NICK NRG 1401

User's Manual rel 1.0 **GB**

INDEX:

1- SYMBOLS

Graphic symbols used on this manual:

THIS SYMBOL INDICATES A HOT SURFACE

THIS SYMBOL INDICATES ELECTRIC SHOCK RISK

THIS SYMBOL INDICATES GENERAL RISK

THIS SYMBOL MEANS "YOU CAN PLACE THE UNIT ON NORMALLY FLAMMABLE SURFACES"

LED ◖0,5 m

THIS SYMBOL INDICATES THE MINIMUM DISTANCE FROM THE ILLUMINATED OBJECTS

THIS SYMBOL INDICATES THE EUROPEAN COMMUNITY DIRECTIVE 2002/96/EC ON WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

2- GENERAL WARNING

Read the instruction contained in this user manual carefully, as they give important information regarding safety during installation , use and maintenance.
The device is not for domestic use and must be installed by a qualified electrician or experienced person.
Always disconnect the device from the mains before maintenance.
The device must always be equipped with an efficient ground connection.

3- GENERAL WARRANTY CONDITIONS

The unit is guaranteed for 36 months from the date of purchase against manufacturing material defects.

4- TECHNICAL FEATURES

Overview
NICK NRG 1401 is a high performance LED wash moving head.
Extreme brightness, single pixel control, and 4° - 52° zoom range make this fixture perfect in a range of applications, either as a beam light with multi-color rays, or as a wash light with a very wide projection.
NICK NRG 1401 is suitable for medium/big venues, and it's the perfect for TV studios, delivering top-of-the-line visual effects of perfectly uniform wash lighting.

DTS Product code:
03.LDR015.FFP   NICK NRG 1401 FC FPR Black finish

LED Technology
* 23 x 15W OSTAR STAGE "N" FULL RGBW LEDs
* Pixel to pixel control
* 11.500 Lumen

Optical group
* 4°- 52° linear motorized zoom with high-efficiency optical system
* PC Beam to very wide Wash projections

Colour generation
* 16 million colours
* Wide palette of pure uniform whites
* Variable linear colour temperature (2700K – 8000K)

Interface / Control / Programming
* Multi-function OLED graphic colour display + 4 soft keys:
control / management / monitoring of the main parameters
* Controlled via DMX 512 and RDM standard digital communication protocols
* Internal operating system updatable via DTS RED BOX interface via "DTS firmware upgrade utility" program on windows based PC

DMX
33 DMX channels (default), 111 DMX channels or 20 DMX channels

Pan & Tilt
* 'FPR' system (DTS patent)
Pan: limitless rotation, in both direction, 360° rotation in 0.89 sec.
Tilt 270°: 1,2 sec.
* 16-bit movement resolution

Power supply
* Electronic full-range AC 90-260V 50-60 Hz
* Power consumption: 390W Max

Connectors
* DMX: 4 XLR (3 pins In / Out and 5 pins In / Out) panel connectors
* Power supply: PowerCon In / Out panel connectors

Operating ambient temperature
-10° / 40°

Weight
13 Kg

International certifications
Certification CE
LED Class: Class 2 LED product

Dimensions
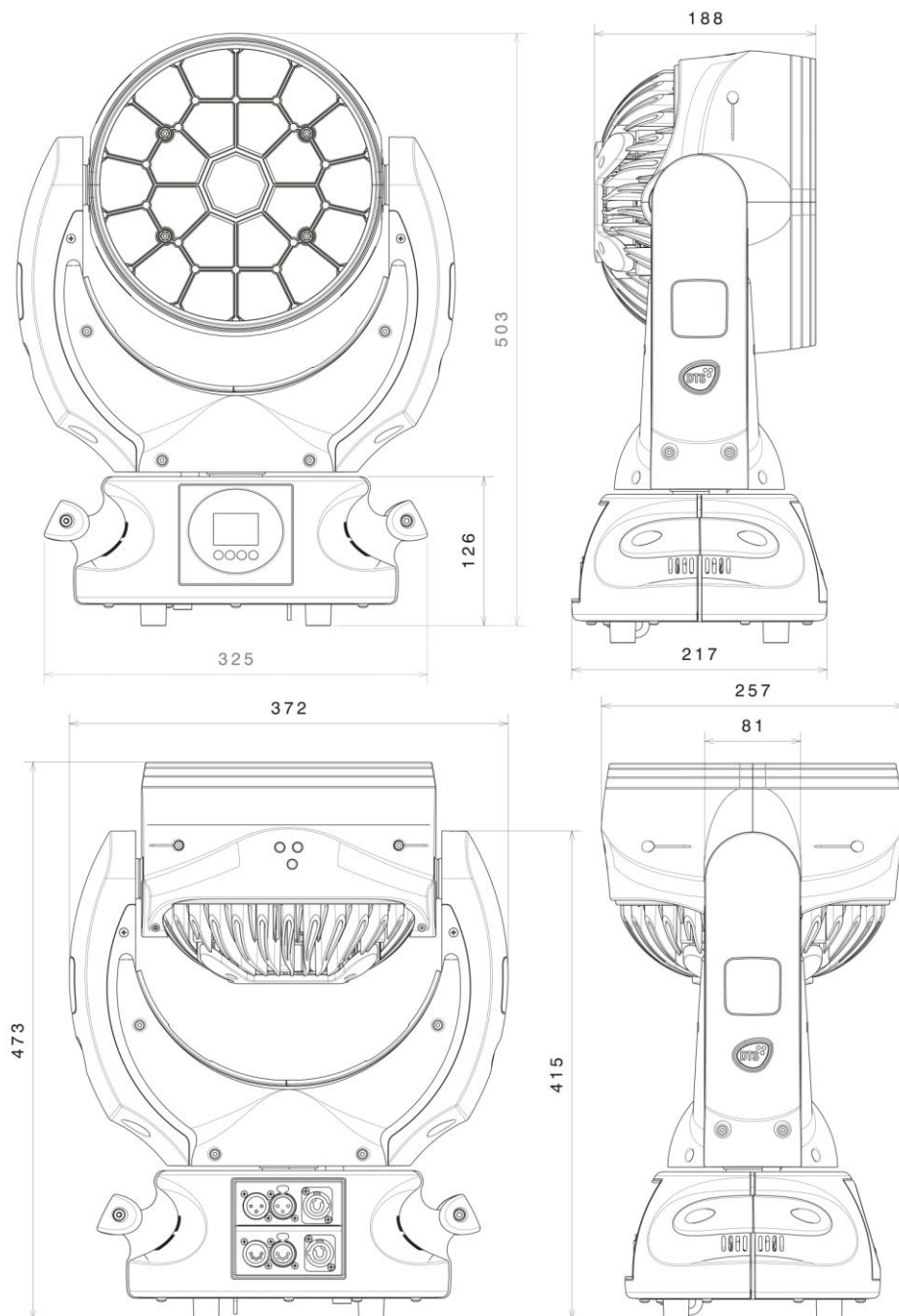
Packaging Dimensions (LxWxH)
530 x 430 x 414 mm
Weight: 16 Kg
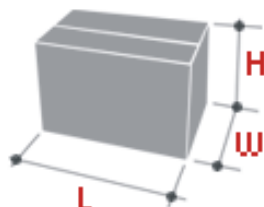
5- ACCESSORIES

As standard

• 1 x PowerCon male cable connector (cod. 0520P014)
• 1 x XLR 5 Pins male cable connector (cod. 0508B066)
• 1 x XLR 5 Pins female cable connector (cod. 0508B065)
• "C" Clamp GQUICK with "Fast Lock" connection 1/4 turn (cod. 0521A014)
• User's manual

Optional (on request)

Flight case
• Professional Flight case for 4 units; compartment for accessories, swivel wheels, cover with hinges with-stay, dishes on cover for piling, 8 handles (2 eachside) (cod. 0521C059.1)
Clamps / safety wires
• "C" Clamp G60 black (max. load 50Kg) (cod. 0521A004)
• "C" Clamp G100 black / professional (max. load. 200Kg) (cod. 0521A015)
• Aliscaf clamp for tube diameter 50 mm (max. load. 100Kg) (cod. 0521A008)
• Omega bracket with "Fast Lock" connection 1/4 turn (Cod. 02K00467)
• Safety wire (3mm x 60 cm), max. capacity load 60Kg (cod. 0521A010)

6- IMPORTANT SAFETY INFORMATION

6.1 Fire prevention:

-It is permissible to place the unit on normally flammable surfaces.
Suitable for mounting on normally flammable materials surfaces greater than 200°C with some combustion time lag.
-Minimum distance from the closest illuminable surface: 0,5 m. LED ⊂0,5 m
-Replace any blown or damaged fuses only with those of identical value (5AT).
Refer to the wiring diagram if there is any doubt.
-Connect the projector to mains power via a thermal magnetic circuit breaker.

