



Intuicom[®]

RTK Bridge-M[™] Installation Guide

**For
Hemisphere[®] Outback A220**

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1 Overview

The Hemisphere Outback A220 smart antenna is typically configured to accept CMR or RTCM 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 Hemisphere A220 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 mount-point 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 (without GPS) with activated data provider account (Verizon, AT&T, etc...)
2. FIP4-MRTKPWDT-EZ (Intuicom power data cable)
3. Null Modem Adaptor (M-M)
4. Intuicom RTK Bridge-M Cellular antenna/cable [P/N: FIP4-MMSM-MAX (magnetic mount)]

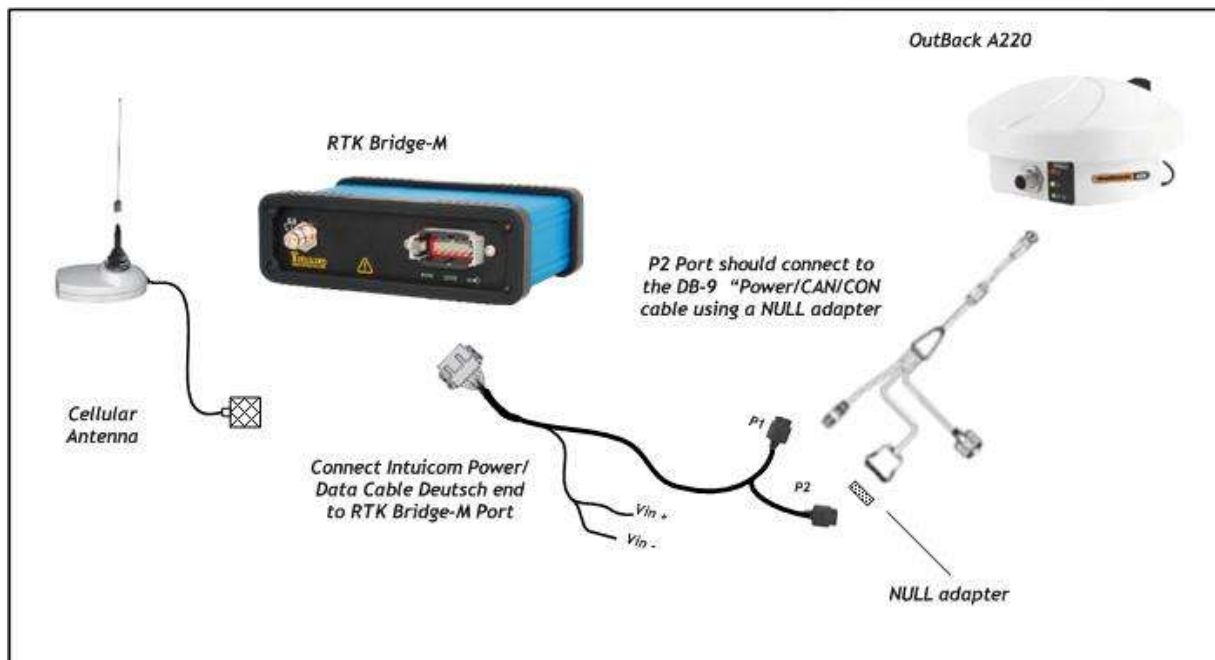
2.2.2 Other Equipment and Accessories

1. PC with serial port and Hemisphere software (SLXMon and Remote Control) or Outback S3 for configuration.
2. Hemisphere Outback A220
3. A220 cable(Hemisphere 051-0236)

