Service Manual

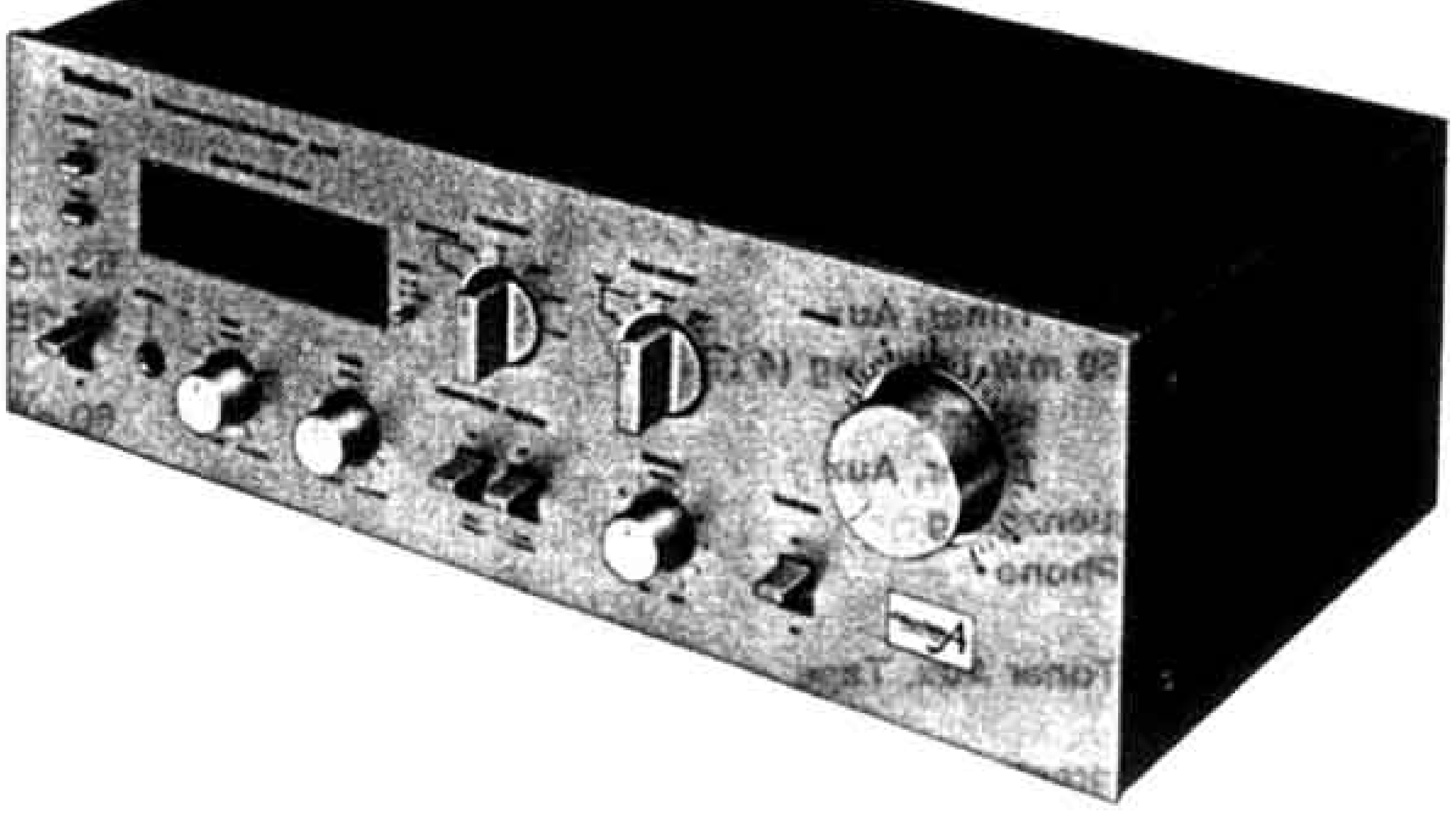
Stereo Integrated DC Amplifier

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.

