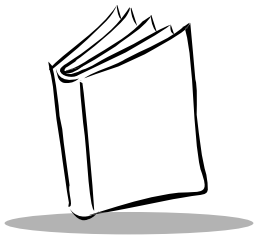


PDT 7200/7500 Series Addendum

Overview

This addendum provides an update to the Terminal Configuration Manager (TCM) documented in the *PDT 7200 Series Product Reference Guide* and *PDT 7500 Series Product Reference Guide*. TCM is a Symbol SDK utility designed to assist you in setting up the FLASH Disk image. TCM simplifies building and downloading hex images to the PDT 7200/7500 terminal.

In TCM, you create a *script* that contains the information (commands to copy files) for building the image. TCM works with directory windows which display the directory structure of your script and the source directories, files, and scripts from which you pull components. You can open multiple scripts, drag and drop items from a drive/directory to the script, rename and delete files in the script, etc. Upon building the image, TCM adds all the files, directories, and scripts referenced in the script to the image.

The SDK includes a number of standard scripts and demos/samples for you to use as a base for creating your own scripts. These scripts can be found in the SYMSDK\SCRIPTS directory.

Note: *Before you create a script to build a hex image, identify the files required (system files, drivers, applications, etc.) and locate the files' source directories to make the script building process easier.*

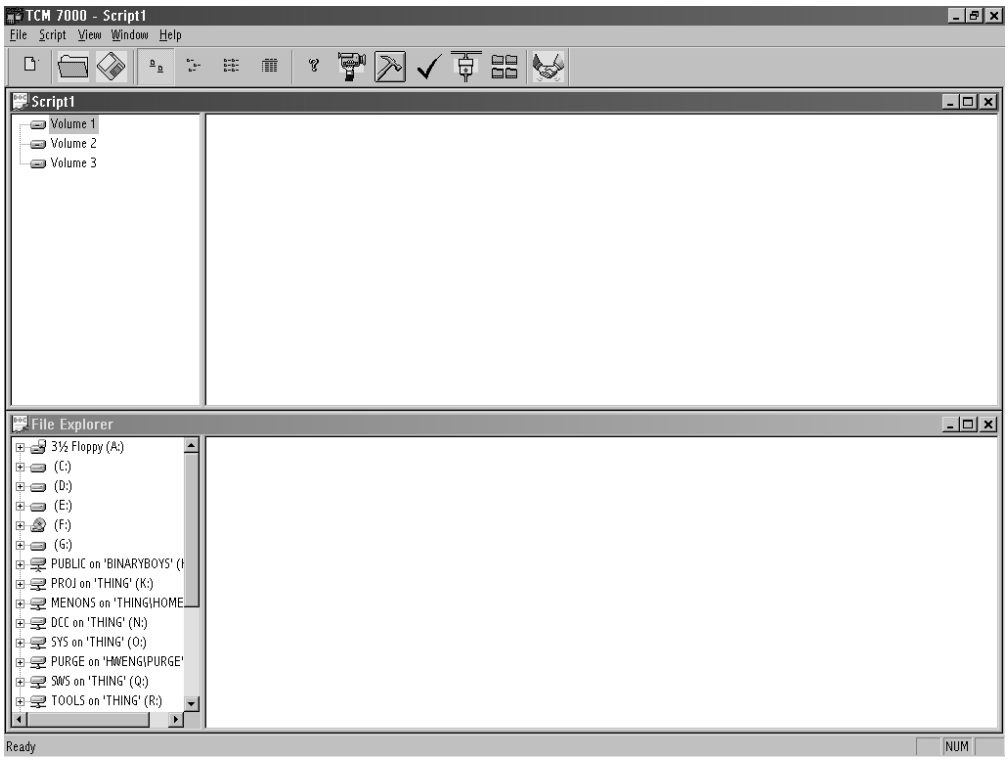
The required processes for building a hex image in TCM include:

- Starting TCM
- Creating or modifying a script
- Building the hex image
- Sending the hex image.

Each process is described in this addendum.

Starting Terminal Configuration Manager

To start TCM, double click on the TCM icon in the SYMSDK group. The following screen appears, displaying two directory windows; Script1 and File Explorer. Each directory window is split; the left half (or *pane*) of the window displays the directory tree for the current drive, and the right half displays the directory contents for the current drive.



