



# INSTRUMENTS

## Analogue Display

### Operation User Guide V1.0

For Software V1.22

Date 13/05/20

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## Appendix A Bluetooth Configuration

### A1 Enable Bluetooth

Analogue displays are shipped with Bluetooth enabled. The below section only applies if you have deliberately disabled it.:

In normal operation Bluetooth should already be enabled. If you have manually disabled Bluetooth then it can be re-enabled by setting the rotary switch on the inside of the unit to position 0. (The rotary switch can be found by unscrewing the desiccant screwed into the base of the display)

### A2 Connecting to Bluetooth

A third-party terminal program is required. We have used and tested HyperTerminal and TeraTerm (<https://osdn.net/projects/tssh2/releases/>) for Windows PCs.

Pair the display with your PC. This varies a little between operating systems, but the following steps should be similar:

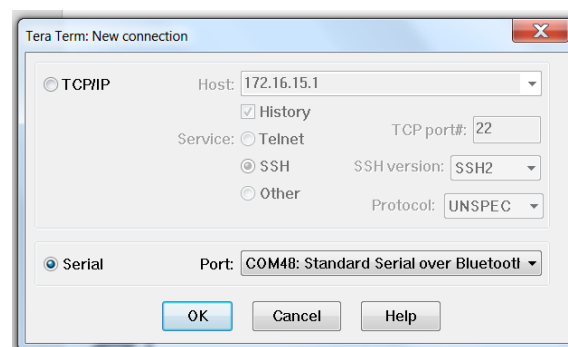
- Open 'Control Panel'
- Select 'Devices and Printers'
- Click 'Add a device'
- After a few moments Bluetooth enabled devices should populate the list, select the Analogue display identified by serial number
- When prompted enter the pairing code 1234
- The PC should now connect to the Analogue

Right click on the successfully paired device in 'Devices and Printers' and click 'Properties'. Select the 'Hardware' tab and make note of the COM port assigned to your device (e.g. *Standard Serial over Bluetooth link (COM48)*)

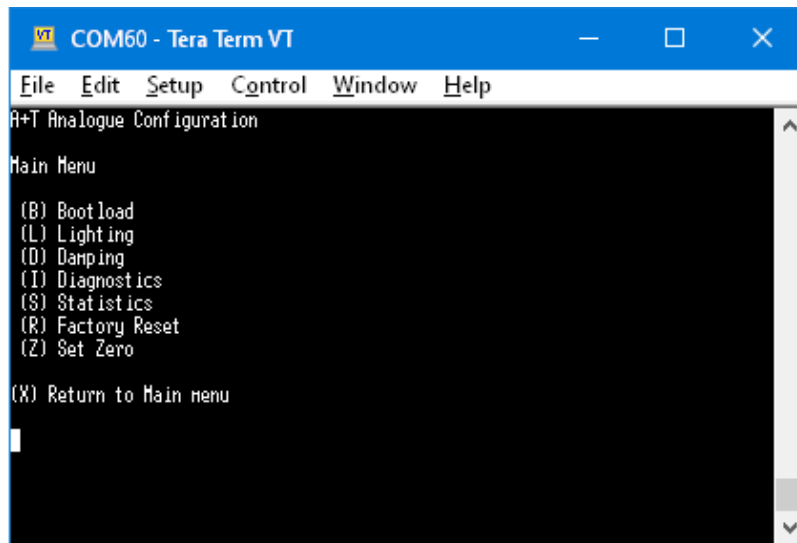
Connect to this COM port with your terminal program of choice. Instructions are provided below for TeraTerm.

### A3 Bluetooth connection with TeraTerm

Open TeraTerm. Select the 'Serial' radio button and select the previously noted COM port from the drop-down menu.



Once opened a blank screen will appear. Press the enter key on your keyboard and the Bluetooth menu should be displayed.



## Appendix B Firmware Upgrade

### B1 Preparation

Analogue displays may have their internal firmware upgrade by connecting through a Bluetooth enabled PC

Upgrading the Analogue firmware requires a third-party terminal program. We have used and tested TeraTerm (<https://osdn.net/projects/ttssh2/releases/>) and HyperTerminal for Windows PCs

You will also require the latest Analogue firmware and the A+T bootloader software. Both can be found on the A+T website here:

<https://www.aandtstruments.com/support/downloads/>

Extract all files of the bootloader into a single directory.

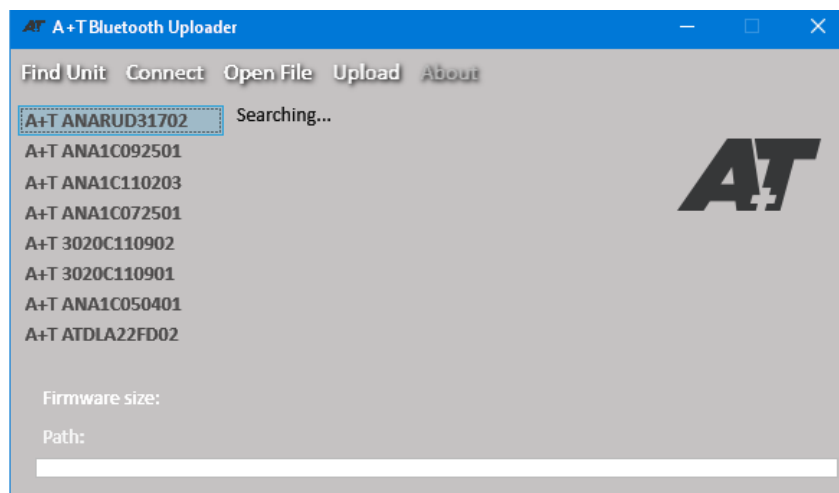
### B2 Enter Bootloader Mode

Following the instructions in Appendix A, connect to the Analogue display with Bluetooth. Enter 'B' to go to the Bootload menu, then enter 'Y' to start the bootloader.

### B3 Upload New Firmware

Run the A+T Uploader software.

Click 'Find Unit'. After a few moments the target device should appear in the list of available devices. Select the target device and click 'Connect', the uploader will ask for confirmation but this can be ignored/confirmed (it is only relevant to MFDs). Click 'Open File' and locate the firmware file you previously downloaded, then click 'Upload'.



The Analogue pointer will move around the dial as the upload proceeds. Once the uploader shows 100%, the Analogue will reset and then continue normal operation.