



AN OSRAM BUSINESS

Alpha / A.leda lines

FIRMWARE UPDATE NOTES

Foreword and concepts to get familiar with

This document provides useful information and procedures regarding the firmware update process of the **latest Clay Paky moving heads**.

This tech note refers to units equipped with the latest Clay Paky electronic platform, easily recognizable by the LCD graphic display rather than the red-digits one typical of the previous models.

There currently are three main firmware families for moving heads, dedicated to:

- 1. Units using HID lamps as light engine, of whatever power level*
- 2. Units belonging to the A.leda Wash and B-EYE families, with PIXEL MAPPING CAPABILITIES*
- 3. Units belonging to the A.leda Wash and B-EYE families, with NO SINGLE PIXEL control*

Regardless of the specific families, every firmware package is composed of multiple files, out of which mainly one (the **application file** for the CPU) is normally being interested by updates.

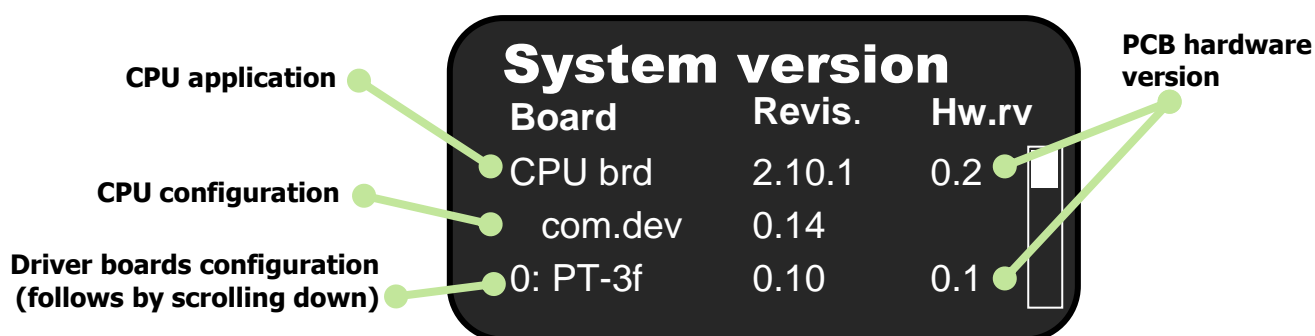
The other files, containing the **configuration** data of the PCBs, are only reissued when major changes are made.

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1. CHECKING THE CURRENT VERSION

In order to properly plan a firmware update knowing the **current state of the machine** is needed; to do so you can access the on board menu and choose "SYSTEM VERSION" from the "INFORMATION" menu.



The current **CPU application** revision is reported on the first line (highlighted in the picture), followed by the hardware revision of the board. On the second line, the **CPU configuration** file revision is listed, while from line 3 on you can check all the **additional driver boards configuration** files, including the Pan / Tilt board and, for LED lights, the LED driver board.

All the informations relating to the CPU (application and configuration files) and the firmware versions of the driver boards should be noted down for later reference.

2. SELECTING THE NEEDED FILES

<http://www.claypaky.it/en/download/yourproductname>

eg

<http://www.claypaky.it/en/download/mythos>

The Clay Paky website, as well as the support mail address **cpservice@claypaky.it**, provides the latest firmware collections, containing all the files you might need to perform a full firmware update.

It should be noted that **it is inadvisable to reinstall configuration files that are already to the latest version**, so you will normally have to send one file only out of the .zip file content

The single firmware files and their function are recognizable by their names:

File type	File name (general)	File name (example)
CPU application	FirmwareName_FW_x.y.z.img	HID_FW_2.10.001.img ALEDA_FW_2.10.001.img
CPU configuration	ARM9_HW_x.y.z.img	ARM9_HW_14.0.000.img
Motor driver configuration	ARM9_BoardType_x.y.img	ARM9_PT_0.10.img (pan / tilt motor driver board) ARM9_MOS_0.10.img (silent motor driver board)
LED driver configuration	FirmwareName_FixturePower_x.y.img	ALEDA_K20_3.10.img (LED driver with pixel mapping)

3. SENDING THE FILES TO THE FIXTURES

Once the files to be loaded on the fixtures have been determined, said files can be sent to the unit using the Clay Paky **Firmware UpLoader** (P/N **C61206**) or the Web-Server tool embedded in each Clay Paky fixture. Additional information on the use of the FUL / webserver are available in the relevant product page on the Clay Paky website.

Depending on your needs, you can use the tool that best serves you considering that:

- The **FUL** can update up to a maximum of 32 fixtures at a time (as per the DMX 512 protocol specs);
- The **Webserver** can upload the firmware to a single fixture at a time, but its transmission speed is multiple times faster than that of a standard DMX cable;
- The Webserver is a fixture resident application, so no other tool apart from a computer (Mac OS, Windows, Linux or others indifferently) is needed to upload any kind of firmware;
- Clay Paky fixtures are able to send their main firmware (the **CPU application** file only) via DMX to a maximum of 32 fixtures within the same family (units from the A.leda family will ignore firmwares dedicated to HID units and vice versa, the numerical limit accounts for both family and non family-members);
- The webserver will provide you an extensive range of informations regarding your unit, including the possibility of saving sets of options, checking System Errors and Diagnostics and performing the fine-tuning of your units' parameters.

