



C 12 VR

Bedienungshinweise
User Instructions
Mode d'emploi
Istruzioni d'uso
Modo de empleo
Instruções de Uso

CE (EMC, LVD)



1. The Microphone

This microphone has been recreated to meet the demand for the “tube sound” with the design approach of today using modern componentry around the “heart” of the microphone – the original, specially selected 6072 tube. It should be stressed at this point, that vacuum tubes with their heater filaments are much more delicate than solid-state components. Consequently, the user has to take great care in handling the microphone. Drops from even moderate heights may cause the filament to break and would result in immediate failure of the microphone. It would be advisable for the users to keep a spare tube – specially selected by an AKG Service Department – always ready for replacement.

How to replace the vacuum tube?

Turn the three grub screws at the lower end of the microphone into the body in clockwise direction until the outer housing can be pulled off in downwards direction.

The vacuum tube can now be removed by depressing the lower (rubber) shockmount to free the tube with a forward motion. Taking the tube socket in one hand and the tube itself in the other hand will enable you to separate the vacuum tube from the socket. Insertion of a new tube should be done in reverse order of the description above.

How to change the sensitivity of the microphone?

The circuit design incorporates the facility to increase the nominal sensitivity of the microphone by 10 dB. This basic change to the microphone’s data may be made by the user in the following manner:

1. Open the microphone according to the description in the last paragraph.
2. On the top left corner of the transformer board are three small p. c. board switches placed next to each other. Change **all three switches** to the opposite position with a small object, like ball-pen or similar.
3. Close the microphone in reverse order of the opening procedure.

How to mount the microphone?

A special shock mount/stand adapter H 15/T is provided and should always be used to mount the microphone on floor stands or booms. The clamp of the shockmount should be guided from the lower end of the microphone upwards until it is placed near the gravitational centre (slightly below the engraving). The shockmount can now be placed with the microphone on stands or booms with thread sizes of 3/8 or 5/8 inch. It may also be swivelled against the stand axis to suit the recording angle.

Powering of the microphone:

The required power unit N 12 VR is included in the delivery. It is clearly marked and quite obvious by connector type and size, how to connect the microphone to the power unit with the 10 m (30 ft.) multicore cable MK-Tube. The audio frequency may be taken from the power unit transformer balanced by a conventional audio cable with standard XLR-type connector. Please see the circuit diagram for wiring details.

2. The Power Unit N 12 VR

This device not only supplies the microphone with the filament and plate voltage for the vacuum tube, but facilitates also the control of polar pattern and bass cut remotely from the micro-

phone. Prior to connecting the N 12 VR to AC power, check the AC voltage of the power line you are going to connect the N 12 VR to.

Check that the N 12 VR AC voltage selector to the right of the power switch on the front panel is set to the same AC voltage. If it is not, use a flat-blade screwdriver to set the AC voltage selector to the correct voltage.

Warning: Connecting the N 12 VR to the wrong AC voltage may destroy the unit and cause fire and/or electric shock.

Replacing Fuses

The fuse protecting the **primary circuit** is located in the marked fuse compartment below the power connector.

Use a flat-blade screwdriver to open the fuse compartment lid. Replace the fuse with a new fuse of the same type (T 100 mA) and close the fuse compartment lid.

The 50-mA, fast-blow fuse protecting the **anode circuit** is located on the circuit board inside the unit.

Disconnect the unit from AC power by unplugging the power cable.

Remove the four screws fastening the top panel.

Remove the top panel.

Replace the fuse with a new 50-mA, fast-blow fuse.

Replace the top panel and fastening screws.

Power Connector

Especially on tour, you may need to connect the unit to a power outlet that does not match the power connector on the supplied power cable.

Purchase a matching power cable locally that complies with IEC and local safety standards and has a power connector with a chassis ground pin. While in the same area, use this „local“ power cable only.

Should it be required to increase the connection between the microphone and the power unit beyond 20 metres, an adaptation within the power unit N-Tube becomes necessary.

