FERRUPS® and Fortress®
Signal Splitter Box

The FERRUPS and Fortress Signal Splitter Box packages contain the basic hardware needed to allow a single FERRUPS or Fortress UPS to control the automatic shutdown of multiple systems. This manual describes the installation and operation of the FERRUPS and Fortress Signal Splitter Boxes.

Please check to see that you received the items listed in one of the boxes below.

FERRUPS Signal Splitter Box Package (Model number SS-1)

    1 FERRUPS Signal Splitter Box (BOX-0029)
    1 FERRUPS-to-Signal Splitter Interface Cable (INT-0030)
    1 User Manual (this manual)
    1 Warranty Registration Card

Fortress (and 800 Series) Signal Splitter Box Package (Model number SS-2)

    1 Fortress Signal Splitter Box (BOX-0030)
    1 Fortress-to-Signal Splitter Interface Cable (INT-0031)
    1 External Power Supply (PWS-0014, 12VDC, 800ma)
    1 User Manual (this manual)
    1 Warranty Registration Card

We encourage you to read the entire manual. It contains useful information about your FERRUPS or Fortress Signal Splitter Box. To find a specific topic, refer to the table of contents. **If you have a question or problem concerning this package, call BEST's Technical Support Center at 800-356-5737.**

TABLE OF CONTENTS

100   OVERVIEW

Your FERRUPS or Fortress Signal Splitter Box allows you to control the automatic shutdown of multiple systems with a single FERRUPS or Fortress UPS. The Signal Splitter Box provides connection ports for up to four different interface cable kits. In addition, an *RS232 Out* port is provided for use with CheckUPS software or with another Signal Splitter Box.

Your FERRUPS or Fortress Signal Splitter Box includes

- Four *UPS Status* ports to connect cables from BEST interface kits to your systems. Connection to a *UPS Status* port allows each of your systems to monitor the status of the UPS.

- An *RS232 Out* port for use with BEST's CheckUPS software, a hand-held Remote Control Panel, a modem, or another BEST Signal Splitter Box. (On the FERRUPS Signal Splitter Box, an EnviroCom II can be connected to this port if desired).

- An external *Emergency Power Off (*EPO) connection if you need emergency shutdown for your systems.

- An AS/400 *Bypass Switch* status contact connector.

- A connector for an external 12VDC power source (An external 12VDC power source is required for the Fortress Signal Splitter Box. If more than two FERRUPS Signal Splitter Boxes are cascaded, an external 12VDC power supply is recommended. See **Section 500**).

- A set of DIP switches to select which one of your systems will shut down the UPS after the automatic shutdown of all of your systems is complete.

A Signal Splitter Box, combined with BEST interface cable kits, allows you to use multiple UPS monitoring packages (and run a single copy of CheckUPS software) without the inconvenience of designing custom cables. Internal relays provide the proper isolation necessary to prevent signal interference between the interface cable kits.

200 GETTING STARTED

FERRUPS and Fortress Signal Splitter Boxes are designed to work in conjunction with BEST interface kits and CheckUPS or CheckUPS II software (if desired). **In order to install your Signal Splitter Box, you need the correct interface kits (or custom cables) and CheckUPS software kit (if used) that will be used to monitor the UPS.** A diagram of a general application for a FERRUPS Signal Splitter box is shown in Figure 1.

Installation instructions for the FERRUPS Signal Splitter Box begin in **Section 300**. Installation instructions for the Fortress Signal Splitter Box begin in **Section 400**.

Figure 1

300 INSTALLING THE FERRUPS SIGNAL SPLITTER BOX
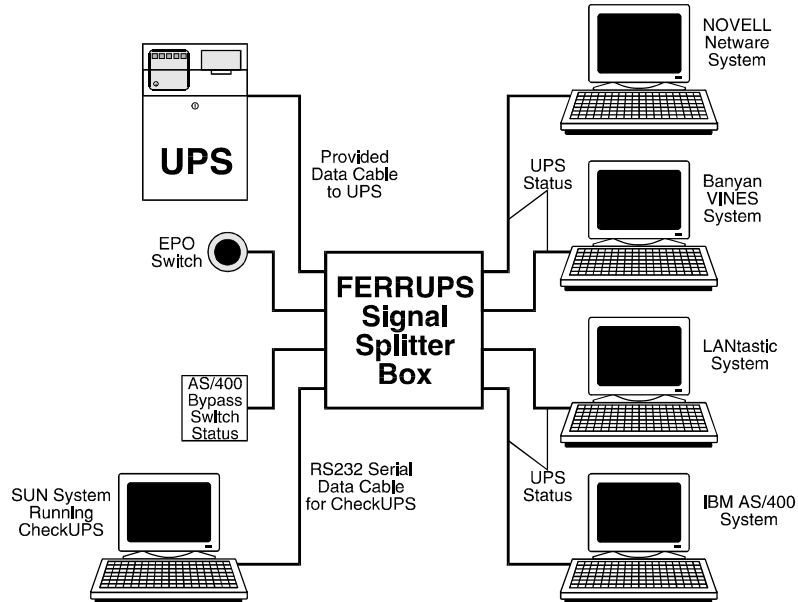
NOTE: The installation instructions in this section are for the FERRUPS Signal Splitter Box. If you are installing a Fortress (or 800 series) Splitter Box, go to **Section 400**.

