MOTOROLA

Instruction Manual Revision

1. GENERAL

This revision details changes that have taken place since the printing of your manual. Use this information to update your manual.

The following document refers to non-Motorola products which may be used for loading the new system image for MW520, and their web sites. Motorola makes no recommendations or endorsements to any of the non-Motorola products and services. References to non-Motorola products or services are provided "as is" (for information purposes only) and do not constitute an endorsement or a recommendation. All non-Motorola trademarks, brands, and names mentioned below are the property of their respective owners.

2. SERVICE MANUAL AFFECTED

98-08901C31-O, *Mobile Workstation 520 Model F5203 Application Developer's Guide*

3. INTRODUCTION

This documentation details how to load a new system image on a MW520 - Model F5203. The three different methods for loading a system image on a device are: PCMCIA ATA HARD DRIVE card, Network, and Parallel Port. The selection of which method to use is left to the individual administrator. The following sections will describe how to use each one of these methods.

4. MATERIALS AND SOFTWARE NEEDED

Once a preferred method for loading a system image has been selected, the appropriate materials, as described below, should be gathered.

4.1   Materials for PCMCIA ATA HARD DRIVE Card Method

- One bootable PCMCIA card Type II. Recommended cards are Calluna 260/650MB HD (Type II), SanDisk ATA HARD DRIVE card 440MB. (For more information on the products, go to the appropriate web site referred to at the end of this document.)

- Version 6.01 of the Ghost application - available from Symantec Corporation. (This should be installed on the ATA HARD DRIVE card.)

- A copy of the image to be downloaded onto the MW520 unit. This should be copied onto the ATA HARD DRIVE card.

- A PC with DOS 6.22, to create the bootable ATA HARD DRIVE card.

4.2   Materials for Network Method

- A networked host PC (Pentium 166MHz or above)

- A PC with Microsoft Windows 95/98 or DOS 6.22 to create the bootable floppy disk.

- An Ethernet PCMCIA card (an example is a 3Com 3CCFE574BT).

- A USB floppy drive (an example is from Y-E DATA, Inc.)

- A bootable floppy prepared with the network cards drivers and the relevant setting to a user's network. (The preparation process is described below.)

- Version 6.01 of the Ghost application - available from Symantec Corporation. (This should be installed on the ATA HARD DRIVE card in a shared directory.)

- A copy of the image to be downloaded onto the MW520 unit. (This should be in a shared directory on the networked host PC.)

4.3   Materials for Parallel Port Method

- A host PC (Pentium 166MHz or above) with a parallel port and a <u>Microsoft Windows 9x</u> system.

- A USB floppy drive (an example is from Y-E DATA, Inc.)

- One of the following two bootable media:

    - A bootable floppy and a USB floppy drive (an example is from Y-E DATA, Inc.)
    - A bootable ATA HARD DRIVE card
- A standard parallel crossover cable (male - male)

- Version 6.01 of the Ghost application - available from Symantec Corporation. (This should be installed on the host PC <u>and</u> on the bootable media.)

- A copy of the PREGHOST utility. (This is available in the recovery CD or from Motorola at FTP:// MW520.MOT.COM). This should be installed on the bootable media.

- A copy of the image to be downloaded onto the MW520 unit. (This should be on the host PC.)

5.   IMAGE INSTALLATION VIA PCMCIA ATA HARD DRIVE

ATA HARD DRIVE card Preparation Procedure:

Step 1.   Insert the ATA HARD DRIVE card into a computer with DOS 6.22 and type the following command: **format <PC drive letter> /s**

Step 2.   Edit the config.sys in the root of the ATA HARD DRIVE card so that it contains the following strings:

device=a:\himem.sys

Step 3.   Edit the **autoexec.bat** in the root of the ATA HARD DRIVE card so that it contains the following strings:

@echo off

prompt pg

smartdrv.exe

Step 4.   Make sure that the following files are in the root directory of the ATA HARD DRIVE card: **himem.sys** and **smartdrv.exe**. If they are not, they must be copied to the root directory of the ATA HARD DRIVE card from a PC with MS DOS 6.22.

Step 5.   Copy the GHOST.EXE and the MW520 system image (*.img or *.gho) files to the ATA HARD DRIVE card.

5.1   Image Installation Procedure

Step 1.   Ensure that the MW520 unit is turned off.

Step 2.   Insert the ATA HARD DRIVE card into the lower PCMCIA card slot of the MW520 unit.

NOTE

The orientation of the PCMCIA slot on the MW520 unit is upside down from the orientation of previous versions of MW520 units.)

Step 3.   Power-on the MW520 unit and launch **GHOST.EXE** from the DOS command prompt.

Step 4.   From within GHOST, choose **Local -> Disk -> From Image**.

Step 5.   Choose the image file you need.

Step 6.   Choose target hard drive (number 2, not ATA HARD DRIVE card).

Step 7. Press **OK** to size, and then **Yes** to proceed.

Step 8. Wait until the system image loading process is completed, then restart the computer.

6.   IMAGE INSTALLATION VIA NETWORK

6.1   Floppy Preparation Procedure

Step 1. Insert a floppy disk into a computer with DOS 6.22 and Microsoft Windows 3.11 for Workgroups. Access a DOS window and type the following command: **format <PC drive letter> /s**

Step 2. Edit the **config.sys** in the root of the floppy disk so that it contains the following strings:

```
device=a:\himem.sys /testmem:off

shell=a:\command.com /p /e:800

DOS=HIGH,umb

FILES=30

buffers=40

STACKS=9,256

LASTDRIVE=Z

device=a:\mswgcn\protman.dos /i:a:\mswgcn

device=a:\mswgcn\workgrp.sys

device=a:\mswgcn\elpc3.dos (or other name of your network card MS-
DOS driver)
```

Step 3. Edit the autoexec.bat in the root of the floppy disk so that it contains the following strings:

```
@echo off

prompt $p$g

PATH=a:\mswgcn

a:\mswgcn\net start
```

Step 4. Make sure that the following file is in the root directory of the floppy disk: **himem.sys**. If it is not, it must be copied from the root directory of the PC used to format the floppy.

