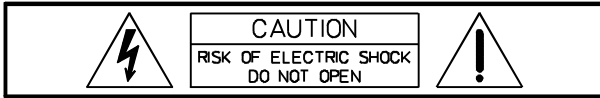




## AC ONE AUDIO CONTROLLER

## IMPORTANT SAFETY INSTRUCTIONS



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,  
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.  
AVIS: RISQUÉ DE CHOC ELECTRIQUE. NE PAS OUVRIR.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a damp cloth.
7. Do not block any of the ventilation openings.  
Install in accordance with the manufactures instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
9. Only use attachments/accessories specified by the manufacturer.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

### For US and CANADA only:

Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

## IMPORTANT SERVICE INSTRUCTIONS

**CAUTION:** These servicing instructions are for use by qualified personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the Operating Instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

1. Security regulations as stated in the EN 60065 (VDE 0860 / IEC 65) and the CSA E65 - 94 have to be obeyed when servicing the appliance.
2. Use of a mains separator transformer is mandatory during maintenance while the appliance is opened, needs to be operated and is connected to the mains
3. Switch off the power before retrofitting any extensions, changing the mains voltage or the output voltage.
4. The minimum distance between parts carrying mains voltage and any accessible metal piece (metal enclosure), respectively between the mains poles has to be **3 mm** and needs to be minded at all times.  
The minimum distance between parts carrying mains voltage and any switches or breakers that are not connected to the mains (secondary parts) has to be **6 mm** and needs to be minded at all times.
5. Replacing special components that are marked in the circuit diagram using the security symbol (Note) is only permissible when using original parts.
6. Altering the circuitry without prior consent or advice is not legitimate.
7. Any work security regulations that are applicable at the location where the appliance is being serviced have to be strictly obeyed. This applies also to any regulations about the work place itself.
8. All instructions concerning the handling of **MOS** - circuits have to be observed.

**Note:**  **SAFETY COMPONENT (HAS TO BE REPLACED WITH ORIGINAL PART ONLY)**

## WARRANTY (Limited)

Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid.

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**Incidental and Consequential Damages Excluded:** Product repair or replacement and return to the customer are the only remedies provided to the customer. Electro-Voice shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **Other Rights:** This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

**Electro-Voice Electronics** are guaranteed against malfunction due to defects in materials or workmanship for a period of three (3) years from the date of original purchase. Additional details are included in the Uniform Limited Warranty Statement.

Specifications subject to change without notice.

# Electro-Voice®

600 Cecil Street, Buchanan, Michigan 49107, Phone 616/695-6831, Fax: 616/695-1304

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Fax: 011-852/351-3329



Technische Informationen

*Architects and engineers specifications*

## **ACONE** AUDIO CONTROLLER

### **Beschreibung**

Höchste Anforderungen an Schalldruck, Reichweite und Soundqualität lassen sich in Audioanlagen nur mit aktiven Mehrweglautsprechersystemen realisieren bei denen die unterschiedlichen Frequenzbereiche des Audiosignals jeweils getrennt verstärkt und wiedergegeben werden. Das vergleichsweise beste Preis-Leistungsverhältnis bieten Aktiv 2-Weganlagen mit Subwoofern. Der Bassanteil des Audiosignals wird über die Subwoofer wiedergegeben, der Mittel-Hochtonanteil und die Vocals über hochwertige Fullrangeboxen.

Ein wesentlicher Vorteil von Aktiv 2-Weganlagen mit Subwoofern liegt unter anderem darin begründet, daß die Vocals nicht auf verschiedene Lautsprechersysteme aufgeteilt sind. Dadurch ist eine problemlose Justierung des Soundsystems möglich. Komplizierte Einmessarbeiten sind - im Gegensatz zu aktiven 3-Weg oder 4-Wegsystemen - nicht notwendig.

Auf kleinen Bühnen oder in kleineren Räumen kann mit einem Mono-Subwoofer gearbeitet werden weil die Bässe unter derartigen Bedingungen kaum geortet werden können. Auf größeren Bühnen sind getrennte Subwoofer für beide Seiten unerlässlich, weil sonst zu große Lautstärkeunterschiede zwischen den Bässen und Höhen auf der Bühne und an verschiedenen Zuhörerplätzen auftreten können. Ein zentral angeordneter Mono-Subwoofer kann natürlich vorteilhaft als Ergänzung eingesetzt werden.

Der ACONE Controller wurde zum Aufbau höchstwertiger Aktiv-2-Wegsysteme mit Subwoofern entwickelt. Als Leistungsverstärker werden in derartigen Systemen professionelle lineare Leistungsendstufen wie beispielsweise Electro-Voice P1200, P2000, P3000 oder Q44, Q66 eingesetzt. Beim Einsatz von Prozessorendstufen wie beispielsweise Electro-Voice P1250 wird der Endstufenprozessorteil einfach ausgeschaltet.

Die Installation und Bedienung des ACONE Controllers ist vollkommen problemlos, der Anwender braucht sich nicht mit der komplexen Materie von Weichenfunktionen und Entzerrern zu beschäftigen. Alle Regler zur Anpassung an die Raumakustik und die Lautsprecherkabinette sind auf der Frontseite zugänglich, die komplizierte elektronische Verknüpfung der Einstellungen wird automatisch intern realisiert. Die neuentwickelte PowerMax12 Weichenfunktion (Patents Pending) nutzt Endstufenleistung und die Übertragungseigenschaften der Boxen optimal. Dadurch werden klanglich erheblich bessere Ergebnisse mit geringerem Aufwand erzielt als mit herkömmlichen Frequenzweichen oder Controllern.

Der ACONE Controller eignet sich auch exzellent zum Aufbau von Aktiv 2-Weg Instrumentalanlagen für Keyboards, Bass und Drums und vermeidet durch die PowerMax12 Weichenfunktion den in herkömmlichen aktiven Instrumentalanlagen häufig beklagten „lack-of-punch-and-definition“.

Mit dem erstklassigen Dynamikbereich von über 116dB, einem extrem niedrigen Geräuschpegel und herausragendem Preis-Leistungsverhältnis ist der Einsatz des ACONE Controllers auch in kritischen Anwendungen in der Festinstallation eine bevorzugte Alternative zu herkömmlichen Frequenzweichen und Controllern.

### **Description**

Meeting the highest requirements of modern audio applications - especially, when it comes to sound pressure level, coverage and sound quality - is only possible when using active multi-component loudspeaker systems which provide the possibility to separately amplify and reproduce the audio signal's individual frequency ranges. Active 2-way installations with additional sub woofer systems probably offer the best price-performance ratio. The low frequency range of the audio signal is reproduced by the sub woofers while high-quality full-range cabinets take care of the Mid/Hi frequencies and vocals.

One of the essential advantages when using active 2-way systems with additional sub woofers is the fact that the vocals are not divided between several speaker systems. This, in return, offers more convenience when adjusting the sound system. Unlike than with active 3- or 4-way configurations - difficult analyzing and measuring of sound fields is unnecessary.

Since locating low-frequency sound is merely impossible, simply using monaural sub woofers is absolutely sufficient for smaller stages or rooms. On wider stages it is indispensable to use individual sub woofer systems for both sides. Otherwise, the level differences between bass and treble would result in audible degradation of the overall sound. Of course, adding a centrally located sub woofer might additionally improve the sound quality.

The ACONE Controller has been designed to be used in high-performance installations that employ active 2-way systems plus sub woofers. Applications like these also mostly incorporate professional linear power amplifiers like the Electro-Voice P1200, P2000, P3000 or Q44, Q66. When using processor controlled power amplifiers like the Electro-Voice P1250, the processor section is simply switched off.

Installing and operating the ACONE Controllers is easy as can be since the user does not need to know any complex detail about crossover functions and equalization. All controls for matching the sound to different acoustic conditions and loudspeaker systems are located on the front panel. Difficult tasks - like electronic signal routing and settings for instance - are automatically carried out inside the appliance. The newly designed PowerMax12 crossover function (patents pending) optimally utilizes amplifier output power and loudspeaker transmission capacities. Compared to conventional crossovers or controllers, this results in an improved overall sound quality which is achieved with less effort.

The ACONE Controller is also most suitable for integration in active 2-way instrument reinforcement applications for keyboards, E-bass and drums. The PowerMax12 crossover function eliminates the often complained about "lack-of-punch-and-definition", like it is common for conventional active musical instrument reinforcement systems.

Its excellent dynamic range of more than 116dB, the extremely low noise level and the outstanding price-performance ratio makes the ACONE Controller an advantageous alternative to conventional crossover and controller solutions - even in the critical field of permanent installation.

## Description

Satisfaire aux exigences des applications audio modernes – surtout lorsqu’il s’agit de pression sonore, de qualité sonore et de couverture – n’est possible qu’en utilisant des systèmes de haut-parleurs actifs multi-voies offrant la possibilité d’amplifier et de reproduire séparément le signal audio de chaque bande de fréquences. Les installations actives à deux voies avec sub-woofers offrent probablement le meilleur rapport performance-prix. Les fréquences basses du signal audio sont reproduites par les sub-woofers alors que des enceintes large bande de qualité se chargent des fréquences médium/hautes et des voix.

