

MIDWAY

J2ME developers who are interested in creating content for Motorola phones often ponder if there is a way to download J2ME applications onto a Motorola phone using a USB or serial cable. The answer to that question is that there is indeed a way to do this, and it is through the Motorola MIDway tool! The latest version of MIDway is 2.8 and can be downloaded from the Motocoder website at www.motocoder.com.

Requirements

- Midway application (MIDway2_8.exe)
- Windows 98/2000/NT/XP (Unix, Linux, MAC OS not supported)
- USB or serial cable

If a USB cable is used:

- USB driver Usbmot2000.inf (comes bundled with MIDway)
- USB cable:

part number SKN6311A use for phones:

T720/T720i, v60i, v60t, v66i, a630, t725, v80, v300/v400/v500, v600, e398

part number SKN6371A use for phones:

c370/c450/c550, e380, v180, v220, c650

If a serial cable is used:

- serial cable:

part number SKN6315A (Motorola Serial Data Cable) + SYN0279 (Head Adaptor) use for phones:

a830, a835, T720/T720i, v60i, v60t, v66i, a630, t725, v80, v300/v400/v500, v600, e398

(Note: you may need to change the baud rate in the midway settings to 115200 in order to get it to work)

- java app loader needs to be enabled

It is important to note that the MIDway tool will only work with a device that has the java app loader feature enabled. This feature is not available by purchasing a device through a standard consumer outlet.

The easiest method of confirming support for this is by looking at the `Settings->Java Settings->Java Settings` menu (path to java settings may vary depending on phone) on the phone in question and seeing if the "Java App Loader" option is available on that menu. If it is not, then you need to send it to a member of the Motocoder team to get it enabled.

We allow any GSM developer to send us their GSM phone to enable the JAL loader.

Our turn-around time is 5 to 10 working business days, that's our goal. Sorry, we don't have another way to grant access through OTA or by letting you download a program to enable JAL in your phone at this time.

Please make sure that you are registered on www.motocoder.com and have raised a new case to advise us that you are sending in the handset, then send it through FedEx, UPS or other trackable method and please keep the following items with you; Tracking information, write down your ESN/IMEI from the back of your phone, battery and battery door(back piece), SIM Card, chargers and backup your phone contacts onto your SIM or to your computer before sending them in. We are NOT responsible for any lost data from your phone.

For US based Developers please send your device to: Kristie Miller MOTOCoder Tech Support
Motorola, Inc. 600 North U.S. Highway 45, Room MW111, Libertyville, IL 60048

For EMEA based Developers please send your device to: c/o Simon Walker, Motocoder Developer Program, Mail Box 27, Motorola, Midpoint, Alencon Link, Hampshire, United Kingdom. RG21 7PL.

For ASIA based Developers please send your device to : c/o Robin Liu, MOTOCoder Developer Program, Motorola Beijing Branch, No. 108 Jian Guo Road, Chao Yang District, Beijing, 100022, P.R.China.

Phones Supported

a830, a835, c370/c450/c550, e380, T720/T720i, v60i, v60t, v66i, a630, c650, t725, v80, v180, v220, v300/v400/v500, v600, e398

Installing MIDlets

The following section explains step by step the procedure for downloading MIDlets using MIDway 2.8.

This tool has been tested for Windows 98/2000/NT/XP operating systems.

