"MIC-AMP"

USER MANUAL

Geachte klant,

Wij danken u hartelijk voor uw keuze en het vertrouwen dat u in ons produkt stelt.
U deed een goede keus, dit produkt is ontworpen door en voor professionele gebruikers.

Er is gebruik gemaakt van onze enorme "know how" in mengtafel en signaal processor technieken en dit gekombineerd met hoogwaardige komponenten geeft u de zekerheid van een lange gebruiksduur.

Bovenstaande eigenschappen resulteren in een zeer betrouwbaar en bedrijfszeker eindprodukt.

Deze gebruiksaanwijzing helpt u in het optimaal benutten van alle mogelijkheden die dit produkt in zich heeft.

Mocht u nog vragen hebben dan kunt u zich altijd tot onze dealers wenden en in uiterste nood tot ons.

D&R ELECTRONICA WEESP B.V.
Rijnkade 15B
1382 GS WEESP-HOLLAND
The Netherlands
Phone: 0294-418 014
Fax: 0294-416 987
Website: http://www.d-r.nl
E-mail: info@d-r.nl

PRECAUTIONS:

The product you have just unpacked is manufactured with safety in mind and is double checked in the test department for reliability in its high-voltage section.

The MIC-AMP operates on 115 volt or 230 VAC, 50/60 Hz. In some products there is a voltage-selector built in on the rear panel that indicates how the unit was set at the factory
If the voltage-selector does not indicate the voltage that your country is using, remove the linecord from the mains and place the voltage-selector to its proper position. If no voltage selector is mounted inside your Mic-amp, the factory has already set the mic-amp for the right voltage used in your country.

WARNING

Never change the position of the voltage-selector while the unit is still connected to the mains!
Should any solid object or liquid fall into the cabinet, turn off the unit immediately and have it checked by qualified personnel before operating it any further.

When the unit is not to be used for a long period, turn the power off to conserve energy and to extend the useful product life of your unit.

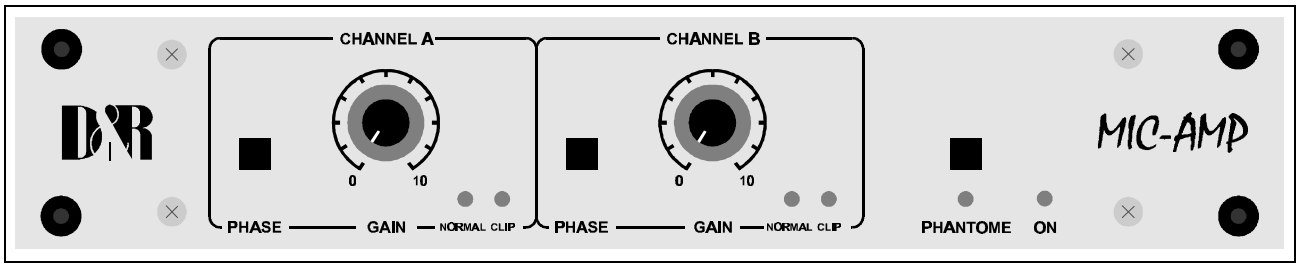
RACK MOUNTING

You can mount the MIC-AMP (height is 1HE, width is 9.1/2") in a 19" rack by using two MIC-AMP modules or using one MIC-AMP and one blindpanel.

- Allow adequate air circulation to prevent internal heat build-up.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains) that may block ventilation.
-Do not install the unit near heat sources such as radiators or power-amplifiers or in a places subject to excessive mechanical vibration.

FUSEHOLDER:

The fuseholder is mounted inside the unit (read product safety. When a fuse is blown, replacing it with a new one may not be sufficient. The actual cause must be detected and solved.
Contact your nearest dealer if the unit can not be repaired by replacing the fuse. Use only the fuses specified.



MIC-AMP

This two channel pre-amp is designed to be the answer for extremely high quality microphone amplification especially on equipment which only are provide with line inputs.
It transforms the balanced microphone-level signal to an unbalanced -10 dBV line-level signal to correspond to the line inputs on other equipment, for example P.C.M.-units and DAT/DCC recorders

SETTING UP PROCEDURE

Connect the microphone to the input of the MIC-AMP and the output of the MIC-AMP to the equipment it should be connected to.

GAIN

When a signal at the input is present the normal led lits regularly. (is green)
Turn the gain clockwise until the clip led lits sporadic.

