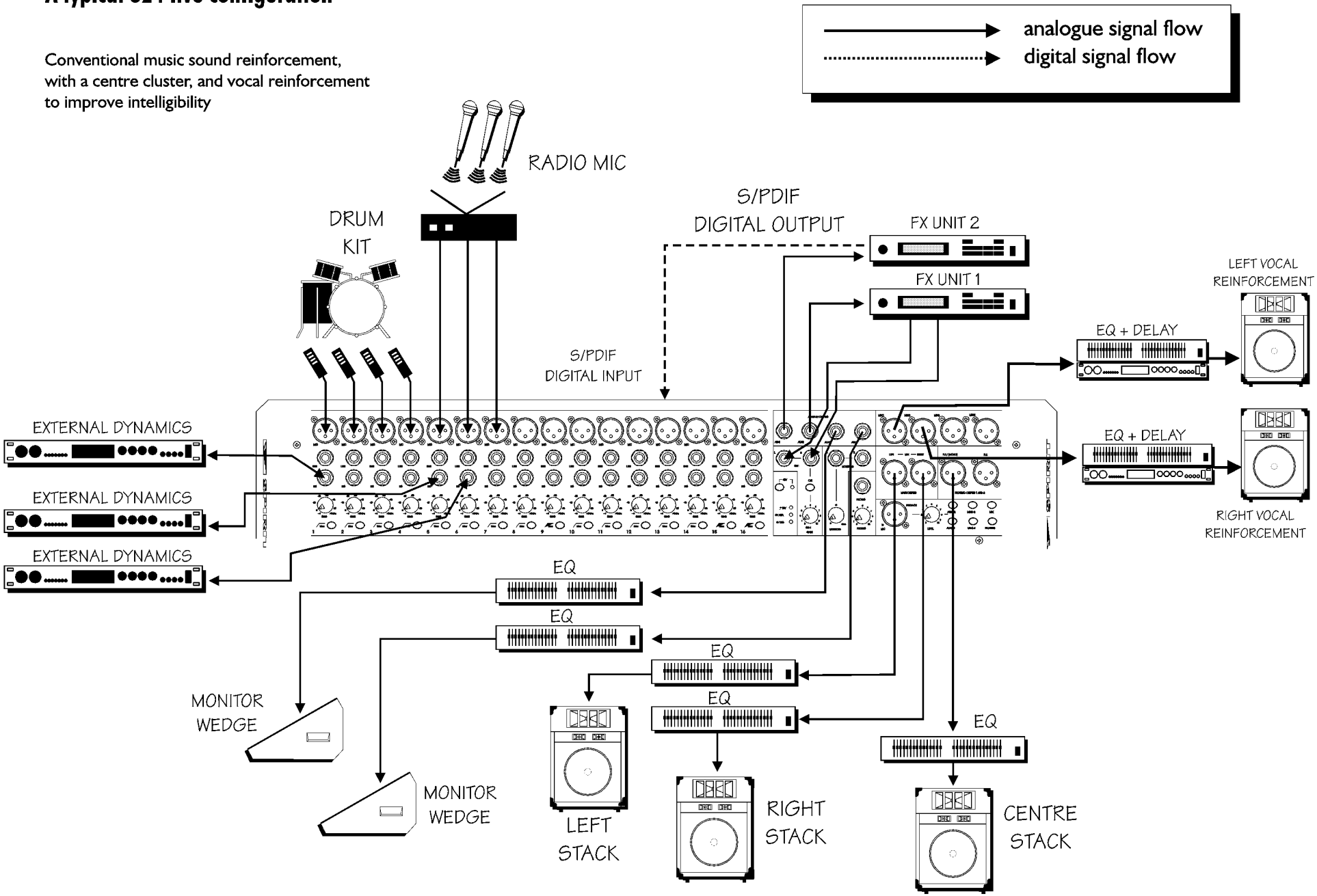
IV

APPLICATIONS

A typical 324 live configuration

Conventional music sound reinforcement, with a centre cluster, and vocal reinforcement to improve intelligibility



V

POWER, CABLES AND CONNECTIONS

In this Section:

1. Power and UPS Supplies	98
2. Audio Connections	99
3. Software Upgrade Procedure	100

When connecting a Live Sound console, it is important to ensure that connections to and from the console are made correctly. Adherence to some basic rules when interconnecting equipment will greatly reduce the chances of getting "hum" or "buzz" through the system, and will ensure that the console is delivering the best possible sound.

1 - Power, and UPS Supplies

Although it looks and feels very much like a conventional analogue mixer, underneath it all 324 Live is basically a computer running some software.

As with any conventional PC, and most other CPU-based systems, 324 Live will not respond favourably to power failures (blackouts) or power "sags" (brownouts). A blackout, however brief, and in some cases a brownout will cause the console to reset. At this point, it will automatically reboot itself. Although this will not damage the console, it will require the user to wait until the console is fully rebooted before continuing.

For this reason, we strongly recommend the use of an Uninterruptible Power Supply ("UPS"). A UPS is a device that site between the main supply (e.g. wall socket) and the console. It is continually monitoring the mains supply, and under normal circumstances passing the supply straight through, but maintains a powerful internal battery on full charge.

In the event of a power loss, the UPS "seamlessly" switches from the main supply to its internal battery, usually also warning the user of the problem via some audible or visual alert. The amount of time for which the UPS will continue to deliver power depends on the particular UPS - units are available which will run from 1 minute through to hours - and on the number of devices run from the UPS (the "draw").

