



SOFTWARE UPGRADE INSTRUCTIONS

INSTALLING SOFTWARE RELEASE 9V126-01F IN THE 80224 PROCESSOR MODULE (FOR MODEL 2000 MOTION SENSOR)

February 2001 (Revised For CD June 2009)

DOCUMENT NO. SIG-00-00-25

VERSION A.1

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A. BACKGROUND

Safetran periodically releases enhanced application software for the Model 2000 Motion Sensor. The latest revision (identified as 9V126-01F) is described in Safetran Customer Service Bulletin 1-01. The following pages contain instructions for upgrading the application software in the 80224 Processor Module.

B. SOFTWARE RELEASE DISK

Date: 1-29-2001	Check Sum: 8CBA7E21E362
Product Name: 2000 MS	CSB: 1-01
Module Number: 80224	Disk P/N: 9V342-A01C
Memory Device: 9V126	Disk EDP No.: Z224-9V342-A010
Software Revision: 01F	

C. SOFTWARE VERSION IDENTIFICATION

The software version resident in the 2000 MS can be determined by one of two methods. In both methods, the software version is the second message displayed during the power-up/test cycle and appears for approximately two seconds. This latest version, F, is displayed as 9V126-01F.

The two methods are:

Method 1. Interrupt power to the MS (set the case **POWER** switch to **OFF** and then back to **ON**). Observe the MS display for the version.

NOTE

Interrupting MS power will activate the crossing.

Method 2. Momentarily remove the keypad from the MS case and then replace it. Observe the display for the version.

NOTE

Removing the MS keypad will **NOT** activate the crossing.

D. WHEN AND WHERE TO UPGRADE

The new software version may be uploaded into any 80224 module from a laptop computer in the field if so desired by the railroad.

NOTE

The new F-level software provides additional programming steps; however, the parameters covered by these steps are defaulted “OFF” or do not affect crossing operation. Therefore, any crossing upgraded to F-level software will operate as it did prior to the software upgrade once the previous application parameters (steps) listed on the history card are reprogrammed.

E. PARTS/TOOLS REQUIRED

- Laptop Personal Computer (DOS compatible) with CD drive
- RS-232 cable, 9-pin female to 9-pin male
- Safetran provided software release disk (9V342-A01C)
- Software Upgrade Instructions (document number SIG-00-00-25, Version A.1)

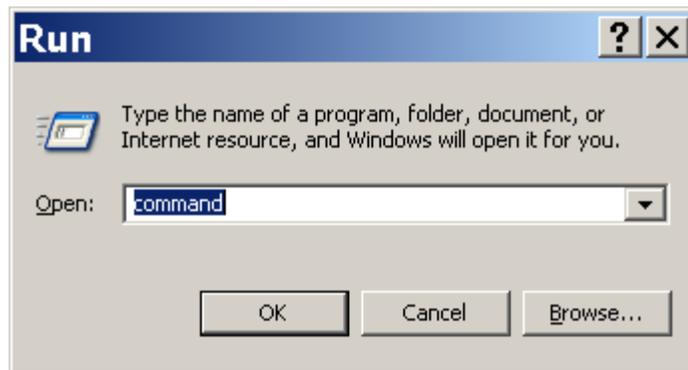
F. UPGRADE PROCEDURE

Step 1 **IMPORTANT! – Review the Program and Function Mode menus and compare the current system operating parameters (approach distance, frequency, etc.) with those recorded on the Application History Card. If necessary, update the history card for future reference.**

Step 2 Connect personal computer COM1 port to 80224 module 9-pin RS-232 connector using 9-pin female to 9-pin male cable (see figure 1).

Step 3 Install 9V342-A01C disk (supplied by Safetran) in appropriate computer drive.

Step 4 Exit to DOS or Windows® DOS shell. (Click **Start > Run** then type **command** in the **Open:** text field (see below). Click **OK** to display the DOS screen.)



```
C:\WINDOWS\system32\command.com
Microsoft(R) Windows DOS
(C)Copyright Microsoft Corp 1990-2001.
C:\>
```

NOTE

If DOS is not at the **C:\>** prompt as shown in the example above, type **CD** as shown below and then press the **Enter** key to display the **C:\>** prompt.

```
C:\WINDOWS\system32\command.com
Microsoft(R) Windows DOS
(C)Copyright Microsoft Corp 1990-2001.
C:\>CD\
C:\>
```

Step 5 At **C:\>** prompt type **D:**

NOTE

Substitute the correct drive letter designation if drive D is not the CD drive.

