



Space Tracer 4000

ORDERCODE 40960



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The Showtec Space Tracer 4000 brings excitement to any venue. Whether you want simple plug-&-play action or a sophisticated DMX show, this product provides the effect you need.

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Thank you!



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Showtec Space Tracer 4000™ Product Guide

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WARNING

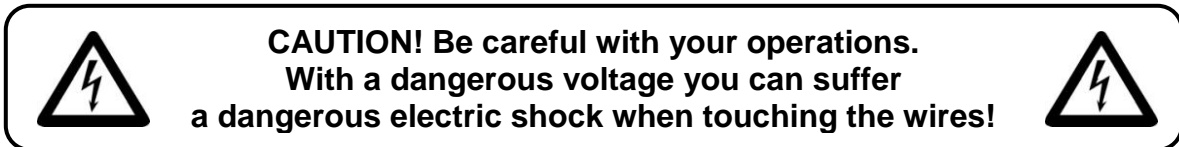


**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOUR INITIAL START-UP!**

SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual



Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never run the device without lamp!
- Never ignite the lamp if the objective-lens or any housing-cover is open, as discharge lamps may expose and emit a high ultraviolet radiation, which may cause burns.
- Never look directly into the light source.
- Never leave any cables lying around.
- Do not insert objects into air vents.
- Do not connect this device to a dimmerpack.
- Do not switch the device on and off in short intervals, as this would reduce the lamp's life.
- If the lamp has been turned OFF, let the lamp cool down for 15 minutes, before turning the lamp ON again.
- Do not touch the device's housing bare-handed during its operation (housing becomes very hot).
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use device indoor, avoid contact with water or other liquids.
- Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.
- Only operate the device after having familiarized with its functions.
- Avoid flames and do not put close to flammable liquids or gases.

- Always replace the lamp, when it is damaged or deformed due to the heat.
- Always keep case closed while operating.
- Always allow free air space of at least 50 cm around the unit for ventilation.
- Always disconnect power from the mains, when device is not used, before cleaning or when replacing lamp! Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the device and the power-cord from time to time.
- If the lens is obviously damaged, it has to be replaced. So that its functions are not impaired, due to cracks or deep scratches.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Showtec device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- For adult use only. Space Tracer must be installed out of the reach of children. Never leave the unit running unattended.
- For replacement use lamps and fuses of same type and rating only.
- Allow time to cool down, before replacing lamp.
- The user is responsible for correct positioning and operating of the Space Tracer. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.



CAUTION ! EYEDAMAGES !.
Avoid looking directly into the light source.
(meant especially for epileptics) !



OPERATING DETERMINATIONS

This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

The minimum distance between light-output and the illuminated surface must be more than 2 meters.

The maximum ambient temperature $t_a = 40^\circ\text{C}$ must never be exceeded.

The relative humidity must not exceed 50 % with an ambient temperature of 40°C .

If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.


Any other operation may lead to dangers like short-circuit, burns, electric shock, lamp explosion, crash etc. You endanger your own safety and the safety of others!

Improper installation can cause serious damage to people and property !

Connection with the mains

Connect the device to the mains with the power-plug.

Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	FASE
N	BLUE	BLACK	SILVER	NUL
	YELLOW/GREEN	GREEN	GREEN	EARTH

Make sure that the device is always connected properly to the earth!

Description of the device

Features

The Showtec Space Tracer 4000 is an immensely powerful color changer with great effects.

- DMX-control via standard DMX-controller
- 12 DMX-control channels required
- IP-44 Protection degree
- Complete with road-proof flightcase
- Stand-alone control or Master-Slave control
- Lamp Osram XOB 4000W Xenon included (155000 Lumen)

Note: If the lamp has been turned OFF, let the lamp cool down for 15 minutes, before turning the lamp ON again.

Overview



Fig. 1

- 1) Lens
- 2) Yoke
- 3) ON / OFF
- 4) Power Supply socket
- 5) 3-pin socket
- 6) 5-pin socket
- 7) Display + Setup buttons

Installation

Installing the Lamp

The Showtec Space Tracer 4000 uses the XOB 4000W Xenon (ordercode 80918) bulb as manufactured by all popular manufacturers. Use only the appropriate lamp for your unit.

Note that, product versions that use other lamps, may be offered in the future. Check your product specification label for information.

Always disconnect from electric mains power supply before changing lamps.

The lamp has to be replaced when it is damaged or deformed due to the heat.

Do not install lamps with a higher wattage! Lamps with a higher wattage generate temperatures the device was not designed for.

