

HTScan

numero di serie/serial number

data di acquisto/date of purchase

fornitore/retailer

indirizzo/address

cap/città/suburb

provincia/capital city

stato/state

tel./fax/

Prendete nota, nello spazio apposito, dei dati relativi al modello e al rivenditore del vostro **HTScan**: in caso di richiesta di informazioni, pezzi di ricambio, servizi di riparazione o altro ci permetteranno di assistervi con la massima rapidità e precisione.

Please note in the space provided above the relative service information of the model and the retailer from whom you purchased your **HTScan**: This information will assist us in providing spare parts, repairs or in answering any technical enquiries with the utmost speed and accuracy.

ATTENZIONE: la sicurezza dell'apparecchio è garantita solo con l'uso appropriato delle presenti istruzioni, pertanto è necessario conservarle.

WARNING: the security of the fixture is granted only if these instructions are strictly followed; therefore it is absolutely necessary to keep this manual.

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Congratulations on having purchased a **tas** product. You have assured yourself of a fixture of the highest quality, both in componentry and in the technology used. We renew our invitation to you to complete the service information on the previous page, to expedite any request for service information or spares (in case of problems encountered either during, or subsequent to, installation). This information will assist in providing prompt and accurate advice from your **tas** service centre.

1. Packaging

Following the instructions and procedures outlined in this manual will ensure the maximum efficiency of this product for years to come.

Open the packaging and ensure that no part of the equipment has suffered damage in transit. In case of damage to the equipment, contact your carrier immediately by telephone or fax, following this with formal notification in writing.

packing list

Ensure the packaging contains:

- 1 **HTScan**
- 1 **instruction manual**
- 1. **yoke**

2. Transportation

The **HTScan** should be transported in its original packaging or in a **tas** approved flight case.

We recommend the use of a suitable flight case which will stop the articulated movement of the **HTScan** during transportation.

3. Important safety information

Fire prevention:

1. **HTScan** utilises an Osram HMI 1200w base SFc15,5 lamp or equivalent; use of any other lamp is not recommended and will null and void the fixture's warranty
2. Never locate the fixture on any flammable surface.
3. Minimum distance from flammable materials: 0,5 m.
4. Minimum distance from the closest illuminable surface: 2 m.
5. Replace any blown or damaged fuses only with those of identical values. Refer to the schematic diagram if there is any doubt.
6. Connect the projector to main power via a thermal magnetic circuit breaker.

Prevention of electric shock:

1. High voltage is present in the internals of the unit. Isolate the projector from mains supply prior to performing any function which involves touching the internals of the unit, including lamp replacement.
2. For mains connection, adhere strictly to the guidelines outlined in section 7 of this manual.
3. The level of technology inherent in the **HTScan** requires the use of specialised personnel for all service applications; refer all work to your authorised **tas** service centre.
4. A good earth connection is essential for proper functioning of the projector. Never operate the unit without proper earth connection.
5. The fixture should never be located in an exposed position, or in areas of extreme humidity. A steady supply of circulating air is essential.

Protection against ultraviolet radiation:

1. Never turn on the lamp if any of the lenses, filters, or the housing is damaged; their respective functions will only operate efficiently if they are in perfect working order.
Never look directly into the lamp when it is operating.

Safety:

1. The projector should always be installed with bolts, clamps, and other fixings which are suitably rated to support the weight of the unit.
2. Always use a secondary safety chain of a suitable rating to sustain the weight of the unit in case of the failure of the primary fixing point.
3. The external surface of the unit, at various points, may exceed 80°C. Never handle the unit until at least 10 minutes have elapsed since the lamp was turned off.
4. Always replace the lamp if any physical damage is evident.
5. Never install the fixture in an enclosed area lacking sufficient air flow; the ambient temperature should not exceed 55°C.
6. A hot lamp may explode. always wait for at least 10 minutes to elapse after the unit has been turned off prior to attempting to replace the lamp.
Always wear suitable hand protection when handling the lamp.