TECHNNICAL SPECIFICATIONS

Specifications are subject to change without notice for further improvement.

(DIN 45 500)

AMPLIFIER SECTION

20 Hz~20 kHz continuous power output	
both channels driven	2 × 45W (4Ω)
	2 × 40W (8Ω)
40 Hz~16 kHz continuous power output	
both channels driven	2 × 45W (4Ω)
	2 × 40W (8Ω)
1 kHz continuous power output	
both channels driven	2 × 55W (4Ω)
	2 × 45W (8Ω)
Total harmonic distortion	
rated power at 20 Hz~20 kHz	0.03% (4Ω)
	0.02% (8Ω)
rated power at 40 Hz~16 kHz	0.03% (4Ω)
	0.02% (8Ω)
rated power at 1 kHz	0.02% (4Ω)
	0.02% (8Ω)
half power at 20 Hz~20 kHz	0.015% (8Ω)
half power at 1 kHz	0.003% (8Ω)
−26 dB power at 1 kHz	0.1% (4Ω)
50 mW power at 1 kHz	0.15% (4Ω)
Intermodulation distortion	
rated power at 250 Hz: 8 kHz=4:1, 4Ω	0.03%
rated power at 60 Hz: 7 kHz=4:1, SMPTE, 8Ω	0.02%
Power bandwidth	
both channels driven, −3 dB	
	(THD 0.03%) 5 Hz~30 kHz (4Ω)
	(THD 0.02%) 5 Hz~30 kHz (8Ω)
Residual hum and noise	0.5 mV
Damping factor	25 (4Ω), 50 (8Ω)
Input sensitivity and impedance	
PHONO	2.5 mV/47kΩ
TUNER, AUX	150 mV/27kΩ
TAPE 1 REC/PLAY	180 mV/33kΩ
TAPE	150 mV/27kΩ
PHONO maximum input voltage (1 kHz, RMS)	150 mV
S/N	
rated power (4Ω)	
PHONO	73 dB (IHF, A: 80 dB)
TUNER, AUX	85 dB (IHF, A: 95 dB)
−26 dB power (4Ω)	
PHONO	63 dB
TUNER, AUX	63 dB
50 mW power (4Ω)	
PHONO	60 dB
TUNER, AUX	60 dB
Frequency response	
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

GENERAL

Power consumption	500W
Power supply	AC 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensions (W·H·D)	430 × 142 × 257 mm (16-15/16" × 5-19/32" × 10-1/8")
Weight	6.9 kg (15.2 lb.)

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.
Gehörrichtige 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

