

# underwater technology

MiniPod Receiver Operation Manual







## **Revision History**

Issue	Change	Reason for change	Date
13300	No.		Date
1	n/a	First Issue	09/05/2019
2	2462	Addition of GPS Update Rate	22/12/2020
3	2571	New protocol release (V2.1.0.0)	08/03/2022
4	2738	RTK update full RTCM support (V2.2.1.0).	13/04/2023
4	2730	BCN-201G Support	13/ 04/ 2023



## Table of Contents

REVISION HISTORY	2
INTRODUCTION TO THE MINIPOD RECEIVER	5
Overview	5
INSTALLATION INSTRUCTIONS	6
Packing List	6
RFR Receiver	
Positioning of RF antenna	
MINIPOD ALIGNMENT	
Software Installation	8
SOFTWARE OPERATION	9
INITIAL CONFIGURATION	9
Normal Operation	
MAIN DISPLAY	9
Pod List	13
Model	-
Serial	
Data ID	-
ID On	-
Diff. On	
Port	13
Errors	
Extended Info	
Bad	
F/W Rev	
GPS Module GPS REV	
Last Error	
Modifying MiniPod Configuration	
System Message Area	
Menu	
File	
Receiver	
Tools	
Help	
PROGRAM OPTIONS	
Differential Corrections	19
WiFi Channel Selection	22



Networking Serial Output	
END OF LIFE RECYCLING / DISPOSAL	

Thank you for choosing applied acoustics ltd as one of your equipment suppliers. We hope you experience many years of reliable operational use from our products.



modulus technology ltd carries out all technical support, servicing and repairs. If you have any technical issues with our products please contact the modulus technology team:

Tel: +44 (0)1493 416452 Email: <u>techsupport@modulustechnology.com</u> Web: <u>https://www.aaetechnologiesgroup.com/modulus-technology/</u>



applied acoustic engineering Ltd has made every effort to ensure that the information contained in this manual is correct at time of print. However our policy of continual product improvement means that we cannot assume liability for any errors which may occur.



These written instructions must be followed fully for reliable and safe operation of the equipment that this manual refers to. applied acoustic engineering Ltd cannot be held responsible for any issues arising from the improper use or maintenance of equipment referred to in this manual or failure of the operator to adhere to the instructions laid out in this manual. The user must be familiar with the contents of this manual before use or operation.



#### Introduction to the MiniPod Receiver

#### Overview

The MiniPod Receiver is a combined hardware and software solution to receive GNSS data from RF enabled MiniPod(s) and to send RTK corrections to the MiniPod for precise GNSS positioning.



MiniPod Receiver (RFR-101G)

MiniPod 101G

1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	active:							1-0-1-0-1
File Rect	ever Te	ols Help						
3	tak.							
arhauten								
-								
Pod Liet						_	Carlos Contra	
Nodel	Serial	Dote	Ð	10 On	Port	-	Erons	
100	MTDEY	#GPGGA, 104833.00.5235.6015182.N.00142.4161839.E.2.16.0.7.0.449.M.46.861.M.4.0.0123'43	÷.	- R	N/A	- 0	1.87%	
GPS1010	MT041	\$GPGGA,104803.00.5235.60102937.N.00142.4166084E.E.2.19.0.7.1.514.M.46.861.M.5.0.0136141	1	1	N/A		0.00%	
GPS101G	MT043	\$GPGGA, 104833.00.5235.6016400.N.00142.4158697.E.2.20.0.6.2.828.M.46.861.M.5.0.0136*6A	2	12	N/A	- 50	5.80%	
W#	Descript	on						Ī
10:48:28	Please x	at while we configure the network						Ī
10:48 28 10:48 22	Please a MrsPod	at while we configure the network. GPS101G - MAC Address 0x13A200418F84E8, Senal No: WT043						1
10:48:28 10:48:22 10:48:22	Please x MrsPod Remote	at white we configure the network						- I
10:48:28 10:48:22 10:48:22 10:48:22	Please s MrsPod Fierrote MrsPod	at White we configure the hetwork. GPS 1010 - NAC Address In 13A200418FB4EE, Senal No: MT043 AT Command Response Received GPS1010 - NAC Address In 13A200418F7812, Senal No: MT041						
10:48:28 10:48:22 10:48:22 10:48:22 10:48:22	Please x MrsPod Renote MrsPod Fiencte	at white we configure the network						
10.48.28 10.48.22 10.48.22 10.48.22 10.48.22 10.48.22 10.48.22 10.48.22	Please x MrsPod Renote MrsPod Fiencte MrsPod	at while we configure the network GP3101G - MAC Address 0x13A220418F84E8, Senal No: MT043 AT Command Response Received GP3101G - MAC Address 0x13A2004187812, Senal Ni: MT041 AT Command Response Received						
We 10-48-28 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22 10-48-28 10-48	Please x McsPod Renote NeriPod Renote NeriPod Renote Please x	at White we configure the hetwork						
10-48-28 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22 10-48-22	Please x MrsPod Renote MrsPod Renote MrsPod Renote Please x Please x	at White we configure the hetwork. GPS1010 - NAC Address Ibi 13A200418FB4EE, Senal No: MT043 AT Command Response Received GPS1010 - NAC Address Ibi 13A200418F7b12, Senal No: MT041 AT Command Response Received GPS1016 - NAC Address Ibi 13A200418FF1DA, Senal No: MT031 AT Command Response Received.						