48 VOLT PHANTOME POWERING

For condenser microphones a 48 Volt phantome is provided per channel.
You will not hear any click while switching. This phantome circuit uses a softswitching arrangement.
This means the voltage is built up slowly. It is active after about 8 seconds.
The phantome power does not effect dynamic microphones when the microphone, cables and plugs are wired symmerical. (balanced).
Be sure, that your microphone wiring is balanced to keep optimum signal to noise ratio.

PHASE

The phase switch reverses the wiring of the microphone input, so it changes the polarity of the connected microphone. This can be useful when two microphones are out of phase or cancellations are to be heard in the low frequency range.

CONNECTIONS

It is recommended to unplug the MIC-AMP from the mains outlet, before making the following connections.
Reconnect the mains-lead after the connections have been completed and make sure they are secure.

MICROPHONE INPUT

The MIC-AMP has two separate microphone inputs, each on an XLR connector.

WIRING DIAGRAM FOR IN/OUTPUT CONNECTORS

INPUTS	XLR female	pin 2	= in phase
		pin 3	= out of phase
		pin 1	= ground

OUTPUTS	XLR male	pin 2	= in phase
		pin 3	= out of phase
		pin 1	= ground

The MIC-AMP has two separate, low impedance, ground compensated outputs on a nominal operating level of -10 dB and a maximum output level of +22 dBu.

SPECIFICATIONS

Inputs	stereo jack / XLR female	6,25 mm / 3pin XLR female balanced
	impedance	2 kOhm
	max input level	+ 3 dBu
	CMRR	> 62 dB at 50 Hz
		> 70 dB at 1 kHz
		> 66 dB at 10 kHz
Output:	stereo jack / XLR male	6,25 mm / 3 pin XLR male ground compensated
	impedance	100 Ohm
	nom. level	- 7.8 dBu (-10 dBV)
	max. level	+ 23 dBu

OVERALL

THD at:	O dB / 100 Hz	0,012%
	O dB / 1 kHz	below noise level
	O dB / 10 kHz	below noise level

Gain min.	+ 20 dB / max. + 60 dB
Gain control range:	40 dB
S/N-ratio (gain max.)	- 129,0 dBr (A-weighted)
Frequency-response:	- 3 dB at 2 Hz, - 3 dB at 100 kHz
Phantome active after:	8 sec. Vph > 42 V (phantome led is red)
Normal led on at:	- 7,8 dBm (- 10 dBV) (nom. level)
Clip led on at:	+18 dBu
Power requirements:	115volt - 230 volt AC 50/60 Hz
Power consumption:	3VA
Fuse	163 mA slow
Storage temperature	- 10C to + 65C
Operating temperature	+ 3C to + 40C

Dimensions	201 x 44 x 175 mm (w/h/d) (excl. controls) 201 x 44 x 198 mm (w/h/d) (incl. controls) 9,5" x 1HE (w/h)
Weight	Approx. 1,7 kg

CLEANING

Clean the cabinet, panel and controls with a dry soft cloth. Do not use a moistened cloth or any type of solvent, such as alcohol or any other spirit, which might damage the finish.

CAUTION:

Never open your equipment yourself, there are no users serviceable parts inside, therefore we strongly advice not to open the unit yourself.
- Opening a unit is only allowed to trained and qualified service engineers, who are fully aware of the fact that it can be dangerous to service a mains powered unit.
- Always earth the unit.
- Only make use of the product in a way as is described in the manufacturers brochures and manuals, never use it for other purposes than intended by the manufacturer.
- Never use this equipment in an environment with a high humidity and never expose it to water.
- Do not use this equipment in rain/snow or equivalent type of weather.
- Check your mains cord regularly and see if it is in a safe condition with a properly connected mainsplug on one side and securely tightened in the equipment on the other side.
- Return your product yearly to your dealer for a safety checkup.
- The hazard of an electrical shock can be avoided by carefully following the rules mentioned above.

DECLARATION OF CONFORMITY

Manufacturers Name: D&R Electronica Weesp b.v.

Manufacturers Address: Rijnkade 15B,
1382 GS Weesp,
The Netherlands

declares that the product

Mic-amp

conforms to the following product specifications:

EMC: EN 55022: 1987
CISPR 22 (1993) class B

EN 500082-1 (1992)

Supplementary Information:

The products herewith complies with the requirements of the EMC Directive 89/336/EEC (1989) as amended by the CE Marking Directive 93/68/EEC (1993).

