



Trouble Shooting Guide

Maestro 100 Series

Rev. 01



REVISION HISTORY

Rev.	Date	Details	Originated by
01	22 Feb 2007	First release	Wallace Lee

This manual is written without any warranty.

Maestro Wireless Solution Ltd. reserves the right to modify or improve the product and its accessories which can also be withdrawn without prior notice.

Besides, our company stresses the fact that the performance of the product as well as accessories depends not only on the proper conditions of use, but also on the environment around the places of use.

Maestro Wireless Solution Ltd. assumes no liability for damage incurred directly or indirectly from errors, omissions or discrepancies between the modem and the manual.

Confidential, the whole present document is the sole property of Maestro Wireless Solution Limited.



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CHAPTER 1: Introduction

This document is intended for Maestro distributors to inspect Maestro 100 modems in case of malfunction or return from customer. Please note this is not a “repair manual”. Maestro Wireless Solutions does not ask third party to repair Maestro 100 modem.

In many cases malfunction are due to improper settings or installation, and could be corrected easily, without returning to manufacturer.

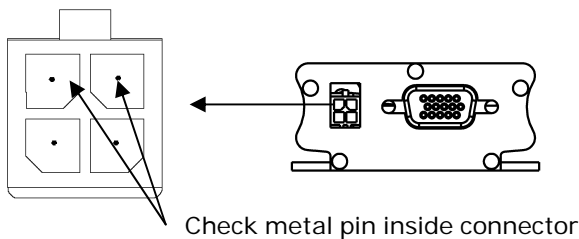
CHAPTER 2: VISUAL CHECKING

1. Basic and visual inspection

- Check all accessories (cable, power supply cord, adaptor, antenna) first. Just verify accessories using good modem.
- Check on the unit if there is any screw or nut loosened.
- Please note if defect is found caused by improper usage warranty may be void.

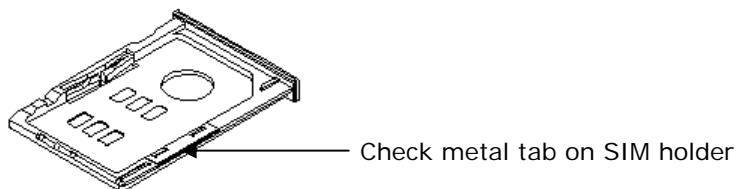
2. Power supply connector

Check if the power supply connector is damaged or not. Make sure contact pins inside are still in good condition.



3. SIM card / SIM card holder

- Take out the SIM card holder. Check if the metal tab on the holder is present. Missing the metal the unit will not be able to read the SIM card.



- Make sure the contacts on the SIM card are clean.

4. Antenna connector

- Check the center of the antenna connector, see if the circular contact is in the correct place or not. If the contact is pushed towards inside of the plastic material the antenna connection cannot be made.

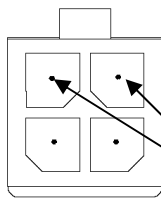


CHAPTER 3: ELECTRICAL MEASUREMENT

If the modem passed Visual inspection we can go for electrical measurement. This is just a simple “go or no go” measurement, no special equipment is required. Just using regulated power supply and digital multimeter.

1. Power supply resistance

- Use a digital millimeter to measure the DC resistance between the +ve and –ve contacts of the unit. The resistance should be very high (>3Mega Ohms).
- If you find the value is very low or even zero the inside circuit may have been burnt.



Measure resistance between +ve and -ve

2. DC current measurement

- Get an adjustable DC power supply with current limiting function. Setup the supply to 12V DC output and current limit 200mA. Try power up the modem (without SIM card inserted) with the power supply.
- If you the current is too high to trigger the current limiting function switch off the power supply immediately. The modem circuitry may have been damaged. If the current is normal (less than 100mA) please proceed to chapter.
- If there is very low or even zero current measured, the unit should be out of order, return for repair.

CHAPTER 4: POWER-ON CHECKING

If electrical measurement is passed, you can go to power-on checking. At the beginning no SIM card is needed.

1. LED status

After power up the LED on the unit should be turned on. If it does not please try to re-flash the firmware. Contact Maestro Wireless Solutions for “boot mode downloading procedure” files and document.

2. AT Command response

If LED is on try to follow Maestro 100 User Guide Chapter 3 to check the AT response. If the modem has not response please try with other baud rate (300-115200 bps). If all baud rates are fail, please e-flash the firmware.

3. AT Command tests

The following table is from Maestro 100 User Guide Chapter 3: Note: Issue AT+CMEE=1 to have extended error code (+CME ERROR)

Description	AT commands	Modem response	Comments
Network registration checking	AT+CREG?	CREG=<mode>,1	Modem registered to the network
		CREG=<mode>,2	Registration lost, re-registration attempt
		CREG=<mode>,0	Modem not registered on the network, no registration attempt
Receiving signal strength	AT+CSQ	+CSQ:20,0	The first parameter has to be at least 15 for normal communication
Receiving an incoming call		RING	An incoming call is waiting
	ATA		Answer the call
		OK	
Make a call	ATD1234567;		Don't forget the ";" at the end for "voice" call
		OK	Communication established
		CME ERROR : 11	PIN code not entered (with +CME = 1 mode)
		CME ERROR : 3	AOC credit exceeded or a communication is already established
Make an emergency call	ATD 112;		Don't forget the ";" at the end for "voice" call
		OK	
Communication loss		NO CARRIER	
Hang up	ATH		
		OK	
Enter PIN code	AT+CPIN=1234		
		OK	PIN Code accepted
		+CME ERROR : 16	Incorrect PIN code (with +CME = 1 mode)
		+CME ERROR : 3	PIN already entered (with +CME = 1 mode)

4. Other tests

Please refer to Maestro User Guide Chapter 6

CHAPTER 5: INSPECTION FLOW CHART

