How to Call in CSD Mode on a MRD-315 and MRD-355

Using the MRD as a Modem Emulator in CSD mode

How to Enable (CSD) Circuit Switched Mode on The MRD router

Overview

Please note: CSD mode is not available on the MRD-455 router

In order to use the MRD-315/355 in CSD mode, you need to enable Circuit Switched Mode and also enable Modem Emulator mode.

You also need to ensure that you have a CSD enabled SIM card, which is a different phone number from the voice SIM card. A standard data SIM card will not work in CDS mode.

The Hayes AT command are used with the RS232 serial port.

Assumptions

This application note applies to: MRD-315 and MRD-355 3G routers and assumes the router has a factory default configuration. It is also assumed that have a CSD enabled SIM card.
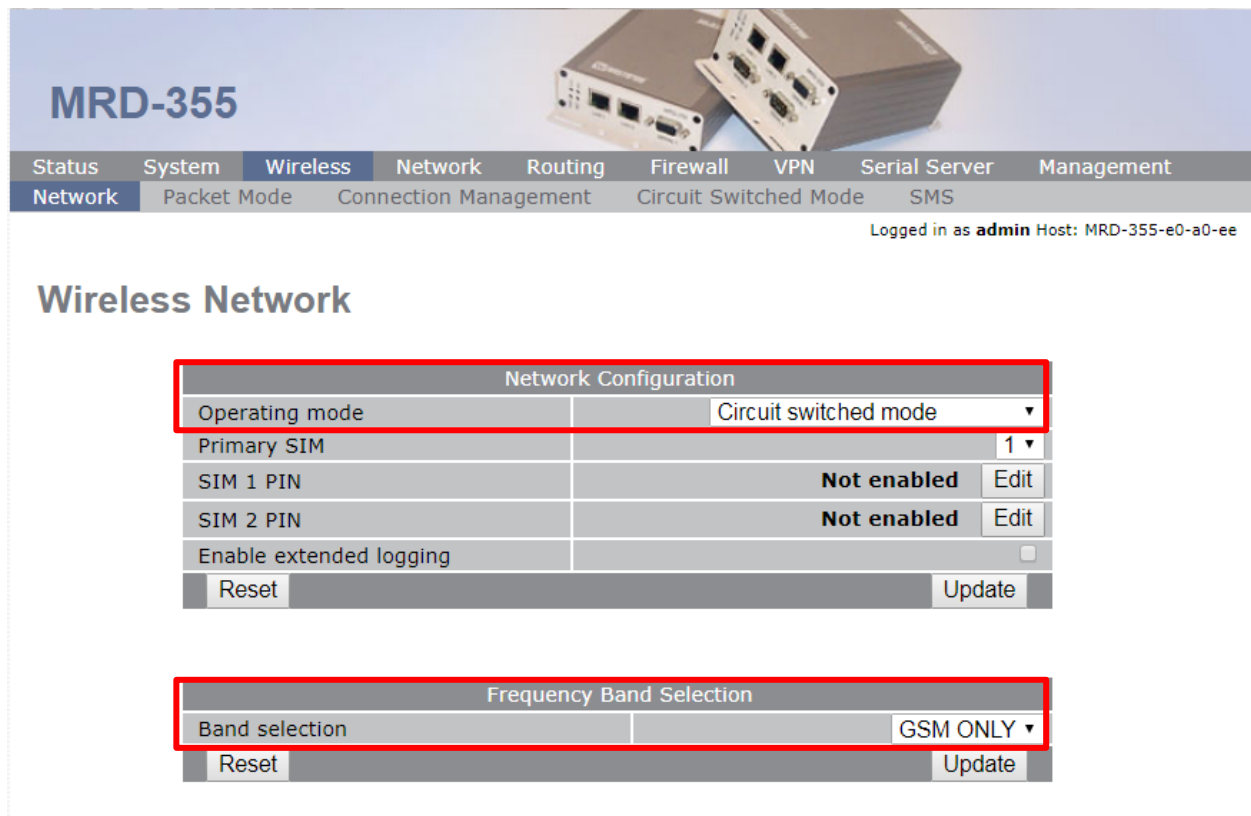
Corrections

Requests for corrections or amendments to this application note are welcome and should be addressed to technical@westermo.co.uk

Requests for new Application Notes and Quick Notes can be sent to the same address.

