

SG300A First Time Setup

This manual describes important setup instructions.

If the software is updated, the horn antenna changed or the oscillator changed, these setup procedures must be completed in order to provide accurate results.

Setup Features

- Setting the ghost blocking filter option.
- Setting the measurement distance.
- Setting the Horn antenna type.
- Setting the product serial number.
- Setting the oscillator serial number.

Setting Filter Options

The filter setting helps to limit false readings.

This feature added as of **V0.16I** software.

Ghost Blocking

This filter selects the ghost blocking level.

The filter level options are listed here.

00	F GH 0	Ghost blocking OFF
01	F GH 1	Ghost blocking level 1
02	F GH 2	Ghost blocking level 2
03	F GH 3	Ghost blocking level 3 (Default)
04	F GH 4	Ghost blocking level 4
05	F GH 5	Ghost blocking level 5
06	F GH 6	Ghost blocking level 6
07	F GH 7	Ghost blocking level 7

Changing the Filter Setting

This is a one time setup. This feature is used mostly for blocking ghosts in noisy environments with various filter options.

- Tap the “**N**” button several times until the **USE:** menu appears.

- Tap the “**Right**” button twice. The **Error Level** menu will appear.

Error Level
Normal

- Using the IR remote tap the “**+/-**” button once. The filter setup menu will appear.

Filter 02= GH2

- Tap “**0**” through “**7**” buttons to enter the filter option. The setting “**3**” is default filter.
- Tap “**OK**” to save the filter option.

Filter 03=GH3

- Any time detail data is saved, the filter option will be recorded into the file on the USB drive.

Setting the Horn Antenna and Measurement Distance

The measurement distance and type of horn antenna can be set in software. Version **V0.16T** and newer.

This setup should be updated anytime the measurement distance is changed or the horn antenna is changed to a different type.

NOTE: This is a Memo function and has no effect on the performance of the unit.

NOTE: Since the measurement distance changes often, this number must be re-entered each time the SG300A is powered on.

- Tap the History “**Up**” or “**Down**” arrows to select the desired history memory.

Hist02 > 0
Pk= 98 L= 96 KPH

- Use the IR remote to enter the antenna type and measurement distance.

A	Standard antenna
B	Elongated antenna 12.7mm
C	Elongated antenna 25.4mm

- Tap the “0-9” and/or “A-C” buttons on the IR remote to enter a value. For example, if the measurement distance is 50M and the standard horn is being used, type **50A** and a measurement distance of 50M.

Enter: > 50A
Press OK to save

- Tap the “OK” button for to save the value.
- Tap the “EXIT” button to exit the note save mode.

Setting the MA7801 Serial Number

The serial number and quality level of the MA7801 microwave transceiver can be set in software. Version **V0.15G** and newer.



This is a one time setup and will only need to be repeated if the MA7801 is replaced with a different unit.

- Tap the “N” button several times until the **Signal Levels** menu appears.
- Tap the “Right” button. The **Version** menu will appear.
- If the MA7801 serial number is **-----**, then the MA7801 serial number needs to be set.

Ver V0.17C 0.1A
SG----- B01692

- Using the IR remote tap the “+/-” button. An asterisk will appear in the lower right corner of the LCD display.

Version V0.17C
MA7801 ----- *

- Using the IR remote tap the “+/-” button a second time. Two asterisks will appear in the lower right corner of the LCD display.

MA7801 Ser Num
----- **

- Tap “0” through “9” buttons to enter the serial number.
- Tap “A” through “F” buttons to enter the quality of the transceiver where “A” is highest quality and “F” is the poorest quality.
- For example, if a very light ding of the tuning fork properly detects the speed, then mark as “A”.
- Note: The quality level can be changed without also changing the serial number.
- Tap “OK” to save the serial number and quality level.

Ver V0.16G 0.1A
SG10045 M01692A

- The MA7801 serial number and quality level is saved in the data file when recording good speeds or all speeds.
- The “M” Mono or “S” Stereo is auto detected while transmitting. Until the trigger has pulled at least once to start transmitting, this value may be incorrect.