D&R Electronica Weesp b.v.
Rijnkade 15 B
1382 GS WEESP
The Netherlands
President of Engineering

PRODUCT SAFETY

This product is manufactured with the highest standards and is double checked in our quality control department for reliability in the "HIGH VOLTAGE" section.

CAUTION

Never remove any panels, or open this equipment. No user servicable parts inside.
Equipment power supply must be grounded at all times.
Only use this product as described, in user manual or brochure.
Do not operate this equipment in high humidity or expose it to water or other liquids.
Check the AC power supply cable to assure secure contact.
Have your equipment checked yearly by a qualified dealer service center.
Hazardous electrical shock can be avoided by carefully following the above rules.

EXTRA CAUTION FOR LIVE SOUND

Ground all equipment using the ground pin in the AC power supply cable.
Never remove this pin. Ground loops should be eliminated only by use of isolation transformers for all inputs and outputs. Replace any blown fuse with the same type and rating only after equipment has been disconnected from AC power. If problem persists, return equipment to qualified service technician

PLEASE READ THE FOLLOWING INFORMATION

Especially in sound equipment on stage the following information is essential to know.
An electrical shock is caused by voltage and current, actually it is the current that causes the shock.
In practise the higher the voltage the higher the current will be and the higher the shock.
But there is another thing to consider and it is resistance.
When the resistance in Ohms is high between two poles, the current will be low and vica versa.
All three of these; voltage, current. and resistance are important in determining the effect of an electrical shock.
However, the severity of a shock primarily determined by the amount of current flowing through a person.
A person can feel a shock because the muscles in a body respond to electrical current and because the heart is a muscle it can affect, when the current is high enough.
Current can also be fatal when it causes the chest muscles to contract and stop breathing. At what potential is current dangereous.
Well the first feeling of current is a tingle at 0.001 Amp of current.
The current between 0.1 Amp and 0.2 Amp is fatal.
Imagine that your home fuses of 20 Amp can handle 200 times more current than is necessary to kill. How does resistance affect the shock a person feels.
A typical resistance between one hand to the other in "dry" condition could well over
100,000 Ohm.

If you are playing on stage your body is perspiring extensively and your body resistance is lowered by more than 50%. This is a situation in which current can easily flow.
Current will flow when there is a difference in ground potential between equipment on stage and in the P.A. system. Please do check if there is any potential between the housing of the mikes and the guitarsynth amps, which will be linked by your body on stage. Imagine, a guitar in your hand and your lips close to the mike! A ground potential difference of above 10 volts is not unusual, in improperly wired buildings it can possibly be as high as 240 volts.

Allthough removing the ground wire sometimes cures a system hum, it will create a very hazardeous situation for the performing musician.
Always earth all your equipment by the grounding pin in your mains plug.
Hum loops should be only cured by proper wiring and isolation input/output transformers.

Replace fuses always with the same type and rating after the equipment has been turned off and unplugged.
If the fuse blows again you have an equipment failure, do not use it again and return it to your dealer for repair.

