

Yaesu M-1 Reference Microphone

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The Yaesu M-1 is a lot more than just a microphone. It's not only a good-looking unit, but it's also functional, versatile, and well thought out. It's the first time I have had to read a manual to use a microphone.

Description

The Yaesu M-1 comes with two small screwdrivers (called the “dedicated alignment tool”) for the microphone equalizer (EQ) adjustment, which is very clever, as it uses recessed potentiometers, and you won't change your setting just by touching the base.

Included with the M-1 is a reversible cable for the transceiver connection. On one side you have the standard eight-pin round plug, and on the other side is an RJ-45 eight-pin modular connector. On the microphone you have both connectors, so depending on your radio microphone input, you can connect the cable to the side that matches your radio. The printed manual is complete with everything you need to know about your new microphone. It comes with a cowl cap that can be attached to the microphone for a treble boost (see Figure 10). Also included is an AC adapter (SAD-22) with a micro-USB cable to power the microphone. The use of the adapter is optional if you have a recent Yaesu radio, like the **FTDX101D**, as it can provide power through the microphone connector. To use the power provided by the radio, you need to open the base of the microphone and flip a switch inside (see Figure 11). There's a **DCIN** switch with two selections, **TRX** or **DCIN**, to power from your radio — obviously, you switch to **TRX**. That's what I did, and no other cable, other than the microphone connection, is needed.

The input power is 5 V with a typical current consumption of 160 mA. The impedance is 600 Ω , and the frequency response is between 30 and 17000 Hz. The M-1 size is 5.5 inches wide with a maximum height of 11 inches (adjustable from 8.5 to 11 inches) and depth of 6 inches. The weight is 2.11 pounds without the cable attached.

The M-1 is a dual-element microphone. One is a condenser, and the other is dynamic. You can also use both at the same time to create a unique sound. Both elements can be adjusted independently, including the graphic equalizer and the mic gain directly on the microphone.



Figure 10 — The Yaesu M-1 with the treble boost cowl cap installed.

Bottom Line

The Yaesu M-1 is a high-quality microphone that provides endless possibilities to fine-tune your audio.



Figure 11 — The Yaesu M-1 internal **DCIN** switch to select an external power source from the transceiver.



Figure 12 — The Yaesu M-1 microphone base rear panel.

On the microphone base you have a nine-band graphic EQ with two memory settings for each element. You also have a pass-through (THR) option if you prefer using your radio's internal EQ settings. On both sides of the microphone, you have a rubber/plastic mini screwdriver to adjust the EQ and the mic gain on the microphone. This type of knob prevents the user from changing any settings unintentionally.

This is the most expensive microphone I have ever bought, but this unit screams quality, and you can feel it. It seems to be made exclusively of aluminum. I have never experienced a smooth PTT like the one on the M-1. It feels like it's sitting on a cushion of air. The manual states that the PTT key used a "contactless triple air cylinder magnetic construction [for] smooth fingertip-sensitive operations."

On the rear panel of the M-1 base, you will find many ports (see Figure 12). On the left is a **POWER** switch with **AUTO** and **ON**. In the **AUTO** position, the microphone turns on and off together with the power of the radio. In the **ON** position, it stays on when the radio is



Figure 13 — The Yaesu M-1 microphone top view of the EQ and other adjustments.

turned off (with external power). Under the **POWER** switch you have a **PHONE** 3.5-millimeter jack to use with a pair of headphones to monitor yourself and to listen to the recorded memories. If you connect the **RX AUDIO IN** to your radio, you will also be able to listen to the received audio from the transceiver. You can connect the included power sources to the micro-USB **DC IN 5V** input. I would have preferred the use of a USB-C connection instead of a micro-USB. In the middle, you will find the modular and round microphone ports to the radio, to use with the reversible cable. You will also find a balance **XLR OUT** to connect to a mixing console. If you used the XLR output, ensure that there's no phantom power on the connection, and if you keep your radio connected, you may have a ground loop with a hum. If you use the microphone with only the **XLR OUT** connection, you will need the external power source.

