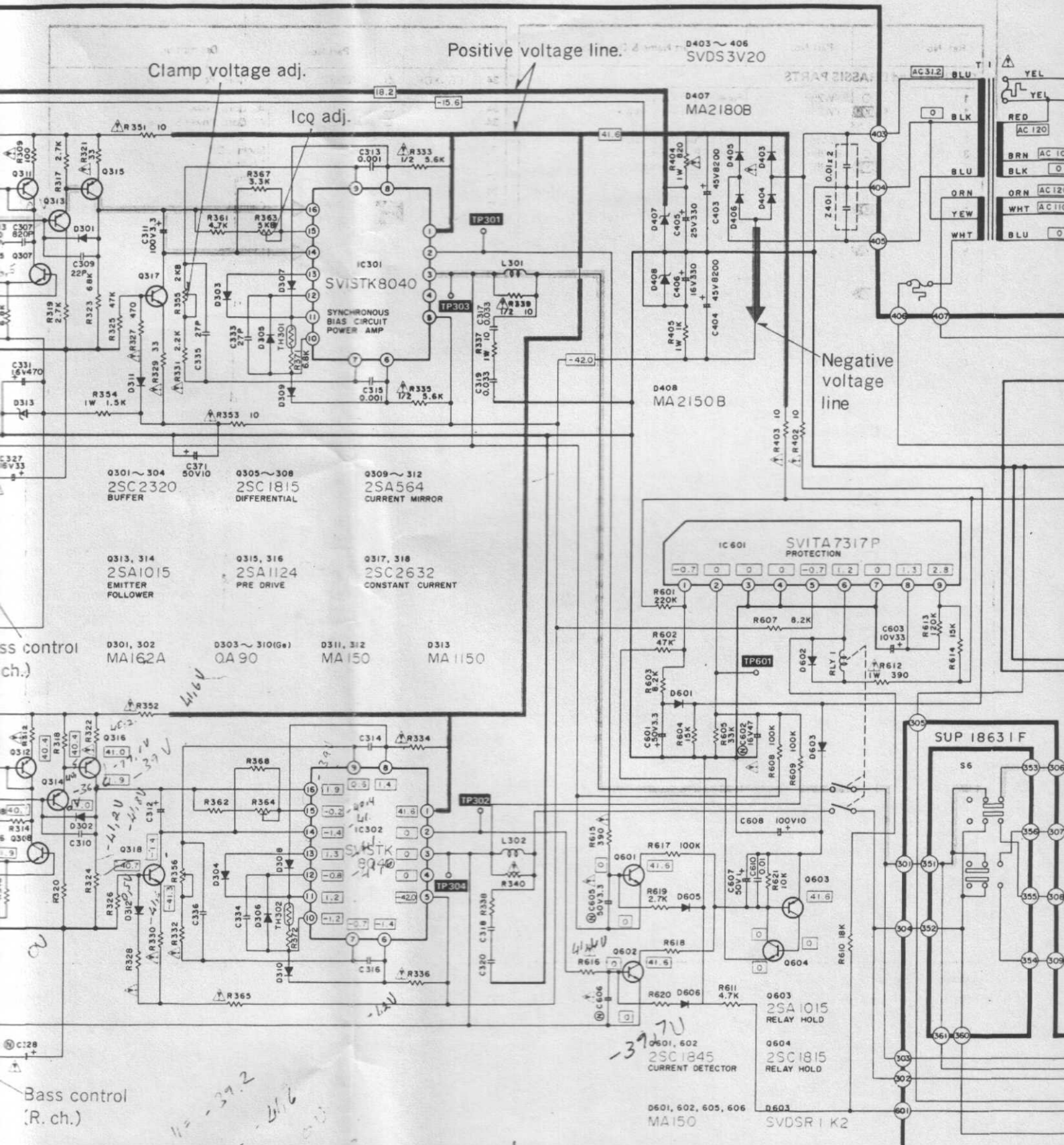
Puissance de sortie continue de 20 Hz~20 kHz,	
les deux canaux en circuit	2 × 45W (4Ω) 2 × 40W (8Ω)
Puissance de sortie continue de 40 Hz~16 kHz,	
les deux canaux en circuit	2 × 45W (4Ω) 2 × 40W (8Ω)
Puissance de sortie continue à 1 kHz	
les deux canaux en circuit	2 × 55W (4Ω) 2 × 45W (8Ω)

Distorsion harmonique totale	
à puissance nominale (20 Hz~20 kHz)	0,03% (4Ω) 0,02% (8Ω)
à puissance nominale (40 Hz~16 kHz)	0,03% (4Ω) 0,02% (8Ω)
à puissance nominale (1 kHz)	0,02% (4Ω) 0,02% (8Ω)
à demi-puissance (20 Hz~20 kHz)	0,015% (8Ω)
à demi-puissance (1 kHz)	0,003% (8Ω)
puissance de -26 dB à 1 kHz	0,1% (4Ω)
puissance de 50 mW à 1 kHz	0,15% (4Ω)

11-11







Clamp voltage adj.