Mini Pod Receiver Software



The MiniPod Receiver software, connected via a USB interface to a RFR-101G, receives the RF transmissions from connected MiniPod(s) and data sensors within or connected to the MiniPod. The windows based, MiniPod Receiver software, is used to display any received GNSS and AHRS data, this data can then be fed, either via Ethernet or serial interface, to the client navigation/ logging application.

If multiple MiniPod's are used, the output from each MiniPod can be prefixed with a unique numerical identifier to enable identification of the data or split across multiple serial outputs.

The system supports differential corrections, received via a PC serial port from an external source. These are then sent to each connected MiniPod to improve position accuracy via the RF network. The differential corrections may be input in either RTCM or CMR format.

## Installation Instructions

## Packing List

- 1. MiniPod RF Receiver [RFR-101G-7000]
- 2. USB 2.0 Cable Assembly [ELD050194]
- 3. MiniPod RF Receiver Cable, located inside lid. [RFR-101G-4000]
- 4. MiniPod RF Directional High Gain Antenna [EMD050040]
- 5. MiniPod RF Omni-directional Antenna [EMD050051]
- 6. MiniPod Flash Drive [SFT-MINIPOD-6006]
- 7. Antenna mounting hardware





#### RFR-101G Receiver Connections



The RFR receiver should be connected to the computer running the application by the USB interface, once properly connected the Power LED will illuminate. The RF receiver cable RFR-101G-4000 should have one end connected to the RFR Box and the other should be connected to the desired antenna.



#### Positioning of RF antenna

Connect the selected antenna, dependent on application to the RFR-101G via the RF Receiver Cable.

The RF antenna should be mounted at the highest point of the vessel, as practical to do so, and face towards the target with an unobstructed line of sight. Objects around the antenna may cause interference with the signals and result in errors.

It may be necessary to tilt the antenna towards the MiniPod's for optimum performance. Other commercial Wi-Fi antennas are available and can be used with our system however the antenna's supplied should be adequate for the majority of setups.

Please refer to the appendix for the antenna beam plots as supplied standard.



Ensure the MiniPod BCN-101G internal antenna is in alignment with directional RFR receiver antenna

#### MiniPod Alignment

The MiniPod(s) must be installed with the antenna label (shown below) pointing towards the RF Antenna to ensure reliable transmission of RF data.

(((0)))	AC	
Λ	Ŵ	

Please see the MiniPod manual for further information BCN-101G-8002

#### Software Installation

Prior to installing the software on the Windows PC, please connect the RFR-101G into a USB port of the PC and then wait for windows to install the required driver. Once installed the device will be shown in the windows device manager as a 'USB Serial Port' (FTDI driver)



Install the 'MiniPod Receiver' software by running the 'Setup.exe' package supplied



## Software Operation

## Main Display

The main display consists of the menu, a toolbar, a pod list area and a system message area.