The following table lists the components of the TCM start-up screen.

TCM Screen Components

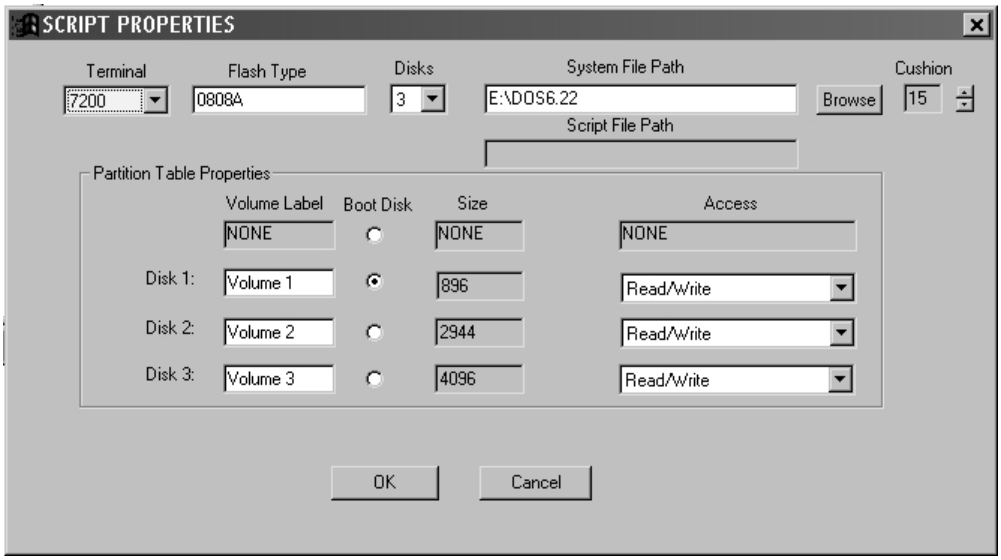
<table>
<tr><th>Component</th><th colspan="4">Description</th></tr>
<tr><td>Script Window</td><td colspan="4">Associated with a script file containing the information to create a Flash Disk image. This window is the target window, or the primary TCM window in which you can create a script or change a script file's contents by copying, deleting, and renaming files and directories. More than one script window can be open at a time.
The Script Window consists of two panes, the Directory Tree Pane on the left and the Directory Contents Pane on the right. Subordinate directories and files of each volume are listed in the Directory Contents Pane.</td></tr>
<tr><td>File Explorer</td><td colspan="4">A read-only source window for files and/or directories to include in the script being built.</td></tr>
<tr><td rowspan="6">Tool Bar</td><td colspan="4">Contains the tools, illustrated below, for taking action on a script.</td></tr>
<tr><td>  </td><td>Create a new script file.</td><td>  </td><td>Check script for existing files.</td></tr>
<tr><td>  </td><td>Open a script file.</td><td>  </td><td>Select the hex image to load.</td></tr>
<tr><td>  </td><td>Save a script file.</td><td>  </td><td>Tile windows.</td></tr>
<tr><td>  </td><td>View script properties.</td><td>  </td><td>Build and send the hex image to the terminal.</td></tr>
<tr><td>  </td><td>Build a script.</td><td></td><td></td></tr>
</table>

Defining Script Properties

Before a script is created, the script properties must be defined. This defines the type of terminal, type of flash type, number of disks being created, the memory configuration of each disk volume.

To define the script properties:

1. With TCM open, click on the Script Window to make it the active window.
2. Under the script menu, select the Properties option.
   OR
   Click on  from the tool bar. The Script Properties window displays.



3. Under the Terminal pull-down menu, select 7200 or 7500.
4. In the Flash Type field, enter the type of flash chip installed in your unit, as indicated by booting into IPL.
5. Under the Disks pull-down menu, select the number of disk volumes to be created.