6.2 Prevention of electric shock:

-High voltage is present inside the unit. Unplug the unit prior to performing any function which involves touching the inside of the moving head.
-The level of technology inherent in the NICK NRG 1401 requires the assistance of specialised personnel for all servicing.
Please refer to an authorised D.T.S. service centre.
-A good earth connection is essential for proper functioning of the projector.
-Never connect the unit without proper earth connection.
-The fixture should be located in places with a good air ventilation.

6.3 Safety:

-The projector should always be installed with bolts, clamps and other tools that are capable of supporting the weight of the unit.
-Always use a second safety cable to sustain the weight of the unit in case of the failure of the main fixing point.
-The external surface of the unit, at various points, may exceed 70°C. Never handle the unit until at least 10 minutes have elapsed since the projector was turned off.
-Never install the fixture in an enclosed area lacking sufficient air flow.
The ambient temperature should not exceed 40°C.

6.4 Level of protection against the penetration of solid and liquid objects:

-The projector is classified as an ordinary appliance and its protection level against the penetration of solid and liquid objects is IP 20.

6.5 Waste Electrical and Electronic equipment (WEEE) directive:

-The machine, accessories and packaging should be sorted for environmetal-friendly Recycling.
For EC countries: according to the European Directive 2012/19/EC for Waste Electrical and Electronic Equipment and its implementation into national right, luminaires that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

7- VOLTAGE AND FREQUENCY

The NICK NRG 1401 can operates at 90-260Vac   50-60 Hz.

8- INSTALLATION

The unit is suitable for dry locations only.
NICK NRG 1401 may be either floor or ceiling mounted.
For floor mounting installations, the NICK NRG 1401 is supplied with four rubber mounting feet on the base.
For ceiling mounted installations, we recommend the use of appropriate clamps to fix the unit to the mounting surface.
The supporting structure from which the unit is hung should be capable of bearing the weight of the unit, as should any clamps used to hung it. The structure should also be sufficiently rigid so as not to move or shake whilst the NICK NRG 1401 is moving.
Four 1/4 turn Fast Locks connections placed in the base of the unit allow to hang the NICK NRG 1401 by using the Fast Lock "C" clamp provided in the box.

8.1- Safety cable

A safety cable must be securely fixed to the NICK NRG 1401 and to the suspension truss in order to avoid the fixture accidentally falling should the main fixing point fail.
Make sure that the safety cable can bear the weight of the entire unit.
A suitable safety cable (code 0521A010) is available on demand.
You may attach the safety cable to the attachment point (A) located on the base of the fixture, as shown in the picture below.
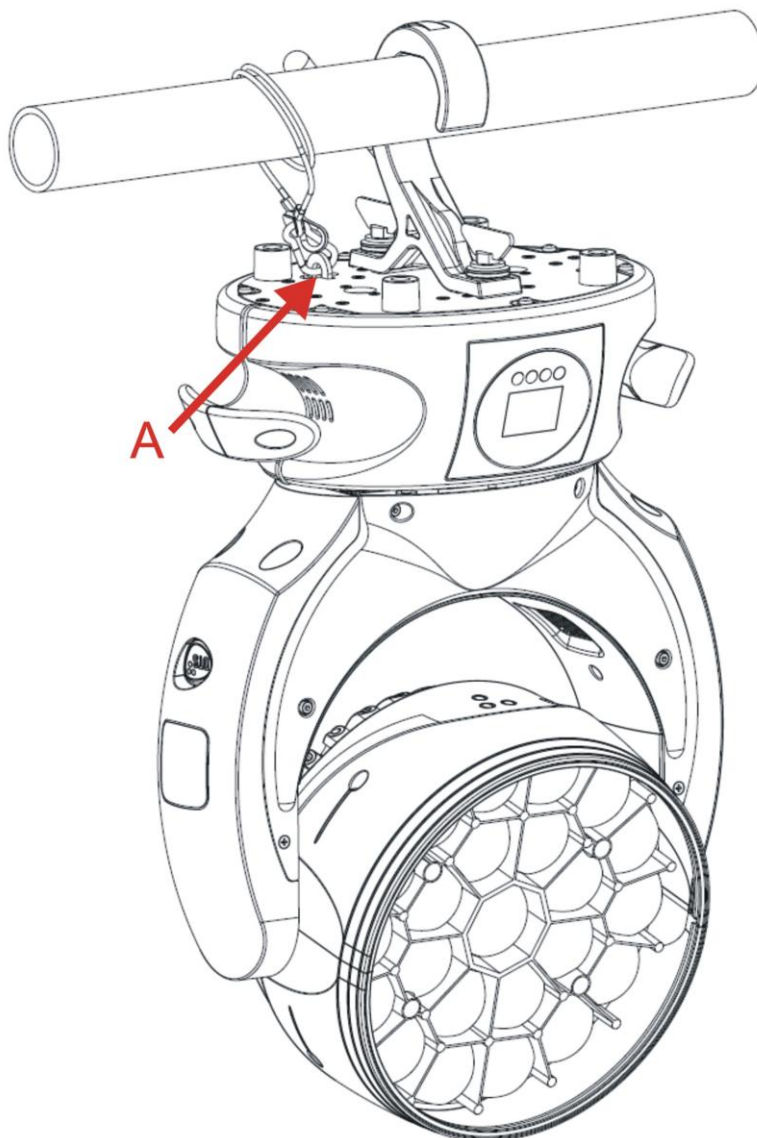
8.2 Protection against liquids

The projector contains electric and electronic components which should under no circumstances come into contact with oil, water or any other liquid.
The proper unit functioning would be compromised should this occur.

8.3- Movement

Unlimited Pan rotation; Tilt 270° (1,2 sec.)
Do not place any obstructions in the path of the projector's movement.

8.4- Risk of fire

Each fixture produces heat and must be installed in a well-ventilated place.
It is permissible to place the unit on normally flammable materials surfaces.
Suitable for mounting on normally flammable materials surfaces greater than 200°C with some combustion time lag.
Minimum distance from the object being illuminated is 0,5 m. LED ◖0,5 m

8.5- Forced ventilation

You will note, on inspection, that the unit features various air inlets and cooling fans. These should, under no circumstances, be blocked or obstructed whilst the projector is in operation. Doing so could cause the fixture to seriously overheat thereby compromising its proper operation.

8.6- Ambient temperature

The projector should never be installed in places that lack a constant air flow.
The ambient temperature should not exceed 40°C.

9- MAINS CONNECTION

NICK NRG 1401 operates at 90-260Vac 50-60 Hz.
Prior to connecting the unit to your mains supply, ensure that the model in your possession correctly matches the mains supply available.
For connection purposes, ensure that your plug is capable of supporting 2 amps at 230Vac, or 5 amps at 90Vac.
Strict adherence to regulatory norms is strongly recommended.

