

Intuicom[®]

RTK Bridge-M[™] Installation Guide

**For
Trimble[®] EZ Guide 500[®]**

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1 Overview

The EZ Guide 500 receiver is typically configured to accept CMR format RTK corrections from an Intuicom RTK Bridge-M which in turn has been configured to connect to a GPS/GNSS reference network. The intended audience for this document is a dealer or integrator familiar with the EZ Guide 500 and generally familiar with the Intuicom RTK Bridge-M. The Intuicom RTK Bridge-M User Guide covers the steps necessary for its configuration.

2 Requirements for Installation

2.1 Required Information

In order to operate an Intuicom RTK Bridge-M, you are required to have the necessary information to access and log in to the Real-Time Network. This information is entered into the RTK Bridge-M and stored in a profile. More details on setting up an RTK Bridge-M is available in the RTK Bridge manual.

- IP address
- TCP port
- NTRIP mountpoint name
- username and password for access to the real-time GPS/GNSS network

2.2 Required Equipment

2.2.1 Intuicom Equipment and Accessories

1. Intuicom RTK Bridge-M with activated data provider account (Verizon, AT&T, etc...)
2. Intuicom RTK Bridge-M to EZ Guide 500 data/power cable:
[P/N: FIP4-MRTKPWDT-EZ]
3. Intuicom RTK Bridge-M Cellular/GPS antenna/cable:
[P/N: FIP4- FIP4-MMDM-MAX (magnetic mount)]

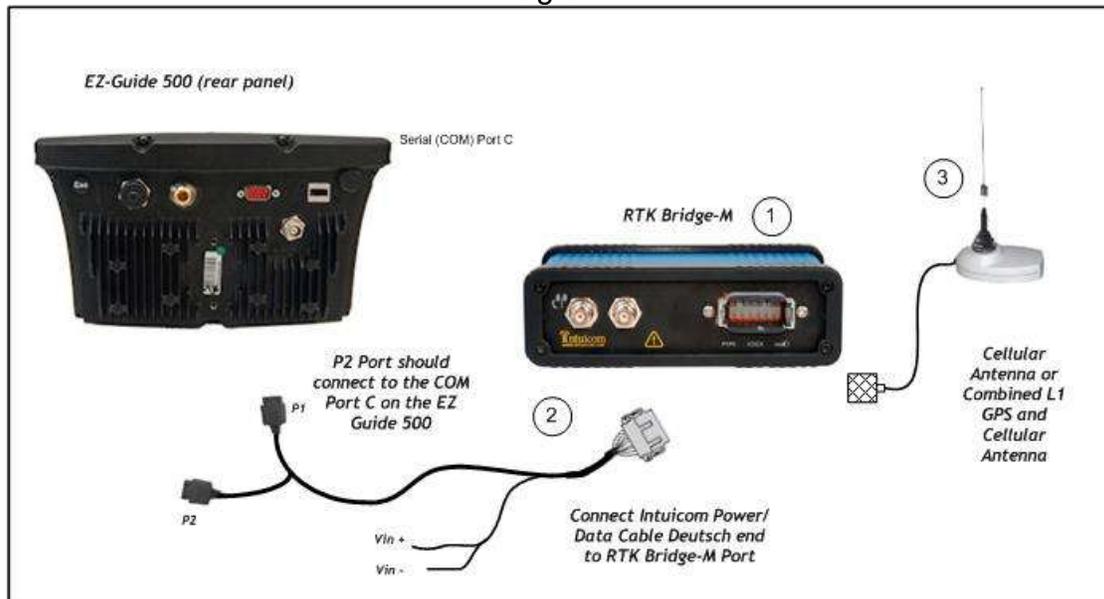
2.2.2 Other Equipment and Accessories

4. Trimble EZ Guide 500 receiver with RTK (CMR) option enabled and COM port available

3 Installation Instructions

Below is the Installation Diagram for the recommended installation of the Intuicom RTK Bridge-M Utilizing the equipment noted above.

