



NIRTA



24-004-1461
Rev1.0 July 2004

INTRODUCTION

Welcome!

You made the right decision by choosing this sophisticated and intelligent product. Every unit has been thoroughly tested and carefully packed before shipment. Unpack the shipping carton carefully, saving the carton and all packing materials for possible later use.

Check carefully for sure your product is not damaged and all accessories not missing. If your product appears to be damaged or missing, please do not use it and contact your local distributor immediately.

Please read this manual carefully and thoroughly, as it gives important information regarding safety, use and maintenance. Keep this manual with the unit for possible future reference.

Caution!

There are no user serviceable parts inside this unit. Do not attempt any repairs yourself, and doing so will void your manufacturer's warranty. In the unlikely event, your unit may require service please contact nearest distributor.

NOTICE INFORMATION

Keep dry

This product is not waterproof, and may malfunction if exposed to high levels of humidity. Rusting of the internal mechanism can cause irreparable damage.

Do not drop

This product may malfunction if subjected to strong shocks or vibration.

Keep away from strong magnetic fields

Do not use or place this device in vicinity of equipment that generates strong electromagnetic radiation or magnetic fields. Strong static charges or the magnetic fields produced by equipment such as radio transmitters could interfere with the display or affect the product's internal circuitry.

Cleaning

Due to fog residue, smoke, and dust cleaning the exterior of the case may become necessary. Use normal glass cleaner and soft cloth to wipe down the outside casing.

CF cards

Memory card may become hot during use. Make sure the power is off when removing or inserting memory cards. Use recommended 32 MB Compact Flash Card only. The CF card should be exclusive and must not be shared by PC or other devices.

Copyright Notice

No part of the manual included with this product may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without authorized written permission.

SPECIFICATIONS

Model:	NIRTA
Power Requirement:	DC 9-15V, 500 m A min.
LED Screen:	4-digit segment display
DMX Channels:	64 DMX channels
Input/ Outputs:	DMX Out: 3-pin Neutrik chassis connector RS 232 port: DB 9 connector Fog Machine connector 5-pin din connector USB connector for DJ work light
Audio Trigger:	By built-in microphone
Dimensions (LxWxH):	360x193x74mm
Weight:	Approximately 2.1 Kg
Accessories:	AC/ DC Adaptor x1(included) Scandisk 32 MB Compact Flash Card (optional) 5V/1W DJ work light (optional)

OVERVIEW

The NIRTA is a 64 DMX channels intelligent lighting controller in response to up to 8 fixtures of 8 DMX channels (plus Pan/Tilt movement) each. The NIRTA allows you to record 96 scenes and 4 programs, patch 8 DMX channel for the fixture(s), freely have access to CF card for the exchange of data and mutually swap data between two units.

REAR PANEL CONNECTIONS

- **Power input** for an external 9V power supply. This requires a transformer with a 9VDC output at 500ma.
- **Power switch** – switching on or off the power.
- **DMX 512 output** using a 3-pin XLR connector. There is a polarity switch that swaps pins 2 and 3. Some lighting fixtures receive data minus on pin 2 and some on pin 3. The more commonly used polarity is data minus on pin 2 (switch is to the right as you're looking at the back of the unit).
- **9-pin RS-232 connector** - The RS-232 port can be used to connect to a personal computer in order to do memory backups and software updates.
- **CF Card Slot** – Insert or unload CF card that allows you to back up the memory using 32 MB Compact Flash cards.
- **Fog Machine connector** – used for connection to a Fog Machine.

FRONT PANEL CONTROLS

Fixture Buttons

There are 4 Fixture buttons in a row. The Bank button allows changing between 1-4 fixtures and 5-8 fixtures. A tap of any of these fixture buttons allows you to enable the fixture. The relative LED blinks when the fixture is activated. When the Group button is pressed, several fixtures can be selected at a time, as a result the relative LEDs blink synchronously.

Scene Buttons

There are 4 Scene buttons in a row. As there are 24 pages, total 96 scenes are available. The relative scene LED is lit indicating the recorded scene is available. To call the recorded scenes, just tap the relative buttons.

Channel Faders

There are 4 Faders in a row. The Page button allows changing between 1-4 and 5-8 channels. These faders are used to manual control the relative fixture channels.

Speed Fader

This allows you adjust the running speed of programs. It ranges from 0.05 second to 10 minutes. When Speed+Fade button is enabled (lit LED), it can control Fade time as well as Speed.

Record Button

Pressing this button for 3 seconds enables Record mode, as is implied by the lit LED. Pressing for 3 seconds again disables Record mode, as a result the LED goes out.