	Receiver			1	ſ	3
File Rece						
Configuration	Toolbar					
Pod List						
Model	Deta	Ð	ID On	Port		Evers
~ Seriat	1022056			1.1		
GP5201G	\$GPGGA,110408.00,5235.5998486,N,00142.4160487,E,4,29,0.6,1.4281,M,46.9870,M,0.2,0000*47	0		N/A	4	0.00%
GP5201G	\$GPHDT,266.353,T*32	0	2	N/A	4	0.00%
✓ Serial:	1022057					
GPS201G*	\$GPGGA, 110409.00, \$235, 5997975, N,00142, 4168996, E, 4, 18, 0. 7, 1, 4952, M, 46, 9870, M, 4.0, 0000*40	0	[]]	14/A	1.	0.00%
GP5701G*	\$PRDID, -0.002, -0.003, *66	0		N/A		0.00%
~ Serial	1022058					
GPS201G	\$GPGGA, 110408.00, \$235.5997050, N, 00142.4124082, E, 4, 19, 0.7, 1.4869, M, 46.9870, M, 3.0, 0000*49	0	- [47]	N/A	1	0.00%
	Description Differential Data Setal Port Openad - COM15	Po	d Lis	t		
Time 2012:03:34	Differential Data Serial Port Opened - COM15	Po	d Lis	t		

The menu will allow you to navigate round the application for added options and functionality.

The toolbar has links to open a configuration, save the configuration and to change the individual MiniPod settings.

The Pod List will display all connected MiniPod's on a network we recommend a limit of 8 MiniPod's should be connected on any 1 network however this is dependent on data update rates, number of data strings and corrections being sent as there is a limited bandwidth for the wireless.



All system messages will be displayed in a window timestamped this should be monitored for any errors that may occur.

#### **Initial Configuration**

When the software is run for the first time the following screen will be displayed

S MiniPod Receiver	_	×
File Receiver Tools Help		
Configuration		
Pod List		
Model Serial Data ID On Port Errors		
Time Description		
Image: Weight of the second		
COM8,230400		

The software will continually search for MiniPod's that are connected to the same network as the RFR-101G. When found each MiniPod will be displayed.



The default network channel is 12. This can be changed in the options window

Once all required MiniPod's have been connected, the Pod List will show the data received from each pod, however the Model Number and Serial Number data for each MiniPod will be blank (as shown below).



Model	Serial	Data	ID	ID On	Port		Errors
		\$GPGGA,104527.98,5235.5996055.N,00142,4294336,E,1,05,2,8,114,829,M,46,861,M,,*65	0	V	N/A	Ļ	0.00%
		\$GPGGA,104528.00,5235.60180034,N,00142.41646934,E,2,07,1.6,6.276,M,46.861,M,4.0,0136*42	1	V	N/A	Ļ	0.00%
		\$GPGGA,104528.00,5235.6012340,N,00142,4163317,E,2,09,1.4,-11.335,M,46.861,M,4.0,0136*53	2		N/A	Ļ	0.00%

To get the Model Number and Serial Number of each connected MiniPod, select 'Get ID's' from the Tools menu. Please note you may have to repeat the Get ID's process more than once to get data from all connected pods, depending on data rates