Diagram 1



3.1 Configuration

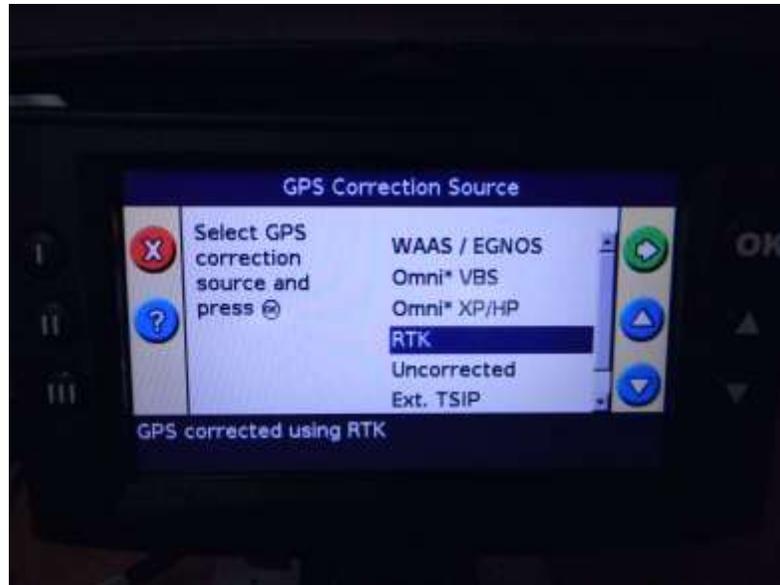
- Configure the Intuicom RTK Bridge-M to connect to GPS/GNSS Reference network and obtain CMR/CMR+ correction data stream from an appropriate single reference station, or as a VRS.
- Configure the resulting RTK correction data to be output front data port at a known baud rate (a baud rate of 38400 is recommended).
- Confirm GPS and cellular antenna (typically a combined antenna with two coaxial cables with TNC connectors) are connected and placed where they have good sky view and good cellular signal.
- Independently confirm the RTK correction data stream from the data port on the front of the unit. This can be accomplished by viewing data output from the data port into any terminal emulation software (ie. HyperTerminal) and RTK Bridge-M Programming Cable. Details can be found in the Intuicom RTK Bridge-M User Guide.
- Using the Intuicom RTK Bridge-M to EZ Guide 500 data/power cable, connect the RTK Bridge-M to the COM Port on the EZ Guide 500.



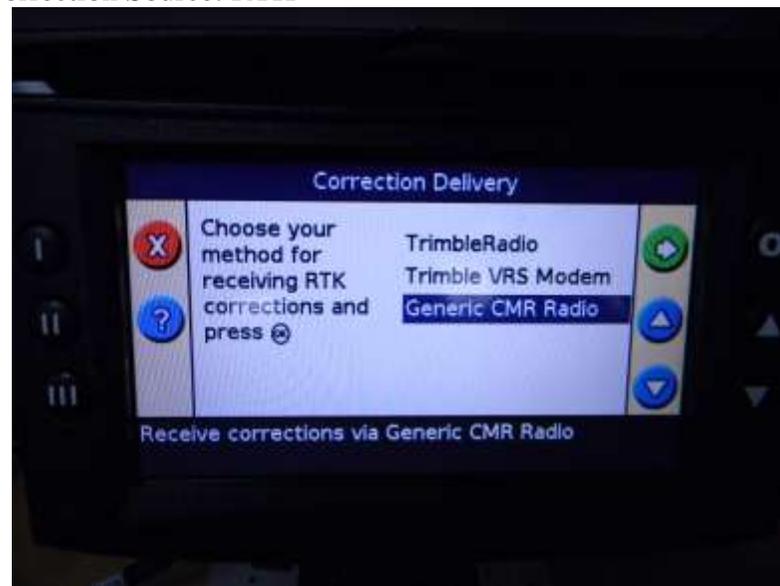
- Select the Tools window



- Go to GPS Setup



- Select Correction Source: RTK



- Select Correction Delivery: Generic CMR Radio



- Configure Port Settings:
 - Baud Rate 38400bps
 - Data Parity None
 - Stop Bits 1



- Confirm operation – Confirm the Intuicom RTK Bridge-M is correctly configured and its antennas are connected and within cellular coverage. The main status view on the EZ Guide 500 should report that it is receiving RTK corrections.

