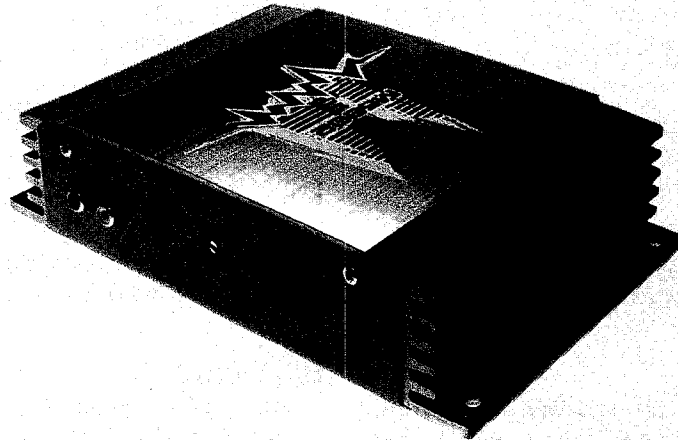


Service Manual

AUTOMOTIVE CONSUMER ELECTRONICS

CY-M5002EN

2 Channel Power Amplifier 2-Kanal-leistungsverstärker



SPECIFICATIONS*

Power Supply	: DC 12V (11V - 16V), Test Voltage 14.4V Negative Ground
Current Consumption	: 7A (at 25W × 2)
Speaker Impedance	: 4 ohms
Power Output	: 25W + 25W (200Hz, 20,000Hz, 0.5%)
Maximum Power Output	: 50W + 50W
Total Harmonic Distortion	: 0.08% (1,000Hz, at 23W)
Signal to Noise Ratio	: 94dB (IHF, A)
Frequency Response	: 10Hz - 50,000Hz
Input Sensitivity (Pre)	: 50mV to 500mV
Input Sensitivity (SP)	: 0.6V to 6V
Input Impedance	: More than 10 kohms
Dimensions**	: 210 (W) × 48 (H) × 135 (D) mm
Weight**	: 1.2kg

* Specifications subject to change without notice.

** Dimensions and Weight shown are approximate.

TECHNISCHE DATEN*

Spannungsversorgung	: 12V (11V - 16V) Gleichspannung, Testspannung 14,4V, negative Erdung
Leistungsaufnahme	: 7A (bei 25W × 2)
Lautsprecherimpedanz	: 4Ω
Ausgang	: 25W + 25W (200Hz, 20.000Hz, 0,5%)
Höchstausgangsleistung	: 50W + 50W
Gesamtklirrfaktor	: 0,08% (1.000Hz, bei 23W)
Signal/Rauschabstand	: 94dB (IHF, A)
Frequenzgang	: 10Hz - 50,000Hz
Eingangsempfindlichkeit (RCA)	: 50mV - 500mV
Eingangsempfindlichkeit (Lautsprecher)	: 0,6V - 6V
Eingangsimpedanz	: über 10 kΩ
Abmessungen**	: 210 (B) × 48 (H) × 135 (T) mm
Gewicht**	: 1,2kg

* Technische Daten und Ausführung können sich ändern ohne besondere Ankündigung bei gebührenden Verbesserungen.

** Abmessungen und Gewicht in angenäherten Werten angegeben.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

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CONTENTS

	Page
FEATURES	1
FUSE	1
DIMENSIONS	1
< OPERATING INSTRUCTIONS >	
Operation Procedures	2
System Diagram	2
Installation	2
Electrical Connection	3
BLOCK DIAGRAM	5
SCHEMATIC DIAGRAM	6
WIRING DIAGRAM	7
IC BLOCK DIAGRAM	8
REPLACEMENT PARTS LIST	9~12
EXPLODED VIEW	13

FEATURES

- 50W×2 Maximum Power Output.
- 0.08% Total Harmonic Distortion.

FUSE

Be sure to use a fuse of the specified rating (10A) when replacing a blown fuse. Fuses with higher capacity ratings, use of any substitute, or connection without a fuse may result in a fire hazard or damage to the unit.

INHALTSUERZEICHNIS

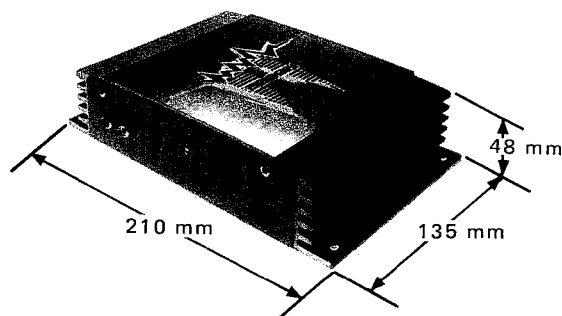
	Seite
MERKMALE	1
SICHERUNG	1
ABMESSUNGEN	1
< BETRIEBUNG SANLEITUNG >	
Grundlegende Gerätebedienung	3
Systemschema	3
Einbau	4
Elektrischer Anschluß	4
BLOCK DIAGRAM	5
SCHALTBILT	6
VERDRHATUNG	7
IC BLOCK DIAGRAM	8
ERSATZTEILLISTE	9~12
AUFGELOTE DARSTELLUNGS	13

MERKMALE

- 50W×2 Höchstaussgangsleistung.
- 0,08% Gesamtklirrfaktor.

SICHERUNG

Als Ersatz für eine durchgebrannte Sicherung unbedingt eine Sicherung mit dem vorgeschriebenen Nennwert (10A) verwenden. Durch den Gebrauch von Sicherungen mit höheren Nennwerten, von Sicherungsersatzteilen oder durch den Anschluß ohne Gebrauch einer Sicherung kann ein Brand oder Geräteschaden verursacht werden.

DIMENSIONS / ABMESSUNGEN

Operation Procedures

For your driving safety, keep the volume level low enough to be aware of road and traffic conditions.

Precautions:

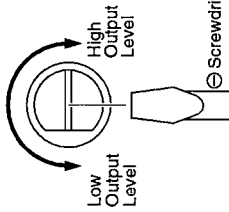
- This unit is designed to be used with a Panasonic tape player/radio model.
- This unit is automatically switched on and off if the power switch of the tape player/radio is turned on and off. The power indicator lights up when the tape player/radio is turned on.
- Due to its large output, the current consumption of the unit is also large; therefore, the unit should not be used when the engine turned off. Otherwise, the battery may deteriorate so that starting of the engine may become impossible.

Level Adjustment:

In some instances, the acoustical output from each speaker may not be balanced properly depending upon the type of speakers or tape player/radio unit to be used. If this occurs, try to adjust the volume level by turning the level adjust volume to the left or right until the output from each amplifier is balanced by using a flat-head screwdriver as shown in the illustration.

