PC Board Switch and Jumper Settings

S1 - Operational Mode/Config Bypass/COM 1 Rate

S1 is a four-position, slide-style, DIP switch consisting of four single-pole, single-throw (SPST) switches numbered 1 through 4. Position 1 is used to set the operational mode, position 2 is used to enable/disable configuration bypass, and position 3 is used to select the serial communication rate. Position 4 is reserved for future use. See Table 10 for switch settings.

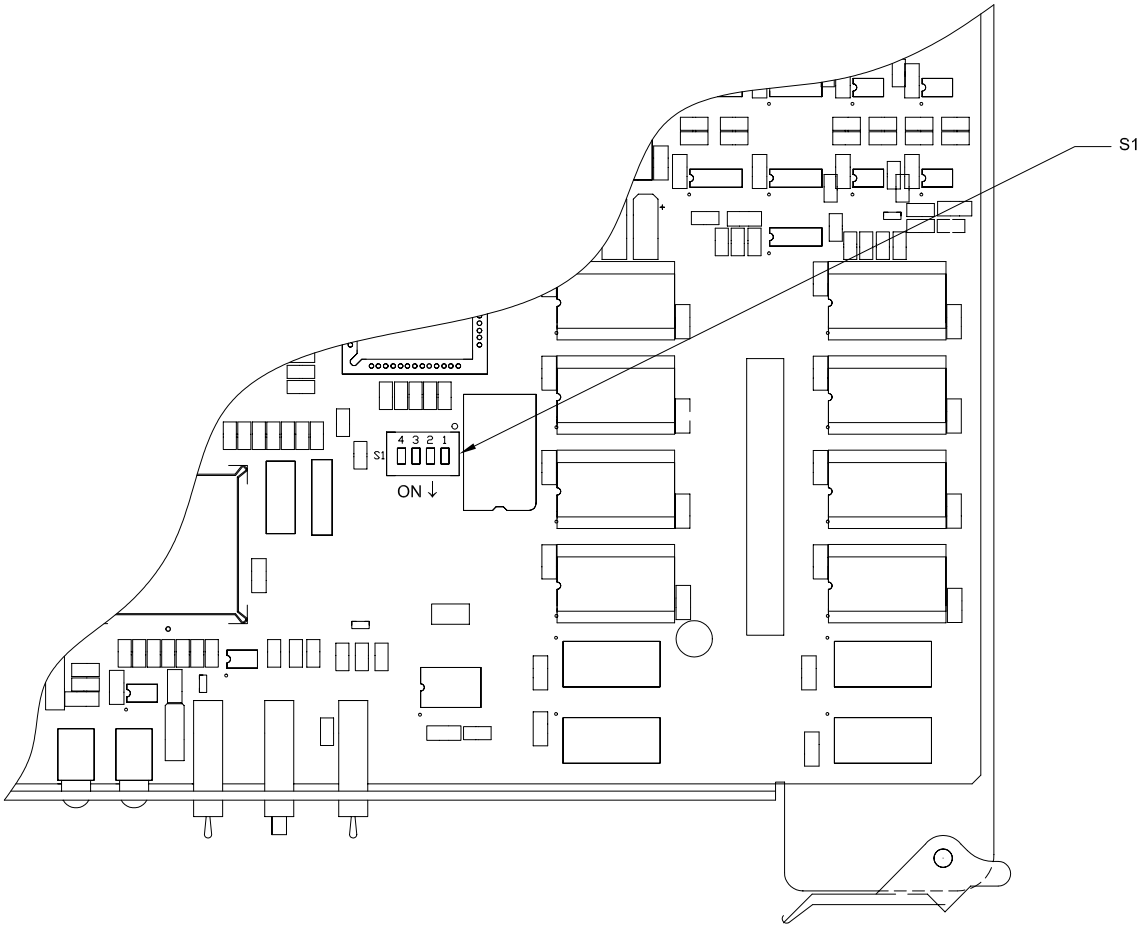

Figure 35. 3500Plus S1 (Operational Mode/Config Bypass/Comm Rate)

Table 10. 3500Plus Switch S1

3500Plus S1 Operational Mode/ Config Bypass/Comm Rate	Switch S1-1	Switch S1-2	Switch S1-3	Switch S1-4
Software Upgrade Mode	ON			
Normal Operation Mode	OFF			
Configuration Bypass Enabled		ON		
Configuration Bypass Disabled		OFF		
COM 1 Rate: 38400 Baud			ON	
COM 1 Rate: 9600 Baud			OFF	
Reserved – Set S1-4 to OFF				OFF

S1-1 Operational Mode

This switch is used to place the 3500Plus into software upgrade mode and allow the 3500Plus Software Installation Utility to update the software residing in Flash ROM. For normal operation, this switch should be in the OFF position. When using the 3500Plus Software Installation Utility, place this switch in the ON position. See “Load3500 Flash ROM Upgrade” on page 36 for more information.

S1-2 Configuration Bypass

For normal operation, this switch should be in the OFF position. For information on using the configuration bypass feature, see “Configuration Bypass” on page 41.

