



PCUW Application User Guide

REVISION STATUS

| Rev | Changes | Date |
|------------|---|--------------|
| A | First Release | 05-Nov-2006 |
| B | Change COM port setting and uploading details | 06-Feb-2009 |
| C | Update Argus Address / Add Contact details | 30-July-2009 |
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1. OVERVIEW

The PCUW application is used as a PC-based controller for AISG compliant antennas. This document covers operation of the PCUW application.

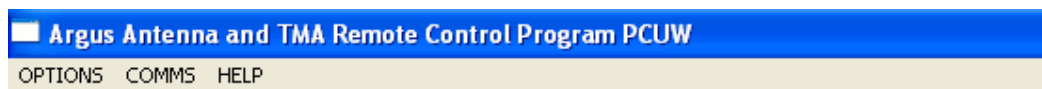
1.1. The Computer

- To control an AISG compliant device, the computer uses the PCUW.exe software. For the software to work correctly, the antenna or TMA needs to be connected to the computer. If the PCU is not connected, then the program will not work. The program “PCUW” allows the user to scan for antennas and TMAs, change antenna downtilt, Change LNA gain, leave notes in the onboard memory, get alarms, change Operator Data, etc.
- The software will create two files in the location that it is stored in. The first file is the “comm.fig” file. It stores the preferences such as what com port is used and whether the user choses to view the communications in the background. The second file is a list of connected devices.

2. PCUW APPLICATION

NOTE: There are two versions of the AISG Protocol; these are currently 1.1 and 2. Due to this there are two separate PCUW versions that are used for each of these protocols. They are PCUW1.1 and PCUW2.

PCUW uses the AISG communications protocol to control the antenna or TMA. The following menu options are presented on execution of the program.



Compatible with AISG version 2.0 3GPP

Figure 1: Main Menu.

2.1. Selecting a Com Port

By selecting “comms” on the main menu, the user can choose between com port 1 to 12, and can have the communications displayed in the background. These options are available in the “Comms” menu.

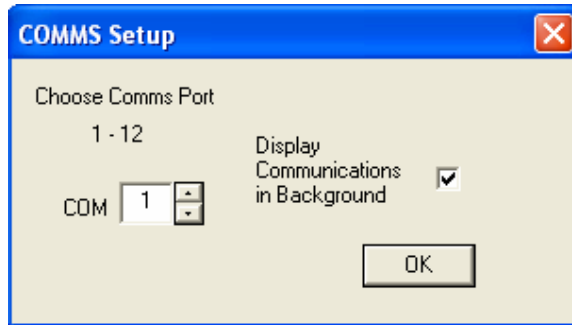


Figure 2: COMMS Setup Window.

By selecting “Display Communications in Background” the raw data in Hex will be displayed on the background window.

If the computer connects with an Argus CTXD-30-H controller by USB cable, the com port of PCUW doesn't need to be changed.

If the computer connects with a CTXD-60-H controller by USB, the com port of PCUW needs to be changed. The changing sequence is as follows:

Open the System Properties Window by right clicking on My Computer and selecting properties from the resulting menu:

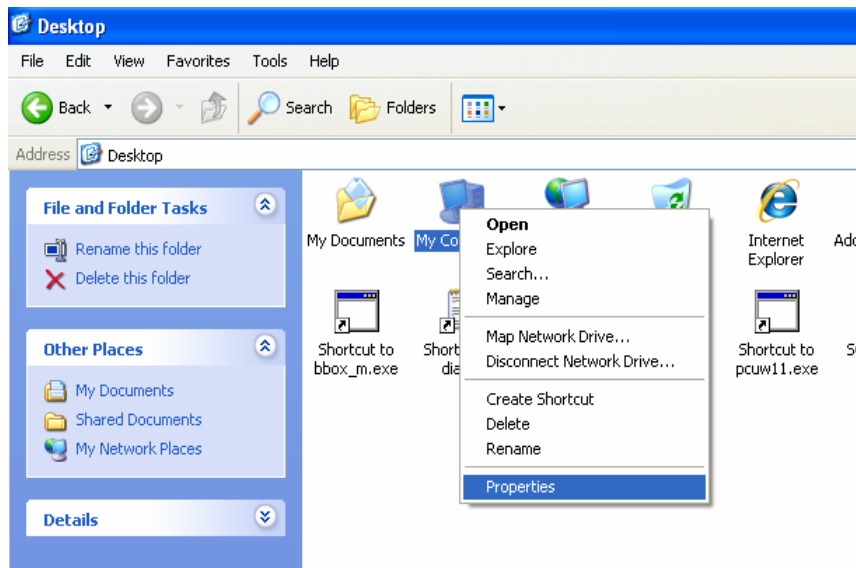


Figure 3: Desktop Window

Select the “Hardware” Tab at the top of “System Properties” Window and click on the “Device Manager” Button:

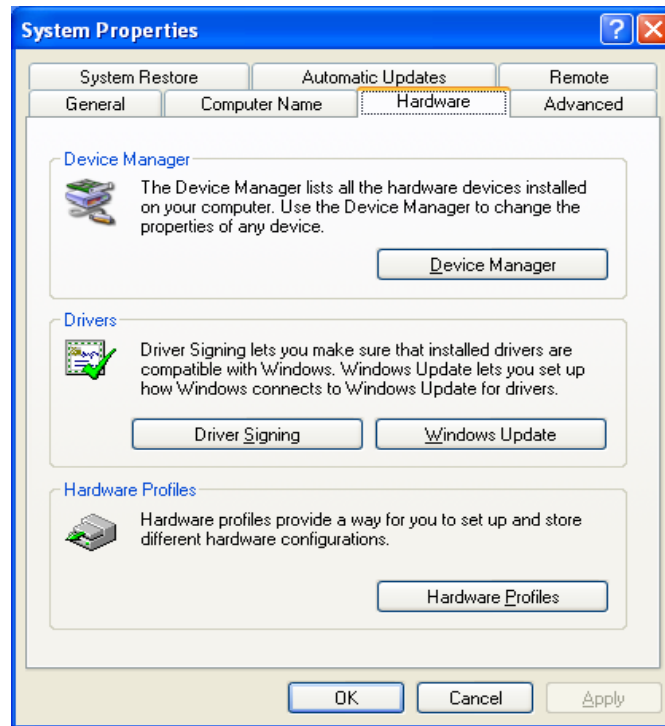


Figure 4: System Properties Window

Find the device in the Device Manager Named USB Serial Port (COM?) and double left click on it:

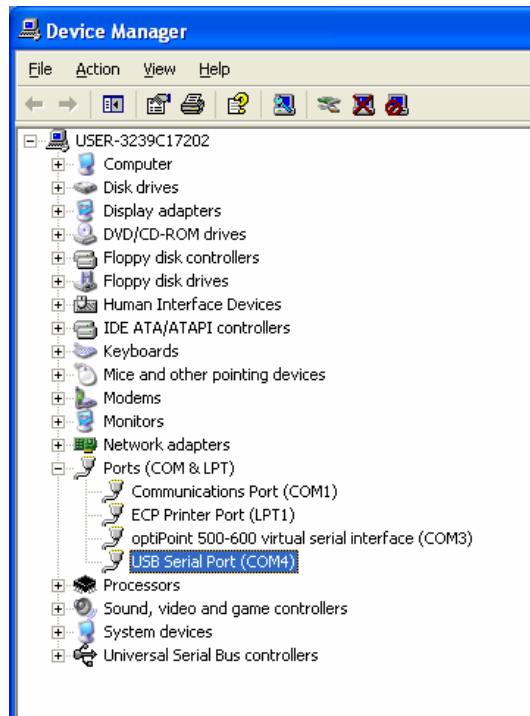


Figure 5: Device Manager Window

Select the Port Settings tab from the “USB Serial Port Properties” Window and press the “Advanced” button:

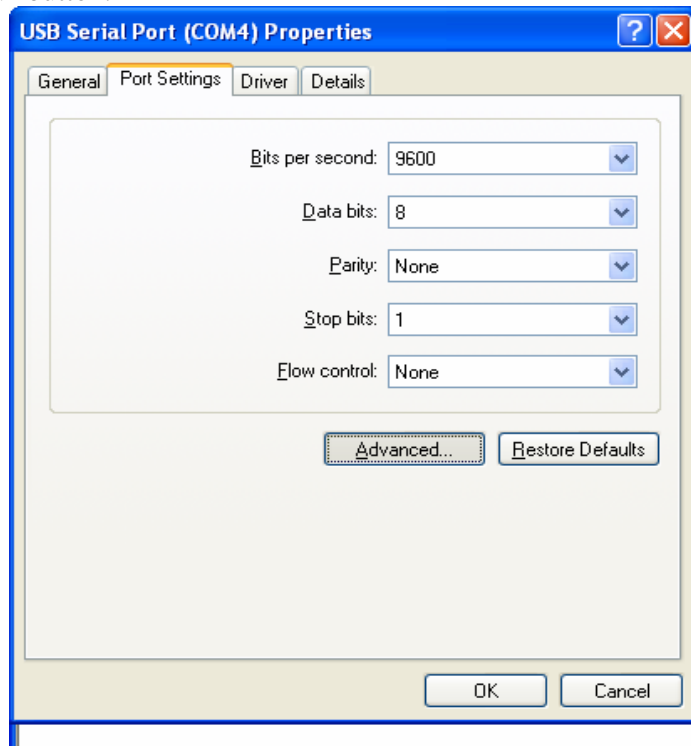


Figure 6: USB Serial Port (COM?) Properties Window

Select a communications port that is not in use from the drop down list labelled COM Port Number, then press “OK” button for both the Advanced Setting and USB Serial port Properties Windows and close the Device Manager:

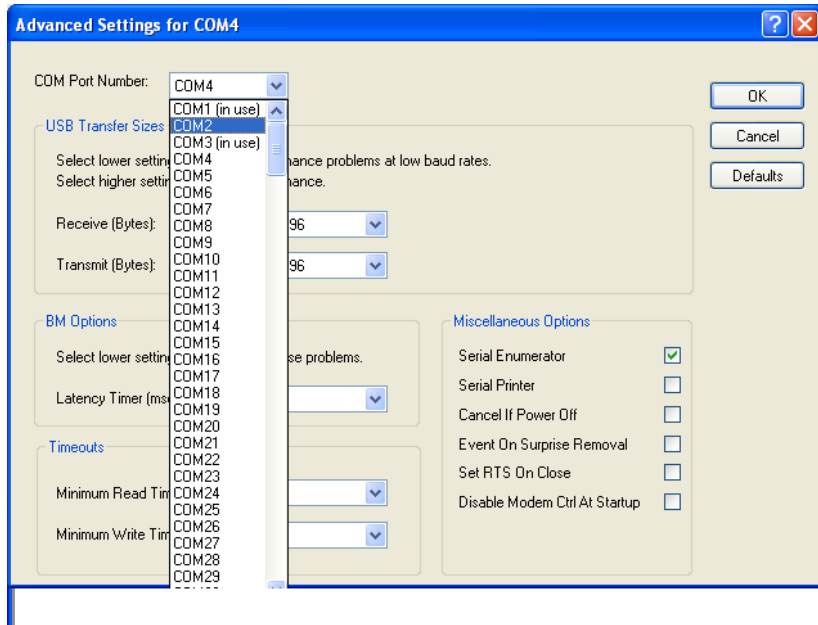


Figure 7: Advanced Settings for COM? Window

Select “comms” on the main menu of PCUW, and choose com port 2:

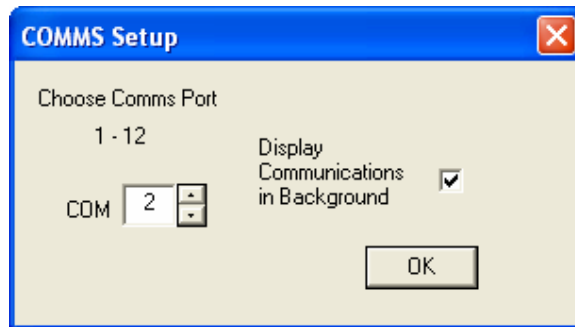


Figure 8: COMMS Setup Window

2.2. Scanning for Devices by Serial Number

NOTE: Choosing to scan by serial number is typically only done on installation of an antenna or TMA. Once the devices have been assigned a HDLC address, subsequent control of the antenna and TMA can be obtained using the scan for HDLC address.

According to the AISG protocol, each antenna or TMA is assigned an address for communications, known as a HDLC address. When the device is installed, a HDLC

address must be assigned to it before any other communications can take place. This is achieved using the “Scan devices by serial number” and the following screen appears.