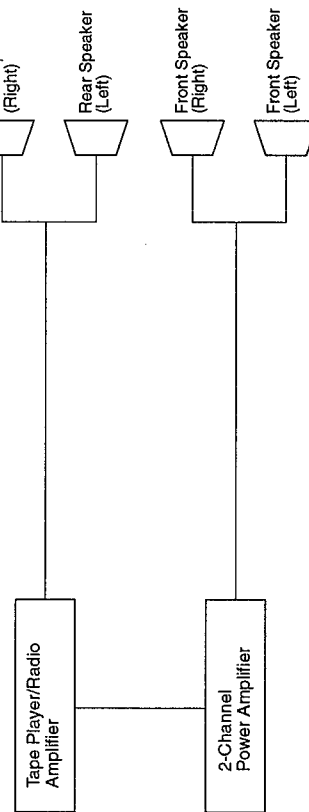
At first, the level is set at -3dB against the maximum level.

Level Adjust Volume
(Front side of the unit)

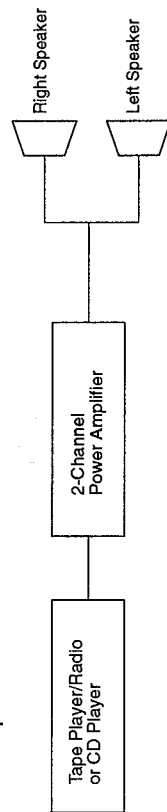


System Diagram

Standard Example:



Other Example:



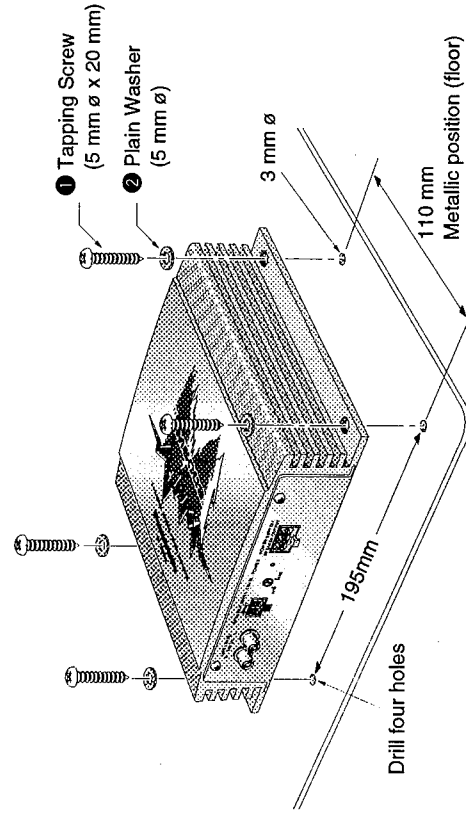
Installation

- This equipment, if possible, should be installed by a professional installer.
- In case of difficulty please consult your nearest authorized Panasonic Service Center.
- The speakers to be used with the amplifier should be able to handle more than 50W. Use of speakers with small input ratings can result in damage to the speakers.
- Since the 2-Channel Power Amplifier has a very large output, the unit should be installed in the trunk of car.
- The speaker cords and the power amplifier unit should be kept away from the antenna and antenna extension cord.
- In case of using the RCA cords, they should be kept away from the speaker cords.

Supplied Hardwares

No.	Description	Q'ty.
①	Tapping Screw (5mm ϕ x 20 mm)	4
②	Plain Washer (5mm ϕ)	4

Installing the unit to a metallic portion of the car:



Electrical Connection

Before wiring:

- This unit is to be used only in a 12-Volt, DC battery system (Car) with negative ground.
- Remove the covering of the leads about 5 mm long from their end before connecting.
- Disconnect the cable from the negative (-) battery terminal (see note below).

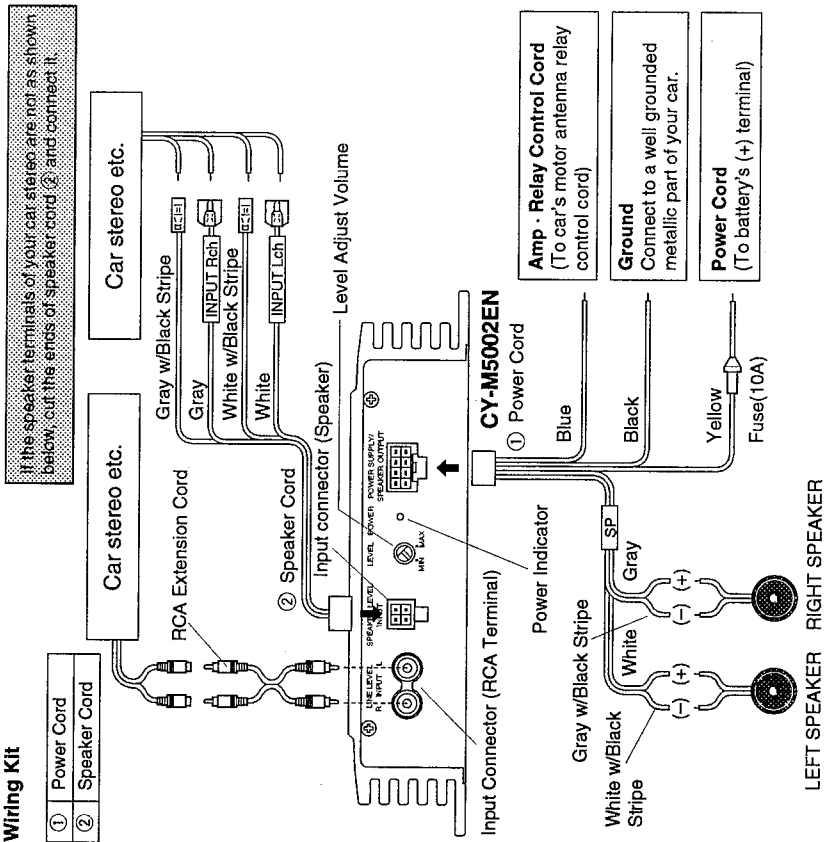
Note:

For installation in cars with trip or navigational computers, all electronic memory settings previously registered in the computer will be lost when the battery terminal is disconnected. For this type of car, battery Therefore, extra care should be taken to prevent short circuiting.

- Please read the operating and installation instructions carefully of the respective equipment before connecting it to this unit.
- Do not connect the RCA connector and speaker connector at the same time.

Wiring Kit

- ① Power Cord
- ② Speaker Cord



Grundlegende Gerätebedienung

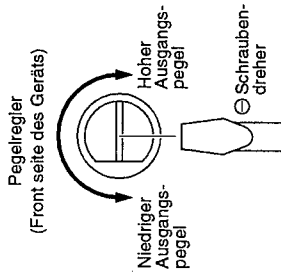
Aus Gründen der Fahrtsicherheit ist der Lautstärkepegel so einzustellen, daß auch andere Verkehrsgeräusche (Hupen usw.) vernommen werden.

