

# L-Series Plus RDM Protocol Specification

## TECHNICAL INFORMATION

November 2024 • 1.0 • English

L5.0051939





## Imprint

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Original version.

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### For Further Assistance

Arnold & Richter Cine Technik GmbH & Co. Betriebs KG

Flintsbacher Str. 1-5

D-83098 Brannenburg

Germany

E-mail: [service-lighting@arri.de](mailto:service-lighting@arri.de)

Website: <https://www.arri.com/en/technical-service/>

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## About this Document

### Product Information Resources

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Please enter the following searchkeys in the search bar to retrieve the documents for the product:

L-Series Plus , L-Series Plus, L1.004880\*

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For more details about the product, please refer to the ARRI website at:

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### Document Revision History

# 1 RDM PIDs

## 1.1 Manufacturer Identification

| PID    | Parameter       | Description                                        |
|--------|-----------------|----------------------------------------------------|
| 0x20B9 | Manufacturer_ID | Manufacturer identification number (ARRI Lighting) |

## 1.2 RDM UID

The L-Series Plus RDM unique identifier (UID) consists of the manufacturer ID and serial number.

The Manufacturer ID is **0x20B9**.

## 1.3 Model Identification

| PID    | Parameter       | Description                        |
|--------|-----------------|------------------------------------|
|        | <b>Model_ID</b> | <b>Model Identification Number</b> |
|        |                 | <i>L-Series</i>                    |
| 0x0111 |                 | L5-C Plus                          |
| 0x0112 |                 | L7-C Plus                          |

## 1.4 Personality Identification

| PID  | Parameter                      | Description                   |
|------|--------------------------------|-------------------------------|
|      | <b>Personality Description</b> | <b>DMX Personality</b>        |
|      |                                | <i>DMX version 4.4</i>        |
| 0x01 |                                | P:1 – CCT & RGBW 8 bit        |
| 0x02 |                                | P:2 – CCT 8 bit               |
| 0x03 |                                | P:3 – CCT & HSI 8 bit         |
| 0x04 |                                | P:4 – RGBW 8 bit              |
| 0x05 |                                | P:5 – HSI 8 bit               |
| 0x06 |                                | P:6 – CCT & RGBW 16 bit       |
| 0x07 |                                | P:7 – CCT 16 bit              |
| 0x08 |                                | P:8 – CCT & HSI 16 bit        |
| 0x09 |                                | P:9 – RGBW 16 bit             |
| 0x0A |                                | P:10 – HSI 16 bit             |
| 0x0B |                                | P:11 – CCT & RGBW C/F         |
| 0x0C |                                | P:12 – CCT C/F                |
| 0x0D |                                | P:13 – CCT & HSI C/F          |
| 0x0E |                                | P:14 – RGBW C/F               |
| 0x0F |                                | P:15 – HSI C/F                |
| 0x10 |                                | P:16 – GEL V2 8 bit           |
| 0x11 |                                | P:17 – GEL V2 16 bit          |
| 0x12 |                                | P:18 – x,y coordinates 8 bit  |
| 0x13 |                                | P:19 – x,y coordinates 16 bit |
| 0x14 |                                | P:20 – Sources 8 bit          |
| 0x15 |                                | P:21 – Sources 16 bit         |
| 0x16 |                                | P:22 – Effects 8 bit          |
| 0x17 |                                | P:23 – Effects 16 bit         |

| PID  | Parameter | Description                      |
|------|-----------|----------------------------------|
| 0x18 |           | P:24 – LE CCT & RGBW 8 bit       |
| 0x19 |           | P:25 – LE CCT & RGBW 16 bit      |
| 0x1A |           | P:26 – LE HSI 8 bit              |
| 0x1B |           | P:27 – LE HSI 16 bit             |
| 0x1C |           | P:28 – LE x,y coordinates 8 bit  |
| 0x1D |           | P:29 – LE x,y coordinates 16 bit |
| 0x1E |           | P:30 – Ultimate 8 bit            |
| 0x1F |           | P:31 – Ultimate 16 bit           |