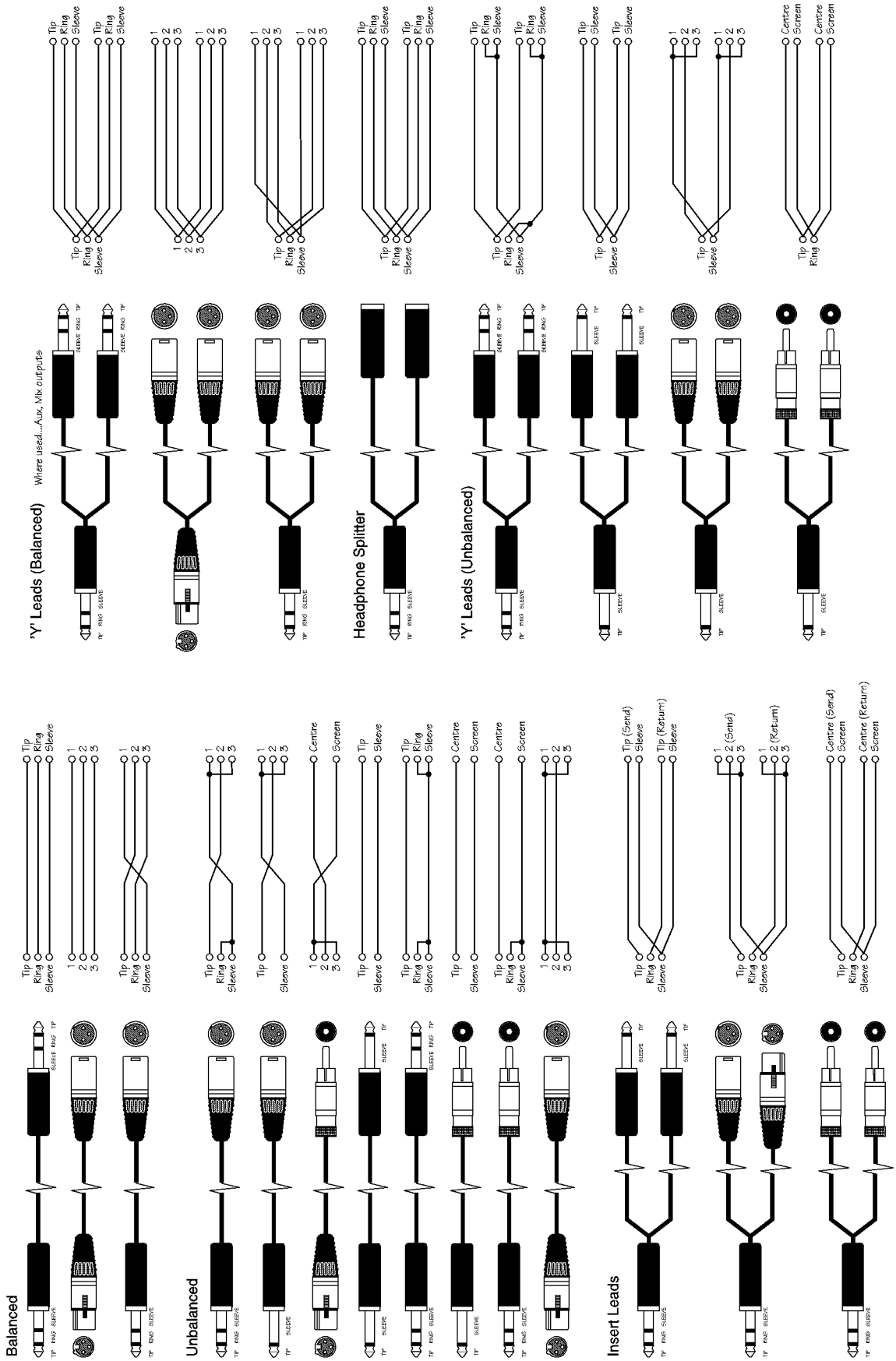
In addition to battery supply, most UPS devices will also FILTER the mains, helping iron out inconsistencies in the supply, and protecting against "spikes".

UPS devices are now very common in studios, offices and Live applications requiring PCs. PC stores are therefore a good source for finding an appropriate supply.

The 324 Live is rated at approximately 100W, so when choosing a UPS, quote this figure and the length of battery operation required to the dealer, who should then be able to select an appropriate device.

As a general rule, a UPS capable of handling a PC and a Monitor should have no problem supplying a 324 Live. Remember to check that the chosen UPS will not only offer battery support, but also FILTER the incoming supply.

2 - Audio Connections



3 - Software Upgrade Procedure

A - Data Backup 100

B - IBM Compatible PC Instructions 101

C - Apple Macintosh Instructions 107

D - Download Cable Specifications 111

! ***The following instructions detailing 324 Live data back up and software upgrade procedures have been tested thoroughly and approved by the Spirit by Soundcraft 324 Live software validation team.***

! ***Spirit by Soundcraft will not be held responsible should incorrect back software installation procedure result in any data loss.***

A - DATA BACKUP

All 324 Live data, including Snapshots, User Setups and FX User Presets (also Dynamics Presets and MIDI Controller Presets in software post version 1.199) should be properly backed up before upgrading to a new version of software.

This should be done either with the use of a MIDI Data Filer or with the use of a MIDI System Exclusive Librarian for Mac or PC.