Damages caused by non-observance are not subject to warranty.

XBO lamps are at high internal pressure when cold (up to 35 bar) and at operating temperature (up to 80 bar). Therefore, always read the instruction manual that is supplied with the lamp. The lamp may only be installed by qualified personal.

Only handle lamps with their protective covers in place. Do not handle lamps without their protective covers unless approved safety glasses, facemask (with neck protector), chest protector, and gauntlets are worn.

OZONE GENERATION:

An electrical discharge in xenon gas generates Ozone gas (O₃). Ozone is extremely toxic and will cause serious health problems if inhaled in excess of allowable limits over a prolonged period of time.

Always make sure that there is enough fresh air around, when using the unit.

Procedure :

1. Loosen the 4 clamps on the housing. Gently remove the metal housing. Open the cover of the head, take out the M12 screw which can be found on the lamp. Open the cover on the back of the head, take out the fan (with connecting cable) and back board. Take the small circle board out. Use a 5mm allen key to unscrew the screw (M6) which fixes the lamp holder in place. Now you can remove the lamp holder and lamp from the light head.
2. Carefully remove the old lamp.
3. Read lamp instructions. **Do not touch the lamp bulb.**
Oil on hands shortens the lamp life. (If you touch the bulb glass, wipe off the glass with a clean, lint-free towel and rubbing alcohol.) Insert the lamp.
4. Now replace the lamp holder and reconnect by following the above steps in reverse order.

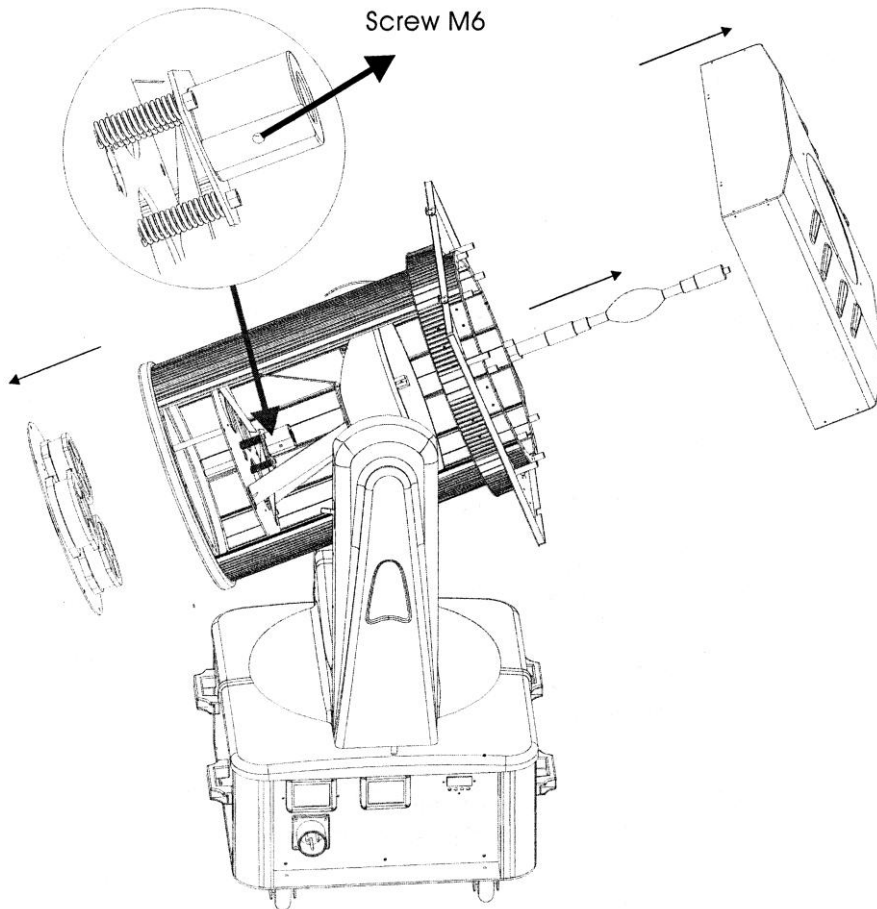
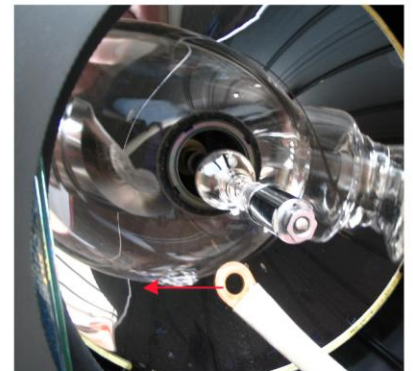
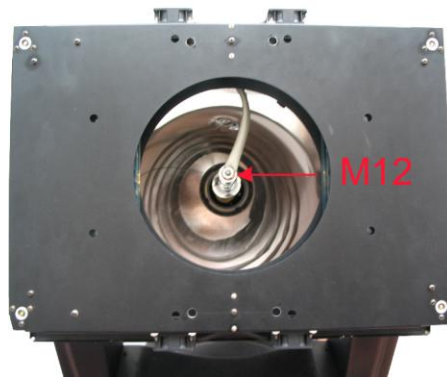
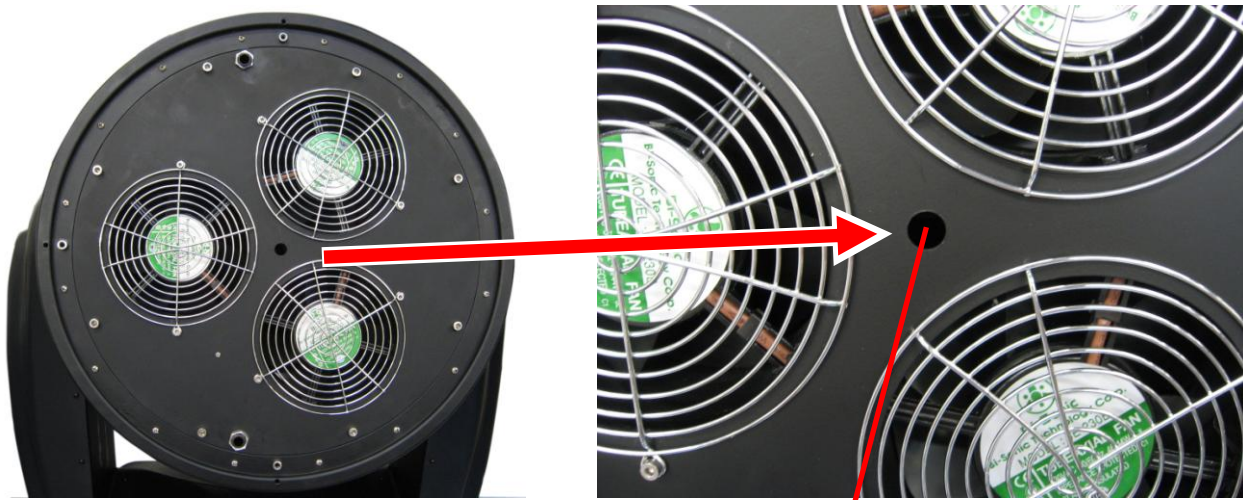