Step 5.1 Press the **Enter** key.

Step 6 At **D:\>** prompt type **LOADBOOT**

Step 6.1

Press the **Enter** key. The Setup screen displays (see figure 2).

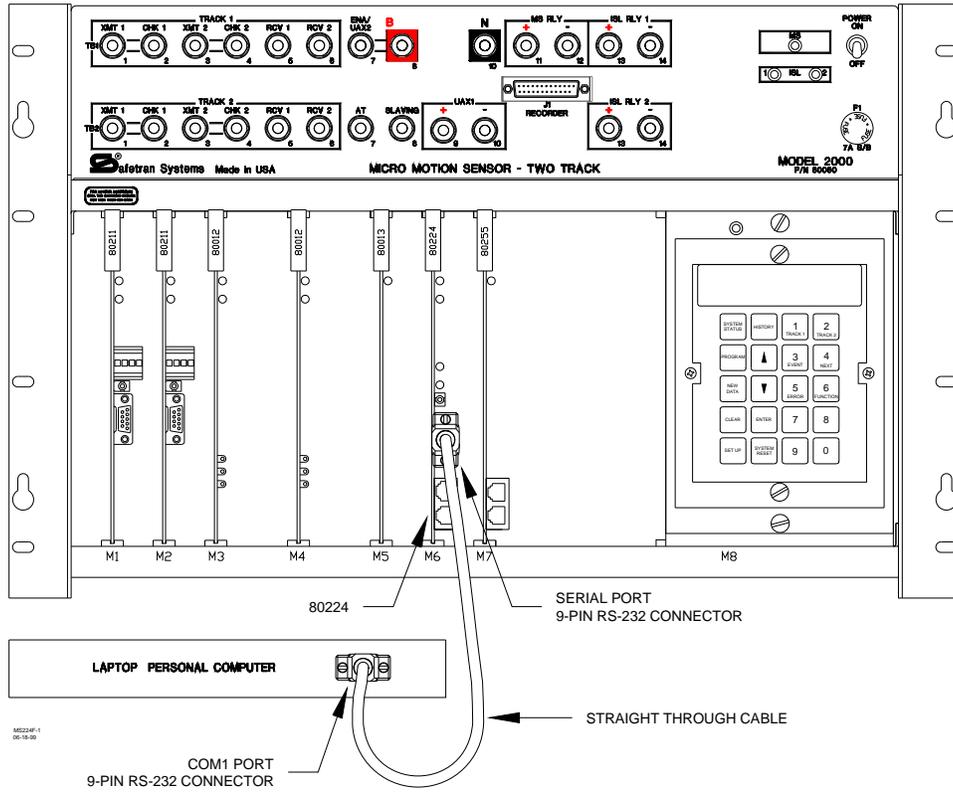


Figure 1
80224 Processor Module Serial Port to PC Interconnection Diagram



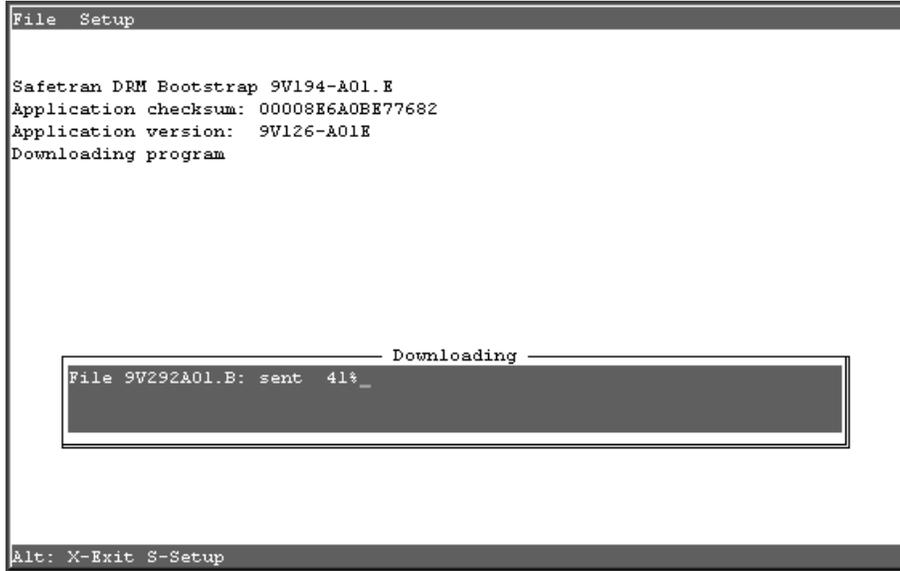
Figure 2
Processor Module Software Installation Setup

Step 7

Set the Motion Sensor **POWER** switch to **OFF**.