The Spirit recommended methods for this backup are:

MIDI Data Filer:	Alesis Data Disk
IBM PC software:	Leaf Digital Sysex Solution 97 (Win 9x / NT 4.0)
Macintosh software:	SysEx 4.02

The Mac and PC software can be downloaded from the Spirit by Soundcraft website:
www.spiritbysoundcraft.com

The Leaf Digital software can also be downloaded from the Leaf Digital homepage:
http://www.leafdigital.com/Software/

SysEx 4.02 can also be downloaded from the SysEx homepage:
http://www.ioc.net/~sgrace/sysex

Procedure

- 1 The chosen sysex librarian should be set to receive incoming data from the 328 MIDI output.
- 2 On the 328, enter the 'MIDI Dump Out' menu.
- 3 Here, 'All Data' should be selected.
- 4 Press <ENTER>.
- 5 The 324 Live will now dump all data to the librarian.
- 6 When the message 'Dump Finished' appears in the 324 Live LCD, the dump is completed.
- 7 The dump should then be stored as a file within the librarian.

When the software has been upgraded, the process should be reversed. Enter the 'MIDI Dump In' menu, and play the recorded data file back to the desk. The message 'Dump Finished' will indicate that the transfer is complete and has been successful.

! ***Before proceeding to the software upgrade stage - this instruction must be followed: Switch off the 324 Live and switch it on WHILE HOLDING ALL 4 CURSOR KEYS SIMULTANEOUSLY, until the message "Desk reset to Defaults" appears. Allow the desk to finish booting, and switch it off once more.***

B - IBM COMPATIBLE PC INSTRUCTIONS

Connecting the 324 Live to the PC

- 1 Connect the Spirit Digital PC Download Cable between the serial port of the computer and the RS 422 port on the 324. The sleeved end of the cable should be connected to the 324 Live. Note that a standard serial cable cannot be used to upgrade 324 Live software.
- 2 Switch off the 324 Live and enter Upgrade Mode by switching in the software download switch, located between the Link Port and Auxiliary Optical Output on the rear of the con sole. It is a small blue switch, recessed behind the metal enclosure of the 324 Live.
- 3 Boot the PC. For Windows 3.1 or 3.11, use the following instructions. For Windows 95, 98 or NT 4.0, follow the instructions on this page .

Windows 3.1 / 3.11

If the 324 Live software is compressed in .zip format, the software should be uncompressed following these instructions to extract the 324 Live .abs software file. Otherwise, if the software file is already in .abs format you should not attempt ot unzip the file.

- 1 Create a directory on the hard drive and label it '324SOFT', or similar.
- 2 Download the 324 Live .zip software file to this directory.
- 3 Run WinZip 6.3, or a similar decompression utility.
- 4 In WinZip, select Open Archive.
- 5 Select the downloaded .zip file in the '324SOFT' directory.
- 6 Select Extract.
- 7 In Extract To: ensure that the path to the '324SOFT' directory is correct.
- 8 Click Extract.

The 324 Live .abs software will now be extracted to this directory on the hard drive.

Software upgrade procedure

Run the Terminal program, usually located in the Accessories group.

Ensure the settings are correct, by choosing the Settings menu and selecting the Communications option. The settings should be as follows:

- **bits per sec.: 115200**
- **data bits: 8**
- **parity: none**
- **Stop bits: 1**
- **Flow control: None**

Switch on the 324 Live . The console will enter software upgrade mode, and all of the LEDs on the desk will stay on. If the console continues to boot, switch it off and ensure that the download switch is fully engaged before attempting again.

- 1 The software upgrade mode menu should appear in the Terminal window, finishing with the line: 'Press "x" to start XMODEM transfer'.
- 2 Press "x" on the computer keyboard.
- 3 Open the 'Transfer' menu and select 'Send Binary File'.
- 4 Select the 1K Xmodem protocol.
- 5 Select the .abs file in the filename field, from the floppy drive or wherever you put it on the hard drive.
- 6 Click on **Send.**
- 7 A transmission window will then appear providing feedback on the transfer [wait 20 seconds for the program to establish the connection].
- 8 An progress bar should make it obvious when the file transfer is underway
- 9 The software should take up to 2 minutes to upload.

! ***If you take too long finding and selecting the .abs file after pressing the "x" key, the 324 Live console may time-out, with the message "transfer unsuccessful". If this hap pens, power down the console and power up again. If your settings are correct, the menu will reappear in the Terminal program. Repeat steps 2-9.***

! ***IF YOU SUSPECT THAT THE TRANSFER HAS NOT BEEN PERFORMED SUCCESSFULLY, YOU SHOULD NOT CONTINUE! INSTEAD REPEAT THE PROCE DURE ABOVE. IF YOU STILL ENCOUNTER DIFFICULTIES, CONSULT THE PC TROUBLESHOOTING SECTION ON PAGE 88.***

When the transfer is complete:

- 1 The message 'Press "p" to program flash' will appear on the terminal.
- 2 Press "p" on the computer keyboard.
- 3 Wait for the flash to be programmed – DO NOT SWITCH OFF THE CONSOLE DURING THIS PROCESS!
- 4 When prompted with 'Now turn the download switch off', disengage the recessed download switch on the rear of the console.
- 5 The message '324 Live running' will appear and the console will boot with the new software installed.
- 6 On the PC, exit the Terminal program. Click Yes when asked if you wish to disconnect and click Yes when prompted to save the session. This will save your settings for future use. Enter '324 ' or a similar filename.

To verify that the software has been installed correctly, enter the 'Software Info' menu on the 324 . Make sure that the displayed software version is correct.