Once you have the correct interface cable kits for each of your systems, you are ready to connect your FERRUPS Signal Splitter Box. Because of the numerous system configurations possible, the installation section is generic in terms of interface kit connections. See the manual for each of your interface kits for specific installation steps.

During installation, turn off your FERRUPS and other systems.

310 Connecting the FERRUPS to the FERRUPS Signal Splitter Box
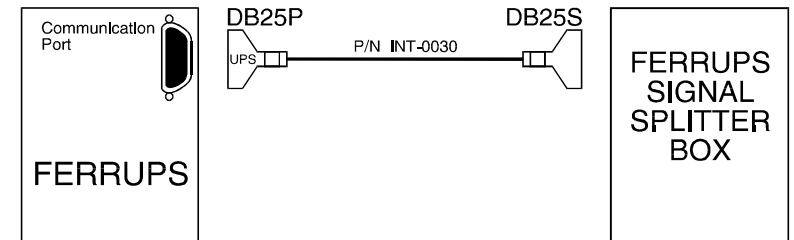
Figure 2

To connect the FERRUPS to the FERRUPS Signal Splitter Box, refer to Figure 2 and follow the directions below.

1. Connect the male end (labeled "UPS") of the supplied cable (INT-0030) to the female DB25S communication port on the FERRUPS.

2. Connect the female end of the supplied cable (INT-0030) to the *UPS In* port on the FERRUPS Signal Splitter Box (see Figure 4, page 5, for the location of the *UPS In* port).

320 **Connecting Your Systems to the FERRUPS Signal Splitter Box Using Cables from BEST Interface Kits**

The FERRUPS Signal Splitter Box has four *UPS Status* ports. **These ports work with BEST FERRUPS interface kits.**

**NOTE:** If one of your systems is running CheckUPS software for FERRUPS, do not use this section to connect that system to the Splitter Box. See **Section 330** for instructions on connecting the system that is running CheckUPS software.
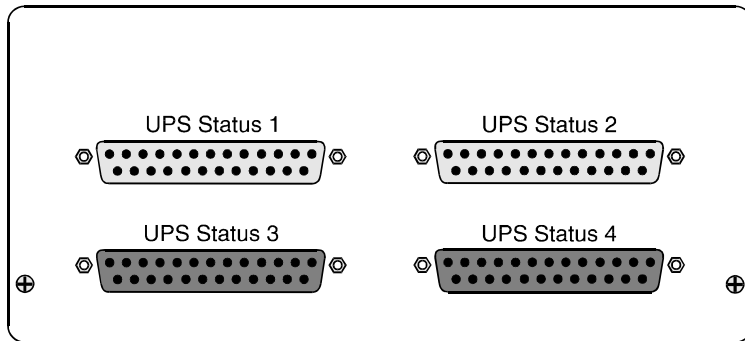
Figure 3

Follow the instructions below to connect your interface kits.

1. Determine which *UPS Status* port you want the system to monitor.

2. Follow the installation instructions for the specific interface kit you are using. Treat the *UPS Status* port on the Signal Splitter Box as if it were the UPS connection mentioned in the interface kit installation manual.

3. Repeat steps 1 and 2 for each additional interface kit**.**

330 **Connecting to the *RS232* Out Port on the FERRUPS Signal Splitter Box**
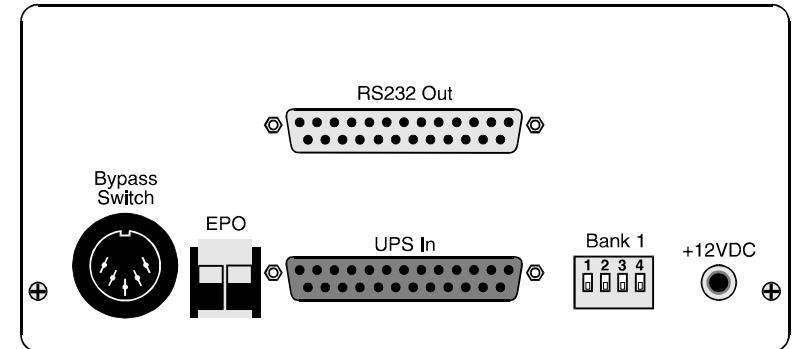
Figure 4

The *RS232 Out* port (see Figure 4 for location) can be used to connect

- a single FERRUPS CheckUPS software package.
- a serial device (such as a modem).
- another FERRUPS Signal Splitter Box (see **Section 500**).
- a BEST EnviroCom II (see **Section 600**).

If you connect a system running CheckUPS software to the FERRUPS Signal Splitter Box, follow the installation instructions in the CheckUPS manual. Treat the *RS232 Out* port on the Signal Splitter Box as if it were the UPS connection mentioned in the CheckUPS manual.

NOTE: Only one FERRUPS CheckUPS software package may be used with the Signal Splitter Box.

If you wish to install a serial device, follow the installation instructions in the serial device manual. Pinouts of the *RS232 Out* port are provided in Figure 5 on page 6.

Figure 5: FERRUPS Splitter Box *RS232 Out* Port Pinouts

340   Connecting a BEST Bypass Switch to the FERRUPS Signal Splitter Box Using an AS/400 Monitor Cable

The *Bypass Switch* connection on the FERRUPS Signal Splitter Box allows an AS/400 to monitor a BEST bypass switch if you also use the appropriate interface cable kit (BEST Part Number BIK-001A) to connect the AS/400 system to the Signal Splitter Box.