## 1.5 Network Management

| PID    | Parameter          | Description           |
|--------|--------------------|-----------------------|
| 0x0001 | DISC_UNIQUE_BRANCH | (G) Search RDM device |
| 0x0002 | DISC_MUTE          | (S) Mute RDM device   |
| 0x0003 | DISC_UN_MUTE       | (S) Unmute RDM device |

## 1.6 Status Collection

| PID    | Parameter             | Hex-Value | Description                                                                 |
|--------|-----------------------|-----------|-----------------------------------------------------------------------------|
| 0x0020 | QUEUED_MESSAGE        |           | (G) Retrieves queued messages or a status message if no message is in queue |
| 0x0030 | STATUS_MESSAGE        |           | (G) Retrieves current Warning/Error messages                                |
| 0x0031 | STATUS_ID_DESCRIPTION |           | (G) Retrieves description of each Warning/Error/Status message              |

## 1.7 RDM Information

| PID    | Parameter             | Description                                                                                                  |
|--------|-----------------------|--------------------------------------------------------------------------------------------------------------|
| 0x0050 | SUPPORTED_PARAMETERS  | (G) Retrieves a list of all supported RDM commands                                                           |
| 0x0051 | PARAMETER_DESCRIPTION | (G) Retrieves a list of all non-standard RDM commands (manufacturer commands >= 0x8000) and their parameters |

## 1.8 Product Information

| PID    | Parameter                | Description                                                                                                                                            |
|--------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0x0060 | DEVICE_INFO              | (G) Retrieves a variety of information about the device that is normally required by a controller                                                      |
| 0x0070 | PRODUCT_DETAIL_ID_LIST   | (G) Requests technology details for a device                                                                                                           |
| 0x0080 | DEVICE_MODEL_DESCRIPTION | (G) Text description of up to 32 characters for the device model type                                                                                  |
| 0x0081 | MANUFACTURER_LABEL       | (G) This parameter provides an ASCII text response with the manufacturer name for the device “ARRI Lighting” is the default name                       |
| 0x0082 | DEVICE_LABEL             | (G S) Supports the setting a descriptive label for each device. It may be used for identifying a dimmer rack number or specifying the devices location |

| PID    | Parameter                   | Description                                                                                                                      |
|--------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 0x0090 | FACTORY_DEFAULTS            | (G S) Set the device to its factory defaults Get: Check if settings still in default state <input type="checkbox"/> 1 if default |
| 0x00C0 | SOFTWARE_VERSION_LABEL      | (G) Retrieves software version string of main software                                                                           |
| 0x00C1 | BOOT_SOFTWARE_VERSION_ID    | (G) Retrieves primary boot software version                                                                                      |
| 0x00C2 | BOOT_SOFTWARE_VERSION_LABEL | (G) Retrieves details about primary bootloader                                                                                   |

## 1.9 DMX512 Setup

| PID    | Parameter                   | Description                                                                                          |
|--------|-----------------------------|------------------------------------------------------------------------------------------------------|
| 0x00E0 | DMX_PERSONALITY             | (G S) Retrieve or set DMX mode                                                                       |
| 0x00E1 | DMX_PERSONALITY_DESCRIPTION | (G) Shows a description of a DMX-Mode, max 32 characters. Shows exactly the description used in ALSM |
| 0x00F0 | DMX_START_ADDRESS           | (G S) Retrieve or set DMX address                                                                    |
| 0x0120 | SLOT_INFO                   | (G) Retrieves the description from each DMX slot of the recent DMX mode                              |
| 0x0121 | SLOT_DESCRIPTION            | (G) Retrieves the description with max. 32 characters for each DMX slot of the recent DMX mode       |
| 0x0122 | DEFAULT_SLOT_VALUE          | (G) Retrieves the default DMX value for each DMX slot of the recent DMX mode                         |