Audio/Preview Button

This button is used to enable Audio mode, as is implied by the lit LED.

Tap Sync Button

Repeatedly tapping this button establishes the running speed of programs.

Fog Machine Button

This button is used for Fog Machine operation.

Joystick

This joystick controls Pan or Tilt movement of fixtures.

Program Buttons

There are 4 program buttons in a column. These buttons are used to load or store programs.

Blackout Button

Disable overall output when this button is enabled.

Delete Button

This button can be used to delete scenes, steps or programs only in Record mode.

△/ ▽ Buttons

These two buttons can be used for plus or minus adjustments.

LED Screen

This LED Screen gives direct read-out of adjustments of parameters.

USB Connector

This connector is used for gooseneck light (DJ work light).

THE MENU FIELD

Pressing Record button for three seconds allows you to have access to SET-UP menu, in the meantime, the Record LED is lit and the LED Screen reads “1: rec”. You may have access to Record, Setup, CF card or RS 232 using Δ / ∇ button. Please refer to under-mentioned for further instruction.

1. Record Enable

Press Record button for three second until the Record LED is lit. Press Δ / ∇ button to scroll to “1: rec” readout, then press the Record button to access Record mode, “rec” appearing in the LED Screen indicates Record is enabled.

In Record mode, you are allowed, as required, to record scenes, delete scenes, record programs, and delete steps out of program or entire program.

1.1. Recording Scenes

You are presumed to have assigned the fixtures before recording. To record scenes, please follow undermentioned procedures:

1. Be sure you are in Record mode. Select a fixture or a group of fixtures and make an adjustment using relative channel faders.
2. Repeats step 1 to make adjustments of other fixtures.
3. Select the destination page using Δ / ∇ button.
4. Press Record and destination Scene buttons at a time, all LEDs will give a brief flash indicating you’ve created a scene successfully, in the meantime, the relevant Scene LED will be lit.
5. Press Record button for three seconds to quit from Record mode, the Record LED will go out.

1.2. Deletion of Scenes

To delete scenes, please follow undermentioned procedures:

1. Be sure you are in Record mode. Select the destination page using Δ / ∇ button.
2. Press Delete and destination Scene buttons at a time, all LEDs will give a brief flash indicating you’ve deleted a scene successfully, in the meantime, the relevant Scene LED will go out.
3. Press Record button for three seconds to quit from Record mode, the Record LED will go out.

1.3. Recording Programs

To record programs, please follow undermentioned procedures:

1. Be sure you are in Record mode. Select a program out of 4 Program buttons, the Program LED will flash at intervals and the LED Screen will read “ st00 ”.
2. Call a recorded scene or create a new scene pursuant to the paragraph of 1.1.
3. Make adjustments of speed or fade time. To preview its effect, just press Audio/Preview button.
4. Press Record button to save the current scene, all LEDs will give a brief flash indicating you’ve inserted a scene successfully, in the meantime, the LED Screen will read “ st01 ”.
Select the step number using Δ / ∇ button, then you can write the current scene into the current step.
5. Repeats steps 2-4 to record up to 99 steps into the program.
6. Press Record button for three seconds to quit from Record mode, the relevant Record LED will go out.

1.4. Deletion of Steps

To delete steps, please follow undermentioned procedures:

1. Be sure you are in Record mode. Select a program out of 4 Program buttons, the Program LED will flash at intervals and the LED Screen will read “ st00 ” .
2. Select the step as required using Δ / ∇ button.
3. Press Delete button, all LEDs will give a brief flash indicating you’ve deleted the step successfully, in the meantime, the LED Screen will read the earlier step.
4. Repeats steps 2-3 until all unnecessary steps have been deleted.
5. Press Record button for three seconds to quit from Record mode, the relevant Record LED will go out.

1.5. Deletion of Programs

To delete programs, please follow undermentioned procedures:

1. Be sure you are in Record mode. Select a program out of 4 Program buttons, the Program LED will flash at intervals and the LED Screen will read “ st00 ” .
2. Press and hold down the Program button.
3. Press Delete button while holding the Program button, all LEDs will give a brief flash indicating you’ve deleted the program successfully.
4. Press Record button for three seconds to quit from Record mode, the relevant Record LED will go out.

2. Setup Menu

Press Record buttons for three seconds until the Record LED is lit. Press Δ / ∇ button to scroll to “2: Set” readout, then press the Record button to access Setup menu.

In Setup menu, you may have access to Assign, Blackout Delay or Display Shift using Δ / ∇ button. Please refer to under-mentioned for further instruction.

