

**SHURE**

MICROPHONES AND ELECTRONIC COMPONENTS

EVANSTON PHONE DA-8-9000 • CHICAGO PHONE SH 3-1600

**DATA SHEET****MODEL 707A  
CRYSTAL MICROPHONE**

**General:** Model 707A is a pressure-operated diaphragm type crystal microphone; it has a smooth response from 30 to 7000 cycles and has typical semi-directional properties. Model 707A uses a moisture-proofed Bimorph Rochelle Salt crystal.

The case is made of cast metal for good appearance and ruggedness, and is finished in iridescent gray enamel and chrome. The microphone is provided with a high quality single conductor shielded cable.

Model 707A has a 5/8" - 27 thread for mounting on a standard desk or floor stand.

**Applications:** Model 707A is designed for voice and music reproduction and is ideal for amateur communication, home recording, low cost Public Address systems, call systems, and all general purpose use.

Because the cartridge unit is mounted in rubber to provide mechanical isolation from the case, the microphone can be handled with a minimum of mechanical noise pickup.

**Connections:** The inner or "hot" conductor of the cable should be connected to the grid of the first tube in the amplifier across a load resistance of 5 megohms. Input resistances as low as 1 megohm may be used if necessary but higher values are recommended because of better low-frequency response obtained. The shield should be connected to the amplifier chassis or ground. The shield, chassis or amplifier ground should be securely grounded to a water pipe or similar ground to prevent shock hazard during operation of the amplifying system. The cable may be lengthened if desired; low capacity shielded microphone cable should be used for this purpose.

**Operation:** No polarizing voltage is required for crystal microphones.

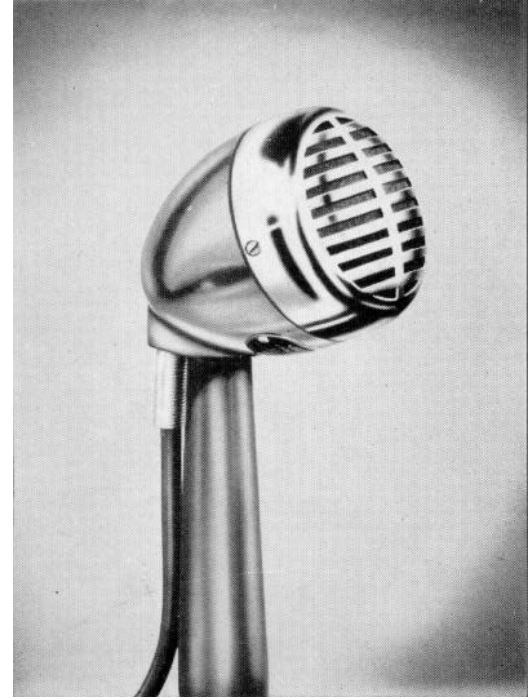
Crystal microphones may be seriously damaged if accidentally connected to loud speaker or power supply outlets carrying high voltage. Check your connections carefully.

Crystal microphones should not be used or kept in places where the temperature exceeds 125°F. They should not be exposed to the rays of the sun in very hot weather for any considerable length of time or left in closed automobiles parked in the sun during hot weather, as the temperature inside the automobile may easily build up to over 125° F. and permanently damage the crystal.

When used near a radio transmitter, use the minimum length of cable consistent with placement requirements. Careful grounding of the cable shield is advisable.

**Voltage Sensitivity:** 3.15 millivolts r.m.s. per microbar at the end of a 7-foot (2.1 m) cable across 1 to 5 megohms at 1000 cycles. This is equivalent to 50 db below 1 volt per microbar at the terminals of the 7-foot (2.1 m) cable.

Microphone rating  $G_M = -150$  db.  
RTMA Standard SE 105, August, 1949.

**SPECIFICATIONS**

Model .....	707A
Length, Overall .....	3-1/4" (82.6mm)
Diameter of Case .....	2-13/32" (61.1mm)
Finish .....	Iridescent Gray and Chrome
Net Weight .....	7/8 lb. (360g)
Shipping Weight 7' (2.1m) cable .....	2 lbs. (907g)

**Internal Output Impedance:** Equivalent to a 900 micro-microfarad condenser.

**Recommended Load Impedance:** 1 to 5 megohms.

**Guarantee:** Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from the factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened.

**License Notice:** Shure patents issued or pending.