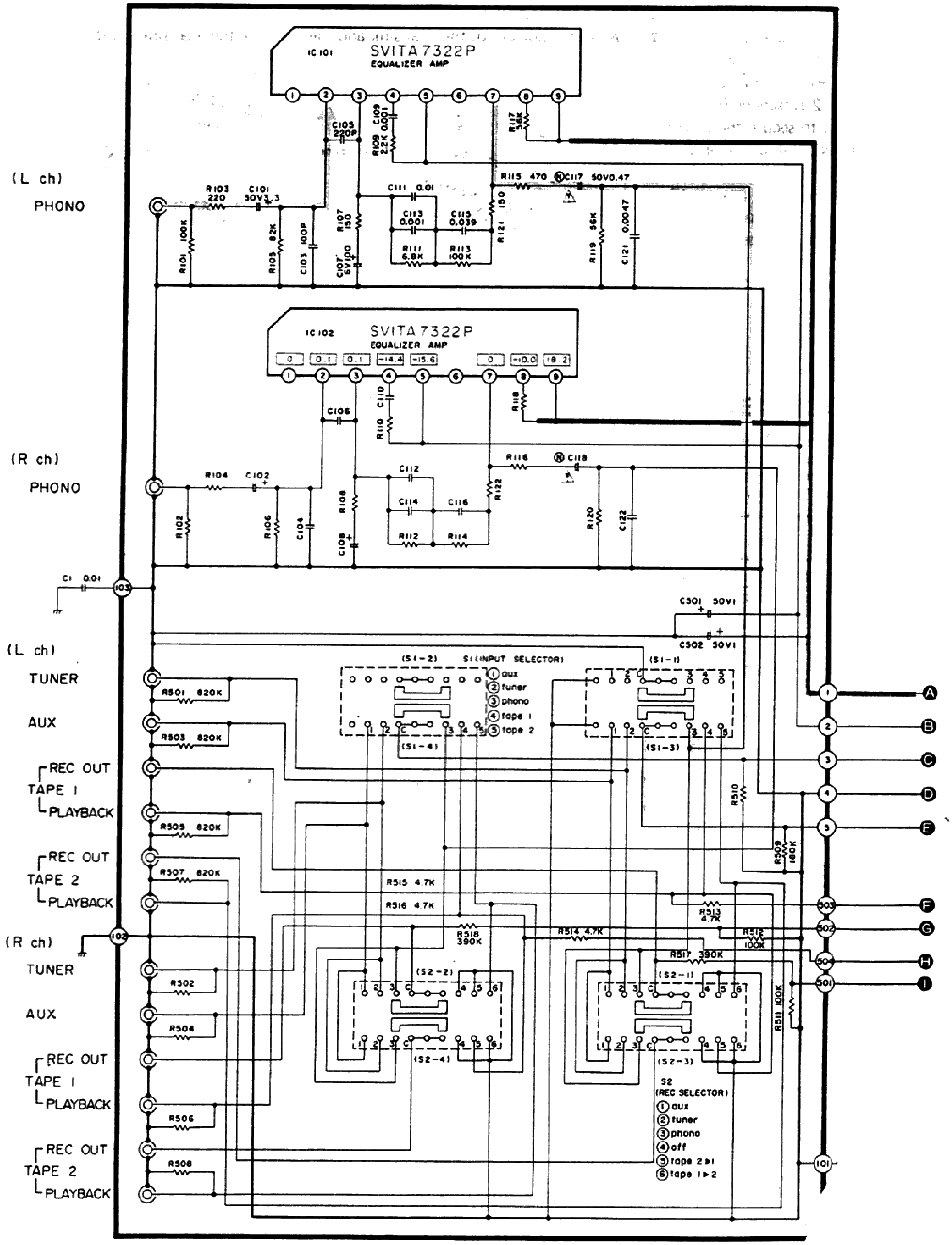
Bmerkung:
Der Gesamtklirrfaktor wurde mit einem digitalen Rauschspektrometer (Anlage HP 3045) gemessen.

DONNEES TECHNIQUES (DIN 45 500)

Sujet à changment sans préaris

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)
a demi-puissance (20 Hz~20 kHz)	0,015% (8Ω)
a 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)



IC101 SVITA7322P EQUALIZER AMP
IC102 SVITA7322P EQUALIZER AMP
(L ch) PHONO
(R ch) PHONO
R103 220
C101 50V3.3
R101 100K
R105 82K
C103 100P
C105 220P
C109 0.001
R109 22K
R107 150
C107 6V100
C111 0.01
C113 0.001
C115 0.039
R111 6.8K
R113 100K
R121 150
R115 470
C117 50V0.47
R117 56K
R119 56K
C121 0.0047
0
0.1
0.1
-14.4
-15.6
0
-10.0
18.2
R104
C102
R102
R106
C104
C106
C110
R110
R108
C108
C112
C114
C116
R112
R114
R122
R116
C118
R118
R120
C122
C1 0.01
C501 50V1
C502 50V1
(L ch) TUNER
AUX
TAPE 1 REC OUT PLAYBACK
TAPE 2 REC OUT PLAYBACK
(R ch) TUNER
R501 820K
R503 820K
R505 820K
R507 820K
R502
R504
R506
R508
S1 (INPUT SELECTOR)
(S1-1)
(S1-2)
(S1-3)
(S1-4)
1 aux
2 tuner
3 phono
4 tape 1
5 tape 2
R515 4.7K
R516 4.7K
R518 390K
R514 4.7K
R517 390K
R513 4.7K
R512 100K
R510
R509 180K
R511 100K
(S2-1)
(S2-2)
(S2-3)
(S2-4)
S2 (REC SELECTOR)
1 aux
2 tuner
3 phono
4 off
5 tape 2 ▸ 1
6 tape 1 ▸ 2
A
B
C
D
E
F
G
H
I
101
102
103
501
502
503
504