The Microphone Base Controls

On top of the M-1 base is where you perform all of the adjustments (see Figure 13). You can use either the condenser (**C**) element or the dynamic (**D**) element, or both (**DUAL**) at the same time. When any of these three options are active, an amber LED turns on above each of these buttons. You can deactivate the dual elements by pressing **DUAL**, and then you can select between **C** and **D** just by pressing it. There's a nine-band EQ with two memories for each element (**1** and **2**), so setting up this microphone can be a complex operation because there are so many adjustments. As an example, you can use both microphone elements at the same time in **DUAL** mode, and each element has its own EQ and mic gain control, so you can do a mix and

match of both at the same time. Also, for each element there's a THR button. When pressed, a white LED beside the button will turn on and the graphic EQ function will be bypassed. It's also usable in dual mode. You can activate any EQ on any element while one of the elements is in bypass mode (imagine all of the creative possibilities with this mic!). The low cut (**LC**) button will cut off the 200 Hz frequency by -6 dB. A blue LED will turn on when activated. Keep in mind that this function is independent of the EQ.

To prevent scratching your fancy microphone, always use the included screwdriver located on each side of the base to adjust the EQ and the mic gain. Yaesu paid great attention to detail by including two adjustment tools, so it's easily accessible for left- or right-handed operators.

There are two memories that you can use to record your audio. With a long press, the red LED will turn on in the middle of the button, meaning it's recording. A short press will stop the recording. To recall any recording, just do a short press on the button, and when it plays back your recorded audio, the middle LED will be blue.

On the microphone base is an LCD display showing the EQ adjustment. Upon pressing the **SCOPE** button (an amber LED will turn on when active), you will see a live scope of your audio output. The LCD is not directly lit, but on top of the Yaesu logo there's a gap with a white/blue LED that lights the display (helpful when it's dark in the shack). On top of the **SCOPE** button you will find a volume knob for the monitor. The **PTT** and **LOCK** buttons are self-explanatory.

Under the mic base are two switches. In the **NORM** position, the PTT needs to be held to transmit, and the transceiver will return to receive when relieved. In the **HOLD** position, the PTT will hold when pressed, and if you press again, the transceiver will return to reception. When the **RX ATT** switch is in the **ON** position, the audio signal input from the **RX AUDIO IN** jack will be attenuated by 20 dB.

On the Air

I must admit that after several months, I still need to experiment with the mic, as I don't think that my audio is as good as it can be. I received very good reports making a first adjustment by listening to myself, but one evening I got a friend to help me make the adjustment directly on the air. I didn't completely understand

the dual elements, as I tuned only one EQ, but the audio improved considerably. Having two EQs per element — one setting for ragchew and one for DX — is great.

Here's my recommendation for fine-tuning the microphone's EQ: First, make sure the EQ in the radio is turned off. It's easier to do it on the mic. You may want to try mixing both EQs in the future, but this will complicate the tuning process — probably with very little improvement. Then, adjust one element at a time. Start by resetting the nine EQ bands (memory 1) to **0 dB**, and proceed with the adjustment. Then change elements, and repeat the process. When both elements are independently adjusted to your desired audio, copy your EQ settings for both elements into the EQ memory 2 (you will need to adjust the bands manually). Start from there to fine-tune the **DUAL** mode.

I also have an Expert Electronics MB1 transceiver that uses the same mic connection as a Yaesu FT-991, and the mic also works well with this radio. It is also able to power the mic directly.

Conclusion

The Yaesu M-1 is an awesome microphone that gives you endless possibilities to fine-tune your audio. Although it's an expensive unit, it is worth the price if you consider all of the included features. If you own a Yaesu radio, you have everything you need to fine-tune your audio without any other EQ. Plus, you can easily recall presets depending on your operation needs (DX or ragchew) just by touching one button on the microphone base. For me, this one is a keeper.