Technical Specifications

Protocol: DMX512
Input / Output Connectors: XLR-5
Memory: Memorises last DMX information during DMX failure and all pre-sets (DMX Channel and pre-heat) after Power down.

Output protections: One MCB per channel to protect the unit from overloads.
Thermal protections.
One 40/63 Amp. RCD (ΔI max. 30mA).
One 32/63 Amp. MCB

Output Connector: CEE

Power per Channel:
123DR: 12 Channels 3KW
63DR: 6 Channels 3KW
Dimensions: 483 x 132 x 450 mm.
Handles will increase depth 32mm out from front panel.
Weight: 18Kg / 22,5 Kg
Mains: 3 Phases + Neutral.
Working Conditions: ambient Temperature: -10ºC to 35ºC.
Relative Humidity: 80% max. (without condensation).

3KW DIMMER PACKS.

Arri DR ***Series Digital Dimmer Packs have been projected to achieve the most exigent demands, such as Theatres, TV, auditoriums and other live applications.***

Using DMX 512 protocol, (XLR - 5 Pins), their main specifications are:

- All parameters programmed using a comprehensive keyboard (only 3 keys).
- 7 Dimming curves, including one disable curve (Curve 0),
- Eight scenes (presets).
- Liquid Crystal Display with:

  - DMX condition (display: “DMX” or “---“).
  - First DMX Channel selected.
  - Percentage level per Channel (00% to 99%).

Communication protocole: DMX 512, (XLR - 5 Pins)
Main specs:
- Liquid Crystal Display plus LED monitors.
- Keyboard first DMX Channel selection.
- Independent Pre-Heat per channel.
- 8 Presets: 4 HTP Presets plus 4 DMX mode.
- Individual dimming curve set-up.

- LCD visualises:
  - First DMX Channel.
  - DMX percentage per channel (in two pages of 6 channels)
  - Selected Preset
- LED monitors:
  - Three Phase presence.
  - 12 LED's real output monitors.
- Each channel is protected by one MCB. DR series are equipped with built in 32 Amperes RCD (ΔI max. 30mA) and GENERAL switch.
- Double 80mm fans for best cooling during demanding applications.
- Fans are individually electronic thermal controlled.
- Electronic thermal shut-down, if internal temperature rises up to dangerous values, with automatic reset.

Figure 1 shows us what the control panel should look like when we put power on for the first time. If everything is OK and DMX is present at the input, you'll see **DMX1**. If DMX signal is not connected, LCD shows: **---1** (on both cases 1 represents "Page 1" that shows channels 1 to 6, "Page 2" will show channels 7 to 12).

Number **C027** says that the DMX channel stored on the unit is Channel "27", (Fig. 1 shows **C027**) The user can reprogram DMX channel, set pre-sets level or select different dimming curves using the three keys, but for that you should read carefully SET-UP Section.

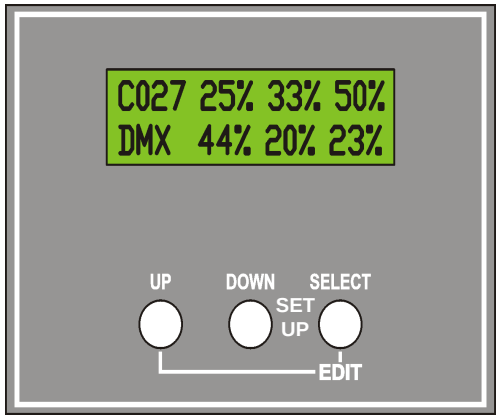

Fig.1

To put the dimmer working again in **MODE 1**, the dimmer should be powered down and up for reset.
If power up happens with DMX present, dimmer goes directly into **MODE 2**.

Controlling the Display:

The operator can visualize 6 channels at a time. "Page 1" will let the operator read channel 1 to 6, and "Page 2" channel 7 to 12.
To switch from **"Page 1"** to **"Page 2"** you need to press **SELECT** key. If you want to see continuously all channels, press **SELECT** key for 3 seconds, and the display will toggle automatically between "Page 1" and "Page 2".

WARRANTY and SERVICE.

All distributors are in conditions to give technical service. Any assistance should be made by authorised personal only.

Depending on local legislation, ONE or TWO ([1]) years Warranty for all Quadrant equipment should be given. Purchase date will initiate warranty period (consider invoice date).

Warranty will terminate if equipment has been open by not authorised person or misuse.

Arri *equipment complies CE specifications* CE

IMPORTANT: In order to develop all equipment in production, **Arri** reserves the right to change any part or specifications of this equipment or this manual with no previous notice.

([1]) Only for Europe and some countries.

preset (1 to 4 for HTP and PS). Touch **SELECT** key to enter Channel preset field. Use **UP** and **DOWN** keys to define output level (00% to 99%). Use **SELECT** key to select next channel. After that, one scene should be programmed.

NOTE: In this software version 99% represents Full Power.

- If you want to end *"PRESET Mode"* at any time press **SELECT** for a few seconds till LCD displays ***"Storing Preset"***.
- **All preset parameters will be memorised even after power down.**
- To program all other Pre-Sets, follow same procedure.

▪ When you Power-On the equipment it will start working with last internal parameters (used when Power-Down occurred).

▪ To program PRESETS using your light control desk, you only need to make a scene with your desk, than touch **UP** and **SELECT** keys and maintain touching till "Loading preset" ends. The previously selected PRESET will be programmed. Select a new PRESET, exit preset mode, make a new scene, touch again **UP** and **SELECT** keys and maintain touching till "Loading preset" ends, and that's all. Go on, up to 8 Presets.