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Enabling CSD mode on the MRD router

1. Circuit Switched Mode and Modem Emulator

- Navigate to Wireless-> Network tabs

- Now click the dropdown menu under **Operation mode** and select "Circuit switched mode". Click update

- Then ensure that **Band selection** is set to "GSM ONLY". Click update

- Navigate to Wireless->Circuit Switched Mode

- Click on the ✎ icon to edit any of the Port settings

- Now navigate to Serial Server->Port Setup

- Select "Modem Emulator" from the drop down menu and click update.

- Navigate to Status->Alarms and ensure there are no faults.

MRD-355

| Status | System | Wireless | Network | Routing | Firewall | VPN | Serial Server | Management |
| Alarms | Wireless | LAN | VPN | GRE | Serial Server | System Log | | |

Logged in as **admin** Host: MRD-355-e0-a0-ee

Alarms

11:04:38 28/09/2017

| System	
Power On Self Test	Passed
Temperature (°C)	now: 31.50, min: 25.75, max: 31.50
Uptime	00:16:18
Wireless	
Network Status	No Fault
Connection Status	No Fault
Network	
LAN	No Fault
Loopback	No Fault
Services	
DHCP Server	Disabled
VPN	Disabled
Serial Server	No Fault

2. Application Example: MRD-355 and TD-36

The following pages illustrate an MRD-355 in CSD mode connecting to a TD-36 PSTN modem. The example used is based on the configuration in this document. The MRD can be used to call or receive calls from CSD/PSTN modems. In this example we use the MRD-355 and TD-36 (PSTN) modem.

- With the MRD configured as per document, using a Terminal software program open the correct com port and settings.
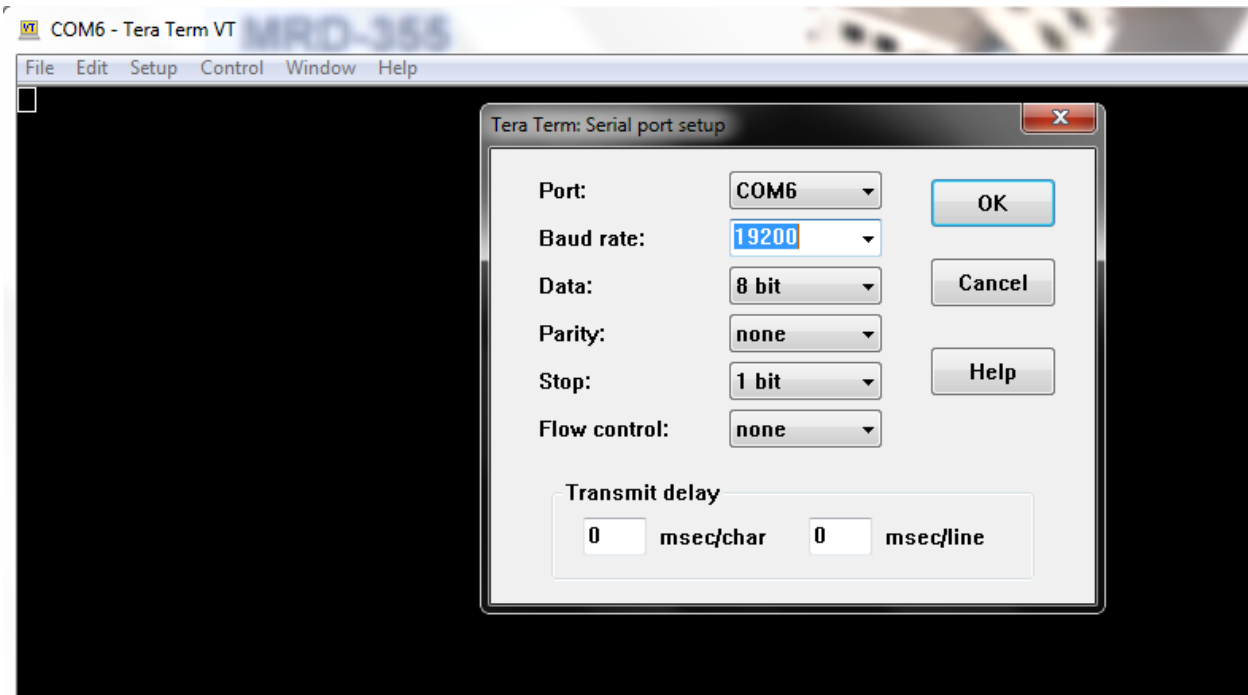
- Using standard AT command "ATD<number>" you will be able to call the remote modem, in this example the TD-36. Once the TD-36 answers you will see "CONNECT"