To connect a BEST Internal AS/400 bypass switch to your FERRUPS Signal Splitter Box, use a BEST AS/400 bypass switch monitor cable (BEST Part Number INT-0037).

To connect a BEST External AS/400 bypass switch to your FERRUPS Signal Splitter Box, use the interface cable that you received with your bypass switch (BAA-0093).

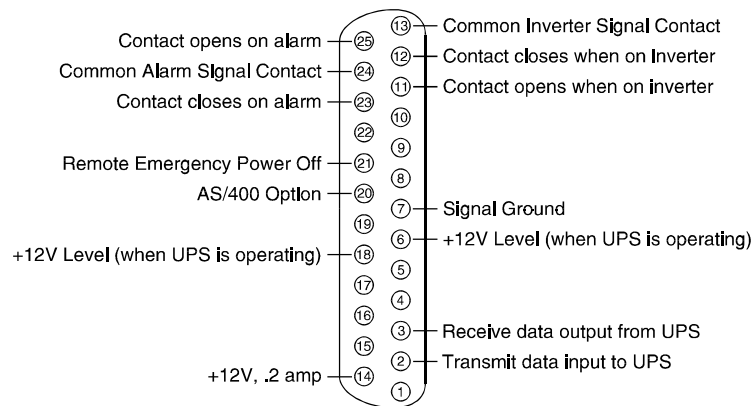1. Connect one end of the cable to the bypass switch monitor connection on the bypass switch.

2. Connect the other end of the cable to the *Bypass Switch* connection on the FERRUPS Signal Splitter Box (see Figure 4, page 5, for location of connector).

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350   Connecting an External Emergency Power Off Switch to the Signal Splitter Box

The *Emergency Power Off* (EPO) connector may be used to shut down the FERRUPS or Fortress in case of emergency (fire, safety, etc.). To use the EPO connection, you must provide a Normally Open switch. Normally Open switches may be obtained from electrical suppliers.

Follow the instructions below to connect your EPO switch(es). See Figure 4 on page 5 or Figure 11 on page 12 for the location of the EPO connector.

1. Wire the Normally Open switch to the removable EPO connector on the Signal Splitter Box. See Figure 6.

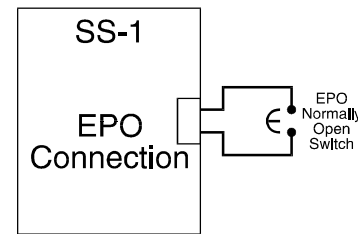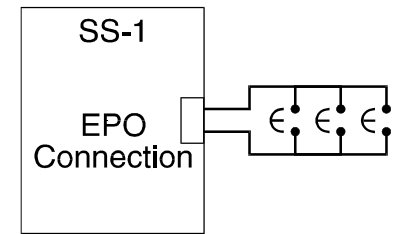2. If you use more than one EPO switch, wire them in parallel. See Figure 7.

Figure 6   **Figure 7**

⚠️   **CAUTION:**   Do not use an external power source on the EPO switch connector. Doing so may result in damage to your UPS and equipment.
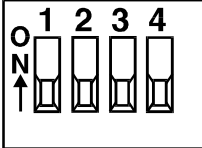
7

360   Determining Settings for the DIP Switches on the FERRUPS Signal Splitter Box

After the automatic shutdown sequences for your systems are completed, you may want to shut down the FERRUPS to conserve its batteries. Using DIP switch settings, the FERRUPS Signal Splitter Box lets you determine which one of your systems sends the "power off" signal to the UPS (see Figure 4, page 5, for location of DIP switches).

To set the DIP switches, use Figure 8 below as a guideline. The system that you want to shut down the UPS should be connected to one of the four *UPS Status* ports (see Figure 3, page 4, for location of ports). Find the number of that port in the first column of the table and use the switch settings in that row.

NOTE: If CheckUPS software is used with one of your systems, it must be used to shut down the UPS through the *RS232 Out* port on the Signal Splitter Box. All Splitter Box DIP switches must be Off in this case.

    1 = Set the switch to On (Up).
    0 = Set the switch to Off (Down).

Figure 8: FERRUPS Shutdown DIP Switch Settings				
Port	**1**	**2**	**3**	**4**
UPS Status 1	1	0	0	0
UPS Status 2	0	1	0	0
UPS Status 3	0	0	1	0
UPS Status 4	0	0	0	1
Settings if CheckUPS is used	0	0	0	0

CAUTION: Make sure that the system selected to shut down the UPS sends the "power off" signal to the UPS **after** all other system shutdowns are complete. If the "power off" signal is sent to the UPS before shutdown of your systems is complete, system crashes will occur. See your specific system manuals to determine the timing of this sequence.

400   INSTALLING THE FORTRESS SIGNAL SPLITTER BOX

NOTE: The installation instructions in this section are for the Fortress (or 800 series) Signal Splitter Box. If you are installing a FERRUPS Signal Splitter Box, see **Section 300**.

Once you have the correct interface cable kits for each of your systems, you are ready to connect your Fortress Signal Splitter Box. Because of the numerous system configurations possible, the installation section is generic in terms of interface kit connections. See the manual for each of your interface kits for specific installation steps.

During installation, turn off your Fortress and other systems.