Fig. 2



Adjusting the Beam Angle

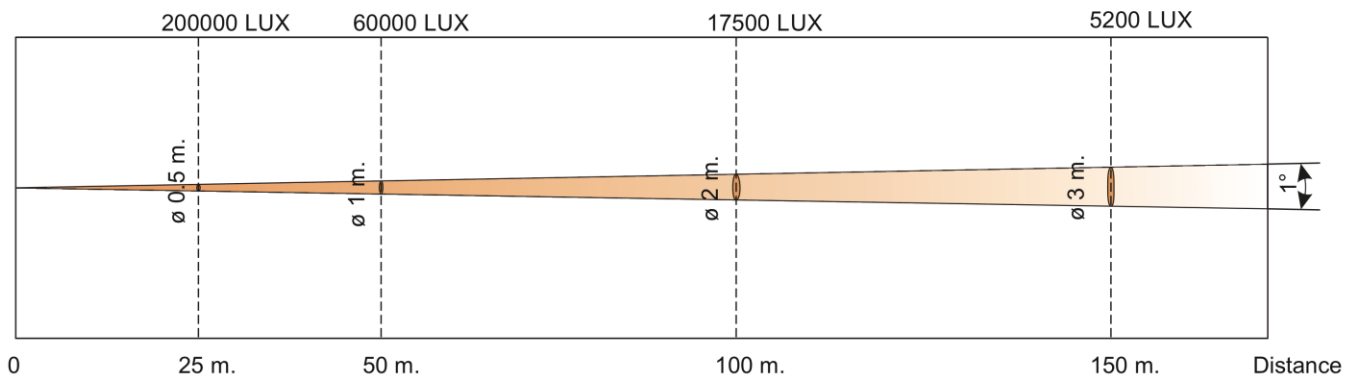
At the back of the unit there is a small hole. Insert a screwdriver inside and turn to adjust the beam angle.