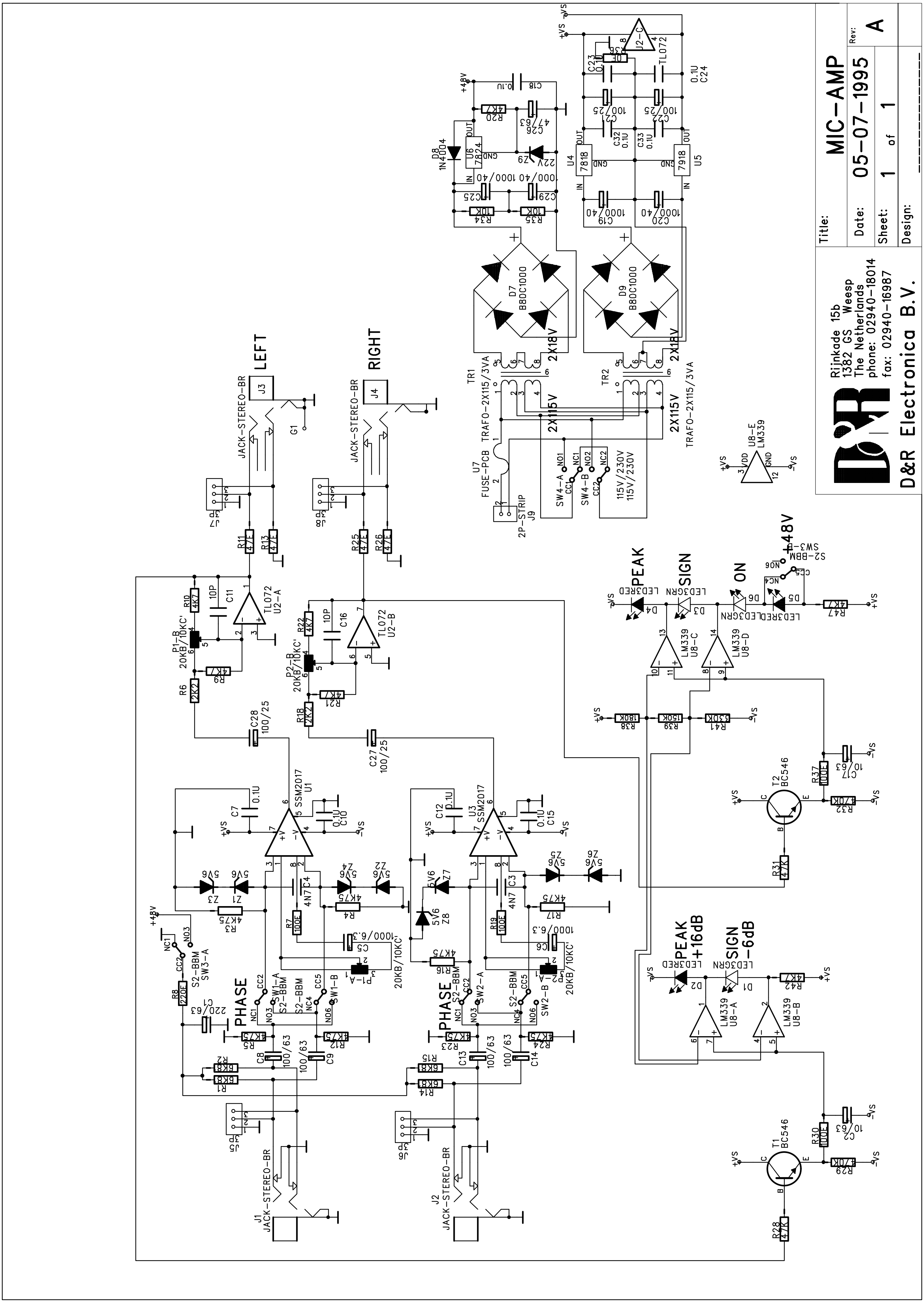
And last but not least be carefull not to touch a person being shocked as you, yourself could also be shocked.
Once removed from the shock, have someone send for medical help inmediately