Step 7.1 Press and hold the Motion Sensor keypad **SET UP** key. While watching the PC display, set the Motion Sensor **POWER** switch to **ON**.

Step 7.2 Continue to hold the **SET UP** key until a **Downloading** window appears briefly within the Setup screen (see figure 3).



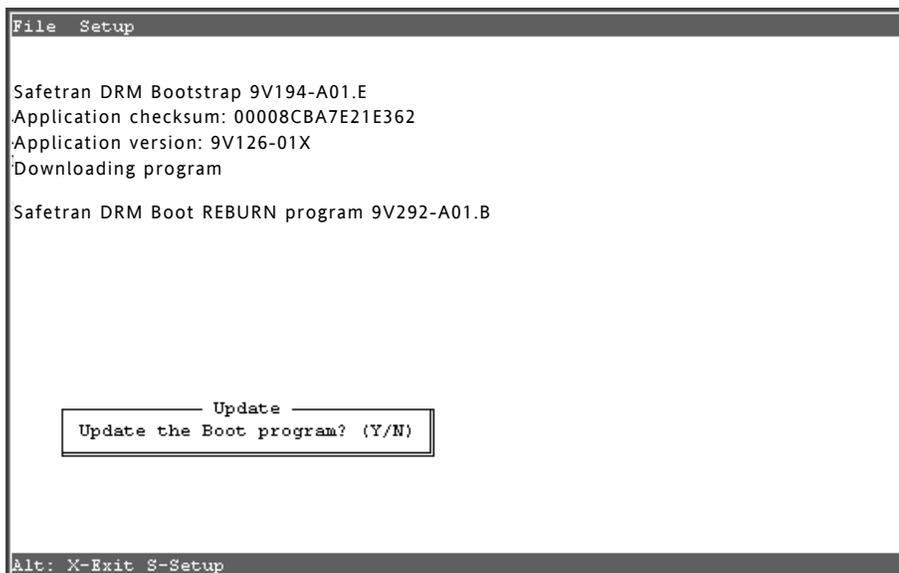
224F3.gif
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Figure 3
Boot Program Downloading Window

NOTE

Due to variations in version of currently loaded software, “Application version” shown in figure 3 is indicated as “01X”. Your display will indicate the actual version currently loaded.

At the completion of boot program downloading, an **Update** dialog box displays within the Setup screen (see figure 4).



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Figure 4
Boot Program Update Dialog Box

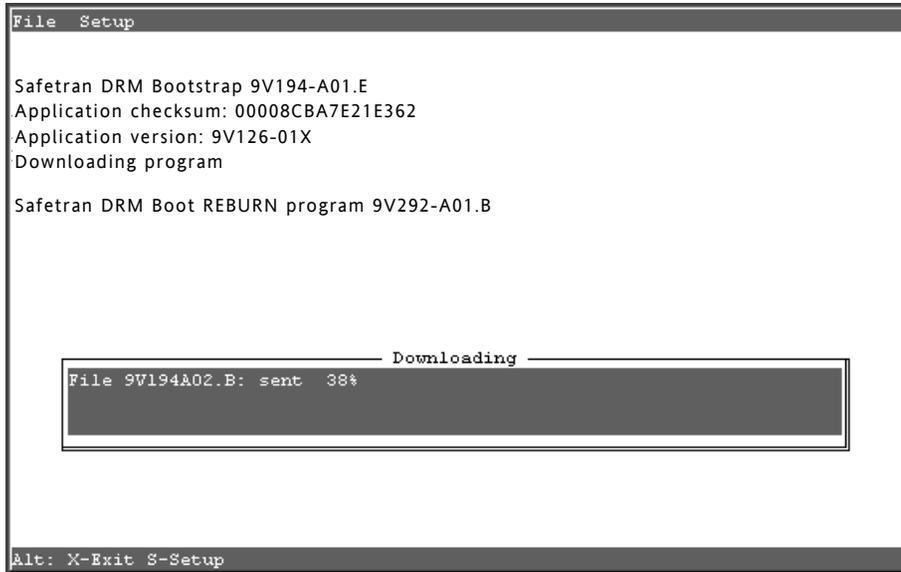
NOTE

Due to variations in version of currently loaded software, “Application version” shown in figure 4 is indicated as “01X”. Your display will indicate the actual version currently loaded.