S1-3 COM 1 Rate

This switch is used to select the communications rate used by COM 1 on the 3500Plus. The communication rate for COM 2 is determined by settings made in the Win3500Plus software.

S1-4 Reserved

S1-4 is reserved for future use.

Reset (S2)

This SPDT momentary pushbutton switch is used to manually reset the 3500Plus System Controller in the event of system failure or lockup (similar to a warm boot on a PC). To reset the controller, press and hold this switch for about three seconds.

Mode (S4)

This SPDT toggle switch is used in a dual controller system to designate which controller is the primary controller, and which is the backup controller. Set the Mode switch to ACTIVE on the primary controller, and to STANDBY on the backup controller.

In a single controller system, this switch has no effect.

Front Panel LEDs

See “LEDs” on page 42.

Load3500 Flash ROM Upgrade Utility

The 3500Plus operating software resides in Flash ROM and may be easily upgraded by using Load3500, the upgrade utility, and the same cable assembly used with Win3500Plus. Running Load3500Setup.exe (the installation wizard) will install Load3500 and create four icons on your system (“Vx_x” will be the version of the software being installed, e.g. V1_0, V2_0, etc.):

- Load3500Interactive
- LoadInstallerVx_x
- LoadLoaderVx_x
- LoadUserVx_x

CAUTION

Load3500Interactive is a powerful troubleshooting tool which should only be used under the guidance of Customer Service. Do not attempt to use this utility unless instructed to do so. Incorrect operation may result in rendering your 3500Plus System Controller inoperable.

Among the files included with each 3500Plus upgrade are three which will be installed in the Load3500\Src\ folder:

- InstpgmVx_x.abs
- LoaderVx_x.abs
- 3500PVx_x.abs

Each subsequent upgrade will be started by running a new Load3500Setup.exe installation wizard. This will add three new icons to your system (with the corresponding new Vx_x designations), and three new .abs files to the Load3500\Src\ folder. By retaining all of the previous versions, you can easily reinstall an older version if necessary.

After installing Load3500 on your PC, upgrade the 3500Plus software as follows:

NOTE

The upgrade process will delete the configuration currently residing in the 3500Plus. To avoid loss of data, ensure that you have saved a copy of this configuration on your hard drive.

1. Using Win3500Plus, upload a copy of the configuration from the 3500Plus to your hard drive.
2. Exit Win3500Plus.
3. Remove power from the 3500Plus.
4. Remove the 3500Plus from the chassis.
5. Set the Operational Mode DIP switch S1-1 to Software Upgrade Mode (see "S1-1 Operational Mode" on page 31).
6. Install the 3500Plus in the chassis.
7. Apply power to the 3500Plus.

NOTE

Ensure the files being installed are the same version, unless otherwise directed by Customer Service.

3500PVx_x.abs is a much larger file than the other two. The installation of this file may take several minutes to complete.

8. Run LoadInstallerVx_x to install InstpgmVx_x.abs.
9. Run LoadLoaderVx_x to install LoaderVx_x.abs.
10. Run LoadUserVx_x to install 3500PVx_x.abs.
11. Remove power from the 3500Plus.
12. Remove the 3500Plus from the chassis.
13. Set the Operational Mode DIP switch S1-1 to Normal Operation Mode.
14. Install the 3500Plus in the chassis.
15. Apply power to the 3500Plus.
16. Press the Reset button on the front of the 3500Plus System Controller.
17. Install the companion Win3500Plus software upgrade to your PC.

NOTE

The CPU Link Test will not be successful until the Reset has been completed. Depending on your system configuration, this may take several minutes.

18. Using Win3500Plus, perform a CPU Link Test to ensure that the 3500Plus is operational.
19. Using Win3500Plus, download the configuration saved in Step 1, to the 3500Plus.

The 3500Plus System Controller is now operational again.

Chapter 5 – Maintenance and Repair

Periodic Maintenance

There are no periodic maintenance requirements for this equipment.

Troubleshooting

Configuration Bypass

If the configuration being used by the 3500Plus System Controller becomes corrupt, it may be bypassed to allow the loading of another configuration as follows:

1. Remove power from the 3500Plus.
2. Remove the 3500Plus from the chassis to allow access to switch S1 (see Figure 35 on page 30). Set switch S1-2 to the ON position in accordance with Table 10 on page 31.
3. Reinstall the 3500Plus and apply power.
4. Load the new configuration. This will overwrite the corrupted configuration.
5. Remove power from the 3500Plus.
6. Remove the 3500Plus from the chassis and return switch S1-2 to the OFF position.
7. Reinstall the 3500Plus and apply power.

Figure 38. 3500Plus System Controller Board Assembly Front View

Front Panel Test Points

3500Plus System Controller Board

The 3500Plus System Controller board has three test points accessible from the front panel, GND, +5V, and +BATTERY, as shown in Figure 38.

GND (TP17)

This test point provides a convenient ground when measuring voltages at the other test points.

+5V (TP18)

The voltage measured between this test point and GND (TP1) is the output of the voltage regulation circuit and should be 5 ±0.1 VDC.

+BATTERY (TP19)

The voltage measured between this test point and GND (TP1) is the output voltage of the backup memory power source and should be >2VDC when power has been removed from the board.