



# Technical Manual

## STEREO POWER AMPLIFIER RB-980BX

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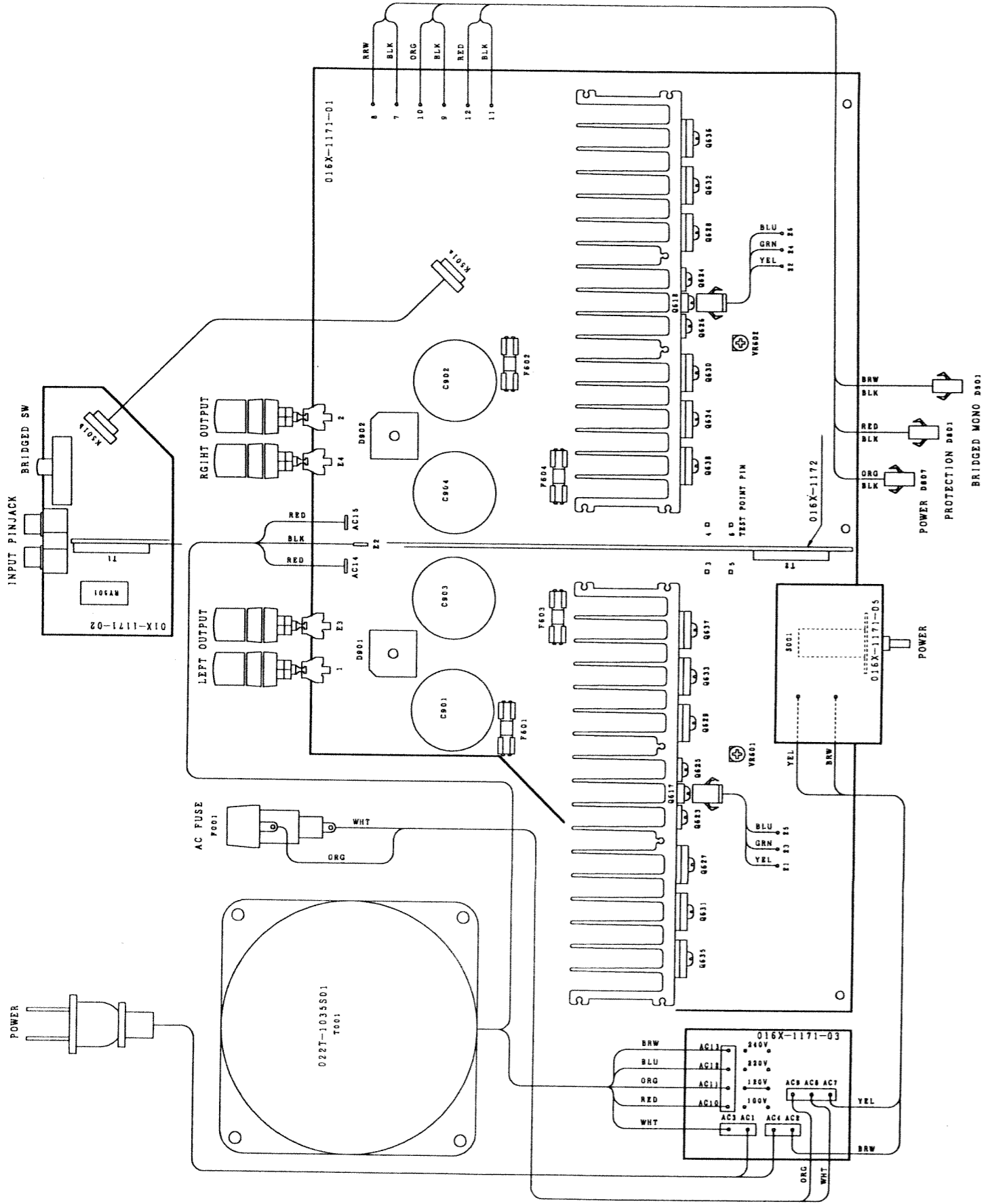
### Specifications

