

Description:

General

The D 112 is a dynamic cardioid microphone designed for miking up bass instruments. Its frequency response extends down to 20 Hz and it is completely overload-proof. The sound entry side is identified by a green bumper band. Sounds arriving from the sides and rear are suppressed.

Construction

The D 112 has a die-cast aluminum case and a stainless steel wire mesh grille. With its dual windscreen to keep out wind noise, the D 112 is perfectly suited for wind instruments and vocalists, too.

Application:

Finding the optimum microphone placement is basically a process of trial and error. Here are a few hints:

Bass Drum

Most engineers agree that it is beneficial to remove the front head when miking up the bass drum. A full drum sound is obtained by placing the microphone just outside the drum.

The further inside, the drier and less boomy the sound and the better the acoustic separation of the bass drum from the rest of the kit. Pointing the microphone right toward the beater produces a harder sound culminating in a "click" when the microphone is as close as 1 or 1.5 inches to where the beater strikes the head. Directing the microphone away from this point, toward the rim of the head, will mellow the sound.

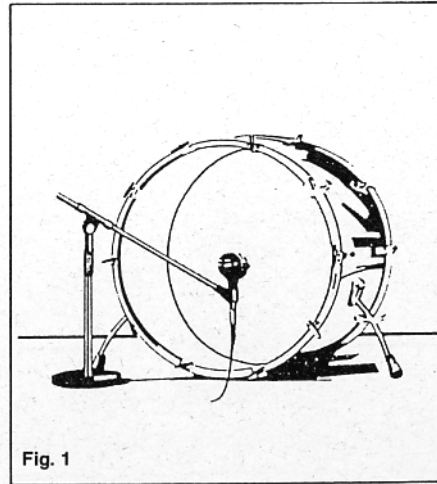


Fig. 1

Bass Guitar

Place the D 112 up close to the bass speaker and aim it toward the center of the diaphragm to capture the high frequencies which are radiated over a very narrow angle only.

Electric Guitar

To mike up a guitar amp, place the D 112 close to the speaker as shown. If your guitar sounds weak and thin through the PA, the D 112 will restore the lacking punch and bass (e.g., of certain open-back combo amps with poor bass response).

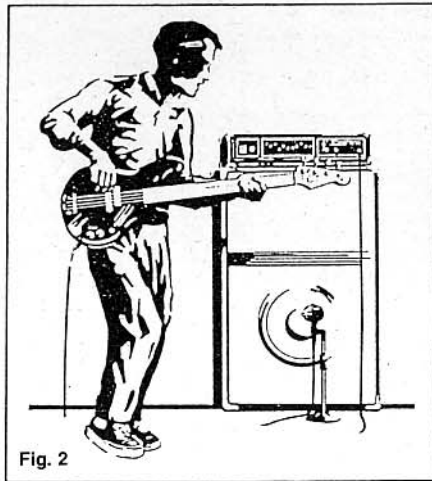


Fig. 2

Double Bass

The sound of a double bass amplified via a pickup can be improved by adding a microphone. The two signals are eq'd separately and then mixed. Place the D 112 about 4 to 8 inches away from the bridge for increased warmth and fullness of sound.

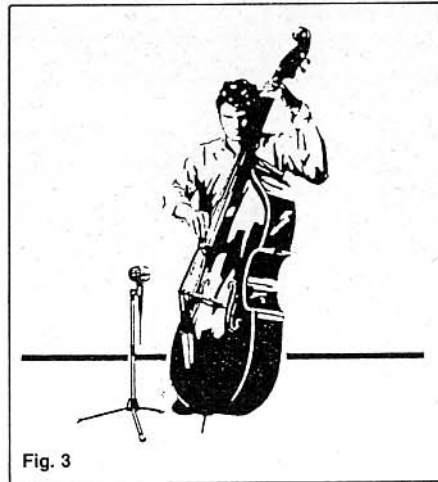
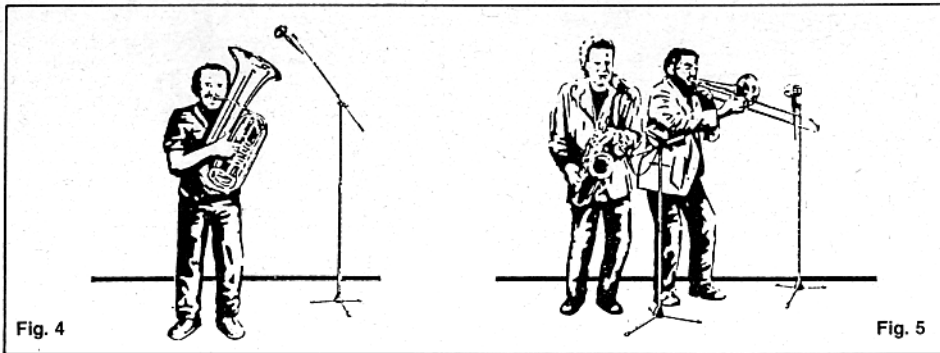


Fig. 3

Wind Instruments

The D 112 is an excellent microphone for wind instruments, mainly for the trombone, tenor horn, and tuba, as well as for the trumpet, fluegelhorn,

etc. When miking up close (2 to 12 in.) be sure to play to the side of the microphone because loud passages may cause excessive wind noise or distortion (fuzz).