Un des avantages essentiels offert par l’utilisation des systèmes actifs à deux voies avec des sub-woofers supplémentaires est que les voix ne sont pas réparties sur plusieurs systèmes de haut-parleurs. Ce qui est beaucoup plus pratique pour le réglage de la sonorisation. Contrairement aux configurations actives à 3 ou 4 voies, les mesures et les analyses compliquées des champs sonores ne sont pas nécessaires.

Pour les scènes ou les salles de petites dimensions, comme les sons basses fréquences sont pratiquement impossibles à situer, il suffit d’utiliser des sub-woofers mono. Pour les scènes plus grandes il est absolument indispensable d’utiliser un système de sub-woofers séparés pour chaque côté. Sinon, les différences de niveau entre les basses et les aigus provoqueront une dégradation audible du son dans son ensemble. Bien sûr, l’ajout d’un sub-woofer placé au centre améliorera encore la qualité sonore.

Le contrôleur ACONE a été conçu pour être utilisé dans des installations performantes employant des systèmes actifs à deux voies avec sub-woofers. De telles applications incluent fréquemment des amplificateurs de puissance linéaires professionnels comme les Electro-Voice P1200, P2000, P3000 ou Q44, Q66. Lors de l’utilisation d’amplificateurs de puissance contrôlés par processeur comme le Electro-Voice P1250, la section processeur est tout simplement désactivée.

L’installation et le maniement des contrôleurs ACONE est aussi simple que possible, puisque l’utilisateur n’a besoin de connaître les détails complexes des fonctions de Crossover, ou d’égalisation. Tous les contrôles permettant d’adapter le son aux diverses conditions acoustiques et aux divers systèmes de haut-parleurs se trouvent en face avant. Les tâches difficiles – comme l’acheminement du signal électronique et les réglages, par exemple - sont automatiquement pris en charge en dehors de l’appareil. La fonction de Crossover, nouvellement conçue, du PowerMax12 (brevet en cours) optimise la puissance de sortie de l’amplificateur en fonction des caractéristiques du haut-parleur. Comparé aux Crossovers ou aux contrôleurs conventionnels, le résultat est une qualité sonore globale améliorée qui est obtenue avec moins d’efforts.

Le contrôleur ACONE convient également parfaitement lorsqu’il est intégré dans des applications actives à 2 voies pour le renforcement d’instruments, tels les claviers, les basses et les batteries électriques. La fonction Crossover du PowerMax12 élimine le sempiternel "manque-de-punch-et-de-définition", commun aux systèmes actifs conventionnels utiliser pour le renforcement des instruments de musique.

Son excellente dynamique, de plus de 116 dB, son niveau de bruit extrêmement bas et son rapport performance-prix très attractif font du contrôleur ACONE une alternative avantageuse aux solutions de Crossover et de contrôleurs conventionnels – même dans le domaine critique des installations permanentes.

## Technical Specifications ACONE

All level and frequency controls in center position, Lo-EQ and Hi-EQ controls at 0dB, MID-EQ control at -4dB, unless otherwise specified.

Note: 0dBu = 0.775V

### Crossover

Mode	2-Way-Stereo + SUB Mono
Frequency, sweepable	45Hz ... 160Hz
Filter Type	PowerMax12*

### LO-Cut

Filter Type	12dB/octave
Frequency, sweepable	20Hz ... 100Hz

### Equalization

LO-EQ	50Hz, Shelving, 0dB ... +12dB
MID-EQ	4kHz, Dip, -8dB ... 0dB
HI-EQ	15kHz, Lift, 0dB ... +8dB

### Inputs A, B

Type	Active Balanced, XLR-female
Input Impedance	20kOhm
Maximum Level	+20dBu
Rated Level	+6dBu
Gain Range	-∞ ... + 6dB
Parallel Outputs A, B	XLR-male

### Outputs HI, LO, SUB

Type	Active Balanced, XLR-male
Output Impedance	75 Ohm
Maximum Level	+ 20dBu
Rated Level	+ 6dBu
Gain Range	-∞ ... + 6dB

### Frequency Response,

-3dB ref.1kHz, Lo-Cut 20Hz	16Hz ... 150kHz
----------------------------	-----------------

