



Soundelux Model U99

User Manual



Introduction

Inspired by the original “Sound of Tomorrow U67,” the U99 is a multi-pattern tube microphone for the recording studio and for premier live events. Featuring a k67 dual symmetrical backplate dual membrane capsule along with the signature Soundelux USA “fat” switch featured on the U195 microphone, and an innovative new high frequency “boost-flat-cut” switch, the U99 has enough proximity effect to sound full, but not so much that it sounds boomy. This makes it a natural on vocals, acoustic instruments, drums, and VO.

As with all Soundelux USA mics, The U99 uses a “new old stock” tube and true linear high current power supply for the fullest possible sound. It also features a large core output transformer to radically increase the low frequency headroom. The mic comes with its own proprietary N470 power supply, six pin XLR cable, and bottom thread shock mount, and is built in the same facility by the same people who build Bock microphones.

Description

The Soundelux USA Model U99 is a high quality continuously variable directivity studio condenser microphone utilizing vacuum tube electronics. Modeled after the famous 67 designed and originally built in the 1960’s, this mic takes that platform and expands the electronics bandwidth and feature set. It utilizes it’s own proprietary cable and power supply. The microphone’s audio output is standard male XLR3, with positive excitation of the diaphragm at the front of the mic resulting in a positive voltage at the output XLR’s pin 2. Audio output is fully transformer balanced.

Additional Circuit Notes

The Soundelux USA U99 uses classic single pentode run as triode circuitry with high quality through hole components. Through hole components are more mechanically robust than surface mount and allow for worldwide ease of repair, as well as being the component standard for all vintage mics. Single triode or pentode run as triode mic circuits demand excellent capsules before them and excellent transformers after them, with a reward of low noise, simplicity of troubleshooting, and classic sound unachievable otherwise. The Soundelux USA U99 departs from the classic 67 of the 1960’s in its expansion of the bandwidth of the electronics, which has had its low frequency cutoff frequency decreased from 40 Hz to 10 Hz, without any loss of high frequencies, by use of a larger transformer.

As well, the cathode self bias cap is rear of mic switch selectable for “fat,” which has an increased value to maximize warmth, or “normal” with a traditional value capacitor. For loud sound sources, or very close up use, a -20 dB pad switch is available on the rear of the mic. As well, the rear mounted “High Frequency” switch allows the user to tailor the desired response at 10 kHz to “flat” (capsule has natural boost of +2 dB @ 10 kHz), “boost” (+2 additional dB @ 10 kHz, total +4 dB @ 10 kHz, a gentle shelf starting at 4 kHz), or “cut.” Cut has two corner frequencies, 10 kHz and 5 kHz, and reduce the sibilant region 3.5 kHz - 8 kHz by 1.5 and 3 dB respectively.

Getting Started

It is recommended that the user place the mic in its shockmount on a stand and connect all the cables before applying power to the unit. Allow a few minutes for the mic to warm up.

Power Supply and Cable

The Bock Audio P-251 full linear power supply features simple shunt B+ regulation and active current source for the heater. The outputs and cable pinouts are shown in the table at right.

Pin #	Output
1	audio (-)
2	audio (+)
3	pattern (if applicable)
4	heater (5.1v typical)
5	B+ (120v typical)
6	ground
case	shield

Specifications

Patterns:	Remote continuously variable omni through cardioid and figure 8
Frequency Range:	10 Hz to 18 kHz, ± 2 dB
Sensitivity:	33 mv/Pa
Equivalent Noise:	19 dB ("A" weighted), 29 dB (unweighted)
Distortion vs. SPL @ 1 kHz:	(increasing distortion is non-exponential, nearly linear, and primarily 2nd harmonic) 112 dB = 0.5% THD 118 dB = 1% THD 129 dB = 2% THD
Impedance:	200 Ohms true transformer balanced
Recommended load:	2K Ohms
Dynamic range:	99 dB (max SPL-"A" noise)
S/N (94 dB-noise):	75 dB ("A" weighted), 65 dB (unweighted)
Capsule size:	1" diameter, dual symmetrical backplate K67 type
Tube type:	New Old Stock EF732
Dimensions:	2" dia x 9" oal (50 x 228 mm)
Weight:	1 lb 9.3 oz (1.58 lbs) = 716 g
Shipping weight:	12 lbs
Power Supply:	P251 true linear, factory wired 115v or 230v operation

Safety

- CAUTION: Shock Hazard: Do not open microphone when connected to power source. No user serviceable parts inside. Refer failed units to qualified service personnel.
- VORTICHT: Shock gefahr: Bitte nicht das mikrofon offen wenn es eingeschaltet ist einen stoppkontakt.
- Keine zu wartenden Teile im Inneren. Beziehen gescheitert Einheiten qualifiziertem Service-Personal.
- ATTENCIONE: Choc hazard: N'ouvrez pas le microphone quand il y a un connectionne avec un source d'electricity. Aucune pièce réparable par l'utilisateur. Référer unités échoué à un personnel qualifié.
- ATTEZIONE: Rischio di scossa: Non aprire il microfono quando e attaccato al'elettricità. Non contiene parti riparabili. Riferimento unità riusciti a personale qualificato.
- Read the instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat source such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use with attachments/accessories specified by the manufacturer.
- 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.
- Soundelux USA U99
- UL 62368-2
- EN 62368-1
- Part 10004702 v201210