Note: *The options available under the disks pull-down menu changes depending on the flash type. Some flash types only have one option for the number of disk volumes, others have two options.*

6. If you have selected four volumes under the disk pull-down menu, you have the option to change the memory configuration of the third and fourth volumes. To do so, click on the up or down arrow for either of the volumes, until the memory configuration of each is set to the desired value. You will notice that as you change the values for one of the volumes, the other volume is automatically changed accordingly.
7. Decide which volume will be the boot disk, and click on the boot disk box next to that volume.This disk becomes the C: drive.
8. For each disk volume, determine the Read/Write access option.
9. The current path for your operating system source displays in the System File Path field (MSDOS6.22 for DOS terminals). If this is not the correct path, click on the Browse button and navigate to the correct directory.
10. The Script File Path displays the path of the selected script file.
11. Select a Cushion percentage from the Cushion pull-down menu to specify the percent of flash reserved for cushion. Choosing a higher number reduces disk storage space, but also increases write performance on fragmented disks or disks becoming full. To speed the writing process, select as high a number as your storage needs permit (up to 25%).

Creating the Script for the Hex Image

On start-up, TCM displays the screen shown on page 2, with the Script1 window and File Explorer window pointing to the SYMSDK\SCRIPTS directory and the SDK7X00 directory. The Script1 Window directory pane displays three volumes: Volume1, Volume2, and Volume3. Depending on the type of flash chip you have, the number of volumes may change. Files can be added to each of the volumes.

- Create a new script file or open an existing script
- Drag and drop existing files and directories to that script
- Set the script parameters
- Save the script
- Review and modify the script.

Each process is described in the sections that follow.

Open a New or Existing Script

Scripts are created in the Script Window.

To open a new script:

- Choose New from the File Menu, OR
- Click on  from the tool bar.

To open an existing script (e.g., a standard script provided in the SDK):

- Choose Open from the File Menu and select the script file name, OR
- Click on  from the toolbar and select the script file name, OR
- Double click on an existing script in the Script Browser window.

Note: *If you open and make changes to an existing script, saving the changes writes over the existing script. If you wish to use an original or Symbol-supplied standard script as a base and save the changes in a new script, use Save As instead of Save after making the changes.*

Copy Components to the Script

Copy files from the File Explorer Window to the Script Window using the drag and drop method with the mouse or the Copy command.

To copy *files or directories* to the script being generated:

1. Click on the File Explorer Window to make it the active window.
2. Click on the source directory in the Directory Tree Pane. TCM displays the directory contents in the Contents Pane.
3. Click on the file(s) and/or directory in File Explorer.

Note: *Optionally, use the standard Windows Shift+Left-click and Control+Left-click features to select multiple files and directories.*

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4. Drag and drop the selected file(s) and/or directory from File Explorer to the target directory in the Script Window.

   OR

   Click on the target directory and select the File Explorer Copy icon from the toolbar.

Save the Script

To save the changes to a new script:

1. From the File menu, choose Save As.

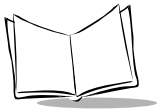
   OR

   On the toolbar, click on  .
2. Enter the path and filename. TCM appends a .TCM extension to the script.
3. Choose the OK button.

Note: *If you save an untitled script, TCM by default saves the script to the directory that the Script Browser is pointing to.*

To save changes to an existing script:

- From the File menu, choose Save, OR
- On the toolbar, click  .



Note: *If you open and make changes to an existing script, saving the changes writes over the existing script.*

If you wish to use an original or Symbol-supplied standard script as a base and save the changes in a new script, use Save As instead of Save after making the changes.

Building the Image

As part of the build, TCM performs a check on the script which verifies that all files referenced in the script exist. If the image is bootable, TCM verifies that the boot files are available.

Note: *Performing a check is more important for previously existing scripts to ensure that files referenced in the script are still in the designated locations.*

To check a script:

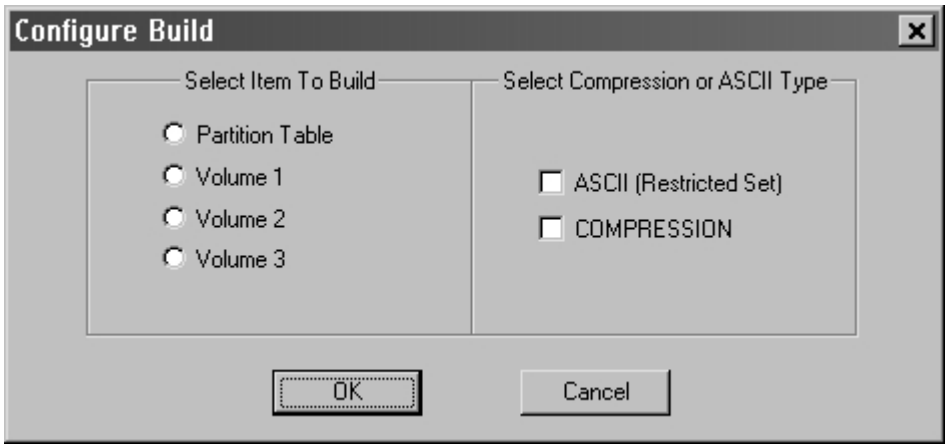
1. In the Script Window, select the script.
2. Save the script, if not already saved.
3. From the Script Menu, choose Check.