Continuous Power Output ...	120 watts* per channel, min. RMS both channels driven into 8 ohms from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion.	Output .....	Speaker 8 ohms nominal
DIN Power Output .....	220 watts per channel (1kHz, 4 ohms, 1% THD)	Damping Factor .....	1,000 (20 to 20,000 Hz, 8 ohms)
Peak Current .....	80 A (0.1 ohms, 10 $\mu$ sec, 1 pulse)	Input Sensitivity/ Impedance .....	1.0 V/33 kohms
Bridged Power .....	360 watts (mono) min. RMS driven into 8 ohms from 20 to 20,000 Hz with no more than 0.05% total harmonic distortion.	Frequency Response .....	4 to 100,000 Hz, +0.5 dB, -3.0 dB
Total Harmonic Distortion (20 to 20,000 Hz) .....	No more than 0.03% (continuous rated power output) No more than 0.03% (continuous 1/2 rated power output) No more than 0.03% (1 watt per channel power output, 8 ohms)	Signal-to-Noise Ratio (IHF A network) .....	120 dB
Intermodulation Distortion (60 Hz : 7 kHz = 4:1) .....	No more than 0.03% (continuous rated power output) No more than 0.03% (continuous 1/2 rated power output) No more than 0.03% (1 watt per channel power output, 8 ohms)	Power Requirement .....	120 V/60 Hz, 220 V/50 Hz, 240 V/50 Hz or 100 V/50 Hz-60 Hz (depending on destinations)
		Power Consumption .....	400 watts
		Dimensions (overall) .....	440 (W) x 120 (H) x 323 (D) mm 17-5/16" x 4-23/32" x 12-23/32"
		Weight (net) .....	10.2 kg/22.44 lbs.

- Specifications and design subject to possible modification without notice.
- \* Measured pursuant to the Federal Trade Commission's Trade Regulation Rule on Power Claims for Amplifiers (applicable to the U.S.A. only).

Serial No.  
Beginning

# Wiring Diagram



# Parts List

SYMBOL	PARTS NO.	DESCRIPTION
X-1171-01 PCB ASSEMBLY		
C601, C602	041 50BGF4R7M	CAP, ELEC. 50V4. 7UF
C603, C604	044 FKP2-100V681H	CAP, FILM 100V680PF
C605, C606	044 #S160V221J	CAP. STYROL 105-062
C607, C608	041 25BGF100M	CAP, ELEC. 25V100UF
C609, C610	041 50BGF10M	CAP, ELEC. 50V10UF
C611, C612	044 #S160V331J	CAP. STYROL 105-063
C613~616	044 #S160V221J	CAP. STYROL 105-062
C617, C618	044 MKT18-100V104K	CAP, FILM 100V0. 1UF
C801	041 U16V100	CAP, ELEC. 16V100UF
C802	041 U63V22	CAP, ELEC. 63V22UF
C901~904	041 NS2G63V10000	CAP, ELEC. 63V10000UF
C905~912	043 500VZF103	CAP, CERA. 500V0. 01UF
C913	041 U63V220	CAP, ELEC. 63V220UF
C914	041 U63V22	CAP, ELEC. 63V22UF
D601~608	034 1N4148	DIODE
D609~612	034 1N4003	DIODE
D801~802	034 SEL1124R	LED
D803, D804	034 1N4148	DIODE
D805, D806	034 RD6. 2EB	ZENER DIODE
D807	034 SEL1124R	LED
D901, D902	034 BR84	BRIDGE DIODE
D903~906	034 1N4003	DIODE
F601~	036 (U)F5A	MINI FUSE for STD
F604	036 (S)T4A	MINI FUSE for CEE
Q601~604	033 2SC2362K-FG	TRANSISTOR
Q605~610	033 2SA1016K-FG	TRANSISTOR
Q611, Q612	033 2SC2362K-FG	TRANSISTOR
Q613, Q614	033 2SA1209-ST	TRANSISTOR
Q615, Q616	033 2SC2911-ST	TRANSISTOR
Q617, Q618	032 2SD1684-S	TRANSISTOR
Q619, Q621	033 2SC3478-LKU	TRANSISTOR
Q621, Q622	033 2SA1376-LKU	TRANSISTOR
Q623, Q624	033 2SC4381-OY	TRANSISTOR
Q625, Q626	033 2SA1667-OY	TRANSISTOR
Q627, Q628	033 2SC3856-OY	TRANSISTOR
Q629, Q630	033 2SA1492-OPY	TRANSISTOR
Q631, Q632	033 2SC3856-OPY	TRANSISTOR
Q633, Q634	033 2SA1492-OPY	TRANSISTOR
Q635, Q636	033 2SC3856-OPY	TRANSISTOR
Q637, Q638	033 2SA1492-OPY	TRANSISTOR
R601, R602	054 MK2475RFECZ	R. METAL 1% 475Ω
R603, R604	054 MK233K2FECZ	R. METAL 1% 33. 2K
R605~612	054 MK201K5FECZ	R. METAL 1% 1. 5K
R613, R614	054 MK2562RFECZ	R. METAL 1% 562Ω
R615~618	054 MK2221RFECZ	R. METAL 1% 221Ω
R619, R620	054 MK247K5FECZ	R. METAL 1% 47. 5K
R623~626	054 MK2100RFECZ	R. METAL 1% 100Ω
R631, R632	054 MK212K1FECZ	R. METAL 1% 12. 1K
R633, R634	054 MK22K74FECZ	R. METAL 1% 2. 74K
R635, R636	054 MK218K2FECZ	R. METAL 1% 18. 2K