4. Lamp: Installation and replacement

HTScan utilises an Osram HMI 1200 base Sfc 15,5 or equivalent. The lamp is available from your authorised sales agent.

| | |
|-----------------------|---------------|
| tas cod | LM5099 |
| wattage | 1200 w |
| luminous flux | 110.000 lm |
| colour temperature | 6000° K |
| base | SFc 15,5 |
| approximate lamp life | 750 ore |

Attention

Disconnect mains prior to opening up the unit

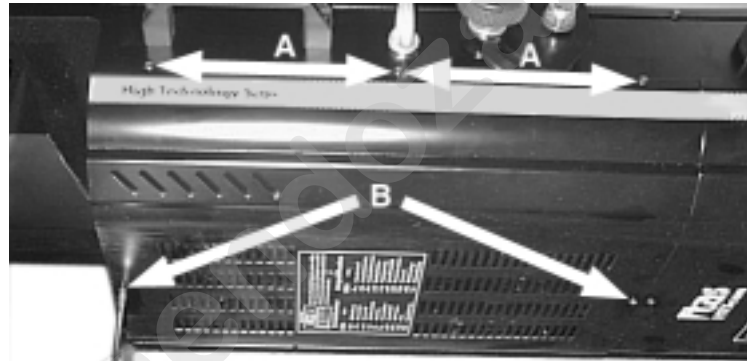
The fixture's internal temperature can reach 150° C after 5 minutes, with a maximum peak of 350° C; ensure that the lamp is cold prior to attempting removal. The fixture should be allowed to stand and cool for 10 minutes prior to its removal.

HMI lamps are part of the mercury vapour family of discharge lamps and must be handled with great care. The lamp operates at high pressure, and the slight risk of explosion of the lamp exists if operated over its recommended life.

We recommend, therefore, that the lamp be replaced within the manufacturer's specified lamp life.

mounting the lamp

- 1) Using a Philips screwdriver, loosen the 6 screws **A** and remove the 2 screws **B** which affix the cover **HTScan**



- 2) Remove the cover
- 3) Locate the Sfc 15,5 lampholder.
- 4) The Sfc 15,5 is symmetrical and its construction is precise. The lamp is manufactured from quartz glass and should be handled with care; always adhere to the instructions supplied in the lamp's packaging. Never touch the glass directly, use the tissue provided in the lamp's packaging. Insert the lamp into the lampholder. **DO NOT USE UNDUE FORCE.** In case of difficulty, re-read the instructions and repeat the procedure.

To ensure a uniform beam spread, rotate the lamp in the lampholder until the pinch is located towards the top of the fixture.

Press down firmly on both ends of the lamp to ensure it is seated correctly in the lampholder; if this procedure is not carried out, the lamp may not sit in the centre of the optical path, therefore rendering the beam spread not uniform.

- 5) Reposition and replace the fixture's housing and refasten the four screws. Prior to igniting the new lamp, reset the lamp life counter as described in section **11 "Display panel functions."**

5. Operating voltage and frequency

The projector may operate at either 210, 230 or 250 V, at 50 or 60 Hz; **tas** presets (barring specific requests), a voltage of 230 V and a frequency of 50 Hz. If this preset does not correspond with the conditions in your particular country of operation, consult your **tas** service agent or a specialist technician.
Incorrect frequency and voltage selection will detrimentally affect the operation of the projector.

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6. Mounting the unit

mounting

HTScan can operate in any mounting position.

The structure from which the unit is hung should be of sufficient rating to hold the weight of the unit, as should any clamps used to hang the unit. If ceiling mounting the unit, ensure that the method of fixing the unit to the ceiling is secure

The structure should also be sufficiently rigid so as not to move or shake whilst the **HTScan** moves during its operation.

protection against liquids

The projector contains electric and electronic components that must not come into contact with water, oil, or any other liquid.

lamp positioning

Ensure that the **HTScan** is always operated with the lamp base facing down. Failure to do so will result in overheating within the unit and drastically reduced lamp life.

vertical movement

The yoke is provided with mounting/adjusting knobs on either side: loosen these knobs and manually position the **HTScan** to the angle at which you wish it to operate. A mechanical stop allows movement of the fixture in the range of +/- 45°.

HTScan should always be mounted in the horizontal plane.

mounting

The yoke is provided with three untapped 11mm holes to allow the attachment of C-clamps (cod.068) and five lateral holes to allow the adjustment of the height of the projector from the yoke. Ensure that your clamp is sufficiently strong to take the weight of the **HTScan**.

safety chain

The use of a safety chain fixed to the **HTScan** and to the primary suspension point, is highly recommended to protect against accidental failure, however unlikely, of the primary suspension point.

forced ventilation

You will note that the projector's housing contains several air entry points and fan outlets, positioned both on the head and the base of the unit; under no circumstances should any of these points be obstructed!