Positive voltage line.

IcQ adj.

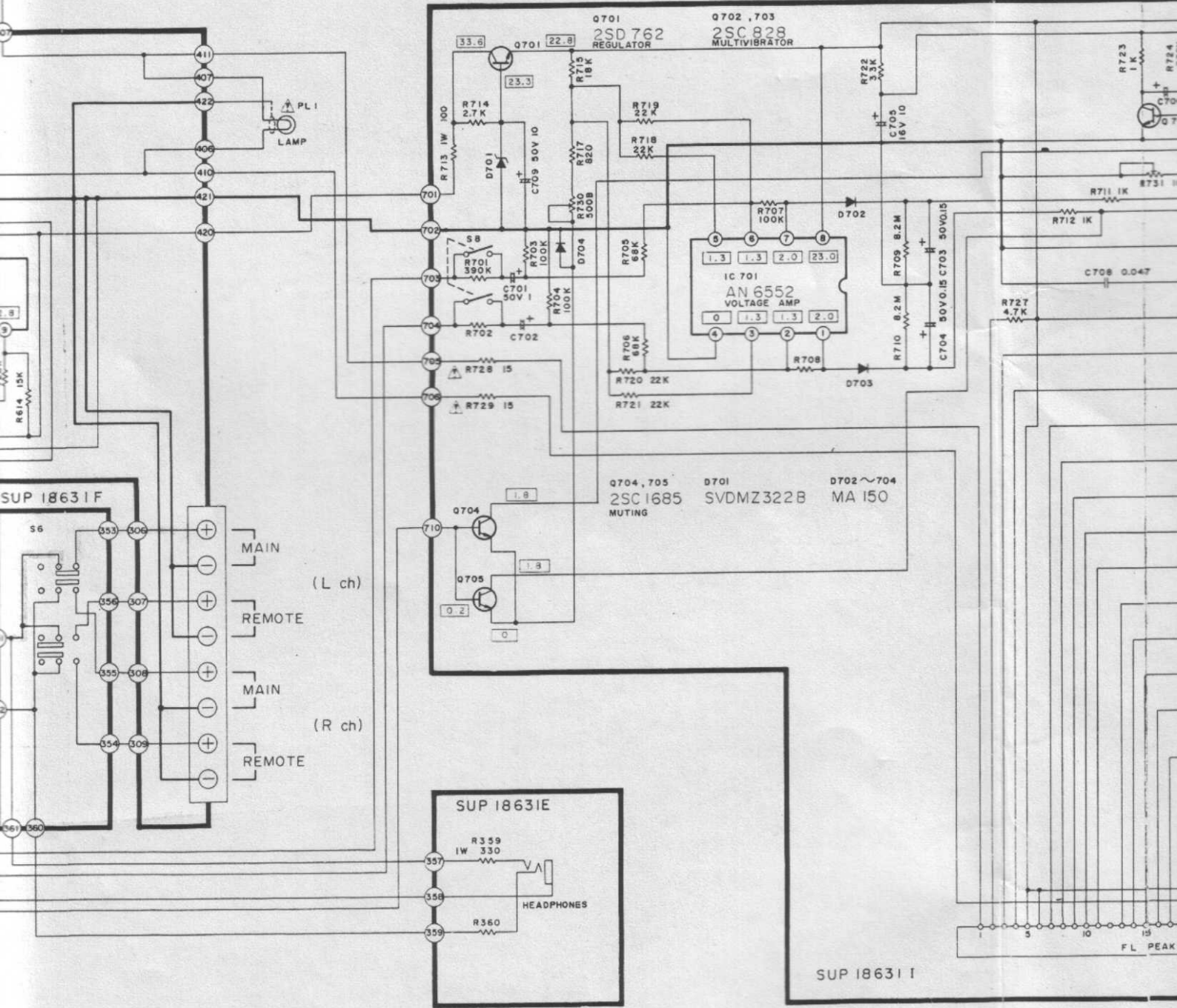
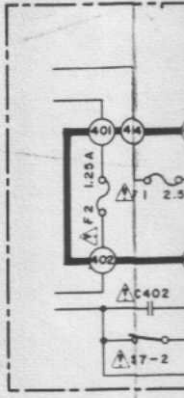
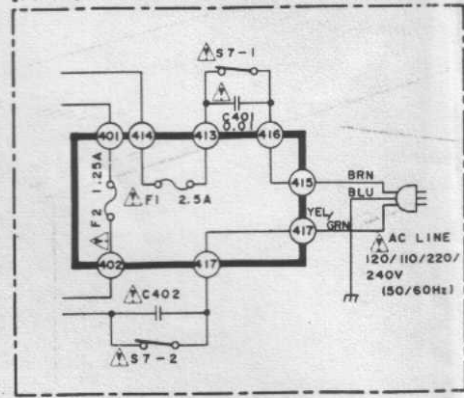
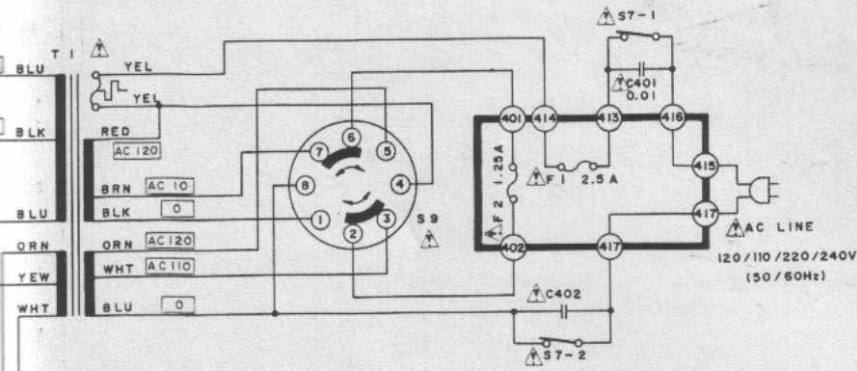
Negative voltage line

