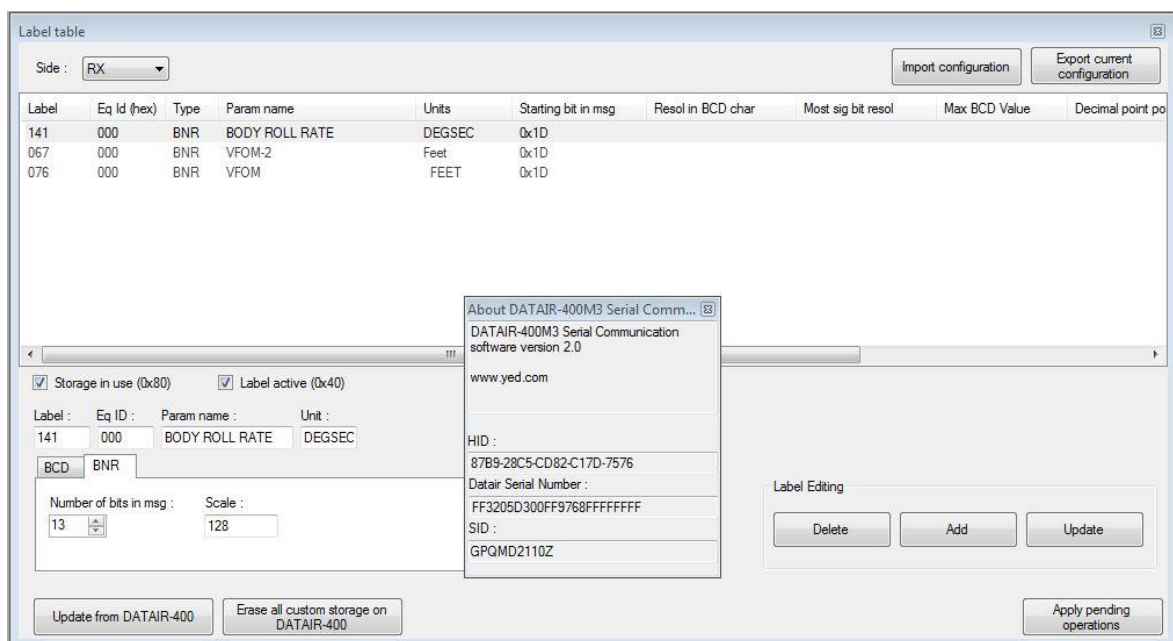




DATAIR - 400/M3+ & DATAIR-400/M3(V2) ARINC-429 TESTER Label Definition Software, User Manual



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1. INTRODUCTION

This user manual refers to both the DATAIR-400/M3(V2) instrument running V2.xx firmware and the DATAIR-400/M3+ instrument and will be referred to throughout this user manual as DATAIR-400/M3 collectively unless otherwise indicated.

DATAIR-400M3 Label Definition Serial Communication software V2 is a tool for defining custom Labels on your PC for use on your DATAIR-400/M3. Although it is possible to define custom labels on the DATAIR-400/M3 directly, some customers prefer to do this on a PC and then download these definitions to their DATAIR-400/M3. It is also possible to download and back up any custom defined Labels created on the DATAIR-400/M3 to your PC.

This user guide describes features and function of the software.

DATAIR-400M3 Serial Communication software is compatible with Windows XP and higher, x86 and x64, with .NET framework 4.5. No installation is needed, just run it.

1.1 Software features

DATAIR-400M3 Serial Communication software features include:

- Adding/Updating/Deleting custom label storage
- BNR/BCD and Rx/Tx modifications
- Import/Export configuration to XML file
- Offline mode for working on local configuration without DATAIR-400M3 connection

NOTE: For the **DATAIR-400/M3+** instrument which has a Data Acquisition feature, this software will also download a captured data file from the DATAIR-400/M3+ and allow it to be saved to the host PC hard disk as a spread sheet compatible file.

2. RUNNING THE SOFTWARE

The DATAIR-400/M3 must have version 2.08 installed or a later.

For the DATAIR-400/M3(V2) uses the supplied RS232 Firmware Update cable and connect the PC to the DATAIR-400/M3.

This is a dual function cable in that it will function as a firmware update cable when the “DAT400” end of the cable is connected to the DATAIR-400/M3 – **DO NOT CONNECT IT THIS WAY WHEN RUNNING THIS SOFTWARE! PLEASE ENSURE** that for running this software you connect the **D9 socket marked “DAT400” to the PC serial port.**

For the DATAIR-400/M3+ use the USB Data Transfer (Blue) cable and connect the PC to the DATAIR-400/M3+.



PLACE DATAIR-400/M3 into PC UPDATE MODE.

In order to allow serial communication between the DATAIR-400/M3 and the PC the DATAIR-400/M3 must be placed into “PC UPDATE” mode. See LCD screen shots above.

