

JW-Palm Instructions

12 December 2006

The JW-Palm module is designed to let you score behavior on a Java equipped PDA with an integrated keypad or an external keypad, and then transfer it back to a laptop or desktop able to run JWatcher 1.0 for processing using JWatcher's algorithms. It was developed to work in the Palm OS, which runs a variety of handheld devices and phones (we tested it extensively on a Tungsten C and on the Palm simulator running on a PC). It will work particularly well if your ethogram is simple because the screen size limits the number of keys that are displayed. However, it will accept key entries that are not displayed. When scoring, it works equally well using the touch screen keypad and a pen.

WARNING: This is a somewhat clunky beta-release; the program works well, but it's a chore to install it to enable you to transfer files. We have released it because it may be very useful to you. At this point there will be no additional development or un-paid support. Use it at your own risk.

Installing and setting up JW-Palm

Before you begin, you must have:

- 1) A Palm OS equipped PDA or other device with a keypad or external keyboard.
- 2) A way to transfer the files between a desktop/laptop computer and the PDA
 - a. You can do this if both devices are wireless and you can transfer files through a wireless hub running off your main computer. You must be in the same subnet in order to transfer files wirelessly.
 - b. You can also purchase The Missing Synch (www.markspace.com). This \$40 software allows you to mimic a web-link and transfer files through the Palm's cradle. It works flawlessly on a Mac OS 10.4 machine; they sell a Windows version.
- 3) Palm's HotSync software installed (and/or The Missing Synch). You must have a named Palm account (e.g., mypalm).
- 4) IBM Java Virtual Machine installed on your Palm. If you don't have it, you can download J9JavaVMMidp20.prc from www.palm.com/us/support/jvm
- 5) JWatcher Palm Suite (see link from your installer). This installer sets up the Apache Tomcat web server on your machine. This web server is required to transfer files to and from your Palm. Also with this installer you will get the JWPalm.Prc file you need to install on your Palm (see instructions below).

To install JW-Palm

- 1) Download and install the appropriate version of JW-Palm to your desktop or laptop computer. Uncompress it.
- 2) There are three ways that you could transfer the file to the Palm.
 - a. Wirelessly: double click on the JWPalm.prc file. HotSync will prompt you on which account you want it to go. HotSynch your Palm. You should be able to see JW icon on your program list.
 - b. Install it as you would any other Palm software by using your PalmOne Quick Install application.
 - c. Using the Missing Synch: drag the JWPalm.prc file to the Missing Synch installation window. HotSynch your Palm. You should be able to see JW icon on your program list.

To configure IBM JVM (J9)

The JW Palm program is written in Java. Thus, Java must be installed and properly configured on your computer.

- 1) Select Preferences option on the main screen of your Palm.
- 2) Select IBM Java VM.
- 3) Check "Use double buffering".
- 4) Check "Use High resolution coordinates".
- 5) Set Memory Maximum to 32MB.
- 6) Set Maximum Java Thread to 32KB.

To Install the JW Manager

The JW Manager is a program that allows your main computer and the Palm to communicate through Apache Tomcat web server. It must be properly configured for file transferring. NOTE: each time you wish to transfer files, you must re-establish the connection.

- 1) Install JW Palm Suite.
- 2) On Windows, after installing JW Palm Suite, go to Start >> Program Files >> JW Palm Suite >> and click "Start JW Manager". This action should start Apache Tomcat. You should see a dos window open where you will be able to see if files are being sent and received. If this window pops up but immediately shuts down, please go to your system settings and remove the System Variable JAVA_HOME or modify it so that it is a blank string.

To configure JW-Palm file transfer on Windows

For this to work you must have established a way to connect to the Internet.

NOTE: You must re-establish the connection using Apache Tomcat and re-configure your Palm to communicate with it each time you want to transfer files.

- 1) Click on JW-Palm icon on your Palm. The first screen (if you have not yet configured JW-Palm) will be an alert telling you to configure host.

You must configure it using the option "Configure Host" on JW-Palm's Main Menu.

- 2) Click on Configure Host and set the Host IP (this should be the IP address of the main computer that you wish to transfer files to and from).

To configure JW-Palm on a Macintosh

For this to work you must have established a way to connect to the Internet.

NOTE: You must re-establish the connection using Apache Tomcat and re-configure your Palm to communicate with it each time you want to transfer files.