**Nominal Gain** 0dB

**Maximum Gain** +12dB

**Dynamic Range**, +20dBu, noise A-weighted 117dB

**THD+N**, 20Hz ... 20kHz, +6dBu < 0.02%

**THD+N**, typical, +6dBu 0.003%

**Crosstalk** <-80dB

**Mute Switch Rejection** > 90dB

**Level Control Attenuation** > 80dB

**Power Requirements**, 50Hz....60Hz, voltage selector 100V ... 120V, 220V ... 240V

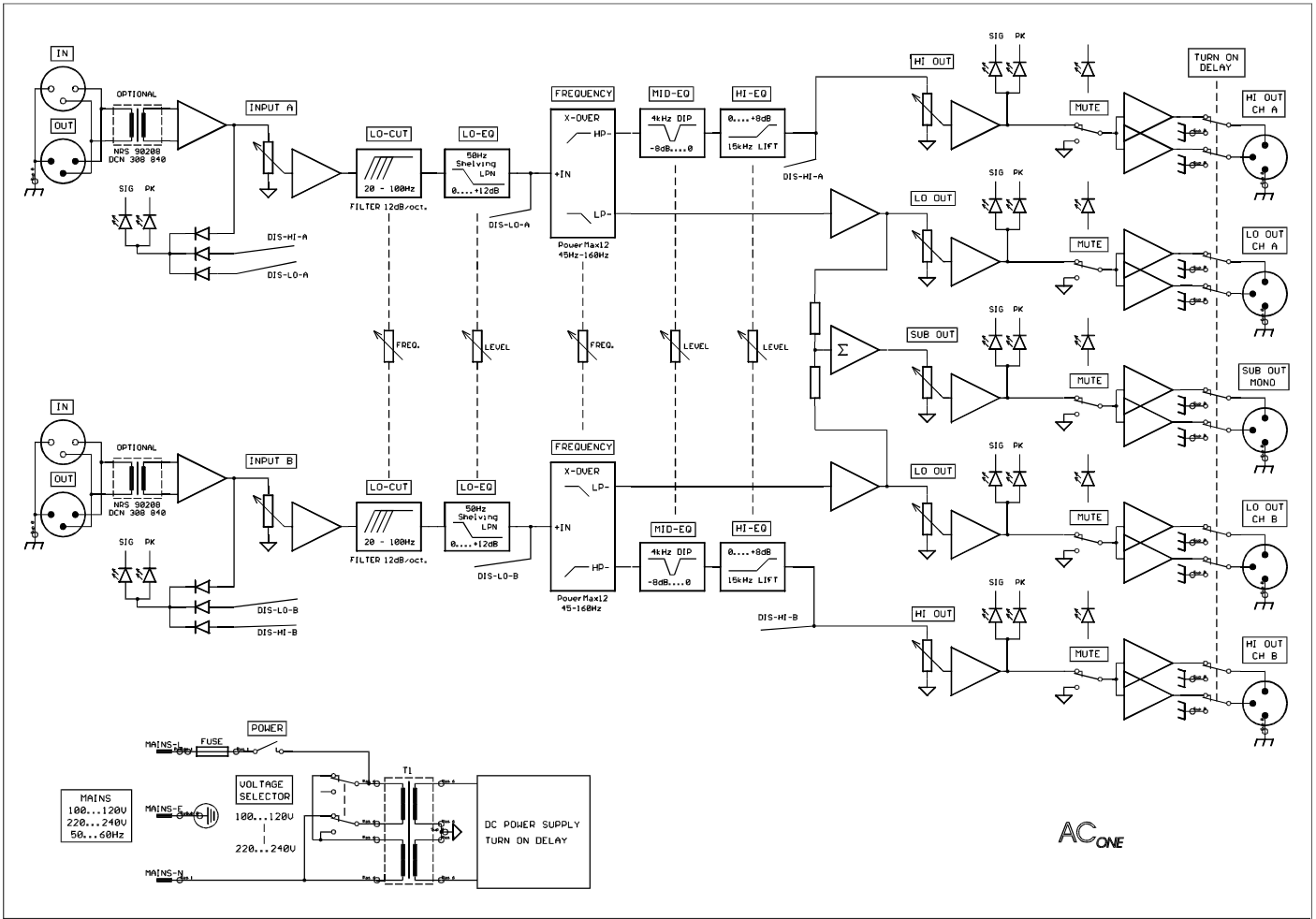
**Power Consumption** 17 W

**Dimensions**, (WxHxD), mm 483 x 43.6 x 226.5

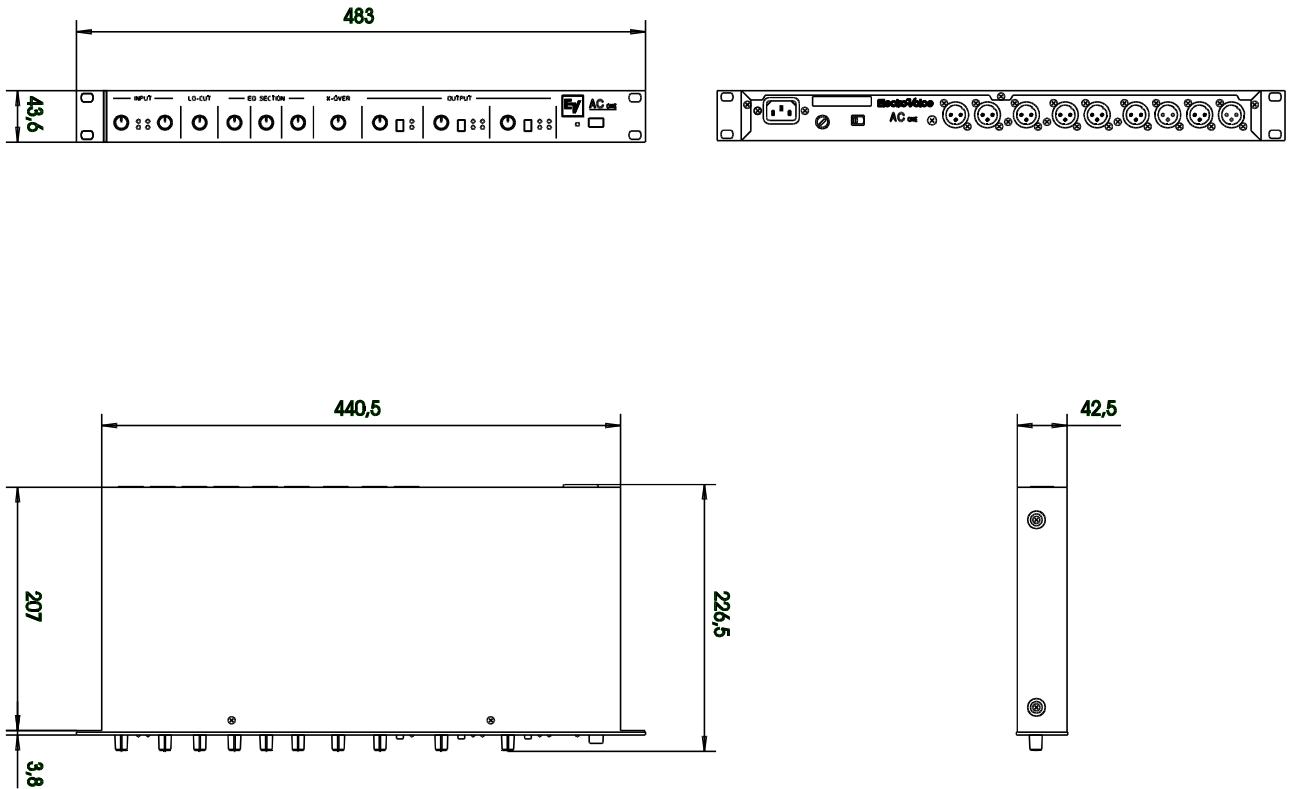
**Weight** 3.2 kg

**Optional, input transformer** NRS 90208

\*Patents pending



Abmessungen / Dimensions (in mm)



