VARI✷LITE TECHNICAL BULLETIN

SUBJECT: **VL4000 Spot Luminaire Software Release**	SERIES: **4000**
DISTRIBUTION: **Service Centers, End Users**	STATUS: **Routine**

Introduction

Embedded Software Release

Vari-Lite has a new software release for VL4000 Spot Luminaires. Software version **01/16/15** (file name, **VL4000_011615.bin**) is now available for download and installation.

Vari-Lite suggests all owners and users of the VL4000 Spot Luminaires download and install this new version of software from the Support section of the Vari-Lite web site (www.vari-lite.com).

Please review this bulletin in its entirety before downloading and installing the software.

Note: VL4000 Spot Luminaires manufactured on and after **01/05/15** will have this software installed. This software may be loaded in all previously manufactured fixtures.

⚠ Important Notes About this Version of Software

✱ *Please review this bulletin in its entirety before downloading and installing the software.*

✱ *After installing this software update, some show programming may require modification. Certain fixture operation will be affected by installing this software.*

✱ *Pay close attention to* "Set Tilt Cal" on page 5. *The procedure described will need to be done or show programming altered after loading this software.*

✱ *Power recycling is required after new software is installed.*

About PEGASUS Upload Software

For instructions on downloading and installing VARI✷LITE luminaire software, refer to luminaire's user manual.
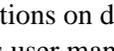
The PEGASUS Upload Software and luminaire firmware files are available for download, at no charge, from the Philips Vari-Lite web site at www.vari-lite.com in any luminaire product downloads support section.

For more information on PEGASUS Upload Software, please refer to Vari-Lite Technical Notice TN-349 (located in any product downloads Support section on the Vari-Lite web site) or contact your Authorized VARI✷LITE Dealer or Vari-Lite customer service.
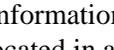
If you have any questions regarding this release or your VARI✷LITE product, please contact Vari-Lite Customer Service at 1-877-VARILITE (or +1-214-647-7880) or via e-mail at entertainment.service@philips.com.
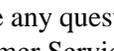
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Release Notes

Updates to VL4000 Spot Luminaire Software (01/16/15):

New Features - General

Implemented Fixture Shutdown - Refer to current user's manual* for DMX values contained in the luminaire's control channel for this feature. This command will turn the lamp OFF, disable all motors, and stop the luminaire from functioning until either a Full Luminaire ReCal command or Lamp ON command is sent. When in the shutdown state, the luminaires menu will display **SHUTDOWN**.

Note: The luminaire's cooling fans will continue to run for 5 minutes after the shutdown command is sent. After 5 minutes the luminaire fans will shutdown. A power cycle will also clear the shutdown state.

Added USB Menu under the Fixture Menu - added some new features including data logging and the ability to load fixture software via the USB port. See the following and refer to "Appendix B" on page 10 for more information.

- *Implemented USB Logging* - The VL4000 Spot luminaire now stores error messages in a log file within the luminaire. This information along with specific luminaire settings can be saved as a .csv *(comma-separated values)* file to a USB flash drive connected to the USB port.

To save the current log file to a USB Flash Drive:

Step   1. Insert a USB flash drive *(not supplied, by others)* into luminaire's USB port.

Step   2. Press [ESC].

Step   3. Press [UP] / [DOWN] arrows until **Fixture** appears. Press [OK].

Step   4. Press [UP] / [DOWN] arrows until **USB** appears. Press [OK].

Step   5. Press [UP] / [DOWN] arrows until **USB Log** appears. Press [OK].

Step   6. Press [UP] / [DOWN] arrows until **DOWNLOAD** appears. Press [OK].

Step   7. Once the download is complete, the display will read "**Reset Current Lum error log file?**" Press [OK] to reset or [ESC] to exit.

Step   8. Press [OK] to clear the current log file in the luminaire or [ESC] to keep it.

The .csv log file on the USB Flash Drive can be read via any computer system. The file name will be as follows: 4KSxxxxx.csv (the xxxxx will be the unique luminaire ID of the fixture). Each log file contains labels and values as shown in Table 1 on page 3 of this bulletin.