Vorsichtsmaßnahmen:

- Dieses Gerät ist für ein Panasonic Autoradio entwickelt und gebaut worden.
- Dieses Gerät wird automatisch ein- und ausgeschaltet, wenn das Autoradio ein- oder ausgeschaltet wird.
- Bei eingeschaltetem Autoradio leuchtet die Betriebsanzeige.
- Aufgrund der hohen Ausgangsleistung verbraucht der Leistungsverstärker auch viel Strom. Daher sollte das Car Audio System nicht bei abgestelltem Motor angeschlossen werden, da sonst die Autobatterie zu schwach werden kann (Anlaufprobleme).

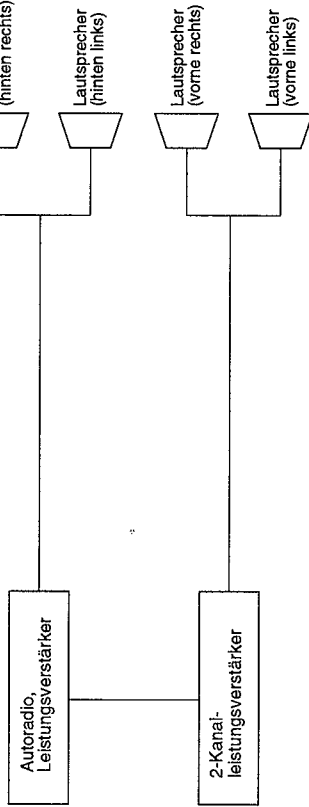
■ PegelEinstellung:

Es kann vorkommen, daß die Lautsprecheransgänge nicht richtig balanciert sind, je nach Typ der verwendeten Lautsprecher oder des jeweiligen Autoradios. In diesem Fall die Lautstärke durch Drehen des Pegelreglers nach links oder rechts einstellen, bis die Lautsprecheransgänge ausbalanciert sind. Hierzu einen normalen Schraubendreher verwenden, wie in der Abbildung gezeigt wird. Die Auswirkungen der Einstellungen sind in der Tabelle unten beschrieben. Zuerst wird der maximale Pegel auf -3 dB eingestellt.

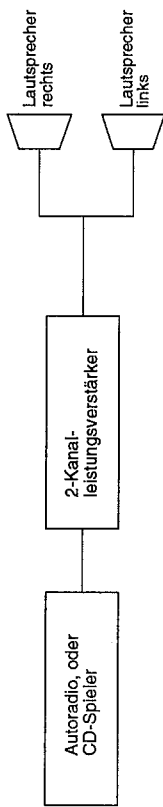


Systemschema

Standard-Beispiel:



Weitere Beispiele:



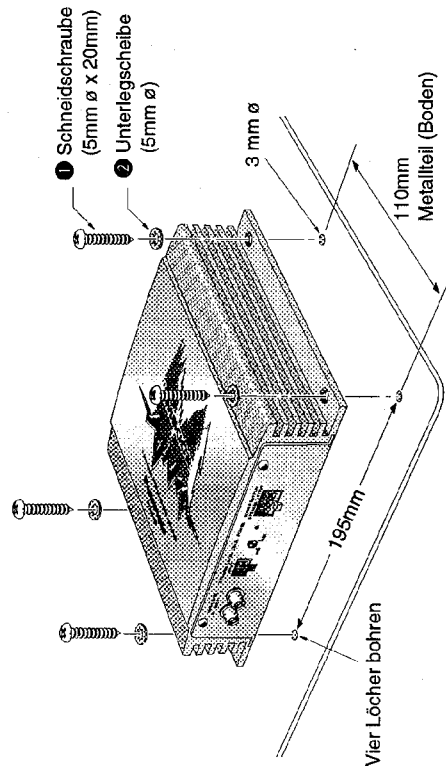
Einbau

- Diese Endstufe sollte nur von einem Fachmann eingebaut werden.
- Wenn Sie beim Einbau Schwierigkeiten haben, wenden Sie sich bitte an die nächste Panasonic-Kundendienststelle.
- Die Lautsprecher müssen eine Belastbarkeit von mindestens 50 W haben. Lautsprecher mit zu geringer Belastbarkeit können beschädigt werden.
- Aufgrund seiner hohen Ausgangsleistung sollte der Leistungsverstärker im Kofferraum installiert werden.
- Es ist darauf zu achten, daß der Leistungsverstärker und die Lautsprecherkabel genügend Abstand von der Antenne und dem Antennenkabel haben.
- Bei Gebrauch von RCA Kabeln ist darauf zu achten, daß diese genügend Abstand zu den Lautsprecherkabeln haben.

Mittelleiterte Befestigungstelle

Nr.	Bezeichnung	Anzahl
1	Schneidschraube (5mmø x 20mm)	4
2	Unterlegscheibe (5mmø)	4

Das Gerät an einem Metallteil des Wagens installieren:



Elektrischer Anschluß

Vorsichtsmaßregeln für die Installation:

- Dieses System kann nur in Verbindung mit einer 12-Volt-Gleichstrom-Batterieanlage (Auto) mit negativer Erdung verwendet werden.
- Die Isolierung für etwa 5 mm vom Ende der Kabel entfernen, bevor die Kabel angeschlossen werden.
- Vor dem Einbauen und Verkabeln das Massekabel (-) von der Batterie abklemmen.

Hinweis:

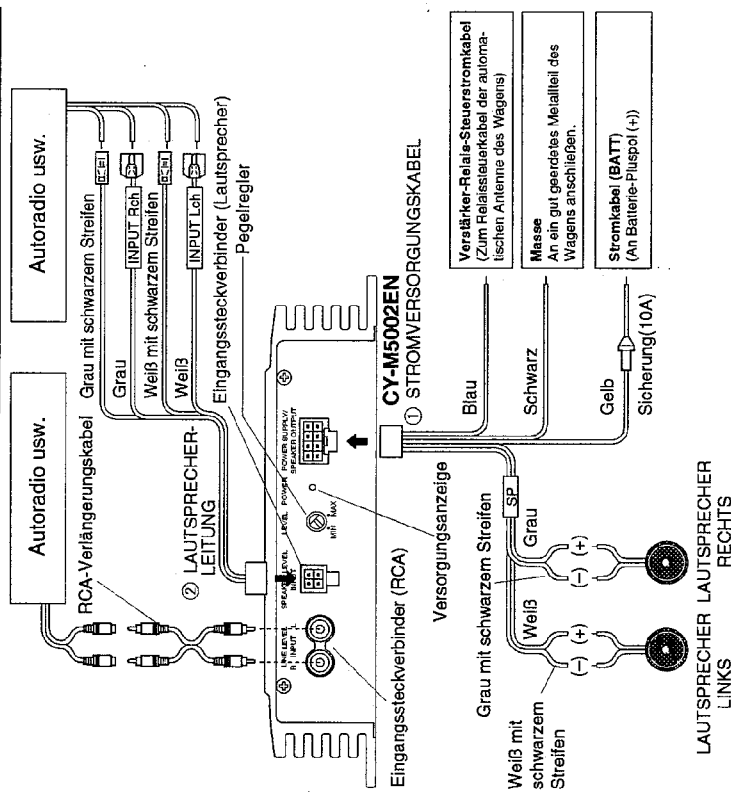
Bei mit Navigations- oder anderen Computern ausgestatteten Fahrzeugen können Computer-Speicherhalte verlorengehen, wenn die Batterie abgeklemmt wird. Bei derartig ausgestatteten Fahrzeugen sollte die Batterie nicht abgetrennt werden. In diesem Fall ist insbesondere darauf zu achten, daß kein Kurzschluss verursacht wird.

