Specifications*

Generating Element:
Externally polarized condenser

Polar Pattern:
Cardioid, Omnidirectional, Figure 8

Frequency Response:
10Hz - 20KHz

Sensitivity:
-34dBV (20 mV) @ 1 Pa

Impedance:
200 ohms

Self Noise:
12 dB-A

Maximum SPL:
145 dB

Switches:
Hi-pass, pad, on/off with auto shut-off option

Hi-pass:
135 Hz, 6 dB/octave

Pad:
20dB

Powering Requirements:
48V phantom, 8 mA

Connector:
Three pin male XLR type

Finish:
Durable black urethane. Brass plated front screen

Net Weight:
2.3 lbs. (1.0 Kg) with shockmount

* Due to our continuous efforts to improve our products and promote the development of standards, specifications are subject to change without notice.
**Description**

The equitek e300 from CAD is a multi-pattern externally biased servo-condenser microphone. The e300 offers unparalleled performance from critical studio tracking to live sound reinforcement. A regulated bypass voltage generator for precise output sensitivity, sophisticated laser trimmed op-amp circuitry for increased management of fast transients and open capsule architecture design make the e300 a classic vocal studio microphone.

The equitek e300 incorporates a number of unique features including:
- **Servo head amplifiers.**
- **High SPL capability (145 dB SPL with pad).**
- **Transformerless balanced output circuits.**
- **Internal power reservoir system that can supply ten times the current available from phantom powering alone.**
- **The equitek e300 combines a 1.1" gold plated bi-directional pattern (cardioid, omni, figure 8) dual diaphragm capsule with advanced electronics.**
- **Remote operation without phantom power using internal batteries.**
- **20 dB non-capacitive pad.**
- **Internal pop/EI filter.**
- **Automatic power switch down circuit.**

**Getting Started**

The e300 requires 48 volt phantom power and the internal batteries must be charged for proper operation. Although the internal batteries were charged at the factory, the batteries will gradually self-discharge if the microphone has been in storage for a long time. It may be necessary to charge the batteries before initial use. Please see the section below on powering the equitek e300.

**Caution!**

The high gain and wide bandwidth of the e300 microphone will easily overload the inputs of many professional mixing consoles if adequate precautions are not taken. This is especially true if the mic is going to be used on percussion or amplified electronic instruments. If you have never used this microphone before, we strongly recommend that you initially reduce the system gain by doing one or more of the following:

- Enable the pad switch on the input of your mixing console.
- Start with the input trim control on your mixing console turned down to a low level.
- Enable the -20 dB pad switch on the e300 microphone.

**Powering the equitek e-300**

The equitek e300 is powered by a combination of 48 volt phantom power and a pair of rechargeable 9 volt batteries. This powering arrangement overcomes the inherent current limiting associated with most phantom powered supplies. The batteries are trickle charged by the phantom supply. When needed, the batteries provide the extra current necessary during high SPL transients. The microphone will not function properly without the batteries present. The microphone can be used without phantom power for periods of up to 6 hours provided the batteries are fully charged. Standard 9 volt alkaline batteries can also be used if extended operation is needed when no phantom power is available.* (Auto power shutoff circuit must be disabled for battery operation without phantom power.) The minimum requirement for the phantom supply is a regulated 48 volts with the capability of supplying at least 8 mA of current. Supplies that do not meet this requirement will not allow continuous operation of the microphone. Before initial use, the batteries may need to be fully charged. Once the batteries have received this initial charge, they should not need to be charged in this manner again, unless the microphone is used for a long time. The batteries carry a charge decay rate of 0.5% per month. If you need to replace the batteries, follow these steps:

1. Connect the microphone to a phantom supply and allow the batteries to charge 12 - 14 hours with the mic turned off.
2. Remove the batteries from the microphone and charge using a standard battery charger.

* See the section on Auto Power Shutoff.