Step 8

While watching the PC display, type **Y**.

A boot reburn program **Downloading** window appears in the Setup screen (see figure 5).



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Figure 5

Boot Reburn Program Download Window

NOTE

Due to variations in version of currently loaded software, “Application version” shown in figure 5 is indicated as “01X”. Your display will indicate the actual version currently loaded.

At completion of the boot reburn program download, the **Success** window displays within the Setup screen (see figure 6).



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Figure 6

Boot Program Update Success Window

NOTE

Due to variations in version of currently loaded software, “Application version” shown in figure 6 is indicated as “01X”. Your display will indicate the actual version currently loaded.

Step 9 Press any key.
The Setup screen closes and the DOS window displays.

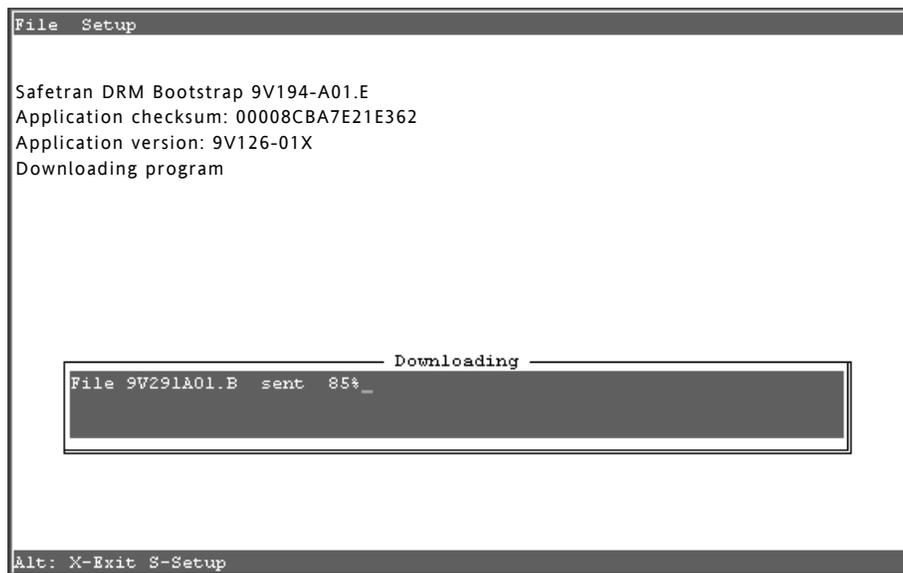
Step 10 At **D:\>** prompt type **INSTALL**.

Step 10.1 Press the **Enter** key.
The Setup screen displays (see figure 2).

Step 11 Set the MS **POWER** switch to **OFF**.

Step 11.1 Press and hold the MS keypad **SET UP** key. While watching the PC display, set the MS **POWER** switch to **ON**.

Step 11.2 Continue to hold the **SET UP** key until a **Downloading** window appears briefly within the Setup screen (see figure 7). Release the **SET UP** key.