## WARRANTY (Limited)

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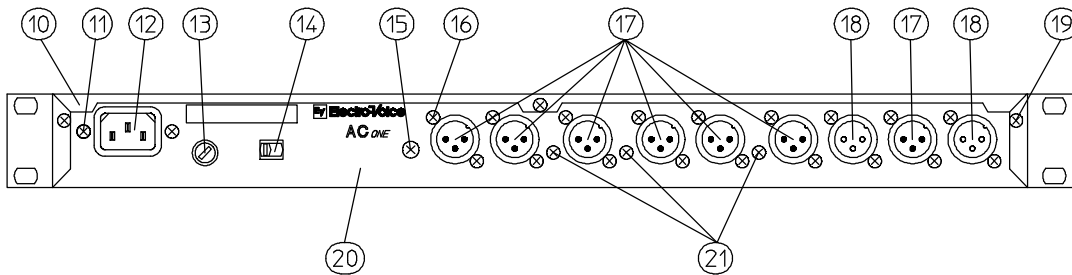
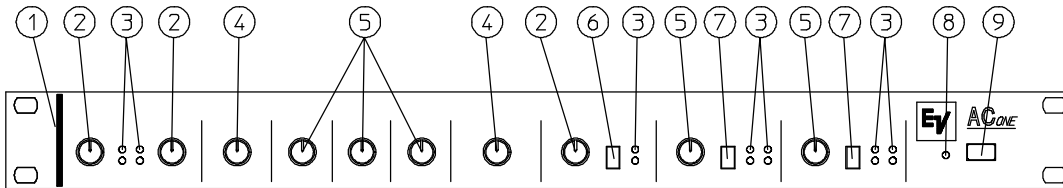
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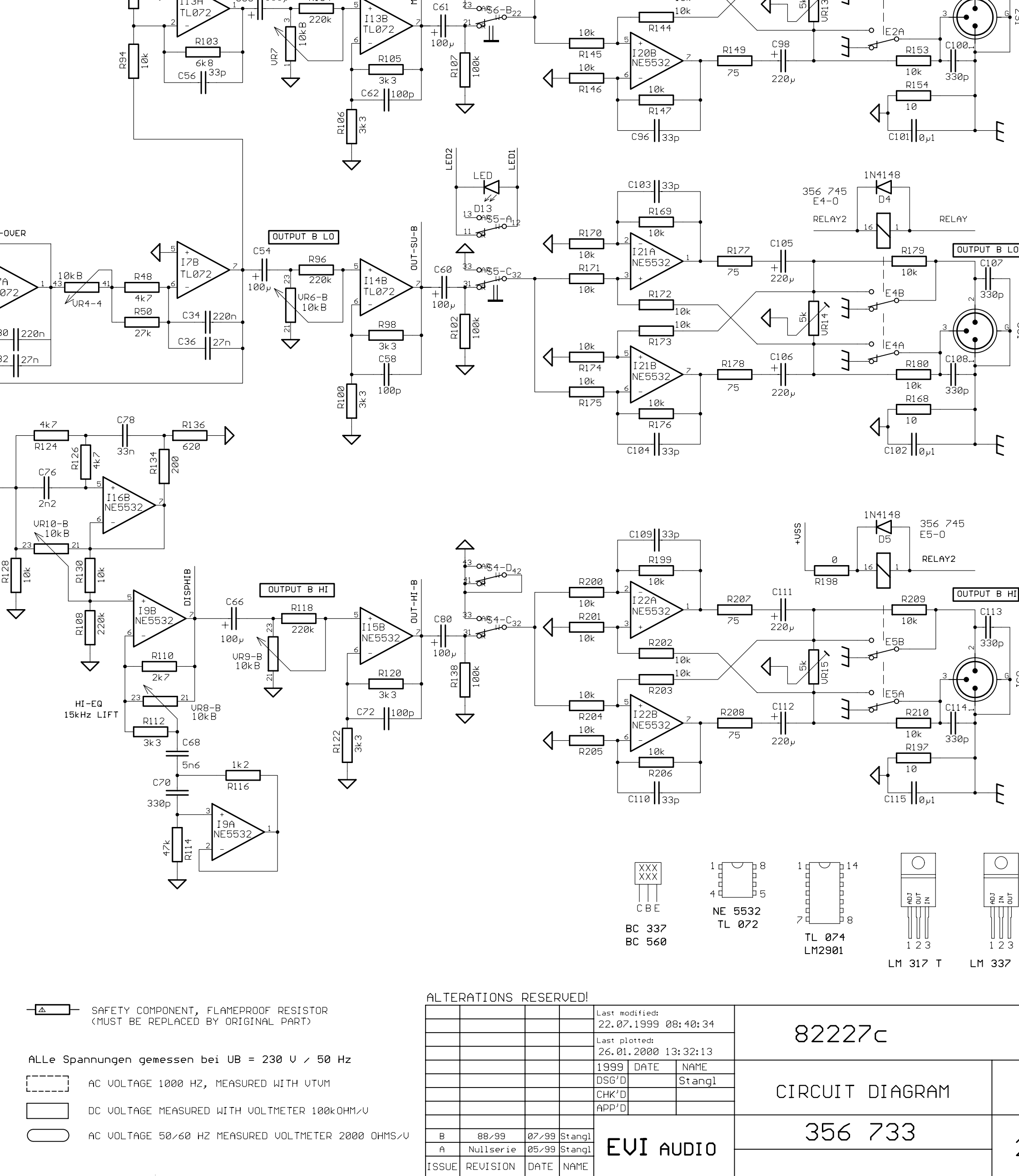
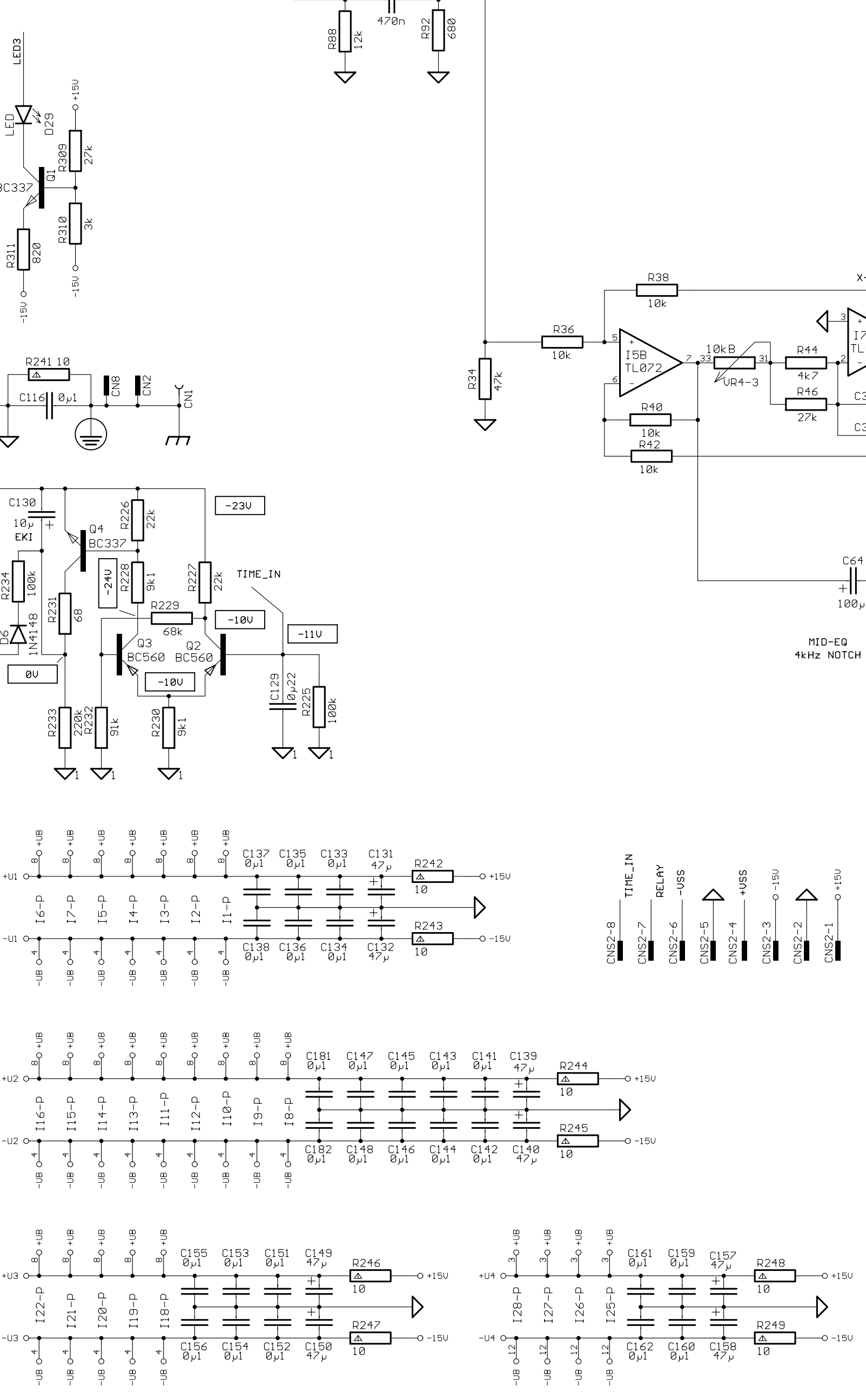
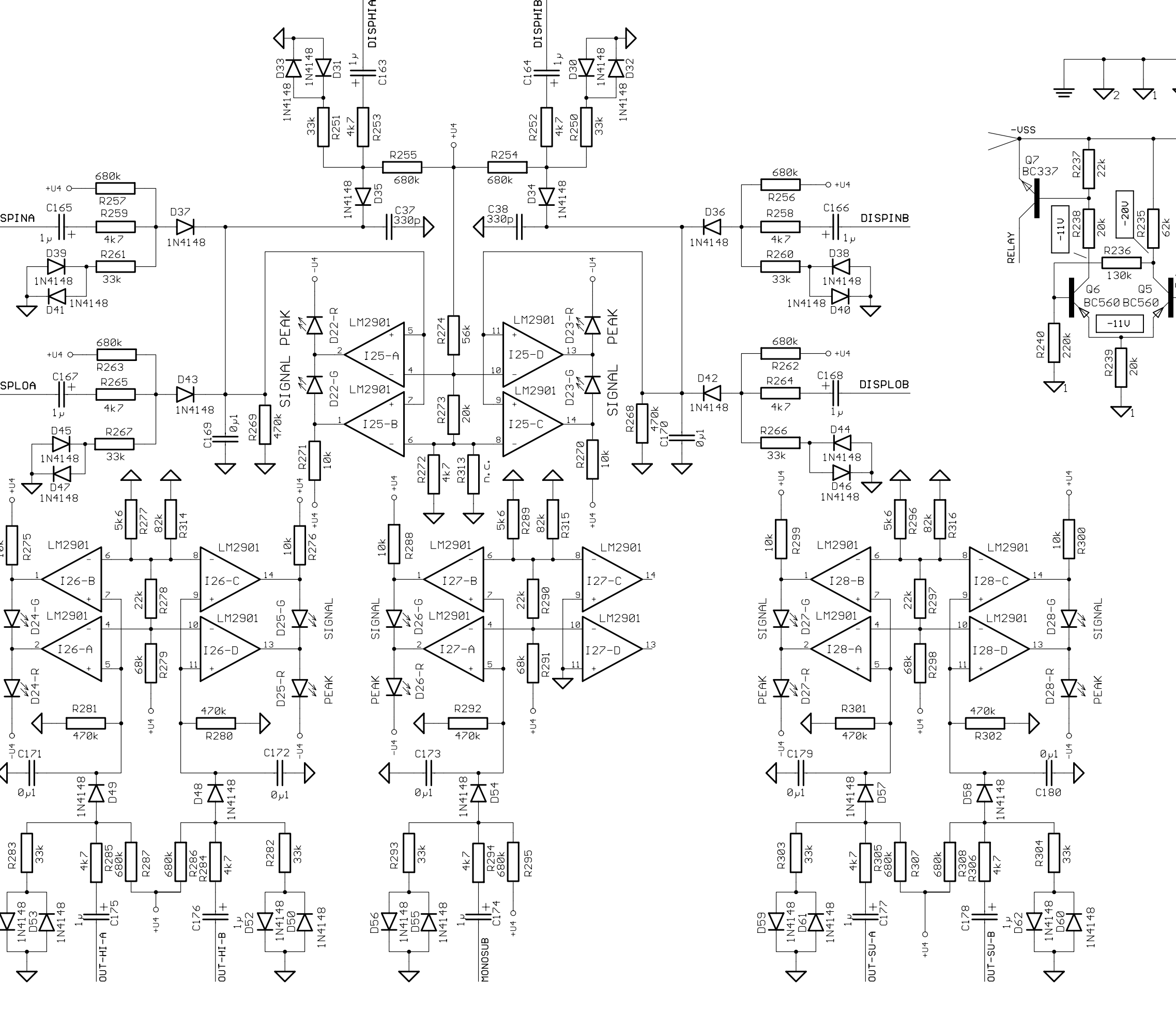
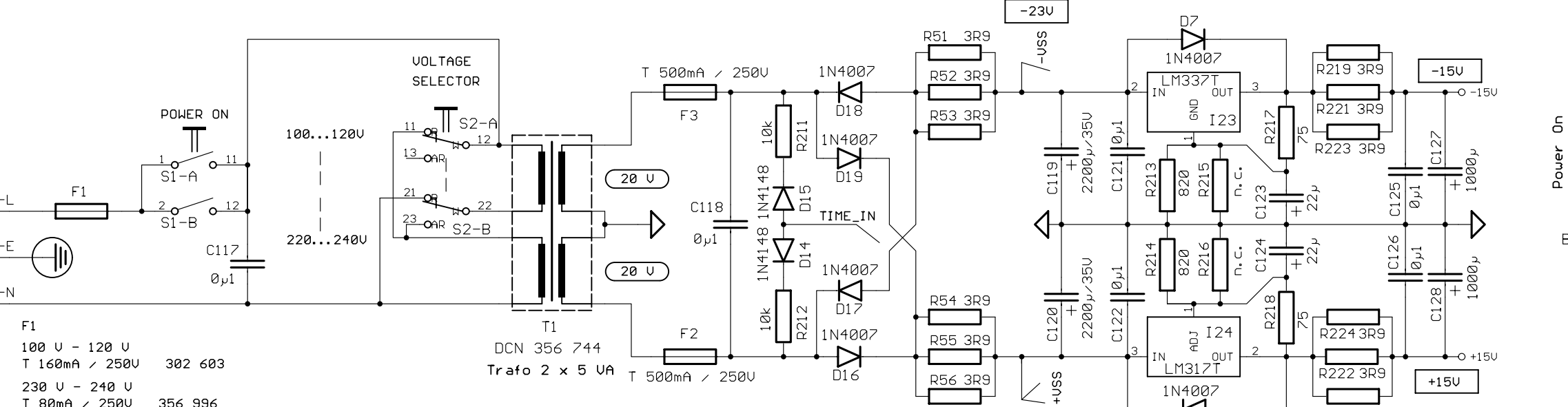
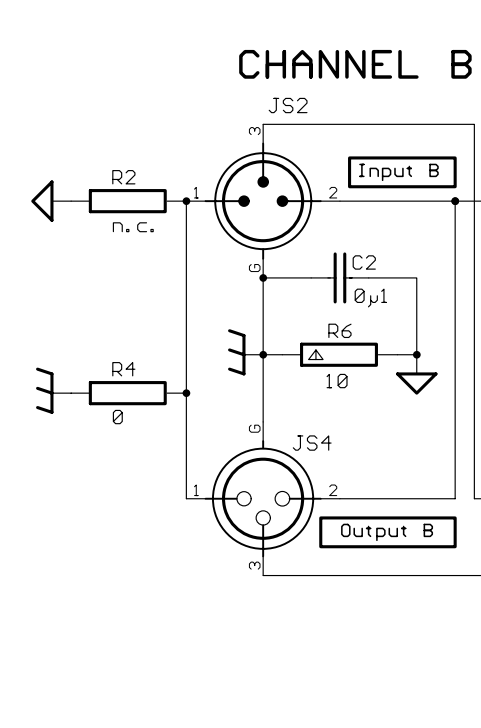
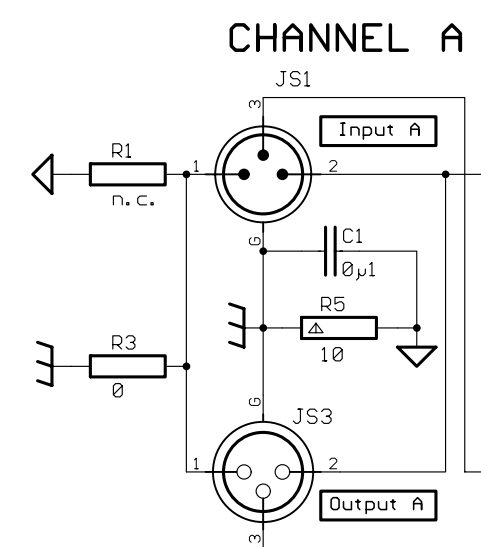
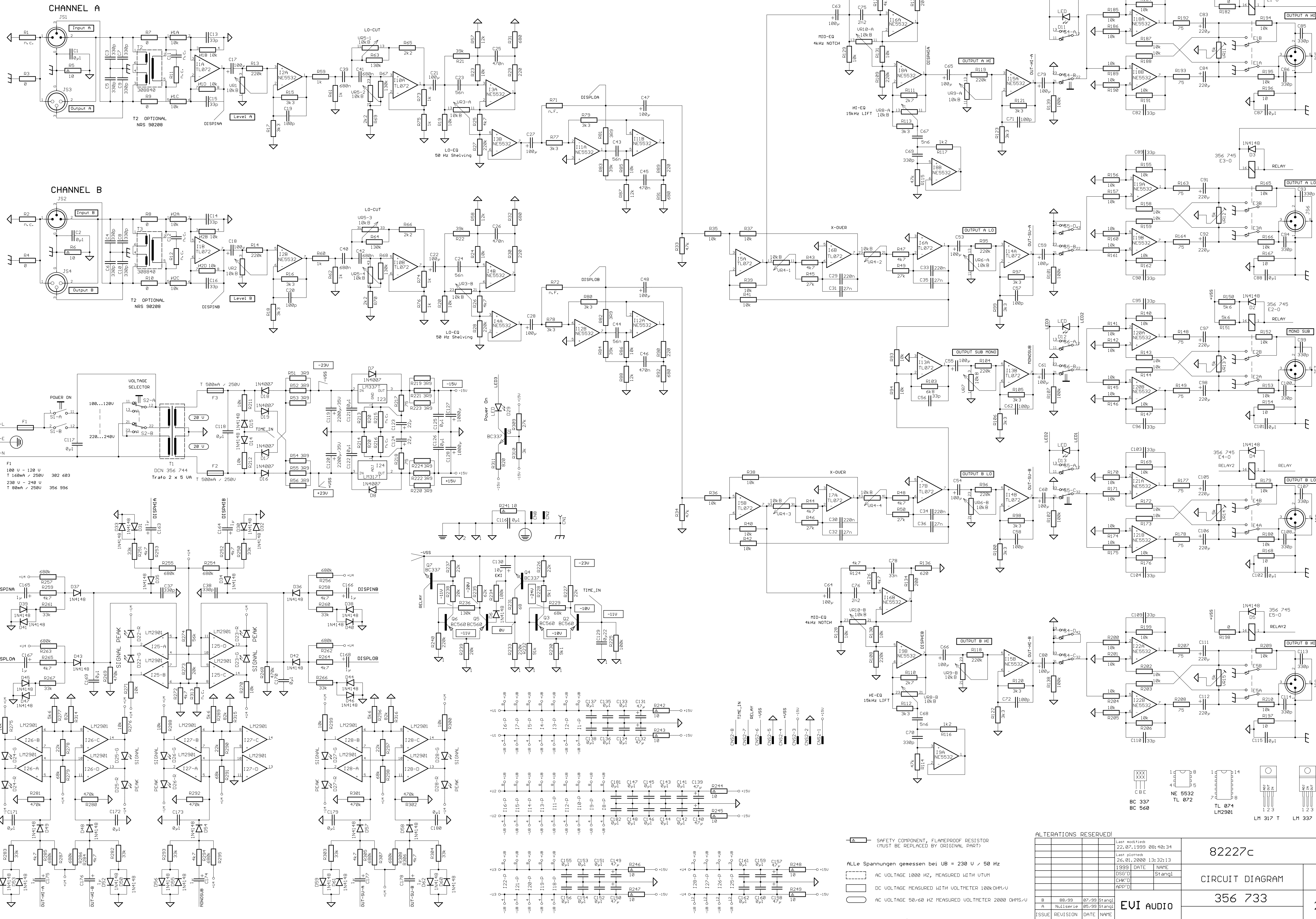


