Chameleon Labs

Model TS-1 MKII

Tube Condenser Microphone
Owner's Manual

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The TS-1 MKII is a small diaphragm, tube, condenser microphone of exceptional sonic clarity and rugged construction. When used in accordance with the guidelines in this manual it will give you many years of outstanding performance.

Because the TS-1 MKII uses vacuum tube circuitry it requires a separate power supply unit (included with the microphone) in order to operate, even if your mixer has phantom power. If your mixer has phantom power, it is not necessary to switch it off when using the TS-1 MKII. However, due to differences in design of the phantom power circuits contained in various mixers (and preamps) it is recommended that you defeat the phantom power as a precautionary measure when it is not needed to power other mics that you might also be using.

Connections

First, connect the microphone to the power supply using the seven pin cord (included). It is recommended that the microphone be placed in the shock mount (included) to avoid pick up of unwanted vibration. The TS-1 MKII is not intended for hand-held operation. Next, connect AC power to the power supply using the IEC power cord (included). Finally, connect the audio output on the power supply to one of the microphone inputs of your system using a standard three-pin microphone cable.

How to use your TS-1 MKII

First, set the red voltage selector switch to match the AC voltage in your area (115/230). There are three silver toggle switches on the front of the power supply. The POWER switch is on the left, under the red pilot lamp. The STANDBY switch is on the right, under the green pilot lamp. After all the proper connections have been made (see section above), lift the POWER switch. The red pilot will illuminate. This begins heating the vacuum tube and prepares the microphone to produce a signal. After ten to fifteen seconds, you can lift the STANDBY switch. The TS-1 MKII will soon begin to output an audio signal from the 3-pin XLR jack. It requires about five minutes for the microphone to warm up completely, though a period of fifteen minutes is recommended to assure that the TS-1 MKII has fully stabilized and has attained its optimum operating temperature. At this point, the microphone body will feel warm to the touch. This is normal. One of the features unique to the TS-1 MKII is the ability to adjust the warmth of the microphone. The warmth adjustment of the microphone is enabled by moving the CAL toggle switch out of the CAL (calibrated) mode. This will switch on the HEATER VOLTAGE control located above the CAL switch. Adjustment of the HEATER VOLTAGE control will allow custom tailoring of the microphone to your exact requirements. A precision meter will allow you to repeat your custom sonic settings.

If you decide to take a break from using the microphone, you can lower the STANDBY switch until you return. This will help to extend the life of the vacuum tube. Note: it is not recommended that you leave the mic in its standby mode (POWER switch up and STANDBY switch down) for periods longer than thirty minutes. When you are finished using the TS-1 MKII, switch it off and store it in its box with the supplied desiccant. There is no harm in using the microphone for very long periods of time but do not leave the microphone running continuously. Some people feel that tube microphones should be left on at all times. This is not true. A vacuum tube has a finite service life and you will be using it up unnecessarily if you do this.

Application

The TS-1 MKII is a small diaphragm, condenser microphone with vacuum tube electronics. It comes with interchangeable capsules, one of which has a cardioid pickup pattern, and the other is omni-directional. A hyper cardioid capsule and a 1" large diaphragm capsule are also available as an optional accessory. To change the capsule, unscrew the capsule from the tip of the microphone and replace it with the other capsule. When mounting a capsule, be very careful not to cross-thread it and never force a capsule that is reluctant. The capsules should screw on smoothly and easily.

All capsules are marked to identify their pickup pattern. The cardioid capsule has a heart shaped insignia printed on its side and the omni-directional capsule has a circle. The cardioid capsule has vent slots on the side and the omni-directional capsule does not. Use the cardioid capsule in situations where you desire to pickup specific sound sources, such as one guitar within an ensemble, or only the higher strings of a piano. You can also use the cardioid capsule when you wish to reduce the acoustic presence of the space in which you are working, such as reducing crowd noise during live recording. Use the omni-directional capsule when you wish to pickup a wider area, such as a group of backing vocalists. Also, use the omni-directional capsule when you wish to include more of the acoustic character of the space in which the microphone is being used, such as in concert halls that have outstanding acoustics. The optional TS-1L, 1" large diaphragm capsule will allow the microphone to perform as a conventional side address large diaphragm microphone, suitable for vocal and full range instrument recording. The capsule is switchable between omni directional and cardioid patterns by using the toggle switch on the front of the microphone capsule. There is also an optional adaptor, model number ADP-1, which allows CK Series capsules from AKG® to be mounted on the body of the TS-1 MKII.