410   Connecting the Fortress UPS to the Fortress Signal Splitter Box

To connect the Fortress to the Signal Splitter Box, refer to Figure 9 and follow the directions on page 10.
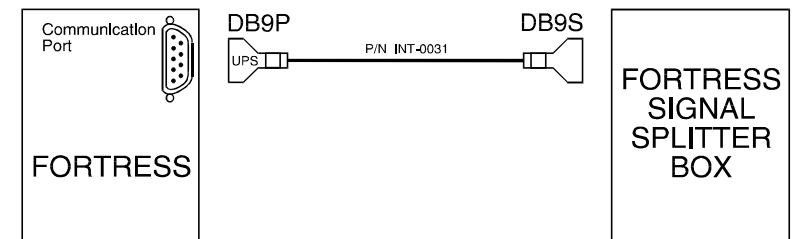

Figure 9

1. Connect the male end (labeled "UPS") of the supplied interface cable (INT-0031) to the female DB9S port on the Fortress.

2. Connect the female end of the supplied cable (INT-0031) to the *UPS In* port on the Fortress Signal Splitter Box (see Figure 11, page 12, for location of port).

3. Connect the provided 12VDC power supply to the +12VDC jack on the Signal Splitter Box (see Figure 11, page 12, for location of jack). **You must plug the 12VDC power supply into the Fortress UPS.**

⚠ **CAUTION:** Do NOT plug the 12VDC power supply into an unprotected outlet. Doing so will result in UPS status signal loss to your systems during power failures.

420 **Connecting Your Systems to the Fortress Signal Splitter Box Using Cables from BEST Interface Kits**

The Fortress Signal Splitter has four *UPS Status* ports (see Figure 10). **These ports work with BEST Fortress interface kits.**

NOTE: If one of your systems is running CheckUPS software for Fortress, do not use this section to connect that system to the Splitter Box. See **Section 430** for instructions on connecting the system that is running CheckUPS software.

NOTE TO IBM AS/400 USERS: A special interface cable is available to connect an IBM AS/400 to the Fortress Signal Splitter Box. This interface cable (BEST Part Number INT-0036) allows an AS/400 to monitor the bypass switch if the AS/400 *Bypass Switch* connection is used (see **Section 440**). The standard Fortress AS/400 interface cable (INT-0005) works with the Splitter Box but does not monitor the status of the bypass switch. Please call BEST if a cable exchange is necessary.
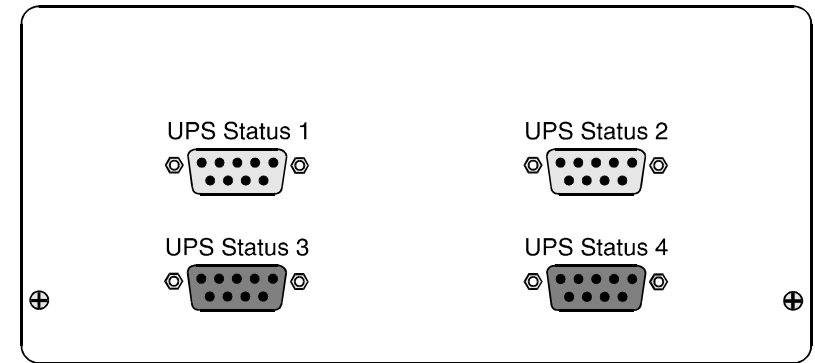
Figure 10

Follow the instructions below to connect your interface kits.

1. Determine which *UPS Status* port you want the system to monitor.

2. Follow the installation instructions for the specific interface kit being used. Treat the *UPS Status* port on the Signal Splitter Box as if it were the UPS connection mentioned in the interface kit installation manual.

3. Repeat steps 1 and 2 for each additional interface kit you connect.

430 **Connecting to the *RS232 Out* Port on the Fortress Signal Splitter Box**

The *RS232 Out* port (see Figure 11, page 12, for location) may be used to connect

- a single Fortress CheckUPS software package.
- a serial device (such as a modem).
- another Fortress Signal Splitter Box (see **Section 500**).

If you connect a system running CheckUPS software to the Fortress Signal Splitter Box, follow the installation instructions in the CheckUPS manual. Treat the *RS232 Out* port as if it were the UPS connection mentioned in the CheckUPS manual.
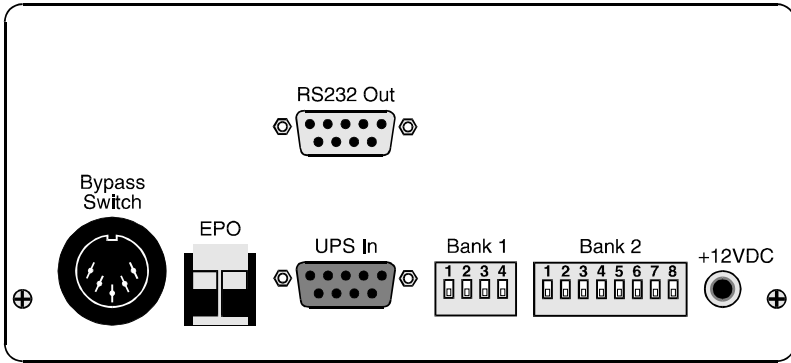
Figure 11

NOTE: If any of your systems require the Fortress to be placed in **Communication Mode "0,"** you cannot run CheckUPS software. Communication Mode "0" disables the standard RS232 communication required by the CheckUPS software. Cable kits that require Communication Mode "0" are listed in the table below.