If you want to learn more about microphones and how to use them, get a copy of "The Microphone — Technology and Techniques" by Norbert Pawera. The book is available at your local music shop. It describes, in a straightforward and easy-to-read manner, basic microphone designs, acoustics (reverberation, room radius, the "acoustics" of halls,...) acoustic properties of musical instruments (compass, formants,...), how to choose the right microphone for a given instrument, and how to place microphones for best results. Both studio and onstage uses are discussed in detail.



Wiring: XLR vs. Jack

The XLR sockets on a mixer or other equipment are practically always balanced microphone inputs. When connecting your microphone to such an input, you may use a cable up to 600 m (2,000 ft.) long

without problems. When making your own cables be sure to solder the two inner (audio) wires to the same pins on both connectors (pins 2 and 3). Pin 1 always takes the shield (ground) (see fig. 6).

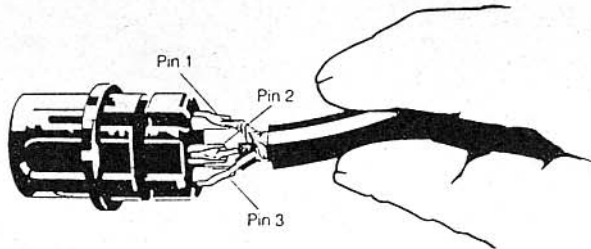


Fig. 6

Jack sockets (mono) are unbalanced inputs. In this case, long cables are susceptible to interference from magnetic fields (power lines, light dimmers).

When fitting a cable with a jack plug bridge pins 1 and 3 in the XLR connector (see fig. 7).

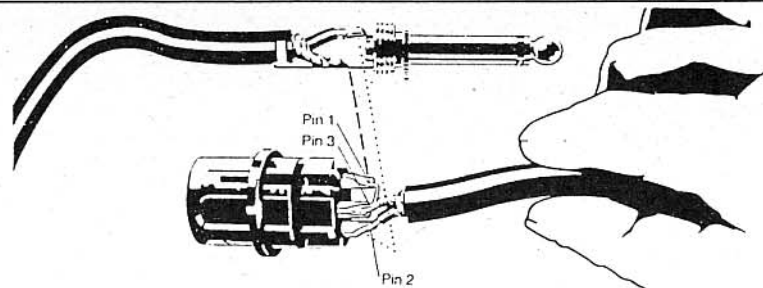


Fig. 7

The following problems are often due to incorrect wiring or a poor soldering joint:

- Hum (shield soldered poorly or to wrong pin)
- Microphone signal too low (incorrect wiring, missing bridge for unbalanced operation)
- "Dead" microphone (short circuit in connector due to poor soldering; cable break)
- Phase problems: Hold two microphones very close to each other and talk into them. If there is no bass, the connections to pins 2 and 3 in one of the XLR connectors have been reversed.

Impedance

The D 112 is a low-impedance microphone (200 ohms) and may be connected to practically all mixers, multitrack recorders, etc. without any problems. High impedance inputs of older equipment require a 1:10 step-up transformer at the equipment end of the cable.

Safety Ground:

Make sure the mixer or other equipment you connect your microphone to is adequately grounded. The D 112 case will be automatically connected to this safety ground.

Microphone Care:

In order to protect your microphones from dirt and damage, store and transport them in their original packages or in a specialized carrying case. To clean the enameled case, use a cloth moistened with water or diluted alcohol if the case is badly soiled.

Specifications:

Transducer Principle:	dynamic pressure gradient transducer
Polar Pattern:	cardioid
Frequency Range:	20 – 17,000 Hz
Sensitivity at 1,000 Hz:	1.8 mV/Pa \pm – 75 dBV re 1 μ bar
Electrical Impedance at 1,000 Hz:	210 ohms
Recommended Load Impedance:	\geq 600 ohms
Max. Sound Pressure Level for 0.5% T.H.D.:	unmeasurable
Hum Sensitivity at 50 Hz:	6 μ V/5 μ T \pm 30 V/Vs/m ²
Climatic Conditions:	temperature range: – 10°C ... + 70°C rel. humidity at + 20°C: 90%
Connector Type:	3-pin male standard XLR
Connector Wiring:	pin 1: ground, pin 2: audio (inphase), pin 3: audio (return)
Housing Material:	die-cast aluminum
Finish:	dark gray metallic enamel
Dimensions:	150 mm (5.9 in.) H x 70 mm (2.8 in.) W x 115 mm (4.5 in.) D
Net Weight:	380 g (13.4 oz.)

Included Accessories:

SA 40 stand adapter

Optional Accessories:

Microphone Cables:

- MK 4/5: 5-m (15-ft.) 2-conductor shielded cable with 3-socket female XLR connector, other end unterminated
MK 9/10: 10-m (30-ft.) 2-conductor shielded cable with 3-pin male and 3-socket female standard XLR connectors
MK 9/20: same as MK 9/10 but 20 m (60 ft.)

Floor Stands:

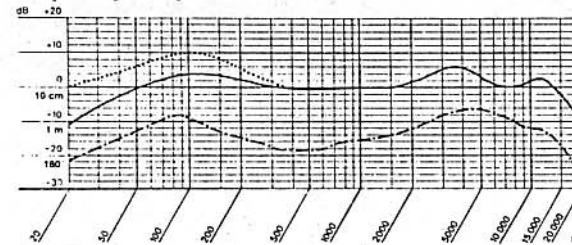
St 102 A, St 200

Table Stands:

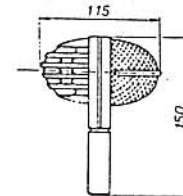
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This product conforms to EN 50 082-1

Frequency Response:



Dimensional Drawing:



Polar Diagram:

