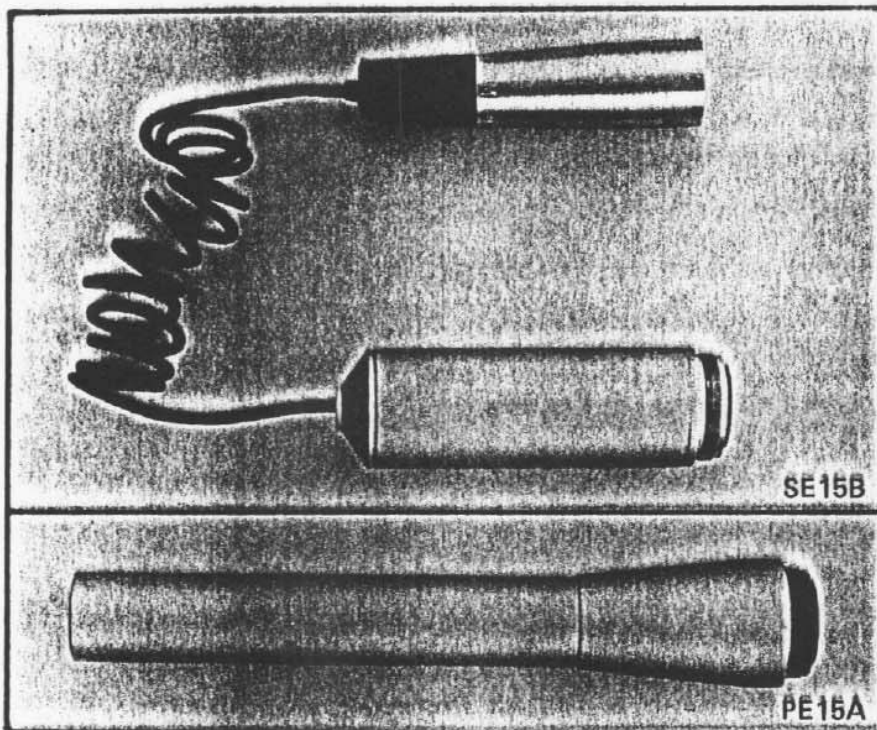




Electro-Voice®
a gulton company

Model PE15A/SE15B Preamplifier

SPECIFICATIONS

PE15A

Frequency Response, Load 800-Ohms or Greater:

20-20,000 Hz $\pm$.25 dB

Gain:

-2.5 dB

Impedance:

150 ohms nominal

Total Harmonic Distortion, 1000 Hz

Less than 1% at 1.5 V RMS output, load 800-ohms or greater

Self Noise:

1.4 μ V A weighted, 25 pF termination

Operating Voltage:

8 to 50 V, phantom power

Current Required:

4 mA

Dimensions:

154 mm (6.06") long
26.8 mm (1.06") diameter
19.0 mm (.75") shank dia.

Weight:

172 g (6.0 oz)

Finish:

Fawn beige micomatte

Case Material:

Steel

Accessories Furnished:

312A stand clamp
Metal storage case
4.6 m (15-ft) cable

Optional Accessory:

307 shock mount

SE15B

Frequency Response,

Phantom Mode, 800-Ohm

Load:

20-20,000 Hz $\pm$ 1.5 dB

50-20,000 Hz $\pm$.25 dB

Load 180 Ohms or Greater,

Worst Case:

25-20,000 Hz $\pm$ 1.5 dB

Frequency Response, A-B Mode,

Flat Bass Response Setting:

30-20,000 Hz $\pm$.25 dB,

8 dB down at 20 Hz

Bass Roll-Off Setting:

300-20,000 Hz $\pm$.25 dB

3 dB down at 125 Hz

10 dB down at 40 Hz

Gain:

-2.5 dB

Impedance:

250 ohms nominal

Total Harmonic Distortion, 1000 Hz

Phantom Mode:

* Less than 1% at 1.5 V RMS output, load 800 ohms or greater

A-B Mode:

Less than 1% at .8 V RMS output

Self Noise:

1.4 μ V A weighted, 25 pF termination

Operating Voltage, Phantom Mode

Phantom Mode:

8 to 50 V

A-B Mode:

12 V $\pm$ 2 V

Current Required:

4 mA for Phantom Mode

6 mA for A-B Mode

Dimensions:

80.7 mm (3.18") long

25.4 mm (1.0") diameter

Weight:

119 g (4.2 oz)

Finish:

Fawn beige micomatte

Case Materials:

Steel and aluminum

Accessories Furnished:

Metal storage case
Integral coiled cable
Cable banding clamp
Flex relief insert

Optional Accessories:

304A shock mount
309 shock mount
301A stand clamp

DESCRIPTION & APPLICATIONS FOR THE PE15A

The Electro-Voice PE15A is a remotely powerable electronic preamplifier designed to work with the following E-V professional condenser heads: CO15E, CS15E, CH15E, and CL42E. The conventional styling of the PE15A is equally at home in the recording studio, on camera, or in hand-held professional entertainer applications. The 3/4-inch diameter allows the PE15A to be used with standard Electro-Voice accessories such as shock mounts, stand clamps, and the 340/342 security stud mounts. The electronics are designed for low noise and maximum stability over a wide range of temperature extremes. Unlike the

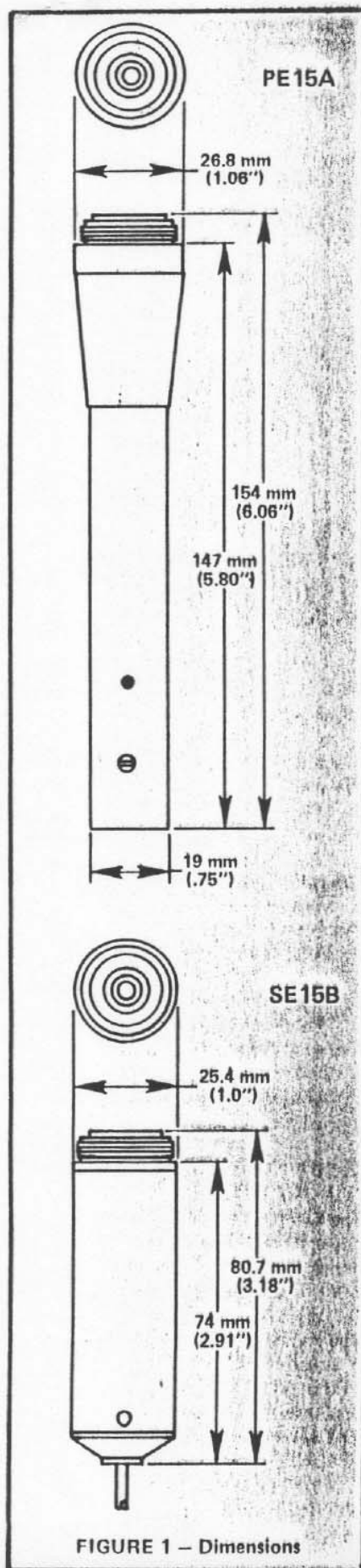


FIGURE 1 - Dimensions

delicate construction of many imported condenser microphones, the PE15A uses a machined steel case to assure the professional that it will endure even the most strenuous field conditions.

ASSEMBLING THE PE15A TO THE MICROPHONE HEAD

To assemble the PE15A in the condenser head of your choice, (1) place the probe extending from the back of the condenser head into the receptacle in the center of the PE15A, (2) push the head on the PE15A just enough to seat it, and (3) thread the two units together until they are snug. The microphone head and electronics are now properly assembled, ready for connection to your microphone input.

POWERING THE PE15A

The PE15A will work with remote power supplies utilizing the phantom mode of operation and capable of providing 8 to 50 volts DC at the connector insert in the PE15A.

Electro-Voice offers two suitable supplies: the BS9 battery supply and the AC24M AC supply (with AC24S expander). Performance details are covered in separate Engineering Data Sheets. Also, the PE15A may be powered directly from any microphone input that has phantom powering built in.

DESCRIPTION & APPLICATIONS FOR THE SE15B

The Electro-Voice SE15B is an electronic preamplifier designed to work with the following Electro-Voice professional condenser heads: CO15E, CS15E, CH15E, and CL42E. The unusually small size of the SE15B is ideal for boom, fishpole, or ENG applications. Weight has been kept to a minimum by using aluminum where possible with steel in critical areas. The SE15B is capable of being remotely powered by either the phantom method or the A-B method (featured in certain Sennheiser microphones and also called "modulation lead powering"). This dual-powering option allows the use of existing power supplies already in common use.

When used with the small CH15E hyper-cardioid head and the optional 304A shock mount, the SE15B makes up an unusually compact package weighing less than 119 grams (4.2 oz) with an overall length of only 80.7 mm (3.18 in). The optional 309 shock mount may be used with the SE15B when a head of relatively large mass such as the CL42E Cardline® is used.

CABLE AND CONNECTOR CONSIDERATIONS

The SE15B is supplied with a coiled shock-isolating cable terminating in a Switchcraft A3M connector. When used with either the 304A or 309 shock mounts, the A3M may be clamped to the shock mount bail using the clamp supplied.

If a different cable of larger diameter is desired for use with the SE15B, the coiled cable assembly may be replaced with a cable of your choosing. A spare insert with a larger inside diameter is provided specifically for this purpose. If a connector interface is desired, then the molded insert may be removed completely and a user-supplied miniature connector may be used in its place. The SE15B is specifically designed to accept the miniature Lemo connector of the RAO and FO series. These connectors are available from Electro-Voice (see parts list in Figure 2).

ASSEMBLING THE SE15B TO THE MICROPHONE HEAD

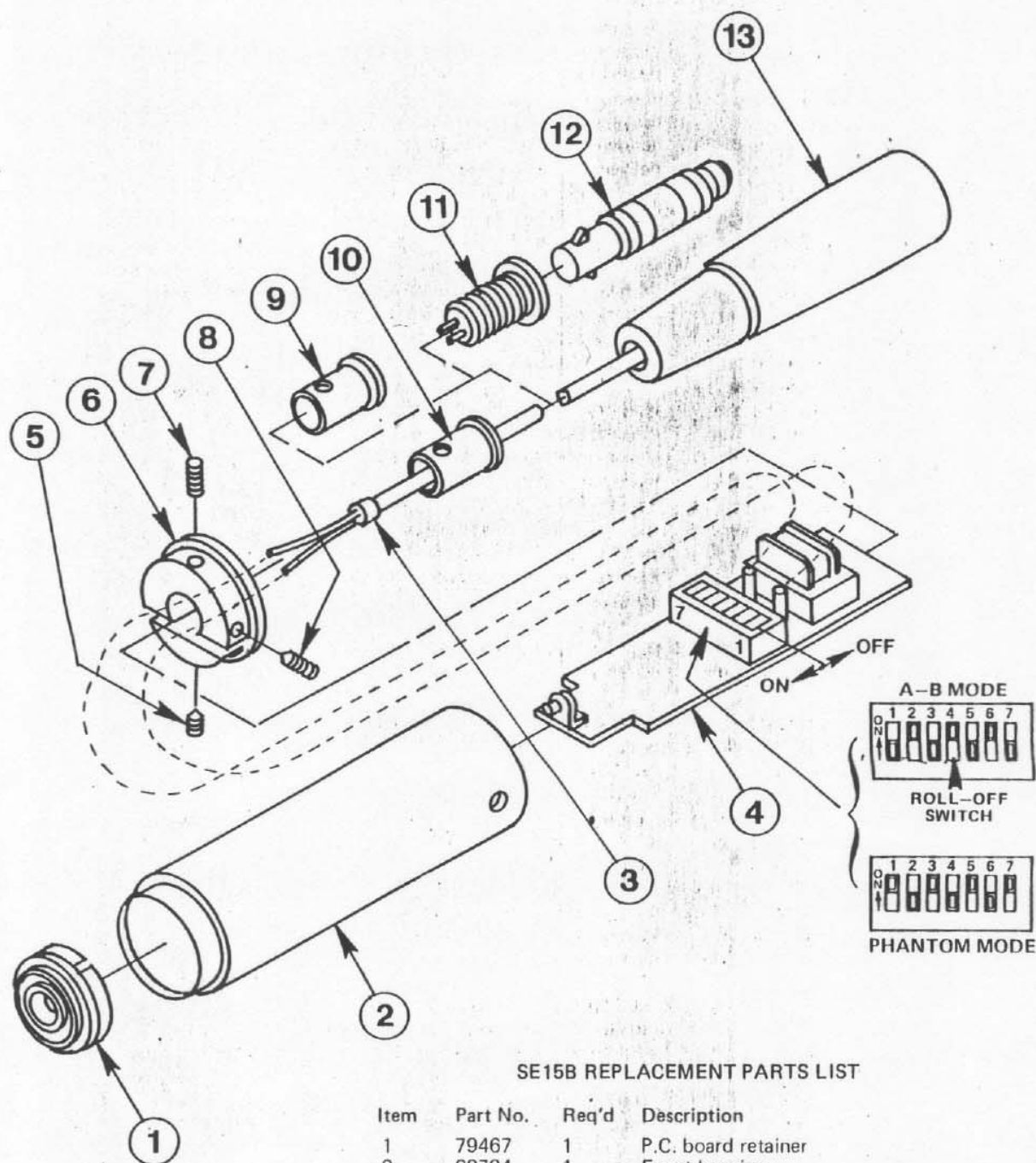
To assemble the SE15B and the condenser head of your choice, (1) place the probe extending from the back of the condenser head into the receptacle in the center of the SE15B, (2) push the head on to the SE15B just enough to seat it, and (3) thread the two units together until they are snug. The microphone head and the electronics are now properly assembled.

POWERING THE SE15B

For proper operation, the SE15B must be programmed to operate from your method of remote powering (either phantom or A-B). As the SE15B leaves the factory, it is programmed for the phantom method. If this is the method of powering you plan to use, then no other action on your part is required and the SE15B may be connected to your power supply at this time. If you are going to use the A-B method of remote powering, then you must re-program the SE15B for this powering method.

Accessing the PC Board For Re-Programming

To re-program the SE15B you must gain access to the printed circuit board inside. First, locate the hex head set screw at the rear of the SE15B case. Then, with a .050 hex socket wrench, rotate the set screw clockwise until it is recessed far enough to clear the outer case of the SE15B. The board may be removed by pushing gently on the probe



SE15B REPLACEMENT PARTS LIST

Item	Part No.	Req'd	Description
1	79467	1	P.C. board retainer
2	88794	1	Front housing
3	20247	1	Banding clamp
4	88793	1	P.C. board subassembly
5	62963	1	#4 - 40 x 1/8 set screw
6	70295	1	Rear housing
7	62964	1	#4 - 40 x 1/4 set screw
8	62904	1	#6 - 32 x 1/4 set screw
9	70337	1	Extra cable adaptor for .187" O.D. cable
10	70297	1	Cable adaptor for coil cable
11	17249	1	Mating Lemo connector for item 12
12	17250	1	Optional classis mount Lemo connector
13	88822	1	Connector and coiled cable subassembly

FIGURE 2 — SE15B Assembly, Exploded View

receptacle at the front of the SE15B case. This will expose a gap between the case and the rear end cap. By grasping the end cap in one hand and the case in the other and gently pulling the two apart, the PC board will come away from the case and be completely exposed.

Setting the Programming Switch

A seven-position miniature switch on the SE15B PC board programs operation for either phantom or A-B power (see Figure 2). For A-B powering, all even numbered switches should be set to the "on" position. The odd numbered switches should be set in the "off" position. For phantom powering, all odd numbered switches should be set in the "on" position. The even numbered switches should be in the "off" position. There is a small label on the side of the switch that states "phantom odd" and "A-B even." This label provides a convenient reminder in the field of the proper switch settings for the different powering modes.