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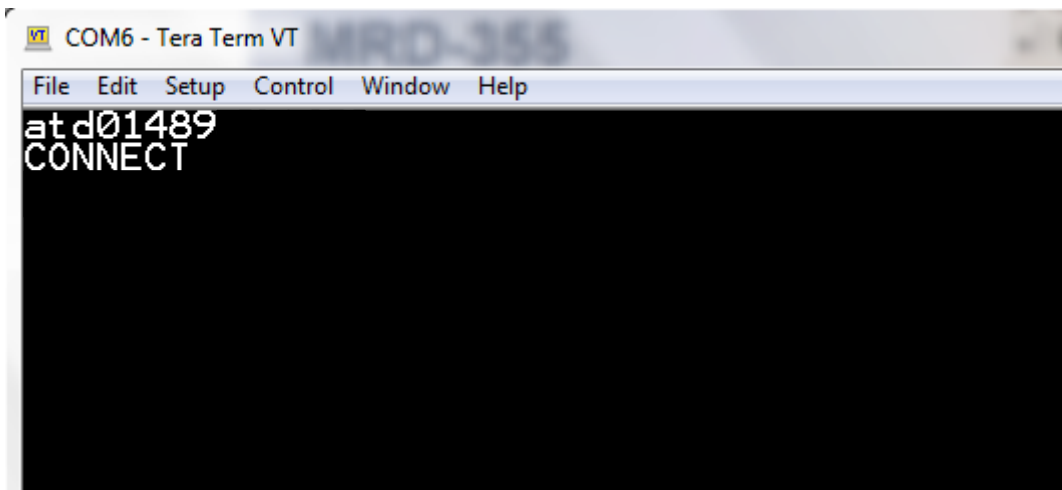
- On the remote end, TD-36 modem you will see the "RING RING" indicating a incoming call. Once its connected you will see "CONNECT 19200"

COM1:19200baud - Tera Term VT

File   Edit   Setup   Control   Window   Help

RING

RING

CONNECT 19200
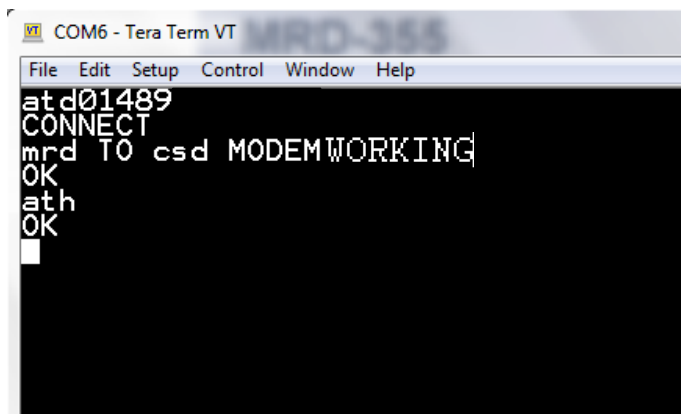
- You can now send data to and from the MRD to the TD-36