- Bei der Verkabelung genau nach der Bedienungsanleitung des jeweiligen Geräts vorgehen.
- Den RCA-Steckverbinder und den Lautsprecher-Steckverbinder nicht gleichzeitig anschließen.

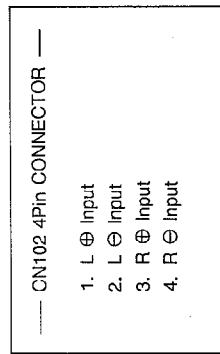
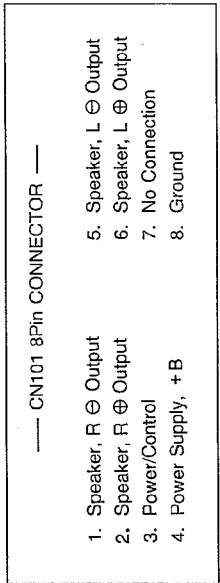
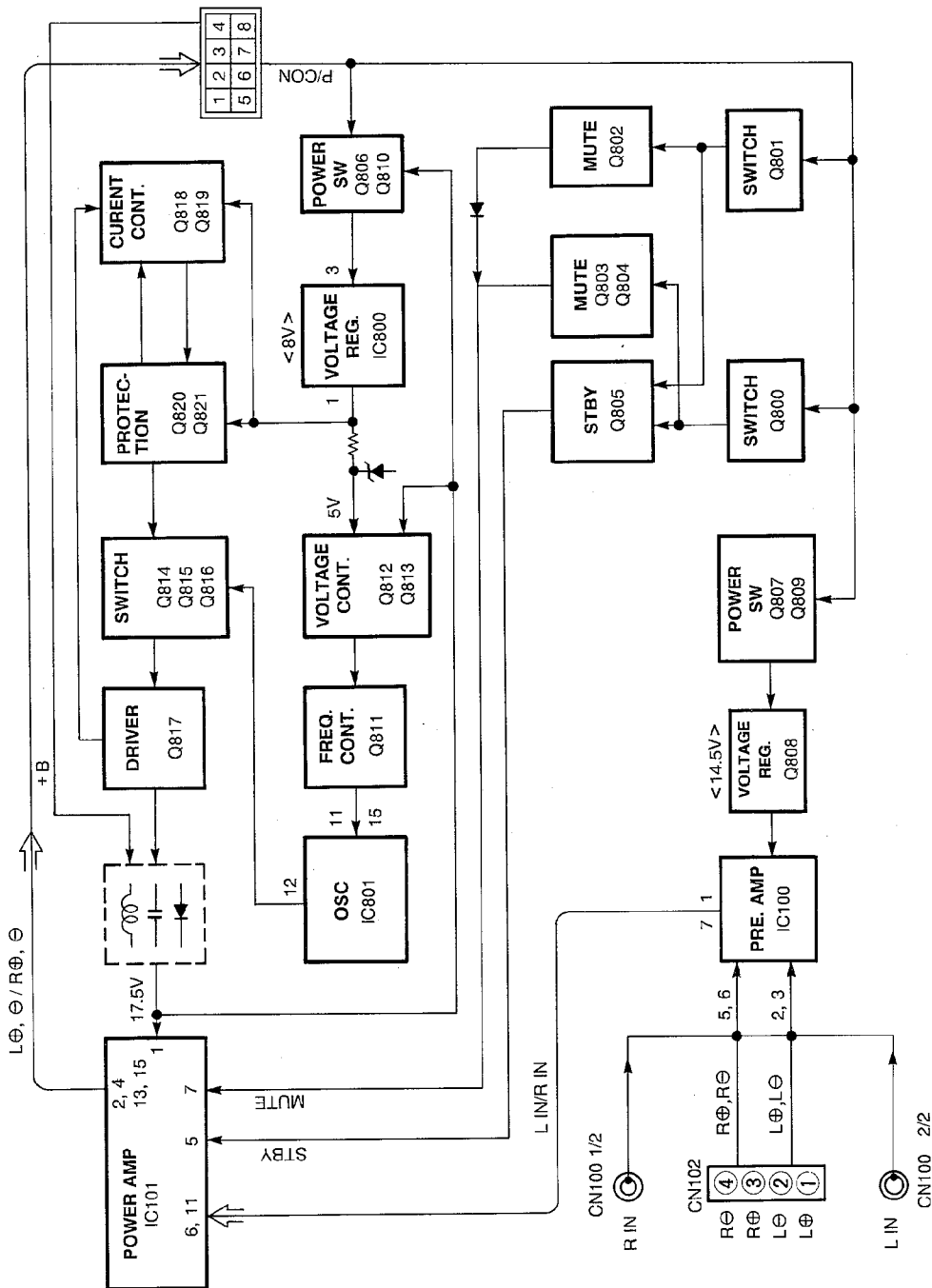
Verkabelungssatz

1	STROMVERSORGUNGSKABEL
2	LAUTSPERCHERLEITUNG

Falls die Lautsprecherkabel nicht wie unten gezeigt gesteckt sind, die Enden des Lautsprecherkabels abschneiden und dieses anschließen.