MAINS AC OUTPUT
90-260Vac 50-60 Hz (16A Max)
Max 8 NICK NRG 1401 units @ 230Vac
Max 4 NICK NRG 1401 units @ 120Vac
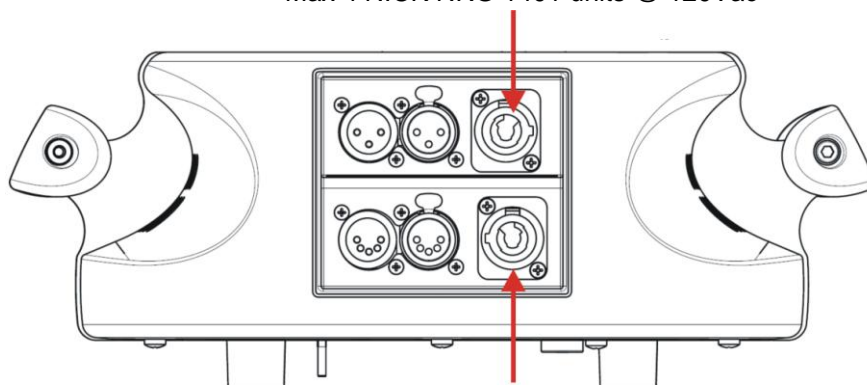
MAINS AC INPUT
90-260Vac 50-60 Hz

FUSE
5A T
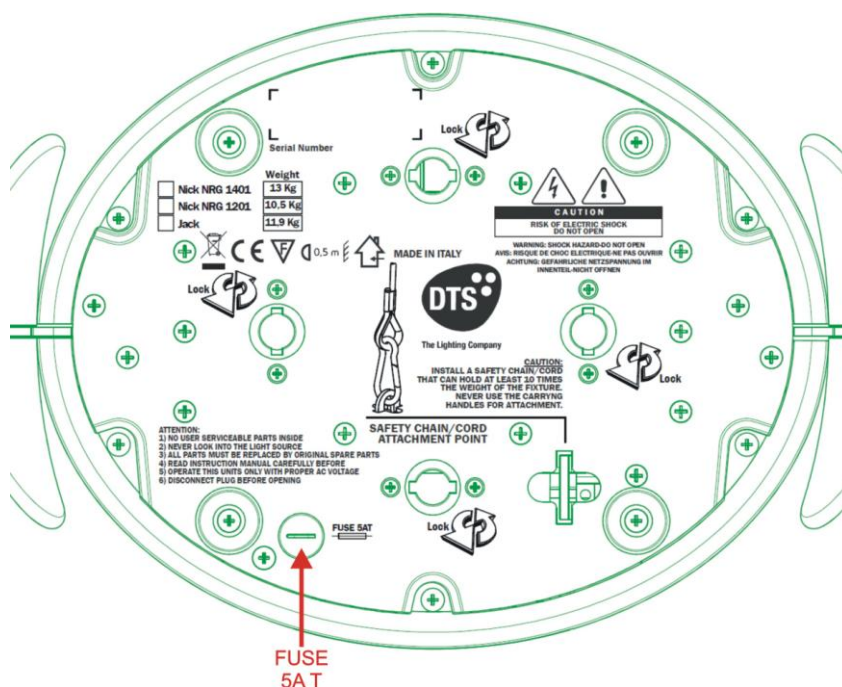
9.1- Protection

The use of a thermal magnetic circuit breaker is recommended for each NICK NRG 1401.

10- DMX SIGNAL CONNECTION

The unit operates using the digital DMX 512 (1990) signal.
Connection between the mixer and the projector or between projectors must be carried out using a two pair screened ø 0.5 mm cable and a XLR 5 or 3 pins connector.
Ensure that the conductors do not touch each other.
Do not connect the cable ground to the XLR chassy.
The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first projector to the DMX IN plug of the second one.
This way, all the projectors are cascade connected.
NB. If the display showing the DMX address flashes, then one of the following errors has occurred:
　　　　 - DMX signal not present
　　　　 - DMX address not valid
　　　　 - DMX reception problem
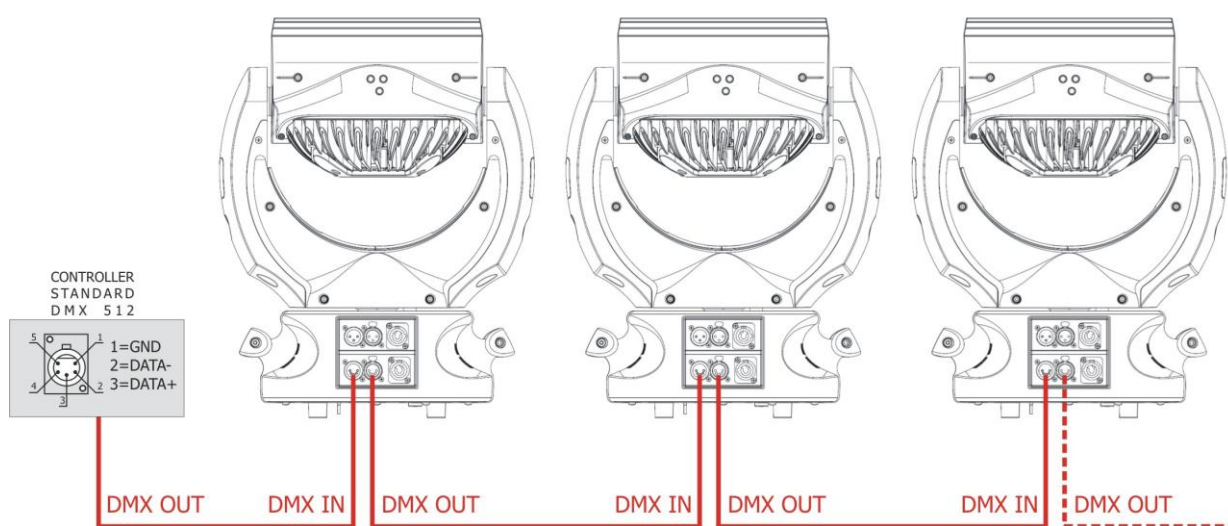
For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.
The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor between pin 2 and 3.
The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.
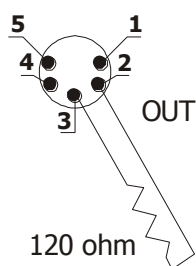
PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE XRL CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE
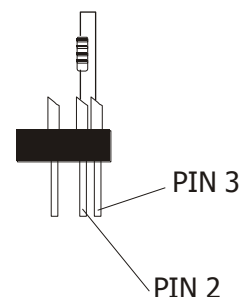
10.1-DMX Addresses

NICK NRG 1401 can be controlled with 33 DMX channels, 111 DMX channels or 20 DMX channels.
In order to use the unit in 33 DMX channels (default), set the following addresses on the mixer:

Projector 1   A001
Projector 2   A034   If you want to select the next projector, just add "33"
Projector 3   A067
…..   A….
projector 6   A166

10.2-Selecting the DMX address

1) Press the UP-DOWN key until you reach the required DMX channel. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now setted to the new DMX address.

TRICKS:
If you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.

11- FIRMWARE UPDATING

Attention:
This procedure require a base knowledge of computer applications.
Please refer to an authorised DTS service centre.

To update the software version of the NICK NRG 1401 you need:
- DTS RED BOX interface (DTS Code: 03.LA.008);
- USB-DMX Driver for the DTS RED BOX interface;
- "DTS Firmware upgrade utility" program installed on your PC;
- Latest firmware available for NICK NRG 1401 unit.

Updating the software version.
Please follow the procedure below to perform the update:

1. Install the DTS RED BOX USB-DMX driver on the PC you will use to update the unit software.
2. Connect the DTS RED BOX interface to the PC by using a USB cable.
3. Connect the DTS RED BOX interface to the fixture by using a DMX cable.
4. Load the new firmware into the unit by using "DTS Firmware upgrade utility" program.