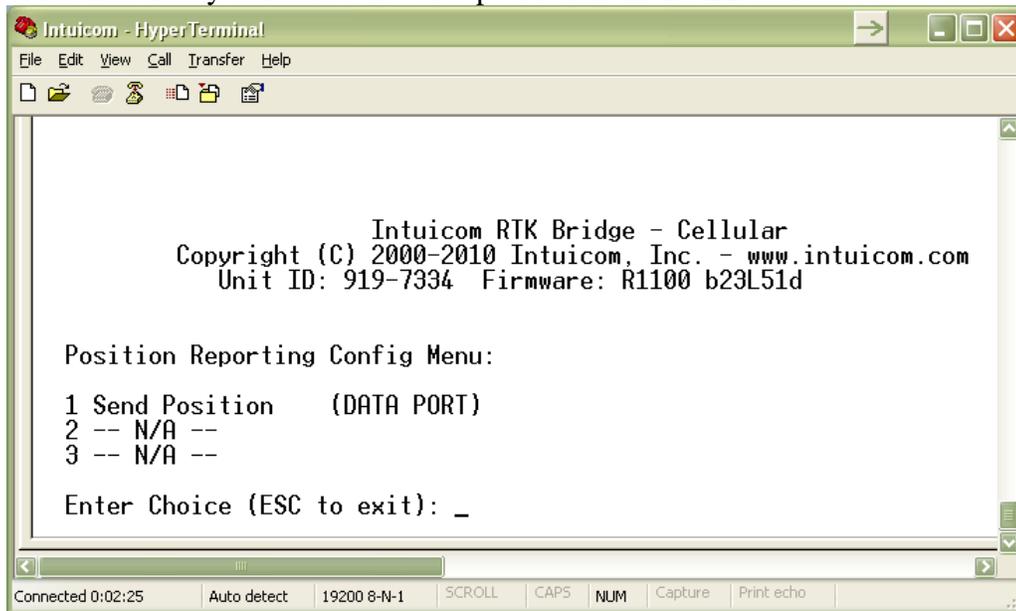
You have now demonstrated that the EZ Guide 500 is receiving corrections and fixing position.

4 Sending GPS position from the EZ Guide 500 to the RTK Bridge-M

Below is a description of how to configure the RTK Bridge-M and EZ Guide 500 to use the GPS position from the EZ Guide 500.

4.1 RTK Bridge setup

The RTK Bridge-M must be configured to receive the GPS position from the data port. In the Profile Configuration menu, select 'Positioning,' the RTK Bridge will display the Positioning Sub-Menu. Press '1' until positioning type is 'DATA PORT.' The RTK Bridge-M is now ready to receive the GPS position from the EZ Guide 500.



4.2 EZ Guide 500 setup

There are several settings that must be configured on the EZ Guide 500 to send the GGA string to the RTK Bridge-M.