POS.	DESCRIPTION	PART.NO.
1	FRONT PANEL	357 643
2	KNOB $\varnothing$ 11	356 348
	POTI 10K LIN	356 751
3	LED RED/GREEN $\varnothing$ 3MM	356 746
4	KNOB $\varnothing$ 11	356 348
	POTI 4x10K LOG NEG	356 752
5	KNOB $\varnothing$ 11	356 348
	POTI 2x10K LIN	356 750
6	KNOB	347 430
	PUSH SWITCH	344 037
7	KNOB	347 430
	PUSH SWITCH	344 038
8	LED GREEN $\varnothing$ 3MM	356 843
9	KNOB BLACK	337 059
	MAINS SWITCH	349 114
10	COVER	357 957
11	SCREW M3x8	335 203
	NUT M3	336 214
12	MAINS CONNECTOR	338 835
	POWER CABLE	300 425
	FUSE 80MA SLOW BLOW	356 996
13	FUSE-HOLDER	328 390
	FUSE-CARRIER	328 391
14	SLIDE SWITCH	340 434
15	TAPPING SCREW 3.9x9.5	304 251
16	SCREW 30x8	344 229
17	XLR CONNECTOR (MALE)	351 816
18	XLR CONNECTOR (FEMALE)	351 815
19	SCREW M3x6	334 989
20	MAIN CHASSIS	357 644
21	SCREW M3x8	335 203

Ohne unsere Genehmigung darf diese Zeichnung weder vervielfältigt, noch dritten Personen oder anderen Firmen zugänglich gemacht werden (siehe einschlägige Gesetze)

		1999		Tag	Name	SERVICE-INFORMATION	Maßstab 1:2
		Bearb.	9.11.	O. Kaiser			
		Gepr.					
		Stand	9.1199	O. Kaiser			
		EVI AUDIO		358 099		3-	
Ausgabe		Änderung		Tag			Name
		DYNACORD		ACone			





SAFETY COMPONENT, FLAMEPROOF RESISTOR (MUST BE REPLACED BY ORIGINAL PART)

Alle Spannungen gemessen bei UB = 230 V / 50 Hz  
 AC VOLTAGE 1000 HZ, MEASURED WITH VTUM  
 DC VOLTAGE MEASURED WITH VOLTMETER 100kOHM/V  
 AC VOLTAGE 50-60 HZ MEASURED VOLTMETER 2000 OHMS/V

ALTERATIONS RESERVED!

Last modified:	22.07.1999 08:40:34
Last plotted:	26.01.2000 13:32:13
1999 DATE NAME	Stangl
0560' CHK'D	Stangl
APP'D	
B 88/99	07/99 Stangl
A Nullserie	05/99 Stangl
ISSUE REVISION DATE NAME	

82227c

CIRCUIT DIAGRAM

356 733

EVI AUDIO

<b>MEASURED DATA</b>	<b>ACONE</b>
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Function:	Analog Controller	Issue Date:	27.07. 2000
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**The measured data apply to the following appliances:**

Unit Model	Unit Number	Mains Voltage	Mains Frequency
ACONE	170 090	120 or 230 V	50 - 60 Hz

**Testing Conditions:**

Measuring tolerance:	$\Delta X = \pm 1.5 \text{ dB}$
Measuring frequency:	$f = 100\text{Hz} / 1 \text{ kHz} / 10 \text{ kHz}$
Stated level values referred to:	$U = 775 \text{ mV} ( 0 \text{ dBu})$
Source impedance Line:	$R(Q) = 50 \Omega$
Load impedance Outputs:	$R(L) = 100 \text{ k}\Omega$
INPUT-, EQ-, Output- Control	Center position
Voltage selector switch	220 V - 240 V ( fuse T100mA )
Measurement standards:	IEC 268, IHF-A
Safety class:	I
Test voltage IEC65:	3000 Vrms
U(F) = Extraneous Voltage	Unweighted, with B = 22Hz ... 22 kHz, effective value (IEC 268)
U(G) = Noise Voltage	Weighting filter, acc. to CCIR-468-3, quasi peak weighted (IEC 268)
U(A) = Interference Voltage	A-weighted, dB(A), effective value (IEC 268)

- The printed board assembly 82227 offers measuring points for servicing purposes.

CNS 2	Assignment
1	+ 15 V
2	GND
3	- 15 V
4	+ VSS
5	GND
6	- VSS
7	Relay
8	Time In

<b>1. Operating Voltages:</b>	ACONE Europe	U(B) = 230V / 50Hz ... 60 Hz
	ACONE Japan	U(B) = 100V / 50Hz ... 60 Hz
	ACONE U.S.A.	U(B) = 120V / 50Hz ... 60 Hz
	ACONE Australia	U(B) = 240V / 50Hz ... 60 Hz

**2. Operating Voltage Deviation Range:** - 10 % ... + 6 % in all modes

**3. Power Consumption:**

	ACONE
	<b>Power Consumption</b>
Idling	17 W

**4. Settings/Adjustments:**

**OUTPUT STAGE SYMMETRY:**

Symmetrically measure the output voltage --> U1 ( HI-OUT - 1 kHz / LO-OUT - 100 Hz )

Sum the signals of XLR-Pin 2 and XLR-Pin 3 via high-quality (precise) resistors ( < 10 kΩ / < 0.5 % ) at the input of the measuring device and adjust the resulting signal via trimmers VR 11 / VR 12 / VR 13 / VR 14 / VR 15 to its minimum value --> U2

Unsymmetrical Attenuation =  $\log ( U1 / U2 ) = > 35 \text{ dB}$

## 5. Function Test

### POWER-ON DELAY :

Feed the signal to Input-Channel A / B and switch the appliance on using the Power-On switch. Approximately 2 seconds after switching the appliance on, the signal is present at the output.

### MUTE-SWITCH:

Feed the signal to Input-Channel A / B. Measure at the outputs and check the function of each Mute-Switch.

## 6. Level

-All level and frequency controls set to their center position, EQ SECTION- all controls set to their "0"-position.

Input	U(E)	Output	U(A)	Comments
Channel A IN ( 1 kHz )	0 dBu	OUTPUT CH A HI	0 dBu	
Channel A IN ( 1 kHz )	0 dBu	OUTPUT CH A HI	+6 dBu	HI OUT control at +6 dB
Channel A IN ( 1 kHz )	0 dBu	OUTPUT CH A HI	+12 dBu	INPUT A + HI OUT control at +6 dB
Channel A IN ( 100 Hz )	0 dBu	OUTPUT CH A LO	0 dBu	
Channel A IN ( 100 Hz )	0 dBu	OUTPUT CH A LO	6 dBu	LO OUT control at +6 dB
Channel A IN ( 100 Hz )	0 dBu	OUTPUT SUB MONO	-3.5 dBu	
Channel A IN ( 100 Hz )	0 dBu	OUTPUT SUB MONO	+2.5 dBu	SUB OUT control at +6 dB
Channel B IN ( 1 kHz )	0 dBu	OUTPUT CH B HI	0 dBu	
Channel B IN ( 1 kHz )	0 dBu	OUTPUT CH B HI	+6 dBu	HI OUT control at +6 dB
Channel B IN ( 1 kHz )	0 dBu	OUTPUT CH B HI	+12 dBu	INPUT B + HI OUT control at +6 dB
Channel B IN ( 100 Hz )	0 dBu	OUTPUT CH B LO	0 dBu	
Channel B IN ( 100 Hz )	0 dBu	OUTPUT CH B LO	+6 dBu	LO OUT control at +6 dB
Channel B IN ( 100 Hz )	0 dBu	OUTPUT SUB MONO	-3.5 dBu	
Channel B IN ( 100 Hz )	0 dBu	OUTPUT SUB MONO	+2.5 dBu	SUB OUT control at +6 dB

-Make sure that all level controls are set to their "∞"-position.

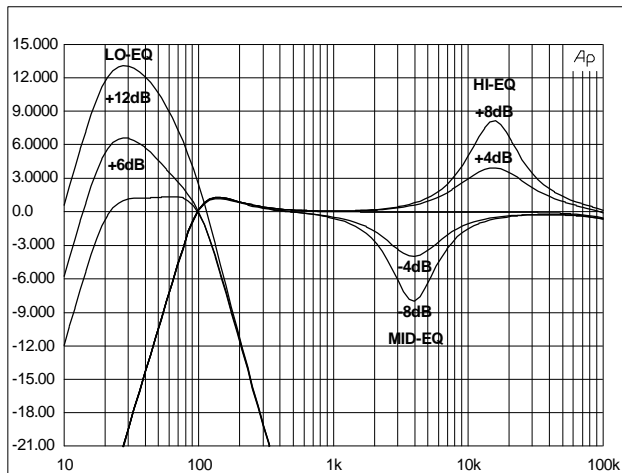
## 7. Amplitudes – Non-Linearities

- MBW = 80 kHz

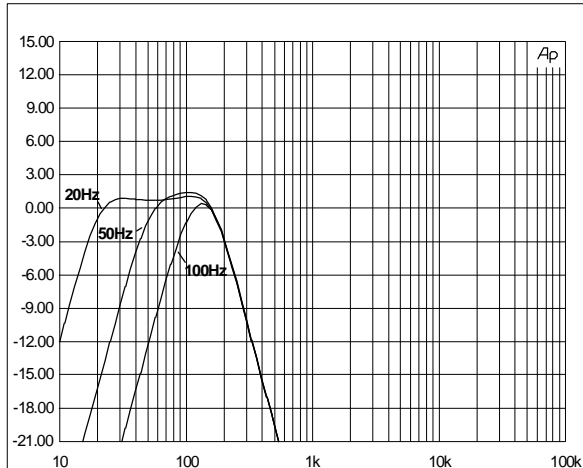
- All measured values for U(A) = +6 dBu

Input	Output	THD+N at 100Hz	THD+N at 1kHz	THD+N at 10kHz
Channel A / B IN ( 1 kHz )	OUTPUTS CH A / B HI		< 0.004 %	< 0.015 %
Channel A / B IN ( 100 Hz )	OUTPUTS CH A / B LO	< 0.005 %		
Channel A / B IN ( 100 Hz )	OUTPUT SUB MONO	< 0.005 %		

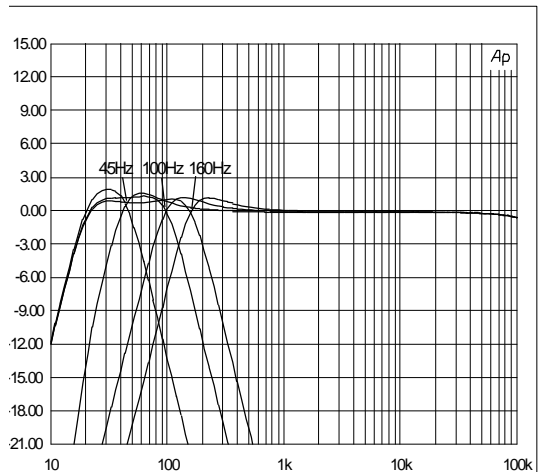
## 8.1 Frequency Response



## 8.2 LoCut



## 8.3 X-Over



## 9. Border Frequencies - 3 dB @ 1 kHz

- All level controls within the signal path set to fully open, EQ SECTION- all controls set to their "0"-position,
- LO-CUT set to 20 Hz, X-OVER in center position.

		ACONE	
Input	Output	f(u)	f(o)
Channel A / B IN	OUTPUTS CH A / B HI	76 Hz	> 150 kHz
Channel A / B IN	OUTPUTS CH A / B LO	16 Hz	125 Hz
Channel A / B IN	OUTPUT SUB MONO	14 Hz	145 Hz

## 10. Noise Interference

- U(F) = extraneous voltage non-weighted with B = 22 Hz ... 22 kHz, effective value (IEC 268-1)
- U(G) = noise voltage, frequency-weighting filter according to CCIR-468-3, quasi peak-weighted (IEC 268-1)
- U(A) = interference voltage A-weighted, dB(A), effective value (IEC 268-1)
- S/N ratio ref. to max. output voltage, A-weighted

- All level and frequency controls set to their center position, EQ SECTION- all controls set to their “0”- position

Output	U(F) dBu	U(G) dBu	U(A) dBu	GAIN dB	S/N-R. dB	Comments
HI OUT A / B	-95	-84	-97	0	-117	
HI OUT A / B	-106	-95	-108			HI OUT STEREO controls down
HI OUT A / B	-89	-78	-91			HI OUT STEREO controls up
LO OUT A / B	-99	-89	-102	0	-122	
LO OUT A / B	-101	-90	-103			LO OUT STEREO controls down
LO OUT A / B	-96	-88	-101			LO OUT STEREO controls up
SUB MONO	-96	-86	-99	+2.5	-119	
SUB MONO	-101	-90	-103			SUB OUT MONO controls down
SUB MONO	-92	-82	-95			SUB OUT MONO controls up

### 11. Operating Voltages and Service Measuring Points

- Voltages measured at the corresponding pin to GND ( mains voltage 230 V )

82227		Measured in Idling Condition	Interference and Ripple Voltage U(F)rms
<b>CNS 2</b>			
1	+ 15 V	+ 15 V ± 2.5%	< 30 µV
2	GND		
3	- 15 V	- 15 V ± 2.5%	< 30 µV
4	+ VSS	+ 23 V ± 2%	< 200 mV
5	GND		
6	- VSS	- 23 V ± 2%	< 200 mV
7	Relay	- 23 after approx. 2 sec.	
8	Time In	- 11 V	

**Voltage selector set to 100 - 120 V. Mains voltage adjusted to 115 V via regulating transformer.**

**Voltage measurement at CNS 2.4 / 2.6 referred to CNS 2.5 ( ± 23 V ).**

**Afterwards re-set the voltage selector to 220 – 240 V!**

### 12. Indicators

- The LED starts lighting when the stated input voltages are applied – tolerance +/- 2 dB.