Setting the Product Serial Number

The serial number of the product can be set in software. Version **V0.10K** and newer.

This is a one time setup and will only need to be repeated if the SG312D firmware is updated.

- Tap the “**N**” button several times until the **GH 1** menu appears.
- Tap the “**Right**” button twice. The **Version** menu will appear.
- If the serial number is **SG-----**, then the serial number needs to be set.

```
Version V0.10K
SG----- M01673
```

- Using the IR remote tap the “**+/-**” button four times. Five asterisks will appear in the lower right corner of the LCD display.

```
Version V0.10K
SG----- *****
```

- Tap “**0**” through “**9**” buttons to enter the serial number.
- Tap “**OK**” to save the serial number.

```
Version V0.10K
SG10045 M01673
```

- If you enter **45** as the serial number, then the serial number will appear as **SG10045**.
- If you enter **20064** as the serial number, then the serial number will appear as **SG20064**.
- All product serial numbers start with **SG1xxxx** or larger.

Marking Good/NG Measurements

Measurements can be marked as **Good** or **NG**. Version **V0.16J** and newer.

When you see a ghost, false or missing measurement appear, it can be marked as such. The measurement will be marked as either **Good** or **NG** in the data saved to the USB drive.

The unit must be transmitting **XMIT** for this function to work. This function works in all modes. The SG300A may be in **Peak**, **PeakLast**, **Last** or **Continuous** mode.

- Tap the history “**Up**” arrow button each time a **Good** measurement is detected.
- An **^** arrow will appear on the display for a moment. The message “**Button Up Good 98KPh T23**” will be saved to the USB drive.

```
XMIT Continuous
Speed 98KPH ^
```

- Tap the history “**Down**” arrow button to mark the measurement as **NG**.
- An **v** arrow will appear on the display for a moment. The message “**Button Down NG 77KPh T4**” will be saved to the USB drive.

```
XMIT Continuous
Speed 77KPH v
```

- Tap the history “**Right**” arrow button to mark the measurement as **NG** missed peak.
- An **>** arrow will appear on the display for a moment. The message “**Button Right NG 68KPh T9**” will be saved to the USB drive.

```
XMIT Continuous
Speed 68KPH >
```

The **T23** number is the number of times the most recent speed was captured. Most often, ghosts or false measurements will have very small numbers here and balls will have higher numbers.

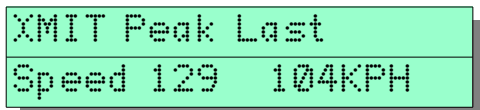
If a higher **T23** number is detected, the false measurement may be a fan or other interfering object that is creating the reading.

Short Functional test

This test provides a quick verification that the SG300A is functioning properly without requiring a tuning fork.

Put the unit into transmit mode.

Hold the “**Y**” button. After a couple of seconds, the beeper will start beeping alternating between two different speeds. The display will show peak **129KPH** and last **104KPH**.

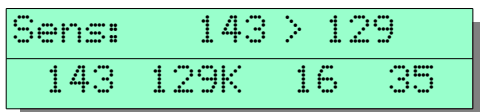


XMIT Peak Last
Speed 129 104KPH

Automatic Sensitivity speed test

The **Sens:** menu is used to measure the sensitivity of the microwave head.

The expected results are on the top line. The actual results are on the second line.



Sens: 143 > 129
143 129K 16 35

See page 28 of the user manual for more details.

Analyzing Test Results

The test results from all of the **detail000.txt** files can be analyzed easily.

From a MAC or Linux computer, go to command line mode. This is a standard built in function of MAC or Linux.

From a Windows computer install a **bash.sh** shell.

Use the following commands to generate summary files that show only the important data.

Find the summary of the measurement results.

```
grep -E "Open|Speed|Close|Button" *txt  
>speedTest.txt
```

Find the results of the AUTO1 test.

```
grep Perf *txt > sensTest.txt
```