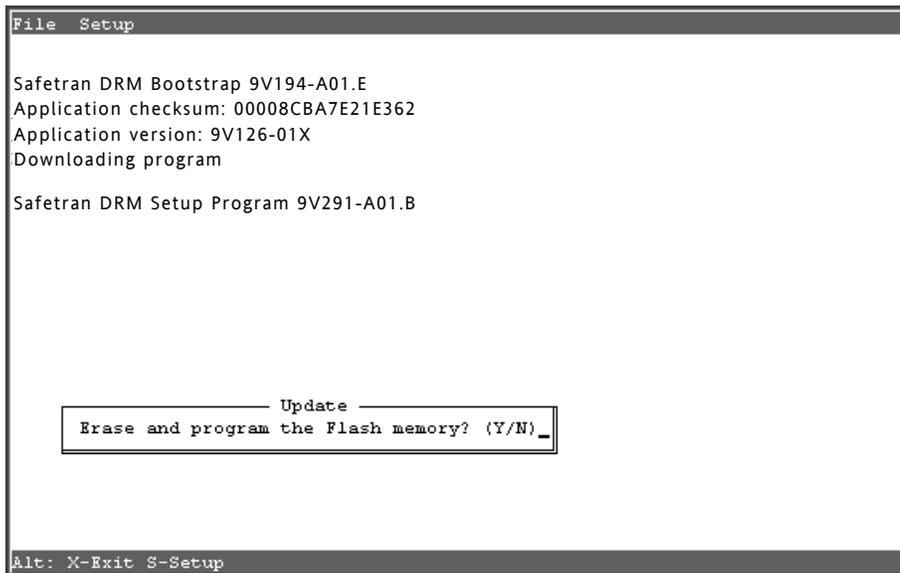
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Figure 7
Setup Program Download Window

NOTE

Due to variations in version of currently loaded software, “Application version” shown in figure 7 is indicated as “01X”. Your display will indicate the actual version currently loaded.

At the completion of file downloading, an **Update** dialog box displays within the Setup screen (see figure 8).



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Figure 8
Setup Program Flash Memory Update Dialog Box

NOTE

Due to variations in version of currently loaded software, "Application version" shown in figure 8 is indicated as "01X". Your display will indicate the actual version currently loaded.

Step 12 Type **Y**.

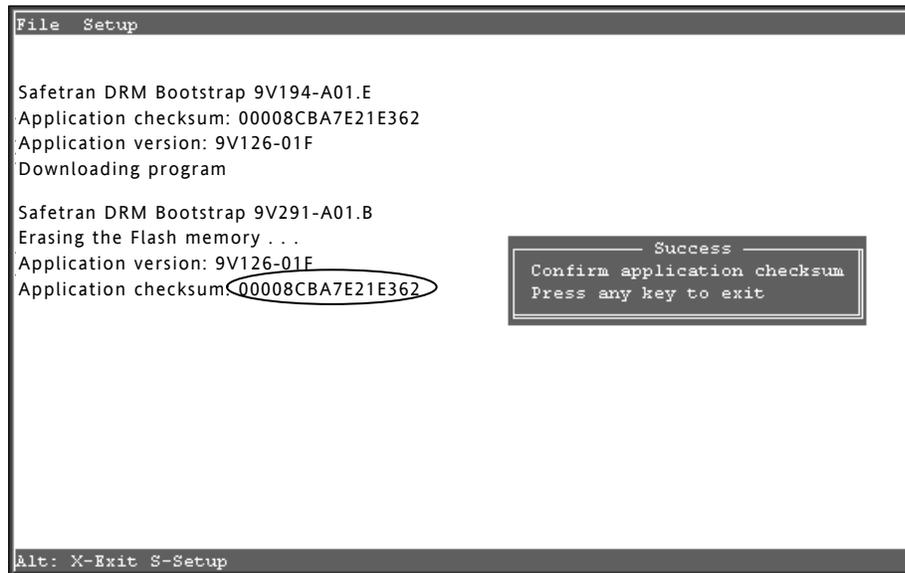
A setup program **Downloading** window appears in the Setup screen (see figure 9).



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Figure 9
Setup Program Download Window

At completion of download, the **Success** window displays within the Setup screen (see figure 10).



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Figure 10
Setup Screen Success Window

- Step 13 Verify that checksum displayed in Setup screen (circled on figure 10) is identical to checksum supplied with program disk.
- Step 14 This completes application software installation. Press any key on the PC keyboard to exit the installation program.
- Step 15 Remove the cable between personal computer COM1 port and 80224 module 25-pin RS-232 connector.
- Step 16 Set the 2000 MS case **POWER** switch to the **OFF** position.
- Step 17 Set the 2000 MS case **POWER** switch to the **ON** position and verify that the new software revision level (**9V126-01F**) is shown momentarily on the display.
- Step 18 BEFORE RETURNING THE 2000 MS TO SERVICE, THE FOLLOWING MUST BE PERFORMED:
- Program the system to Set To Default in Function Menu.
 - Reprogram all system application parameters (number of tracks, frequency, etc.) to the values recorded on the Application History Card.
 - Recalibrate the system.
- Step 19 Verify proper crossing operation by observing train moves.
- This concludes the update.