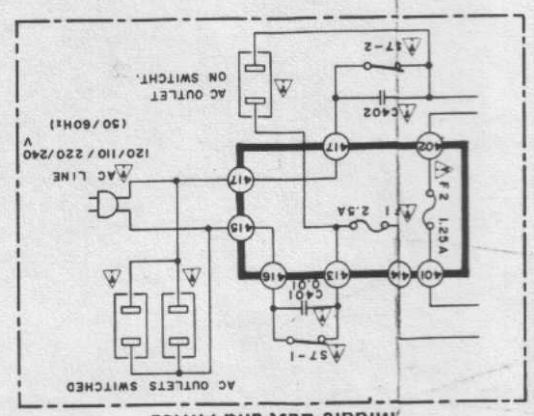
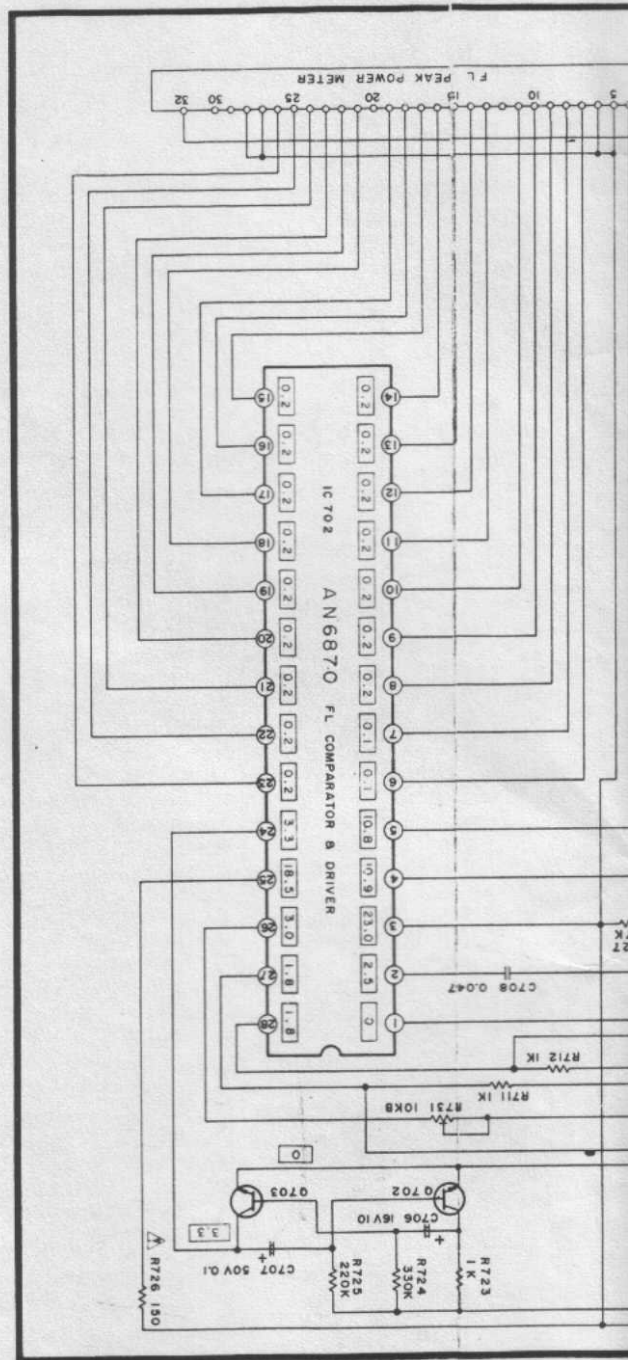
Bass control (R. ch.)