Whilst the DATAIR-400/M3 is in this screen option the display will show “PC UPDATE IN PROGRESS”.

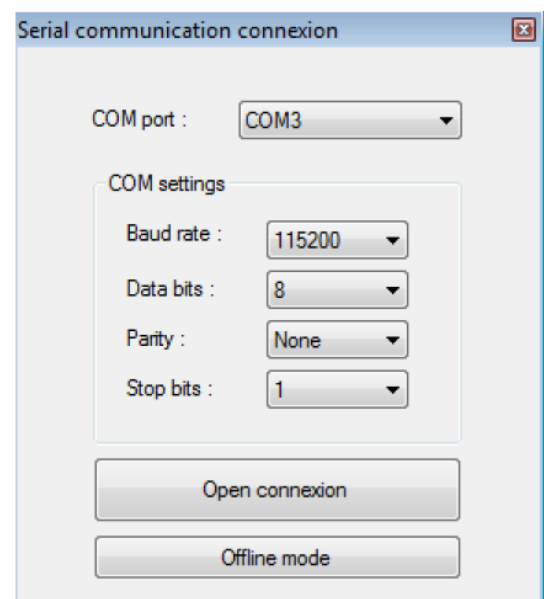
Execute the program file “DATAIR-400M3_SC-V2.exe”.

Set the COM port to one of the options indicated in the “COM port:” drop down box.

Then press the <Open Connexion> button.

The software will begin to download all custom storage to the PC software.

If your DATAIR-400/M3 is not available, you can still use this software in <Offline mode>, which permits custom Label definition operations to be performed and saved to your hard disk for later upload to the DATAIR-400/M3.

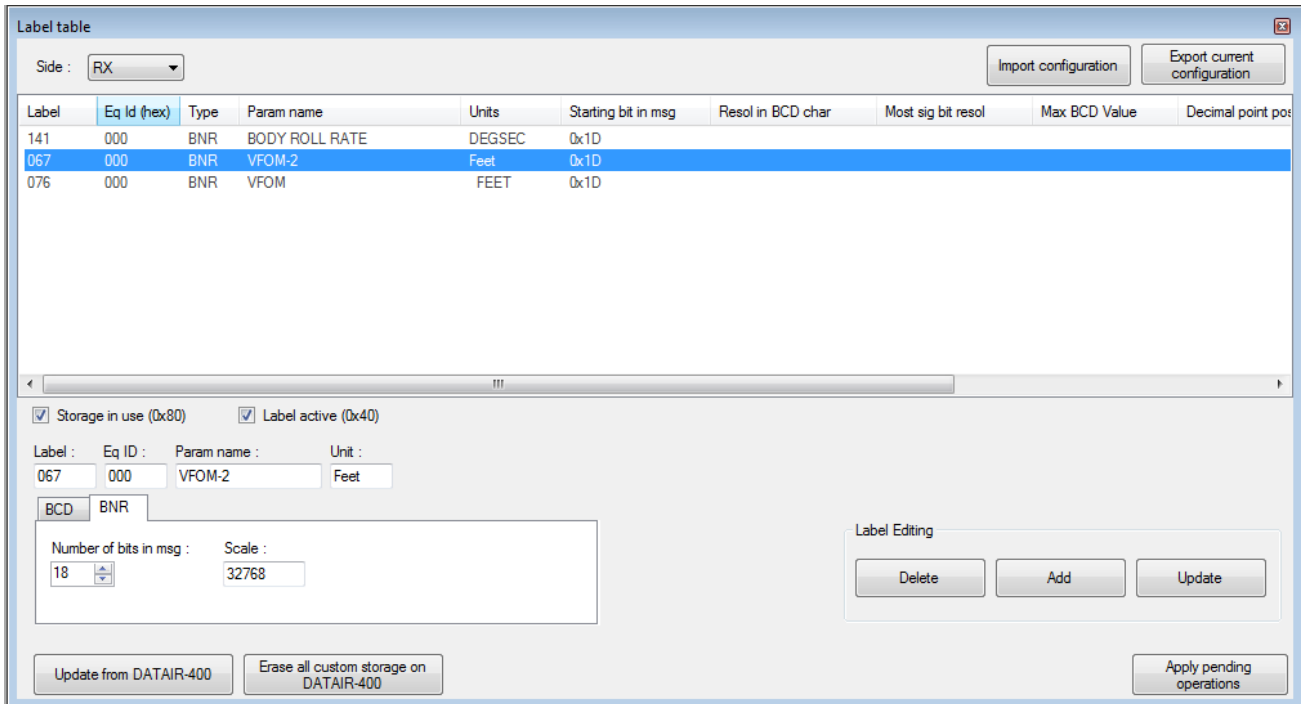


2.1 LABEL TABLE

The Label Table window shows you the custom labels on the DATAIR (if not Offline), and allows you to edit these custom labels or add new Labels.