Obstruction of any of these points will result in the overheating of the unit, detrimentally and seriously affecting the proper operation of the **HTScan**.

On this point, read section **16 "Test"**, paragraph **16.3 Internal temperature monitor (tEMP)**.

7.Mains connection

cabling

The mains cable provided is thermally resistant, complying to the most recent international standards

NB: In case of cable replacement, similar cable with comparable thermal resistant qualities must be used exclusively (cable 3x1.5 ø external 8 mm, rated 300/500V, tested to 2KV, operating temperature -40° +180°).

mains connection

HTScan can operate at voltages from 210V-230V-250V at 50 or 60Hz (operating voltage and frequency can be selected as described in section 5 of this manual).

Prior to connecting the unit to your mains supply, ensure that the model in your possession correctly matches the mains supply available to you.

For connection purposes, ensure your plug is of a suitable rating: 10 amps.

Locate the mains cable which exits the base of the unit and connect it with respect to correct polarity and according to the applicable international standards:

brown cable = active

blue cable = neutral

yellow/green cable = earth

protection

The use of a thermal magnetic circuit breaker is recommended for each **HTScan**.

A good earth connection is essential for the correct operation of the fixture. Strict adherence to regulatory norms is strongly recommended.

8. Signal connection

Control signal is digital, and is transmitted via two pair screened $\varnothing 0.5\text{mm}$ cable. Signal type is **DMX 512**, conforming to international standards; in order to reduce production costs and to allow easy worldwide availability of parts, **tas** utilises only XLR 3 plugs and sockets for signal connection. Pin connection conforms to international standards:

pin 1= screening 0 V
pin 2= data -
pin 3= data +

Should your **DMX 512** controller utilise only XLR 5 sockets, the polarity of pins 1, 2 and 3 must be preserved as shown. Do not connect pins 4 e 5.

| | |
|-------------------------|----------------------|
| pin 1= screening 0 volt | pin 4= not connected |
| pin 2= data - | pin 5= not connected |
| pin 3= data + | |

Ensure that all data conductors are isolated from one another and the metal housing of the connector.

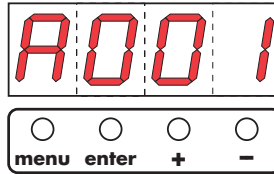
Note: the housing of the cannon XLR 3 must be isolated.

9. Powering up

After having followed the preceding steps, turn on the DMX 512 controller which will be used to control the **HTScan**. Following this, turn on the power to the projector, and turn on the projector's power switch. **The projector will perform a reset function on all the internal and external motors. This will last some few seconds, after which it will be subject to the external signal from the controller.**

DMX reception

The display will be static on to indicate that **DMX 512** signal is being correctly received.



If the display flashes, the projector is not receiving signal. Check your cabling and the controller for correct functioning.

10. DMX addressing

Each **HTScan** utilises **14** (8 bit) or **16** (16 bit) **channels of DMX 512 signal for complete control.**

To ensure that each projector accesses the correct signal, it is necessary to correctly address each fixture. Any number between 1 and 512 can be generated via the multifunction panel of the **HTScan**.

This procedure must be carried out on every **HTScan** being used.

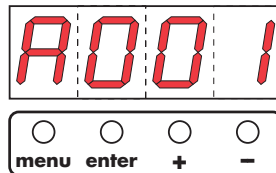
When powered up initially, each projector will show **A001** which indicates **DMX address 1**

Using **8 bit resolution**, a projector addresses as **A001** will respond to commands on channels **1** to **14** from the **DMX 512 controller**. A second projector should be addressed as **15**, the third as **29** and so on until the final **HTScan** is addressed.

Using **16 bit resolution**, a projector addresses as **A001** will respond to commands on channels **1** to **16** from the **DMX 512 controller**. A second projector should be addressed as **17**, the third as **33** and so on until the final **HTScan** is addressed.

altering the dmx address

- 1) Press the **enter** button. The letter A in the display will flash.
- 2) Press the **+** or **-** buttons until the desired **DMX** address is displayed. The letter A in the display will flash to indicate the selected address is not stored in memory.



- 3) Press the **enter** button to confirm your selection; the display will stop flashing and the projector will now respond to the new DMX address.
- 4) To better understand the function of each channel, we refer you to section 12 "Control channel functions from a DMX 512 controller".
- 5) To alter the functioning from 8 to 16 bit refer to section **11 "Display panel functions"**.