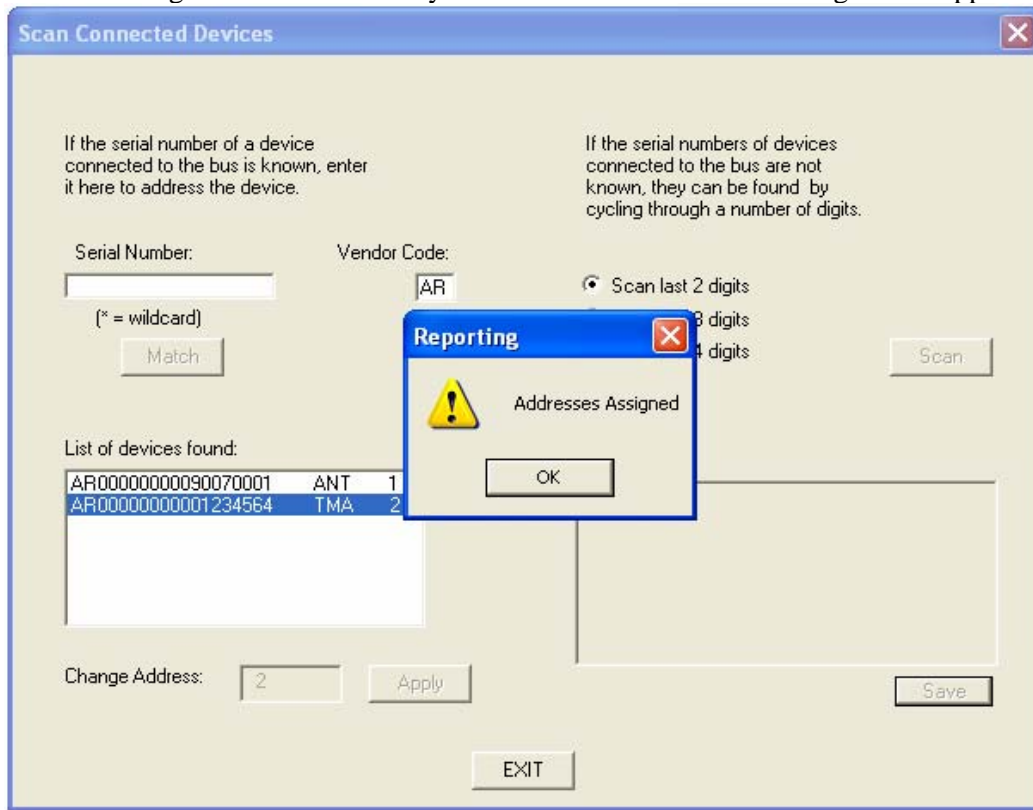


Figure 9: Scan Connected Devices Window.

The user has the option to scan using the last two, three or four digits of the serial number. Scanning using the last two digits is the fastest. However, if there are two devices present with the same last two digits in their serial number a conflict may occur and the user must choose to scan by the last three digits of the serial number to make sure that both devices are found.

After selecting the preferred number of digits to scan for, click “SCAN” and the program will then search for any devices that are AISG compliant. If there is a response from a device, it will appear in the field titled “List of devices found”.

Each antenna or TMA that is found has a default HDLC address selected for it. However this default may be changed, by selecting the device to change, editing the “Change Address” field then clicking the Apply button. When the HDLC addresses are satisfactory for each device, they are assigned by pressing the “Save” button.

When finished, clicking Exit will close the window.

2.3. Scanning for Devices by HDLC

An alternative to scanning devices by serial number is to scan by HDLC address.

To scan by HDLC address, select “Scan by HDLC Address” from the options menu on the main screen. This scans for devices that have already had an address assigned to them.

The operator may select between scanning the last, the last two or all digits. HDLC addresses are assigned consecutively between 1 and 255. Scan last digit is generally used where nine or less devices are connected. Scan last 2 digits where 99 or less are connected and Scan all digits where more than 99 devices are connected. Scanning is completed by pressing the “Scan” button and then “Exit”.