Windows 95 / 98 / NT 4.0

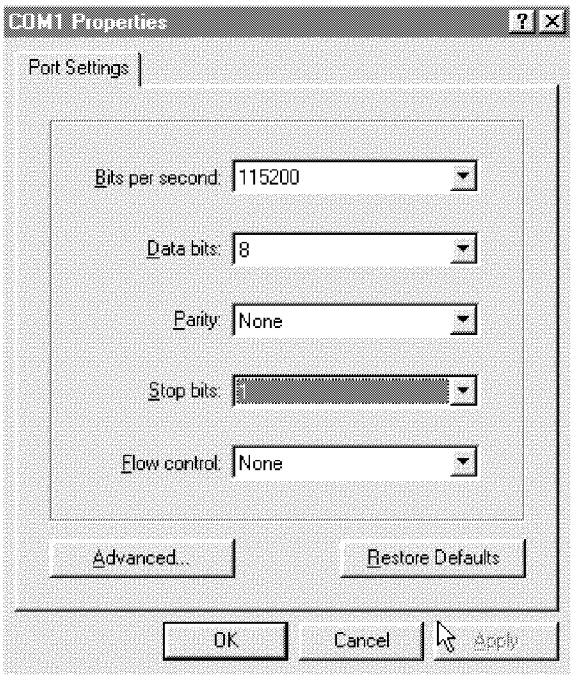
If the 324 Live software is compressed in .zip format, the software should be uncompressed following these instructions to extract the 324 Live .abs software file. Otherwise, if the software file is already in .abs format you should not attempt ot unzip the file.

- 1 Download the 324 Live .zip software file to the desktop.
- 2 Run WinZip 7.0, or a similar decompression utility.
- 3 In WinZip, select **Open Archive.**
- 4 Select the downloaded .zip file from the desktop.
- 5 Select **Extract.**
- 6 Ensure that the desktop is set as the path for the extracted .abs software.
- 7 Click **Extract.**

The 324 Live .abs software will now be extracted to the desktop.

Software upgrade procedure

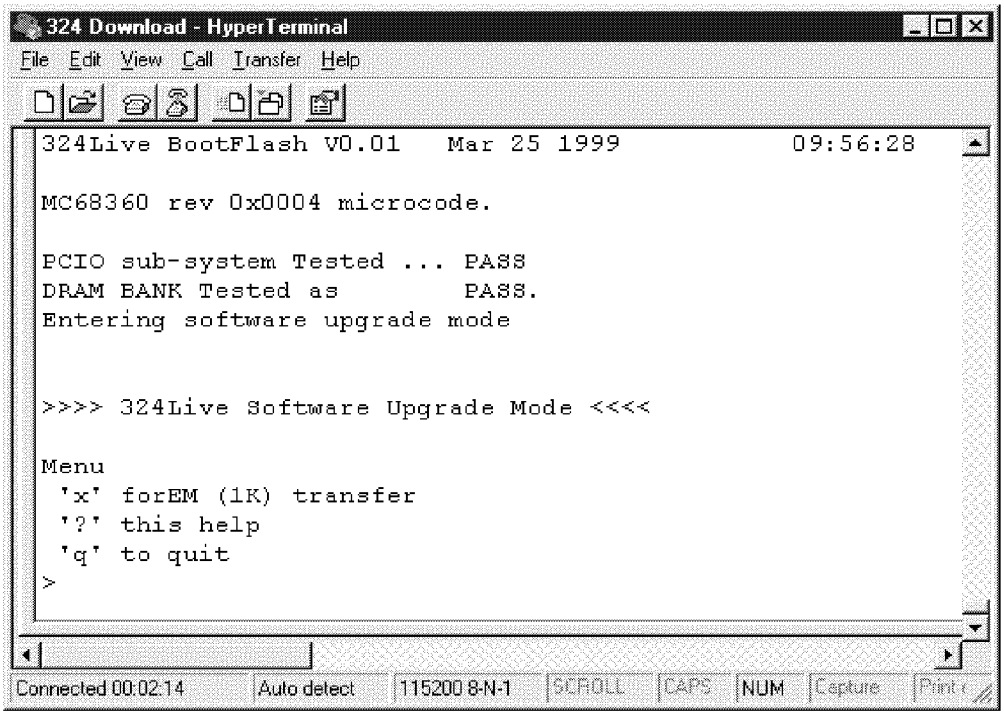
- 1 From the Start menu choose Programs, then Accessories, then Hyperterminal.
- 2 Find the Hyperterminal program icon, and double-click to launch the program.
- 3 Enter the name "324 Live Download", choose an icon and then click OK. This will enable you to return to the program easily on subsequent occasions with the correct parameters already set up.
- 4 At this point the phone number dialogue box should appear. Leave the phone number field blank, and set up the connection using either 'Direct to Com 1' or 'Direct to Com 2', depending on where the 324 Live is connected.
- 5 You now get Com 1 Properties dialogue box. Set up the parameters as follows:



- 6 Click OK. The blank Hyperterminal screen will now be displayed.

Switch on the 324 Live . The console will enter software upgrade mode, and all of the LEDs on the desk will stay on. If the console continues to boot, switch it off and ensure that the download switch is fully engaged before attempting again.

- 7 The software upgrade mode menu should appear in the Hyperterminal window, finishing with the line: 'Press "x" to start XMODEM transfer'



If the Hyperterminal screen does not appear as displayed here, check your connections and try again.