Interface Kits Requiring Communication Mode "0"

Kit Model Number	Cable Number	System Type
BIK009L	INT-0023	LANtastic LAN Manager LAN Server Windows NT
BIK013T	INT-0004	3COM 3 + Share

If you wish to install a serial device (such as a modem), follow the installation instructions in the serial device manual. Pinouts of the *RS232 Out* port on the Fortress Signal Splitter Box are provided in Figure 12 and Figure 13 on page 13.
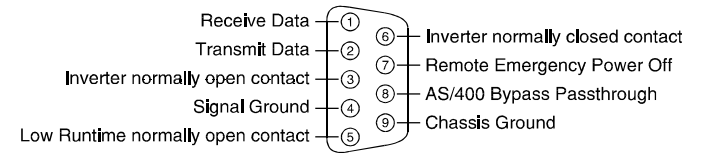
Figure 12: Fortress Signal Splitter Box *RS232 Out* Port Pinouts: Fortress UPS in Communication Modes 1-4
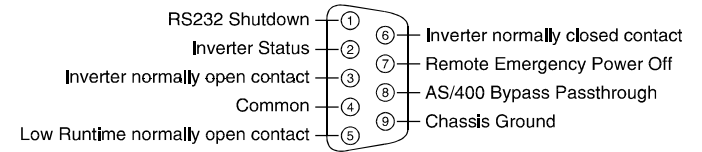
Figure 13: Fortress Signal Splitter Box *RS232 Out* Port Pinouts: Fortress UPS in Communication Mode "0"

440 Connecting a BEST AS/400 Bypass Switch to the Fortress Signal Splitter Box

If you would like your AS/400 system to monitor a BEST bypass switch through the Fortress Signal Splitter Box, follow the instructions below.

● Between the AS/400 system and the Splitter Box, you must use a special interface cable (INT-0036). The standard AS/400 interface cable (INT-0005) works with the Splitter Box but does not monitor the bypass switch.

● Set the Bank 2 DIP switches. See **Section 460c**.

To connect a BEST bypass switch to your Fortress Signal Splitter Box, use a 10-foot AS/400 bypass switch monitor cable (INT-0037).

1. Connect one end of the cable to the bypass switch monitor connection on the bypass switch.

2. Connect the other end of the cable to the *Bypass Switch* connection on the Splitter Box (see Figure 10, page 11).

450 **Connecting an External Emergency Power Off Switch to a Fortress Signal Splitter Box**

Follow the instructions in **Section 350** to connect an external Emergency Power Off switch to your Fortress Signal Splitter Box.

460 **Determining Settings for the DIP Switches on the Fortress Signal Splitter Box**

The Fortress Signal Splitter Box has two sets, or banks, of DIP switches. See one or more of the following sections to determine the correct DIP switch settings for your setup.

- See **Section 460a** to specify which one of your systems (if any) shuts down the Fortress unit after the automatic shutdown sequences for your systems are completed.

- See **Section 460b** if any of your systems require a ground signal derived from the Fortress (LAN Manager, LAN Server, LANtastic, 3COM 3 + Share, or Windows NT).

- See **Section 460c** if you have one or more IBM AS/400 systems monitoring the status of a BEST bypass switch.

460a **Determining DIP Switch Settings for Shutdown of the Fortress**

After the automatic shutdown sequences for your systems are completed, you may want to shut down the Fortress to conserve its batteries. Using DIP switch settings, the Fortress Signal Splitter Box lets you select which one of your systems sends the "power off" signal to the UPS.

NOTE: If Fortress CheckUPS software is used with one of your systems, it must be used to shut down the UPS through the *RS232 Out* port on the Signal Splitter Box. Bank 1 DIP switches 1 - 4 must be Off in this case.

To set the shutdown DIP Switches, use Figure 14 as a guide. The system that you want to shut down the UPS should be connected to one of the four *UPS Status* ports (see Figure 10, page 11 for location of ports). Find the number of that port in the first column of the table and use the switch settings in that row.

   1   =   Set the switch to On (Up)
   0   =   Set the switch to Off (Down)
   X   =   The setting of this switch depends on other system-specific configurations.

Figure 14: Fortress Shutdown DIP Switch Settings	Bank 1				Bank 2							
Port	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
UPS Status 1	1	0	0	0	0	X	X	X	1	X	X	X
UPS Status 2	0	1	0	0	X	0	X	X	X	1	X	X
UPS Status 3	0	0	1	0	X	X	0	X	X	X	1	X
UPS Status 4	0	0	0	1	X	X	X	0	X	X	X	1
Settings if CheckUPS is used	0	0	0	0	X	X	X	X	X	X	X	X

CAUTION: Make sure that the system selected to shut down the UPS sends the "power off" signal to the UPS **after** all other system shutdowns are complete. If the "power off" signal is sent before shutdown of your systems is completed, systems crashes will occur. See your specific system user guides to determine the timing of this sequence.

460b   Determining DIP Switch Settings for Systems Requiring a Ground Signal Derived from the Fortress

Some systems require a ground signal derived from the Fortress (see table below). If you are using one or more of these systems, you must set the appropriate Bank 2 DIP switch(es) to On.