You can import/export Label definitions as an XML file to your PC by using “Import configuration” and “Export current configuration” buttons.

You can Delete/Update selected custom labels by using the <Delete> and <Update> buttons, or adding a custom label by clicking on the <Add> button.

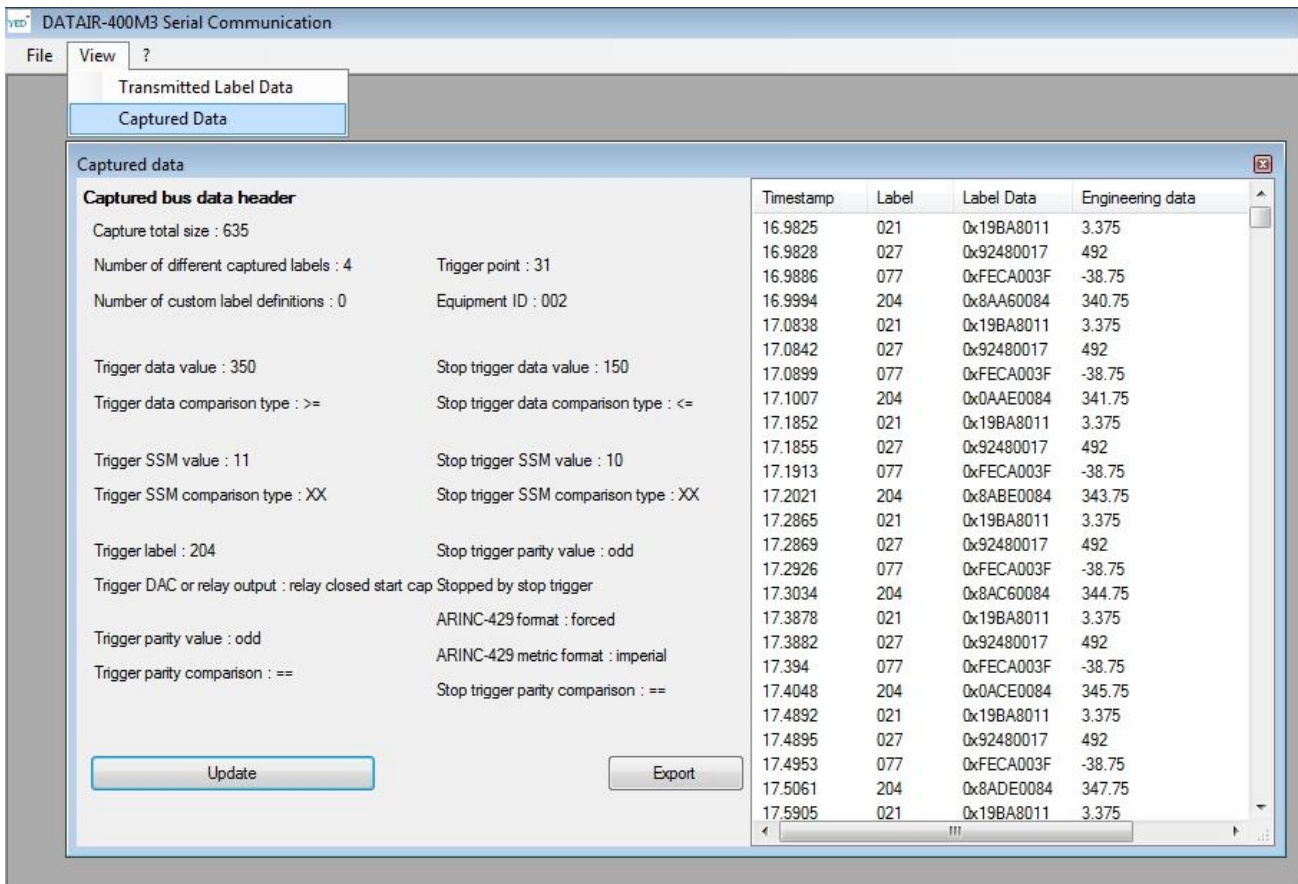


Modifications will not affect the DATAIR-400/M3 stored labels until you apply modifications by clicking on <Apply pending operations> button.

You can erase all custom labels on the DATAIR by using the <Erase all custom storage on DATAIR-400> button.

By clicking on the <update from DATAIR-400> button, all custom storage on the DATAIR-400/M3 will be downloaded to this software and the table shown will be updated with the contents.

2.2 Captured Data download and Save to Disk (DATAIR-400/M3+ ONLY)



If the DATAIR-400/M3+ contains a data capture file from a previous ARINC 429 data capture session, this software can download it from the DATAIR-400/M3+ and display the contents as shown. Only data that was filtered by the DATAIR-400/M3+ at the time of capture will be displayed.