A proper files loading order is important to ensure a smooth update. Specifically:

- Load the **CPU application** file;
Switch off and on the fixture and if needed
- Load the **CPU configuration** file;
Switch off and on the fixture and if needed
- Load the **driver boards configuration** files;
Switch off and on the fixture

4. USING THE FIRMWARE RELATED DOCUMENTS

Together with every new firmware release, a *Firmware Revision History* document is issued, reporting the changes introduced and the specific products these modifications have an impact on. It also lists the units for which specific firmwares are not suitable anymore and important notes on the procedure:

REVISION <i>REVISIONE</i>	DATE <i>DATA</i>	DESCRIPTION <i>DESCRIZIONE</i>	Alpha 1500						Alpha 700				Alpha 800		Alpha 330	
			Beam	Wash LT (*)	Wash	Profile Q	Profile (ΔST)	Spot HPE (ΔST)	Spotlight Wash	Beam	Spot HPE	Wash	Profile (ΔST)	Spot QWO (ΔST)	Profile ST	Sharpy
2.1.000	Sep 09 th 13 09 Set 2013	Identification in fixture's Menu / <i>Identificazione nel menù del proiettore:</i> (Board) CPU brd (Revis.) 2.1.0 <ul style="list-style-type: none">• Implemented RDM protocol (via DMX and via Artnet).• Filename extension changed from .bin to .img IMPORTANT: it is necessary to upgrade the CPU configuration file to version 14.0.000 to use this CPU Firmware version and following.	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Important notes are highlighted

This release should not be used on the Alpha Wash 1500 LT

A second document, called *Latest Firmware Releases*, provides an instant "snapshot" of the latest firmware release for the whole Clay Paky electronic boards (including the ones for the Alpha 1200, 575 and 300 series), in order to be able to fastly understand if a unit might need an update or not.

It is important to note that this information deals with electronic boards and not directly with fixtures, so you should **refer to the model stickers placed on the PCBs or on the Hardware Version** reported in the System Version menu.

Sending the wrong configuration file to a board, or sending a configuration file intended for a specific hardware revision to a board with a different hw revision, can cause unit malfunctioning and permanent damage to the electronics. Refer to the documentation or contact cpSERVICE@claypaky.it

ELECTRONIC BOARD SCHEDA ELETTRONICA	DESCRIPTION / DESCRIZIONE		
	CPU board / Scheda CPU		
	TYPE / TIPO	CP0100-5	
	CP PART NUMBER / CODICE CP	699189	
CPU APPLICATION FIRMWARE	REVISION / REVISIONE	2.10.005	
	DATE / DATA	May, 27 th 2015 / 27 Maggio 2015	
	FILENAME / NOME FILE	HID_FW_2.10.005.img	
	IDENTIFICATION ON FIXTURE'S DISPLAY (INFORMATION → SYSTEM VERSION MENU) IDENTIFICAZIONE SUL DISPLAY DEL PROIETTORE (MENÙ INFORMATION → SYSTEM VERSION)		
	(Board) CPU brd (Revis.) 2.10.5		
	UPLOAD SYSTEM / METODO DI CARICAMENTO		
	Fixture-to-Fixture da proiettore a proiettore	FirmwareUpLoader (C61206 kit)	Web Server
CPU CONFIGURATION FIRMWARE	REVISION / REVISIONE	14.0.000	
	DATE / DATA	July, 02 nd 2013 / 02 luglio 2013	
	FILENAME / NOME FILE	ARM9_HW_14.0.000.img	
	IDENTIFICATION ON FIXTURE'S DISPLAY (INFORMATION → SYSTEM VERSION MENU) IDENTIFICAZIONE SUL DISPLAY DEL PROIETTORE (MENÙ INFORMATION → SYSTEM VERSION)		
	(Board) com.dev (Revis.) 0.14		
	UPLOAD SYSTEM / METODO DI CARICAMENTO		
	FirmwareUpLoader (C61206 kit)		Web Server

Some other, basic rules have to be followed as well, amongst which:

- **Never cut the power** to fixtures sending / receiving firmware packets;
- Always ensure the DMX / ethernet cables being used to perform the update are in perfect physical / electrical condition, and **never remove such connectors** during the update;
- **Do not perform firmware updates on units that are not officially supported** from the FW version you are sending them;
- **Keep firmware consistency in complete stock**, this will ensure smooth future updates as well;
- **Never downgrade to previous CPU application versions** without having ensured that the configuration files for ALL the other boards can support it. This can cause permanent malfunction to the electronic platform.