



# **Wismo™ software Downloading procedure**

Version : **8.2**

Date : **07/12/2001**

Reference : **SW/DOC/DWNLD\_PROC**

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## Document amendments

Issue	Date	Status	Author	Comments
1.0	09/08/00	P	DCo	Creation
2.0	26/09/00	P	RMA	AT+WHWV
3.0	10/12/00	P	RMA	Downloader update
4.0	15/03/01	P	RMA	Downloader and PCB versions
5.0	20/03/01	P	RMA	Update for some PCB versions
6.0	31/07/01	P	DCo	Add recovery procedure
7.0	22/10/01	P	DCo	Add WISMO™ 2C-2 and WISMO™ 3
8.0	19/11/01	P	JIs	Update add WISMO™ 2C-2 and WISMO™ 3
8.1	28/11/01	P	JIs	Update add WISMO™ 2C-2 and WISMO™ 3
8.2	07/12/01	P	JIs	Update for some PCB versions

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# 1 Introduction

The software package shall include the followings:

**Documentation:**

- The AT software release note, informing you on the major modifications.
- The AT specification document corresponding to the software release (see Annex 1 for the links)

**Firmware (download in using Xmodem<sup>(1)</sup> protocol):**

- pro-lib.dwl: The software release for WISMO™ module
- Configuration files: (some of those files may not exist depending on software version)
  - ◆ wm12550.dwl: To set up the module to 900/1900 MHz bands
  - ◆ wmmodem.dwl: To set up the external WMOD2 modem (force the audio 2 by default). This file shall not be downloaded for internal modem WMOi3.
  - ◆ wm12792.dwl: Activate the Wavecom echo cancellation
  - ◆ wm12793.dwl: Force the module in 900MHz band
  - ◆ vxxx.dwl: Configure the software to the PCB version.

Please check your PCB reference number by using the AT command : AT+WHWV. PCB version = yyy

The following rules MUST be applied when downloading the Vxxx.dwl file:

- Download Vxxx.dwl, if PCB hardware version yyy = xxx
- In other cases, download Vzzz.dwl. Where zzz is the highest number just below yyy

Example:

If PCB version 4.27, yyy = 427

If the only available configuration files are: V400.dwl / v417.dwl / v500.dwl

The only files which can be download is V417.dwl

- ◆ ADC\_xx.dwl: Battery software calibration (for WISMO™ module manufactured before Week 50 2000)

Module	File to download
WISMO™ 2C	ADC_2C.dwl
WISMO™ 2C-2	ADC_2C2.dwl
WISMO™ 3	ADC_W3.dwl

- [dwl.dwl](#): The latest downloader<sup>(2)</sup> (see Annex 1 for more detailed information)

**ⓘ Wavecom strongly recommends to update the downloader.**

The downloader version can be checked with AT+WDWL?

**Note:**

1- Xmodem

Xmodem is a standard protocol for downloading. Most of the terminal applications like "Windows Hyper Terminal" integrate it (for more information check on Internet). See the below example for more information

2- Downloader

The module integrates a downloader (by default). In the case of a new downloader is available, you can download it into the module. Take the above file for example, it is already implemented in the first module series.

**ⓘ Attention,**

- If a problem occurs during the downloading of the firmware (excepted the downloader), please refer to the paragraph 3 for recovery process.
- If the sentence "BAD SOFTWARE" is sent through the serial link, at power up. It does not mean the software is "bad" or the download failed. The module cannot start and need to be unlocked. In such case send the module back to Wavecom for upgrade..
- If a problem happens during the downloading of the downloader, the module or modem cannot be downloaded anymore, it must be send to the nearest Wavecom support centre for recovery.

## 2 Examples (with “Windows Hyper Terminal”)

### 2.1 Before Starting:

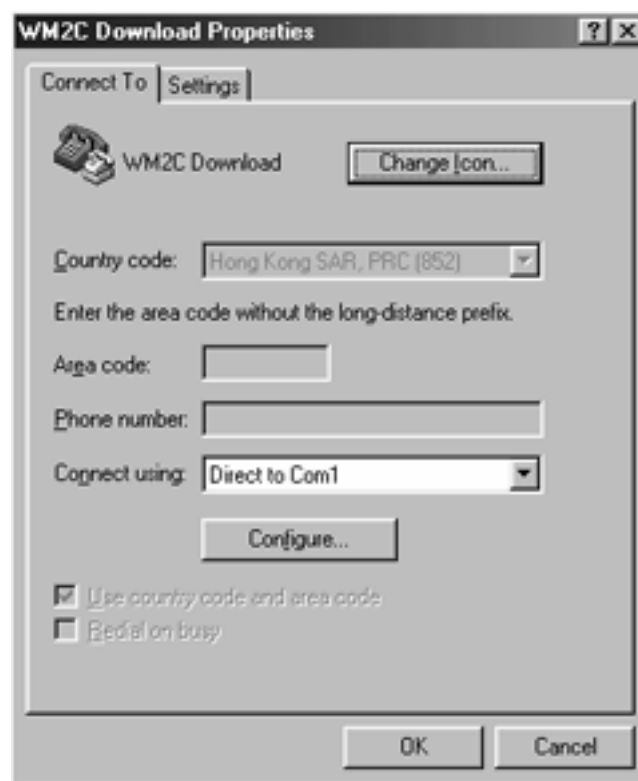
In the following example the connection is called “WM2C Download”.  
To start, the RS232 link is set up at 9600 Bps, with 8 data bits, no parity, one stop bit and a hardware flow control (RTS/CTS).  
The “COM1” is used as serial communication port.