Use of the <Update> button will start the download of the data capture file into this software. The time to download this data will depend upon the size of the data capture file.

The download process will commence a few seconds after pressing the <Update> button.

The portion of the dialogue on the left provides the following information:

- Total Labels captured
- Number of different Labels captured
- The Trigger point within the data file
- The Start and Stop Trigger data values
- The Trigger Condition <= or =>
- The Start and Stop Trigger SSM values – if specified
- The Trigger SSM comparison conditions, shown here as 'XX' (Don't care)
- The active Equipment ID
- The number of custom Labels
- Start and Stop Triggers for Parity conditions
- ARINC 429 Engineering units scaling as Imperial or Metric.

The portion of the dialogue on the right will show the captured data.

Use the <Export> button to save the downloaded data file to your local hard disk. The data will be saved as a .CSV file that can be opened by most Spreadsheet programs.

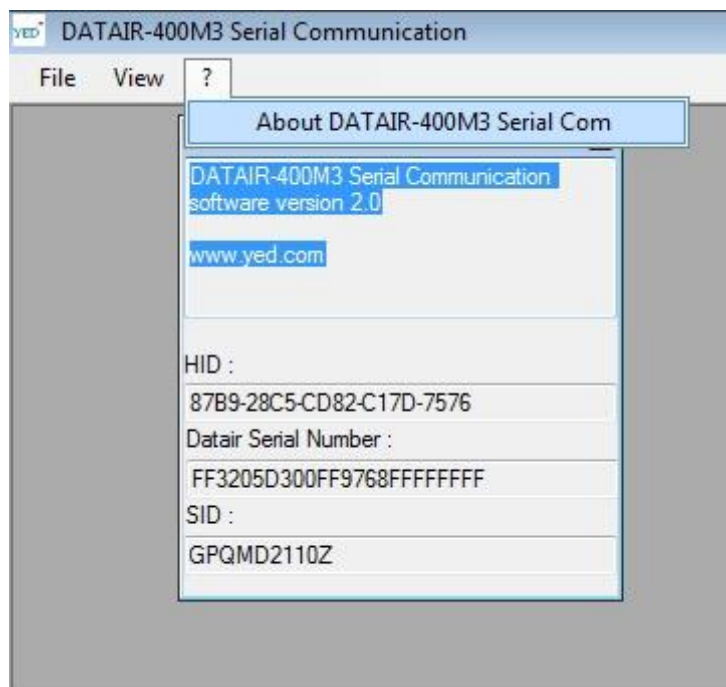
	A	B	C	D	E
1	Time Stamp	Label	Label Data	Engineering Data	Unit
2	16.9825	21	0x19BA8011	3.375	EPR
3	16.9828	27	0x92480017	492	Deg
4	16.9886	77	0xFECA003F	-38.75	Knots
5	16.9994	204	0x8AA60084	340.75	Knots
6	17.0838	21	0x19BA8011	3.375	EPR
7	17.0842	27	0x92480017	492	Deg
8	17.0899	77	0xFECA003F	-38.75	Knots
9	17.1007	204	0x0AAE0084	341.75	Knots
10	17.1852	21	0x19BA8011	3.375	EPR
11	17.1855	27	0x92480017	492	Deg
12	17.1913	77	0xFECA003F	-38.75	Knots
13	17.2021	204	0x8ABE0084	343.75	Knots
14	17.2865	21	0x19BA8011	3.375	EPR
15	17.2869	27	0x92480017	492	Deg
16	17.2926	77	0xFECA003F	-38.75	Knots
17	17.3034	204	0x8AC60084	344.75	Knots
18	17.3878	21	0x19BA8011	3.375	EPR
19	17.3882	27	0x92480017	492	Deg
20	17.394	77	0xFECA003F	-38.75	Knots
21	17.4048	204	0x0ACE0084	345.75	Knots
22	17.4892	21	0x19BA8011	3.375	EPR
23	17.4895	27	0x92480017	492	Deg
24	17.4953	77	0xFECA003F	-38.75	Knots
25	17.5061	204	0x8ADE0084	347.75	Knots
26	17.5065	21	0x19BA8011	3.375	EPR

3.0 REQUESTING FULL LICENSED SOFTWARE VERSION KEY FILE

For requesting the full software version, use the ? – “About DATAIR-400M3 Serial com” menu, and then send us the cut and paste contents of “HID”, “Datair Serial Number” and the “SID” as shown on the About window below.

We will send you a license key file that must be placed in the same folder as your installed software.

The license key is attached to the DATAIR-400/M3 hardware so it will operate in Full mode when the DATAIR-400 is connected to the PC and powered. The software will work on any PC that contains the supplied licence key file in “Offline mode” without requiring a connection to the DATAIR-400/M3.



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