#### When this process is complete the Pod List should look similar to that shown below

File Rece	iver To	ols Help						
20	173.							
Configuration								
Pod List		102						
Model	Serial	Data	ID	ID On	Port	- 48	Errors	
GPS101G	MT031	\$GPGGA,104833.00,5235.6015182,N,00142.4161839,E,2,16,0.7,0.449,M,46.861,M,4.0,0123*43	0	V	N/A	1	1.87%	
GPS101G	MT041	\$GPGGA, 104833.00,5235.60102937,N.00142.41660848,E,2,19,0.7,1.514,M,46.861,M,5.0,0136*41	1		N/A	←	0.00%	
GPS101G	MT043	\$GPGGA, 104833.00.5235.6016400.N.00142.4158697.E.2.20.0.62.828.M.46.861.M.5.0.0136*6A	2		N/A	ĸ	0.000	
							6.80%	
ìme	Descript	on					6.80%	
ime ) 10:48:28	1.24403240529	ion vait while we configure the network					6.80%	
) 10:48:28	Please v						6.80%	
10:48:28 10:48:22 10:48:22	Please v MiniPod Remote	vait while we configure the network GPS101G - MAC Address 0x13A200418F84E8, Serial No: MT043 AT Command Response Received					6.80%	
10:48:28 10:48:22 10:48:22 10:48:22 10:48:22	Please v MiniPod Remote MiniPod	vait while we configure the network GPS101G - MAC Address 0x13A200418F84E8, Serial No: MT043 AT Command Response Received GPS101G - MAC Address 0x13A200418F7612, Serial No: MT041					<u> 6.80%</u>	
10:48:28 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22	Please v MiniPod Remote MiniPod Remote	vait while we configure the network GPS101G - MAC Address f&t3A200418F84E8, Serial No: MT043 AT Command Response Received GPS101G - MAC Address f&t3A200418F7612, Serial No: MT041 AT Command Response Received					6.80%	
10:48:28 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22	Please v MiniPod Remote MiniPod Remote MiniPod	vait while we configure the network GPS101G - MAC Address fx:13A200418F84E8, Serial No: MT043 AT Command Response Received GPS101G - MAC Address fx:13A200418F7612, Serial No: MT041 AT Command Response Received GPS101G - MAC Address fx:13A2004185F10A, Serial No: MT031					<u> 6.80%</u>	
10:48:28 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22	Please v MiniPod Remote MiniPod Remote MiniPod Remote	vait while we configure the network GPS101G - MAC Address 0x13A200418F84E8, Serial No: MT043 AT Command Response Received GPS101G - MAC Address 0x13A200418F7612, Serial No: MT041 AT Command Response Received GPS101G - MAC Address 0x13A2004185F10A, Serial No: MT031 AT Command Response Received					6.80%	
10:48:28 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22 10:48:22	Please v MiniPod Remote MiniPod Remote MiniPod Remote Please v	vait while we configure the network GPS101G - MAC Address fx:13A200418F84E8, Serial No: MT043 AT Command Response Received GPS101G - MAC Address fx:13A200418F7612, Serial No: MT041 AT Command Response Received GPS101G - MAC Address fx:13A2004185F10A, Serial No: MT031					<u> 6.80%</u>	

The software must be restarted after initial configuration to ensure correct operation

Once the above process has completed, the software must be shut down and then restarted to ensure all connected pods are set up correctly for reliable operation.

The MiniPod receiver software will go through a network configuration process you should not make changes until this is complete.

The following message will be displayed in the system messages.

14:18:04 MiniPod network configuration completed



## Normal Operation

Each time the software is launched, the system will allow any connected pods to stabilise RF data transmissions, which may initially result in checksum errors. Once all the connected pods have stabilised, the network will be configured. Information will be displayed in the message window to confirm this.

#### Pod List

This pod list area will display data and statistics from any pod currently connected to the network. The following information is displayed for each connected MiniPod.

#### <u>Model</u>

The model number of the connected MiniPod.

#### <u>Serial</u>

The serial number of the connected MiniPod.

#### <u>Data</u>

The data message(s) received from the connected MiniPod.

#### ID

The ID number that will be prefixed to the selected MiniPod's data, sent out of the serial port and/or over ethernet

#### <u>ID On</u>

If selected, the ID will be prefixed to the output.

#### <u>Diff. On</u>

If selected, and differential corrections are being received, the corrections will be transmitted to the seleced MiniPod's GPS receiver to improve positional accuracy.

#### <u>Port</u>

The name of the output serial port that the selected pods data will be sent to. The data output baud rate is fixed the same across all ports and can be configured from the options menu



#### <u>Errors</u>

The percentage of data messages received from the connected MiniPod that were invalid.

## Extended Info

The Pod List information can display extra information, by selecting 'Extended Info' from the 'Tools' menu. If selected, three extra columns will be displayed for each connected pod.