**Systems Requiring a Ground Signal
Derived from the Fortress**

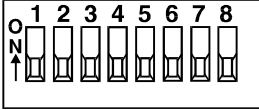| System Type	BEST Interface Cable Part Number
LAN Manager/LAN Server	INT-0023
LANtastic	INT-0023
Windows NT	INT-0023
3COM 3 + Share	INT-0004

To set the Bank 2 DIP switch(es), use Figure 15 as a guide. Each system that requires a ground signal derived from the Fortress should be connected to one of the four *UPS Status* ports (see Figure 9, page 9, for location of ports). Find the number of that port in the first column of the table and use the switch settings in that row.
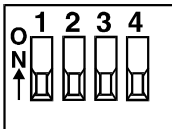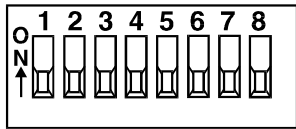
460c   Determining DIP Switch Settings for an IBM AS/400 System Monitoring a BEST Bypass Switch

If you have an IBM AS/400 monitoring the status of a BEST bypass switch, you must set the appropriate DIP switches. If these settings are not made, the AS/400 will **not** monitor the status of the bypass switch.

Use Figure 16 as a guide to help determine these settings. Your AS/400 system should be connected with an INT-0036 interface cable to one of the four *UPS Status* ports (see Figure 10, page 11, for location of ports). Find the number of that port in the first column of the table and use the switch settings in that row.

1 = Set the switch to On (Up)
0 = Set the switch to Off (Down)
X = The setting of this switch depends on other system-specific configurations

Figure 15: Ground Select DIP Switch Settings

Port	1	2	3	4	5	6	7	8
UPS Status 1	0	X	X	X	1	X	X	X
UPS Status 2	X	0	X	X	X	1	X	X
UPS Status 3	X	X	0	X	X	X	1	X
UPS Status 4	X	X	X	0	X	X	X	1

Figure 16: DIP Switch Settings for an AS/400 System Monitoring a Bypass Switch

Port	1	2	3	4	1	2	3	4	5	6	7	8
UPS Status 1	0	X	X	X	1	X	X	X	0	X	X	X
UPS Status 2	X	0	X	X	X	1	X	X	X	0	X	X
UPS Status 3	X	X	0	X	X	X	1	X	X	X	0	X
UPS Status 4	X	X	X	0	X	X	X	1	X	X	X	0

500 **CASCADING FERRUPS OR FORTRESS SIGNAL SPLITTER BOXES**

You may wish to use a single UPS to control the automatic shutdown of more than four or five systems. To accomplish this, two or more Signal Splitter Boxes may be connected together, or cascaded. Since power requirements differ between the FERRUPS and Fortress Signal Splitter Boxes, the setup of each is discussed separately.

510 **Cascading FERRUPS Signal Splitter Boxes**

NOTE: This section applies to FERRUPS Signal Splitter Boxes only. If you wish to cascade Fortress Signal Splitter Boxes, see **Section 520**.
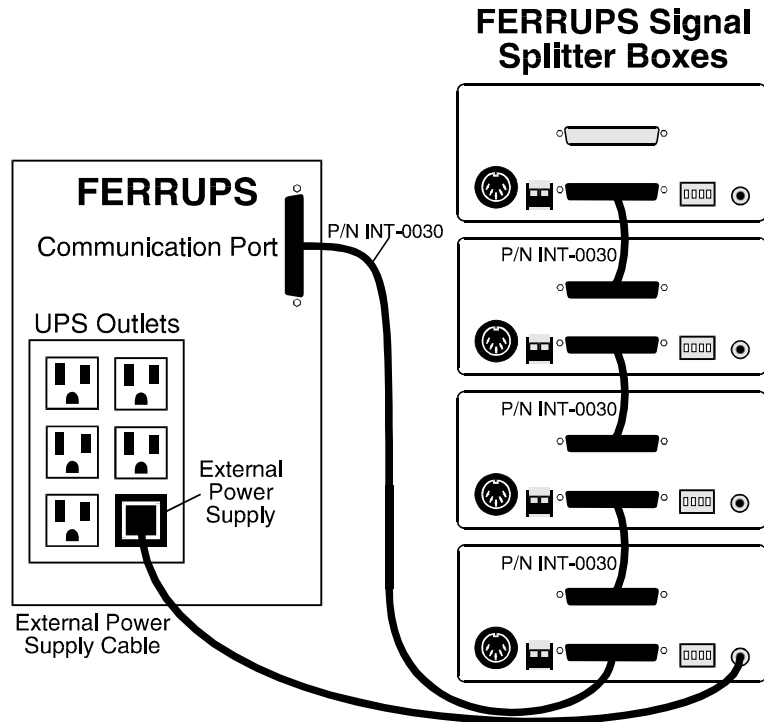

Figure 17

Refer to Figure 17 and follow the steps below to cascade your FERRUPS Signal Splitter Boxes. Figure 4 on page 5 shows the locations of the ports on the FERRUPS Signal Splitter Box.

1. Connect the first FERRUPS Signal Splitter Box according to **Section 300**.

2. To attach the next Splitter Box, connect the male end of the supplied cable (INT-0030) to the *RS232 Out* port on the Splitter Box that you are cascading <u>from</u>.