12- DISPLAY FUNCTIONS
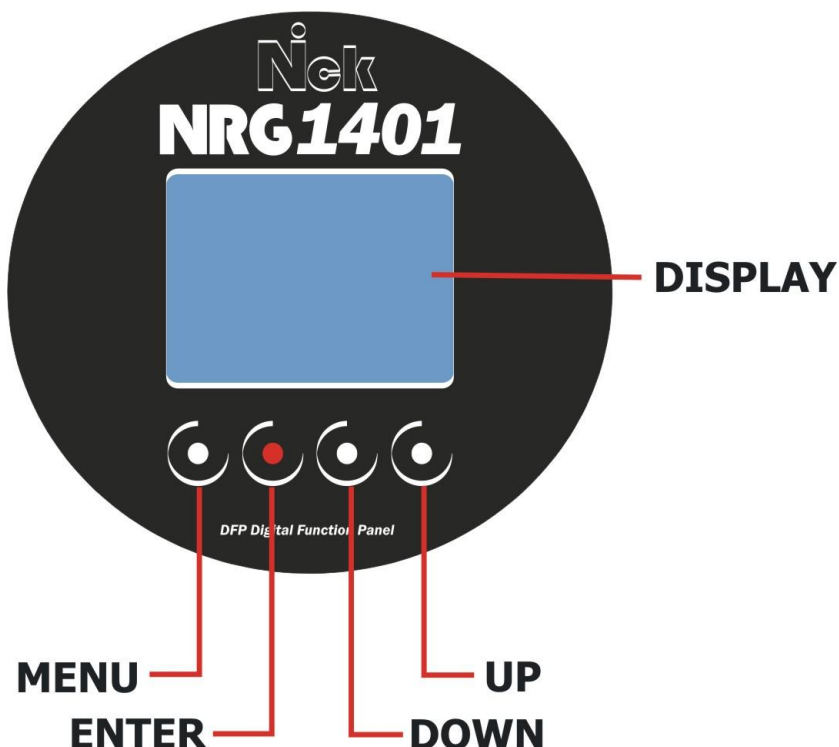
The NICK NRG 1401 display panel shows all the available functions . Using these functions, it is possible to change some of the parameters and add some functions. Changing the D.T.S. setting can vary the functions of the unit so that it does not respond to the DMX 512 used to control it. Carefully follow the instructions below before carrying out any variations or selections.
NOTE: the symbol ☞ shows which key has to be pushed to obtain the desired function.

Software version 2.19

☞ ☞ **Display** ☞ ☞
Menu Up-Down   ENTER Up-Down

DISPLAY POSITION / STAND BY

Display Position:
Reverses display's reading depending on the mounting position
(on the ground or suspended).

Display Standby:
To turn off the display (after 30 seconds) or leave it always on.

DISPLAY
POSITION
AA
MENU ENTER DOWN UP

Display Position
ON THE GROUND
(Default)
SUSPENDED
☞
ENTER

DISPLAY
STANDBY
OFF
MENU ENTER DOWN UP

Display Standby
OFF = Display Standby disabled (Default)
ON = Display goes Off after 30 seconds
☞
ENTER

DMX Set

DMX MODE
SHAPES: 33 DMX channels (default).
This mode allows to combine pixel shapes on a foreground level with pixels on a background level.
EXTENDED: 111 DMX channels.
This menu allows to control pixel to pixel.
COMPATIBILITY: 20 DMX channels.
This mode allows to have compatibility in programming when using NICK NRG 1401 with other DTS range LED units (NICK NRG 1201, NICK NRG 801, NICK NRG 501 and WONDER).

MACRO Mode
STD = Standard (Default)
EXT = Extended; enable rainbow effects on Macro channel

DIMMER DELAY
This menu allows to select the value of the delay (in seconds) for the Dimmer channel reaction to DMX or program variation

LED

RGBA MIN / MAX VALUES
This menu allows to select the Minimum / Maximum levels for Red, Green, Blue and Amber/White

SMOOTH VALUE
This menu allows to select the value of the delay (in milliseconds) for RGBA and Dimmer channels reaction to DMX or Program variation.
1 = Fast response
20 = Slow response

GAMMA CORRECTION
This menu allows to select between Linear current output or Quadratic current output for LEDs
Default = Quadratic

OUTPUT FREQUENCY
This menu allows to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of your camera recordings

BOOST
This menu allows to increase the LED's current from 670 mA to 1000 mA (default).

DMX SET
DMX MODE
SHAPES
MENU ENTER DOWN UP

DMX Mode
SHAPES:
33 DMX channels
(default)

DMX SET
MACRO
STD
MENU ENTER DOWN UP

MACRO
STD = Standard mode enabled (Default)
EXT = Extended; enable rainbow effects on Macro channel

DMX SET
DIMMER DELAY
OFF
MENU ENTER DOWN UP

DIMMER DELAY
Range: OFF / 0.1 - 2.0 sec.
Default = OFF

LED
RED MIN
0
MENU ENTER DOWN UP

MIN / MAX CMPT.
Default = disabled

LED
SMOOTH
OFF
MENU ENTER DOWN UP

SMOOTH
Range = Off / 1-20
Default = OFF

LED
GAMMA CORR.
QUAD
MENU ENTER DOWN UP

GAMMA CORRECTION
Linear = Linear current output
Quadratic = Linear light output (default)

LED
OUTPUT FREQ.
610
MENU ENTER DOWN UP

OUTPUT FREQUENCY
Range = 610 Hz – 20 KHz
Default = 610 Hz

LED
BOOST
ON
MENU ENTER DOWN UP

BOOST
With BOOST active, the LED's current is set to 1000 mA (30% more gain)
Default = Enabled

☞ ☞ **AUTO**   ☞ ☞
Menu Up-Down   ENTER Up-Down

AUTOMATIC MODE
Automatic demo game
without DMX controller

STEP 01/16
Chase with 16 steps previously
created in REC MODE
Speed time, Wait time, Dimmer, Pan,
Tilt and Zoom values selectable by user.

PERSONAL COLOURS
Sixteen customizable Colour Macros.
RGBW, Dimmer, Shutter, Pan, Tilt
and Zoom values selectable by user.

RAINBOW
Rainbow colours effect.
Speed time, Dimmer, Shutter, Pan,
Tilt and Zoom values selectable by user.

FIXED COLOURS
Sixteen Colour Macros as
on "MACRO" channel.
Dimmer, Shutter, Pan, Tilt and Zoom
values selectable by user.

WHITE MACROS
Sixteen macros for White
color from 2700K to 8000K.
Dimmer, Shutter, Pan, Tilt and
Zoom values selectable by user.

AUTO

SURE?
Menu - NO
Enter - YES

MENU ENTER DOWN UP

AUTO-PROGRAM

STEP
01/16

MENU ENTER DOWN UP

AUTO-PERS.COL.

RED
120

MENU ENTER DOWN UP

AUTO-RAINBOW

SPEE
0010

MENU ENTER DOWN UP

☞
ENTER

By setting all the units
connected to the
MASTER to DMX
address 1, them will be
synchronized with the
Master unit following the
chase selected on it,
including TIME, WAIT,
Pan&Tilt and Zoom
position of the MASTER
unit.

☞ ☞   **SLAVE**   ☞ ☞   ☞
Menu Up-Down   ENTER Up-Down   ENTER

SLAVE MODE SETTING
This menu allows to set the
NICK NRG 1401 as slave unit.
<u>DMX signal must be present
from MASTER unit (set in
AUTO MODE) in order to ran
the units in SLAVE mode</u>.
By setting all the SLAVE units
connected to the MASTER, to
DMX addess 1, them will be
synchronized with the Master
unit following the chase
selected on it, but running their
own Pan&Tilt and Zoom position.

SLAVE

SURE?
Menu - NO
Enter - YES

MENU ENTER DOWN UP

SLAVE

PAN

128

MENU ENTER DOWN UP

SLAVE

TILT

128

MENU ENTER DOWN UP

SLAVE

ZOOM

0

MENU ENTER DOWN UP

The SLAVE unit receives DMX
signal from the MASTER unit.
By setting all the SLAVE units
connected to the MASTER, to
DMX address 1, them will be
synchronized with the Master
unit following the chase selected
on it, but running their own
Pan&Tilt and Zoom position.

