



GEMINI 5540A RF POWER METER

# QUICK START GUIDE

## 1. UNPACKING AND INSPECTION

Thank you for your purchase of the TEGAM GEMINI 5540A RF Power Meter. This Quick Start Guide will provide the essential information necessary to begin using your new instrument right away. For a full explanation of the features and functions, however, please download the Operator's Manual at [www.tegam.com](http://www.tegam.com).

### 1.1. Inspection

Each GEMINI RF Power Meter is electrically and mechanically inspected before shipment. Upon receiving your new TEGAM RF Power Meter, unpack all items from the shipping container and inspect the items for any obvious damage that may have occurred during transit. Notify TEGAM immediately if damage, dents, worn connectors, or other irregularities are found. Use the original packing materials if reshipment is necessary.



Figure 1: GEMINI 5540A RF Power Meter

### 1.2. Package Contents

Each GEMINI 5540A RF Power Meter is shipped with:

- GEMINI 5540A RF Power Meter, with input and output connectors as specified by customer at time of purchase
- CA-65-72, USB Type B to Type A Data Transfer and Power Cable, 36 inches
- 5540A-901, GEMINI 5540A RF Power Meter Quick Start Guide
- Calibration Certificate and Documentation

## 2. INSTRUMENT DISPLAY

The GEMINI RF Power Meter digital direct-reading display, shown in *Figure 2*, provides forward and reverse power measurements, VSWR, and frequency. These readings are indicated on the display by the designators *FWD PWR*, *REV PWR*, *VSWR*, and *FREQ* respectively. Units of measurement are displayed on the right side of the display. The displayed measurement data is updated three times per second.

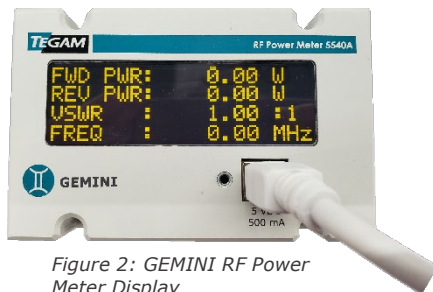


Figure 2: GEMINI RF Power Meter Display

**NOTE:** The Frequency indication is informational and provided only for the user's convenience. For traceable frequency measurements, use appropriate instruments.

**NOTE:** The VSWR indication is informational only when any Forward or Reverse Power indication is outside the specified measurement range of the instrument.

## 3. CONNECTING THE RF POWER METER AND TAKING YOUR FIRST MEASUREMENT

1. To meet published specifications, allow the instrument to acclimate in the laboratory environment for at least 24 hours after shipping, storage, or other exposure to temperatures beyond its operating range of 18 to 28 °C.
2. Before connecting your GEMINI RF Power Meter to any RF power source, identify the INPUT and OUTPUT ports. The INPUT port and power flow direction are designated by the **FWD** → symbol on the instrument housing (see *Figure 3*).

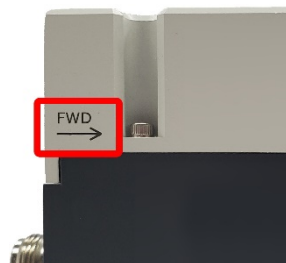


Figure 3: Power flow direction symbol.

**NOTE:** *The GEMINI RF Power Meter may be calibrated to either the input or output port. However, the RF power source must always be connected to the input port regardless of which port is calibrated. Failure to do so may result in incorrect readings. Refer to the Calibration Certificate for port calibration information.*

3. Connect the USB Type B cable to the GEMINI RF Power Meter 5 VDC power and data transfer port. Connect the other end of the USB Type B cable to a suitable 5 VDC, 500 mA power source. The GEMINI RF Power Meter display will illuminate.

**NOTE:** *The GEMINI RF Power Meter may be connected to any USB power source capable of supplying 5 VDC, 500 mA. This includes some mobile device portable power banks and wall chargers. However, for communication and data collection, connection to a USB 2.0 or higher port on a computer or other data collection device is required.*

4. Connect the GEMINI RF Power Meter OUTPUT to a suitable load using torque techniques appropriate for the connector type.

**WARNING:** High RF power levels may be present at the output of the GEMINI RF Power Meter. Always connect an appropriate load to the instrument output.

**WARNING:** The GEMINI RF Power Meter should be serviced by qualified personal only. Never attempt to open the instrument casing, disconnect transmission lines, or otherwise service the meter while RF power is applied to the system.

**Failure to comply with these warnings may result in injury or death to personnel, and damage to equipment.**

5. Connect the GEMINI RF Power Meter INPUT to the RF power source using torque techniques appropriate for the connector type.
6. Allow 10 minutes for the instrument to warm up.

7. Turn ON the source RF output power. The display will begin updating immediately. Allow sufficient time for the readings to stabilize before recording the measurement results.

## 4. GEMINI TOOLS™ RF POWER METER APPLICATION

### 4.1. Description

The GEMINI Tools power meter application is a free software interface available for download to all GEMINI RF Power Meter users. The application allows for remote monitoring and data collection from up to five instruments simultaneously. Data is stored in text files and formatted for easy importing into spreadsheet, database, or other data management programs.

### 4.2. Operation

Operation of the GEMINI Tools power meter application is straightforward:

1. Download and run the installer found at [www.tegam.com/geminitools](http://www.tegam.com/geminitools).
2. Launch the program and set the Configuration Parameters as desired (click **Tools** -> **Configuration**).
3. Connect your new GEMINI RF Power Meter to the PC or compatible USB hub on which the GEMINI Tools power meter application is running. The application will automatically detect connected instruments.
4. Select the desired unit in the *Available Meters* group (hold the CTRL key to select up to five (5) units).
5. Click **START Data Collection** to begin collecting measurement data.

## 5. FURTHER INFORMATION

This Quick Start Guide is just the beginning. Please visit [www.tegam.com](http://www.tegam.com) to download the Operation Manual and familiarize yourself with all the features and benefits of your new TEGAM GEMINI 5540A RF Power Meter.

