

# Microwave Checker

## User Manual

Issue 2.0



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## **Safety**

**Please read this manual carefully to make yourself familiar with the capabilities and functions of the Microwave Checker before attempting to use it.**

1. Never place the unit inside the microwave oven.
2. There are no user serviceable parts in this unit. Under no circumstances should the user attempt to open the unit. If opened, the warranty will be invalidated.
3. The Microwave Checker is guaranteed for one year from the date of purchase. Please keep your invoice as proof of purchase.
4. Should the unit require a service, repair or calibration, please return it to:

First Stop Safety  
11 Glaisdale Road  
Northminster Business Park  
York YO26 6QT  
Tel: 01904 791050

When returning the unit, please contact the Sales Department to advise us of its return. The customer will be advised of any costs prior to work commencing.

## Introduction

The Microwave Checker is an easy to use, accurate meter for checking leakage from Microwave Ovens. It can also be used for checking Radio Frequency emission levels from a variety of sources.

### Package includes:

- Microwave Checker with 9v PP3 battery fitted.
- User Manual
- Set of test labels.

### Features

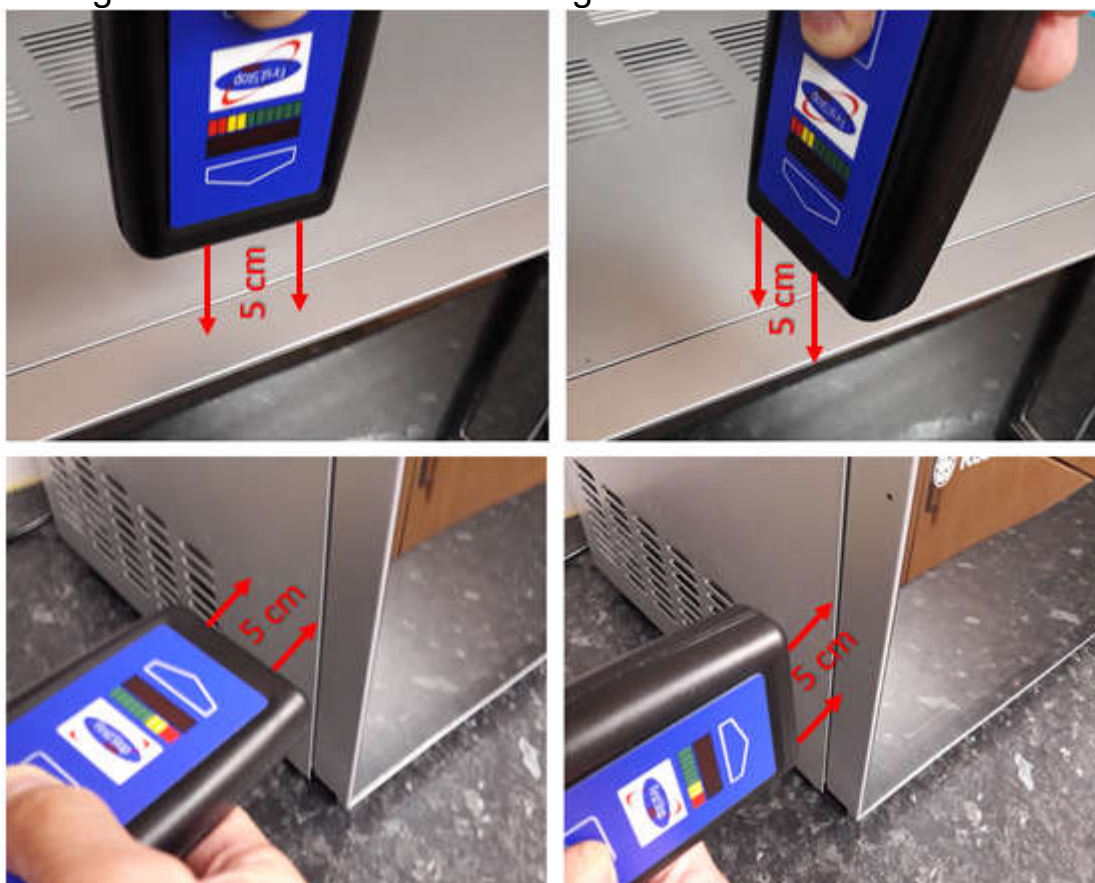
- RF measurement range from 0.07 mW/cm<sup>2</sup> to 7.1 mW/cm<sup>2</sup>.
- 10 LEDs to show level in this range.
- Easy to read red / amber / green indication.
- Simple push button operation.
- Display Test on power up.
- Battery Low indication.



## Operation

### Leakage Test

1. Place a large microwave-safe mug of cold water inside the microwave oven.
2. Switch on for 2 minutes at full power. (If the microwave oven has a radiant heater for roasting or baking, then make sure that this is not turned on. Only use the microwave oven on microwave power).
3. **Hold the microwave checker so that the front edge is 5cm (2in.) from the surface.** Hold the Test button while placing the Microwave Checker as shown below, checking the edges of the door seals and the front glass area. Check readings with the Microwave Checker turned through 90 degrees. Note maximum reading.