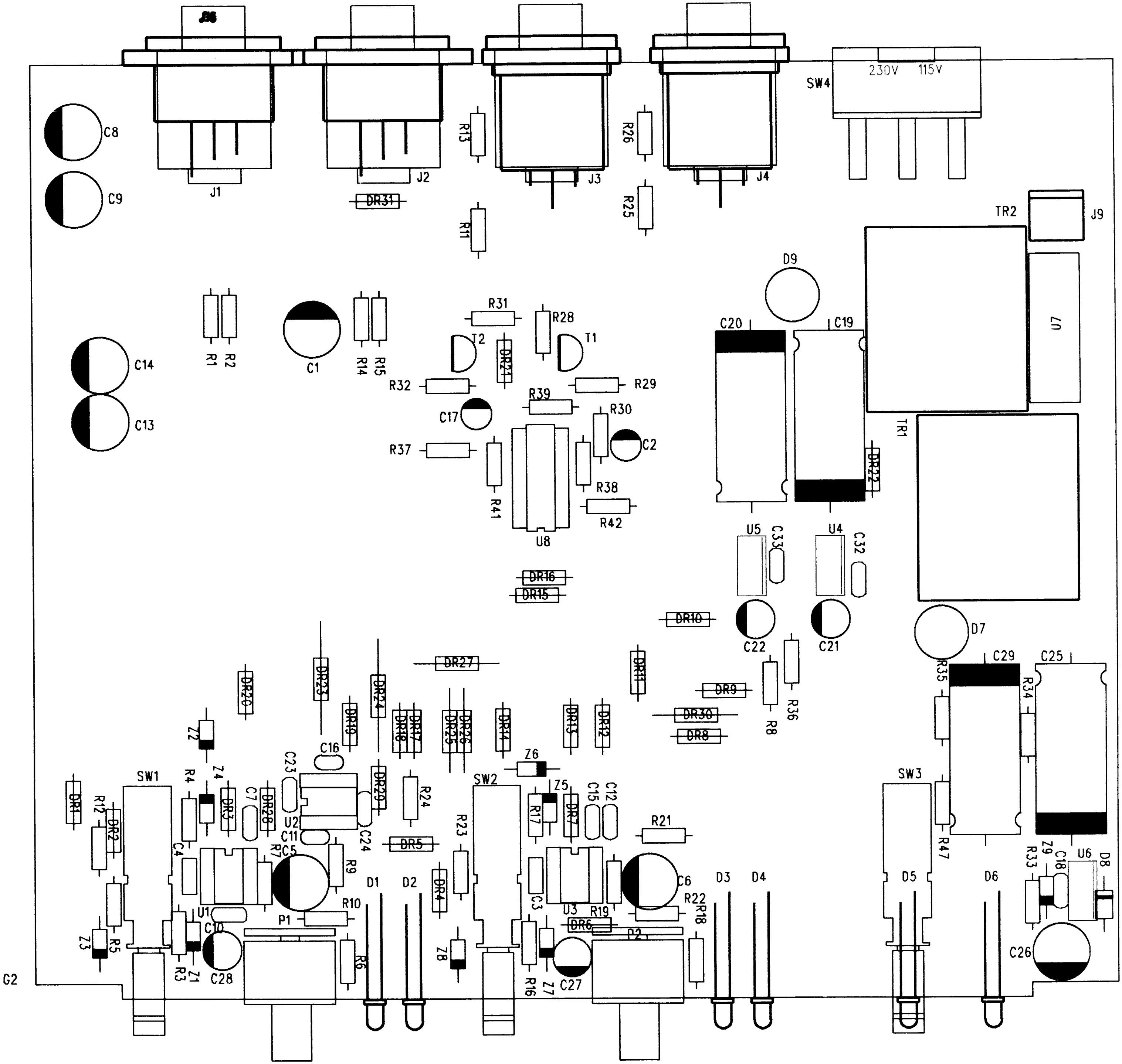
Always keep the above mentioned information in mind when using electrically powered equipment.

"MIC-AMP"

SERVICE MANUAL

Micamp.sch-1 - Wed Aug 18 17:10:13 1999





J1
J2
J3
J4
SW4
230V
115V
C8
C9
R13
R26
R25
DR31
R11
TR2
J9
D9
U7
R1
R2
C1
R14
R15
R31
R28
T2
T1
DR21
C14
C13
R32
R29
R39
C17
R30
C2
R37
R41
R38
R42
U8
C20
C19
TR1
DR22
U5
C33
U4
C32
DR16
DR15
DR10
C22
C21
D7
C29
C25
R35
R34
R36
R8
DR9
DR30
DR8
DR11
DR27
DR23
DR24
DR20
DR19
DR18
DR17
DR25
DR26
DR14
DR13
DR12
Z2
Z4
C16
C23
Z6
SW1
SW2
SW3
R4
DR3
C7
DR28
DR29
R24
Z5
C15
C12
R17
DR7
R21
DR1
R12
DR2
U2
C11
C24
C4
R7
C5
R9
DR5
R23
R47
Z9
C18
R33
U6
D8
D1
D2
DR4
D3
D4
C6
D5
D6
C3
U1
R10
R19
R22
R18
P1
DR6
P2
C10
Z3
R5
R3
Z1
C28
R6
Z8
R16
Z7
C27
C26
G2