2.1. Assignment

In Setup menu, press Δ / ∇ button to scroll to “1: ASS” readout, then press the Record button to access Record mode, “C1:L1” appearing in the LED Screen prompting you to start assignment.

1. Select a fixture or a group of fixtures.
2. Press Δ button to select channels 1-8 or Pan/Tilt of this console, the LED Screen will show C1/ C2/ C3/ C4/ C5/ C6/ C7/ C8/ PA/ TI accordingly.
3. Select the destination channels of fixture using ∇ button, the LED Screen will show L1/ L2/ L3/ L4/ L5/ L6/ L7/ L8 accordingly. Please bear in mind that every fixture channel (L1-L8) SHOULD NEVER occupy more than one console channel (C1-C8), in a nutshell, the fixture channels should be one-to-one assigned to the console channels.
4. Pan/ Tilt should be assigned before you can use the Joystick to control Pan/ Tilt movement of fixtures. C1-C8 of the console can be used to assign Pan/ Tilt, be sure Pan/ Tilt MUST NOT be assigned to the same channel.
5. Press Record button. If the assignment is OK, all LEDs will flash briefly indicating you’ve succeeded in assignment and the LED Screen will read “ good ” and then go back to “C1:L1” for another assignment. If there is something wrong with the assignment, the LED Screen will read “Err” and then return to “ C1:L1 ”.
6. Repeat steps 1-5 to go on with assignment of next fixtures.
7. Press Record button for three seconds to quit from Record mode, the relevant Record LED will go out.

2.2. Blackout Delay

In Setup menu, press Δ/∇ button to scroll to “2: blt” readout. Press the Record button, the LED Screen will show the current Blackout setting.

1. Press Δ/∇ button to select between zero to 10 seconds for Blackout delay.
2. Press Record button for three seconds to quit from Record mode, the relevant Record LED will go out.
3. Pressing Blackout button for one second can bypass Blackout delay.

2.3. Display Shift between 100/ 255

In Setup menu, press Δ/∇ button to scroll to “3: dis” readout. Press the Record button, the LED Screen will show the current display mode.

1. Press Δ/∇ button to select between 100 and 255.
2. Press Record button for three seconds to quit from Record mode, the relevant Record LED will go out.

3. CF Card Menu

Press Record buttons for three seconds until the Record LED is lit. Press Δ/∇ button to scroll to “3: CF” readout, then press the Record button to access CF Card menu.

There are 7 data types in the CF Card menu, including All (ALL), Scenes (SCEN), Program 1 (Pr01), Program 2 (Pr02), Program 3 (Pr03), Program 4 (Pr04) and Set (Set) which can greatly help data exchange and backup.

In CF Card menu, you may have access to Write (“1: St”) or Read (“2: rd”) menu using Δ/∇ button. Please refer to under-mentioned for further instruction.

3.1. Write Menu

In CF Card menu, press Δ/∇ button to scroll to “1: St” readout, then press the Record button to access Write menu.

1. In Write menu, press Δ/∇ button to select desired data type you wish to write into the CF Card.
2. Press Record button, the data location message will appear in the LED Screen.
3. Press Δ/∇ button to select desired location between 01-99.
4. Press Record button, the message “Stor” will twinkle in the LED Screen, which indicates it is writing.
5. The message “good” will appear in the LED Screen when this process is completed successfully. The Record LED will go out in one second after completion of writing, which implies you’ve quit from SET-UP menu. If failure occurs, the message “Err” will appear in the LED Screen.
6. A final caveat: No power outage is allowed during writing.

3.2. Read Menu

In CF Card menu, press Δ/∇ button to scroll to “2: rd” readout, then press the Record button to access Read menu.

1. Repeats steps 1-3 of subchapter 3.1.
2. Press Record button, the message “rEAd” will twinkle in the LED Screen, which indicates it is reading the CF Card.
An important caveat: the original data of the console, such as programs and scenes, will be overwritten.

3. The message “good” will appear in the LED Screen when this process is completed successfully. The Record LED will go out in one second after completion of reading, which implies you’ve quit from SET-UP menu. If failure occurs, the message “Err” will appear in the LED Screen.
4. A final caveat: No power outage is allowed during reading.

4. RS 232 Menu

Press Record buttons for three seconds until the Record LED is lit. Press Δ/∇ button to scroll to “4: 232” readout, then press the Record button to access RS 232 menu.

In RS 232 menu, you may have access to Software Update, Data Upload or Data Download using Δ/∇ button. Please refer to under-mentioned for further instruction.

4.1. Software Update

In RS 232 menu, press Δ/∇ button to scroll to “1: SOF” readout, then press the Record button, the Record LED will flash at intervals and the LED Screen will show “SOFT” indicating it is ready to receive the updated software on your PC.