Insert a flat screw driver in here and turn to adjust beam angle

Beam Angle

1° Beam Angle



16° Beam Angle

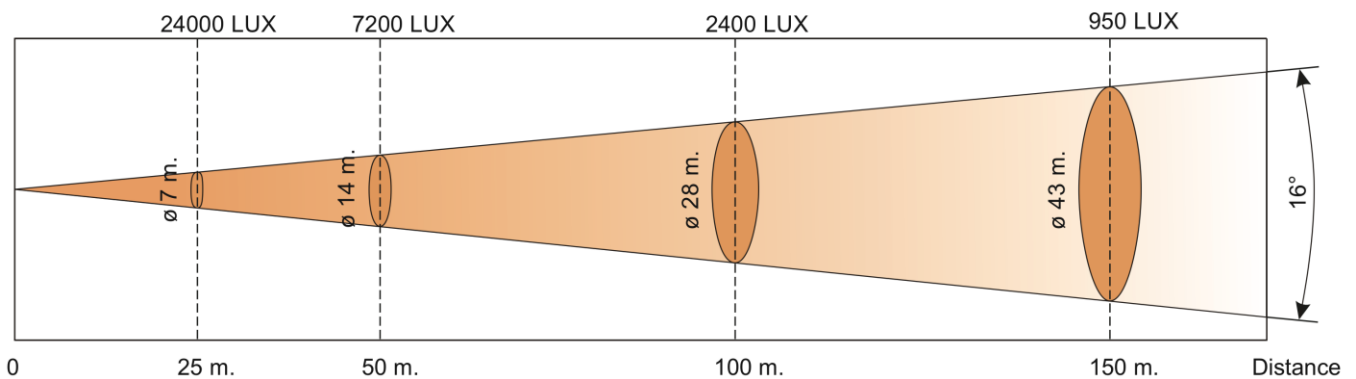


Fig. 3

Set Up and Operation

Follow the directions below, as they pertain to your preferred operation mode.

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.

After opening the packaging, unlock the TILT of the head, as shown below.

LOCK (Red) locks the TILT movement of the head.

UNLOCK (Green) unlocks the TILT movement of the head

When transporting the device, the head must always be locked



Fig. 4

Open the cover of the light head, and take out the protection sponge.

When preparing for operation, please lock the 4 wheels to avoid shaking when the head is in motion.

One Space Tracer

1. Leave at least 1 meter on all sides for air circulation.
2. Plug one end of the electric mains power cord into the IEC socket on the unit.
Then plug the other end of the cord into a proper electric power supply socket.

Multiple Space Tracers

1. Leave at least 1 meter on all sides for air circulation.
2. Use a 3-p XLR cable to connect the Space Tracers and other devices.
The pins:



1. Earth
2. Signal -
3. Signal +

3. Link the units as shown in (figure 5), Connect a DMX signal cable from the first unit's DMX "out" socket to the second unit's "in" socket. Repeat this process to link the second, third, and fourth units.
4. Supply electric power: Plug electric mains power cords into each unit's IEC socket, then plug the other end of the mains power cord into proper electric power supply sockets, starting with the first unit. Do not supply power before the whole system is set up and connected properly.

Note: It's necessary to insert a XLR termination plug (with 120 Ohm) in the last fixture in order to ensure proper transmission on the DMX data link.

Multiple Space Tracers Set Up

DMX-Set up



Master/Slave Set up

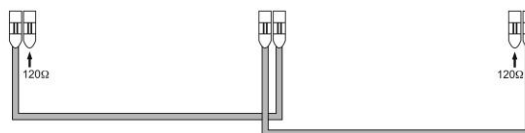


Fig. 5

Note : Link all cables before connecting electric power

DMX Protocol

Channel 1 - Horizontal movement (Pan)

Push the slider up, in order to move head horizontally (PAN).

Gradual head adjustment from one end of the slider to the other (0-255, 128-center).

The head can be turned by 350° and stopped at any position you wish.

Channel 2 - Vertical movement (Tilt)

Push the slider, up in order to move head vertically (TILT).

Gradual head adjustment from one end of the slider to the other (0-255, 128-center).

The head can be turned by 240° and stopped at any position you wish.