- 1) Click on JW-Palm icon on your Palm. The first screen (if you have not yet configured JW-Palm) will be an alert telling you to configure host. You must configure it on the option "Configure Host" on JW-Palm's Main Menu.
- 2) Click on it, and set the Host IP (this should be the IP address of the main computer that you wish to transfer files to and from).
- 3) Set the JW-Palm port to 5928.
- 4) Then, exit JW-Palm and while still on your Palm, go to Preferences, Network, and select:
 - a. 'Windows RAS' for the Service
 - b. Ensure that 'Cradle/Cable' is connected if you're using the Missing Synch
 - c. Click Done
- 5) On your Macintosh, change the "JW Palm Suite" Folder name in the Applications folder so that it does not have spaces (i.e., change it to JWPalmSuite).
- 6) Enter the mac's Terminal mode and use the following Unix commands.
 - a. `cd /Applications/JWPalmSuite/apache-tomcat-5.5.20/bin/`
 - b. change permissions to following files:
 - i. `chmod 775 ./shutdown.sh`
 - ii. `chmod 775 ./startup.sh`
 - iii. Keep the terminal window open while transferring files.

You should now have established a connection and should now be able to transfer files to and from the Palm.

From now on, in the Terminal mode, all you need to do is:

`cd /Applications/JWPalmSuite/apache-tomcat-5.5.20/bin/` and type `./startup.sh` and Apache Tomcat will start. To shut it down, type `./shutdown.sh`. If this doesn't work, re-do step 6 and stop there.

NOTE: It is essential that the machine where you are running Apache (JW Palm Suite) and the Palm need to be on the same LAN. On the Mac, if you are using Missing Sync you must be running it on the same computer you are connecting to with the Palm.

NOTE: You may have to also establish a JWatcher Port on your Mac. To do so, go to System Preferences/Sharing/Firewall. Click New, then specify Other port will have a TCP number 5928, a UDP number 5928, and name this port JWatcher. Back in the Firewall set, click JWatcher to allow access.

Using JW-Palm

The normal workflow to score behavior on a PDA is to

- 1) Create a focal master file using your main computer.
- 2) Ensure that your main computer is set to communicate with your Palm (this requires you to get Apache Tomcat up and running on your main computer, and to set the preferences so that your Palm communicates with it properly).
- 3) Transfer your previously created *.fmf to the Palm.
- 4) Score behavior on the Palm either with or without the *.fmf file.
- 5) Edit your *.dat files on the Palm.
- 6) Export your *.dat files to your main computer.
- 7) Analyze your data on your main computer.

Transferring a focal master file to the Palm

- 1) Once you have created a *.fmf file, move it to your desktop. Ensure that your Palm device is set to communicate with your computer (either through a wireless link or through the cradle).
- 2) Launch the Palm application on your PDA by clicking on the icon.
- 3) Select Manage & Transfer Files. Be sure that your host is properly configured (this must be done each time you re-launch the Palm).
- 4) Select Import Focal Master files and click OK to permit JWatchMidlet use airtime to send or receive an http connection.
- 5) Once the connection is established, a list of .fmf files will be listed. Select which ones you wish to transfer and hit Import FMFs. If the Palm freezes, restart it and start again. Otherwise, it should quickly import the files.
- 6) The ... icon allows you to navigate back to the main menu.

Performing a data capture on the Palm

- 1) Select Perform Data Capture
- 2) Name your focal data file and select which *.fmf file you would like you use. Select Next.
- 3) Answer any relevant questions. When finished, select Next.
- 4) Modify the time, count up /down, and sound on/off, if required. When ready, select Start. You can look at the behavior key codes and their descriptions (that you have entered using JWatcher 1.0 when creating your *.fmf) by clicking Behaviors. Note: this window must be closed prior to scoring behavior.
- 5) Use the pen to tap the pre-defined keys, or use a key-pad to define new keys. You will see the last key pressed on the screen.

Editing a data file captured on the Palm

- 1) Select Edit data and then select the file you wish to edit. Select Next.
- 2) Click in a box with the wand and use the keypad to correct the entry. Click OK.
- 3) When finished, select Save or Save As.

NOTE: Before analyzing these files on your main computer, you must edit them one more time to remove the 'E' that will precede the EOF key. Alternatively, you may chose to ignore 'E'.

Exporting a data file captured on the Palm to your main computer

- 1) From the main menu, select Manage & Transfer files.
- 2) Ensure that your host is properly configured and then select Export Focal Data files
- 3) Select the files you wish to export and click Export DATs.
- 4) Be sure to edit these files to remove the E that precedes the EOF before analyzing them or be sure to set up your *.faf to ignore the 'E'.

Other functions

Deleting Focal Data files and Focal Master files is straightforward.