Step 5. Using a PC with Microsoft Windows 3.11 for Workgroups, install Microsoft Workgroup Client for Network (MSWGCN) to the following subdirectory of the floppy drive: **\mswgcn**.

Step 6. Make sure that the DOS PCMCIA network card driver is installed in the following subdirectory of the floppy disk: **\mswgcn**.

Step 7.   Edit the **protocol.ini** in the **\mswgcn** directory of the floppy disk, so that it contains the following strings:

```
[network.setup]
version=0x3100
netcard=ms$elnk3,1,MS$ELNK3
transport=ms$netbeui,MS$NETBEUI
lana0=ms$elnk3,1,ms$netbeui

[protman]
DriverName=PROTMAN$
PRIORITY=MS$NETBEUI

[MS$ELNK3]
DriverName=ELpc3$
```
             (or name of your network card driver: elpc3.dos -> elpc$)
```
IOADDRESS=0x300
MAXTRANSMITS=6
pcmcia_enabler=yes
INTERRUPT=0xB

[MS$NETBEUI]
DriverName=netbeui$
SESSIONS=6
NCBS=12
BINDINGS=MS$ELNK3
LANABASE=0
```

6.2   Image Installation Procedure

Step 1.   Ensure that the MW520 unit is turned off, that the PCMCIA network card is installed in the unit, and that it is connected to a network. (Note: The orientation of the PCMCIA slot on the MW520 unit is upside down from the orientation of previous versions of MW520 units.)

Step 2.   Make sure that you have opened file sharing to the directory with the image file on the networked host PC. Finally, ensure that the Ghost application is on the host PC and that the PC is on the same network with the MW-520 unit.

Step 3. Connect the USB floppy to the MW520 unit and insert the bootable floppy disk that was created according to the "Floppy Preparation Procedure" section included above.

Step 4. Power-on the MW520 unit and enter **NET** from the DOS command prompt. You should see a color interface. Use it to map the network location on the networked host PC to the network drive on the MW-520 unit, for example: drive "X" to \\OurFileServer\images.

Step 5. Exit the **NET** program and change directories to the network drive.

Step 6. Launch **GHOST.EXE** from the DOS command prompt.

Step 7. From within GHOST, choose **Local -> Disk -> From Image**.

Step 8. Choose the image file you need from the networked PC's shared directory.

Step 9. Press **OK** to "Target Drive", press **OK** to size and then **Yes** to proceed.

Step 10. Wait until the system image loading process is completed, then restart the computer.

7. IMAGE INSTALLATION VIA PARALLEL PORT

NOTE
When installing an MW520 unit system image via a parallel crossover cable and the parallel port, it is very important that the MW520 unit be configured as **MASTER**.

NOTE
The MW-520 unit parallel port is by default configured for ECP. Make sure that both the Host PC parallel port and the MW-520 unit parallel port are both configured the same.

As noted above, a bootable media is required. This can be either a bootable PCMCIA ATA HARD DRIVE card, or a bootable floppy and a USB floppy drive. The choice of which media to use is left to the individual administrator.

7.1 Floppy Preparation Procedure

Copy Ghost.exe, and Preghost.com into the floppy.

7.2 PCMCIA Preparation Procedure

Insert a PCMCIA ATA HARD DRIVE card into the computer:

Copy Ghost.exe and Preghost.com into the PCMCIA ATA HARD DRIVE card.

7.3   Image Installation Procedure

Step 1. Ensure that the host PC (with Microsoft Windows 9x) has the GHOST.EXE program and the MW520 unit system image (*.img or *.gho) file.

Step 2. Before powering-on the MW520 unit, connect the MW520 unit to the Microsoft Windows 9x host via the parallel crossover cable.

Step 3. Power-on the MW520 unit and enter the **BIOS Setup** by pressing the **F2** key when the Motorola logo is displayed.

Step 4. Open the **POWER** menu item and set the **Power Saving** setting to **Disabled**.

Step 5. Press the **F10** key and select **Yes** to confirm changes.

Step 6. Before the MW520 unit is restarted, either connect the USB floppy drive (with the bootable floppy inserted), or insert the ATA HARD DRIVE card into the MW520 PCMCIA drive.

Step 7. Execute the **PREGHOST.EXE** utility on the MW520 unit from the DOS prompt. Wait until it is completed.

Step 8. Launch the Ghost application on the MW520 unit. Choose LPT -> Master.

Step 9. Launch the Ghost application on the host PC. Choose LPT -> Slave.

Step 10. Wait until the connection is established (one second).

Step 11. Choose Local -> Disk -> From Image

Step 12. Choose the image file you need.

Step 13. Press OK to the target drive, OK to size, and then Yes to proceed.

Step 14. After the image is loaded, restart the computer.

Step 15. Open Bios Setup (by pressing the F2 key when the Motorola Logo is displayed).

Step 16. Press the F9 key (Setup defaults) and confirm changes (by selecting the Yes item).

Step 17. Press the F10 key and confirm changes (by selecting the Yes item).

Step 18. Restart your system.

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