

Data Sheet

QT_Readme.pdf

2 Pages

Last Revised 11/04/05

Micro RWD Quad Tag (QT) Reader

The MicroRWD QT version uses the same basic hardware as previous MicroRWD versions but has a larger memory microcontroller to accommodate the software for reading four different tag types. The QT version is pin-for-pin, host interface and command protocol compatible with the individual H1, H2, EM400X and MCRF200 reader versions. This file should therefore be read in conjunction with the **RWD_QT.PDF**, **H1prot.PDF**, **H2prot.PDF**, **EMprot.PDF** and **MCprot.PDF** data sheets. Functionally, the only difference is that the MicroRWD QT internal EEPROM parameter map has been changed to accommodate all the parameters of all the individual versions.

A new command code "v" plus a parameter byte can be used to select the three main transponder types, a parameter in the EEPROM map further selects between EM400X and MC200/123 types. This mode change command actually stores a parameter byte in the RWD EEPROM at location 17 (11 hex).

Changing Reader Mode on MicroRWD QT

The current Windows programs for H1, H2, EM4001 type readers assume the MicroRWD QT is already set in the required Reader mode so none of the programs use the "v" command. New versions of the Windows software will be released shortly that will send the appropriate "v" command + selection code when the Windows s/w first starts up.

Therefore to read different transponder types, the MicroRWD Reader Mode must be set, the STATUS command sent and the ACKNOWLEDGE byte received. A 0xD6 acknowledge byte would indicate that a valid transponder of the type selected was in the field.

The MicroRWD QT mode can be changed by either of two methods:

a) The RWD EEPROM can be programmed using the "P" (Program EEPROM) command or by using the H1, H2 or EM400X Windows software and selecting the MicroRWD MEMORY tab. Location 17 (11 hex) can then be programmed to 01 (H2 mode), 02 (H1/HS mode) or 03 (EM400X mode). When in EM400X mode a further parameter byte at location 16 (10 hex) selects between EM400X and MC200/123 mode.

MicroRWD EEPROM Memory

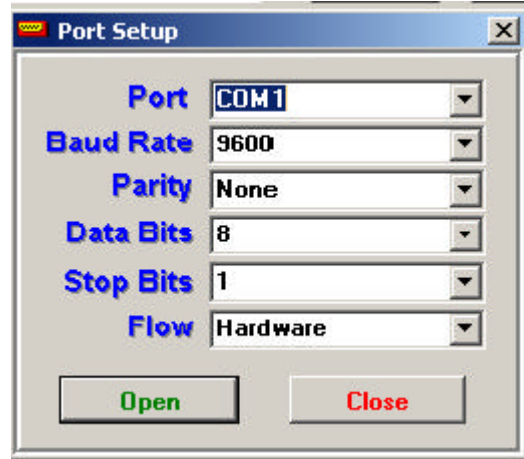
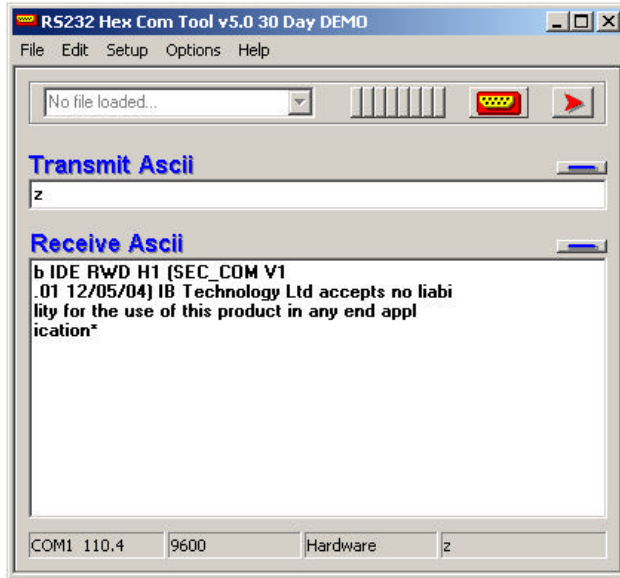
Byte 16: **EM400X Option Byte**, 0x00 = MC200, 0x01 = H400x (default)

Byte 17: **Reader Type**: 0x01 = H2, 0x02 = H1/HS (Default), 0x03 = EM400X

b) The alternative method is to use a Windows based "RS232 Terminal" programme that can be used to manually transmit command codes and view the raw HEX/ASCII data received. To change the MicroRWD QT Read Mode the following commands can be sent to the RWD using a "RS232 Terminal" programme.

- “va” text string selects H2 mode
- “vb” text string selects H1/HS mode
- “vc” text string selects EM400X mode

Third-party RS232 HEX COM TOOL from Virtual Integrated Design, downloadable from: www.rs232pro.com



We recommend the use of the third-party “RS232 HEX COM TOOL” from Virtual Integrated Design. A 30-day fully operational demo version can be downloaded from website: www.rs232pro.com and the full registered version can be downloaded for around USD 39. This third-party application is easy to use and can send and receive ASCII or HEX data as shown in the pictures above. Select the appropriate PC COM port and 9600-baud, 8 bits, 1 stop, no parity, and hardware handshaking protocol from the drop down menu. Clicking on the “**Transmit ASCII**” and “**Receive ASCII**” text changes the send and receive windows to HEX data format.

Note that “RS232 HEX COM TOOL Version.6.0 or later should be downloaded (www.rs232pro.com) because this version correctly supports hardware handshaking. We support the ethical use of demonstration software and request that you purchase the unlimited registered version as soon as evaluation is complete.

A simple test for correct communication between the PC and the MicroRWD (and to confirm which Reader mode is selected) is to send the “z” command using the “RS232 Terminal” software shown above. If received correctly the RWD replies with the reader type, software version and IB Technology disclaimer message. If this is received and displayed in response to the “z” command then the Reader mode commands can be sent

Note also that “RS232 Terminal” programmes such as “HyperTerminal” bundled with Windows are not suitable because they can only send and receive 7-bit ASCII data and not 8-bit Hex/Hex data.

More information on the Micro RWD and other products can be found at the Internet web site:

<http://www.ibtechnology.co.uk>

Or alternatively contact IB Technology by email at:

sales@ibtechnology.co.uk