Configure DRA818V/U with USB Board DAC02 V1.00

DESCRIPTION

This manual demonstrates how to use computer to configure the parameters in order to understand the commands more clearly. From the pin description of DRA818V/DRA818U, we can see that GND, VCC, RXD, TXD and PD are used for normal configuration so we can connect the five pins to USB-to-TTL board and connect them to computer. Here we use USB board DAC02 to start the testing.

PIN	Name	Function	Description
1	GND	Ground	Ground (0V)
2	VCC	Power	Power supply
3	---	---	
4	TXD	Input	UART output
5	RXD	Output	UART input
6	---	---	
7	---	--	

Table 1: DAC02 Pin Functions

PIN	Name	Function	Description
6	PD	Input	Power saving control pin: Low→sleep mode; High→normal mode
8	VBAT	Power	Power supply
9	GND	Ground	Ground (0V)
16	RXD	Input	UART input, TTL level
17	TXD	Output	UART output, TTL level

Table 2: DRA818V/DRA818U Pin Functions

We can connect the PD and VBAT pins of DRA818V/U module to the VCC pin of DAC02 and make cross connection for RXD and TXD pins of the two boards. We use the popular Advanced Serial Port Monitor from AGG Software as serial tool to configure the module. Each command is ended with <CR><LF> so we need to choose the option by clicking the Menu → File-→ Configure. From the dialogue, we click button “COM port” and then “End-of-string character”.