When testing you **MUST** maintain a 5 cm distance between the tester and the microwave oven

Check All Door Seals



### Check Front Glass Area

4. If measurements are not complete, then replace the mug of water with a fresh mug of cold water and switch on for another 2 minutes.
5. If the test result is in the green area then this is an acceptable level of leakage.
6. If the test result is in the amber area, then this indicates that the leakage is acceptable, but is above what would be expected from a new microwave oven. We would advise you to consider replacing the microwave oven within a year.
7. If the test result is in the red area, DO NOT use the microwave oven. Remove from service immediately.

### Interlock Test

When the microwave oven is working, open the door and check that the oven switches off. If the interlock is working correctly, there should be no microwave energy being produced when the door is open. You can use the Microwave Checker to check for this.

**If the microwave oven passes both the Leakage Test and the Interlock Test, complete a green Pass label and attach it to the oven.**

## Display Test

The Microwave Checker will perform a short display test at the start of every measurement when the display button is pressed. The display will show a pair of bars, moving inwards from each end of the display. Check that all of the bars illuminate in turn. The display will then go blank ready for measurements.

## Low Battery Warning

One bar at each end of the display will illuminate when the test button is pressed. Please replace the battery with a PP3 9v battery. The battery compartment is located on the rear of the unit. Slide the battery cover downwards to expose the battery. Ensure that the new battery is fitted with the correct polarity, as indicated by the label inside the compartment. Replace the battery cover.

## Specification

Range: 0.07 mw/sq cm to 7.1 mw/sq cm

LED	Power mw/sq cm	Field strength (V/m)	Action
#1	0.07	16	pass
#2	0.1	19	pass
#3	0.15	24	pass
#4	0.23	30	pass
#5	0.37	37	pass
#6	0.6	48	pass
#7	1.0	62	replace soon
#8	1.9	85	replace soon
#9	4.0	123	fail
#10	7.1	163	fail

Accuracy:  $\pm 3$ dB

Frequency Range: 2.45GHz  $\pm$  50MHz

Probe Direction: At front of checker as indicated

Power Supply: 1 x 9V PP3 Battery

## **Annual Calibration**

Your Microwave Checker is an accurate instrument and it is important to make sure that it is continuing to measure correctly. A faulty tester could fail to pick up a problem with a faulty microwave oven. To prevent this and ensure the accuracy of your Microwave Checker, we recommend that calibration is carried out annually. We can send you an annual reminder by e-mail or letter. You may opt out of this service at any time.

When you return your Microwave Checker to us we will carry out the following:

- Calibration with traceability back to National Standards
- Refurbishment or upgrade as necessary
- Issue of a new Calibration Certificate

## **Collection & Delivery Service**

We can arrange for the Microwave Checker to be collected for calibration and delivered back to you. Our turn-around time is 5 working days from receipt of the tester, although the actual time is usually much less. All you have to do is to order online or send us a completed order form.

## **Booking a Calibration**

This couldn't be easier. You can request your calibration in a number of ways:

Email        [calibrations@firststopsafety.co.uk](mailto:calibrations@firststopsafety.co.uk)

Phone        01904 529054

Download a calibration booking form from our website  
[www.firststopsafety.co.uk](http://www.firststopsafety.co.uk)

**All you have to do is to send us the order. We will do everything else!**

## **Lifetime Warranty**

When you purchase a new Microwave Checker or PAT Tester from First Stop Safety you can do so with total peace of mind. If you return the product to us for Annual Calibration, we will provide a Lifetime Warranty for any failures of the product. (see Terms & Conditions for full details).

If your product develops a fault you simply return the unit to First Stop Safety and we will repair the unit free of charge and send it back to you. By calibrating your tester annually your Lifetime Warranty will cover your Microwave Checker for many years.

## **Lifetime Warranty Conditions**

First Stop Safety have complete confidence in our Microwave testers enabling us to provide a Lifetime Warranty free of charge.

To retain the validity of the Lifetime Warranty the unit must be returned to First Stop Safety annually for recalibration.

Note: If the calibration is allowed to expire, the Lifetime Warranty is invalidated.

We have a one month grace period with regards to your calibration date. This means that you have one calendar month after the calibration expiry date in which to book your tester in for calibration.

The Lifetime Warranty covers the Microwave Checker unit only, not accessories.

If your unit develops a fault we repair it free of charge as long as your units Lifetime Warranty has been maintained and your account is up to date.

## **What is not covered by the Lifetime Warranty**

- If the unit has been water damaged.
- If the unit has been physically damaged beyond fair wear and tear.
- Repairs if the unit has not been returned for annual calibration.
- The cost of the annual calibration.