Important Note: Keeping the **+** or **-** button pressed will cause the display to alter at increased speed, allowing a faster selection to be effected.

By pressing the **-** button, you may inadvertently select a DMX address which is not being communicated to the fixture by the controller, for example 405. If this is the case, the display will flash. You may solve this problem by altering the incorrect DMX setting.

11. Display panel functions

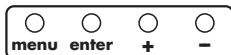
The display panel on the base of the **HTScan** is used to display and set function information and various parameters.

Altering the **tas** factory settings may vary the functioning of the projector, causing it to not respond to external **DMX 512** signal. Please read and familiarise yourself with the following information very carefully before altering any selections.

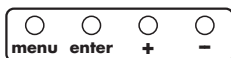
rpan

This function inverts the movement for horizontal (pan) movements.

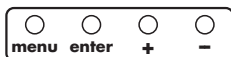
- 1) Press the **+** or **-** buttons until **rpan** (for pan direction) is displayed.



- 2) Press the **enter** button to confirm your selection; the display will show **off** (for clockwise - standard operating mode).



- 3) Press the **+** or **-** buttons; the display will show **on** (for counter-clockwise).



- 4) Press the **enter** button to confirm your choice of pan movement.

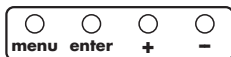
rtilt

This function inverts the movement for vertical (tilt) movements.

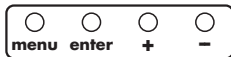
- 1) Press the **+** or **-** buttons until **rtilt** (for tilt direction) is displayed.



- 2) Press the **enter** button to confirm your selection; the display will show **off** (for clockwise - standard operating mode).



- 3) Press the **+** or **-** buttons; the display will show **on** (for counter-clockwise).

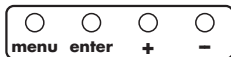


- 4) Press the **enter** button to confirm your choice of tilt movement.

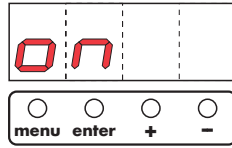
16br

This function varies the movement resolution from 16 bit to 8 bit. The number of channels utilised by the projector thus become either 14 (8 bit resolution) or 16 (16 bit resolution).

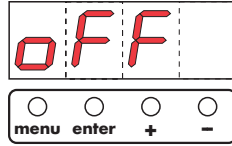
- 1) Press the **+** or **-** buttons until **16br (for resolution)** is displayed.



- 2) Press the **enter** button
- 3) Press the **+** or **-** buttons until **on** is displayed (16 bit resolution).
- 4) Press the **enter** button to confirm your selection.



- 5) Press the **+** or **-** buttons until **off** is displayed (8 bit resolution).

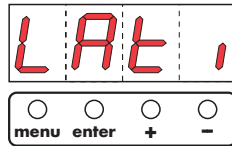


- 6) Press the **enter** button to confirm your selection.

LAti

This function provides information on the number of hours of operation of the lamp in the unit.

- 1) Press the **+** or **-** buttons until **LAti** (for lamp life).

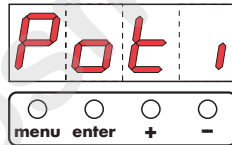


- 2) Press the **enter** button to confirm your selection; the display will show a numerical value which is the length of time in hours that the lamp has been operated since the counter was last reset.
The lamp life counter needs to be reset to zero at every lamp change to provide accurate information on lamp life
- 3) To perform a reset for this function, simultaneously press the **+** and **-** buttons and the display will automatically reset.
- 4) Press **enter** to confirm the lamp life counter reset operation (**LAti**).

POti

This function displays the total number of hours which the **HTScan** has been operated

- 1) Press the **+** or **-** buttons to display **POti** (for hours).

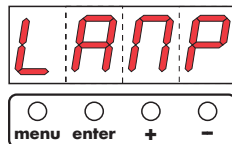


- 2) Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the number of hours which the fixture has been connected to mains power. Unlike **LAti** this function is not resettable.

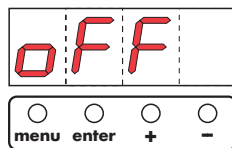
LAMP

This function allows for the on/off control of the lamp via DMX512 signal, or for the permanent on (disabling DMX control of this function) of the lamp.