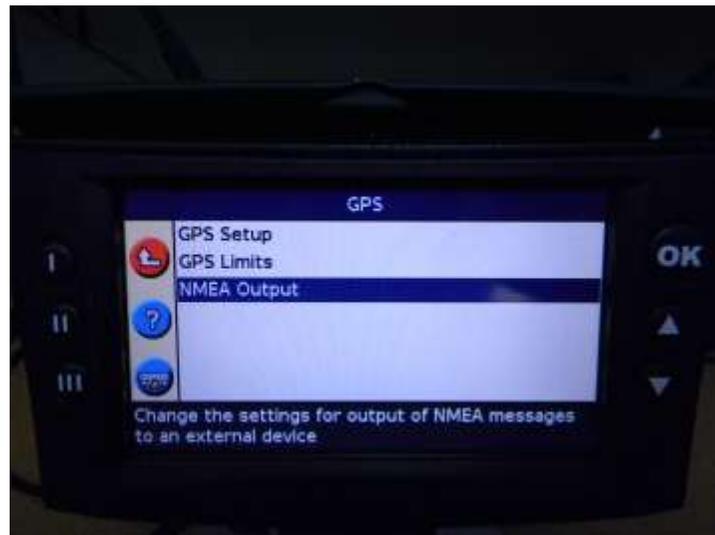
- From the main screen, go to the Tools menu



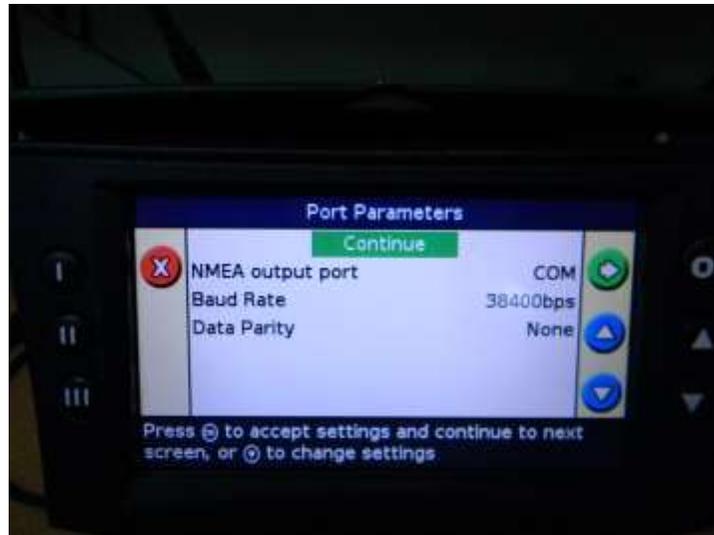
- Select User Mode Advanced



- Select System, then GPS



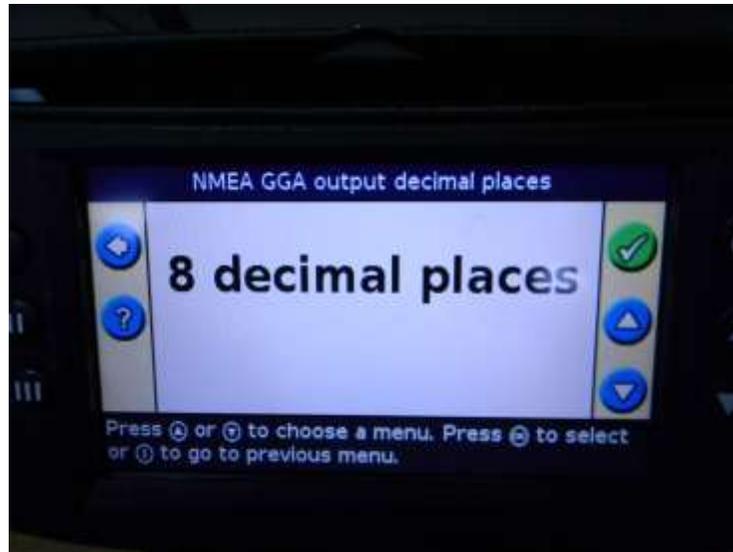
- Select NMEA Output



- Configure Port settings
 - NMEA Output port COM
 - Baud Rate 38400bps (this must be the same as the Data Port Baud Rate on the RTK Bridge)
 - Data Parity None



- Message Selection
 - GGA must be set to 1Hz
 - Everything else can be set to Off



- NMEA GGA Output Decimal Places set to 8

The EZ Guide 500 should now be configured to send the GGA string to the RTK Bridge-M. Return to the Main screen to verify RTK Fix.