- 8 Press "x" on the computer keyboard.
- 9 Open the 'Transfer' menu and select 'Send File'.
- 10 Select the 1K Xmodem protocol.
- 11 Select the .abs file located on the desktop in the filename field.
- 12 Click on Send.
- 13 A transmission window will then appear providing feedback on the transfer [wait 20 seconds for the program to establish the connection].
- 14 A progress bar should make it obvious when the file transfer is underway.

! ***If you take too long finding and selecting the .abs file after pressing the "x" key, the 324 Live console may time-out, and the message "transfer unsuccessful" will appear in the transfer window. If this happens, power down the console and power up again. If your settings are correct, the menu will reappear in the Hyperterminal window. Then repeat steps 8-14.***

! ***IF YOU SUSPECT THAT THE TRANSFER HAS NOT BEEN PERFORMED SUCCESSFULLY, YOU SHOULD NOT CONTINUE! INSTEAD REPEAT THE PROCEDURE ABOVE. IF YOU STILL ENCOUNTER DIFFICULTIES, CONSULT THE PC TROUBLESHOOTING SECTION ON PAGE 85.***

When the transfer is complete:

- 15 The message 'Press "p" to program flash' will appear on the terminal.
- 16 Press "p" on the computer keyboard.
- 17 Wait for the flash to be programmed – **DO NOT SWITCH OFF THE CONSOLE DURING THIS PROCESS!**
- 18 When prompted with 'Now turn the download switch off', disengage the recessed download switch on the rear of the console.
- 19 The message '324 Live running' will appear and the console will boot with the new software installed.
- 20 On the PC, exit the Hyperterminal program. Click Yes when asked if you wish to disconnect and click Yes when prompted to save the session. This will save the settings you chose at the beginning of the procedure, for future use. Enter '324 ' or a similar filename.

To verify that the software has been installed correctly, enter the 'Software Info' menu on the 324 . Make sure that the displayed software version is correct.

Troubleshooting (PC Windows 3.1 /95 /98 /NT)

- **Q. When I switch on the console, the download menu does not appear on the computer.**

  A. Check that the download cable is firmly connected, and that it is positioned the correct way around. Check that the Download switch on the back of 324 Live is latched in. Check that the Terminal/Hyperterminal setup options are correct. Ensure you are using a recommended Spirit download cable, or that the pinout matches the pinout chart on page 89.

- **Q. When I switch on the console, spurious characters appear.**

  A. Check that the download cable is connected the correct way around. Check that the Terminal/Hyperterminal setup options are correct.

- **Q. The words "Bad command" appear every time I press a key.**

  A. Make sure that Caps Lock is not on.

- **Q. After pressing "x" and sending the file using the Terminal/Hyperterminal program, the download does not seem to work.**

  A. The console has timed out waiting for the software. Cancel the download from Terminal/Hyperterminal, switch off the console, then switch it back on. Begin the transfer again.

C - APPLE MACINTOSH INSTRUCTIONS

Connecting the 324 Live to the Mac

Connect the Macintosh Download Cable between the Modem port of the Mac and the RS 422 port on the 324. Do not use the Printer port.

Note that a standard serial-to-9 pin cable cannot be used to upgrade 324 Live software. The correct cable can be ordered from Spirit or a cable can be made using the pinout chart on page 90.

Switch off the 324 Live and enter Upgrade Mode by switching in the software download switch, located between the Link Port and Auxiliary Optical Output on the rear of the console. It is a small blue switch, recessed behind the metal enclosure of the 324 .

Setting up the Macintosh

Download Zterm from the 324 Live website at HYPERLINK http://www.spirit-by-soundcraft.co.uk/digital/download/index.htm www.spiritbysoundcraft.com. Zterm is the software that you will use to communicate between the Mac and the 324.

Stuffit Expander is required to unzip ZTerm.

ZipIt is required to unzip the 324 Live software. This is also available for download from the 324 Live website.

> ***Note that AppleTalk must be disabled before you attempt the software upgrade procedure. Click on the Apple icon on the top left hand side of the screen. From the drop down menu, select 'Chooser'. Set AppleTalk to Inactive. Depending on your computer, you may need to restart to fully disengage AppleTalk.***

Any fax software should also be disabled.

Unstuffing Zterm software file with Stuffit Expander

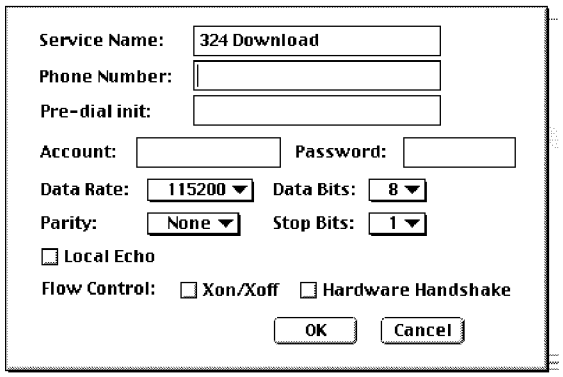
- 1 Click on the Zterm.sit icon, then drag and release it onto the top of the Stuffit Expander icon. Notice the expansion of the software.

  If Stuffit Expander is installed with Expander Enhancer, the compressed software .aip file can be extracted as above. Alternatively, ZipIt can be downloaded from the 324 Live website. Follow these instructions to extract the 324 Live .abs software file with ZipIt.

- 2 Unstuff zipit.sit as above.
- 3 Open the ZipIt folder and drag the zipped software .zip file onto the ZipIt icon in the folder.
- 4 Drag the revealed .abs file onto the desktop and close ZipIt.