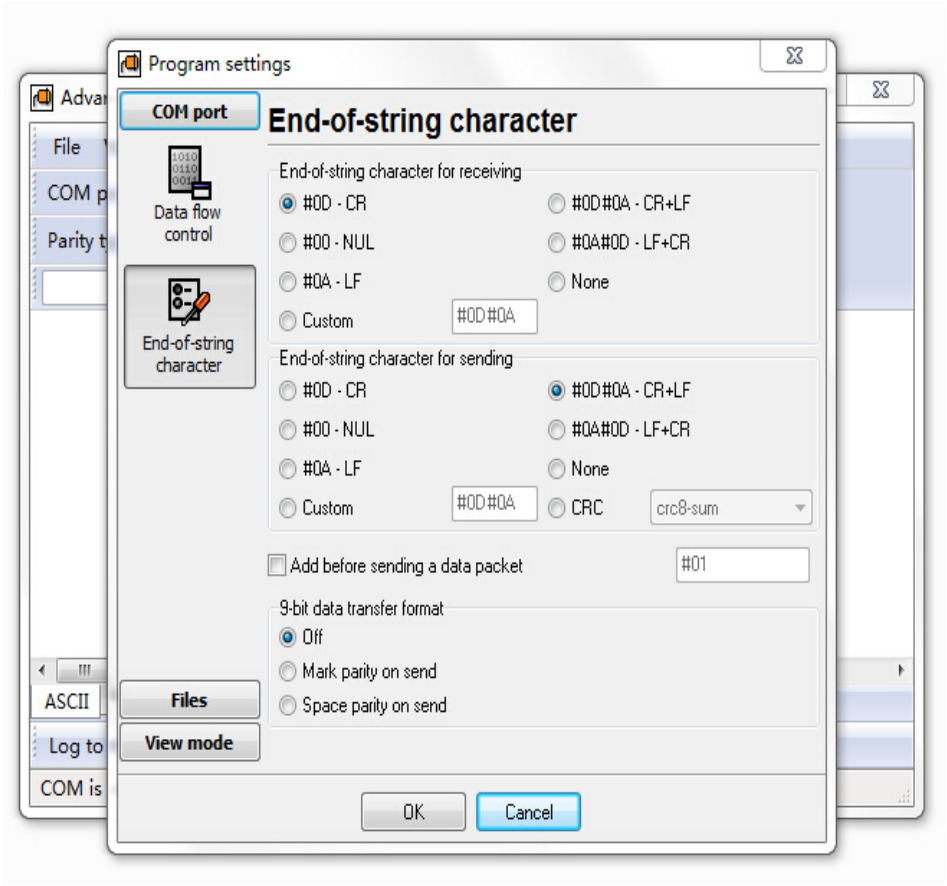

Figure 1: Set the End of String Character for Sending

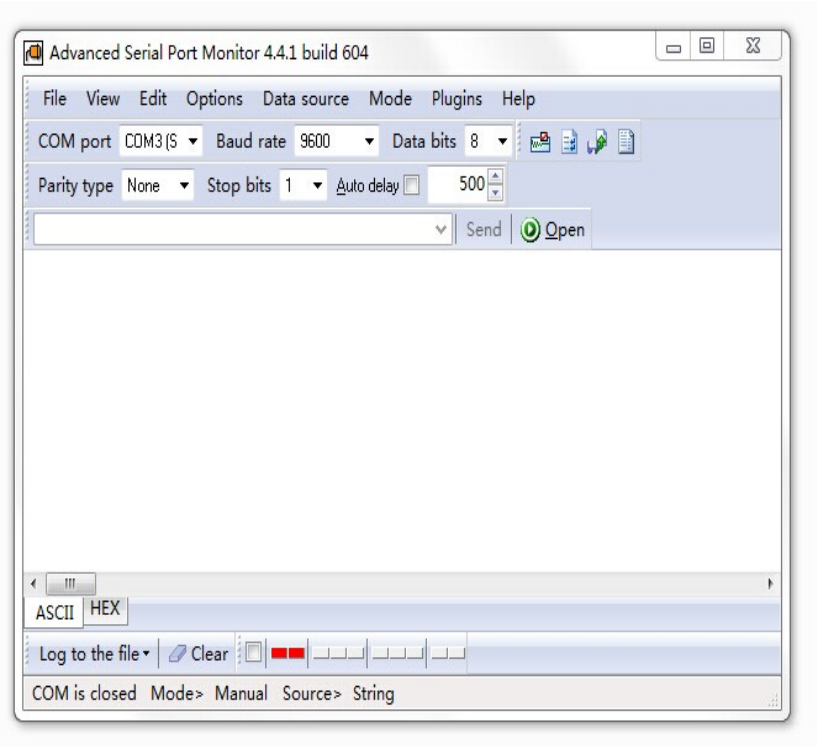

Figure 2: Set the Correct Data Format

For the first use of DAC02 we need to install USB driver first and then insert the USB board with module into the computer. The data format of serial tool must be the same as the default data format of DRA818V/U in order to use the commands properly. If everything is ok, we can enable the OPEN button to open the corresponding COM port and start the testing of commands.

The handshake command AT+DMOCONNECT is the easiest to start with. We input the command into the textbox and click “send”. The command and response will be showed in the display area. +DMOCONNECT:0 means the communication is successful.

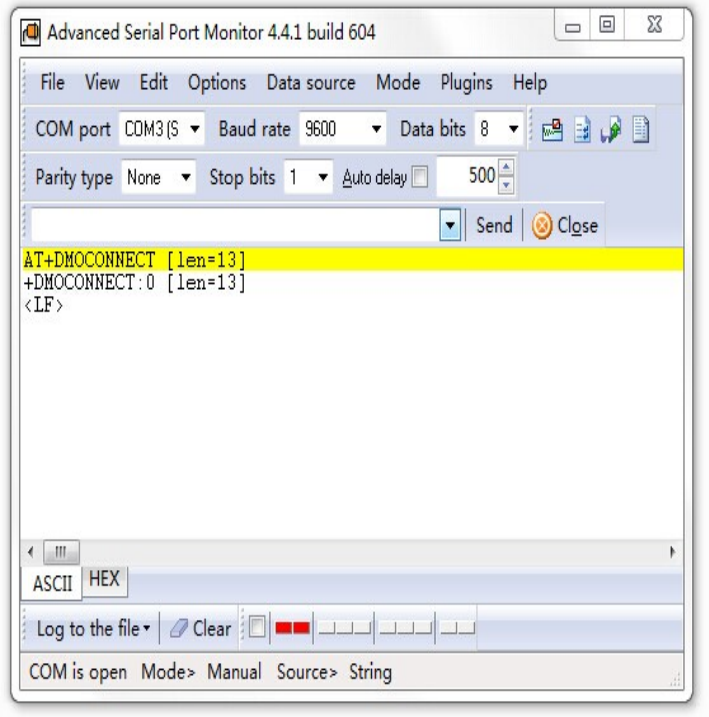

Figure 3: Test the Handshake Command

Group Setting Command is used to set a group of parameters which can make the module work properly. There are two types of CSS codes: CTCSS and CDCSS. If users need to make DRA818U compatible with DRA808M, CTCSS is the only choice. We can verify the two types of codes through the tool.

