



"Since 1956"

Field Calibration Kit For TR-525 Rain Gauge



FC-525 Calibrator Kit Contents

- ◆ Graduated Beaker with pre-drilled draining slot for precise liquid measure
- ◆ Black anodized calibrator funnel
- ◆ A #65 and a # 70 nozzle
- ◆ Cleaning pin for each nozzle
- ◆ Instructions for field calibration and sensor adjustment

A quick and economical way to field test the accuracy of your TR-525 series rainfall sensors.
Eliminates unnecessary down-time. Easy to use.



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Instructions for Calibration (Inches/Metric)

Step # 1

Sensor Preparation

Remove gold anodized collector from the sensor and replace it with the black calibration funnel & desired nozzle. Make sure the calibration funnel is clean and free from dust particles that could clog the nozzle and invalidate your results.

Step # 2

Zero The Counter, Logger, or Recording Device

Make sure that the sensor is properly connected and that the counter is zeroed prior to the start of field calibration.

Step # 3

Water Measurement

Place your thumb firmly over the horizontal drain in the graduated beaker. Fill beaker with water well above the horizontal drain.

Step # 4

Accurate Water Measure

While holding the horizontal drain closed, place the water filled beaker on a level, flat surface. Remove your thumb and allow excess water to drain from the beaker. *The beaker has been milled so it will hold precisely the amount of water needed for your particular sensor.

Step # 5

Filling Calibration Funnel

Replace your thumb over the horizontal drain to prevent leaking and pour all the measured water from the beaker directly into the calibration funnel. Be careful not to spill or splash as this will effect your results. Calibration will begin immediately. Once all the water has passed through the calibrator, compare your results with the table below.

Calibration Results

Calibrating a TR-525I or TR-525M Using the **BRASS #65** Nozzle

Calibration should take **25 minutes** and your reading should be **98 counts** plus or minus 2 counts.

Calibrating a TR-525I or TR-525M Using the **ALUMINUM #70** Nozzle

Calibration should take **45 minutes** and your reading should be **99 counts** plus or minus 2 counts.

Note: All Texas Electronics, Inc. rainfall sensors are dynamically calibrated in the factory using a constant rate of one inch of rainfall per hour (100 tips/hour). Field calibrations result in a lower tip count due to the variable drip rate caused by the head pressure in the calibration funnel. This is why field calibration results vary from factory calibration.

Instructions for Adjustments

If your rain gauge does not fall within acceptable calibration ranges, we recommend that you repeat the calibration procedure at least once to eliminate the possibility of technical error. If after repeating the test your gauge is still out of calibration, use the following procedure for adjustment.

Step # 1

Locate Adjustment Screws

Turn sensor upside down to locate the two adjustment screws. Remember, when adjusting the calibration of the rain gauge, **both screws must be turned the same amount to keep the tipping bucket balanced.**

Step # 2

Adjust Calibration Screws

Keep sensor in the upside down position to adjust the set screws. To increase the reading of your rain gauge turn set screws *clockwise*. To decrease the reading turn set screws *counter clockwise*. As a general rule, a 1/4 turn of both screws represents approximately 1 count.

Step #3 Re-calibrate to insure proper adjustment.

Instructions for Calibration (USW)

Step # 1

Sensor Preparation

Remove gold anodized collector from the sensor and replace it with the black calibration funnel & desired nozzle. Make sure the calibration funnel is clean and free from dust particles that could clog the nozzle and invalidate your results.

Step # 2

Zero The Counter, Logger, or Recording Device

Make sure that the sensor is properly connected and that the counter is zeroed prior to the start of field calibration.

Step # 3

Water Measurement

Place your thumb firmly over the horizontal drain in the graduated beaker. Fill beaker with water well above the horizontal drain.

Step # 4

Accurate Water Measure

While holding the horizontal drain closed, place the water filled beaker on a level, flat surface. Remove your thumb and allow excess water to drain from the beaker. *The beaker has been milled so it will hold precisely the amount of water needed for your particular sensor.

Step # 5

Filling Calibration Funnel

Replace your thumb over the horizontal drain to prevent leaking and pour all the measured water from the beaker directly into the calibration funnel. Be careful not to spill or splash as this will effect your results. Calibration will begin immediately. Once all the water has passed through the calibrator, compare your results with the table below.

Calibration Results

Calibrating a TR-525USW Using the **BRASS #65** Nozzle

Calibration should take **25 minutes** and your reading should be **56 counts** plus or minus 2 counts.

Calibrating a TR-525USW Using the **ALUMINUM #70** Nozzle

Calibration should take **45 minutes** and your reading should be **58 counts** plus or minus 2 counts.

Note: All Texas Electronics, Inc. rainfall sensors are dynamically calibrated in the factory using a constant rate of one inch of rainfall per hour (100 tips/hour). Field calibrations result in a lower tip count due to the variable drip rate caused by the head pressure in the calibration funnel. This is why field calibration results vary from factory calibration.

Instructions for Adjustments

If your rain gauge does not fall within acceptable calibration ranges, we recommend that you repeat the calibration procedure at least once to eliminate the possibility of technical error. If after repeating the test your gauge is still out of calibration, use the following procedure for adjustment.

Step # 1

Locate Adjustment Screws

Turn sensor upside down to locate the two adjustment screws. Remember, when adjusting the calibration of the rain gauge, **both screws must be turned the same amount to keep the tipping bucket balanced.**

Step # 2

Adjust Calibration Screws

Keep sensor in the upside down position to adjust the set screws. To increase the reading of your rain gauge turn set screws *clockwise*. To decrease the reading turn set screws *counter clockwise*. As a general rule, a 1/4 turn of both screws represents approximately 1 count.

Step #3 Re-calibrate to insure proper adjustment.