Channel 3 - Pan fine 16 bit

Channel 4 - Tilt fine 16 bit

Channel 5 –PAN/TILT Speed

0-255	From Max Speed (0) to Min. Speed (255) in vector mode
-------	---

Channel 6 – Lamp ON OFF & Reset

0-127	No Function
128-139	Lamp on after 3 seconds, Reset
140-229	No Function
230-239	Lamp off after 3 seconds
240-255	No Function

Channel 7 –Cyan

0-255	Gradual color change from White (0) to Full Cyan (255)
-------	--

Channel 8 –Magenta

0-255	Gradual color change from White (0) to Full Magenta (255)
-------	---

Channel 9 –Yellow

0-255	Gradual color change from White (0) to Full Yellow (255)
-------	--

Channel 10 –CMY speed adjust

0-255	Gradual speed adjustment from fast (0) to slow (255)
-------	--

Channel 11 –Frost Filter

0-255	Gradual adjustment from Beam (0) to Frost (255)
-------	---

Channel 12 – Dimmer / Strobe

0-127	Gradual adjustment from 10% (0) to 100% (127)
128-245	Strobe effect, from slow to fast (0-10 flashes/sec.)
246-255	Shutter open

Control Panel

When the indicator light is on, means the Explorer is working

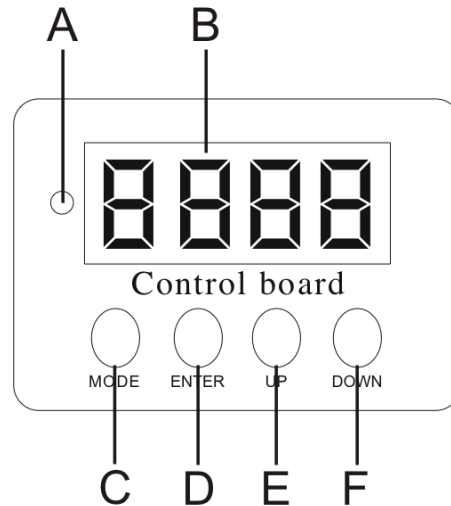


Fig. 7

- A. LED
- B. Display
- C. [MODE] Button
- D. [ENTER] Button
- E. Up Button
- F. Down Button

Control Mode

The fixtures are individually addressed **A001 - A514** on a data-link and connected to the controller. The fixtures respond to the DMX signal from the controller. (When you select the DMX address and save it, the controller will display the saved DMX address the next time.)

DMX Addressing

The control panel on the front side of the base allows you to assign the DMX fixture address, which is the first channel from which the Explorer will respond to the controller.

Please note when you use the controller, the unit has **12** channels.

When using multiple Explorers, make sure you set the DMX addresses right.

Therefore, the DMX address of the first Explorer should be **1(A001)**; the DMX address of the second Explorer should be **1+12=13(A013)**; the DMX address of the third Explorer should be **13+12=25(A025)**, etc.

Please, be sure that you don't have any overlapping channels in order to control each Explorer correctly.

If two or more Explorers are addressed similarly, they will work similarly.

For address settings, please refer to the instructions under "Addressing" (menu **A001**)

Controlling:

After having addressed all Explorer fixtures, you may now start operating these via your lighting controller.

Note: After switching on, the Explorer will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the "LED" on the control panel will not flash.

The problem may be:

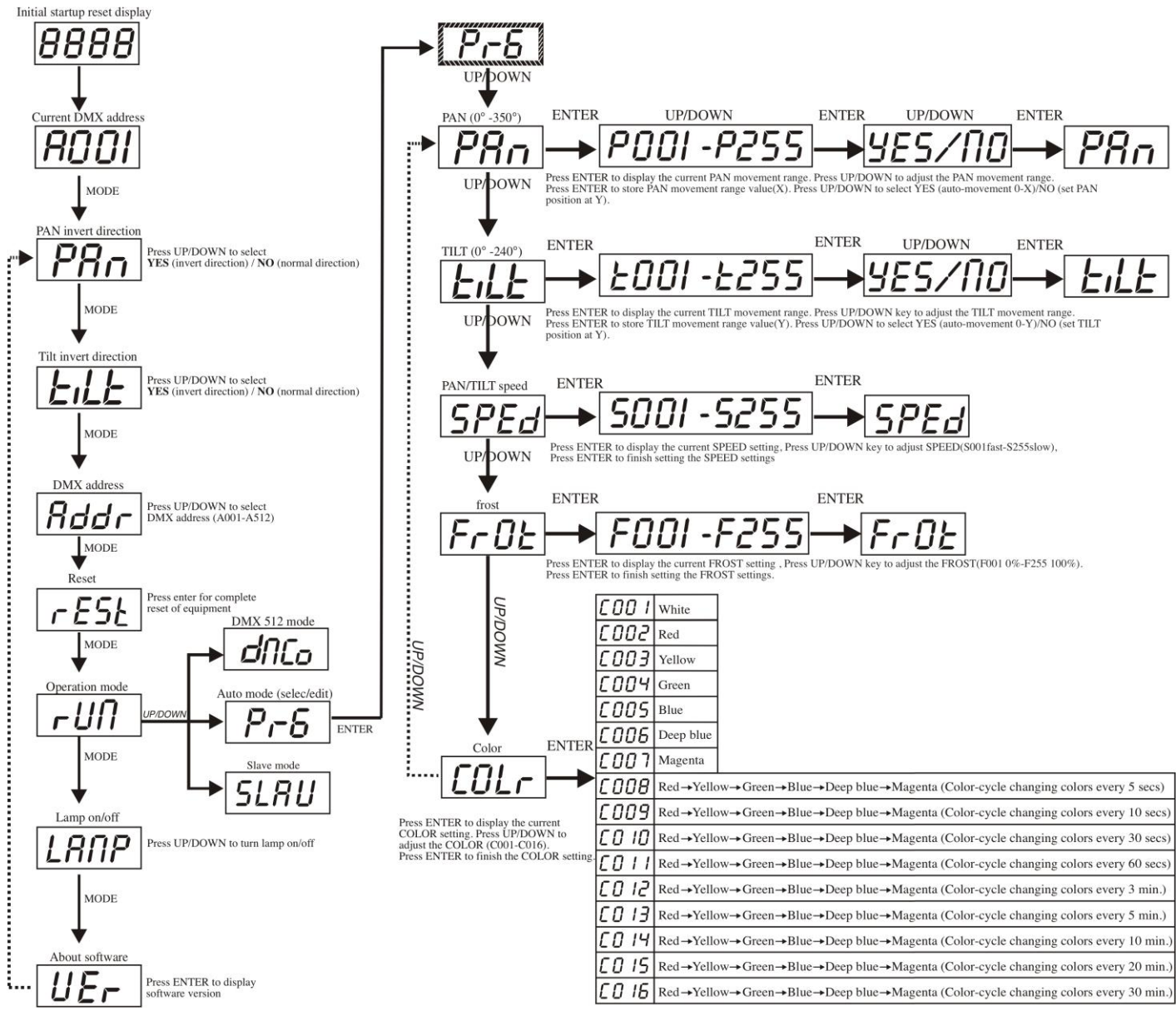
- The XLR cable from the controller is not connected with the input of the Explorer.
- The controller is switched off or defective, the cable or connector is defective, or the signal wires are swapped in the input connector.

Note: It's necessary to insert a XLR termination plug (with 120 Ohm) in the last fixture in order to ensure proper transmission on the DMX data link.

Control Panel Functions

Function Table:

Mode	Function	Condition
PAN	Pan movement in positive or negative direction	YES--negative direction
TILT	Vertical movement in positive or negative direction	YES--negative direction
Addr	Address code set	
rEST	Reset	YES--reset
FUN	Working mode	DMCO DMX 512 mode
		PTB Automatic
		SLAE Slave mode
LAMP	Lamp switch	ON Lamp On
		OFF Lamp Off
VER	Software version	
HEAT	Lamp hot	
LA.Er	Lamp error	



Stand-alone Mode

The fixtures on a data-link are not connected to the controller, but can execute a pre-set program. To set the program to be played, by pressing the Mode button until the display shows RUN, then select UP. If the display shows PRG then select Enter.

Stand-alone operation" can be applied to a single fixture (the fixture may be set to the master/slave mode or controller mode) or to multiple fixture operating synchronously.

For synchronous operation of multiple fixtures, the fixtures must all be connected on a data-link and one of them is set as a master (master mode) and the rest as slaves (slave mode). The DMX address of all the slaves are assigned to **ADDR1** and on that particular slave address only one fixture can be connected. To the fixture as the master or slave, see "Addressing" (menu **ADDR1**).

If the master fixture resets or runs a test (program), all slaves will execute these acts too.

You can't play or edit any program on a slave, if the master is switched on and connected to the master/slave chain.

Note: Disconnect the fixtures from the DMX controller before master/slave operating, otherwise data collisions can occur and the fixtures will not work properly!

It's necessary to insert the XLR termination plug (with 120 Ohm) into the input of the master fixture and into the output of the last slave fixture in the data-link, in order to ensure proper transmission on the data link. From the master's control panel it is possible to control any slave in a master/slave chain.

