

# Soundelux ELUX 251 User's Manual

The Soundelux ELUX 251 is a high quality variable directivity studio condenser microphone using vacuum tube electronics. As such, it requires its own proprietary power supply and cable. The microphone's audio output is standard male XLR 3-pin at the power supply, with positive excitation of the diaphragm at the front of the microphone resulting in a positive voltage at the output XLR's pin 2. Audio output is transformer balanced.

**CAUTION: Shock Hazard: Do not open microphone when connected to power source.**

**VORICHT: Schok gefahr: Bitte nicht das mikrofon offen wenn es eingeschaltet ist in einen stoppkontakt.**

**ATTENZIONE: Choc hazard: N'ouvrez pas le microphone quand il y a un connectionne avec un source d'electricity.**

**ATTEZIONE: Rischio di scossa: Non aprire il microfono quando e attaccato all'elettricità.**

## !!!!ATTENTION!!!!:

- 1) **DO NOT CONNECT MICROPHONE WHEN AC POWER IS APPLIED TO POWER SUPPLY!**
- 2) **DO NOT HOT SWAP MICS AND SUPPLIES.**
- 3) **DO NOT swap mics and supplies. Each supply has been optimized for that mic.**

**It is recommended that the following procedure be followed when setting up the microphone:**

- 1) With no power applied, and no connections made, determine which AC Mains voltage is relevant to your location, and be sure it matches the voltage indicated on the P251 power supply. The mains voltage is factory preset and should only be changed at the factory.
- 2) Attach shock mount to stand.
- 3) Place ELUX 251 microphone securely in shock mount.
- 4) Insert FEMALE end of 6-pin Tuschel cable (provided with microphone) into microphone. Try to provide some strain relief loop when lacing cable on microphone stand. Do not stretch or make the cable taught.
- 5) After cable has been laid out with plenty of slack and not in a heavily trafficked spot, insert MALE end of 6-pin Tuschel cable into power supply.
- 6) Connect audio output Male XLR-3 with user provided cable to console or microphone preamplifier. 48v phantom need not be applied, nor will it damage the microphone, but we recommend it not be applied if possible.
- 4) Verify that monitor loudspeakers are muted, or that signal path does not allow monitoring of microphone during power up.
- 7) Verify that rear panel power switch is set to "off", and connect IEC 320 compatible AC power cable (provided with mic) to power supply, then wall AC outlet.
- 8) Apply power. Allow 1 minute before allowing monitoring of microphone
- 9) For optimum performance, allow the microphone to warm up for at least one hour.

### **About the ELUX 251**

The ELUX 251 was designed to provide a modern equivalent of the now vintage ELAM 251 studio microphone. Great attention to minute detail has resulted in a stunning mic with all the attributes of the vintage product along with a few modern advances. The audio band noise floor has been lowered, and power supply acoustic noise eliminated. The headgrille's internal chamber resonance has been matched to the original (in equivalent volume, which affects high frequency response), and the original tube/transformer configuration has been maintained. It is the only American made microphone now using the original German broadcast spec threaded locking connector, and the heart of the mic, the capsule, is made in Germany as well.

The ELUX 251 uses only the absolute highest quality, cost no object components available. Internal layout and construction is designed for the shortest signal path possible. The zero-feedback, minimum capacitance design assures excellent phase and dynamic response. Mechanical components such as the tube socket and capsule are mounted so as to place their resonance below the critical audio band. Even the wiring from the components to the tube socket is resonance damped, so as to dissipate unwanted mechanical interference. Internal wiring is silver plated copper with Teflon insulation, for maximum conductivity, minimal oxidation, and minimal temperature influence (both short and long term) in the heated environment of the mic. The capsule is a close-tolerance, time tested CK-12 design, using 6mil Dupont Mylar™ film for the best longevity, performance, and faithfulness to the original 251. The 6072A tube has been rigorously selected for low noise, max SPL, and minimum distortion. The expected lifetime of the tube is 10 years or better. This triode is run at a low enough voltage to ensure long life. The output is coupled through a unique, wide bandwidth transformer. This transformer's design assures low distortion at all frequencies, as well as a near perfect impedance vs. frequency transformation. It's CMRR (common mode rejection) is superior to transformerless designs. The ELUX 251 uses the P251 full linear power supply. This supply has inductor-fed (eliminates hum) shunt regulation on the high voltage and an active current sourced heater regulator. To ensure long life and high system headroom, the transformers have been selected for at least twice the normal system current draw. The cable is double shielded. Though it is not required for the mic to perform within or beyond specification, we recommend that the customer seek out the highest the highest quality 3pin XLR cable for this and all mics between mic and console/preamp.