BLOCK DIAGRAM MODEL CY-M5002EN

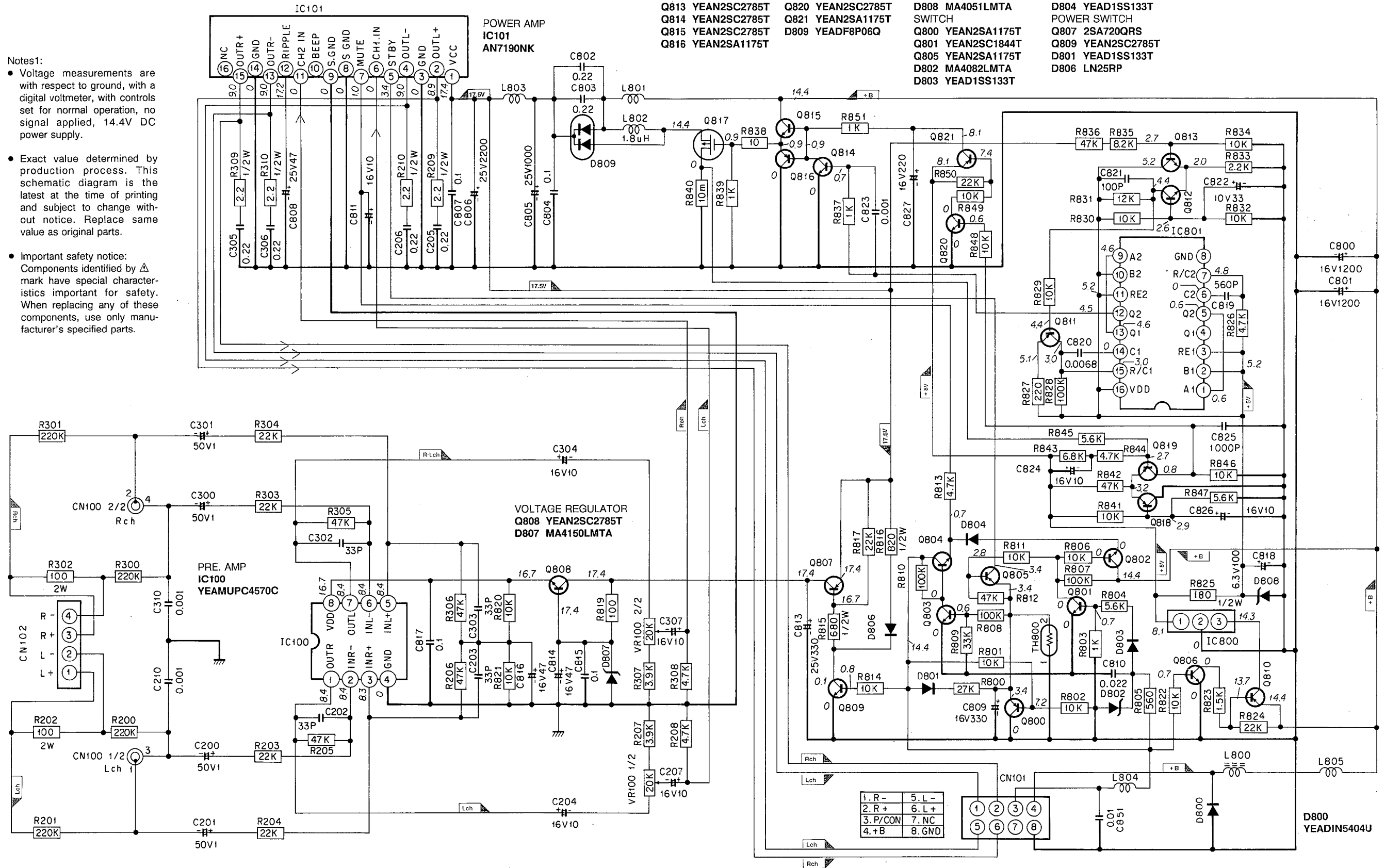


2 Channel Power Amplifier

SCHEMATIC DIAGRAM / SCHALTBILT MODEL CY-M5002EN

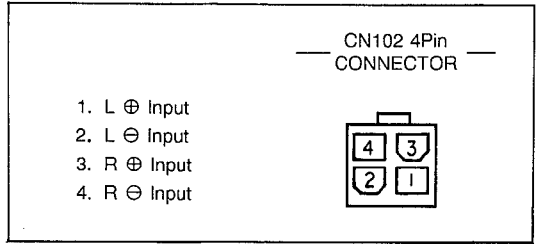
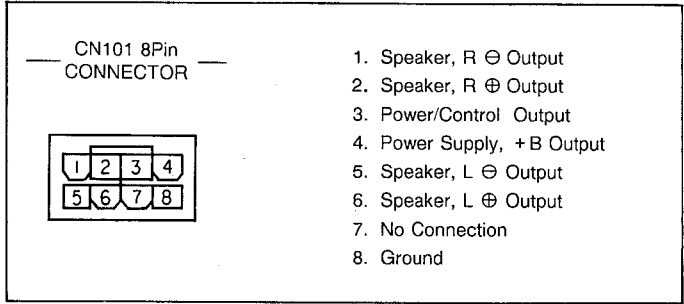
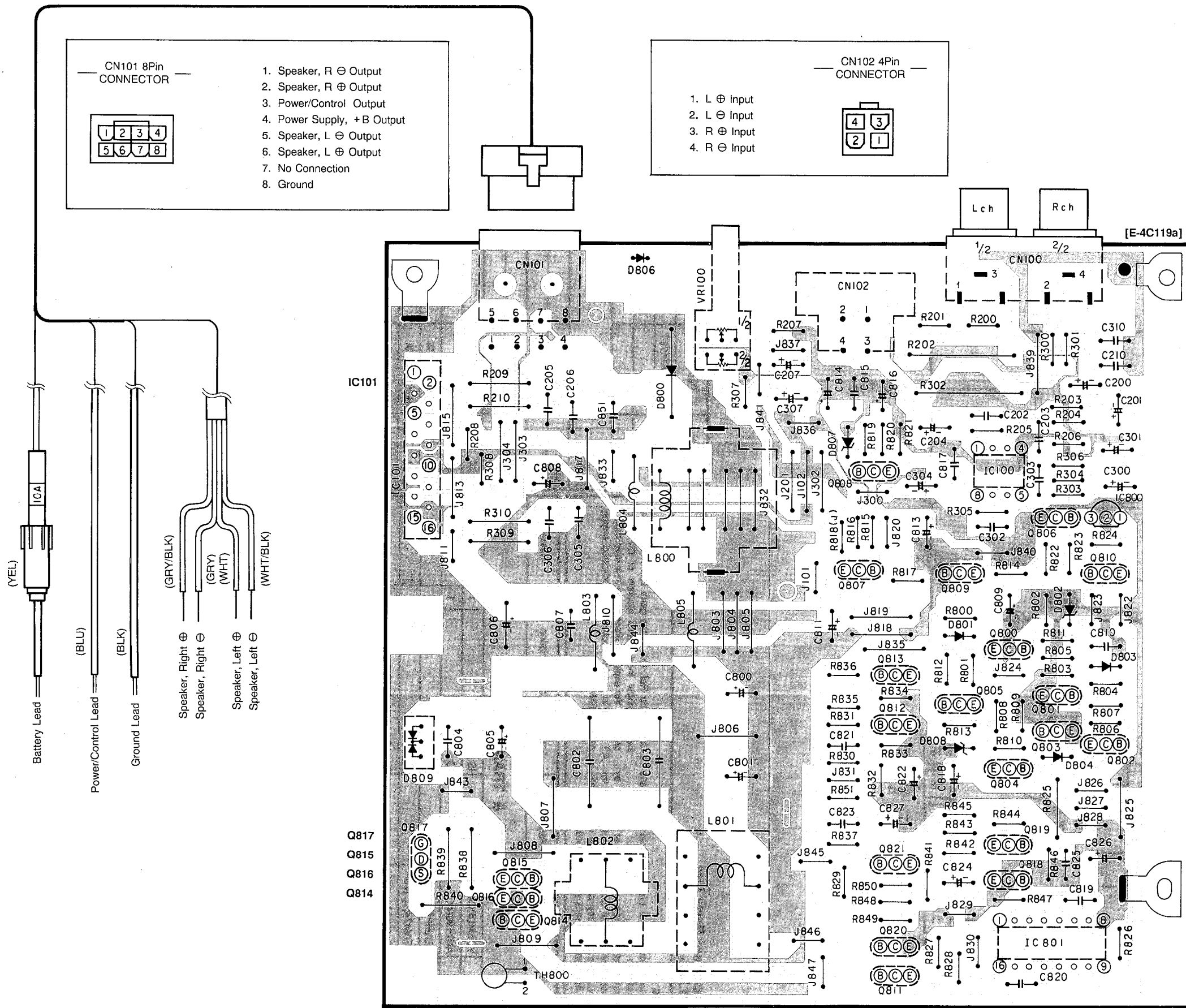
- Notes1:
- Voltage measurements are with respect to ground, with a digital voltmeter, with controls set for normal operation, no signal applied, 14.4V DC power supply.
 - Exact value determined by production process. This schematic diagram is the latest at the time of printing and subject to change without notice. Replace same value as original parts.
 - Important safety notice: Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