■ SCHEMATIC DIAGRAM

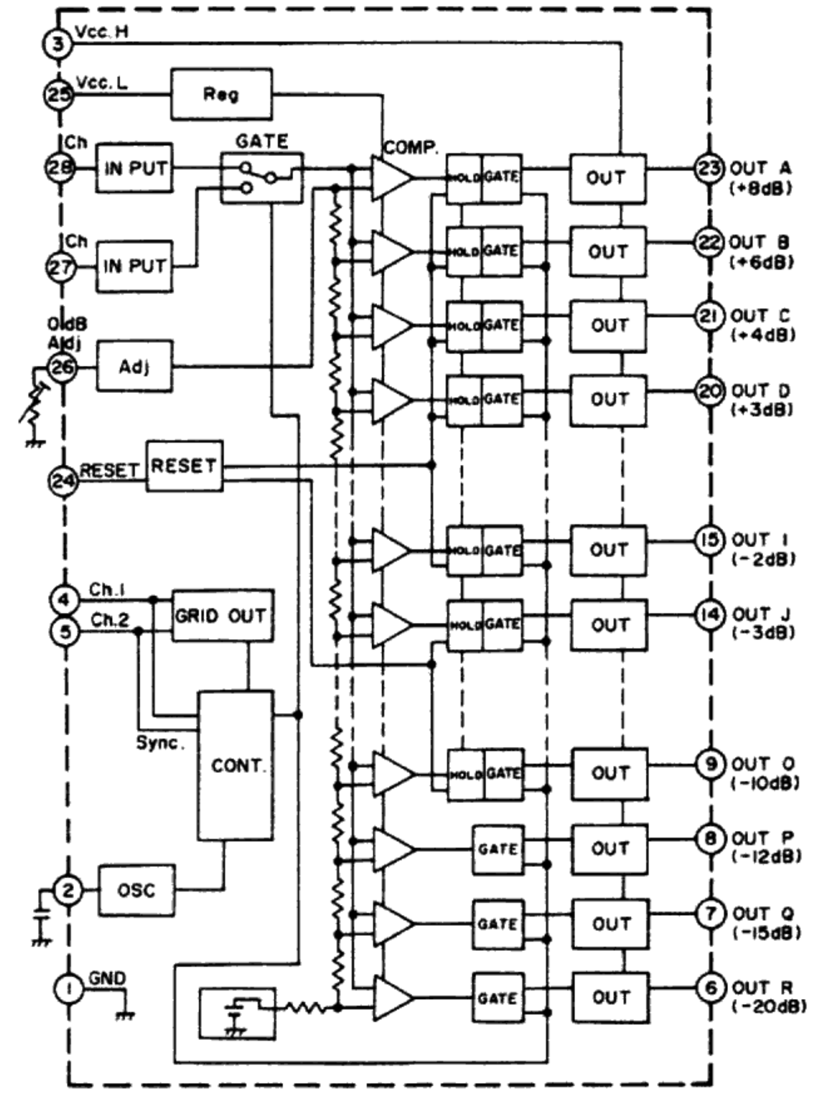
• Power source circuits for [XAL] and [XA]

[XAL] ..... Available in Australia

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

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 off←→⑤ tape 2▶1←→⑥ tape 1▶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.
   240V←→220V←→110V←→120V
12. ⚠ Indicates that only parts specified by the manufacturer be used for safety.
13. ▭ 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



IC702 (AN6870) Level comparator