   OR

   On the toolbar, choose  .
4. TCM verifies that files referenced in the script exist on available drives and lists an error message in the Errors found box for any missing files.
5. Choose the OK button to exit.

To build a script:

1. In the Script Window, select the script to be built.
2. From the Script menu, select Build.
   OR
   On the toolbar, choose  . The Configure Build window appears.

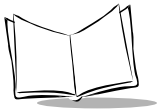


3. Select whether to build the partition table, or one volume.
4. Select ASCII format for your hex image, or Compression, which reduces the size of most hex images in order to speed downloading. Click OK.
5. TCM performs a check. If the script is has no errors, TCM proceeds with the build.

If the Build Fails

If the build fails, TCM displays a message indicating which file(s) are missing.

If the total amount of flash required by the script exceeds the image size, a TCM error results and the build fails. To correct this, reduce the number of files in the volume, or make the disk non-bootable. Refer to *Defining Script Properties* on page 4 for more information on setting the image size appropriately.



Sending the Hex Image

Once the hex file is built, you are ready to download it to the terminal. A Hex image download requires both TCM and a program loader stored on the terminal. The terminal comes with a program loading utility, Initial Program Loader (IPL), stored in the terminal's write-protected flash. To run IPL, the terminal must be inserted in a cradle or connected to a host PC by direct serial connection.

Loading the BIOS

Uploading a new BIOS erases only the 128K of Flash where BIOS is stored. While IPL is updating the BIOS, the BIOS image is saved in memory until the entire BIOS is received and verified. The Flash Disk image and application storage area are unaffected.

Saving the Script

If you made changes to the script since last saving it, save the script again.

Connect The Terminal and Development PC

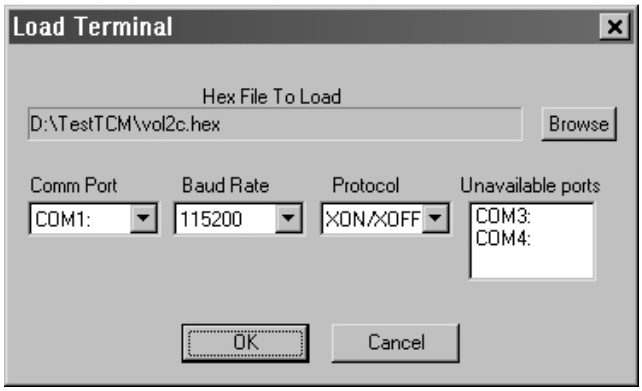
To send the hex file to the terminal, first link the terminal and development PC by one of the following devices:

- Direct serial link
- Cradle (refer to Chapter 3, *Cradle Setup and Operation* in the *Product Reference Guide* for more information on setting up the cradle).

Begin the Send in TCM

In TCM on the PC:

1. Select the script.
2. From the file menu, choose Load Terminal.
   OR
   On the toolbar, choose  . The Load Terminal screen displays.



3. If the correct hex file is not displayed in the Hex File to field, click on the browse button and navigate to the correct hex file to be downloaded.
4. Click on the Comm Port pull-down menu and select the COM port being used. Ports already in use display in the Unavailable Ports field.
5. Click on the Baud Rate pull-down menu and select the appropriate baud rate. Your options are 2400, 4800, 9600, 19200,38400, 57600, 115200.
6. Click on the Protocol pull-down menu and select the appropriate protocol. Your options are: RTS/CTS and XON/XOFF.

You may now return to the *Product Reference Guide* for information on running the terminal's Initial Program Loader (IPL).

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