#### 101G

MiniPod	Receiver											2
File Rec	eiver To	als Help										
2	1											
configuration.												
Pod List						 						
		Deta	ID	10 On	Pat	 Errora	Bad	F/W Rev	GPS Module	GPS Rev	Last Erro	v

#### 201G with Inclinometer I/P add on.

MiniPod	Receiver										7		×
File Rec	eiver Tools Help												
26	1 32												
Sinfipution		_	_	_	_	_	_					_	_
Pod List.				111-						416-00-11			
Podel	Casa	TD	ID:0+	Part		(Errors)	Set	F/WRee	SPS Hodule	<b>GPS Rev</b>	PatAltOn	LastB	- 17
~ Serial	1022056												
GP5301G	\$6P95A, 119634.00, 5235.5998532, N, 00142.4160603, E, 4, 31, 0.5, 1.5271, M, 46-5870, M, 0.2, 0000 **	0	12	N/A	+	0.00%	1.14	0.3.25	ASTERX:HD	4.17.1 229		11:40	59
0253036	\$52+617,286.120,7*38	.0	62	N/A	1	0.00%	1.1	0.2.25	ASTERX 443	4.12.1 220		11:40:	58
× Serial	1022057												
GP5303G	\$0P6GA, 110634.00, \$215, \$998090, AL00142, 4369019, E, 4, 21, 0, 7, 1, 4728, M, 46, 5870, M, 3, 0, 0000 MD	8		N/A.	4	0.00%	1.1	0.2.25	ASTERIX MIS	4.12.1 220	THC-2016	11-40	99
GP53036	\$P\$(5)(5,001,-0.000,*4)	11.00	10mi	10/4		0.00%	-	0.7.75	AUTERX-MG	4.12.1.220	man which	11-40:	100

Note: Add on only interrogated at RFR-101G initialisation, therefore re-start software to initialise Inclinometer add on powered on with RFR-101G software running.

Bad

A count of invalid messages received from each connected MiniPod.

#### F/W Rev

The firmware revision running on the connected MiniPod.

#### GPS Module

The fitted module model number will be displayed



#### <u>GPS REV</u>

The current installed firmware on the GPS module will be displayed.

#### <u>Last Error</u>

The time of the last invalid message received from the connected MiniPod.

## Modifying MiniPod Configuration

To configure output options, 'double click' on the required MiniPod in the Pod List. Alternatively, highlight the MiniPod in the pod list and press the 'Edit Selected Pod' on the toolbar.



🏀 Configure Pod		_		×
Port N/A V ID 🚺	ID On		Oł	K
			Can	
2				

The GPS data received from each MiniPod may be sent out of either the same, or differentserial ports, as specified by the user. If the same serial port is specified for more than one pod, an ID (selected by the user) may be prefixed to the GPS data transmitted. This enables identification of the MiniPod that the GPS data originated from. The ID is also prefixed to the UDP data transmitted.

## System Message Area

The system will display various informational warning and errors messages in this area.



#### BCN-201G INC Tare Function

The BNC-201G allows the user to connect a perpiheral, the INC-201G inclinometer supports a remote tare function to allow the user to soft reset the values.

Right click on the INC-201G to enable the context menu -

File Rece	siver Tools Help							
3 🗖	1							
onfiguration								
Pod List					_	_		
Hodel	Data			10	10:06	Port	T	direors.
~ Serial	1022056			-				
GP5201G	\$GPGGA,110501.00,5235	1.5998512,N,00142	4160689,E,4,29,0.6,1.4969,M,46.9070,M,0.2,0000*42	0	121	N/A	10	0.00%
P\$2016	\$GPHOT,266.312,T*37			0	1	N/A		0.00%
~ Serial:	1022057							
GP5201G*	\$GPGGA, 110501.00, 5235	1.5998054,N,00142	4168976,E,4,21,0.7,1.4891,M,46.9870,M,2.0,0000*4D	0		N/A	٩,	0.00%
GP5201G*	\$PRDID, -0.002, -0.004	Set Tare		0		N/A	+-	0.00%
~ Serial:	1022058	Clear Tate	-					
GP5201G	\$GPGGA,110501.00,5	Read Tare	4053,E,4,21,0.7,1.4981,M,46.9870,M,2.0,0000*44	0	[2]	N/A	+	0.00%
The second	Description			_			_	
12:03:34	Differential Data Serial Po	rt Opened - COM15						



#### Menu



#### <u>File</u>

The pod configuration for the currently connected pods can be saved to a file. The saved settings include ID, ID On, Diff. On and Output Port. This saved file can then be recalled for future operations.

#### <u>Receiver</u>

The serial port that the receiver is connected to can be selected. However, the correct receiver serial port should be automatically selected on start up.