👉 👉 **WIRELESS** 👉 👉
Menu Up-Down   ENTER Up-Down

WIRELESS SELECTION OFF

MENU ENTER DOWN UP

WIRELESS DMX
SYSTEM DISABLED
(Default)

👉 ENTER
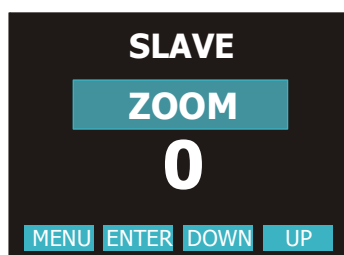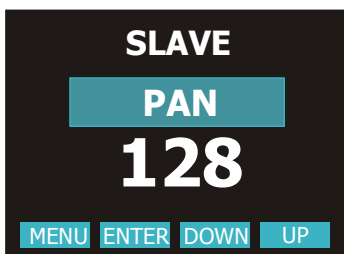
WIRELESS DMX
Wieless DMX enabled / disabled.
By activating W-DMX MODE, it will
be possible to control NICK NRG
1401 via D.T.S. ANTENNA Wireless
DMX Transmitter (cod. 03.E1271).

**Wireless DMX Receiver Kit
(Code 03.LA.126) on NICK NRG
1401 is available on request.**

WIRELESS SELECTION ON

MENU ENTER DOWN UP

WIRELESS DMX SYSTEM
ENABLED

👉 ENTER

WIRELESS UNLINK

MENU ENTER DOWN UP

UNLINK = LOG OUT

👉 ENTER

Logging on NICK NRG 1401 (WIRELESS DMX must be enabled on the unit).

To log on the NICK NRG 1401 in the WIRELESS system simply press and quickly release the function button on the transmitter .
The transmitter will start flashing rapidly red/green scanning for new free receivers / NICK NRG 1401 units. When a NICK NRG 1401 logs on to the transmitter the LINK green light on transmitter starts to flash rapidly.
After approximately 10 seconds the transmitter will jump back to normal mode and continue transmitting data. The NICK NRG 1401 now try to synchronize to the transmitter.
When synchronized to the transmitter, 2 different modes are possible:
1. Antenna transmitter has detected and transmits a DMX signal, in this mode a solid green light is seen on the transmitter and solid display is seen on NICK NRG 1401.
2. No DMX signal connected, the Antenna transmitter will flash red/green; display blinking on NICK NRG 1401.

To log off NICK NRG 1401 from a transmitter simply select UNLINK function under WIRELESS DMX MENU and press ENTER.
When NICK NRG 1401 is logged off the display is blinking, meaning its available for log in on a new transmitter.

Logging out a NICK NRG 1401.
Select UNLINK function under WIRELESS DMX MENU and press ENTER.
When NICK NRG 1401 is logged off the display is blinking, meaning its available for log in on a new transmitter.

Logging out all NICK NRG 1401 linked to a transmitter.
Press and hold the function button of the transmitter for about 3 seconds. When the display is blinking on NICK NRG 1401, it mean that the units are logged out.

Transmitter, Status LED.
Flashing red/green, no dmx connected.
Solid green, dmx signal detected and transmitted.
Fast flashing red/green, log in mode (every free NICK NRG 1401 unit, not logged in to any other transmitter, will be logged on)

NICK NRG 1401 Status.
Display blinking, not logged on to a transmitter (free).
Solid display, logged on to a transmitter and receiving dmx data.

☞ ☞ **EMERGENCY** ☞ ☞
Menu Up-Down ENTER Up-Down

EMERGENCY
Emergency operating mode.
By setting Emergency mode, it will
be possible to select one of the
16 pre-programmed WHITE cues
that will then ran if DMX signal is
missing or not available.
Useful for Emergency EXIT
illumination on public areas.
Dimmer level, Pan&Tilt and
Zoom values selectable by user.

EMERGENCY
SELECTION
OFF
MENU ENTER DOWN UP

EMERGENCY
Disabled = Default

☞
ENTER

EMERGENCY
SELECTION
ON
MENU ENTER DOWN UP

EMERGENCY
Enabled

EMERGENCY
WHITE
1
MENU ENTER DOWN UP

WHITE (1-16)
Default = WHITE 1

EMERGENCY
DIMMER
255
MENU ENTER DOWN UP

DIMMER
Default = 255

EMERGENCY
PAN
128
MENU ENTER DOWN UP

PAN
Default = 128

EMERGENCY
TILT
128
MENU ENTER DOWN UP

TILT
Default = 128

EMERGENCY
ZOOM
0
MENU ENTER DOWN UP

ZOOM
Default = 0

👉 👉 **DEFAULT SET** 👉 👉
Menu Up-Down ENTER Up-Down

👉
ENTER
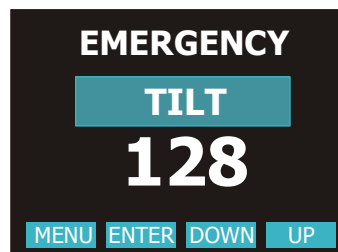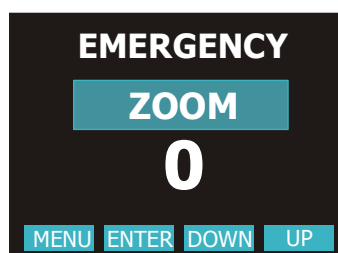
DEFAULT SETTINGS
To restore default settings

DEFAULT SET

MENU ENTER DOWN UP

DEFAULT SET
SURE?
Menu - NO
Enter - YES

MENU ENTER DOWN UP

👉 👉 **TEMPER. °C** 👉
Menu Up-Down ENTER

TEMPERATURE
LED Driver board, display board and
LED panel temperature monitoring

TEMPER. °C

DRV 023.7
LED 022.3
DSP 027.1

MENU ENTER DOWN UP

👉 👉 **TIME** 👉 👉
Menu Up-Down ENTER Up-Down

👉
ENTER

LIFE TIME
This menu shows the total unit
life time and the RGBW LEDs
life time

TIME
UNIT
13 Hr - 08 min

MENU ENTER DOWN UP

TIME
RED
0 Hr - 08 min

MENU ENTER DOWN UP

TIME
GREEN
0 Hr - 08 min

MENU ENTER DOWN UP

TIME
BLUE
0 Hr - 08 min

MENU ENTER DOWN UP

TIME
AMBER
0 Hr - 08 min

MENU ENTER DOWN UP

👉 👉   **SYSTEM**   👉 👉
Menu Up-Down   ENTER Up-Down

PAN INVERSION / TILT INVERSION /
PAN SPEED / TILT SPEED /
STUDIO MODE / FAN MAX SPEED /
RESET BY DMX

PAN INVERSION
This menu allows to set the Pan
movement. Normal or Reversed.

TILT INVERTION
This menu allows to set the Tilt
movement. Normal or Reversed.

PAN SPEED
Pan Speed control (1-5)

TILT SPEED
Tilt Speed control (1-5)

STUDIO MODE
This menu allows to decrease
the speed of the zoom motors
to have a unit low noise operation.

FAN MAX SPEED
This menu' allows to select the
internal fans speed.

RESET BY DMX
This menu allows to enable /
disable the Motors reset control
(Pan&Tilt and Zoom) via DMX.

SYSTEM
PAN INVERSION
NORM
MENU ENTER DOWN UP

PAN INVERSION
Default = NORMAL

👉
ENTER

SYSTEM
TILT INVERSION
NORM
MENU ENTER DOWN UP

TILT INVERSION
Default = NORMAL

SYSTEM
PAN SPEED
5
MENU ENTER DOWN UP

PAN SPEED CONTROL
Default = 5

SYSTEM
TILT SPEED
5
MENU ENTER DOWN UP

TILT SPEED CONTROL
Default = 5

SYSTEM
STUDIO MODE
OFF
MENU ENTER DOWN UP

STUDIO MODE
ON = Silent operation
OFF = Zoom motor maximum
speed (Default)

SYSTEM
FAN MAX SPEED
100%
MENU ENTER DOWN UP

FAN MAX SPEED
50% (12V) - 100% (24V)
Default = 100%

SYSTEM
RESET BY DMX
ENAB
MENU ENTER DOWN UP

RESET BY DMX
Enable: Motors reset enabled
via DMX (Default)
Disabled: Motors reset
disabled via DMX
Now: Instant motors reset.