## 1.10 Sensors

| PID    | Parameter         | Description                                       |
|--------|-------------------|---------------------------------------------------|
| 0x0200 | SENSOR_DEFINITION | (G) Retrieves the definition of a specific sensor |
| 0x0201 | SENSOR_VALUE      | (G S) Retrieves or sets sensor data               |

## 1.11 Dimmer Settings

| PID    | Parameter                        | Description                                     |
|--------|----------------------------------|-------------------------------------------------|
| 0x0343 | CURVE                            | (G S) Retrieve or set a dimmer curve            |
| 0x0344 | CURVE_DESCRIPTION                | (G) Retrieves the description of a dimmer curve |
| 0x0347 | MODULATION_FREQUENCY             | (G S) Modulation frequency modes                |
| 0x0348 | MODULATION_FREQUENCY_DESCRIPTION | (G) Description text for each mode              |

## 1.12 Power / Lamp Settings

| PID    | Parameter    | Description                                                               |
|--------|--------------|---------------------------------------------------------------------------|
| 0x0400 | DEVICE_HOURS | (G) Retrieves the number of hours of operation the device has been in use |
| 0x0401 | LAMP_HOURS   | (G) Retrieves the number of lamp hours                                    |

### 1.13 Display Settings

| PID    | Parameter      | Description                                                                          |
|--------|----------------|--------------------------------------------------------------------------------------|
| 0x0500 | DISPLAY_INVERT | (G S) Retrieve or change the display invert setting<br>Off = 0<br>On = 1<br>Auto = 2 |
| 0x0501 | DISPLAY_LEVEL  | (G S) Retrieve or change the display contrast 0...0xFF                               |

### 1.14 RDM Configuration

| PID    | Parameter       | Description                                                        |
|--------|-----------------|--------------------------------------------------------------------|
| 0x0603 | REAL_TIME_CLOCK | (G) Retrieves the real time clock (Year, Month, Day, Hour, Minute) |

### 1.15 Control

| PID    | Parameter       | Description                                |
|--------|-----------------|--------------------------------------------|
| 0x1000 | IDENTIFY_DEVICE | (G S) Identify device<br>Off = 0<br>On = 1 |
| 0x1001 | RESET_DEVICE    | (S) Reset device<br>0x01 for warm reset    |

### 1.16 RDMnet Management

| PID    | Parameter                        | Description                                                                                                          |
|--------|----------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 0x0700 | LIST_INTERFACES                  | (G) Retrieves a packed list of network interface descriptors, representing the IPv4 network interfaces on the device |
| 0x0701 | INTERFACE_LABEL                  | (G) Retrieves the label for a network interface                                                                      |
| 0x0702 | INTERFACE_HARDWARE_ADDRESS_TYPE1 | (G) Retrieves the EUI-48 (EU) hardware address of an interface                                                       |
| 0x0703 | IPv4_DHCP_MODE                   | (G S) Retrieve or set the Dynamic Host Configuration Protocol (DHCPv4) mode for an interface                         |
| 0x0704 | IPv4_ZEROCONF_MODE               | (G S) Retrieve or set Zeroconf Mode (Link Local)                                                                     |
| 0x0705 | IPv4_CURRENT_ADDRESS             | (G S) Retrieve or set the current IPv4 address and netmask information for an interface                              |
| 0x0706 | IPv4_STATIC_ADDRESS              | (G S) Retrieve or set static configuration of the IPv4 address and network mask on an interface                      |
| 0x0709 | INTERFACE_APPLY_CONFIGURATION    | (S) Set/apply any changes of the interface configuration                                                             |
| 0x070A | IPv4_DEFAULT_ROUTE               | (G S) Retrieve or set the default IPv4 route for a device                                                            |
| 0x070B | DNS_IPv4_NAME_SERVER             | (G S) Retrieve or set the IPv4 DNS name servers for a device. Up to three IPv4 name servers may be configured        |
| 0x070C | DNS_HOSTNAME                     | (G) Retrieves host name                                                                                              |