Loading the new software into the console

- 1 Launch ZTerm from your desktop.
- 2 From the 'Settings' menu, select 'Connection'.
- 3 You will now have a dialogue box displaying the terminal settings. Set these up as follows:

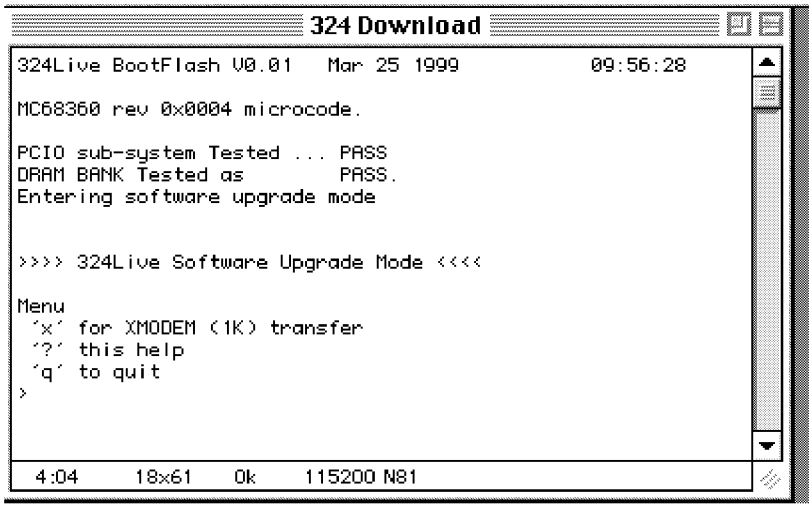


- 4 Click OK.
- 5 From the 'Settings' menu, choose 'Transfer Options'.
- 6 The Transfer Options dialogue box should be set up as follows:
  Send:Xmodem 1k... Receive: Xmodem.
- 7 Leave all other fields as they are and click OK.
- 8 From the 'Settings' menu, choose 'Modem Preferences'.
- 9 Check that this is set up as follows: Serial Port: Modem Port.
- 10 Leave all other fields as they are and click OK.

Switch on the 324 Live . The console will enter software upgrade mode, and all of the LEDs on the desk will stay on. If the console continues to boot, switch it off and ensure that the download switch is fully engaged before attempting again.

Software upgrade procedure

- 1 The software upgrade mode menu should appear in the ZTerm window, finishing with the line: 'Press "x" to start XMODEM transfer.



If the ZTerm screen does not appear as displayed here, check your connections and try again.

- 2 Press "x" on the Mac keyboard.
- 3 Open the 'File' menu and select 'Send Xmodem-1k'.
- 4 When prompted, select the .abs file located on the desktop.
- 5 Click Open.
- 6 A transmission window will then appear providing feedback on the transfer [wait 20 seconds for the program to establish the connection].
- 7 A progress bar should make it obvious when the file transfer is underway.

! ***If you take too long finding and selecting the .abs file after pressing the "x" key, the 324 Live console may time-out, and the message "transfer unsuccessful" will appear in the transfer window. If this happens, power down the console and power up again. If your settings are correct, the menu will reappear in the ZTerm window. Then repeat steps 2-7.***

! ***IF YOU SUSPECT THAT THE TRANSFER HAS NOT BEEN PERFORMED SUCCESS FULLY, YOU SHOULD NOT CONTINUE! INSTEAD REPEAT THE PROCEDURE ABOVE. IF YOU STILL ENCOUNTER DIFFICULTIES, CONSULT THE APPLE MACIN TOSH TROUBLESHOOTING SECTION ON THIS PAGE.***

When the transfer is complete:

- 1 The message 'Press "p" to program flash' will appear in the terminal window.
- 2 Press "p" on the Mac keyboard.
- 3 Wait for the flash to be programmed – **DO NOT SWITCH OFF THE CONSOLE DURING THIS PROCESS!**
- 4 When prompted with 'Now turn the download switch off', disengage the recessed download switch on the rear of the console.
- 5 The message '324 Live running' will appear and the console will boot with the new software installed.
- 6 On the Mac, quit Zterm. Click Yes when prompted to save the session. This will save the settings you chose at the beginning of the procedure, for future use.

To verify that the software has been installed correctly, enter the 'Software Info' menu on the 324 Live and check the displayed software version is correct.

Troubleshooting (Apple Macintosh)

- **Q. When I switch on the console, the download menu does not appear.**

  A. Check that the download switch on the back of 324 Live is fully engaged. Check that the ZTerm setup options are correct. Make sure you are using a recommended Spirit download cable, or ensure that the pinout matches the chart on page 16. The cable provided with the 324 Live is a PC download cable. A Mac cable should be purchased from a Spirit 324 Live dealer.