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Table 1: .csv Log File Information

Parameter	Example Information	Meaning
Model	VL4000 Spot	The fixture model
Fixture Hours	142	The total of number of hours the fixture has been operating
DMX Address	1	Current DMX address of the fixture as set by the user
RDM UID	56:4c:2f:0:7:2a	Refer to **Table 3 on page 7** for information
Luminaire ID	1834	Current luminaire identification number
Software Version	1/6/2015	Current software version loaded in the fixture
DMX Map	16-bit Enh	Current DMX mode setting *(16 bit enhanced or 16 bit)*
Swap Pan/Tilt	No	Current pan and tilt setting
Invert Pan	No	Current pan operation setting
Invert Tilt	No	Current tilt operation setting
Lamp Power Up	Lamp Off	Current Lamp Power Up option setting *(Lamp Off, Lamp ON, or Cal On)*
Lamp Level	Standard	Current operating mode of the fixture *(Standard or Studio)*
Lamp Strikes	518	Total number of lamp strikes initiated by the fixture
Lamp Hours	140	Total number of lamp hours since the last lamp hour reset
Fixture Hour	Error Type(s)	Lists any errors and their associated fixtures hour *(in example shown, a pan error occurred at fixture hour 138)*
138	Pan no sensor	

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- *Implemented USB Upload* - The VL4000 Spot luminaire can have its firmware updated via the USB port.

To upload luminaire software to a luminaire using a USB Flash drive.

Step 1. On a computer connected to the Internet, download the luminaire software from the Vari-Lite web site. Refer to current user's manual* for more information on downloading Luminaire software. *Save the downloaded .bin file to the root directory on a USB flash drive (not supplied, by others). Do not store the .bin file in any folder on the USB flash drive.*

Step 2. Insert USB flash drive into luminaire's USB port.

Step 3. Press [ESC].

Step 4. Press [UP] / [DOWN] arrows until **Fixture** appears. Press [OK].

Step 5. Press [UP] / [DOWN] arrows until **USB** appears. Press [OK].

Step 6. Press [UP] / [DOWN] arrows until **USB Upload** appears. Press [OK].

Step 7. The display will show download progress.

To verify software version at luminaire:

Step 1. At Menu Display, press [ESC].

Step 2. Press [UP] / [DOWN] arrows until **Fixture** appears. Press [OK].

Step 3. Press [UP] / [DOWN] arrows until **Version** appears. Press [OK].

　　1) The first half of the version will be displayed as a date (**MM/DD/YY**). For example, **03/18/14** (March 18, 2014).

　　2) Press [Enter] to display second half of version. This will be displayed as a time (HH:MM). (For example, **16.36** = 4:36 pm).

- *Implemented RDM* - RDM functionality for the VL4000 Spot has been implemented. Refer to "Appendix A" on page 7 of this bulletin for tables outlining the luminaire's specific RDM capabilities.

Added Auto-Recal to Configure ->Head Motors ->Enable - when the head motors are re-enabled, the luminaire will now ReCal the head motors before enabling.

Improved Test Routines - The test routines accessed via the luminaire's menu system have been improved from the previous software version.

Improved Gobo Time - When using gobo time, the scaling of time values has been optimized throughout the entire timing range to allow better gobo time usage.

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New Items in Service Menu

CAUTION: Certain features described below are for Authorized Service Centers and Certified Vari-Lite Technicians use only. Refer to "Appendix B" on page 10 for more information.

Set Tilt Cal

Added a Set Tilt Calibration (Set Tilt Cal) menu under the Fixture -> Service menu. This version of firmware improves the centering calibration of the tilt parameter. When the firmware is installed, the tilt values may differ from previous values. Show data can be updated to correct for the update, however for the best performance user are advised to calibrate the tilt using the luminaire's LCD menu.

To Set Tilt Cal:

Step   1. Press [UP] / [DOWN] arrows until **Service** appears. Press [OK].

Step   2. Press [UP] / [DOWN] arrows until **Set Tilt Cal** appears. Press [OK].

Step   3. The display will read **Set Tilt Encoder Center Tilt Position Press OK** and the tilt motors will disengage.

Step   4. Manually move by hand the tilt of the luminaire's head until it is in alignment with the yoke arm as shown in **Figure 1**.

Luminaire Head

Yoke Arm
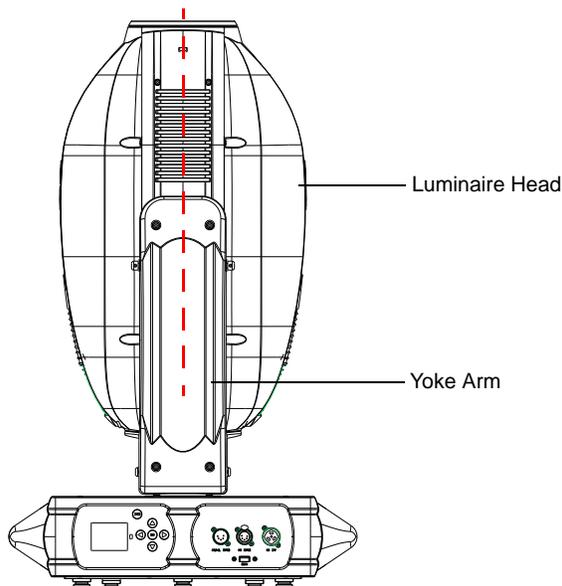
Figure 1: VL4000 Spot Luminaire

Step   5. Press [OK] to accept the calibration or [ESC] to cancel the calibration.