👉 👉 **SOFTWARE** 👉 👉
Menu Up-Down   ENTER Up-Down

SOFTWARE
LED Driver board, motors
board (Pan&Tilt-Zoom) and
display board software version

SOFTWARE

MOTORS

0D36001AF
v2.19*Apr 1 2016

MENU ENTER DOWN UP

Motors board
(Pan&Tilt-Zoom)
Software version

👉
ENTER

SOFTWARE

LED

N1401LED v203

MENU ENTER DOWN UP

LED Driver board
Software version

SOFTWARE

DISPLAY

v. 2.02

MENU ENTER DOWN UP

Display board
Software version

13- PERIODIC CLEANING

Front lenses Glass
The dust can reduce the luminous output substantially.
Regularly clean the front lenses glass using a soft cotton cloth, dampened with a specialist glasses cleaning solution.

Fans and air passages
The fans and air passages must be cleaned approximately every 6 weeks.
This periodic cleaning will depend of course, on the conditions in which the projector is operating.
Suitable instruments for performing this type of maintenance are a brush and a common vacuum cleaner or an air compressor.
If necessary, clean the fans and air passages more frequently.

14- PERIODIC CONTROLS

Mechanical parts
Periodically check all mechanical parts and the gaskets, replacing them if necessary.

Electrical components
Check all electrical components for correct earthing and proper attachment of all connectors, refastening if necessary.
Attention: Disconnect mains power prior to removing the projector housing.

Fuse replacement
Locate the fuse, which protect the electronics, in the base of the NICK NRG 1401. Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type (5AT) if necessary.
Attention: Disconnect mains power prior to removing the projector housing.

15- DMX PROTOCOL

"SHAPES" mode: 33 DMX channels (default)
(Channels and channel functions highlighted in red color are not yet implemented)

1	RED
2	GREEN
3	BLUE
4	WHITE
5	SHUTTER
6	DIMMER
7	DIMMER FINE
8	LINEAR CTO
9	MACRO FIXED COLOR
10	PAN
11	PAN FINE
12	TILT
13	TILT FINE
14	PAN-TILT SPEED
15	FPR
16	SERVICE
17	FUNCTIONS
18	ZOOM
19	RESET
20	SHAPE SELECTION
21	SHAPE SPEED
22	SHAPE FADE
23	SHAPE RED
24	SHAPE GREEN
25	SHAPE BLUE
26	SHAPE WHITE
27	SHAPE DIMMER
28	BACKGROUND DIMMER
29	SHAPE TRANSITION
30	SHAPE OFFSET
31	SHAPE STROBE
32	BACKGROUND STROBE
33	BACKGROUND SELECTION

Ch	Name	DMX levels	
1	RED	0..255	Proportional colour
2	GREEN	0..255	Proportional colour
3	BLUE	0..255	Proportional colour
4	WHITE	0..255	Proportional colour
5	SHUTTER	0..9	Black-out
		10..19	Open
		20..29	Black-out
		30..119	Strobe (from 3,27 s to 30 ms)
		120..149	Pulse up (from 42,6 s to 120 ms)
		150..179	Pulse down (from 42,6 s to 120 ms)
		180..204	Random strobe
		205..229	Full independent random strobe
		230..255	Open
6	DIMMER	0..255	Proportional dimmer MSB
7	DIMMER FINE	0..255	Proportional dimmer LSB

8	LINEAR CTO (not yet implemented)	0..10	No function
		11..255	Linear control temperature correction (whites from 2700K to 8000K)
9	MACRO FIXED COLOR (not yet implemented)	0..14	No function
		15..255	Fixed Macros up to be defined
10	PAN		PAN msb
11	PAN FINE		PAN lsb
12	TILT		TILT msb
13	TILT FINE		TILT lsb
14	PANTILT SPEED	0..127	From maximum to minimum speed
		128..247	Maximum speed
		248..255	Medium speed
		0..10	Standard (not yet implemented)
		11..25	Maximum speed (not yet implemented)
		26..127	From maximum to minimum speed (not yet implemented)
		128..247	Variable reaction to DMX signal (fast to slow) (not yet implemented)
		248..255	Slow reaction time to DMX signal (not yet implemented)
15	FPR	000..010	Position mode 540° (standard path)
		011..020	Position mode 360° (1 turn)
		021..030	Position mode 720° (2 turns)
		031..040	Position mode 1080° (3 turns)
		041..050	Position mode 1440° (4 turns)
		051..060	Position mode 1800° (5 turns)
		061..070	Position mode 2160° (6 turns)
		071..080	Position mode 2520° (7 turns)
		081..090	Position mode 2880° (8 turns)
		091..100	Position mode 3240° (9 turns)
		101..110	Position mode 3600° (10 turns)
		111..120	Position mode 360° smart path
		121..182	Forward spin rotation speed from max to min
		183..193	Stop
		194..255	Reverse spin rotation speed from min to max
16	SERVICE (not yet implemented)	0..10	No function
		11..244	riserve
		245..255	Activating "FUNCTIONS" channel
17	FUNCTIONS (not yet implemented)	0..14	No function
	Activated by channel SERVICE at range 245..255 and staying on desired option for 5 seconds	15..64	SMOOTH OFF-1-2-4...20 same as display menu
		65..74	GAMMA CORRECTION 2.0
		75..84	GAMMA CORRECTION LINEAR
		85..134	OUTPUT FREQ FROM 610Hz TO 20KHz same as display menu
		135..144	BOOST ON
		145..154	BOOST OFF
		155..164	WIRELESS ON
		165..174	WIRELESS UNLINK
		175..184	WIRELESS OFF
		185..194	PAN NORMAL
		195..204	PAN REVERSE
		205..214	TILT NORMAL
		215..224	TILT REVERSE
		225..234	RESERVED (not yet implemented)
		235..244	FAN SPEED STUDIO MODE (not yet implemented)
		245..255	FAN SPEED LIVE MODE (not yet implemented)
18	ZOOM	0..255	Linear zoom from narrow to wide
19	RESET	0..15	No effect
		16..255	Total motors reset (activation after 3 sec.)
		16..75	PAN TILT reset (not yet implemented)
		76..239	ZOOM reset (not yet implemented)
		240..255	TOTAL Unit reset (not yet implemented)

20	SHAPE SELECTION	0..10	No effect
		11..15	PIXEL 1
		16..20	RING 1
		21..25	RING 2
		26..30	PIXEL 1 RING 1
		31..35	PIXEL 1 RING 2
		36..40	PIXEL 1 RING 1 RING 2
		41..45	SINGLE RING UP DOWN
		46..50	FILLED RING UP DOWN
		51..55	SPIRAL
		56..60	FAN
		61..65	BAR1
		66..70	HALF MOON
		71..75	TRIANGLE
		76..80	SEGMENT1
		81..85	ARC1
		86..90	ARC2
		91..95	BAR2 (variable size)
		96..100	SEGMENT2 (variable size)
		101..255	Riservato
21	SHAPE SPEED	0..127	Indicizzato 0..360°
		128..180	Left rotation fast to slow
		181..202	stop
		203..255	Right rotation slow to fast
22	SHAPE FADE (not yet implemented)	0..255	
23	SHAPE RED	0..255	Colour effect - RED
24	SHAPE GREEN	0..255	Colour effect - GREEN
25	SHAPE BLUE	0..255	Colour effect - BLUE
26	SHAPE WHITE	0..255	Colour effect - WHITE
27	SHAPE DIMMER	0..255	Dimmer effect
28	BACKGROUND DIMMER	0..255	Dimmer background
29	SHAPE TRANSITION (not yet implemented)	0..255	
30	SHAPE OFFSET	0..255	Shape offset (0° to 360°)
31	SHAPE STROBE		(not yet implemented)
32	BACGROUND STROBE		(not yet implemented)
33	BACKGROUND SELECTION	0..10	No effect
		11..15	PIXEL 1
		16..20	RING 1
		21..25	PIXEL 1 + RING 1
		26..30	RING 2
		31..35	PIXEL 1 + RING 2
		36..40	RING 1 + RING 2
		41..45	PIXEL 1 + RING 1 +RING 2