### 2.2 Step 1: Set up the download speed to 115200 Bps

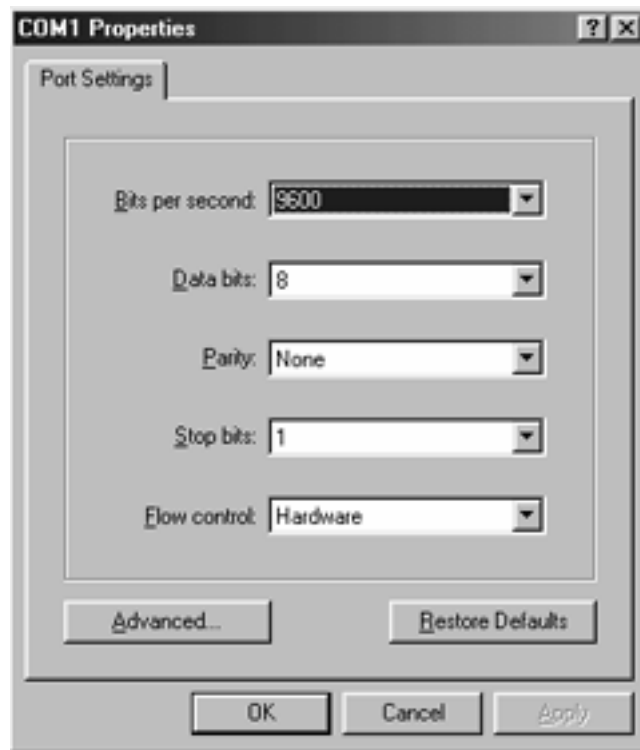
To speed up the download process, you can set up the communication speed at 115200 Bps maximum.

Once you open the “Windows Hyper Terminal” program, on the screen type the command AT+IPR = 115200 and then press “Enter”. (That sets the speed on the module side).

In the “File” menu, click on the “Properties” tab.  
The following dialog box appears on the screen.



Press the “Configure” button (just under the communication port).  
The “COM1 Properties” dialog box appears.