ROLLED-OFF BASS RESPONSE IN THE A-B MODE

When the SE15B is connected to a microphone input in the A-B mode, certain inputs may be subjected to low-frequency overload because the A-B powering method, unlike the phantom method, does not utilize a transformer which would typically provide attenuation of very low frequencies. The low-frequency overload will often sound like wind or mechanically transmitted noise and its occurrence depends on the nature of the specific input circuitry.

If you suspect that low-frequency overload is occurring when using the SE15B in the A-B mode, low-frequency response may be rolled off by setting the center programming switch (4) to the "off" position. SE15B response will then be down 3 dB at approximately 125 Hz and 10 dB at approximately 40 Hz. Note that this roll-off works in the A-B mode only.

PE15A/SE15B AND DISTORTION

Many times, microphones are unjustly accused of causing distortion. More

often than not, the mixer preamp is the problem. Mixer or console preamps are designed to operate with a nominal input level of several millivolts. When this nominal input level is exceeded, the preamp quickly goes into clipping, thus causing distortion. Both dynamic and condenser microphones are capable of delivering over one volt to the mixer input at less than .15 percent total harmonic distortion. Preamps, over the years, traditionally have been designed with dynamic microphones in mind. With condenser microphones having output levels 10 to 20 dB greater than dynamics, caution should be exercised so as not to overload the mixer preamp.

If after reducing the gain of the input mixer stage by the use of pads or other means it is determined that distortion at high sound pressure levels is occurring in the PE15A or SE15B preamp—then the use of a pad between the mike capsule and PE15A/SE15B is indicated. Electro-Voice manufactures the CA10 10 dB attenuator specifically for this purpose. See the CA10 Engineering Data Sheet for more detailed information.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

PE15A

The preamplifier shall have a frequency response of 20 Hz to 20,000 Hz $\pm .25$ dB with a 800-ohm or greater load. It shall operate from any remote power source capable of delivering 8 to 50 V via the phantom method. It shall be housed in a turned steel case and have a shank diameter of 19.0 mm (.75") and a length of 154 mm (6.06"). It shall have a nominal output impedance of 150 ohms and self noise shall be equal to or less than 1.4 μ V A weighted when terminated in a capacitance of 25 pF. The Electro-Voice Model PE15A preamplifier is specified.

SE15B

The preamplifier shall have a frequency response of 20 Hz to 20,000 Hz ± 1.5 dB with a 800-ohm load in the phantom powering mode. Frequency response in the A-B powering mode shall be 30 – 20,000 Hz $\pm .25$ dB in the flat response setting and 300 – 20,000 Hz $\pm .25$ dB in the bass roll-off setting,

3 dB down at 125 Hz and 10 dB down at 40 Hz. The SE15B shall operate from any remote power source capable of delivering 8 to 50 V via the phantom method or 12 V ± 2 V via the A-B method. The preamplifier shall be housed in a combination aluminum and steel case. It shall be 80.7 mm (3.18") long by 25.4 mm (1.0") in diameter. It shall have a nominal output impedance of 250 ohms and self noise shall be equal to or less than 1.4 μ V A weighted when terminated in a capacitance of 25 pF. The Electro-Voice Model SE15B is specified.

WARRANTY (Limited) —

Electro-Voice Professional Broadcast, Recording, and Sound Reinforcement Microphones are guaranteed unconditionally against malfunction from any cause for a period of two years from date of original purchase. Also, these microphones are guaranteed without time limit against malfunction in the acoustic system due to defects in workmanship and materials. (Any active electronics incorporated in a microphone is guaranteed for three years from date of original purchase against such malfunction.) If such malfunction occurs, microphone will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to the proper Electro-Voice service facility. Unit will be returned prepaid. Warranty does not cover finish, appearance items, cables, cable connectors, or switches. Defect guarantee does not cover malfunction due to abuse or operation at other than specified conditions. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee.

For repair information and service locations, please write: Service Department, Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (Phone 616/695-6831) or 8234 Doe Avenue, Visalia, CA 93277 (209/625-1330.-1).

Electro-Voice also maintains complete facilities for non-warranty service of E-V products.

Specifications subject to change without notice.