15- DMX PROTOCOL

"EXTENDED" mode: 111 DMX channels
(Channels and channel functions highlighted in red color are not yet implemented)

1	RED DIMMER		60	RED 11
2	GREEN DIMMER		61	GREEN 11
3	BLUE DIMMER		62	BLUE 11
4	WHITE DIMMER		63	WHITE 11
5	SHUTTER		64	RED 12
6	DIMMER		65	GREEN 12
7	DIMMER FINE		66	BLUE 12
8	LINEAR CTO		67	WHITE 12
9	MACRO FIXED COLOR		68	RED 13
10	PAN		69	GREEN 13
11	PAN FINE		70	BLUE 13
12	TILT		71	WHITE 13
13	TILT FINE		72	RED 14
14	PAN-TILT SPEED		73	GREEN 14
15	FPR		74	BLUE 14
16	SERVICE		75	WHITE 14
17	FUNCTIONS		76	RED 15
18	ZOOM		77	GREEN 15
19	RESET		78	BLUE 15
20	RED 1		79	WHITE 15
21	GREEN 1		80	RED 16
22	BLUE 1		81	GREEN 16
23	WHITE 1		82	BLUE 16
24	RED 2		83	WHITE 16
25	GREEN 2		84	RED 17
26	BLUE 2		85	GREEN 17
27	WHITE 2		86	BLUE 17
28	RED 3		87	WHITE 17
29	GREEN 3		88	RED 18
30	BLUE 3		89	GREEN 18
31	WHITE 3		90	BLUE 18
32	RED 4		91	WHITE 18
33	GREEN 4		92	RED 19
34	BLUE 4		93	GREEN 19
35	WHITE 4		94	BLUE 19
36	RED 5		95	WHITE 19
37	GREEN 5		96	RED 20
38	BLUE 5		97	GREEN 20
39	WHITE 5		98	BLUE 20
40	RED 6		99	WHITE 20
41	GREEN 6		100	RED 21
42	BLUE 6		101	GREEN 21
43	WHITE 6		102	BLUE 21
44	RED 7		103	WHITE 21
45	GREEN 7		104	RED 22
46	BLUE 7		105	GREEN 22
47	WHITE 7		106	BLUE 22
48	RED 8		107	WHITE 22
49	GREEN 8		108	RED 23
50	BLUE 8		109	GREEN 23
51	WHITE 8		110	BLUE 23
52	RED 9		111	WHITE 23
53	GREEN 9			
54	BLUE 9			
55	WHITE 9			
56	RED 10			
57	GREEN 10			
58	BLUE 10			
59	WHITE 10			

Ch	Name	DMX levels	
1	RED DIMMER	0..255	Master dimmer for all 23 red channels
2	GREEN DIMMER	0..255	Master dimmer for all 23 green channels
3	BLUE DIMMER	0..255	Master dimmer for all 23 blue channels
4	WHITE DIMMER	0..255	Master dimmer for all 23 white channels
5	SHUTTER	0..9	Black-out
		10..19	Open
		20..29	Black-out
		30..119	Strobe (from 3,27 s to 30 ms)
		120..149	Pulse up (from 42,6 s to 120 ms)
		150..179	Pulse down (from 42,6 s to 120 ms)
		180..204	Random strobe
		205..229	Full independent random strobe
		230..255	Open
6	DIMMER	0..255	Proportional master dimmer MSB
7	DIMMER FINE	0..255	Proportional master dimmer LSB
8	LINEAR CTO (not yet implemented)	0..10	No function
		11..255	Linear control temperature correction (whites from 2700K to 8000K)
9	MACRO FIXED COLOR (not yet implemented)	0..14	No function
		15..255	Fixed Macros up to be defined
10	PAN		PAN msb
11	PAN FINE		PAN lsb
12	TILT		TILT msb
13	TILT FINE		TILT lsb
14	PANTILT SPEED	0..127	From maximum to minimum speed
		128..247	Maximum speed
		248..255	Medium speed
		0..10	Standard (not yet implemented)
		11..25	Maximum speed (not yet implemented)
		26..127	From maximum to minimum speed (not yet implemented)
		128..247	Variable reaction to DMX signal (fast to slow) (not yet implemented)
		248..255	Slow reaction time to DMX signal (not yet implemented)
15	FPR	000..010	Position mode 540° (standard path)
		011..020	Position mode 360° (1 turn)
		021..030	Position mode 720° (2 turns)
		031..040	Position mode 1080° (3 turns)
		041..050	Position mode 1440° (4 turns)
		051..060	Position mode 1800° (5 turns)
		061..070	Position mode 2160° (6 turns)
		071..080	Position mode 2520° (7 turns)
		081..090	Position mode 2880° (8 turns)
		091..100	Position mode 3240° (9 turns)
		101..110	Position mode 3600° (10 turns)
		111..120	Position mode 360° smart path
		121..182	Forward spin rotation speed from max to min
		183..193	Stop
		194..255	Reverse spin rotation speed from min to max

16	SERVICE (not yet implemented)	0..10	No function
		11..244	Riserve
		245..255	Activating "FUNCTIONS" channel
17	FUNCTIONS (not yet implemented)	0..14	No function
	Activated by channel SERVICE at range 245..255 and staying on desired option for 5 seconds	15..64	SMOOTH OFF-1-2-4...20 same as display menu
		65..74	GAMMA CORRECTION 2.0
		75..84	GAMMA CORRECTION LINEAR
		85..134	OUTPUT FREQ FROM 610Hz TO 20KHz same as display menu
		135..144	BOOST ON
		145..154	BOOST OFF
		155..164	WIRELESS ON
		165..174	WIRELESS UNLINK
		175..184	WIRELESS OFF
		185..194	PAN NORMAL
		195..204	PAN REVERSE
		205..214	TILT NORMAL
		215..224	TILT REVERSE
		225..234	RESERVED
		235..244	FAN SPEED STUDIO MODE
		245..255	FAN SPEED LIVE MODE
18	ZOOM	0..255	Linear zoom from narrow to wide
19	RESET	0..15	No effect
		16..255	Total motors reset (activation after 3 sec.)
		16..75	PAN TILT reset (not yet implemented)
		76..239	ZOOM reset (not yet implemented)
		240..255	TOTAL Unit reset (not yet implemented)
20	RED 1	0..255	Proportional colour
21	GREEN 1	0..255	Proportional colour
22	BLUE 1	0..255	Proportional colour
23	WHITE 1	0..255	Proportional colour
24	RED 2	0..255	Proportional colour
25	GREEN 2	0..255	Proportional colour
26	BLUE 2	0..255	Proportional colour
27	WHITE 2	0..255	Proportional colour
28	RED 3	0..255	Proportional colour
29	GREEN 3	0..255	Proportional colour
30	BLUE 3	0..255	Proportional colour
31	WHITE 3	0..255	Proportional colour
32	RED 4	0..255	Proportional colour
33	GREEN 4	0..255	Proportional colour
34	BLUE 4	0..255	Proportional colour
35	WHITE 4	0..255	Proportional colour
36	RED 5	0..255	Proportional colour
37	GREEN 5	0..255	Proportional colour
38	BLUE 5	0..255	Proportional colour
39	WHITE 5	0..255	Proportional colour
40	RED 6	0..255	Proportional colour
41	GREEN 6	0..255	Proportional colour
42	BLUE 6	0..255	Proportional colour
43	WHITE 6	0..255	Proportional colour
44	RED 7	0..255	Proportional colour
45	GREEN 7	0..255	Proportional colour
46	BLUE 7	0..255	Proportional colour
47	WHITE 7	0..255	Proportional colour
48	RED 8	0..255	Proportional colour
49	GREEN 8	0..255	Proportional colour
50	BLUE 8	0..255	Proportional colour
51	WHITE 8	0..255	Proportional colour