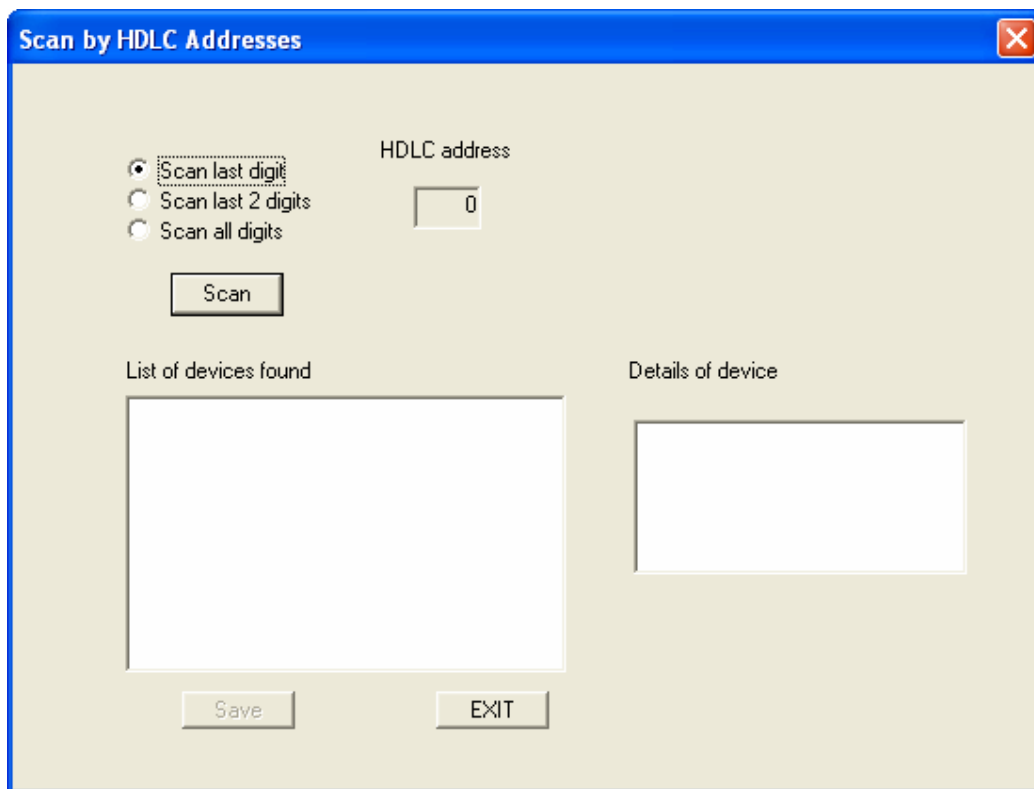


Figure 10: Interconnection of AISG compliant devices.

2.4. Operating Antennas

To read or change the downtilt angle, or to change Antenna, Operator or User Data select “Operate Antennas” from the “Options” menu on the main screen. The following screen will appear.

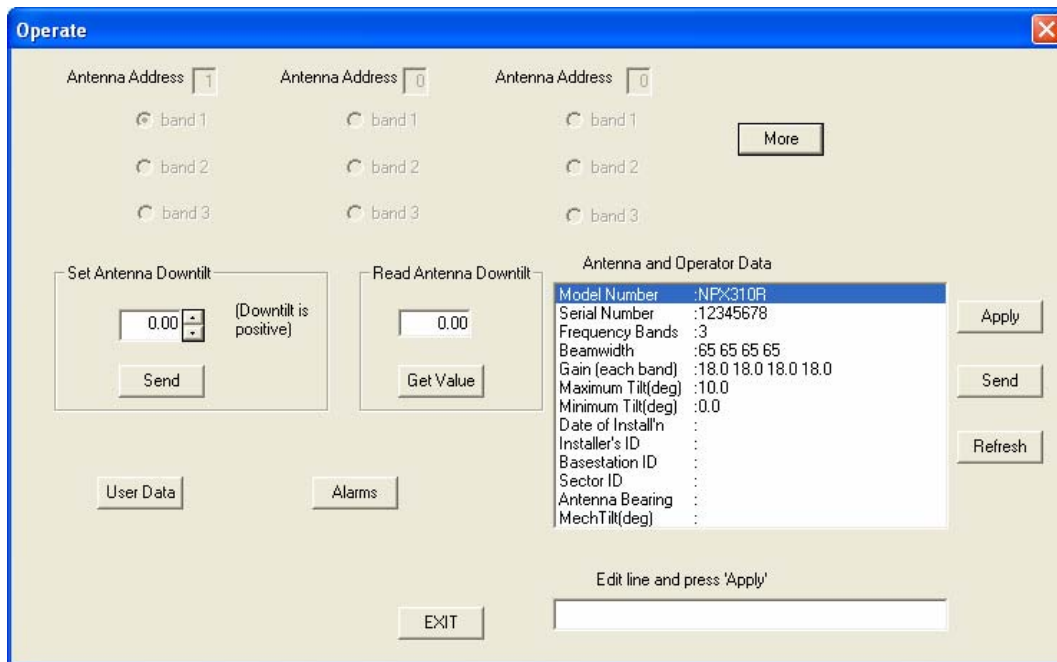


Figure 11: Operate Antennas Window.