The TS-1 MKII can be used in very loud sonic environments without significant distortion. If you hear distortion from the microphone, engage the "mic pad" on your mixer, or move the microphone farther from the sound source. It is not recommended that you use the TS-1 MKII as a hand held microphone, or as a vocal microphone without a windscreen, or outdoors use on a windy day. This is because it has no internal shock mount or pop filter. However, the TS-1 MKII is an excellent vocal microphone when properly protected from plosive sounds, such as breath pops or wind. If you wish to use a

foam windscreen that fits tightly over the microphone capsule, make sure that the foam has not begun to degenerate. Wipe the foam on a white piece of paper. If you can see any traces of the foam transferring to the paper, discard the windscreen. Condenser microphones create electrostatic charges in the capsule. This attracts lint, dust, and other materials and these materials can become attached to the diaphragm. Over time, this will degrade the sound of your microphone.

Storage

You can optimize the life of your new microphone by storing it properly. Keep the TS-1 MKII in its case when not in use, and store it in a cool, dry place. If you are not going to use your TS-1 MKII for a long period of time, leave the microphone on for an extra 15 minutes after you are finished with it. This will drive out moisture that may have accumulated around the capsule during the session. Place the microphone into a sealable plastic bag while it is still warm and seal the bag. Keeping a packet of desiccant crystals in the bag with the TS-1 MKII will also help. If you know that the microphone will be subject to freezing temperatures, it is very important that it be as dry as possible before it is exposed to the cold. Use the long-term storage procedure outlined above for both the microphone and the power supply. Leave the microphone on for 45 minutes prior to placing it and the power supply into sealable plastic bags. Do this even if the mic will only be exposed to the cold for a short period of time. It is also important that the microphone be allowed to return to room temperature WHILE STILL IN THE SEALED PLASTIC BAG. This stops condensation from forming on the microphone and will greatly increase the longevity and reliability of the system.

Cleaning

Use a lint free cloth lightly dampened with water to clean the metal surfaces of microphone system. Never rub anything on the screen that covers the capsules. Make sure the components are completely dry before being stored.

Maintenance

There are no user serviceable parts inside the TS-1 MKII microphone or power supply. Contact a qualified maintenance professional if a problem occurs.

Warranty and Liability

Your Chameleon Labs product is warranted to the original owner for a period of one year. Chameleon Labs guarantees this product to be free from electrical and mechanical

defects and will repair or replace defective components, or replace the microphone at Chameleon Lab's option. Should service be required for your Chameleon Labs product, please contact the manufacturer. Service is provided for products beyond the warranty period. Seller warrants that the goods are described in this agreement, but no other express warranty is made in respect to the goods. The entire risk as to the quality and performance of the good is with the buyer. Seller disclaims all warranties either express or implied, including any implied warranty of merchantability or fitness for a particular purpose, and seller neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of said goods.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

PURCHASED FROM _____

Specifications

Output impedance: 200 ohms

Sensitivity: -35dB (@ 1 KHz, re 0dB=1V/Pa)

Noise: 19dB-A

Maximum Output: 1.5, ~ 130dB SPL

Frequency Response:

Cardioid capsule – 70Hz – 20 kHz +/- 4 dB.
Omni capsule – 30Hz – 20 kHz +/- 4 dB.
Hyper cardioid capsule – 80Hz – 20 kHz +/- 4 dB.
Large Diaphragm capsule – 30Hz – 20kHz +/- 4 dB.