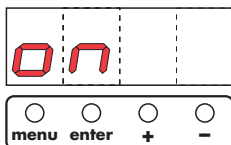
- 1) Press the **+** or **-** buttons to display **LAMP** (for lamp).



- 2) Press the **enter** button to confirm your selection; the display will show **off** (for lamp off).



- 3) Press the **+** or **-** buttons to display **on** (for lamp on).

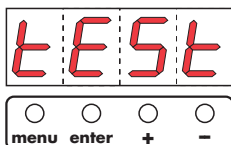


- 4) Press the **enter** button to confirm your selection. The lamp will come on if you selected **on** and will remain off if you selected **off**.

tESt

This function runs an automatic test of all the functions of the **HTScan**.

- 1) Press the **+** or **-** buttons until the display shows **tESt**. This indicates a complete test of all functions may be undertaken.

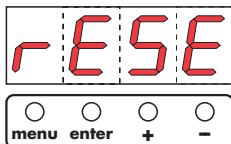


- 2) Press the **enter** button. The display will show **run** and all the functions of the **HTScan will be performed**.
- 4) To interrupt the function **test**, press the **menu** button twice due in succession.

rESE

This function causes a reset to occur in the case (however unlikely) that one or more of the motors should lose its reference point.

- 1) Press the **+** or **-** buttons to display **rESE** (for reset).



- 2) Press the **enter** button to confirm your selection; all the motors will perform a reset.

12. DMX 512 channel functions

If all procedures have been correctly carried out to this point, your DMX 512 controller will have control over all the functions of the HTScan, as shown in the table which follows. The difference between 16 or 8 bit operation depends upon what selection you made in section 11 of this manual.

| channel 16bit | channel 8bit | function | type of control | effect | decimal |
|---------------|--------------|------------------------|---|---|---------|
| 1 | 1 | pan | proportional | coarse control of the base movement | 0-255 |
| 2 | 2 | tilt | proportional | coarse control of the Yoke movement | 0-255 |
| 3 | | panfine | proportional | fine control of the base movement | 0-255 |
| 4 | | tiltfine | proportional | fine control of the Yoke movement | 0-255 |
| 5 | 3 | Speedpan/tilt movement | step | Max speed | 0 |
| | | | proportional | Min. speed | 249 |
| | | | step | black-out while color 1, color 2, rot. Gobo, stat. Gobo or effect changes | 250-252 |
| | | | step | black-out while pan, tilt moving or color 1, color 2, rot. Gobo, stat. Gobo or effect changes | 253-255 |
| 6 | 4 | Function | step | open, max. speed of fan | 0 |
| | | | proportional | open, min. speed of fan (silent operation) from 2 to 127 decreasing speed of fan | 2-127 |
| | | | proportional | Lamp on, reset, open position | 128-139 |
| | | | step | No function | 140-229 |
| | | | | Lamp off after 3 sec. | 230-239 |
| | | | step | No function | 240-255 |
| 7 | 5 | colour wheel 1 | proportional | Open/white | 0 |
| | | | proportional | Red | 14 |
| | | | proportional | Blue | 28 |
| | | | proportional | Green | 43 |
| | | | proportional | Yellow | 57 |
| | | | proportional | Magenta | 71 |
| | | | proportional | Cyan | 85 |
| | | | proportional | Turquoise | 100 |
| | | | proportional | Orange | 114 |
| | | | proportional | White | 127 |
| | | | proportional | Forwards rainbow effect from fast to slow | 128-189 |
| | | | proportional | No rotation | 190-193 |
| | | | proportional | Forwards rainbow effect from slow to fast | 194-255 |
| | | proportional | Colour macro function (channel 8 set from 128-255 64 different colours in following order: white, pink, magenta, red, orange, yellow green, cyan, blue, U | 0-255 | |
| 8 | 6 | colour wheel 2 | step | Open/white | 0 |
| | | | step | pink | 14 |
| | | | step | yellow-green | 28 |
| | | | step | light blue | 43 |
| | | | step | yellow | 57 |
| | | | step | Magenta | 71 |
| | | | step | 5600 K Correction filter | 85 |
| | | | step | 3200 K Correction filter | 100 |
| | | | step | UV filter | 114 |
| | | | step | White | 127 |
| | | step | Enable macro colour function on channel 7 (5) | 128-255 | |