**Auto Power Shut Off Configuration**

The following instructions are only important if you plan on using the e300 without a phantom power supply, such as for remote DAT recording. The equitek e300 incorporates a circuit which shuts the microphone off if phantom power is removed. This is done so that battery power will be conserved if the user forgets to turn the microphone off. If it is desired to operate the microphone using only the batteries, this feature must be disabled or the microphone will not function. This is easily done by means of a small movable configuration jumper located inside the battery cover of the microphone. To configure the e300 to Auto Shut Off, remove the two screws on the bottom of the microphone with a #2 Phillips screwdriver. Carefully remove the bottom plate as not to break off the three internal signal wires. Reverse process for assembly. If you do not plan to use the microphone without phantom power, it is recommended that the configuration jumper remain in its default position.

**A Special Note about Rechargeable Batteries**

The high quality rechargeable batteries used in the equitek e300 are Nickel Metal Hydride, or Nickel Cadmium type. They were selected to provide long life with virtually no maintenance and have a number of properties that make them superior to most commonly available rechargeable "9 volt" batteries:

1. Higher output values
2. Lower self discharge rate
3. High immunity to overcharging

If the e300 is operated with a 48 volt phantom power supply it is unlikely they will ever need to be recharged, even if the microphone is unused for months. If it should ever become necessary to replace the batteries or if you simply want a spare set, use only high quality Nickel Metal Hydride, or Nickel Cadmium type batteries.

**Switch Functions**

- **Power**
  - "1" = Microphone Power On
  - "0" = Microphone Power Off (Use this position switch position for fastest charging of batteries.)

- **Multi Pattern**
  - ○ = Omnidirectional
  - ● = Figure 8

- **H-Pass**
  - Left position = Low end roll off below 135 Hz.
  - Right position = Flat low end response

- **Pad**
  - 0dB = Full gain (highest sensitivity)
  - -20dB = 20dB gain reduction (highest clipping level)

**User Techniques and Applications**

The equitek e300 includes a suspension shock mount which greatly reduces handling noise. The mounting adapters allow for easy microphone positioning and mating to any microphone stand that has standard 5/8" X 27 threads. A thread adapter is included for the smaller threaded Mic stands. The e300 can be used in a broad number of applications ranging from live reinforcement to the most critical studio situations. The e300 is ideal for vocals and voice over. Its uncolored sound characteristics allow you to decide how an instrument or vocal will sound in the mix. The switchable polar pattern is very useful in a variety of the most demanding vocal applications.

**Optional Accessories:**

- EFF-15 P-pop filter mounted on 15" goose neck with standard bracket
- 40-350 100 ft. broadcast quality extension cable terminated with professional 3 pin male/female connectors.
- 40-352 25 ft. broadcast quality extension cable.

**TWO-YEAR LIMITED WARRANTY**

CAD Professional Microphones are warranted for two years to the original purchaser from the date of purchase by Omnitronics, LLC, to be free from defects in material and workmanship. In event of such defect, product will be repaired or replaced at Omnitronics, LLC discretion with a new unit of equal or superior value. This warranty will be at no charge if delivered prepaid to Omnitronics, LLC, together with the proof of purchase and Return Authorization Number. The unit will be returned promptly prepaid. Warranty excludes exterior finish, appearance, items, or malfunction due to abuse or operation under other than specified conditions. CONSEQUENTIAL OR INCIDENTAL DAMAGES ARE EXCLUDED.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

Note: No other warranty, written or oral is authorized by Omnitronics, LLC.

**SHIPPING INSTRUCTIONS**

Please call our customer service department at 404-595-1111 for a pre-approved return authorization number and carefully return the unit and return it to: Omnitronics, LLC, 341 Harbor St., Conesus, NY 14433. ALL RETURNS MUST HAVE A PRE-APPROVED RETURN AUTHORIZATION NUMBER OR IT WILL BE REFUSED. If outside the United States, contact your local dealer or distributor for warranty details.