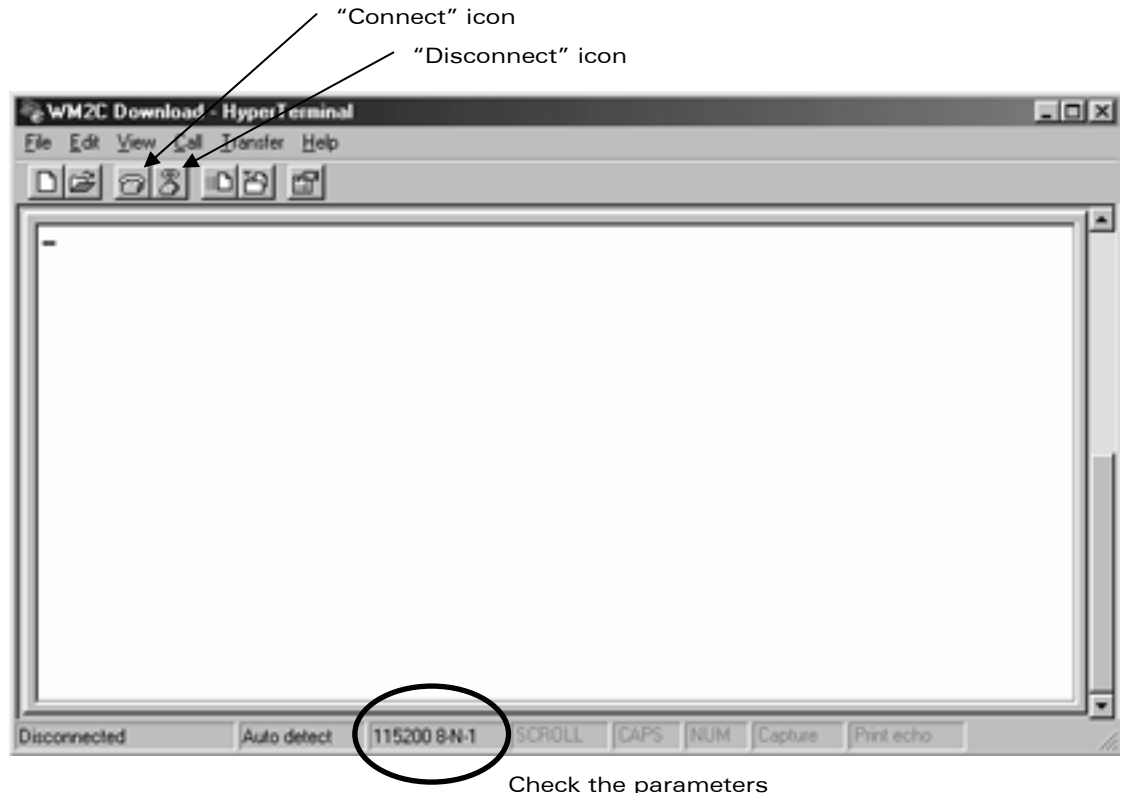


Change the speed from 9600 Bps to 115200 Bps.



Press "Apply button", and then the "OK" button on the next dialog box.

To be sure the link is correctly set up, press the "Disconnect" icon and then the "Connect" icon. ("Windows Hyper Terminal" applies the new setting only after a new connection).



### 2.3 Step 2: Set up the module in downloading mode

On the screen type the command AT+WDWL and then press "Enter".

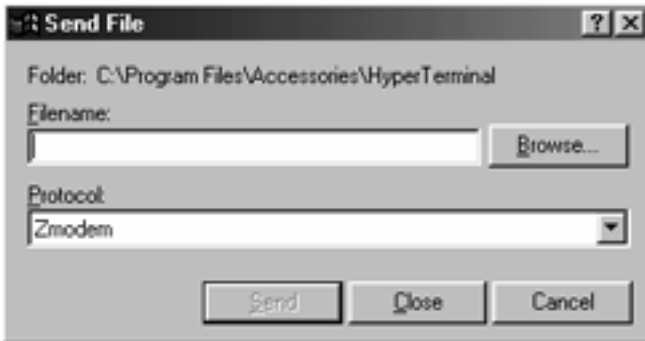
The module answer +DWL: 0, and then a series of "□" characters appears (the module is sending the first characters of the Xmodem protocol).

```
AT+WDWL
+DWL: 0
□□□
```

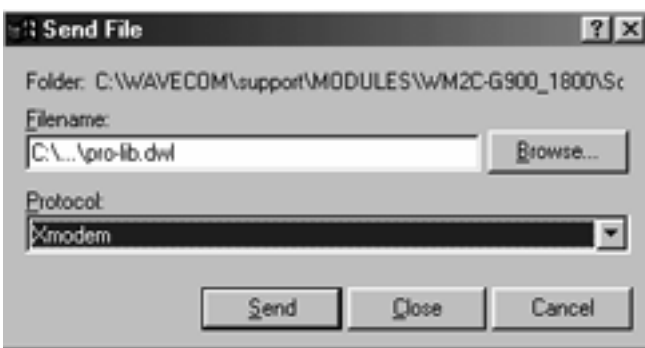


## 2.4 Step 3: Launch the downloading

Click on the "Transfer" menu and then on the "Send File ..." tab. The dialog box " Send File" appears.

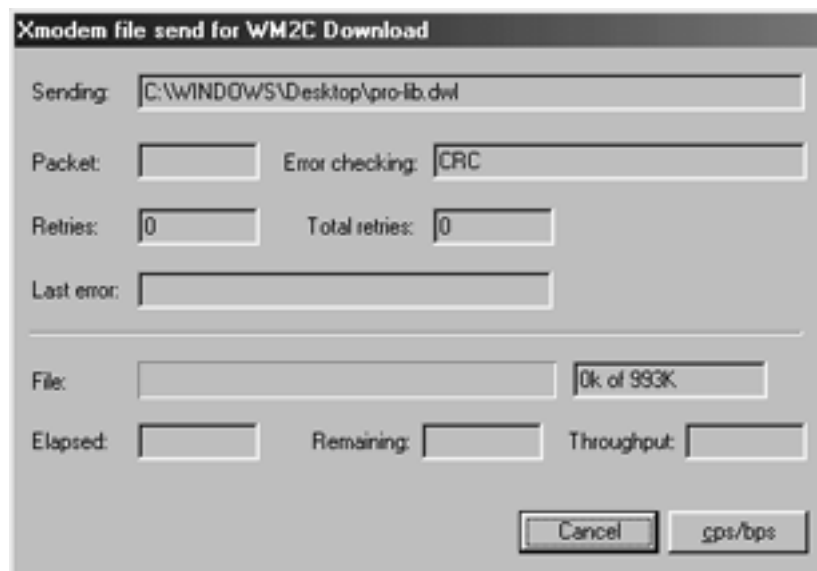


Select the file<sup>(1)</sup> you want to send (in clicking on the Browse..." button) and then choose the "Xmodem" protocol on the second line.