According to the circuit diagram, a simple change of the fuse link marked 250 mA from its fuse holder to the one next to it marked > 20 m is all, which is required.

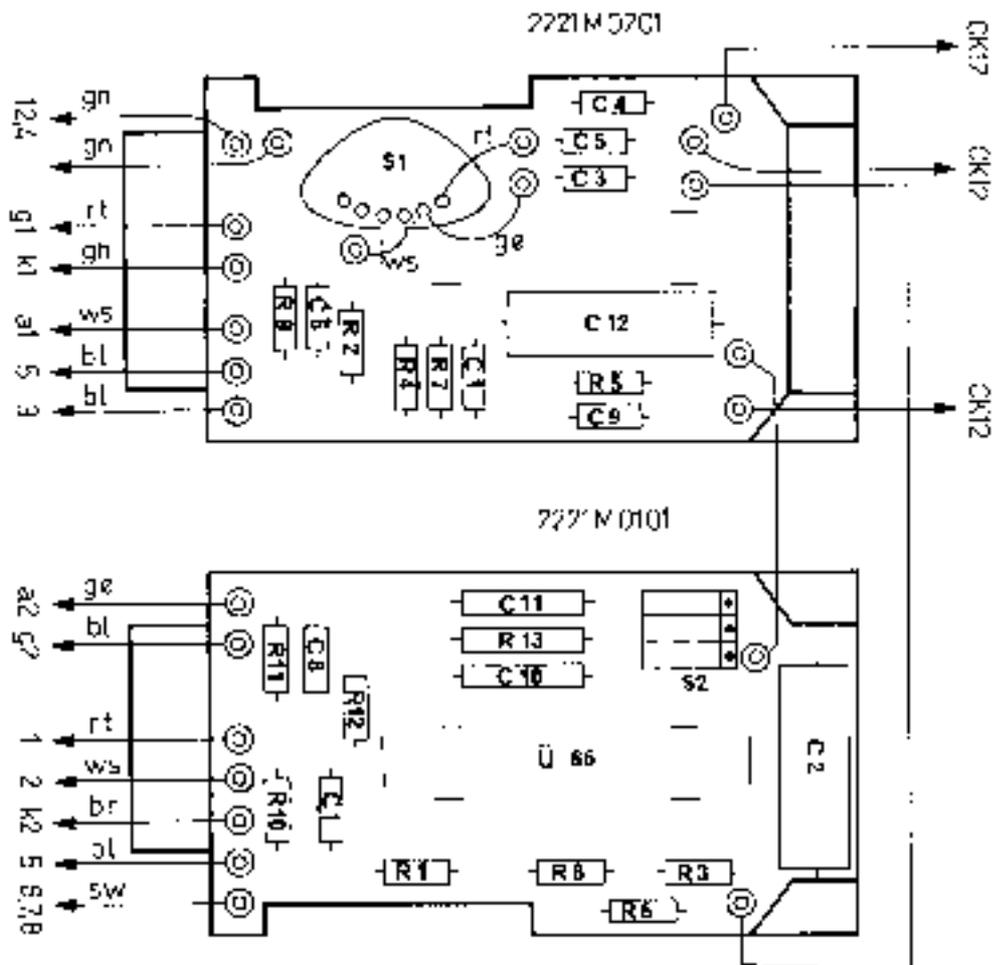
3. Specifications of the Microphone

Operating Principle:	Pressure gradient transducer with double-diaphragm and vacuum tube preamplifier
Directional Characteristics:	Omni-, cardioid-, figure-eight, and six intermediate positions remotely controlled from the microphone on the powering unit
Sensitivity at 1000 Hz:	10mV/Pa \pm -40 dBV*)
Frequency Range:	30 to 20,000 Hz \pm 2.5 dB from published curve
Electrical Impedance:	200 ohms \pm 25 %
Recommended Load Impedance:	\geq 1000 ohms
Equivalent Noise Level:	32 dB (DIN 45405/CCIR 468-2) 22 dB-A (acc. to DIN 45412, A weighted)
Powering:	Via the included powering unit N 12 VR with 115/230 VAC
Maximum Sound Pressure Level:	For k=3 %=128 dB SPL \pm 50 Pa
Pre-attenuation:	Switchable to -10 dB and -20 dB
Roll-off Filter:	Two position filter, remotely controllable from powering unit N-Tube
Connector:	Large-sized Tuchel, 12 pin
Dimensions:	42 \varnothing \times 225 mm (1.65 \varnothing \times 8.9 inch)
Net Weight:	680 g (24 oz.)
Shipping Weight:	Approx. 4.5 kg (~10 lbs.)