By default up to three antennas are displayed, with band 1 of the antenna with the lowest HDLC address selected. The downtilt and Antenna and Operator Data of the selected antenna are displayed. To cycle through further antennas which are connected, click the “More” button. This shifts to the next three displayable antennas.

Once the required antenna and band is selected, adjustment of the downtilt can be performed by choosing the desired angle and clicking the “Send” button. To ensure correct setting of the new downtilt click the “Get Value” button and the new angle will be displayed.

Antenna and Operator data can be viewed in the table on the right. The first seven entries cannot be changed. The rest of the entries can. To edit these fields, click on the desired field, then edit the data using the “Edit line and press Apply” field, and then press “Apply”. Once all the desired editing is complete press the “Send” button, this will update the antennas memory with the new data. To confirm correct data has been saved click on the “Refresh” button.

2.5. Operating TMAs

To read or change the gain (If the TMA model allow this option), Mode or to change TMA, Operator or User Data select “Operate TMA’s” from the “Options” menu on the main screen. The following screen will appear.

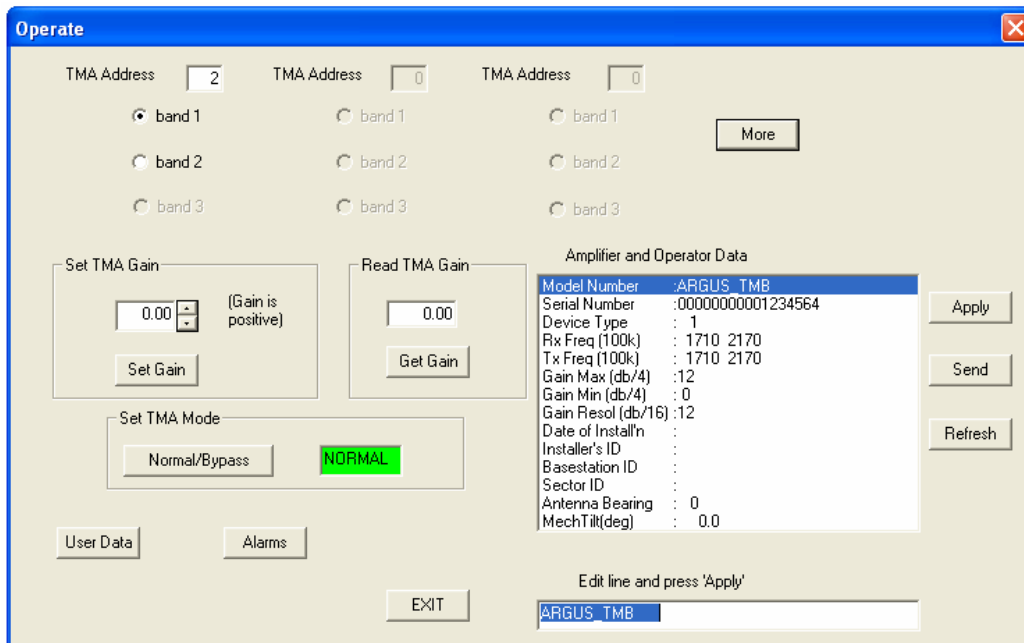


Figure 12: Operate TMAs Window.

By default up to three TMAs are displayed, with band 1 of the TMA with the lowest HDLC selected. The Amplifier and Operator Data, Gain and Mode of the selected TMA and band are displayed. To cycle through further TMAs which are connected, click the “More” button, this shifts to the next three displayable TMAs.

Once the required TMA and band is selected, adjustment of the gain can be performed by setting the Set TMA Gain field and clicking the “Set Gain” button. By clicking the “Get Gain” button, you can confirm that the new gain of the TMA has been set.

By pressing “Normal/Bypass” button you can set whether the selected band on the TMA is in either Bypass or Normal mode. Bypass meaning the TMA Amplifier is bypassed and Normal means the amplifier is in working mode.

Amplifier and Operator data can be viewed in the table on the right. The first seven entries cannot be changed. The rest of the entries can. To edit these fields, click on the desired field, then edit the data using the “Edit line and press Apply” field, and then press “Apply”. Once all the desired editing is complete press the “Send” button, this will update the TMA’s memory with the new data. To confirm correct data has been saved click on the “Refresh” button.

