

# MICROWAVE CHECKER

User Manual  
Issue 1.0



First Stop Safety  
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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.
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.
7. Should the unit require a service, repair or calibration, please return it to:

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

When returning the unit, please contact the Sales Department to advise us of its return. The owner 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.
- 25 RF emission test labels.

## FEATURES

- RF measurement range from 0.07 mw/sq cm to 7.1 mw/sq cm.
- 10 LEDs to show level in this range.
- Easy to read red/amber/green indication.
- 50 mm spacer built into product.
- Simple push button operation.
- Power On indication.
- Battery Low indication.
- 25 RF emission tested labels included.



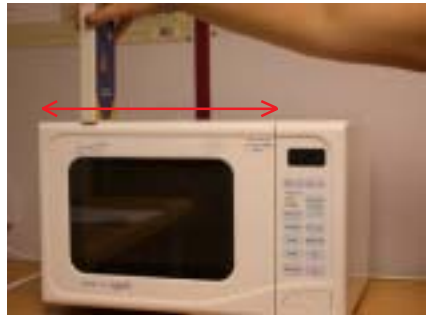
# OPERATION

## LEAKAGE TEST

1. Place a large mug of cold water inside microwave.
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. Place Microwave Checker as shown below in each position for about 15 seconds and note maximum position. By touching the surface of the microwave, you will be at the correct distance (50 mm) for the measurement.



Move side-to-side



Move side-to-side



Move up-and-down



Move up-and-down



Move in a circle around the glass window

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

## INTERLOCK TEST

1. When the microwave is working, open the door and check that the oven switches off. You can use the Microwave Checker to check for levels.
2. If the oven has switched off, then the interlock will be working.

**If both the Leakage Test and the Interlock Test have passed, then write out and apply a PASS label.**

# CALIBRATION

## Annual

Return the unit to the manufacturer for calibration. It is important to ensure the unit is measuring correctly.

## Field check

Make a call from a mobile telephone and when connected hold the Microwave Checker, as shown below, to check that the LEDs flash. This shows that the unit is working correctly.



## 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 end of Checker as marked

Distance to antennae from front end: 50 mm  $\pm$  2 mm

Power supply: 1 x 9 V PP3 battery