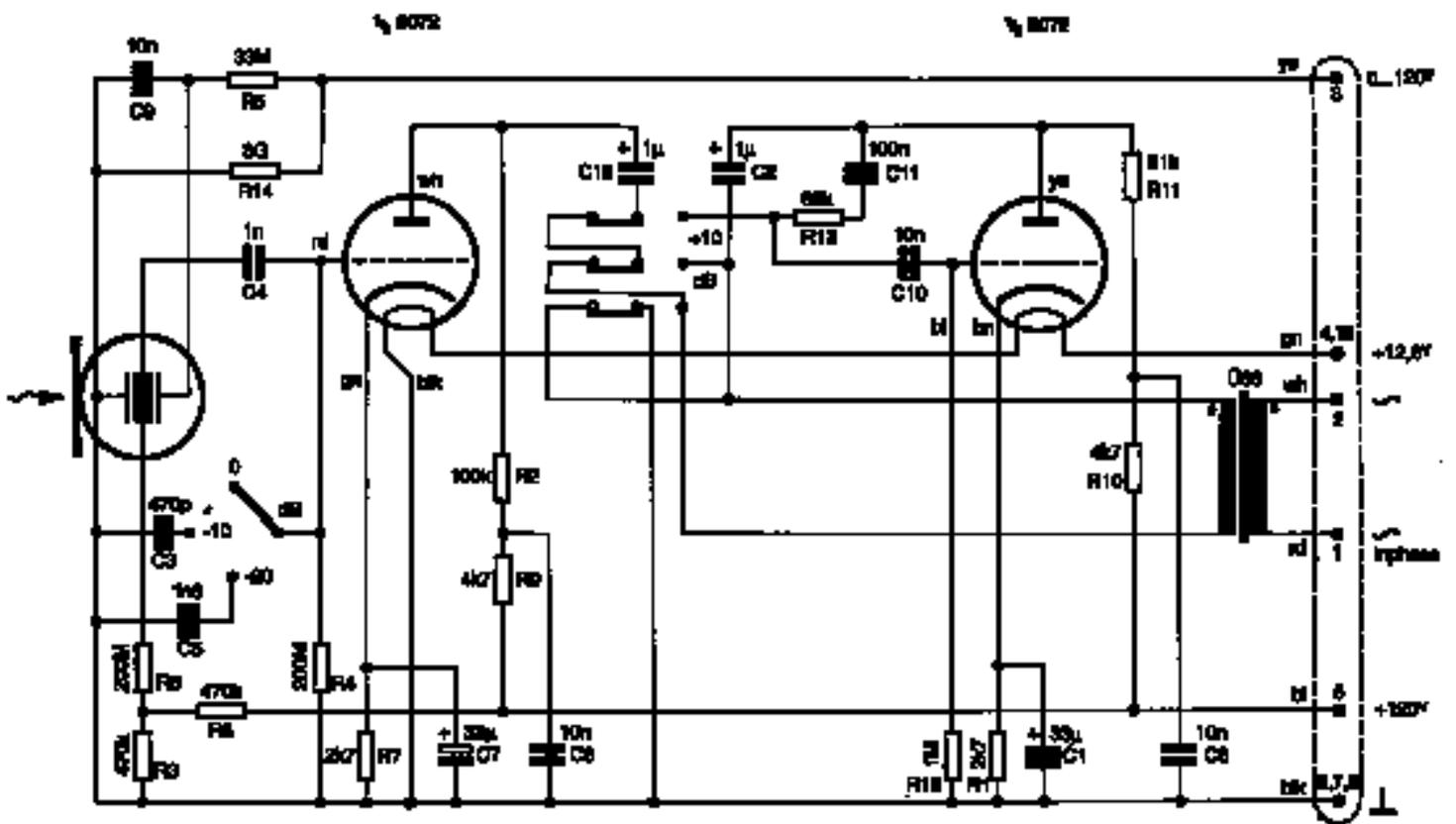
*) The sensitivity may be increased by 10 dB with a switch on the p. c. board.