2.6. Using User Data

There is memory reserved in the antennas or TMAs that may be used as a notepad. To access this memory, from the “Operate” screen, click the “User Data” button. This will bring up the following window.

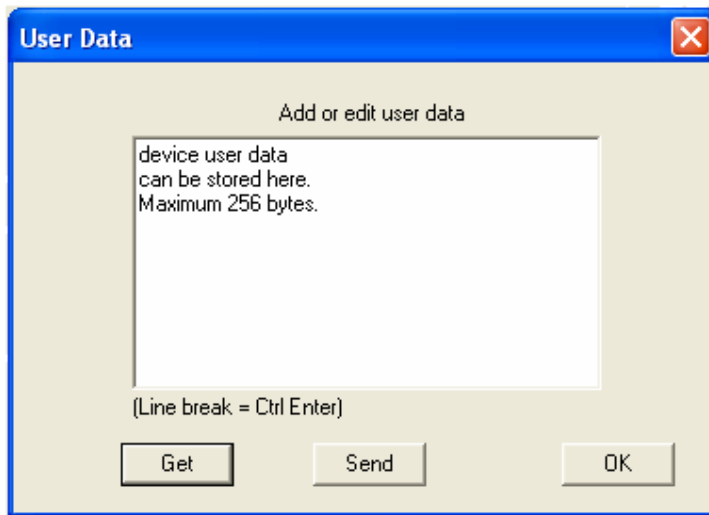


Figure 13: User Data Window.

To retrieve currently save user data, click “Get”. At this point details maybe added or edited, up to a maximum number of 256 characters including control characters.

NOTE: To create a new line you must use “CNTR” and “ENTER” on your keyboard.

To save new data to the antenna, click “Send”, the user data is then stored in the device permanent memory. To exit the screen, click “Okay”.

2.7. Retrieving Device Alarms

Where an error occurs or when an operation fails to complete, the antenna or TMA remembers the operation and sets an alarm flag

To check for alarm states, from the “Operate” window click the “Alarms” button. The following window will be displayed.

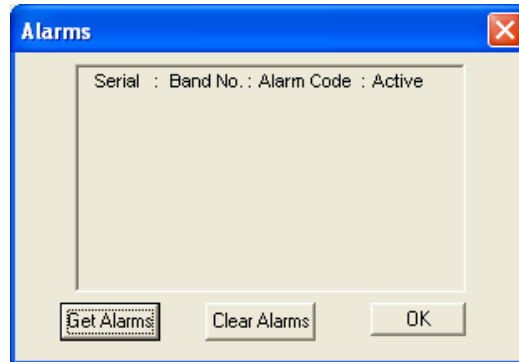


Figure 14: Device Alarms Window.

If any Alarms are present they maybe displayed by clicking the “Get Alarms” button.

To clear the current alarms from the device click the “Clear Alarms”.

Clicking “Ok” will exit the window.

2.8. The Direct Command Window

The “Command Window” is used for sending HEX formatted commands to the antennas or TMAs.

NOTE: This option should only be used by operators with knowledge of the AISG command protocol.

In the options menu of the main screen, select the “Direct Command” menu item. The user is then presented with the following window.

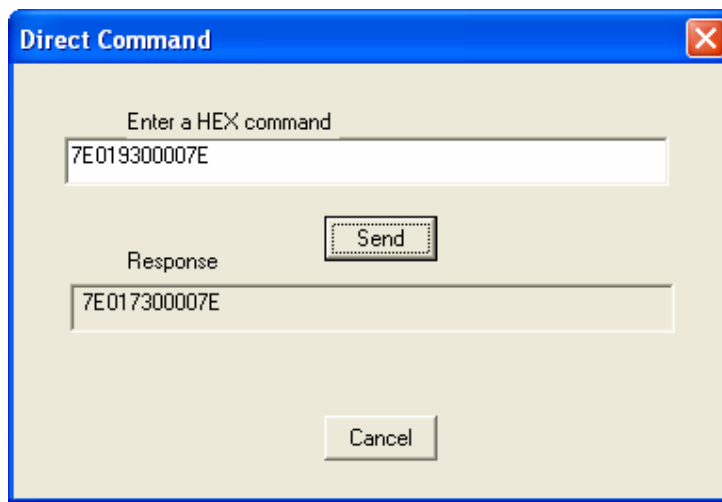


Figure 15: Direct Command Window.