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

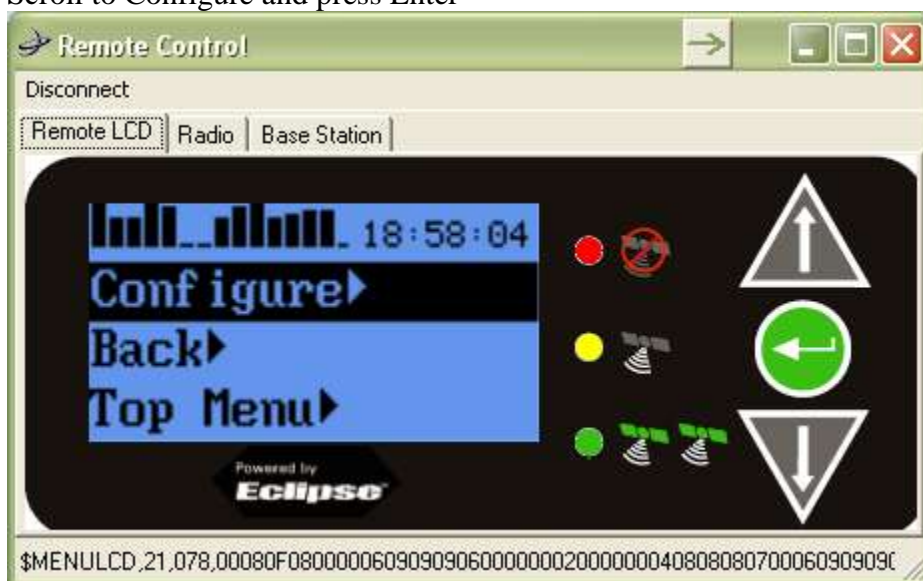
- Configure the Intuicom RTK Bridge to connect to GPS/GNSS Reference network and obtain CMR/CMR+ or RTCM correction data stream from an appropriate single reference station, such as a VRS.
- Configure the resulting RTK correction data to be output from the data port at a known baud rate (a baud rate of 38400 is recommended).
- Confirm cellular antenna is connected and placed where it has a 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 (i.e. HyperTerminal) and RTK Bridge Programming Cable. Details can be found in the Intuicom RTK Bridge-M User Guide.

- Using the Intuicom RTK Bridge-M to A220 data/power cable and the null modem adapter, connect the RTK Bridge-M data port to the Serial 2 (B Port) on the A220.
- Connect setup data/power cabling to the A220 Serial 1 (A Port) and a serial port on a PC running Hemisphere's Remote Control software. Apply power and connect to the A220 with Remote Control.

Use the up and down arrows to navigate through the program menus. From the initial screen, Scroll to GPS and select using the Enter on the keyboard.



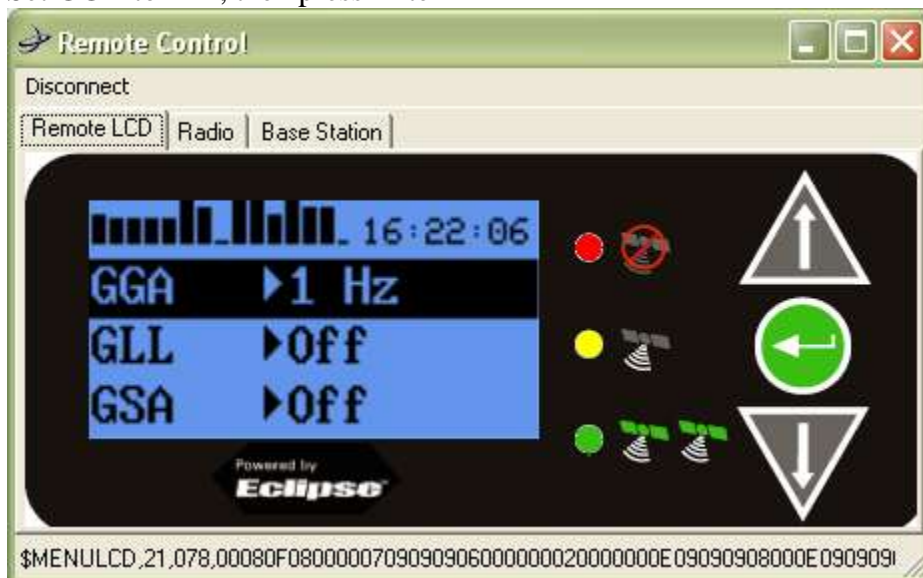
Scroll to Configure and press Enter



Select Data Port B by pressing Enter.