Help – RS 232 connection and Windows configuration

To connect to a PC, you will need a serial lap link cable available at any computer store. A standard RS-232 cable will not work. Connect the RS-232 port on NIRTA to one of the Serial “com” ports on your PC.

You will need a PC running Windows 95/ 98 or higher to connect to NIRTA. Windows comes with an accessory called Hyper Terminal that can communicate with NIRTA via one of the “com” ports on your PC. Determine which of your “COM” ports is available. COM 1 is generally used for the mouse so it is always advisable to connect your NIRTA to COM 2 on your PC.

You must first configure Hyper Terminal to work with NIRTA. Start the Hyper Terminal program by clicking on “Start” in Windows then “Programs” then “Accessories” then “Hyper Terminal” then “Hypertrm”. If for some reasons Hyper Terminal is not installed on your version of Windows, install it from your Windows CD. Go to the control panel, select Add/Remove Programs, select Windows Setup, and then select Communication. Follow the instructions to complete the installation. Once the Hyper Terminal Program is getting started, you will be asked to choose a name and an icon. Name it NIRTA then pick any icon then click OK. Go to the next dialog box “Connect to” and choose “Direct to COM 2”. Ignore the telephone number and other settings in this box then click OK. In the next dialog box, set bits per second to 57600, data bits to 8, parity to none, stop bits to 1, flow control to none, then click OK. You will access Hyper Terminal desktop.

Click File menu in the upper left corner of the desktop, then “Properties”, then select the “settings” tab. From the settings tab click “ASCII Setup”. In the next dialog box, leave all settings deselected, then OK. Close Hyper Terminal and you will be prompted to save this Hyper Terminal setup. Click YES to save it then you will have a program labeled “NIRTA.ht”. You may want to make a shortcut on your desktop if you plan to use your PC with NIRTA often. From this point on, whenever necessary, you can just click NIRTA.ht icon to invoke the NIRTA Hyper Terminal configuration quickly.

1. Connect to your PC as described hereinbefore.
2. Call the version of Hyper Terminal that you created for NIRTA.
3. Click on the top menu bar and select “Send Text File”. A dialogue box will appear allowing you to select the text file we provided (we will provide you the higher version software in Text type file).
4. Find the drive and folder where the file is located, select the file and click on “OPEN”.

5. When Hyper Terminal is transmitting the file, the message “Rece’ (receive) will twinkle in the LED Screen of the console and the Record LED will be lit.
6. The message “good” will appear in the LED Screen and the Record LED will go out when the process is completed successfully. If failure occurs, the message “Err” will appear and the Record LED will go out. Please check the connections and configurations and try it again.
7. If the software is lost as a result of failure, you don’t have to worry about it at all, there is a shortcut to Software Update. With the power off, press Fixture buttons 1-4 at a time. Switch the power on while holding down these four Fixture buttons, then you will have access to Software Update to re-try it again.
8. A final caveat: No power outage is allowed during receiving.

4.2. Data Upload

In RS 232 menu, press Δ/∇ button to scroll to readout of “2: UPr”, then press the Record button to access Data Upload. Similarly, there are 7 data types for Data Upload options, including All (ALL), Scenes (SCEN), Program 1 (Pr01), Program 2 (Pr02), Program 3 (Pr03), Program 4 (Pr04) and Set (Set).

1. When you have accessed Data Upload, press Δ/∇ button to select desired data type you wish to backup on your PC.
2. Repeats steps 1-2 of Paragraph 4.1.
3. Click on the top menu bar and select “Capture Text”. A dialogue box will appear allowing you to select a folder and name for the data file you will send. It is advisable to give an unused name. Click “Start”, Hyper Terminal is now in process of receiving the data file from your console.
4. Press Record button, the message “Send” will twinkle in the LED Screen, which implies it is sending the file.
5. When the process is completed successfully, the message “good” will appear in the LED Screen and the Record LED will go out. If failure occurs, the message “Err” will appear and the Record LED will go out. Please check the connections and configurations and try it again.
6. A final caveat: No power outage is allowed during sending.

4.3. Data Download

In RS 232 menu, press Δ/∇ button to scroll to readout of “3: dPr”, then press the Record button to access Data Download. Similarly, there are 7 data types for Data Download options, including All (ALL), Scenes (SCEN), Program 1 (Pr01), Program 2 (Pr02), Program 3 (Pr03), Program 4 (Pr04) and Set (Set).