- DC-DC CONVERTER
 IC801 YEAM74HC123P
 Q811 YEAN2SA1175T
 Q812 YEAN2SC2785T
 Q813 YEAN2SC2785T
 Q814 YEAN2SC2785T
 Q815 YEAN2SC2785T
 Q816 YEAN2SA1175T
- Q817 YEANAJ30N06E
 Q818 YEAN2SA1175T
 Q819 YEAN2SA1175T
 Q820 YEAN2SC2785T
 Q821 YEAN2SA1175T
 D809 YEADF8P06Q
- VOLTAGE REGULATOR
 IC800 YEAMPC78L08T
 Q806 YEAN2SC1844T
 Q810 YEAN2SB810T
 D808 MA4051LMTA
 SWITCH
 Q800 YEAN2SA1175T
 Q801 YEAN2SC1844T
 Q805 YEAN2SA1175T
 D802 MA4082LMTA
 D803 YEAD1SS133T
- MUTE
 Q802 YEAN2SC2785T
 Q803 YEAN2SC2785T
 Q804 YEAN2SC2785T
 D804 YEAD1SS133T
 POWER SWITCH
 Q807 2SA720QRS
 Q809 YEAN2SC2785T
 D801 YEAD1SS133T
 D806 LN25RP



2 Channel Power Amplifier

WIRING DIAGRAM / VERDRAHTUNG MODEL CY-M5002EN



Pin	IC100	IC101	IC800	IC801
1	8.4	17.4	8.1	0.6
2	8.4	8.9	0	5.2
3	8.3	0	17.4	5.2
4	0	9.0		
5	8.4	3.4		0.6
6	8.4	0		0
7	8.4	4.0		4.8
8	16.7	0		0
9		0		4.6
10				5.2
11		0		5.2
12		17.2		4.5
13		9.0		4.6
14		0		0
15		9.0		3.0
16				5.2

	B	C	E
Q800	7.2	0	3.4
Q801	0.7	0	0
Q802	0	14.4	0
Q803	0.6	0	0
Q804	0	14.4	0.7
Q805	2.8	3.4	3.4
Q806	0.7	0	0
Q807	16.7	17.4	17.4
Q808	17.4	17.4	16.7
Q809	0.8	0.1	0
Q810	16.7	17.4	17.4
Q811	4.4	3.0	5.1
Q812	2.6	4.4	2.0
Q813	2.7	5.2	2.0
Q814	0.7	0.9	0
Q815	0.9	14.4	0.9
Q816	0.9	0	0.9
Q817	2.9	0	3.2
Q818	2.7	0.8	3.2
Q819	0.6	0	0
Q820	0.6	0	0
Q821	7.4	8.1	8.1

	G	D	S
Q817	0.9	14.4	0

- IC100
- Q808
- IC800
- Q806
- Q807
- Q810
- Q809
- Q800
- Q801
- Q805
- Q812
- Q803
- Q802
- Q804
- Q819
- Q821
- Q818
- IC801
- Q820
- Q811