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Gobo Offset

Added Gobo Offset (for each Gobo Wheel) menu under the Fixture -> Service menu - This version of firmware introduces the ability to adjust the offset of each gobo wheel and should only be adjusted if a wheel is not properly centering gobos in the aperture.

CAUTION: This feature should only be performed by Authorized Service Centers and Certified Vari-Lite Technicians.

To Set Gobo Offset for gobo wheel 1 and/or gobo wheel 2:

Step   1.   Using a DMX console or manual control, select a gobo on the desired wheel and adjust the edge parameter accordingly.

Step   2.   Press [UP] / [DOWN] arrows until **Service** appears. Press [OK].

Step   3.   Press [UP] / [DOWN] arrows until **Gobo 1 Offset** or **Gobo 2 Offset** appears. Press [OK].

Step   4.   The display will read **65535**. Use the [UP] / [DOWN] arrows to move selected gobo wheel within the aperture as desired.

Step   5.   Press [OK] to accept and store the gobo offset setting or [ESC] to cancel the gobo offset setting.

Contact Information

For more information on this technical bulletin or on VARI✱LITE products, please contact your Authorized VARI✱LITE Dealer or Vari-Lite customer service.

Appendix A

VL4000 Spot Luminaire RDM Parameter IDs

The following tables outline and describe all the RDM parameters IDs associated with VL4000 Spot Luminaires.

- Table 2, "VL4000 Spot Luminaire RDM Product Parameters IDs"
- Table 3, "VL4000 Spot Luminaire RDM UID"
- Table 4, "VL4000 Spot Luminaire RDM Parameters IDs

Table 2: VL4000 Spot Luminaire RDM Product Parameters IDs

Model ID	Manufacturer	Model Description	Product Category
0x002F	Philips Vari-Lite	VL4000 Spot	0x0100

Table 3: VL4000 Spot Luminaire RDM UID

UID					
MSB of ESTA 56H	LSB of ESTA 4CH	MSB of Serial	Second Byte of Serial	Third Byte of Serial	LSB of Serial

Table 4: VL4000 Spot Luminaire RDM Parameters IDs

Get Allowed	Set Allowed	RDM Parameter IDs	Value	Comment	Implemented
		Category - Network Management			
		DISC_UNIQUE_BRANCH	0x0001		
		DISC_MUTE	0x0002		
		DISC_UN_MUTE	0x0003		
		PROXIED_DEVICES	0x0010		
		PROXIED_DEVICES_COUNT	0x0011		
		COMMS_STATUS	0x0015		
		Category - Status Collection			
		QUEUED_MESSAGE	0x0020		■
■		STATUS_MESSAGES	0x0030		■
■		STATUS_ID_DESCRIPTION	0x0031		■
	■	CLEAR_STATUS_ID	0x0032		■
		SUB_DEVICE_STATUS_REPORT_THRESHOLD	0x0033		
		Category - RDM Information			

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Table 4: VL4000 Spot Luminaire RDM Parameters IDs

Get Allowed	Set Allowed	RDM Parameter IDs	Value	Comment	Implemented
		SUPPORTED_PARAMETERS	0x0050	*Support required only if supporting Parameters beyond the minimum required set.*	
		PARAMETER_DESCRIPTION	0x0051	*Support required for Manufacturer-Specific PIDs exposed in SUPPORTED_ PARAMETERS message.*	
Category - Product Information				
■		DEVICE_INFO	0x0060		■
		PRODUCT_DETAIL_ID_LIST	0x0070		
■		DEVICE_MODEL_DESCRIPTION	0x0080		■
■		MANUFACTURER_LABEL	0x0081		■
■	■	DEVICE_LABEL	0x0082		■
		FACTORY_DEFAULTS	0x0090		
		LANGUAGE_CAPABILITIES	0x00A0		
		LANGUAGE	0x00B0		
■		SOFTWARE_VERSION_LABEL	0x00C0		■
■		BOOT_SOFTWARE_VERSION_ID	0x00C1		■
■		BOOT_SOFTWARE_VERSION_LABEL	0x00C2		
Category - DMX512 Setup				
■	■	DMX_PERSONALITY	0x00E0		■
■		DMX_PERSONALITY_DESCRIPTION	0x00E1		■
■	■	DMX_START_ADDRESS	0x00F0		■
■		SLOT_INFO	0x0120		■
■		SLOT_DESCRIPTION	0x0121		■
■		DEFAULT_SLOT_VALUE	0x0122		■
Category - Sensors 0x02xx				
		SENSOR_DEFINITION	0x0200		
		SENSOR_VALUE	0x0201		
		RECORD_SENSORS	0x0202		
Category - Dimmer Settings 0x03xx - FUTURE USE				
Category - Power / Lamp Settings 0x04xx				
■		DEVICE_HOURS	0x0400		■
■		LAMP_HOURS	0x0401		■
■		LAMP_STRIKES	0x0402		■
■	■	LAMP_STATE	0x0403		■
■	■	LAMP_ON_MODE	0x0404		■

