# SMM-U2 Grounding Bracket

## Overview

The SMM-U2 Grounding bracket attaches to an SMM-U2 microphone to protect the microphone from damage due to electrostatic discharge or electrical storm activity. A grounding wire is attached to the bracket and run to an earth ground to direct electrical surges to ground rather than through the microphone.
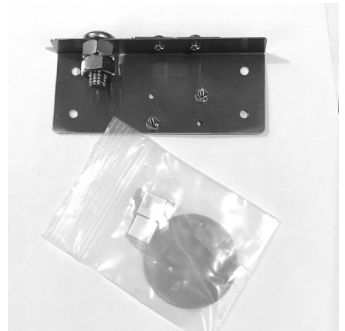
A stainless steel-screen covers the top of the microphone and directs any surges to the bracket and then to the grounding wire. This also provides some protection to the recorder, but the available Song Meter Surge Suppressor should also be used for best protection.

We recommend this bracket anytime electrical storm activity is possible or the microphone is mounted well off the ground, such as on a metrology tower, wind turbine or other tall structure.

> **NOTE:** The SMM-U2 Grounding Bracket does not adversely affect recording quality. The stainless-steel screen is transparent to ultrasound.
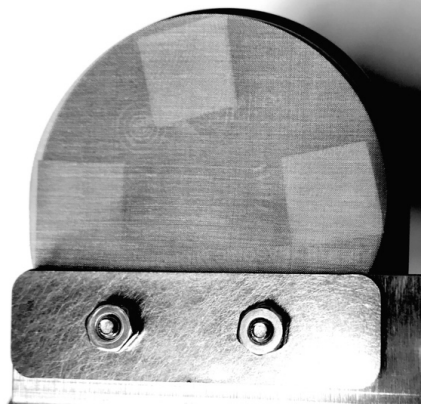
## Installation

The bracket is shipped with the screws, washers, lock washers, and nuts preinstalled in the correct holes. You will need to attach the stainless-steel screen, then attach the bracket to the SMM-U2 microphone, and finally connect the bracket to ground.

## Attach the Grounding Screen

1. Remove the screws, lock washers, and nuts from the upper part of the bracket with the small metal plate.

2. Remove the three pieces of double-sided tape from the bag and attach them to the microphone as shown to the right.

3. Remove the film from the top side of the tape so it is sticky.

4. Remove the grounding screen from the bag and insert it in between the bracket and the metal plate with the holes lined up.

5. Insert one lock washer on each screw and then insert the screws up from the bottom of the bracket, through the grounding screen and the metal plate.

6. Insert the lock washers and nuts on the top.

7. Tighten the screws until tight with a small Philips screwdriver. You should not need a wrench as the lock nuts will hold the nut once it starts to tighten, but just in case, the nut size is 1/4"" or 7mm.

## Attach to the SMM-U2 Microphone

1. Remove the screws, washers. Lock washers, and nuts from the lower part of the bracket.

2. Line up the L-shaped mounting holes on the SMM-U2 microphone with the holes you removed the hardware from.

3. Insert the washers back on the screws and slide the screw through the microphone and bracket.

4. Add the lock washers on the backside of the bracket and then the nuts.

5. Tighten the screws until tight with a small Philips screwdriver. You should not need a wrench as the lock nuts will hold the nut once it starts to tighten, but just in case, the nut size is 7/32" or 5mm.



## Install the Cable Ferrite

A snap-on ferrite is included with every microphone cable and is installed on the cable near the recorder. The SMM-U2 Grounding Bracket kit includes an additional ferrite which should be installed on the SMM-U2 microphone cable near the microphone. This provides additional protection to the recorder as it will filter some electrical surges that make it to the microphone cable through the bracket.



1. As near to the microphone as possible, loop the cable through and snap the ferrite shut. A zip tie is included for further securing the ferrite.

## Connect to Ground

Use a 12 gauge or thicker wire less than 2 meters in length to connect the bracket to earth ground.

1. Loop the wire and tighten it in between the two nuts on the grounding lug. The wrench size is 11/16" or 17mm. You need only loosen the outer most nut.

2. Connect the other end of the wire to the metal frame of a grounded tower structure with an electrically strong (low resistance) connection. The shortest connection possible will provide the best path to ground.

## Specifications

**Testing Certification:** IEC 61000-4-2 : 30kV (Level X)

**Material:** All parts stainless steel

**Dimensioned Drawing:**