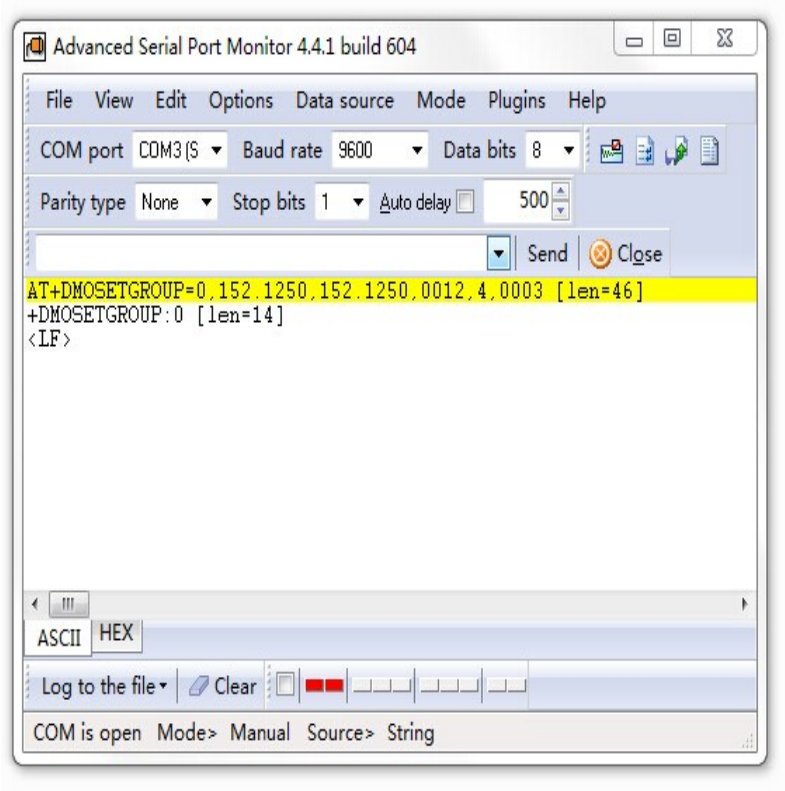

Figure 4: Group Setting Command with CTCSS

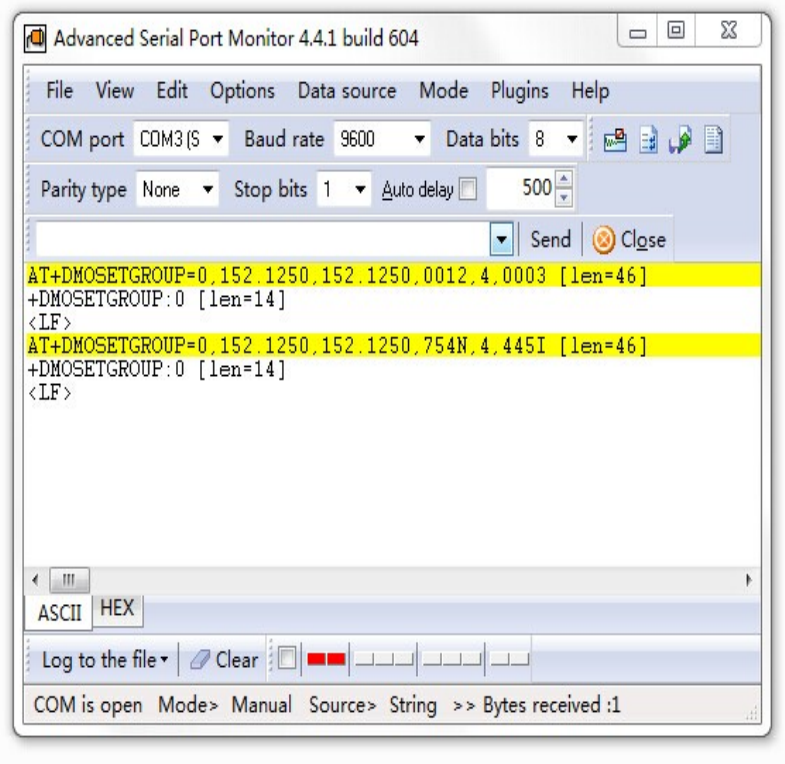

Figure 5: Group Setting Command with CDCSS

The responses for the two commands show the parameters are set correctly. Users also can verify

other commands with the same method.