Table 4: VL4000 Spot Luminaire RDM Parameters IDs

Get Allowed	Set Allowed	RDM Parameter IDs	Value	Comment	Implemented
■		DEVICE_POWER_CYCLES	0x0405		■
		Category - Display Settings 0x05xx			
■	■	DISPLAY_INVERT	0x0500		■
■	■	DISPLAY_LEVEL	0x0501		■
		Category - Configuration 0x06xx			
■	■	PAN_INVERT	0x0600		■
■	■	TILT_INVERT	0x0601		■
■	■	PAN_TILT_SWAP	0x0602		■
		REAL_TIME_CLOCK	0x0603		
		Category - Control 0x10xx			
	■	IDENTIFY_DEVICE	0x1000		■
	■	RESET_DEVICE	0x1001		■
		POWER_STATE	0x1010		
		PERFORM_SELFTEST	0x1020		
		SELF_TEST_DESCRIPTION	0x1021		

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Appendix B

VL4000 Spot Luminaire Revised Menu Structure

Old Fixture Structure
(for software versions PRIOR to 01/16/15)
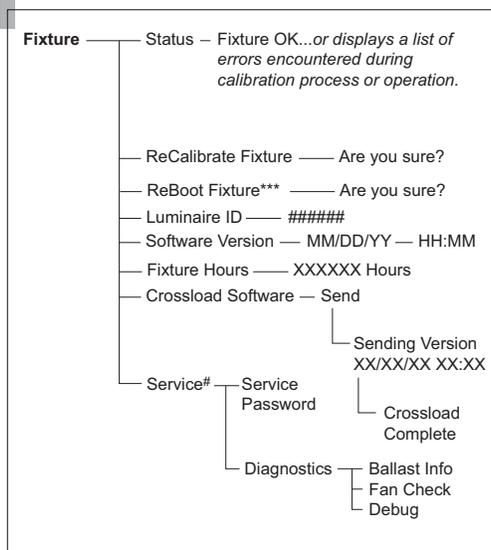
Fixture —— Status – Fixture OK...*or displays a list of errors encountered during calibration process or operation.*

—— ReCalibrate Fixture —— Are you sure?

—— ReBoot Fixture*** —— Are you sure?

—— Luminaire ID —— ######

—— Software Version —— MM/DD/YY — HH:MM

—— Fixture Hours —— XXXXXX Hours

—— Crossload Software — Send

└── Sending Version XX/XX/XX XX:XX

└── Crossload Complete

—— Service# ── Service Password

└── Diagnostics ── Ballast Info
├── Fan Check
└── Debug

Notes:

***Reboots entire fixture including processor.**
 # For use by authorized service technicians only.

NEW Fixture Menu Structure
(for software versions 01/16/15 and later)

Fixture —— Status – Fixture OK...*or displays a list of errors encountered during calibration process or operation.*

—— ReCalibrate Fixture —— Are you sure?

—— ReBoot Fixture*** —— Are you sure?

—— Luminaire ID —— ######

—— Software Version —— MM/DD/YY — HH:MM

—— Fixture Hours —— XXXXXX Hours

—— Crossload Software — Send

└── Sending Version XX/XX/XX XX:XX

└── Crossload Complete

—— Service# ── Service Settings
├── Set Tilt Cal
├── Gobo 1 Offset
└── Gobo 2 Offset

└── Diagnostics ── Ballast Info
├── Fan Check
└── Debug

—— USB ── Update OS

└── Log File ── Download
└── Reset

Notes:

***Reboots entire fixture including processor.**
 # For use by authorized service technicians only.

Note: Revised menu items highlighted in red outline.