wunder cm7

This microphone has been meticulously created to meet the demand for the U47 sound using historically correct components around the “heart“ of the microphone – the original, specially selected EF14 tube.

It should be stressed at this point, that vacuum tubes with their heater filaments are much more delicate than solid-state components. Consequently, the user has to take great care in handling the microphone. Drops from even moderate heights may cause the filament to break and would result in immediate failure of the microphone. It would be advisable for the users to keep a spare tube – specially selected by an Wunder Audio Service Department – always ready or replacement.

Repairs are to be carried out only by experienced, authorized service personal. Unauthorized opening or modification to the equipment shall void the warranty. High Operation voltages are required for the tube in the microphone. Contact with the voltages present in the interior of the device can result in injury of death; therefore, the microphone and PSU must be opened only by authorized, qualified personnel. The microphone must be operated only with the supplied cable. Since hazardous voltages are generated by the PSU that can result in injury or death, always ensure that the microphone cable used is undamaged, Damaged cables must no longer be used.

Please note: tube may have become slightly unplugged in shipping. If after shipping the microphone has no audio output, 99% of the time it is a result of a slightly unplugged tube.

Replacing the vacuum tube

1. Disconnect microphone from PSU.

2. Remove the three bright nickel screws at the lower end of the microphone grille housing.

3. Pull the grille off in upwards direction.

4. Remove the small screw that is located several inches below the Wunder Audio diamond badge.

5. Pull the complete body shell off in an upwards direction.

6. Remove the black rubber donut shaped dampener by pulling downwards off the tube.

7. Remove the vacuum tube by grasping the black rubber shock-mount in one hand and the tube in the other hand – wiggle the tube to free it with a forward motion. *Holding the tube socket in one hand and the tube itself in the other hand will help you separate the vacuum tube from the socket.*

8. Installing a new tube is simply the reverse order of these steps.

Operation

The CM7 is equipped with a 6-pin Tuchel connector that plugs into the base of the microphone and screwed finger tight.

Always make sure that the PSU is switched off when plugging the mic connector into the mic and PSU.

Changing the Pattern

Locate the white pattern switch window at the bottom of the grille housing. Place your finger on the very small handle and slide the switch sideways to change from Cardioid to Omnidirectional pickup pattern and visa-versa.

The Omnidirectional pattern is achieved by disabling the polarization voltage to the rear diaphragm. The U-47 did not maintain equal output levels across patterns.

The U-47's output was 5dB hotter in Cardioid mode than in Omni, because the capsule's rear diaphragm was bypassed in Cardioid mode, avoiding the capacitance loss of having it in the circuit

Also, the Proximity effect of the Grille (the cardioid pattern will sound fuller and than the omni pattern) is normal for this type of microphone. In fact, the Proximity effect works very well and is a much desired effect.

Mounting

A special shock mount/stand adapter is provided and should always be used to mount the microphone on floor stands or booms. The clamp of the shock-mount should be guided from the lower end of the microphone upwards until it is placed near the gravitational centre (slightly below the badge or centered over the badge). The shock mount is designed for use with stands or booms using standard thread sizes. It may also be swiveled against the stand axis to suit the recording angle.

Powering up

The required PSU is included with the microphone. The connector type and size are clearly marked. using the supplied CM7 microphone cable. The audio signal is taken from the power supply via a standard XLR-type mic cable.

After interconnection of the microphone and AC line, the main switch may be turned on. Operating condition is indicated by the power lamp.

The warm-up time of the CM7 is approximately one minute. When your CM7 is new, a 24 hour burn-in period is recommended.

The CM7's tube will "break in" over a period of time enabling the CM7 to sound subtly better over a period of time.

The CM7 Power Supply

This PSU supplies the microphone with the 5-volt filament and 105V plate voltage for the vacuum tube,

It is advisable to check the AC voltage of the outlet prior to connecting the CM7 to AC power.

Changing the AC voltage selector (110/240)

Use a flat-blade screwdriver to unscrew the lid to the PSU and remove.

You will see a small chrome toggle switch located inside the unit directly next to the large AC transformer.

To set the switch to 115V, toggle the switch towards the transformer. To set the switch to 230V, toggle the switch away from the transformer.

Warning: Connecting the CM7 to the wrong AC voltage may destroy the unit and cause fire and/or electric shock.

Replacing the Fuse

The fuse protecting the primary circuit is located outside the PSU. Unscrew the black fuse cover to open the fuse compartment. Replace the fuse with a new fuse of the same type (T 500 mA for 115V; 250 mA for 230V) and close the fuse compartment lid.

AC Power Connector

Especially on tour, you may need to connect the unit to a power outlet that does not match the power connector on the supplied power cable. Purchase a matching power cable locally that complies with IEC and local safety standards and has a power connector with a chassis ground pin.

While in the same area, use this “local“ power cable only.

Shutdown and Storage

Before switching off the microphone or disconnecting cables, reduce the volume of the connected equipment – *only then should the PSU be switched off.*

Disconnect the cables. *When disconnecting a cable, always pull only on the connector housing and not the cable itself.*

When the microphone is not in use it should put away so that dust does not accumulate.

A microphone which is unused for a prolonged period should be stored in a cool, dry place.

Cleaning

Under normal conditions the microphone body may become dirty and covered with fingerprints. One or two drops of Lubriderm unscented hand lotion can be gently rubbed into the nickel finish with a terry cloth and then wiped clean.

Troubleshooting

<u>Microphone not operating</u>

Possible causes:

a. PSU not switched on

b. Microphone not connected to PSU

c. Tube loose or unplugged

<u>Noisy Signal</u>

Possible causes:

a. Tube filament has become damaged.

Specifications

Directional Characteristics: Omni-, cardioid-,

Cardioid (25 mV/Pa; 20 - 18,000 Hz)

Omnidirectional (14 mV/Pa; 20 - 18,000 Hz)

Electrical Impedance: 200 ohms

Powering: Via the included powering unit with 115/230 VAC

Maximum Sound Pressure Level: 128 dB

Connector: Large-sized Tuchel, 6 pin

Dimensions: 240 mm (9.45'') 63 mm (2.48'')

Shipping Weight: Approx. 12 lbs.

Included Accessories

CM7, Power Supply

EF14 tube, connection cable

Shock mount

Quarter-sawn oak case