#### <u>Tools</u>

- Get ID will call all the identification details from the connected mini pods and populate the Pod list.
- Clear Error counts will reset the error details located in the pod list.
- Configure Network will set the relevant delays for the MiniPod(s) that are connected.
- Extended info toggles the extra pod list column on/off
- Options will take you into the program options menu as explained on the following page.

#### <u>Help</u>

About will bring up the following menu which shows the current software version of the application followed by the serial number of the RFR-101G and Network Port that it is broadcasting across (if enabled). The link at the bottom will take you to the applied acoustic website where contact details for help and support can be found.



About MiniPod Receiver

Х



## underwater technology

#### MiniPod Receiver

Copyright © Applied Acoustic Engineering Ltd 2018 - 2022

Software Version V2.2.1.0

Configuration

Serial No : 0101010 Network Port : 17003

Applied Acoustic Engineering Ltd

ОК



## Options

🏀 Options	-	
Differential Corrections (In)  Enabled Show Events  Port COM12   RTCM  CMR	WiFi Channel Selection Current Operating Channel 12 ~	OK Cancel
Baud Rate 230400 V	Networking UDP Port 17003 Broadcast Enabled	
Parity None ~ Stop Bits One ~	Serial Output Baud Rate 230400 V	
Interval 2 MSM Message Number		
○ 1 ○ 2 ○ 3 ● 4 ○ 5 ○ 6 ○ 7		

#### **Differential Corrections**

The RFR-101G is able to send the MiniPod(s) differential corrections in RTCM or CMR format to improve their positional accuracy.

Comport settings can be amended to reflect which port differential corrections are being received on the PC. Select the correct format and check the enabled box to enable transmission of corrections.

When Show Events is ticked the log window will display the RTCM message sent as below.

Time	Description	
2 12:07:33	RTK 1005 Sent	
2 12:07:33	Differential Data Serial Port Opened - COM15	
0 12:07:35	RTK 1074 Sent	
2 12:07:35	RTK 1084 Sent	
12:07:35	RTK 1094 Sent	
12:07:35	RTK 1124 Sent	
0 12:07:35	RTK 1230 Sent	
12:07:35	RTK 1005 Sent	
<		>
COM13,23040	10	



Within the GGA message the positional quality can be monitored to provide feedback that the corrections are being applied by the MiniPod(s).

- 5 indicates RTK Float and corrections are being applied, standard 101G accuracy.
- 4 indicates RTK Int and corrections are applied with the position converged.
   (101G RTK Option required, 201G Standard.)
- 2 SBAS corrections.
- 1- standalone GPS.

🖲 MiniPod Receiver		- D >					
File Receiver T	ols Help						
i 🚰 🔚 🥸							
Configuration							
Pod List							
Model Serial	Data	ID ID On Port Errors					
GPS101G MT015	\$GPGGA,142053.20,5235.55524129,N,00142.45161309,E,5,21,0.6,14.178,M,46.861,M,2.2,0000*7	74 0 🗌 N/A 🗸 0.20%					
	5 in the GPGGA string shows that						
	corre	ections are being used.					

#### **RTK Message Filter Options**

In addition to setting the MSM message type / group to send to the MiniPods the user can select individual RTCM message IDs to filter out and not send to the pods using the Ignore list function and Send All list functions. When using these functions enable show events to monitor the messages and status. The user should only disable messages not required for the local area.

🖲 MiniPod Receiver			
File Receiver To	ools Help		
P 🔁 🔁 🔞	Get ID's		
· 📁 🗖 🤘	Clear Error Counts		
Configuration	Configure Network		
Pod List	Extended Info		
Model Ser	RTK 🕨	lgnore List 🔹 🕨	Add ID
GPS101G MT0	Options	Send All List 🕨	Remove ID
			List Contents
			Clear List



🖲 MiniPod Receiv	/er			
File Receiver	Tools Help			
23 🔲 📸	Get ID's			
· 📁 🗖 💖	Clear Error Counts			
Configuration	Configure Network			
Pod List	Extended Info			
Model Ser		Ignore List	•	
GPS101G MTC	Options	Send All List	►	Add ID 2.
				Remove ID
				List Contents
				Clear List