MRD-355 output window
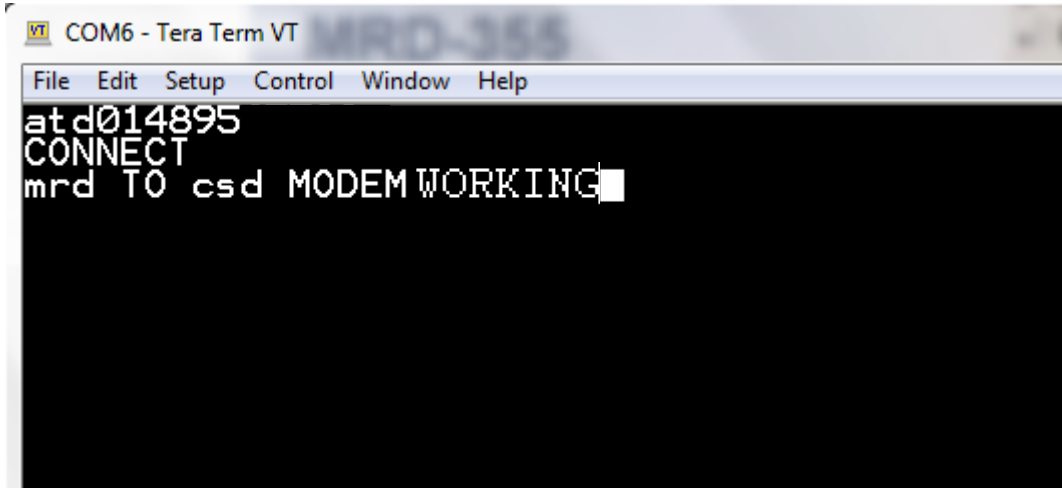
TD-36 output window
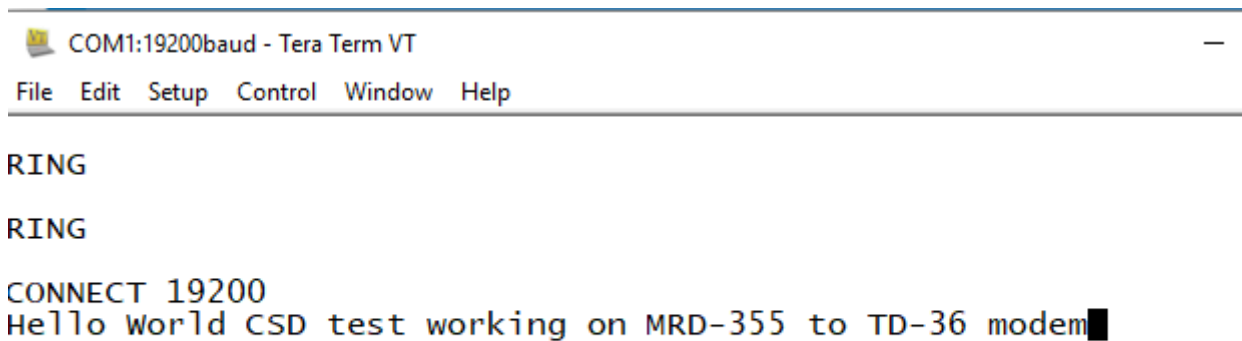
- To hang up the call simply use AT command "ATH"

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- Navigate to Status->Serial Server to see how much data has been sent and received.

- You can also any Errors that have occurred.

- Navigate to Status->System log to see the logs confirming incoming/outgoing calls, duration and the phone number.

Revision history for version 1.0

Revision	Rev by	Revision note	Date
00			
01			
02			
03			
04			
05			
06			
07			

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