Set GGA to 1Hz, then press Enter



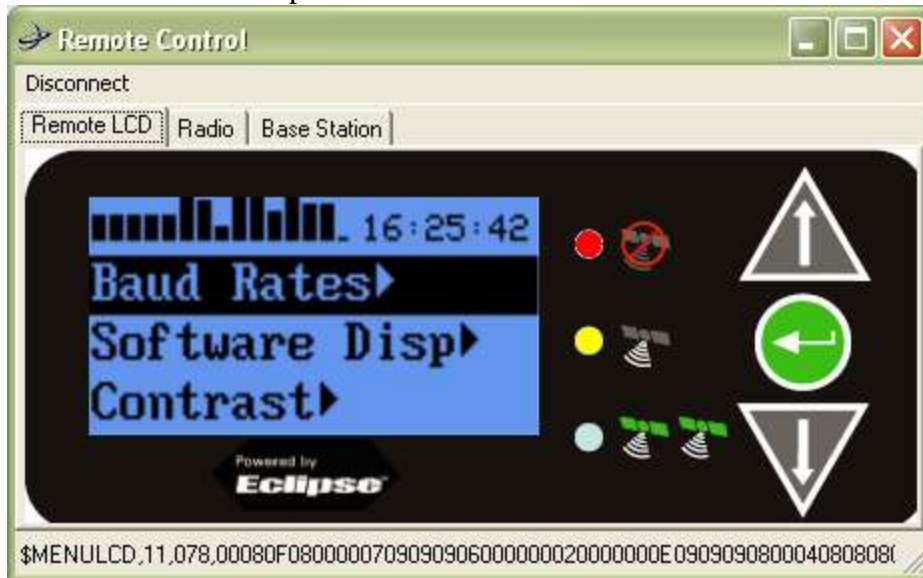
Scroll up to “Top Menu.” Select by pressing Enter



Scroll to System Setup and press Enter



Select Baud Rate and press Enter



Set Baud Rate to 38400 for Port B



The A220 should now be configured to send the GGA string to the RTK Bridge-M and receive an RTK correction stream.

Confirm fix by launching the SLXMon software included with the Hemisphere A220. (It may take several minutes to achieve an initial fix.) “RTK” should appear in NavMode.

SLXMon - View of GPS Solution

File View Control Configure Window Help

View Of Channel Data

CH	SV	ELV	AZI	Dopp	NCO	UERE	SF	PosRes	VelRes	DiffC	LOCK	SNR
1	22	20	246	2802	4321	2.0	2	0.00	0.1	-4.5	CXBF	15.4
2	6	18	316	2838	4358	2.0	2	0.01	0.0	-1.8	CXBF	14.0
3	3	7	322	3226	4746	2.0	2	0.00	0.0	0.0	CXBF	8.6
4	30	12	268	-2158	-638	2.0	2	0.04	0.0	-5.3	CXBF	14.7
5	5	5	60	-3232	-1712	2.0	2	0.00	0.0	0.0	CXBF	12.8
6	29	41	172	-2947	-1427	2.0	2	0.01	0.0	-0.4	CXBF	22.1
7	26	33	54	-2008	-489	2.8	2	0.00	-0.1	0.3	CXBF	20.1
8	27	5	118	2355	3876	2.0	2	0.00	0.0	0.0	CXBF	11.4
9	21	72	338	1046	2567	2.0	2	0.00	0.0	3.3	CXBF	23.2
10	18	53	254	1617	3139	2.0	2	0.01	0.0	2.4	CXBF	24.1
11	16	14	288	-997	519	2.0	2	-0.02	0.0	-4.7	CXBF	16.3
12	15	57	104	397	1914	2.0	2	0.00	0.0	1.5	CXBF	24.2
13	135	43	188	-3	1517	32.0	3	0.00	0.0	0.0	CXBF	21.1
14	138	43	184	0	1522	2.0	3	0.00	0.0	0.0	CXBF	21.8
15	133	41	168	87	1608	4096.0	3	0.00	0.0	0.0	CXBF	17.8

View of GPS Solution

Lat	40.0197693	Spd	0.02	HDOP	1.1	NavMode	3-D RTK	Date	03/07/11
Lon	-105.2165644	Hdg	11.73	VDOP	1.7	No.Used(mask)	9 (3232C020)	Time	16:31:57
Height	1578.048	ROC	0.00	AgeDiff	1	Std. Dev. pseudo	0.01	NCO Err	1520

Ready 3-D RTK 03/07/11 16:31:57 COM1, 19200

Please contact Intuicom support at (303) 449-4330 with any questions.