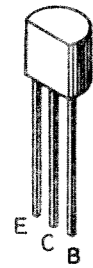
SYMBOL	PARTSNO.	DESCRIPTION
R637, R638	054 MK2001KFECZ	R. METAL 1% 1K
R639, R640	054 MK247R5FECZ	R. METAL 1% 47. 5Ω
R653~664	054 MPC70-0. 22F	R. PLATE 2W 0. 22Ω
R667, R668	054 RSS2X-10F	RESISTOR 2W 10Ω
R801, R802	054 RSS1X-5. 6KF	RESISTOR 1W 5. 6K
R803, R804	053 273J	RESISTOR 1/4W 27K
R805, R806	053 183J	RESISTOR 1/4W 18K
R807, R808	053 104J	RESISTOR 1/4W 100K
R809, R810	053 392J	RESISTOR 1/4W 3. 9K
R811	053 333J	RESISTOR 1/4W 33K
R812	053 104J	RESISTOR 1/4W 100K
R813	053 224J	RESISTOR 1/4W 220K
R814~816	053 104J	RESISTOR 1/4W 100K
R817	053 272J	RESISTOR 1/4W 2. 7K
R818	054 RSS1X-4. 7KF	RESISTOR 1W 4. 7K
R819	054 RSS1X-5. 6KF	RESISTOR 1W 5. 6K
R901~904	054 RSS2X-5. 6KF	RESISTOR 2W 5. 6KF
TH801, 802	034 TD5C350D	THERMISTER
VR601, 602	051 VMGCKPV-2. 2K	SEMI FIXED RESISTOR
	017 PP4-08A00T	HEAT SINKER
	068 C-3963#41	CONNECTOR 2P BRN-BLK
	068 C-3963#42	CONNECTOR 2P RED-BLK
	068 C-3963#43	CONNECTOR 2P ORG-BLK
	068 C-4349A02	CONNECTOR 3P
	069 C-4429A00T	SPEAKER LUG TERMINAL
X-1171-02 PCB ASSEMBLY		
D501	034 1N4148	DIODE
R501, R502	054 MK2001KFECZ	R. METAL 1% 1K
RY501	063 RY24W-KJ	RELAY
S501	064 4TR-2266	SLIDE SWITCH
	066 4TR-2709#3	2P PINJACK
X-1171-05 PCB ASSEMBLY		
C001	044 DE7150F472M	SPARK KILLER
S001	061 C-4176A02	POWER SWITCH
	013 PP4-12A00T	SHIELD COVER
X-1172 PCB ASSEMBLY		
	068 C-4427A07	TERMINAL 8P
OTHERS		
F001	036 (U)F8A	MINI FUSE for STD
	036 (S)T4A	MINI FUSE for CEE
T001	022 T-1035S01	POWER TRANSFORMER
	011 PP2-01A00T	FRONT PANEL
	012 4TQF-15	PUSH KNOB
	014 3TUV-6#6	UPPER COVER
	015 TRP-590	PRINTED REAR CHASSIS
	019 4TSH-19#2	PLASTIC FOOT
	067 4TR-2744#1	SPEAKER TERMINAL (RED)
	067 4TR-2744#2	SPEAKER TERMINAL (BLK)
	069 C-1575	MINI FUSE HOLDER
	072 4TR-670#5	AC CORD for STD
	072 C-2504#3	AC CORD for UK
	072 C-3039	AC CORD for AUSTRALIA
	072 C-3763B01	AC CORD for EUROPA
	081 PP4-15A00	INSIDE CARTON

# Adjustment

Instruments : DC milli-voltmeter

Notes : Prior to Bias Adjustment, run about 5 minutes with rated output (8ohms) and warm up Power Transistor and Heat Sink. Set input off.

Step	Coupling		Location	Adjust	Adjust for
	Plus Lead	Minus Lead			
1	3	5	X-1171 PCB	VR601	DC milli-voltmeter reads 10mV
2	4	6	X-1171 PCB	VR602	



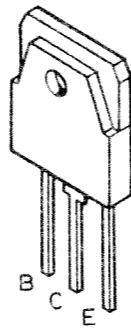
2SA1016  
2SC2362  
2SA1376  
2SC3478



2SA1667  
2SC4381



2SA1209  
2SC2911  
2SD1684



2SA1492  
2SC3856

## (RESISTORS)

5% TOLERANCE UNLESS OTHERWISE NOTED.