ICs & Transistors

Pin No. 1

Pin No

IC100 8Pin
IC801 16Pin

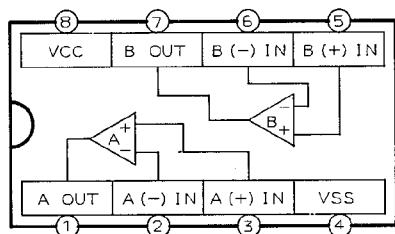
IC800 3Pin

• Q817 • Other transistors

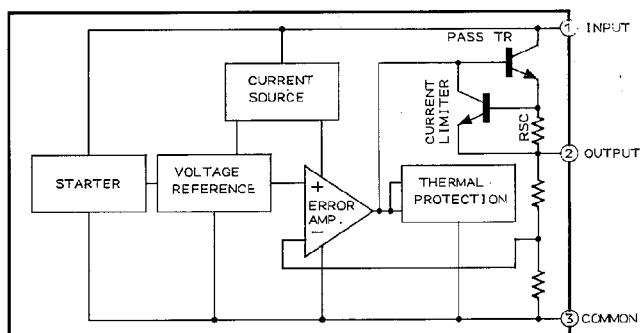
2 Channel Power Amplifier

IC BLOCK DIAGRAM

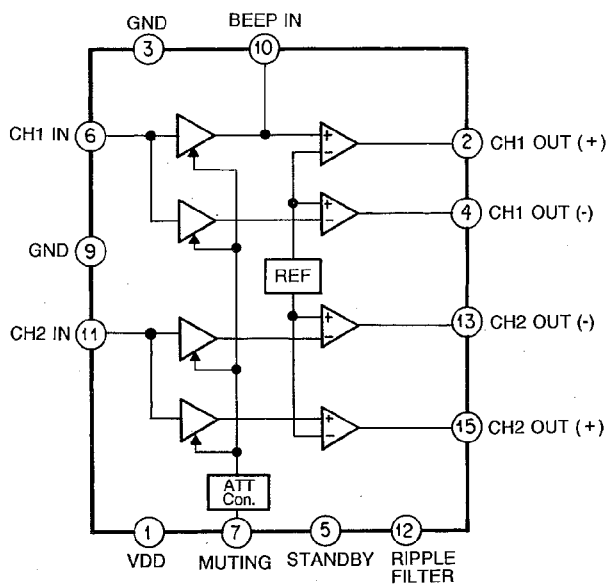
● IC100 YEAMUPC4570C



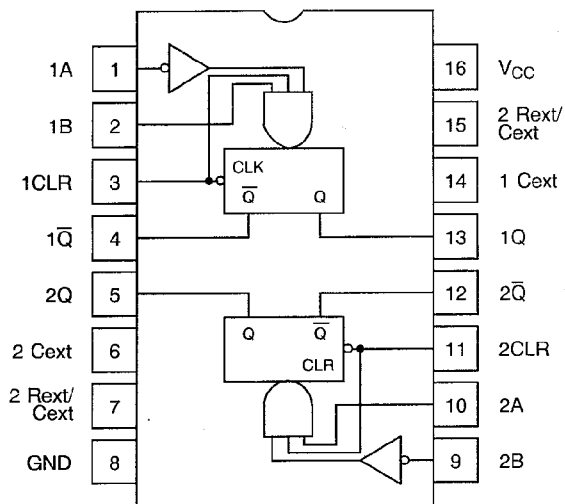
● IC800 YEAMPC78L08T



● IC101 AN7190K



● IC801 YEAM74HC123P



**Replacement Parts List
Model NO. CY-M5002EN**

NOTES :

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice : Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Next to the Ref. No. in the parts list is a location key, to show the general location of the parts shown in the exploded drawing, as in a road map.
4. T marks in remarks column are indicated supply parts of TAMACO.

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
ICS & TRANSISTORS					
[E-4C119]					
IC100	YEAMUPC4570C		IC	1	
IC101	AN7190NK		IC	1	
IC800	YEAMPC78L08T		IC	1	
IC801	YEAM74HC123P		IC	1	T
Q800	YEAN2SA1175T		Transistor	1	
Q801	YEAN2SC1844T		Transistor	1	
Q802	YEAN2SC2785T		Transistor	1	
Q803	YEAN2SC2785T		Transistor	1	
Q804	YEAN2SC2785T		Transistor	1	
Q805	YEAN2SA1175T		Transistor	1	
Q806	YEAN2SC2785T		Transistor	1	
Q807	2SA720QRS		Transistor	1	
Q808	YEAN2SC2785T		Transistor	1	
Q809	YEAN2SC2785T		Transistor	1	
Q810	YEAN2SB810T		Transistor	1	
Q811	YEAN2SA1175T		Transistor	1	
Q812	YEAN2SC2785T		Transistor	1	
Q813	YEAN2SC2785T		Transistor	1	
Q814	YEAN2SC2785T		Transistor	1	
Q815	YEAN2SC2785T		Transistor	1	
Q816	YEAN2SA1175T		Transistor	1	
Q817	YEANAJ30N06E		Transistor	1	
Q818	YEAN2SA1175T		Transistor	1	
Q819	YEAN2SA1175T		Transistor	1	
Q820	YEAN2SC2785T		Transistor	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
Q821	YEAN2SA1175T		Transistor	1	
DIODES					
[E-4C119]					
D800	YEADIN5404U		Diode	1	T
D801	YEAD1SS133T		Diode	1	
D802	MA4062LMITA		Diode	1	
D803	YEAD1SS133T		Diode	1	
D804	YEAD1SS133T		Diode	1	
D806	LN2BRP		Diode	1	
D807	MA4150LMITA		Diode	1	
D808	MA4051LMITA		Diode	1	
D809	YEADF8P06Q		Diode	1	T
CAPACITORS					
[E-4C119]					
C200	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C201	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C202	YEU05SL330T		Ceramic, 33PF 50WV	1	T
C203	YEU05SL330T		Ceramic, 33PF 50WV	1	T
C204	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C205	ECQV1H224JL2		Polyester, 0.22MFD 50WV	1	
C206	ECQV1H224JL2		Polyester, 0.22MFD 50WV	1	
C207	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C210	YEU05B102K		Ceramic, 0.001MFD 50WV	1	
C300	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C301	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C302	YEU05SL330T		Ceramic, 33PF 50WV	1	T
C303	YEU05SL330T		Ceramic, 33PF 50WV	1	T
C304	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C305	ECQV1H224JL2		Polyester, 0.22MFD 50WV	1	
C306	ECQV1H224JL2		Polyester, 0.22MFD 50WV	1	

MODEL CY-M5002EN

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
C307	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C310	YEU05B102K		Ceramic, 0.001MFD 50WV	1	
C800	EEUFA1C122		Electrolytic AL, 1200MFD 16WV	1	T
C801	EEUFA1C122		Electrolytic AL, 1200MFD 16WV	1	T
C802	ECQP1224JZ		Polyester, 0.22MFD 16WV	1	T
C803	ECQP1224JZ		Polyester, 0.22MFD 16WV	1	T
C804	ECQV1H104JM2		Polyester, 0.1MFD 50WV	1	
C805	EEUFA1E102		Electrolytic AL, 1000MFD 25WV	1	T
C806	ECEA1EPU222		Electrolytic AL, 2200MFD 25WV	1	T
C807	ECQV1H104JM2		Polyester, 0.1MFD 50WV	1	
C808	ECEA1EU470B		Electrolytic AL, 47MFD 25WV	1	
C809	ECEA1CU331B		Ceramic, 330MFD 16WV	1	
C810	ECQV1H223JL3		Polyester, 0.022MFD 50WV	1	T
C811	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C813	EEUFA1E331		Electrolytic AL, 330MFD 25WV	1	T
C814	ECEA1CU470B		Electrolytic AL, 47MFD 16WV	1	
C815	ECQV1H104JM2		Polyester, 0.1MFD 50WV	1	
C816	ECEA1CU470B		Electrolytic AL, 47MFD 16WV	1	
C817	ECQV1H104JM2		Polyester, 0.1MFD 50WV	1	
C818	ECEA0JU101B		Electrolytic AL, 100MFD 6.3WV	1	
C819	YEU05B561K		Ceramic, 560PF 50WV	1	
C820	YEE05X682M		Ceramic, 0.0068MFD 50WV	1	
C821	YEU05B101K		Ceramic, 100PF 50WV	1	
C822	ECEA0JU330B		Electrolytic AL, 33MFD 6.3WV	1	
C823	YEU05B102K		Ceramic, 0.001MFD 50WV	1	
C824	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C825	YEU05B102K		Ceramic, 0.001MFD 50WV	1	
C826	ECEA1CU100B		Electrolytic AL, 10MFD 16WV	1	
C827	ECEA1CU221B		Ceramic, 220MFD 16WV	1	
C851	ECQV1H103JL3		Polyester, 0.01MFD 50WV	1	T