Addressing

With this menu you can set the DMX address or address a fixture as a master/slave.

ADDR1 DMX addressing

- 1) Press Choose, until the display shows **ADDR1**.
- 2) Press Enter to confirm.

Then press Up / Down to select the required address **ADDR1 - AS 11**, press Enter to confirm.

```

                ADDR1
          [▲]      [▼]
          AS 11    ADDR2
          AS 10    ADDR3
          AS 09    ADDR4
          .         .
          .         .
          ADDR1    AS 11

```

- 3) Press Choose, the chosen address is shown on the display.

Master / slave addressing

- 1) Press Mode, until the display shows RUN, then select UP.
- 2) Only one fixture can be the master. Up to the 16 slaves may be connected to the master.
Note: Disconnect the fixture from the DMX controller before master/slave operating, otherwise data collisions can occur and the fixtures will not work properly!
In master/slave mode, the master fixture can execute the built-in program, all the slave fixtures will work the same.
- 3) On the Slave devices you must press Mode, until the display shows RUN. Then select UP until the display shows SLAE and press Enter.

Maintenance

The operator has to make sure that safety-relating and machine-technical installations are to be inspected by an expert after every four years in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are to be inspected by a skilled person once a year.

The following points have to be considered during the inspection:

1. All screws used for installing the device or parts of the device have to be tightly connected and must not be corroded.
2. There may not be any deformations on housings, fixations and installation spots.
3. Mechanically moving parts like axles, eyes and others may not show any traces of wearing.
4. The electric power supply cables must not show any damages or material fatigue.

The Showtec Space Tracer 4000 requires almost no maintenance. However, you should keep the unit clean. Otherwise, the fixture's light-output will be significantly reduced. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Wipe lens clean with glass cleaner and a soft cloth. Do not use alcohol or solvents.

The cooling-fans, colour-filters, and the internal lenses should be cleaned monthly with a soft brush.

Please clean internal components once a year with a light brush and vacuum cleaner.

Keep connections clean. Disconnect electric power, and then wipe the DMX and audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Changing the Lamp

1. Loosen the 4 clamps on the housing. Gently remove the metal housing. Open the cover of the head, take out the M12 screw which can be found on the lamp. Open the cover on the back of the head, take out the fan (with connecting cable) and back board. Take the small circle board out. Use a 5mm allen key to unscrew the screw (M6) which fixes the lamp holder in place. Now you can remove the lamp holder and lamp from the light head.
2. Carefully remove the old lamp.
3. Follow directions for installing a new lamp, page 7.

Replacing a Fuse

You don't have to replace a fuse on this device. The fuse is an automatic fuse, which means in case of a power surge, short-circuit or inappropriate electrical power supply, you simply have to push the reset-button on the back, and the strobe will function as before.

You may want to check why the problem occurred, so you can prevent this in the future.

Troubleshooting

No Light

This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps. If the light effect does not operate properly, refer servicing to a technician.

Response: Suspect three potential problem areas: the power supply, the lamp, the fuse.

1. Power supply. Check that the unit is plugged into an appropriate power supply.
2. The lamp. Replace the old lamp with a new one with the same specifications. See page 7 for replacing lamps.
3. The fuse. Replace the fuse. See page 16 for replacing the fuse.

No Response to DMX

Response: Suspect the DMX cable or connectors, a controller malfunction, a light effect DMX card malfunction.

1. Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
2. Determine whether the controller or light effect is at fault. Does the controller operate properly with other DMX products ? If not, take the controller in for repair. If so, take the DMX cable and the light effect to a qualified technician.

See next page for more problem solving.