- **Q. When I switch on the console, spurious characters appear.**

  A. Check that the ZTerm setup options are correct.

- **Q. The words "Bad command" appear every time I press a key.**

  A. Check that Caps Lock is not on.

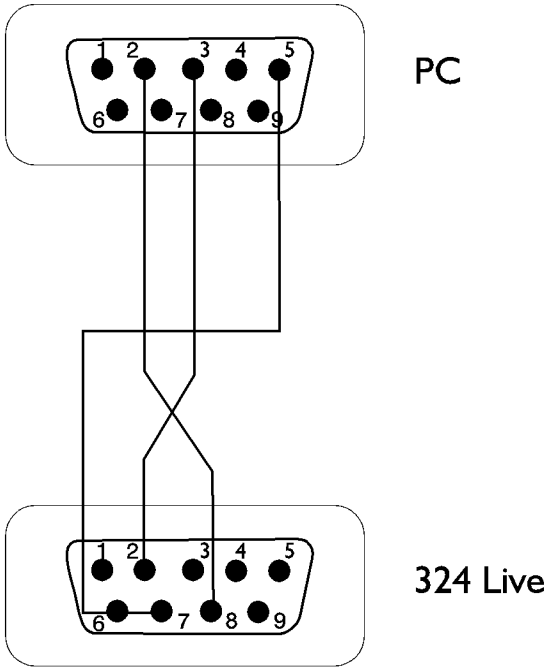
- **Q. After pressing "x" and sending the file using ZTerm, the download does not seem to work.**

  A. The console has timed out waiting for the software. Cancel the download from ZTerm, switch off the console, then switch back on. Begin the transfer again.

D - DOWNLOAD CABLE SPECIFICATIONS

PC Download cable

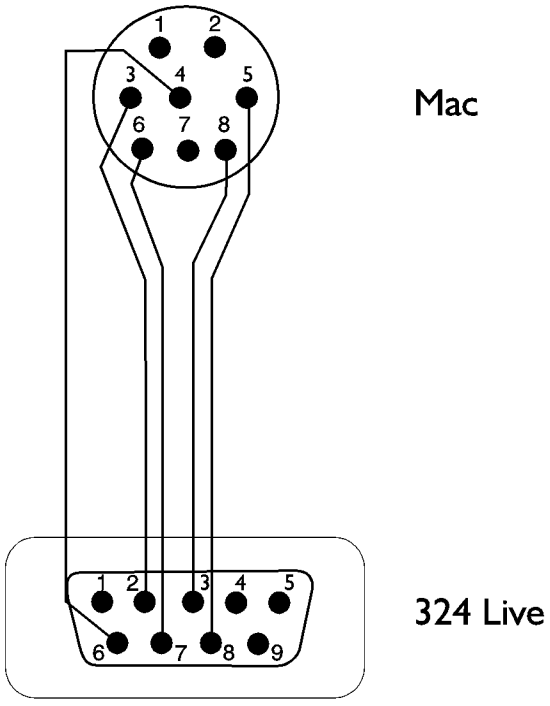
A PC cable can be purchased from a Spirit 324 Live dealer. Alternatively, should you wish to make your own cable, the pinout is below:



VIEWED FROM SOLDER SIDE

Mac Download cable

An Apple Macintosh cable can be ordered from a Spirit 324 Live dealer. Alternatively, should you wish to make your own cable, the pinout is below:



VIEWED FROM SOLDER SIDE

> ***Note that the Mac cable will not work with a new blue Mac G3 or grey Mac G4 as these machines do not support the PS/2 modem connection.***

VI

INTERFACE BOXES

In this Section:

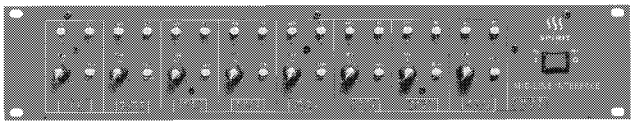
1. Interface Options Specifications **113**

1 - Interface Options Specifications

MIC LINE INTERFACE

The Mic-Line Interface converts either of the Digital TDIF ports on the rear of the 324 Live into 8 Mic-Line Inputs. It will also provide 8 balanced outputs carring either GRPS 1-4 or Direct outputs. The Mic amp is designed with exactly the same characteristics as those of the 324 Live.

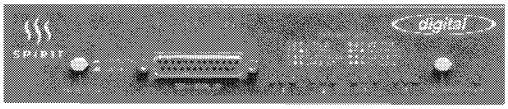
Features include:



- 8 x Balanced XLR Inputs
- 8 x Balanced TRS Inputs
- 8 x Insert Points
- 8 x Balanced Direct Outputs
- 8 x Individual + 48V Phamtom Power switches
- 8 x Individual High Pass Filter @ 100 Hz , 18dB/octave
- 8 x 4 stage meter per channel
- 8 x Ultramic ^{TM}+ Pre Amps

AES/EBU INTERFACE

This converts either of the digital TDIF ports on the rear of the 324 Live into 4 pairs of AES/EBU connectors, allowing 4 AES/EBU inputs and outputs to be connected. The outputs may carry Group or Direct output signals.

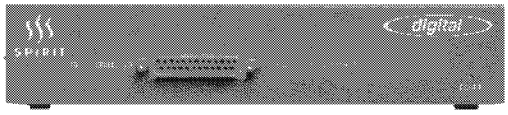


- 1U half rack size, separate power supply
- Frequency Response:+/-0.5 dB, 10Hz-20kHz, THD: 0.02 % @ 1kHz

ANALOGUE INTERFACE

Converts either of the digital TDIF ports on the rear of the 324 Live into 8 analogue phono (RCA) inputs and 8 analogue phono (RCA) outputs.

Allows an analogue multitrack recorder or 8 extra analogue inputs to be connected and allows the Group or Direct outputs to be fed to units accepting analogue inputs.



- 1U half rack size, separate power supply
- Frequency Response:+/-0.5 dB, 10Hz-20kHz, THD: 0.05 % @ 1kHz
- Dynamic Range: >93dB

VII

LEXICON FX PRESETS

The FX 1 and FX 2 processors found on the Spirit 324 Live each have 112 different Lexicon effects, that were pre-programmed before the mixer left the factory.