- All level and frequency controls set to their center position, EQ SECTION- all controls set to their “0”- position

Indicator	Input	Comments	U(E)
SIGNAL INPUT A / B	Channel A / B In	( 10kHz )	-18 dBu
PEAK INPUT A / B	Channel A / B In	LO-EQ positioned at +12 dB ( 100Hz )	+11 dBu
PEAK INPUT A / B	Channel A / B In	HI-EQ positioned at +8 dB ( 10kHz )	+11 dBu
SIGNAL HI OUTPUT A / B	Channel A / B In	( 10kHz )	-15 dBu
PEAK HI OUTPUT A / B	Channel A / B In	( 10kHz )	+14 dBu

SIGNAL LO OUTPUT A / B	Channel A / B In	( 100Hz )	-17 dBu
PEAK LO OUTPUT A / B	Channel A / B In	( 100Hz )	+14 dBu
SIGNAL SUB OUT MONO	Channel A / B In	( 100Hz ) Input: CH A+B	-19 dBu
PEAK SUB OUT MONO	Channel A / B In	( 100Hz ) Input: CH A+B	+11 dBu

### 13. Initial State (factory-shipped)

Unit Type	Unit-No.	Mains Voltage	Voltage Selector/Fuse
<b>ACONE Europe</b>	170 090	230 V	Set to 220V - 240V / 80 mA
<b>With mains cord 300 425</b>			
<b>ACONE Australia</b>		240 V	Set to 220V - 240V / 80 mA
<b>With mains cord 354 619</b>			
<b>ACONE Japan / USA</b>		100 V / 120 V	Set to 100V - 120V / 160 mA
<b>With US-Kit 357 601</b>			
<b>( Mains cord 346 832, Fuse 302 603, Supplement 357 602, Polyester bag 304 712 )</b>			

## Stücklisten - Bill of material

Pos. Nr.	Best. Nr.	Bezeichnung	Description
Ref. No.	Part No.		

<b>170090</b>	<b>Acone</b>		
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	<b>Zubehör</b>		<b>Accessories</b>
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Z 020	345095	FUSS-GUMMI 12.7X 3.5	rubber foot
Z 040	357648	BEDIENUNGSANL. AC ONE	owner's manual
Z 050	300425	KABEL-NETZ 2.0 M 10A	power cable Europe

	<b>Mechanische Teile</b>		<b>Metal work</b>
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356348	DK 11	SW/GR/SW C 6FL	knob
347430	TK 10X6	SW 2,8	push button black 10x6
337059	KNOPF-TASTE	12X7 SW 3.3	push button black 12x7
335228	KRT. DRP	515X365X100	carton
335229	STYROPOR-EINLAGE	DRP	carton filler
333375	SCHUTZHÜLLE	500X700X0,05	poly bag
357643	FB.AC ONE	BED	front panel ACone
357957	DEC.AC ONE	BED	chassis cover

<b>822278</b>	<b>PCBAR#PX 230</b>		<b>main pcb 82227</b>
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C0001	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0002	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0003	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0004	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0005	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0006	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0007	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0008	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0009	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0010	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0013	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0014	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0015	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0016	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0017	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0018	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0019	301530	KO-KER 100.0PF 500V 10%	cap ceramic 100pF
C0020	301530	KO-KER 100.0PF 500V 10%	cap ceramic 100pF
C0021	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0022	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0023	344109	KO-FOL 0.056MF 63V 5%	cap mylar 56nF
C0024	344109	KO-FOL 0.056MF 63V 5%	cap mylar 56nF
C0025	340988	KO-FOL 0.470MF 63V 5%	cap mylar 470nF
C0026	340988	KO-FOL 0.470MF 63V 5%	cap mylar 470nF

Pos. Nr. Ref. No.	Best. Nr. Part No.	Bezeichnung	Description
C0027	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0028	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0029	342923	KO-FOL 0.220MF 63V 5%	cap mylar 220nF
C0030	342923	KO-FOL 0.220MF 63V 5%	cap mylar 220nF
C0031	344105	KO-FOL 0.027MF 100V 5%	cap mylar 27nF
C0032	344105	KO-FOL 0.027MF 100V 5%	cap mylar 27nF
C0033	342923	KO-FOL 0.220MF 63V 5%	cap mylar 220nF
C0034	342923	KO-FOL 0.220MF 63V 5%	cap mylar 220nF
C0035	344105	KO-FOL 0.027MF 100V 5%	cap mylar 27nF
C0036	344105	KO-FOL 0.027MF 100V 5%	cap mylar 27nF
C0037	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0038	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0039	337238	KO-FOL 0.680MF 63V 5%	cap mylar 680nF
C0040	337238	KO-FOL 0.680MF 63V 5%	cap mylar 680nF
C0041	337238	KO-FOL 0.680MF 63V 5%	cap mylar 680nF
C0042	337238	KO-FOL 0.680MF 63V 5%	cap mylar 680nF
C0043	344109	KO-FOL 0.056MF 63V 5%	cap mylar 56nF
C0044	344109	KO-FOL 0.056MF 63V 5%	cap mylar 56nF
C0045	340988	KO-FOL 0.470MF 63V 5%	cap mylar 470nF
C0046	340988	KO-FOL 0.470MF 63V 5%	cap mylar 470nF
C0047	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0048	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0053	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0054	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0055	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0056	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0057	301530	KO-KER 100.0PF 500V 10%	cap ceramic 100pF
C0058	301530	KO-KER 100.0PF 500V 10%	cap ceramic 100pF
C0059	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0060	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0061	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0062	301530	KO-KER 100.0PF 500V 10%	cap ceramic 100pF
C0063	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0064	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0065	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0066	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0067	327394	KO-FOL 5600.000PF 63V 5%	cap mylar 5600pF
C0068	327394	KO-FOL 5600.000PF 63V 5%	cap mylar 5600pF
C0069	300050	KO-FOL 330.000PF 100V 5%	cap mylar 330pF
C0070	300050	KO-FOL 330.000PF 100V 5%	cap mylar 330pF
C0071	301530	KO-KER 100.0PF 500V 10%	cap ceramic 100pF
C0072	301530	KO-KER 100.0PF 500V 10%	cap ceramic 100pF
C0075	326924	KO-FOL 2200.000PF 100V 5%	cap mylar 2200pF
C0076	326924	KO-FOL 2200.000PF 100V 5%	cap mylar 2200pF
C0077	342934	KO-FOL 0.033MF 100V 5%	cap mylar 33nF



Pos. Nr. Ref. No.	Best. Nr. Part No.	Bezeichnung	Description
C0078	342934	KO-FOL 0.033MF 100V 5%	cap mylar 33nF
C0079	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0080	343532	KO-EL 100.000MF 25V	cap electrolytic 100uF/25V
C0081	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0082	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0083	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0084	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0085	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0086	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0087	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0088	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0089	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0090	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0091	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0092	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0093	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0094	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0095	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0096	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0097	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0098	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0099	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0100	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0101	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0102	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0103	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0104	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0105	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0106	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0107	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0108	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0109	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0110	301558	KO-KER 33.0PF 100V 2%	cap ceramic 33pF
C0111	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0112	343533	KO-EL 220.000MF 25V	cap electrolytic 220uF/25V
C0113	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0114	301543	KO-KER 330.0PF 500V 10%	cap ceramic 330pF
C0115	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0116	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0117	341714	KO-SO 0.10MF 275V 20% K	safety cap 100nF/275V
C0118	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0119	356661	KO-EL 2200.000MF 35V	cap electrolytic 2200uF/35V
C0120	356661	KO-EL 2200.000MF 35V	cap electrolytic 2200uF/35V
C0121	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0122	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF

Pos. Nr. Ref. No.	Best. Nr. Part No.	Bezeichnung	Description
C0123	301478	KO-EL 22.000MF 63V	cap electrolytic 22uF/63V
C0124	301478	KO-EL 22.000MF 63V	cap electrolytic 22uF/63V
C0125	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0126	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0127	343534	KO-EL 1000.000MF 16V	cap electrolytic 1000uF/16V
C0128	343534	KO-EL 1000.000MF 16V	cap electrolytic 1000uF/16V
C0129	342923	KO-FOL 0.220MF 63V 5%	cap mylar 220nF
C0130	307445	KO-EL 10.000MF 35V	cap electrolytic 10uF/35V
C0131	343530	KO-EL 47.000MF 50V	cap electrolytic 47uF/50V
C0132	343530	KO-EL 47.000MF 50V	cap electrolytic 47uF/50V
C0133	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0134	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0135	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0136	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0137	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0138	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0139	343530	KO-EL 47.000MF 50V	cap electrolytic 47uF/50V
C0140	343530	KO-EL 47.000MF 50V	cap electrolytic 47uF/50V
C0141	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0142	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0143	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0144	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0145	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0146	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0147	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0148	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0149	343530	KO-EL 47.000MF 50V	cap electrolytic 47uF/50V
C0150	343530	KO-EL 47.000MF 50V	cap electrolytic 47uF/50V
C0151	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0152	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0153	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0154	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0155	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0156	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0157	343530	KO-EL 47.000MF 50V	cap electrolytic 47uF/50V
C0158	343530	KO-EL 47.000MF 50V	cap electrolytic 47uF/50V
C0159	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0160	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0161	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0162	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0163	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0164	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0165	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0166	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0167	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V