1. When you have accessed Data Download, press Δ/∇ button to select desired data type you wish to download from your PC.
2. Press Record button, the message “RECE” will appear in the LED Screen and the Record LED will flash at intervals, which implies it is downloading the file from PC. In the meantime, you can press Record button to quit this process.
An important caveat: the old data of the console, such as programs and scenes, will be updated.
3. Repeat steps 1-4 of Paragraph 4.1.
4. When Hyper Terminal is transmitting the file, the message “Rece” (receive) will twinkle in the LED Screen of the console and the Record LED will be lit.
5. When the process is completed successfully, the message “good” will appear in the LED Screen and the Record LED will go out. If failure occurs, the message “Err” will appear and the Record LED will go out. Please check the connections and configurations and try it again.
6. A final caveat: No power outage is allowed during receiving.

This function also allows you to swap data between two NIRTAs.

To swap data between two units, please refer to the following procedures:

1. Use an RS 232 cable to connect two units.
2. On the NIRTA that you want to download data from, please refer to Paragraph 4.3 to access Data Download menu. Among 7 data types, select the data file that you wish to download from the NIRTA.
3. On the NIRTA that you want to upload data, please refer to Paragraph 4.2 to access Data Upload menu. Select the data file in accordance with that you wish to download.
4. Press Record button on the unit you are downloading from. The LED Screen will show the message “SEnd”, and “Rece” will appear in the LED Screen of uploading unit.
5. When the process is completed successfully, the message “good” will appear in both LED Screens and will automatically exit from Record mode. If failure occurs, both units will show the message “Err”. Please check the connections and configurations and try it again.
6. A final caveat: No power outage is allowed during the process.

PLAYBACK INSTRUCTIONS

Choose Fixtures

Press a Fixture button to select a fixture, and then the relevant Fixture LED will blink indicating it is activated. Press the Fixture button again to switch off the fixture.

Group Fixtures

This function allows you to group the fixtures together. To create a fixture group, press and hold down the Group button, next select two or more fixtures that will be included in the group.

Blackout

This function will kill overall output momentarily. Press the Blackout button to black out overall output, the Blackout LED will be lit indicating this function is activated. A second press will quit this function. 0-10 seconds delay is available for blackout options. Please refer to Paragraph 2.2 for further information. Pressing the Blackout button for 1 second can bypass blackout delay.

Pan/ Tilt Movement

You can use the Joystick to control the Pan/ Tilt movement of fixtures after you have assigned Pan/ Tilt properly. This function will greatly ease your operation. Please refer to Paragraph 2.1 for Pan/ Tile assignment.

Call Scenes

This console allows you to record up to 96 scenes. The relevant Scene LED is lit when it contains a recorded scene. Use Δ / ∇ button to select the page where the scene is. Next, select the scene button you want to call. The relevant Scene LED will blink, indicating it is playing back. In the meantime, you can use the faders and Joystick to directly control the fixtures contained in the scene. Pressing the Scene button for 1 second can reinstate the scene. Press the Scene button again to quit the scene.

Sequence Programs

This console can record 4 programs. To run a program, press the relevant Program button, the recorded program will be activated. You can select several programs in sequence, and then the selected programs will run in the order of your selection. Press the Program button to quit from running, the relevant Program LED will go out.

Mix Programs

Pressing two or more Program buttons at a time allows you to mix programs. The selected programs will run synchronously.

Running Programs With Speed Fader (or Tap Sync)

You can run the programs with preset programming speed or Speed Fader (Tap Sync). The Program LED will blink briefly when it is running with Speed Fader (Tap Sync), whereas the Program LED will blink at intervals when it is running with preset programming speed. Press and hold down the relevant Program button, then press the Speed+Fade button to change running mode between Speed Fader and preset Programming speed.

Running Programs With Fade Time

When the program is running with Speed Fader (Tap Sync), you can press the Speed + Fade to enable or disable Fade Time function. When Fade Time is enabled, the Speed fader will serve speed and fade time control. When Fade Time is disabled, the Speed fader will serve Speed control only.

Audio Running

Press the Audio/Preview button, the relevant LED will be lit indicating Audio is activated. In Audio mode, all selected programs will run with the beat of music rhythms. Press the button again to quit Audio mode, its LED will go out accordingly.

Manual Channel Fader & Reinstate Program

You can use channel faders to control the relevant fixtures at any time. There is no exception when the program is running. If you want to resume the channel, you can press the relevant Program button for one second to reinstate the program.

RESET MEMORY

This function allows you to dump memory. Switch the power off, next press and hold down the Scene No. 2, Bank and Blackout buttons synchronously, then you can switch the power on. It will take you several seconds to complete resetting.

A caveat: Doing reset frequently will do harm to the memory.