These Factory Presets cannot be deleted and can either be used as they are, or modified and saved as your own User presets. There are 128 User Preset memory locations for storing your own custom effects.

The Factory Presets are as follows:

1:Large Hall
2:Vocal Hall
3:Piano Hall
4:Music Club
5:Guitar Stage
6:Small Room
7:Inverse
8:Gate
9:Rich Plate
10:Drum Plate
11:Vocal Plate
12:Flanger
13:Chorus
14:Canyon
15:Multi Tap
16:Resonate
17:Small Hall
18:Bright Hall
19:Dark Hall
20:Big Hall
21:Mid Reverb
22:Long Reverb
23:Huge Reverb
24:Tight
25:Small Room 1
26:Small Room 2
27:Small Room 3
28:Medium Rm 1
29:Medium Rm 2
30:Large Rm 1
31:Large Rm 2
32:Small Plate
33:Plate
34:Plate 15
35:Guitar Plate
36:Drum Plate
37:Gold Plate
38:Guild Plate
39:Vocal Plate
40:Rusty Plate
41:Dark Plate
42:Bright Plate
43:Church
44:Long Plate
45:Diff Plate
46:Big Plate
47:Bottom Plate
48:Solo Plate
49:Echo Plate
50:Deep End
51:Small Gate
52:Short Gate
53:Med Gate 1
54:Med Gate 2
55:Large Gate
56:Gate 1
57:Gate Slap
58:Bright Gate
59:Slap Gate
60:Spring Chor
61:Mega Gate
62:Snare & Tom
63:Metal Gate
64:Elvis Gate
65:Inverse 1
66:Deverse
67:Rev Repeat
68:Ski Slope
69:Talk Flange
70:Full Chorus
71:Slap Flange
72:Sisi Echoes
73:Resonate 2
74:Edge 1
75:Open Harp
76:Rich Reson
77:Delay 1
78:Slap It!
79:Long Chorus
80:Long Delay
81:Delay 280ms
82:Delay 450ms
83:Antr Chorus
84:Chorus Too
85:Chorus Dble
86:Slap Chorus
87:Chorus Delay
88:Thru Ringer
89:Thick Chorus
90:Swing Delay
91:Long Echoes
92:Vocal Chor
93:Vocal Chorus
94:MAT Chorus
95:Chorus Slap
96:Kick Slap
97:Long Chorus
98:Slap Chorus
99:Sheen Chorus
100:Booty Bass
101:Delay 2
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105:1/4 Multi
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107:1/16 Multi
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110:1/8 Chorus
111:1/16 Chorus
112:1/8 T Chorus

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QUICK REFERENCE GUIDE

PROBLEM	SOLUTION
• **How do I Bypass the dynamics processors?**	Pressing the 34arrow keys when in either the DYN 1 or DYN 2 parameter pages, will toggle the 'Bypass' function for the selected dynamics processor On or Off.
• **How do I link channels to make a stereo pair?**	Hold down the CHANNEL/GROUP LINK button and then press one of the SEL buttons on the pair of chan nels you want to link. (This functions for channels 1-2, 3-4, 5-6 etc. only).
• **How do I link Group faders to make a stereo Group?**	Hold down the CHANNEL/GROUP LINK button and then to link. (This functions for Groups 1-2 and 3-4 only).
• **How do I assign the Groups to the Mix or Mono Output?**	Hold down the MIX or MONO button and then press the GROUP button corresponding to the Group you wish to assign to either the MIX or MONO output.
• **How do I copy settings from one channel to another channel?**	Hold down the SEL button on the source channel, and then press the SEL button on the destination channel.
• **How do I switch the Aux 1, 2, 3, 4 Sends or Post Fade?**	Hold down the AUX/FX PRE button and then to be Pre press the relevant AUX button in the ROTARY CON TROLS section to switch between Post Fade (Not illu minated) and Pre-Fade (Illuminated).
• **How do I switch the Aux 1, 2, 3, 4 Sends PRE or Post EQ?**	Press the MENU button and scroll down to the to be Pre AUX PRE/POST EQ menu page. Press the ENTER/YES button and then use the 56keys to select the relevant Aux. Then use the parameter encoder to select Pre or Post EQ.
• **How do I delete a Snapshot?**	Press the SNAPSHOT button and use either the para meter encoder or the 56keys to select the Snapshot you wish to delete. Press the EXIT/NO button and when prompted press the ENTER/YES button to confirm deletion of the selected Snapshot.
• **How do I set up a Mute Group?**	Press the MUTE buttons on the channels you wish to be in a MUTE GROUP. Press and release the STORE but ton and then press one of the MUTE 1, 2, 3 or 4 but tons to store the seletion.
• **How do I Isolate a channel from the Snapshot automation system?**	Press the SEL button on the channel you want to Isolate and then press the ISOLATE button in the SELECT panel.Alternatively hold down the ISOLATE button and press the SEL buttons on any channels you want to Isolate.
• **How do I assign or de-assign DYN 1or DYN 2 to or from a channel?**	Press and hold the DYN ON METERS button,and then press the SEL button on the Channel you wish to assign or de-assign the Dynamics processor to or from.
• **How do I quickly delete all snapshots and return the console to its Factory settings?**	Switch off the console, then switch on again whilst holding down the Left and Right arrow keys. Keep the arrow keys depressed until the LED shows "Hard reset to factory defaults.