This product conforms to EN 50 082-1 and EN 50 081-1.

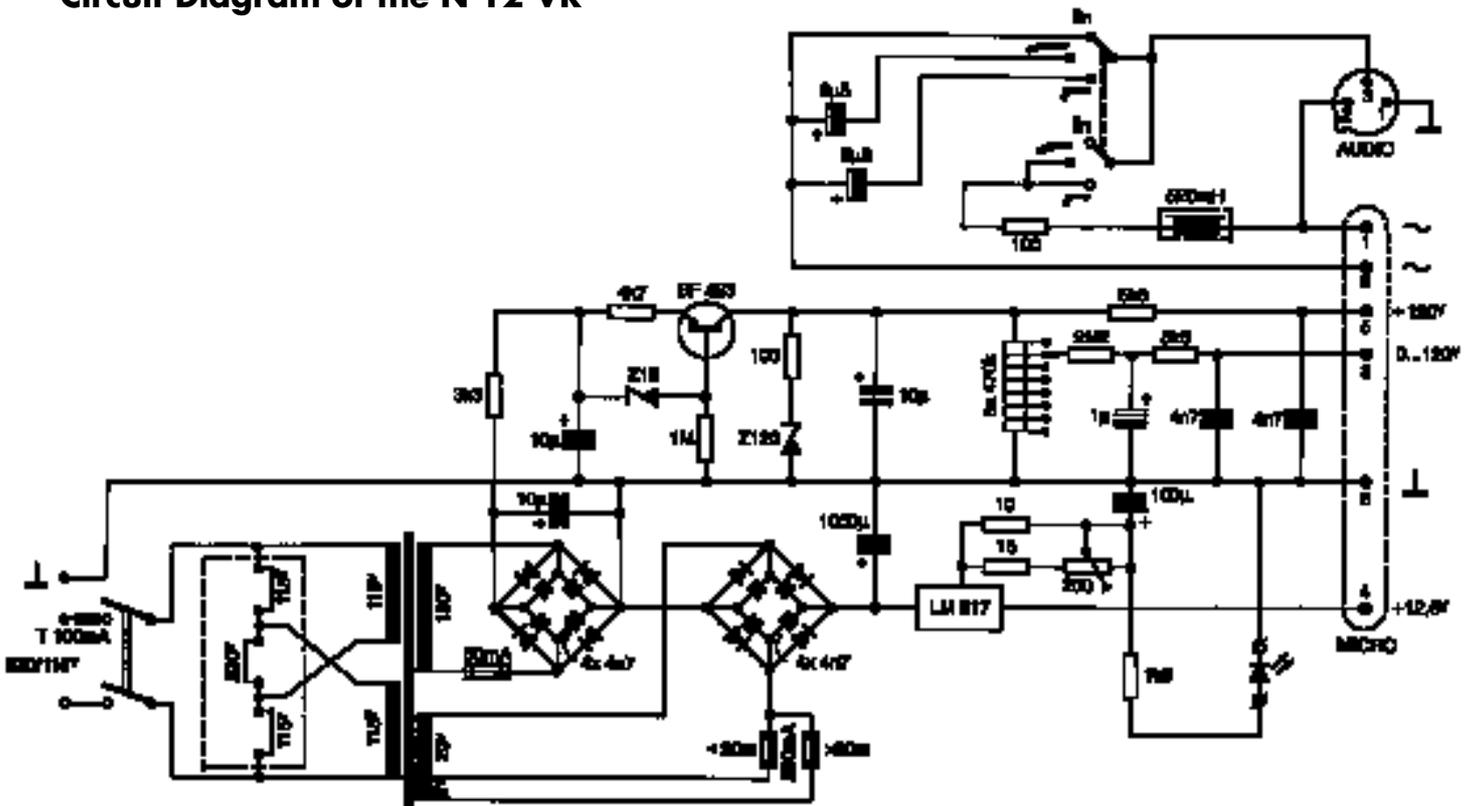
Component locations



Circuit Diagram of the Microphone



Circuit Diagram of the N 12 VR



Included Accessories:

N 12 VR, powering unit
 MK-Tube, 10 m (30 ft) connection cable
 H 15/T, elastic suspension
 W 42, foam-type windscreen
 Heavy-duty flight case

If you want to learn more about microphones and their applications, get a copy of **"Microphones: technique & technology"** by Norbert Pawera. The book is published by "Arsis Baedeker und Land Verlags GmbH" and available at your local music shop. Both studio and "onstage" applications are discussed in detail.

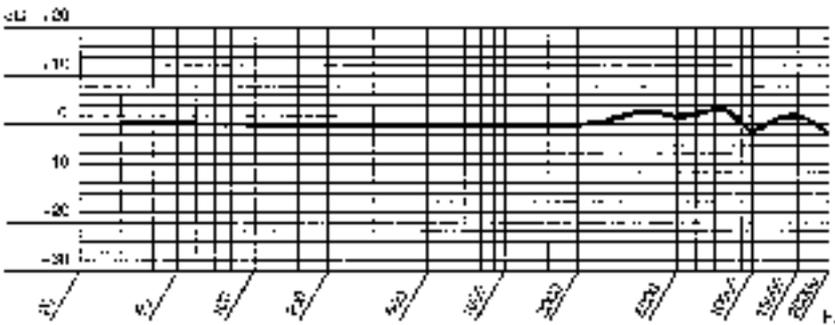
Spare Parts

Description	Ordering code
pcb 1 compl.	2221 M 0101
pcb 2 compl.	2221 M 0201
housing	2221 M 0301
screw for housing	2221 Z 1101
grid cap	2221 M 0401
# 6072 vacuum tube	2221 Z 2001
tube socket	0013 E 0001
rubber support	2221 Z 0601
capsule CK 12	2072 Z 0008
fuse 50 mA	0012 E 0009
fuse 250 mA	0012 E 0007

Spare parts should be ordered at your local AKG Service Agent or representative.