• Power source circuits for [XAL] and [XA]

[XAL] Available in Australia

[XA] Available in Middle East

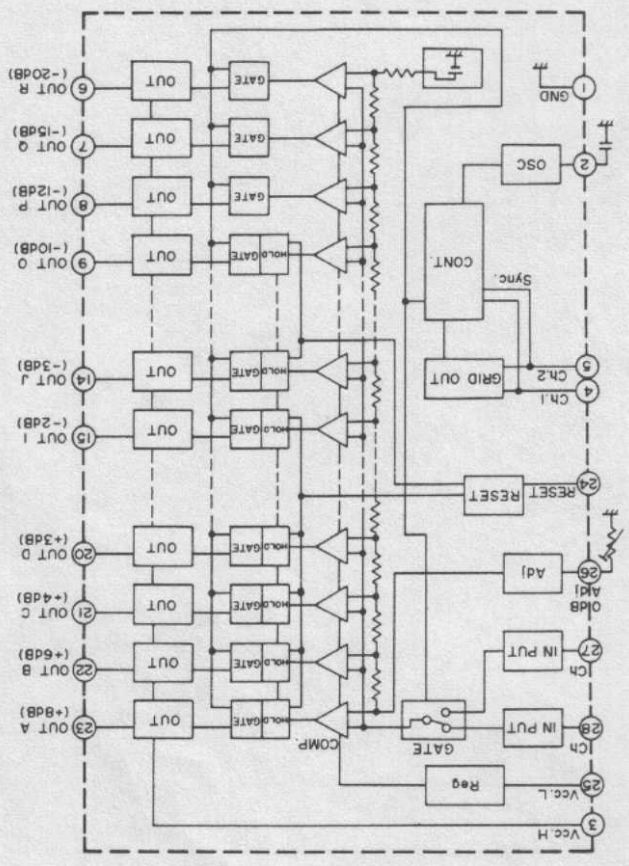




[XA] ... Available in Asia, Latin America, Middle East and Africa

SCHEMATIC DIAGRAM

IC702 (AN6870) Level comparator



- Notes:
- 1. S1: Input selector switch in "phono" position.
 - ① aux → ② tuner → ③ phono → ④ tape 1 → ⑤ tape 2.
 - 2. S2: Rec selector switch in "phono" position.
 - ① aux → ② tuner → ③ phono → ④ tape 1 → ⑤ tape 2.
 - 3. S3: Loudness switch in "off" position.
 - 4. S4: High filter switch in "off" position.
 - 5. S5: Subsonic filter switch in "off" position.
 - 6. S6: Speakers selector switch in "main" position.
 - 7. S7: Power switch in "on" position.
 - 8. S8: Meter range selector switch in "X1" position.
 - 9. S9: Voltage adjustment switch in "240V" position.
12. Δ Indicates that only parts specified by the manufacturer be used for safety.
13. \square Indicated voltage values are the standard values for the DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- 14. --- Phono signal lines of left channel.
 - 15. --- Positive (+B) voltage lines.