52	RED 9	0..255	Proportional colour
53	GREEN 9	0..255	Proportional colour
54	BLUE 9	0..255	Proportional colour
55	WHITE 9	0..255	Proportional colour
56	RED 10	0..255	Proportional colour
57	GREEN 10	0..255	Proportional colour
58	BLUE 10	0..255	Proportional colour
59	WHITE 10	0..255	Proportional colour
60	RED 11	0..255	Proportional colour
61	GREEN 11	0..255	Proportional colour
62	BLUE 11	0..255	Proportional colour
63	WHITE 11	0..255	Proportional colour
64	RED 12	0..255	Proportional colour
65	GREEN 12	0..255	Proportional colour
66	BLUE 12	0..255	Proportional colour
67	WHITE 12	0..255	Proportional colour
68	RED 13	0..255	Proportional colour
69	GREEN 13	0..255	Proportional colour
70	BLUE 13	0..255	Proportional colour
71	WHITE 13	0..255	Proportional colour
72	RED 14	0..255	Proportional colour
73	GREEN 14	0..255	Proportional colour
74	BLUE 14	0..255	Proportional colour
75	WHITE 14	0..255	Proportional colour
76	RED 15	0..255	Proportional colour
77	GREEN 15	0..255	Proportional colour
78	BLUE 15	0..255	Proportional colour
79	WHITE 15	0..255	Proportional colour
80	RED 16	0..255	Proportional colour
81	GREEN 16	0..255	Proportional colour
82	BLUE 16	0..255	Proportional colour
83	WHITE 16	0..255	Proportional colour
84	RED 17	0..255	Proportional colour
85	GREEN 17	0..255	Proportional colour
86	BLUE 17	0..255	Proportional colour
87	WHITE 17	0..255	Proportional colour
88	RED 18	0..255	Proportional colour
89	GREEN 18	0..255	Proportional colour
90	BLUE 18	0..255	Proportional colour
91	WHITE 18	0..255	Proportional colour
92	RED 19	0..255	Proportional colour
93	GREEN 19	0..255	Proportional colour
94	BLUE 19	0..255	Proportional colour
95	WHITE 19	0..255	Proportional colour
96	RED 20	0..255	Proportional colour
97	GREEN 20	0..255	Proportional colour
98	BLUE 20	0..255	Proportional colour
99	WHITE 20	0..255	Proportional colour
100	RED 21	0..255	Proportional colour
101	GREEN 21	0..255	Proportional colour
102	BLUE 21	0..255	Proportional colour
103	WHITE 21	0..255	Proportional colour
104	RED 22	0..255	Proportional colour
105	GREEN 22	0..255	Proportional colour
106	BLUE 22	0..255	Proportional colour
107	WHITE 22	0..255	Proportional colour
108	RED 23	0..255	Proportional colour
109	GREEN 23	0..255	Proportional colour
110	BLUE 23	0..255	Proportional colour
111	WHITE 23	0..255	Proportional colour

15- DMX PROTOCOL

"COMPATIBILITY" mode: 20 DMX channels
(Channels and channel functions highlighted in red color are not yet implemented)

1 PAN
2 PAN FINE
3 TILT
4 TILT FINE
5 PAN-TILT SPEED
6 FPR
7 FREQUENCY
8 SHUTTER
9 DIMMER
10 RED
11 GREEN
12 BLUE
13 WHITE
14 WHITE PRE-PROGRAMMED
15 CTC
16 MACRO
17 FUNCTION
18 ZOOM
19 MACRO SPEED / INDEX
20 RESET

Ch	Name		DMX levels
1	PAN		PAN msb
2	PAN FINE		PAN lsb
3	TILT		TILT msb
4	TILT FINE		TILT lsb
5	PANTILT SPEED	0..127	From maximum to minimum speed
		128..247	Maximum speed
		248..255	Medium speed
		0..10	Standard (not yet implemeted)
		11..25	Maximum speed (not yet implemented)
		26..127	From maximum to minimum speed (not yet implemented)
		128..247	Variable reaction to DMX signal (fast to slow) (not yet implemented)
		248..255	Slow reaction time to DMX signal (not yet implemented)
6	FPR	000..010	Position mode 540° (standard path)
		011..020	Position mode 360° (1 turn)
		021..030	Position mode 720° (2 turns)
		031..040	Position mode 1080° (3 turns)
		041..050	Position mode 1440° (4 turns)
		051..060	Position mode 1800° (5 turns)
		061..070	Position mode 2160° (6 turns)
		071..080	Position mode 2520° (7 turns)
		081..090	Position mode 2880° (8 turns)
		091..100	Position mode 3240° (9 turns)
		101..110	Position mode 3600° (10 turns)
		111..120	Position mode 360° smart path
		121..182	Forward spin rotation speed from max to min
		183..193	Stop
		194..255	Reverse spin rotation speed from min to max

7	**FREQUENCY (not yet implemented)**	**0..45**	**No function**
		46..55	**610Hz**
		56..65	**800Hz**
		66..75	**1000Hz**
		76..85	**1500Hz**
		86..95	**2000Hz**
		96..105	**2500Hz**
		106..115	**3000Hz**
		116..125	**3500Hz**
		126..135	**4000Hz**
		136..145	**4500Hz**
		146..155	**5000Hz**
		156..165	**5500Hz**
		166..175	**6000Hz**
		176..185	**6500Hz**
		186..195	**7000Hz**
		196..205	**7500Hz**
		206..215	**8000Hz**
		216..225	**8500Hz**
		226..235	**9000Hz**
		236..245	**9500Hz**
		246..255	**10000Hz**
8	**SHUTTER**	**0..9**	**Black-out**
		10..19	**Open**
		20..29	**Black-out**
		30..119	**Strobe (from 3,27 s to 30 ms)**
		120..149	**Pulse up (from 42,6 s to 120 ms)**
		150..179	**Pulse down (from 42,6 s to 120 ms)**
		180..204	**Random strobe**
		205..229	**Full independent random strobe**
		230..255	**Open**
9	**DIMMER**	**0..255**	**Proportional dimmer**
10	**RED**	**0..255**	**Proportional colour**
11	**GREEN**	**0..255**	**Proportional colour**
12	**BLUE**	**0..255**	**Proportional colour**
13	**WHITE**	**0..255**	**Proportional colour**
14	**WHITE PRE-PROGRAMMED**	**0..55**	**No function**
		56..105	**Full (Red, Green, Blue at full)**
		106..155	**White DTS**
		156..205	**Custom white create (RGB levels selectable by DMX)**
		206..255	**White CTC (channel 15 CTC enabled)**
15	**CTC**	**0..255**	**Linear control temperature correction (256 whites from 2700 to 8000 K)**
16	**MACRO con MACR = STD**	**0..14**	**No function**
		15..255	**16 fixed macros**
	MACRO con MACR = EXT	**0..14**	**No function**
		15..174	**16 fixed macros**
		175..184	**Rainbow speed 1 (6 sec.)**
		185..194	**Rainbow speed 2 (15 sec.)**
		195..204	**Rainbow speed 3 (30 sec.)**
		205..214	**Rainbow speed 4 (45 sec.)**
		215..224	**Rainbow speed 5 (60 sec.)**
		225..234	**Rainbow speed 6 (120 sec.)**
		235..244	**Rainbow speed 7 (150 sec.)**
		245..255	**Rainbow speed 8 (180 sec.)**
	MACRO con MACR = DYNA (not yet implemented)	**0..14**	**No function**
		15..255	**Dynamic macros up to be defined**

17	FUNCTION	0..79	If channel 14 White Pre-Programmed = DMX range value 156 – 20: Custom White Recall
		80..160	Custom White create (enable custom white creation)
		161..255	Custom White store (store the custom white created)
18	ZOOM		Linear Zoom from narrow to wide
19	MACRO SPEED / INDEX (not yet implemented)	0..127	Proportional index 0 - 360°
		128..180	Left rotation from fast to slow
		181..202	Stop
		203..255	Right rotation from slow to fast
20	RESET	0..15	No effect
		16..255	Total motors reset (activation after 3 sec.)

NOTES

NOTES

MADE IN ITALY $C\epsilon$

DTS

The Lighting Company

ISO 9001:2008
D.T.S. quality system
is certified to the
ISO 9001:2008 standard

D.T.S. products are designed
and manufactured at the D.T.S.
plants in italy

0517I275