Enter the desired HEX command into the “Enter a HEX command” field and click “Send” A CRC value is calculated by the software and inserted into the command.

The device response is displayed in HEX in the “Response” field.

2.9 Uploading New Software

This command allows the user to upload new versions of antenna or TMA software to the device. An upload is performed by selecting “Upload New Software” from the options menu in the main window.

NOTE: To upload new software to a device, just one device should be connected to the PC.

The user is presented with a standard file window, where the new HEX or BIN file is found, selected, and opened. The user is then presented with the following window.

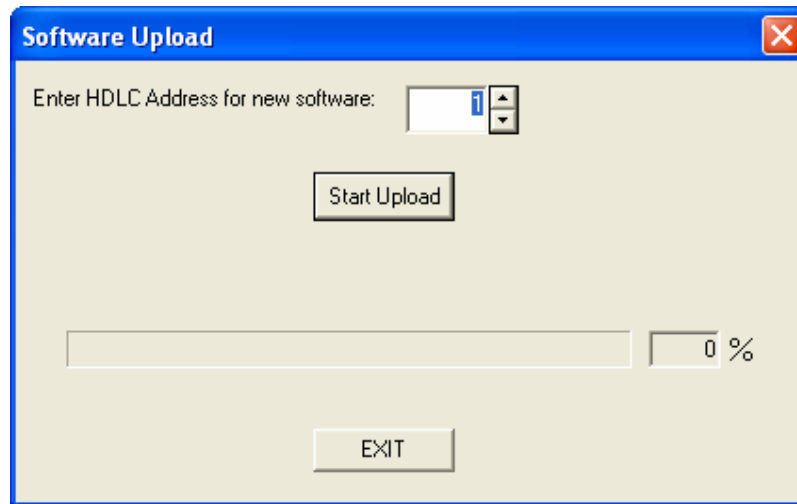


Figure 16: Software Upload window.

The user then selects the HDLC address of the desired antenna or TMA. Click “Start Upload” and the new HEX or BIN file is saved to the device. The user can click “EXIT” button to abort during the uploading.

After uploading the software, the following window will pop up. Click the “OK” button to exit the software upload.

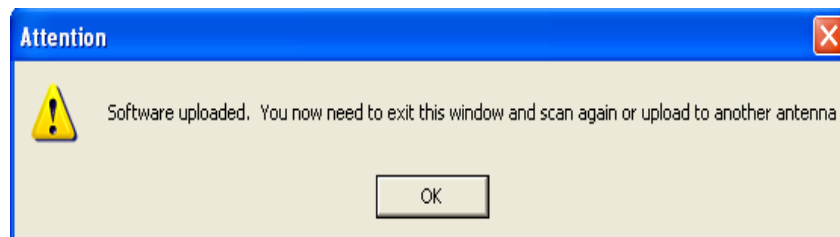


Figure 17: Attention window

On completion and confirmation of the upload, the device will then restart with the new software running.

3. CONTACT DETAILS

Argus Technologies (Australia) Pty Ltd
10-12 Lexington Drive
Norwest Business Park
Bella Vista NSW 2153 Australia
Telephone: +61 2 8884 0888
Facsimile: +61 2 8884 0882
Email: info@argusantennas.com

Argus Technologies (China) Ltd
Bihua Building New Wing,
No. 3 Jinxiu Road,
GET, Guangzhou, 510730, PRC China
Telephone: +86 20 8206 9995
Facsimile: +86 20 8208 9055
Email: info@argusantennas.com

Beijing
Telephone: +86 10 6590 3338
Facsimile: +86 10 8835 7366

Shanghai
Telephone: +86 21 6247 6001
Facsimile: +86 21 6247 6003

Argus Technologies (International) Ltd
14th Floor, Fairmont House
No. 8 Cotton Tree Drive Central,
Hong Kong
Telephone: +852 8226 9253
Facsimile: +852 3184 8969
Email: info@argusantennas.com

Argus Technologies (Europe) Ltd
Unit 10, Cirrus Park,
Lower Farm Road,
Moulton Park Industrial Estate
Northamptonshire
NN3 6UR, England
Telephone: +44 (0) 1604 644 016
Facsimile: +44 (0) 1604 648 334
Email: info@argusantennas.eu