## Adding a message to the ignore list:

Moral		21 JULY						
File Reco		ols Help						
2	122							
Cirfiguration								
							_	_
Ped Last		The second s			1000	111		-
Madel	Serial	Deta		ID.	ID On	Port	-	Eron
GP5101G	MT015	#GPGGA.152510.20.5235.56003547.N.00142.44433834.E.5.18/	0.8.6.745.M.46.861.M.2.2.0000*41	0		N/A	+-	0.05%
			1230 OK	Car	icel			
Time	Description	an .						
15.25.06	RTK 105	A Sert						
3 15:25:06	RTK 11							
3 15.25:06	<b>ATK 12</b>							
	RTK 10							
15 25 08	RTK 10							
2 15 25 08 2 15 25 08	BTK 10	liki Serrat						
<ul> <li>15.25.05</li> <li>15.25.08</li> <li>15.25.08</li> <li>15.25.08</li> <li>15.25.08</li> <li>15.25.08</li> </ul>	RTK 10	l4 Sent I4 Sent						
3 15 25 08 3 15 25 08	BTK 10	14 Sent 14 Sent 14 Sent						

## Events show message 1230 not sent to MiniPod(s).

		Add ID Message ID 1230 added to Ignore list	×
Time	Description		
3 15:26:53	RTK 1084 Sent		
3 15:26:53	RTK 1094 Sent	ок	
15 26 53	RTK 1124 Sent		1
15:26:53 (15:26:53)	RTK Message Ignore - 1230		
15/26.53	RTK Message Ignore = 1230 RTK Message Ignore = 1230		
12,20.23	PTF 1005 Cont		



#### WiFi Channel Selection

The WiFi channel selection box will selected as channel 12 default this may be amended in order to change the frequency band of operation depending on the environment. The below table shows the frequencies of operation;

Decimal	Hex	Frequency	SC mask	WiFi Conflict
11	0x0B	2.405GHz	0x0001	Overlaps Ch 1
12	0x0C	2.410GHz	0x0002	Overlaps Ch 1
13	0x0D	2.415GHz	0x0004	Overlaps Ch 1
14	0x0E	2.420GHz	0x0008	Overlaps Ch 1
15	0x0F	2.425GHz	0x0010	Overlaps Ch 6
16	0x10	2.430GHz	0x0020	Overlaps Ch 6
17	0x11	2.435GHz	0x0040	Overlaps Ch 6
18	0x12	2.440GHz	0x0080	Overlaps Ch 6
19	0x13	2.445GHz	0x0100	Overlaps Ch 6
20	0x14	2.450GHz	0x0200	Overlaps Ch 11
21	0x15	2.455GHz	0x0400	Overlaps Ch 11
22	0x16	2.460GHz	0x0800	Overlaps Ch 11
23	0x17	2.465GHz	0x1000	Overlaps Ch 11
24	0x18	2.470GHz	0x2000	Overlaps Ch 11
25	0x19	2.475GHz	0x4000	No Conflict
26	0x1A	2.480GHz	0x8000	No Conflict

## <u>Networking</u>

This section enables the toggling on/off of broadcasting across Ethernet as well as allowing the UDP Port to be changed.

The checkbox must be ticked to enable broadcasting.

#### Serial Output

The baud rate for the serial output can be selected here, please make sure that the baud rate is suitable for the data speed.



## End of Life Recycling / Disposal



Within the UK, all electronic components and batteries must be taken for separate collection at the end of their working life under the Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 and Waste Batteries and

Accumulators Regulations 2009 respectively. The AAE Technologies Ltd group (AAE Tg) of companies as UK manufacturers will responsibly dispose of any returned end of life AAE Tg components/batteries through registered/approved recycling schemes. In order to prevent uncontrolled waste disposal and promote recycling, please contact Technical Support for a RMA number and return any end of life items (if safe to do so) carriage paid by the sender to our UK head office.

Applied Acoustic Engineering Limited is a leading company in the design and manufacture of a wide range of subsea navigation and positioning products, and marine seismic survey equipment.

The extensive product range includes the innovative USBL tracking system, Easytrak, a variety of positioning and release beacons and selsmic sub-bottom profiling equipment for offshore geotechnical and seabed analysis.

All products use acoustics, underwater sound waves, in location, positioning, navigation and data acquisition applications.



Due to continual product improvement, specification information may be subject to change without notice.

© Applied Acoustic Engineering Limited