IMPORTANT: The preset values control dimmer output ONLY WHEN THERE ARE NO DMX, or while in Set-up mode.

Functioning modes:

Pre-Heat: Sets permanently minimum level per channel.
HTP1-4: Higher **T**akes **P**recedence Set-up Level.

PS1-4: DMX MODE 1 (Stand Alone): Dimmer outputs are controlled by preset values.

PS1-4: DMX MODE 2 (External Control): Dimmer is controlled exclusively by DMX Light controller.

After Power on, if there are no DMX, Dimmer stays at **MODE 1**. If DMX appears, dimmer toggles automatically into **MODE 2**, disabling preset values (although they remain memorised). If DMX disappears the dimmer will maintain indefinitely last scene till DMX is present again at the input or power down.

INSTALLATION.

Those units should be installed on dry and well ventilated places. A special attention should taken by installer when he is going to make electrical connections.

Mind following points:

▪ Mains supply should have three phases and should be protected by a 4 Pole 63Amp. (or other adequate value) R.C.D. (ΔI = 30mA). In case of electrical rule discrepancies ***mind local electrical regulations***.

▪ Power cable should be protected by a 4 pole 32/63Amp. M.C.B. In case of electrical rule discrepancies ***mind local electrical regulations***.

▪ Never overload cables and electrical sectors. Respect following table:

123DR: 3x230V @ 63Amp. (3 Phase at 63 Amps per phase).
63DR: 3x230V @ 32Amp. (3 Phase at 32 Amps per phase).

▪ Installer should be very careful with electrical connections (crimp, ring and screw terminals). Screws should be verified at least once per year. Bad contacts will generate overheat with consequent degradation of insulation materials of cables and connectors. This overheat can produce ***FIRE!*** Electrical regulations identifies the type of cables (section and insulation specifications) you should use on different installations… Follow those regulations. **Output socket** pin-out should be verified and understood before installation. According with customer demands, there are two pin out configurations (type 1 and 2).

▪ **Neutral should have a cable with a conductor area 130% larger than phase conductors**, (In small installations, same conductor areas for Neutral and Phases are acceptable) Missing Neutral produces equipment malfunction and, in special situations some components could be destroyed.

▪ Choose a dry and ventilated place ($T_{amb.}$ < 35ºC). The installer should remember this equipment produces heat.

This heat should be removed from the room or place where it has been installed.

- ***Very Important:*** For safety reasons ***never*** work with this equipment on wet conditions!

Each channel is protected by one M.C.B. If any M.C.B. breaks that means there are an output problem. Never try to substitute a MCB by new one with larger value. Any action of any kind inside the equipment by non-authorised person will terminate warranty.

o DMX should be transmitted through a DMX or STP data cable (impedance around 100 to 120 Ohms). Microphone cables should be avoided.

Important: if the installer uses data cable with more than one twisted pair, only one twisted pair should be identified and used. The others should be connected to ground. Remember, the cable manufacturer only guaranties the impedance for a twisted pair (not between adjacent pairs).

- XLR5 should follow the pin-out mentioned above:

  Pin 1 = Ground - GND
  Pin 2 = Data -
  Pin 3 = Data +

- Last equipment on a DMX line, should have a male XLR5 with a 120 Ohms resistor between pin 2 and 3. This resistor will terminate the DMX data line. If one doesn't follow this rule, problems with data transmission should happen generating a strange malfunction, specially if cables are bigger than 20m (approximate value).
- If you have a complex DMX installation (such as equipment on a truss and on the floor) you should separate each sector (or branch) from others using a DMX splitter (better if the splitter is opto-coupled to prevent ground loops.
- NEVER FORGET to terminate each branch with a terminator.

SET-UP's and PRESETS.

After installation, one can prepare the dimmer Set-up operation. Let's enter the ***SET-UP MODE*:**

- Touch both **DOWN** and **SELECT** keys. After two seconds, unit enters in *Set-Up mode* and digits from "DMX channel" will begin to blink: **001**.
- If we want to select DMX channel 231 (following fig.1 example), we only need to touch **UP** key till number 231 is reached. Use **UP** and **DOWN** keys for precise adjustments. Now we have set up the dimmer at channel **231**.

IMPORTANT: Dimmers will display DMX Fault **"---"** if the selected channel doesn't exist on DMX signal generated by a Light Controller. Some controllers, although they only control a small quantity of channels, they generate 512 "slots"… In that case Dimmer will detect a valid DMX but will not be able to give *any output if selected Channel is higher than the number of channels controlled by DMX controller.*

- Touch **SELECT** key and you'll be moved to CRV (curve) set-up field: **CRV 111111111111**. Use **UP** and **DOWN** keys to set-up individually each channel dimming-curve (0 to 6).

CRV0: Channel disabled.
CRV1: Dimmer reacts as analogue dimmers.
CRV2: Linear Curve (Type 1) for halogen lamps.
CRV3: Linear Curve (Type 2) for halogen lamps.
CRV4: Dimming Curve for florescent lamps (w/ special ballast).
CRV5: Linear Power **(BBC)**
CRV6: RELAY – up to 49%, channel is OFF; more than 50% channel is full (99%).

While in this mode selected Preset will control the output channels.

PRESET MODE:

- Touch both **UP** and **SELECT** keys to enter PRE-HEAT or PRESET mode: **HTP1** or **PS1.** Use **UP** and **DOWN** keys to select the desired