

WL-306 Test Instructions

IMPORTANT NOTES – Please read before testing.

- i) You must read the “Power Levels Changing” section before testing so that the power levels can be set correctly prior to test. **See also “Antenna Selection”** below, make sure you select the correct antenna (e.g. “a 0” or “a 1”) depending upon whichever you are connected to.
- ii) All commands are case sensitive and therefore they must be entered precisely to avoid problems. You can check the cases of each command by entering the Help commands as detailed below.
- iii) Only use the TOP PCMCIA card slot for all the PC Cards. DO NOT used the blanked off lower slot.

1) Card Installation:

The WL-306 has been installed in the PC’s provided and you must follow the following instructions precisely to enable it for testing.

Set up the equipment as detailed in the test set up diagram.

When you initially boot up the PC you will get a “3Com OfficeConnect- Wireless Client Set up” Prompt. Press the cancel button and then proceed as follows:

Click on the “WL-305” icon on the PC desktop.

You should now be at the following prompt

C:\Speedracer

Type in the following command:

C:\Speedracer Set poldebugmac=00-aa-bb-cc-dd-ee

Then:

C:\Speedracer Poldebug X {Where X=2 when using the HP PC and X=4 When testing with the Sony PC}

You are now in “receive mode” and at the debugging prompt ready to test. If you already have other WLAN equipment transmitting you will see the received data scrolling on the screen.

2) Setting the WL-306 into Trasmission

Type in the following commands precisely during test noting the spaces and case (upper/lower) of the commands. Note you only need to enter the commands in BOLD.

r 0 {This will turn the receive mode off and enable you to transmit}
c 1 {This will select channel 1. Similarly you can perform testing on any of the other channels by typing “c x” where x is the channel number}.
a 1 {This will select antenna connection B. Alternatively you can choose Antenna connection A using command “a 0” however this is the default setting so it is not required unless you are changing from Antenna B to A}.
pc 127 {Modifies power level setting from 143 to 127}
tc {Transmit mode = Continuous}
{Note: The above “tc” command sets a continuous number of packets which will be transmitted after the “T” command below is initiated. If you only need to transmit for a shorter time you can limit the number of packets by using the “t xxxxx” command where xxxx is the number of packets. For example **t 3000** will transmit for approximately 1 minute. Simply increase the number accordingly for the time required.
T {Start transmitting}

{You can check the power level using the command “pc” only once the “T” command has started transmission. **Use of this command at any other time may cause the power level to default to an incorrect power level setting**}

Changing Channels:

Once the WL-306 is transmitting, as detailed above, the channels can be changed simply as follows. At the Debugging enabled prompt type:

c x {You can set the channel to anywhere between 1-14 by entering this command where x is the channel number required. The new channel should adopt the same properties (e.g. power levels etc) as the previous channel. If you are in any doubt as to whether this is the case then remove the orange cable from the WL-306, re-insert the cable and then repeat the commands from 2) above this time entering the new required channel number}

Turning On/Off modulation:

You can select a signal with or without modulation using the following commands once the WL-306 is transmitting.

At the Debugging enabled prompt type:

cw 0 {Turns on modulation}
cw 1 {Turns off modulation}

Antenna Selection:

On the open card there are two antenna connectors for the conducted testing as detailed in the attached diagram. You can select between these two using the following command:

At the Debugging enabled prompt type:

a 0 {to select Antenna connection A}.

or

a 1 {to select Antenna connection B}

You will see a big change in the power levels if you switch between correct/incorrect settings **so please make sure that you are testing with the correct (maximum) setting.**

Bit Rate selection:

The data rate can manually be selected using the following commands however it will automatically drop, with distance, to the maximum possible under the connection conditions.

At the Debugging enabled prompt type:

tr 110 {Sets to 11MBps}

tr 10 {Sets to 1MBps}

tr 20 {Sets to 2MBps}

tr 50 {Sets to 5MBps}

Setting up a connection to demonstrate the ETS 300 826 immunity test:

All the above tests can be performed using just one unit and one PC. I have also sent you a WL-305 PC Card so that you can perform the ETS 300 826 tests and demonstrate the connection. To do this please set up as follows:

The following example sets the Access Point (WL-306) to transmit a user specified (x) number of packets to a WL-305 PC Card using channel 1.

Transmit PC from WL-306 (Use PC RA&A 73)

Click on the WL-306 icon on the desktop to bring you to the DOS prompt c:\speedracer

Type the following at the DOS prompt

C:\speedracer set poldebugmac=00-aa-bb-cc-dd-ee

C:\speedracer poldebug 4

{You should now be at the de-bugging prompt}.

>c 1 {Select the low channel}

>tc

Set up the Receive PC as below then send the packets.

>t 10000 {Transmitting 10000 packets. This takes approximately 75 seconds. To transmit for more time simply increase the number of frames}.

>T {Starts Transmitting the packets. If you cannot see them being received on the PC Card then ensure that the channel is set identical to above and that the card is set to receive (r 0)}

Receive PC using PC Card WL-305 (Use PC Card set up in PC RA&A74)

These 10000 packets can be viewed on the Receive PC set up as follows.

Insert the WL-305 PC Card

Click on the WL-306 icon

At the DOS prompt enter the following command:

C:\speedracer poldebug 6.

{You should now be at the debugging prompt for the WL-305. Please then enter the following commands to show the received data}

>c 1 {To select the same channel as the send}

>r 1 {To enable display on the receive}

You will then see:

“Good frame.....” Being displayed on the receive as each packet is received.

>RXSTATS {Type this to display information on the received packets. It will show Total number of packets received, good packets and packets with CRC errors.

NOTE: There is a bug in the program which always shows 7 CRC errors. This is the same whether you send 10000 or 20 frames}