91928528 Mic-amp 9.5" 2 channel micamp

Articlecode	Description	Quantity	Unit
..10250345	Brugcel B80C1000 (rond)	2.0000	st
..10400213	Condensator ker 10p R2.5	2.0000	st
..10401241	Condensator ker 100nF/32V R5.0	9.0000	st
..10401250	Condensator poly 4n7 R5.0	2.0000	st
..10600180	Connector netaanslklem 2p 5mm	1.0000	st
..10250343	Diode 1N4004 (rectifier)	1.0000	st
..10400284	Elco 10uF / 40V radiaal R5.0	2.0000	st
..10400289	Elco 47uF / 63V radiaal R5.0	1.0000	st
..10400292	Elco 100uF / 25V radiaal R5.0	4.0000	st
..10400302	Elco 100uF / 63V radiaal R5.0	4.0000	st
..10400293	Elco 220uF / 63V radiaal R5.0	1.0000	st
..10400303	Elco 1000uF / 10V radiaal R5.0	2.0000	st
..10400297	Elco 1000uF / 40V axiaal	4.0000	st
..10250322	Ic 7818 TO220 SGS (volt.reg)	1.0000	st
..10250324	Ic 7824 TO220 SGS (volt.reg)	1.0000	st
..10250323	Ic 7918 TO220 SGS (volt.reg)	1.0000	st
..10250316	Ic LM-339 (comparator)	1.0000	st
..10250184	Ic SSM-2017 P (audio pre-amp)	2.0000	st
..10250304	Ic TL-072 CP TI (dual-opamp)	1.0000	st
..10600394	Ic-voet 8 pins (vork-contact)	3.0000	st
..10600395	Ic-voet 14 pins (vork-contact)	1.0000	st
..10600432	Jack chassis break	4.0000	st
..10300374	Potm.16 1x 20kB/1x 10kC alog	2.0000	st
..10200491	Print Mic-Amp/d	1.0000	st
..10950582	Printtrafo 2x115V->2x18V 3.0VA	2.0000	st
..10550400	Schakelaar Alps 2p-ns (2 x om)	3.0000	st
..10550083	Schakelaar span.keuze 115/230V	1.0000	st
..10250328	Transistor BC-546B (npn)	2.0000	st
..10350517	Weerstand 1/4W 0E	32.0000	st
..10350844	Weerstand 1% 1/4W 4k75	8.0000	st
..10350846	Weerstand 1% 1/4W 6k81	4.0000	st
..10350713	Weerstand 5% 1/4W 47E	4.0000	st
..10350717	Weerstand 5% 1/4W 100E	4.0000	st
..10350721	Weerstand 5% 1/4W 220E	1.0000	st
..10350733	Weerstand 5% 1/4W 2k2	2.0000	st
..10350736	Weerstand 5% 1/4W 3k9	1.0000	st
..10350737	Weerstand 5% 1/4W 4k7	6.0000	st
..10350741	Weerstand 5% 1/4W 10k	2.0000	st
..10350749	Weerstand 5% 1/4W 47k	2.0000	st
..10350755	Weerstand 5% 1/4W 150k	1.0000	st
..10350756	Weerstand 5% 1/4W 180k	1.0000	st
..10350759	Weerstand 5% 1/4W 330k	2.0000	st
..10350761	Weerstand 5% 1/4W 470k	2.0000	st
..10990675	Zekeringhouder print + kap	1.0000	st
..10250351	Zenerdiode 5V6 / 400mW	8.0000	st
..10250365	Zenerdiode 22V / 400mW	1.0000	st
.10450152	Deksel SiFam red (cap) (11mm)	2.0000	st
.10800924	Doos Randapparatuur 9.5"	1.0000	st
.10700975	Dubbelzijdig plakband 12mm dun	25.0000	cm
.10100005	Front 9.5" Mic-Amp/c	1.0000	st
.10500084	Isolatieplaat 9.5" randapp.PVC	1.0000	st
.10600436	Jack moer	4.0000	st
.10150093	Kast 9.5" 1HE/C versie!!!!!!!	1.0000	st
.10450251	Knop Druktoets 3.3 black-squar	2.0000	st
.10450252	Knop Druktoets 3.3 red-square	1.0000	st
.10450092	Knop SiFam grey splined(15mm)	2.0000	st
.10250386	Led 3mm green round	2.0000	st
.10250387	Led 3mm red round	4.0000	st
.10600499	Netsnoer 2 aderig soldeer	1.0000	st

91928528 Mic-amp 9.5" 2 channel micamp

Articlecode	Description	Quantity	Unit
.20851000	Print bestukt Mic-amp	1.0000	st
.10800956	Schuimblok 9.5"	2.0000	st
.10800429	Sticker CE	1.0000	st
.10800275	Sticker OUT/IN	2.0000	st
.10800421	Sticker WARNING (rood)	1.0000	st
.10700786	Taptite M3x5 verzkop/pozidr/zw	8.0000	st
.10700642	Trekontlasting 11m rond recht	1.0000	st
60898528	Mic-amp + verpakking	1.0000	st