Click the "send" button.

The following dialog box appears on the screen.



You can see the downloading processing.

The downloading lasts around 3 to 4 minutes, after that the dialog box closes automatically.

**Note:**

1- If you want to download two files in one operation (for example to configure the dual band external modem WMOD2), you can merge the files to download in using the DOS command "Copy" + the option "-b":

ex:

To create the new file "onfile.dwl", type:

copy /b pro-lib.dwl + wmmodem.dwl onfile.dwl

## 2.5 Step 4: Restart the module

On the screen type: AT+CFUN=1 and then press "Enter".

The module is automatically set up to communicate at 9600 Bps with 8 data bits, no parity, one stop bit and a hardware flow control (RTS/CTS).

Also to type AT command, you must set the communication port with those parameters.

In the "File" menu, click on the "Properties" tab.

The dialog box "...properties" appears on the screen, press the "Configure" button (just under the communication port). The "COM1 Properties" dialog box appears.

Change the speed from 115200 Bps to 9600 Bps.

Press "Apply button", and then the "OK" button on the next dialog box.

To be sure the link is correctly set up, press the "Disconnect" icon and then the "Connect" icon. ("Windows Hyper Terminal" applies the new setting only after a new connection).

Now, you can check the new software release in typing the command AT+CGMR + "Enter".

For example The module answer "401\_M11B.55 ...." Is the software release is the V4.01.

```
AT+WDWL
+DWL: 0
AT+CFUN=1AT
OK
AT+CGMR
401_M11B.55 1014652 022800 15:39
OK
```

**Note:**

The first restart can be little bit long from 1-2 s up to 15-20 s.

### **3 Recovery procedure**

In case of failure or crash during the downloading process do the following:

- i- Stay logged on your Windows Hyper Terminal session
- ii- Hard reset the module or modem (connect the RESET pin to the ground)
- iii- Then type continuously the capital letter "A" on your keyboard
- iv- After few second the module or modem will echo the "A"
- v- Then type "AT" <CR>
- vi- The module will respond either "ERROR" or "OK", if "ERROR" it displays start again from the step v- until "OK" finally appears
- vii- Finally follow the downloading procedure from the paragraph 2.3

#### **Attention,**

This procedure is not applicable if a failure occurs during the download of the downloader.

If for whatever reasons, the recovery process does not work, the module or modem must be send to the nearest Wavecom support centre for recovery.

## 4 Annex 1: Software releases

Step	Module	WISMO™ 2C	WISMO™ 2c-2	WISMO™ 3	Downloader Step	Documents
GSM						
4	4.00	400_m11b.54	-	-	V1.01	V8.4
	4.01	401_m11b.55	-	-	V1.03	"
	4.02	402_m11b.56	-	-	V1.04	V8.6
	4.02a	402am11b.56	-	-	"	"
	4.02b	402bm11b.56	-	-	"	"
4.1	4.10	410_m11b.58	-	-	V1.08	"
	4.10a	410am11b.58	-	-	"	"
	4.11	411_m11b.59	-	-	V1.09	"
	4.11a	411am11b.59	-	-	"	"
4.2	4.20	420_09gm.2c	420_09gm.2c2	420_09gm.3a	V1.10	V8.7
	4.21	421_09gm.2c	-	-		"
	4.22	-	422_09gm.2c2	-		"
	4.23	423_09gm.2c	-	-		"
4.3	4.30	430_09gm.2c	430_09gm.2c2	430_09gm.3a		V9.0
	4.30a	430a_09gm.2c	430a_09gm.2c2	430a_09gm.3a	V1.13	V9.1
	4.31		431_09gm.2c2	431_09gm.3a	V1.13	V9.1
GPRS						
	4.20	-	420_09gg.2c2	521_09gg.3a		Gprs_at_cmd_v13/ Gsm_v8.7
	5.20	-	520_09gg.2c2			"
	5.21	-	521_09gg.2c2			Gprs_at_cmd_v13/ Gsm_v8.7
	5.26		526_09gg_2c2		V1.13	Gprs_at_cmd_v13/ Gsm_v8.7
Open At						
#1	4.20					
#2	4.31		431_09gm_2c2		V1.13	V9.1