Frequency Response

Omnidirectional



Cardioide

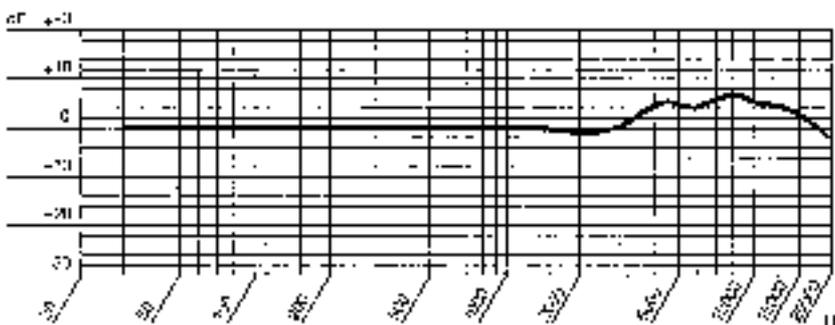
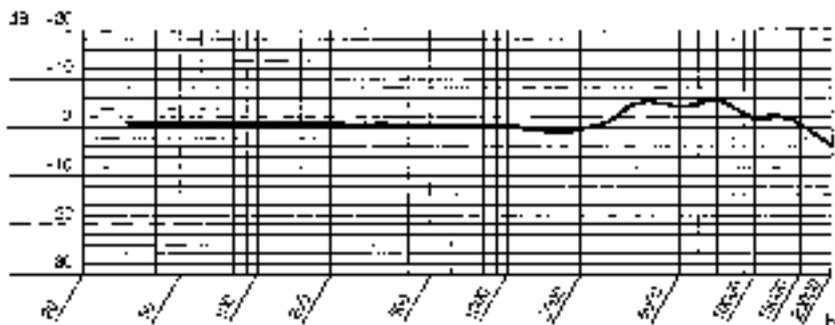
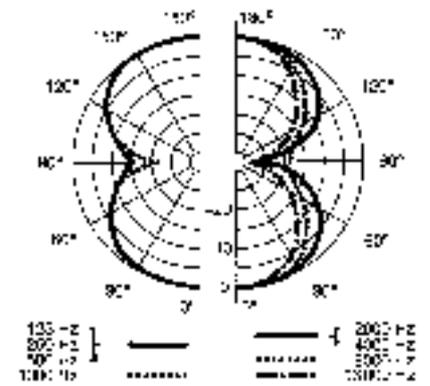
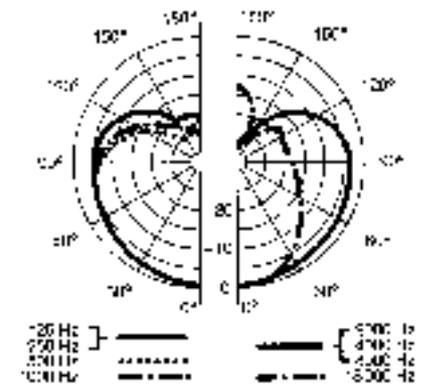
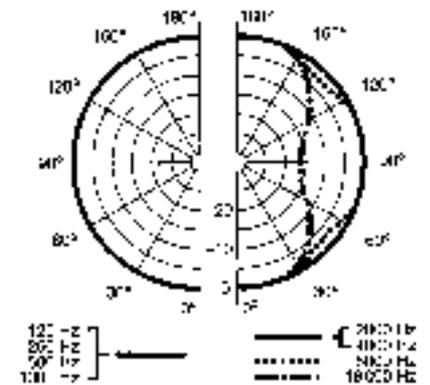


Figure-of-eight



Polar Response



Mikrofone · Kopfhörer · Drahtlosmikrofone · Drahtloskopfhörer · Kopfsprechgarnituren · Akustische Komponenten
Microphones · Headphones · Wireless Microphones · Wireless Headphones · Headsets · Electroacoustical Components
Microphones · Casques HiFi · Microphones sans fil · Casques sans fil · Micros-casques · Composants acoustiques
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Microfones · Fones de ouvido · Microfones s/fios · Fones de ouvido s/fios · Microfones de cabeça · Componentes acústicos

Technische Änderungen vorbehalten. Specifications subject to change without notice. Ces caractéristiques sont susceptibles de modifications.

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H A Harman International Company

AKG Acoustics GmbH

Lemböckgasse 21-25, P.O.B. 158, A-1230 Vienna/AUSTRIA
Tel: (43 1) 86 654-0*, Fax: (43 1) 86 654-516
<http://www.akg-acoustics.com>, e-mail: sales@akg-acoustics.com

AKG Acoustics, Harman Pro GmbH
Bodenseestraße 228, D-81243 München/GERMANY
Tel: (089) 87 16-0, Fax: (089) 87 16-200
<http://www.akg-acoustics.de>, e-mail: info@akg-acoustics.de

AKG ACOUSTICS, U.S.
1449 Donelson Pike, Nashville, TN 37217, U.S.A.
Tel: (615) 360-0499, Fax: (615) 360-0275

Arbiter Pro Audio

Wilberforce Road, London NW9 6AX/ENGLAND
Tel: (0181) 202 1199, Fax: (0181) 202 7076

Studer Japan Ltd.

2-43-7, Uehara, Shibuya-ku, Tokyo 151-0064/JAPAN
Tel: (813) 3465-2211, Fax: (813) 3465-2214

Erikson Pro Audio

620 McCaffrey, St-Laurent, Quebec, H4T 1N1, CANADA
Tel: (514) 738-3000, Fax: (514) 737-5069
Internet: www.jam-ind.com/eriksonpro