Steps to Download MIDlets

- 1) Power up the Phone.
- 2) Select the Menu->Settings->Java Settings->Java App Loader menu item (path to "Java Settings" may vary depending on phone).
- 3) The phone should display a dialogue box on the screen with the words: "Insert Cable Now"
- 4) Insert a USB/serial cable.
- 5) The phone should display "Jal Link is active."
- 6) Run MIDway 2.8 by double clicking on MIDway2_8.exe.
- 7) On MIDway select menu item File->Settings and alter the com port and baud rate settings if needed. If using a serial port, the com port is usually 1. If you are using a USB cable, please see the section "Determining The Com Port Used By The Phone When Using A USB cable" below to figure out the com port setting.
- 8) From the File menu on MIDway select "Open JAD..." OR Click on "Open JAD" toolbar icon (1st icon)
- 9) Select the appropriate JAD file from your computer. (Please refer to the "MIDlet-Jar-URL Path" section below for more information about the MIDlet-Jar-URL attribute in the JAD file)
- 10) Click on the "Send JAD" icon (2nd icon) on Midway. Information from the JAD File will be displayed on the phone's Screen. If the Right Soft Key reads "More", select it. The option to "DOWNLD" should then be displayed. Select "DOWNLD" - this will start the download of the JAR file from the computer to the phone. Upon successful download, the phone starts installing the application. When installed successfully, the phone should display "Run <Application> ?" with YES & NO options for the soft keys.

If you are planning to download more games, select "NO" and follow steps 8-10 again.

All downloaded applications should be listed under the "Games & Apps" menu item.

Determining the Com Port Used By The Phone When Using A USB cable

When connecting your phone to your PC via USB, the com port used is not obvious. The following steps can be used to determine which com port is being used:

- 1) Power up the phone.
- 2) Connect the USB cable to the phone.
- 3) Right click on My Computer.
- 4) Click on Properties.
- 5) Select the 'Hardware' tab.
- 6) Click on Device Manager.
- 7) Your phone should be detected as a Modem (ie. Motorola USB Modem). (In the case where the phone is detected as a USB Modem but is not working properly ie. has a question mark beside it, the computer needs to be rebooted and steps 1-7 should be followed again)
- 8) Right Click on "Motorola USB Modem". Select Properties.
- 9) Select the 'Advanced' tab.
- 10) Click 'Advanced Port Settings'.
- 11) Note down the COM port number.

MIDlet-Jar-URL Path

Before you can download a MIDlet program to a phone, you must verify that the JAD file attribute MIDlet-Jar-URL is in the correct format. Currently, MIDway does not support JAR file paths. Any attempt to download an invalid JAD file to a phone will result in a JAR download error.

Below are examples of incorrect JAR file paths and a correct one.

WRONG

MIDlet-Jar-URL: C:\Projects\Java\WirelessExample\HelloWorld.jar
MIDlet-Jar-URL: file://C:/Projects/Java/WirelessExample/HelloWorld.jar

RIGHT

MIDlet-Jar-URL: HelloWorld.jar

NOTE: By default, CodeWarrior Wireless Studio auto-generates complete JAR paths in the JAD file. This means that all JAD files created by CodeWarrior Wireless Studio must be edited.

Common Issues

- 1) Sometimes after inserting a USB cable after selecting the "Java App Loader" menu item, the phone does not display "JAL Link is Active"

This issue could be due to:

- a) your phone not being detected properly (Broken Modem)
- b) your phone not being detected as a Motorola Composite Device.

For a) reboot the computer and for b) power cycle the Phone.

- 2) If you encounter any download errors, check these areas:

For JAR download errors, common causes include:

- Failure to remove the JAR file path from the MIDlet-Jar-URL attribute field in the JAD file

- Ensure that the JAD and JAR files are located in the same directory

If the JAR file is rejected, common causes include:

- Verify that common JAR manifest and JAD attribute field contents are identical
- Ensure that the MIDlet-Jar-Size attribute field contains the correct JAR size in bytes

3) MIDway displays the error message "Timer Expired". This happens when the communication link between the phone and MIDway is broken. In this case repeat steps 2-10 above in the "Steps to Download MIDlet" section.

4) Ensure that the battery is charged (it is not necessary to be fully charged though).

Debug Log

Debug information is provided in MIDway through the "Debug Log" tab. This log is especially useful when a midlet fails to load and reports an error such as "Application Error". This log may be saved into a text file by using the "Log->Save Log As..." menu item.

Limitations

It is not possible to download a midlet through Bluetooth, Midway does not support this feature.