3. Connect the female end of the supplied cable (INT-0030) to the *UPS In* port on the Splitter Box you are cascading <u>to</u>.

4. Configure the DIP switches on each additional FERRUPS Signal Splitter Box according to **Section 360.**

5. Repeat steps 2, 3 and 4 for each additional FERRUPS Signal Splitter Box.

NOTE: If you cascade more than two FERRUPS Signal Splitter Boxes, a 12VDC, 800ma external power supply is recommended (BEST part number PWS-0014). Connect the power supply to the first FERRUPS Signal Splitter Box to support up to nine boxes total. **The power supply must be plugged into the FERRUPS supplying power.**

CAUTION: Do NOT plug the 12VDC power supply into an unprotected outlet. Doing so will result in UPS status signal loss to your systems during power failures.

520 Cascading Fortress Signal Splitter Boxes

NOTE: This section applies to Fortress Signal Splitter Boxes only. If you wish to cascade FERRUPS Signal Splitter Boxes, see **Section 510.**
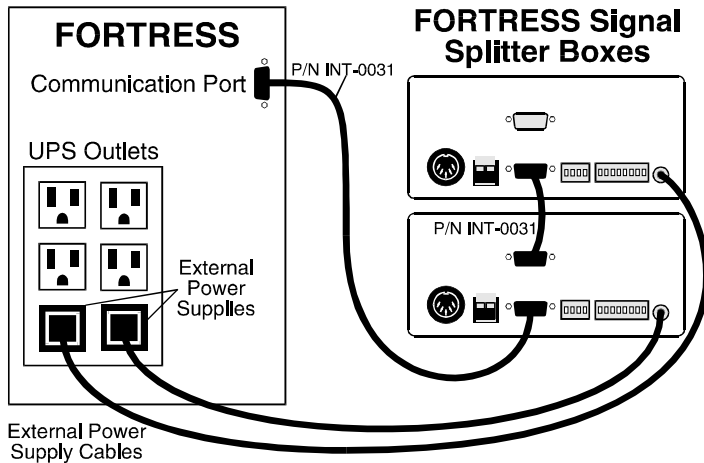

Figure 18

Refer to Figure 18 and follow the steps below to cascade your Fortress Signal Splitter Boxes. Figure 11 on page 12 shows the locations of the ports on the Splitter Box.

1. Connect the first Fortress Signal Splitter Box according to **Section 400**.

2. To attach the next Signal Splitter Box, connect the male end of the supplied cable (INT-0031) to the *RS232 Out* port on the Splitter Box you are cascading <u>from</u>.

3. Connect the female end of the supplied cable (INT-0031) to the male *UPS In* port on the Splitter Box you are cascading <u>to</u>.

4. Connect the provided 12VDC power supply to the power supply jack on the Signal Splitter (see Figure 18).

5. Plug the 12VDC power supply into the Fortress UPS.

⚠ **CAUTION:** Do NOT plug the 12VDC power supply into an unprotected outlet. Doing so will result in UPS status signal loss to your systems during power failures.

6. Configure the DIP switches on each additional Fortress Signal Splitter Box according to **Section 460.**

7. Repeat steps 2 - 6 for each additional Fortress Signal Splitter Box.

NOTE: **Each** Fortress Signal Splitter Box requires use of the supplied 12VDC power supply.

600 CONNECTING AN ENVIROCOM TO A FERRUPS SIGNAL SPLITTER BOX

The FERRUPS Signal Splitter Box can be connected to a BEST EnviroCom I or EnviroCom II. The connection for the EnviroComs differ. To connect an EnviroCom I, see **Section 610**. To connect an EnviroCom II, see **Section 620**.

NOTE: Use these instructions with a <u>FERRUPS</u> Signal Splitter Box only.

610 Connecting an EnviroCom I to a FERRUPS Signal Splitter Box

To connect an EnviroCom I to the FERRUPS Signal Splitter Box, determine which *UPS Status* port you wish to connect your EnviroCom I to (see Figure 3, page 4, for location of port). Then, follow the installation instructions in your EnviroCom I manual. Treat the *UPS Status* port as if it were the UPS connection mentioned in the EnviroCom I manual.

620 Connecting an EnviroCom II to a FERRUPS Signal Splitter Box

An EnviroCom II connects to the *RS232 Out* port on the FERRUPS Signal Splitter Box (see Figure 4, page 5, for location of port). Follow the installation instructions in your EnviroCom II manual. Treat the *RS232 Out* port as if it were the UPS connection mentioned in the EnviroCom II manual.

NOTE: If you use an EnviroCom II, you cannot run CheckUPS software because both require use of the *RS232 Out* port on the FERRUPS Signal Splitter Box.

700 TESTING THE SIGNAL SPLITTER BOX SETUP

When you complete the installation of your Signal Splitter Box, test the setup for proper operation. Because of the numerous configurations possible, testing procedures vary. For specific test instructions, review your system-specific UPS monitoring packages and your CheckUPS manual (if CheckUPS is used). These tests normally require shortening the automatic shutdown times so that the systems will shut down soon after the UPS switches to battery power.

Once you adjust the automatic shutdown times for each of your systems (and adjust the UPS "power off" time, if used), simulate a power failure by removing AC power to the UPS. To do this, turn off the AC circuit breaker or fuse disconnect that supplies power to the UPS.

The systems should automatically shut down according to their specific settings. Once the system shutdowns are complete, the UPS should shut down if configured to do so.