Pos. Nr. Ref. No.	Best. Nr. Part No.	Bezeichnung	Description
C0168	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0169	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0170	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0171	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0172	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0173	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0174	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0175	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0176	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0177	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0178	301453	KO-EL 1.000MF 50V	cap electrolytic 1uF/50V
C0179	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0180	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0181	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
C0182	329021	KO-KER 0.10MF 100V 20%	cap ceramic 100nF
D0001	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0002	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0003	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0004	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0005	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0006	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0007	304360	DIODE 1N 4007 GEGURTET	diode 1N 4002
D0008	304360	DIODE 1N 4007 GEGURTET	diode 1N 4002
D0014	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0015	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0016	304360	DIODE 1N 4007 GEGURTET	diode 1N 4002
D0017	304360	DIODE 1N 4007 GEGURTET	diode 1N 4002
D0018	304360	DIODE 1N 4007 GEGURTET	diode 1N 4002
D0019	304360	DIODE 1N 4007 GEGURTET	diode 1N 4002
D0030	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0031	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0032	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0033	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0034	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0035	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0036	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0037	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0038	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0039	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0040	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0041	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0042	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0043	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0044	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0045	301254	DIODE 1N 4148 AXIAL	diode 1N 4148

Pos. Nr. Ref. No.	Best. Nr. Part No.	Bezeichnung	Description
D0046	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0047	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0048	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0049	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0050	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0051	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0052	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0053	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0054	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0055	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0056	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0057	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0058	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0059	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0060	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0061	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
D0062	301254	DIODE 1N 4148 AXIAL	diode 1N 4148
E0001	356745	RELAIS M4-24H	relay 24V
E0002	356745	RELAIS M4-24H	relay 24V
E0003	356745	RELAIS M4-24H	relay 24V
E0004	356745	RELAIS M4-24H	relay 24V
E0005	356745	RELAIS M4-24H	relay 24V
F0001	356996	SICHER T 80 MA 250V	fuse 80mA slow blow
F0002	302579	SICHER T 500 MA 250V	fuse 500mA slow blow
F0003	302579	SICHER T 500 MA 250V	fuse 500mA slow blow
H0001	343457	DICKS-NETZW. 8PIN 2%	res.network RKL 8A 103J
H0002	343457	DICKS-NETZW. 8PIN 2%	res.network RKL 8A 103J
I0001	331340	IC TL 072 CP 2FACH OP	IC TL 072 CP
I0002	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0003	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0004	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0005	331340	IC TL 072 CP 2FACH OP	IC TL 072 CP
I0006	331340	IC TL 072 CP 2FACH OP	IC TL 072 CP
I0007	331340	IC TL 072 CP 2FACH OP	IC TL 072 CP
I0008	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0009	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0010	331340	IC TL 072 CP 2FACH OP	IC TL 072 CP
I0011	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0012	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0013	331340	IC TL 072 CP 2FACH OP	IC TL 072 CP
I0014	331340	IC TL 072 CP 2FACH OP	IC TL 072 CP
I0015	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0016	331340	IC TL 072 CP 2FACH OP	IC TL 072 CP
I0018	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0019	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N

Pos. Nr. Ref. No.	Best. Nr. Part No.	Bezeichnung	Description
I0020	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0021	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0022	327197	IC NE 5532 P 2FACH OP	IC NE 5532 N
I0023	354929	IC SPNG.REGL. LM 337 T	IC LM 337 voltage regulator
I0024	354199	IC SPNG.REGL. LM 317 T	IC LM 317 voltage regulator
I0025	343502	IC LM 2901 N	IC LM 2901
I0026	343502	IC LM 2901 N	IC LM 2901
I0027	343502	IC LM 2901 N	IC LM 2901
I0028	343502	IC LM 2901 N	IC LM 2901
JS001	351816	STECKER-FL. XLR 3POL PRINTB	xlr connector male
JS002	351816	STECKER-FL. XLR 3POL PRINTB	xlr connector male
JS003	351815	BUCHSE-FL. XLR 3POL SW	xlr connector female
JS004	351815	BUCHSE-FL. XLR 3POL SW	xlr connector female
JS005	351816	STECKER-FL. XLR 3POL PRINTB	xlr connector male
JS006	351816	STECKER-FL. XLR 3POL PRINTB	xlr connector male
JS007	351816	STECKER-FL. XLR 3POL PRINTB	xlr connector male
JS008	351816	STECKER-FL. XLR 3POL PRINTB	xlr connector male
JS009	351816	STECKER-FL. XLR 3POL PRINTB	xlr connector male
JS010	338835	STECKER-KALTGERÄTE	connector male mains
LED11	356749	LED RT 3MM LOW CURRENT	led red
LED12	356749	LED RT 3MM LOW CURRENT	led red
LED13	356749	LED RT 3MM LOW CURRENT	led red
LED22	356746	LED RT/GN 3MM LOW CURRENT	led red/green
LED23	356746	LED RT/GN 3MM LOW CURRENT	led red/green
LED24	356746	LED RT/GN 3MM LOW CURRENT	led red/green
LED25	356746	LED RT/GN 3MM LOW CURRENT	led red/green
LED26	356746	LED RT/GN 3MM LOW CURRENT	led red/green
LED27	356746	LED RT/GN 3MM LOW CURRENT	led red/green
LED28	356746	LED RT/GN 3MM LOW CURRENT	led red/green
LED29	356843	LED GN 3MM LOW CURRENT	led green
Q0001	307150	TRANS BC 337-25 TO 92	transistor BC 337-25
Q0002	306928	TRANS BC 560 C	transistor BC 560 C
Q0003	306928	TRANS BC 560 C	transistor BC 560 C
Q0004	307150	TRANS BC 337-25 TO 92	transistor BC 337-25
Q0005	306928	TRANS BC 560 C	transistor BC 560 C
Q0006	306928	TRANS BC 560 C	transistor BC 560 C
Q0007	307150	TRANS BC 337-25 TO 92	transistor BC 337-25
R0242	329215	WI-SI 10.00 OHM 0.30W 5%	safety resistor 10 ohm
R0243	329215	WI-SI 10.00 OHM 0.30W 5%	safety resistor 10 ohm
R0244	329215	WI-SI 10.00 OHM 0.30W 5%	safety resistor 10 ohm
R0245	329215	WI-SI 10.00 OHM 0.30W 5%	safety resistor 10 ohm
R0246	329215	WI-SI 10.00 OHM 0.30W 5%	safety resistor 10 ohm
R0247	329215	WI-SI 10.00 OHM 0.30W 5%	safety resistor 10 ohm
R0248	329215	WI-SI 10.00 OHM 0.30W 5%	safety resistor 10 ohm
R0249	329215	WI-SI 10.00 OHM 0.30W 5%	safety resistor 10 ohm

Pos. Nr. Ref. No.	Best. Nr. Part No.	Bezeichnung	Description
S0001	349114	SCHALTER-NETZ	mains switch
S0002	340434	SCHALTER-SCHIEBE 2XUM	switch slide
S0004	344038	SCHALTER-RAST 4XUM	switch 4pdt latching
S0005	344038	SCHALTER-RAST 4XUM	switch 4pdt latching
S0006	344037	SCHALTER-RAST 2XUM	switch dpdt latching
T0001	356744	NETZTRAFO-RINGKERN 10 VA	mains transformer 230V
VR001	356751	P-DREH 10KOHM LIN B	potentiometer 10k lin
VR002	356751	P-DREH 10KOHM LIN B	potentiometer 10k lin
VR003	356750	P-DREH 2X 10KOHM LIN B	potentiometer 2x10k lin
VR004	356752	P-DREH 4X 10KOHM LOG NEG E	potentiometer 4x10k -log
VR005	356752	P-DREH 4X 10KOHM LOG NEG E	potentiometer 4x10k -log
VR006	356750	P-DREH 2X 10KOHM LIN B	potentiometer 2x10k lin
VR007	356751	P-DREH 10KOHM LIN B	potentiometer 10k lin
VR008	356750	P-DREH 2X 10KOHM LIN B	potentiometer 2x10k lin
VR009	356750	P-DREH 2X 10KOHM LIN B	potentiometer 2x10k lin
VR010	356750	P-DREH 2X 10KOHM LIN B	potentiometer 2x10k lin
VR011	356753	WI-TRI 5.00 KOHM LIN	trim pot 5k lin
VR012	356753	WI-TRI 5.00 KOHM LIN	trim pot 5k lin
VR013	356753	WI-TRI 5.00 KOHM LIN	trim pot 5k lin
VR014	356753	WI-TRI 5.00 KOHM LIN	trim pot 5k lin
VR015	356753	WI-TRI 5.00 KOHM LIN	trim pot 5k lin
00005	328390	SICHER-HALTER FAU	fuse holder
00010	328391	SICHER-HALTER-KAPPE FEK	fuse holder carrier
00015	303576	SICHER-HALTE-FEDER	fuse clip

# MEMO