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
RESISTORS					
[E-4C119]					
R200	ERDS2TJ224		Carbon, 220k ohms 0.25W	1	
R201	ERDS2TJ224		Carbon, 220k ohms 0.25W	1	
R202	ERG2ANJ101		Carbon, 100 ohms 2W	1	
R203	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R204	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R205	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R206	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R207	ERDS2TJ392		Carbon, 3.9k ohms 0.25W	1	
R208	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
R209	ERDS1FJ2R2		Carbon, 2.2 ohms 0.25W	1	
R210	ERDS1FJ2R2		Carbon, 2.2 ohms 0.25W	1	
R300	ERDS2TJ224		Carbon, 220k ohms 0.25W	1	
R301	ERDS2TJ224		Carbon, 220k ohms 0.25W	1	
R302	ERG2ANJ101		Carbon, 100 ohms 2W	1	
R303	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R304	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R305	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R306	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R307	ERDS2TJ392		Carbon, 3.9k ohms 0.25W	1	
R308	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
R309	ERDS1FJ2R2		Carbon, 2.2 ohms 0.25W	1	
R310	ERDS1FJ2R2		Carbon, 2.2 ohms 0.25W	1	
R800	ERDS2TJ273		Carbon, 27k ohms 0.25W	1	
R801	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R802	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R803	ERDS2TJ102		Carbon, 1k ohms 0.25W	1	
R804	ERDS2TJ662		Carbon, 5.6k ohms 0.25W	1	
R805	ERDS2TJ561		Carbon, 560 ohms 0.25W	1	
R806	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R807	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R808	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R809	ERDS2TJ333		Carbon, 33k ohms 0.25W	1	

MODEL CY-M5002EN

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R810	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R811	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R812	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R813	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
R814	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R815	ERDS1TJ681		Carbon, 680 ohms 0.25W	1	
R816	ERDS1TJ821		Carbon, 820 ohms 0.25W	1	
R817	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R819	ERDS2TJ101		Carbon, 100 ohms 0.25W	1	
R820	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R821	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R822	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R823	ERDS2TJ152		Carbon, 1.5k ohms 0.25W	1	
R824	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R825	ERDS1FJ181		Carbon, 180 ohms 0.25W	1	
R826	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
R827	ERDS2TJ221		Carbon, 220 ohms 0.25W	1	
R828	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R829	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R830	EROS2TKF1002		Resistor, 10k ohms 0.25W	1	
R831	ERDS2TJ123		Carbon, 12k ohms 0.25W	1	
R832	EROS2TKF1002		Resistor, 10k ohms 0.25W	1	
R833	ERDS2TJ222		Carbon, 2.2k ohms 0.25W	1	
R834	EROS2TKF1002		Resistor, 10k ohms 0.25W	1	
R835	EROS2TKF8201		Resistor, 8.2k ohms 0.25W	1 T	
R836	EROS2TKF4702		Resistor, 47k ohms 0.25W	1 T	
R837	ERDS2TJ102		Carbon, 1k ohms 0.25W	1	
R838	ERD25TJ100		Carbon, 10 ohms 0.25W	1	
R839	ERD25TJ102		Carbon, 1k ohms 0.25W	1	
R840	YEK8511		Resistor, 0.01 ohms 0.25W	1 T	
R841	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R842	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R843	ERDS2TJ682		Carbon, 6.8k ohms 0.25W	1	
R844	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
R845	ERDS2TJ562		Carbon, 5.6k ohms 0.25W	1	
R846	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R847	ERDS2TJ562		Carbon, 5.6k ohms 0.25W	1	
R848	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R849	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R850	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R851	ERDS2TJ102		Carbon, 1k ohms 0.25W	1	
CONNECTORS					
CN100	YEAE4CRCA012		2P RCA Connector	1	T
CN101	YEAE4C01065		8P Connector	1	T
CN102	YEAE4C01064		4P Connector	1	T
VARIABLE RESISTORS					
VR100	YEVK4C09B011		Variable Resistors	1	T
COILS					
L800	YETQ024C022		Choke Coil	1	T
L801	YETQ024C021		Choke Coil	1	T
L802	YETQ024C023		Choke Coil	1	T
L803	FBA04HA900NA		Coil	1	T
L804	FBA04HA900NA		Coil	1	T
L805	FBA04HA900NA		Coil	1	T
THERMISTOR					
TH800	ERTD2FIL154S		Thermistor	1	T

MODEL CY-M5002EN

Ref. No.	Part No.	Part Code	Part Name & Description	Fcs set	Remarks
PRINTINGS					
	YFM284C217ZA		Instruction Book	1	T
	YFM284C214ZA		Instruction Book	1	T
INSTALLATION PARTS					
	YAJ014C029ZA		Power Cord	1	T
	YAJ074C021ZA		SP Cord	1	T
	ZZBIS-1		Screw Ass'y	1	T
MISCELLANEOUS					
1	(4-B) YEFF01818		Heat Sink	1	T
2	(1-B) YEFA011579		Chassis	1	T
3	(2-C) YEFX0213889		Bracket	1	T
4	(3-B) YEFX0213890		Bracket, IC	1	T
5	(3-A) YEFX0213940		Bracket, IC	1	T
6	(3-B) (3-C) YAT034C009ZA		Terminal	2	T
7	⊙ XTW3 + 6JFX		Screw	3	T
8	⊙ XTB3 + 6FN		Screw	4	T
9	⊗ YJT034C016ZA		Screw	4	T
10	△ YEJT034C006		Screw	4	T
11	☆ YEJT034C011		Screw	2	T

EXPLODED VIEW / AUFGELOÖTE DARSTELLUNGS

■ Numbers in ○ are indicated REF.No. in the REPLACEMENT PARTS LIST

■ The symbols next to the screws indicate as follows.

7	⊙	XTW3+6JFX	⊕Screw 3mmφ×6mm
8	⊙	XTB3+6FN	⊕Screw 3mmφ×6mm
9	⊗	YJT034C016ZA	⊕Screw
10	△	YEJT034C006	⊕Screw
11	☆	YEJT034C011	⊕Screw