Reapply AC power to the UPS by turning on the AC circuit breaker or fuse disconnect. Restart your systems. **Remember to reset the shutdown times to their original settings.** If you have a problem with the test, see **Section 800** for troubleshooting tips.

800 TROUBLESHOOTING

If your systems are not monitoring the UPS or not shutting down properly, the troubleshooting table may help. Before you use the table, verify your system setup by rechecking all cable connections and DIP switch settings.

If you have any questions, feel free to call BEST's Technical Support Center at 800-356-5737. If you call, please have the following information available for the technical support staff:

- UPS model and serial number
- Model number of Splitter Box (SS-1 or SS-2)
- Types of systems used with the Splitter Box
- Interface kits and CheckUPS kit used with the Splitter Box
- Description of the problem

TROUBLESHOOTING TABLE

Problem	Possible Reason	What to do
The UPS shuts down before all of your systems have completed their shutdown sequences.	1. Bank 1 DIP switches are not set properly, allowing more than one system to shut down the UPS.	1. Be sure you are letting only one system shutdown the UPS. If you are using CheckUPS, then CheckUPS must shut down the UPS. ● **Section 360** - FERRUPS ● **Section 460** - Fortress
	2. The system controlling the UPS shutdown has the UPS shutdown time set too low.	2. Check your system-specific guides for setting the UPS shutdown (power off) time. Reset the power off time to a higher value.
Table continues on next page		

Problem	Possible Reason	What to do
None of your systems will monitor the UPS.	1. Interface cable between UPS and Splitter Box not securely connected. 2. Not enough power for cascaded FERRUPS Signal Splitter Boxes. 3. No external power applied to the Fortress Signal Splitter Box.	1. Make sure that the interface cable is securely connected. ● **Section 310** - FERRUPS ● **Section 410** - Fortress 2. If more than two FERRUPS Signal Splitter Boxes are cascaded, use a 12VDC, 800ma external power supply. **Be sure to plug the power supply into the FERRUPS supplying system power.** 3. Check the connections of the 12VDC, 800ma power supply into the external power supply jack on each Fortress Signal Splitter Box. **Each power supply must be plugged into the Fortress UPS supplying system power.**
One or more of the systems will not monitor the UPS.	1. Interface cable(s) between system(s) and Splitter Box not securely connected. 2. Incorrect interface cable kit(s) used. 3. Custom cable not pinned correctly.	1. Make sure that all interface cables are securely connected. 2. Make sure that the correct interface cable kit is used for each system. 3. Verify the pinouts of any custom cables. ● **Section 330** - FERRUPS ● **Section 430** - Fortress

Problem	Possible Reason	What to do
The AS/400 system is not monitoring the bypass switch.	1. Interface cable between bypass switch and Signal Splitter Box not securely connected. 2. Incorrect DIP switch settings on the Fortress Signal Splitter Box 3. Incorrect AS/400 interface cable used between AS/400 system and Fortress Signal Splitter Box.	1. Make sure that the AS/400 bypass switch monitor cable is securely connected. 2. Check the DIP switch settings. See **Section 460c**. 3. Use a BEST INT-0036 interface cable (not an INT-0005 interface cable) between your AS/400 system and the Fortress Signal Splitter Box.
LANtastic, LAN Manager/Server, Windows NT, or 3COM 3 + Share system will not monitor the UPS correctly.	1. Fortress not in Communication Mode "0." 2. Bank 2 DIP switches not set properly on the Fortress Signal Splitter Box.	1. Change to Communication Mode "0" on the Fortress UPS. See your **Fortress Guide**, Chapter 4, "Using the Setpoints" (Setpoint 7, Communication Mode). 2. Make sure the Bank 2 DIP switches on the Fortress Signal Splitter Box are set correctly. See **Section 460b.**

Best Power Technology Incorporated
Limited Two-Year Warranty

Best Power Technology Incorporated (hereinafter called "BEST") warrants each product sold by it to be free from defect in material and workmanship under normal use and service beginning with the date of the retail sale or the date of delivery to the initial user (whichever occurs first), subject to the following conditions: The warranty period is classified as two (2) years and is limited to the replacement or repair, during the warranty period and subject to conditions enumerated below, of such product returned intact which shall appear to BEST upon inspection, to have been defective in material or workmanship. Replacement or repair will be accomplished at BEST'S CUSTOMER SERVICE DEPARTMENT, Box 106, Necedah, Wisconsin, USA. Such replacement shall be made free of charge if a defect becomes apparent and BEST is notified within the warranty period.

This warranty does not include any taxes which may be due in connection with replacement or repair, nor any installation, transportation, or postage costs. No warranty is made with respect to other products sold by BEST which do not bear the name BEST POWER TECHNOLOGY or BEST POWER TECHNOLOGY, INCORPORATED and no recommendation of such other products shall imply or constitute any warranty with respect to them. This warranty does not cover repair or replacement because of damage from unreasonable use (damage from road hazards, accident, fire or other casualty, misuse, negligence) and any use or installation not in conformance with instructions furnished by BEST or repairs or replacement needed because of modification not authorized by BEST. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Remedies under this warranty are expressly limited to the provision of products as specified above and any claims for loss arising out of the failure of products to perform for any period of time, or special, indirect or consequential damages or other economic loss are expressly excluded.