K KILO OHM

(M) FIXED PRECISION METAL FILM RESISTORS. (F): 1% (G): 2%

NON MARK LOW NOISE TYPE CARBON RESISTORS. 1/4W

## (CAPACITORS)

(S) POLYSTYRENE FILM CAPACITORS.

(MP) METALIZED FILM CAPACITORS.

(H) ELECTROLYTIC CAPACITORS.

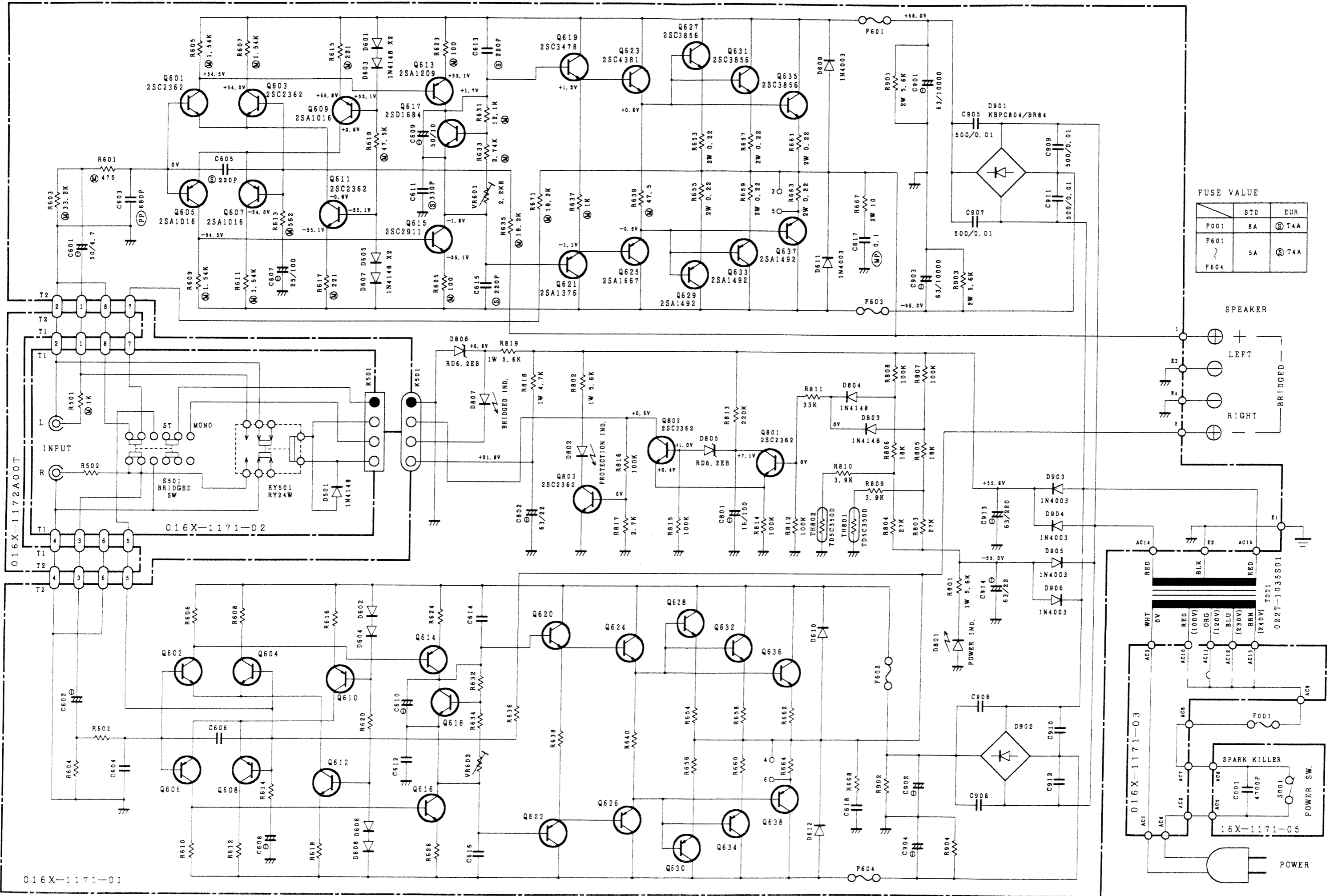
NON MARK CERAMIC CAPACITORS.

: UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITANCE VALUES ARE EXPRESSED IN MFD.

: VOLTAGE READING WITH VTVM FROM THE POINT SHOWN TO THE CHASSIS GROUND. (LINE VOLTAGE 120 VOLTS)

: VOLTAGE READING MAY 20%

Schematic Diagram STEREO POWER AMPLIFIER RB-980BX



FUSE VALUE

	STD	EUR
F601	8A	T4A
F602	5A	T4A
F603		
F604		