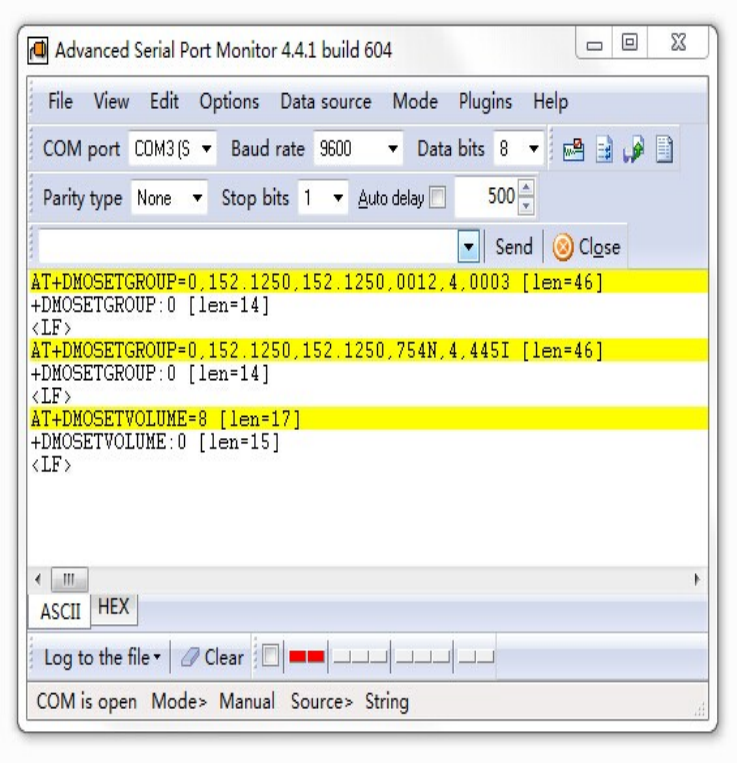

Figure 6: Set the Volume Command

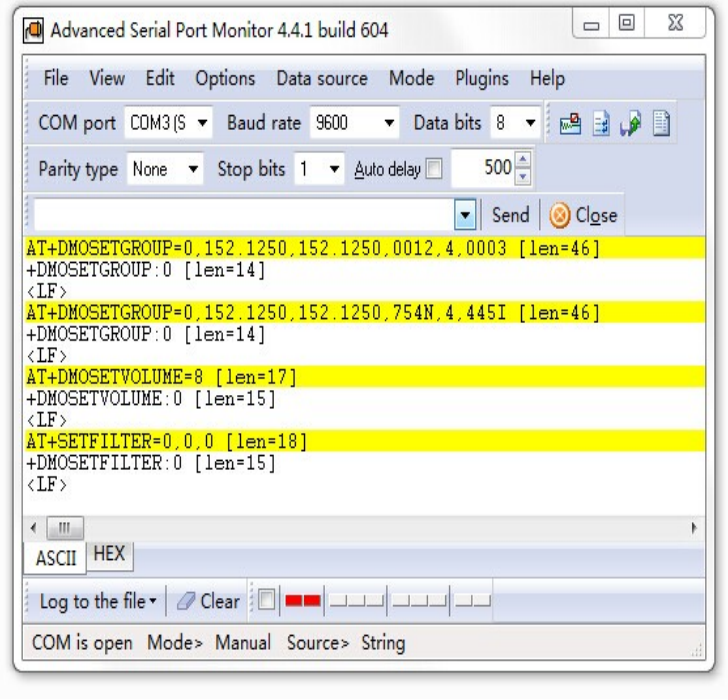

Figure 7: Set the SETFILTER Command

In most applications, the modules are controlled by MCU so users can get corresponding HEX data by clicking the HEX button at the left bottom of the tool and the tool interface will be

changed as figure. Application document **ADW1004** demonstrates the basic communication between DRA808M module and microcontroller. DRA808M has the same working mechanism as DRA818V/U except it has less parameters and commands so users can easily transform the codes in the document for DRA818V/U modules. For the same reason the testing method in this document also can be applied to DRA808M with minor changes on the command parameters.

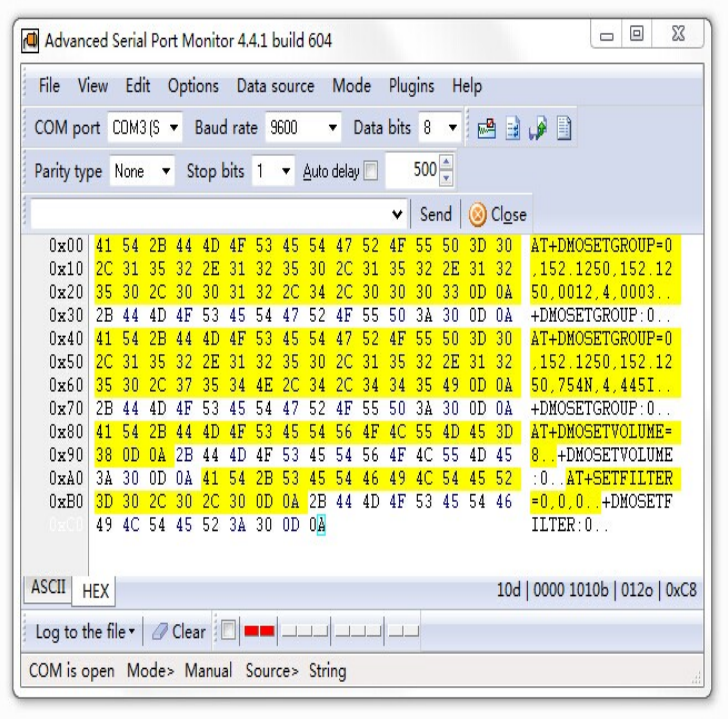

Figure 8: HEX Data of Corresponding Commands

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