Problem	Probable cause(s)	Remedy
One or more fixtures are completely dead.	No power to the fixture	·Check that power is switched on and cables are plugged in.
	Primary fuse blown.	·Replace fuse.
Fixtures reset correctly, but all respond erratically or not at all to the controller.	The controller is not connected.	·Connect controller.
	3-pin XLR Out of the controller does not match XLR Out of the first fixture on the link (i.e. signal is reversed).	·Install a phase reversing cable between the controller and the first fixture on the link.
Fixtures reset correctly, but some respond erratically or not at all to the controller.	Poor data quality	·Check data quality. If much lower than 100 percent, the problem may be a bad data link connection, poor quality or broken cables, missing termination plug, or a defective fixture disturbing the link.
	Bad data link connection	·Inspect connections and cables. Correct poor connections. Repair or replace damaged cables.
	Data link not terminated with 120 Ohm termination plug.	·Insert termination plug in output jack of the last fixture on the link.
	Incorrect addressing of the fixtures.	·Check address setting.
	One of the fixtures is defective and disturbs data transmission on the link.	·Bypass one fixture at a time until normal operation is regained: unplug both connectors and connect them directly together. ·Have the defective fixture serviced by a qualified technician.
	3-pin XLR Out on the fixtures does not match (pins 2 and 3 reversed).	·Install a phase-reversing cable between the fixtures or swap pin 2 and 3 in the fixture, that behaves erratically.
No light	The power supply settings do not match local AC voltage and frequency.	·Disconnect fixture. Check settings (page 7) and correct if necessary.
	Lamp missing or blown	·Disconnect fixture and replace lamp.
Lamp cuts out intermittently.	Fixture is too hot.	·Allow fixture to cool. ·Clean fan. ·Make sure air vents at control panel and front lens are not blocked. ·Turn up the air conditioning.
	The power supply settings do not match local AC voltage and frequency.	·Disconnect fixture. Check settings (page 7) and correct if necessary.

Product Specification

Model: Showtec Space Tracer 4000
Voltage: 240V-50Hz (CE)
Power: 4400W
Dimensions: 700 x 704 x 1430mm (LxWxH)
Flightcase Dimensions: 870 x 800 x 1650 mm (LxWxH)
Weight: 105 kg
Minimum working temp: -27 °C
Maximum working temp : 40° C

Operation and Programming

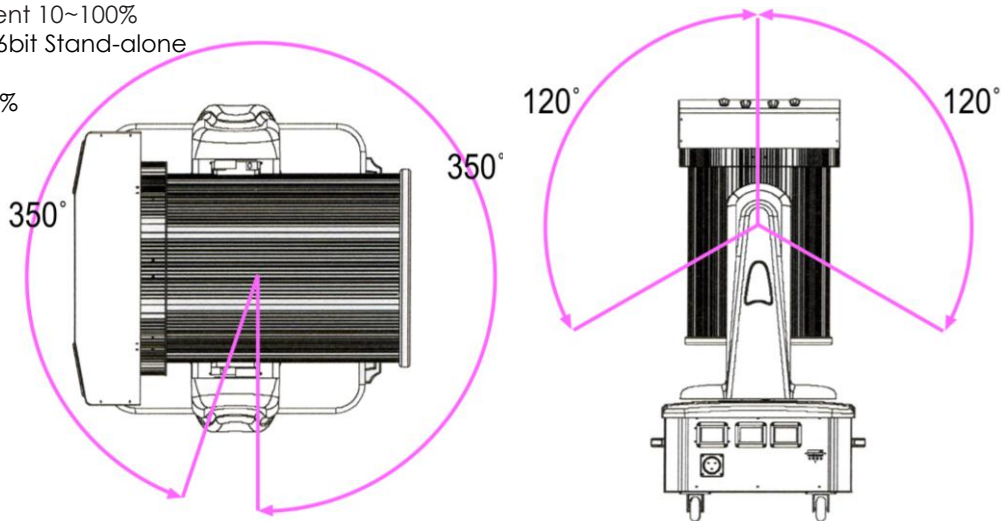
Signal pin OUT: pin 1 earth, pin 2 (-), pin 3 (+)
Set Up and Addressing: Control Panel
DMX Channels: 12
Signal input 3-pin XLR male
Signal output 3-pin XLR female

Lamp

Allowed lamp models*:
Osram XOB 4000W Xenon (1000 hr; 155000 Lumen) (ordercode 80918)

Electro-mechanical effects

DMX-control via standard DMX-controller
CMY Color Mix effect: 3 Colors (Cyan, Magenta, Yellow)
Electronic dimmer: linear adjustment 10~100%
Scan fine adjust: PAN & TILT 8bit/16bit Stand-alone
PAN/TILT linear speed adjustment
Frost Filter: linear adjustment 0-100%
Lamp ON/OFF by DMX
Master / Slave
DMX-controlled
Manual-zoom
Pan: 350°
Tilt: 240°
Superheat Protection
IP44 protection grade
3 cooling fans in the head
Strobe: 0 –10 Flashes/sec



Minimum distance:

Minimum distance from flammable surfaces: 0.5m
Minimum distance to lighted object: 2m

*: Versions for other lamps may be produced. Please check the specification label on your product.

Design and product specifications are subject to change without prior notice.



Website: www.Highlite.nl
Email: service@highlite.nl





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