## 1.17 Manufacturer Commands

| PID    | Parameter          | Description                                                                                                                                                                                                                                                           |
|--------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0x8001 | FAN_MODE           | (G S) Retrieve or set fan mode<br>0 = Fan low / fan quiet<br>1 = Fan vari / fan variable<br>2 = Fan Hi45 / fan high temperature                                                                                                                                       |
| 0x8002 | STATUS_LEDS        | (G S) Retrieve or set status LEDS and display illumination<br>0 = ON<br>1 = OFF                                                                                                                                                                                       |
| 0x8003 | DMX_LOSS_BEHAVIOUR | (G S) Retrieve or set DMX signal lost behavior<br>1 = Hold last command<br>2 = Black out<br>3 = Hold 2 min and fade out                                                                                                                                               |
| 0x8004 | DMX_MODE_SPEC      | (G S) Retrieve or set DMX protocol version<br>1 = V3.4<br>2 = V4.0<br>3 = V4.1<br>4 = V4.2<br>5 = V4.3<br>6 = V4.4                                                                                                                                                    |
| 0x8005 | DISPLAY_CONTRAST   | (G S) Retrieve or set display contrast<br>0 = Less<br>10 = High                                                                                                                                                                                                       |
| 0x8006 | DIM_CURVE          | (G S) Retrieve or set dimmer curve<br>1 = Exponential<br>2 = Linear<br>3 = Logarithmic<br>4 = S-Curve                                                                                                                                                                 |
| 0x8007 | TUNGSTEN_MODE      | (G S) Retrieve or set tungsten mode<br>0 = Disable<br>1 = Enable                                                                                                                                                                                                      |
| 0x8008 | LOW_END_MODE       | (G S) Retrieve or set low end dimming mode<br>0 = Disable<br>1 = Enable                                                                                                                                                                                               |
| 0x800F | ERROR_MODE_DISPLAY | (G S) Retrieve or set display error silent mode<br>0 = Normal<br>1 = Silent error                                                                                                                                                                                     |
| 0x8010 | RGBW_PLASA_MODE    | (G S) Retrieve or set Plasa mode (RGBW calibrated color space)<br>0 = Disable<br>1 = Enable                                                                                                                                                                           |
| 0x8011 | FREQUENCY          | (G S) Retrieve or set PWM frequency<br>0 = Frequency feature disabled<br>1 = Frequency 1<br>2 = Frequency 2<br>3 = Frequency 3<br>4 = Frequency 4<br>5 = Frequency 5<br>6 = Frequency 6<br>7 = Frequency 7<br>8 = Frequency 8<br>9 = Frequency 9<br>10 = Frequency 10 |

| PID    | Parameter              | Description                                                                               |
|--------|------------------------|-------------------------------------------------------------------------------------------|
| 0x8012 | HIGH_SPEED_MODE        | (G S) Retrieve or set highspeed mode<br>0 = Disable<br>1 = Enable                         |
| 0x8013 | RDM_SERVICE            | (G S) Retrieve or set RDM service (needed for host / client)<br>0 = Disable<br>1 = Enable |
| 0x8017 | STAGE_MODE             | (G S) Retrieve or set stage mode<br>0 = Disable<br>1 = Enable                             |
| 0x8018 | EXTENDED_COLOR_CONTROL | (G S) Retrieve or set extended color control<br>0 = Disable<br>1 = Enable                 |
| 0x8019 | DMX_RDM_GATEWAY        | (G S) Retrieve or set Art-Net gateway<br>0 = Disable<br>1 = Enable                        |
| 0x801A | DMX_VALID_FILTER       | (G S) Retrieve or set DMX valid filter<br>0 = Disable<br>1 = Enable                       |
| 0x8035 | DMX Preset Store       | (S) Store DMX preset<br>0 = Preset 1<br>1 = Preset 2<br>...<br>9 = Preset 10              |
| 0x8036 | DMX Preset Activate    | (S) Activate DMX preset<br>0 = Preset 1<br>1 = Preset 2<br>...<br>9 = Preset 10           |

**Lseries® PLUS**