| channel 16 bit | channel 8 bit | function | type of control | effect | decimal | |
|-------------------|------------------|--|--------------------|--|---|---------|
| 9 | 7 | effects | step | open | 0-95 | |
| | | | | frost | 96-127 | |
| | | | proportional | Prism 1 | 128-159 | |
| | | | | max. for min. forward rotation | 128-142 | |
| | | | | stop | 143-144 | |
| | | | proportional | max. for min. backward rotation | 145-159 | |
| | | | | Prism 2 | 160-191 | |
| | | | | max. backward rotation | 160-174 | |
| | | | step | stop | 175-176 | |
| | | | | proportional | max. forward rotation | 191 |
| | | | | Prism 3 | 192-223 | |
| | | | proportional | max forward rotation | 192 | |
| | | | | stop | 207-208 | |
| | | | | max. backward rotation | 223 | |
| | | | proportional | Prism 3 indexing | 224-255 | |
| 10 | 8 | static gobos | | step | open | 0-31 |
| | | | | step | gobo 1 | 32-63 |
| | | | step | gobo 2 | 64-95 | |
| | | | step | gobo 3 | 96-127 | |
| | | | step | gobo 4 | 128-159 | |
| | | | step | gobo 5 | 160-191 | |
| | | | proportional | gobo wheel rotation from slow to fast | 192-255 | |
| 11 | 9 | Rotating gobos selection | step | open | 0-63 | |
| | | | | Gobo 1 (metal) | 64-95 | |
| | | | | Gobo 2 (metal) | 96-127 | |
| | | | | Gobo 3 (multicolor dichroic) | 128-159 | |
| | | | | Gobo 4 (glass) | 160-191 | |
| | | | | no function (open) | 192-255 | |
| 12 | 10 | Gobo rotation & 360° positioning | proportional | Gobo indexing | 0-127 | |
| | | | | step | Forwards gobo rotation from fast to slow | 128-190 |
| | | | | step | No rotation | 191-192 |
| | | | | step | Backwards gobo rotation from slow to fast | 193-255 |
| 13 | 11 | iris | step | Open | 0 | |
| | | | | proportional | max. diameter to min. diameter | 1-179 |
| | | | proportional | closed | 180-191 | |
| | | | | pulse closing slow to fast | 192-223 | |
| | | | | pulse opening fast to slow | 224-255 | |
| 14 | 12 | focus, multistep zoom | proportional | Zoom 15° (Continuous adjustment from far to near) | 0-85 | |
| | | | | Zoom 21° (Continuous adjustment from far to near) | 86-170 | |
| | | | | Zoom 28° (Continuous adjustment from far to near) | 171-255 | |
| 15 | 13 | Shutter, Strobe | step | closed | 0-31 | |
| | | | | Open | 32-63 | |
| | | | proportional | Strobe-effect from slow to fast (max. 10 flashes/second) | 64-95 | |
| | | | | step | Open | 96-127 |
| | | | proportional | Pulse-effect in sequences | 128-159 | |
| | | | | step | Open | 160-191 |
| | | | proportional | Random strobe-effect from slow to fast | 192-223 | |
| | | | | step | Open | 224-255 |
| 16 | 14 | Dimmer intensity | proportional | Gradual adjustment of the dimmer intensity from 0 to 100% | 0-255 | |

13. Micro safety switch **HTScan** is fitted with a micro safety switch which is activated when the housing cover is removed. This switch turns off the lamp and stops it from being re-ignited. Remember to reinstall the housing correctly if you wish to reuse the fixture.

14. Gobo replacement **HTScan** allows gobos to be replaced quite simply. Gobos should be manufactured from dichroic glass or metal. The **tas** reseller network carries a wide range of replacement gobos.

Gobos may be replaced as required to produce special effects as required. Gobo replacement should always be carried out with the power to the unit shut off, and the top housing removed as described in section 15 "**Maintenance**".

replacing gobos on the rotating gobo wheel

- 1) Rotate the gobo wheel until you locate the gobo you wish to remove.
- 2) Remove the retaining spring and remove and then replace the gobo.
- 3) Replace the retaining spring, ensuring that it is seated correctly.

replacing gobos on the fixed gobo wheel

- 1) Rotate the gobo wheel until you locate the gobo you wish to remove.
- 2) Loosen the 3 screws which affix the gobo, thereby replacing it.
- 3) Retighten the 3 screws.

15. Maintenance

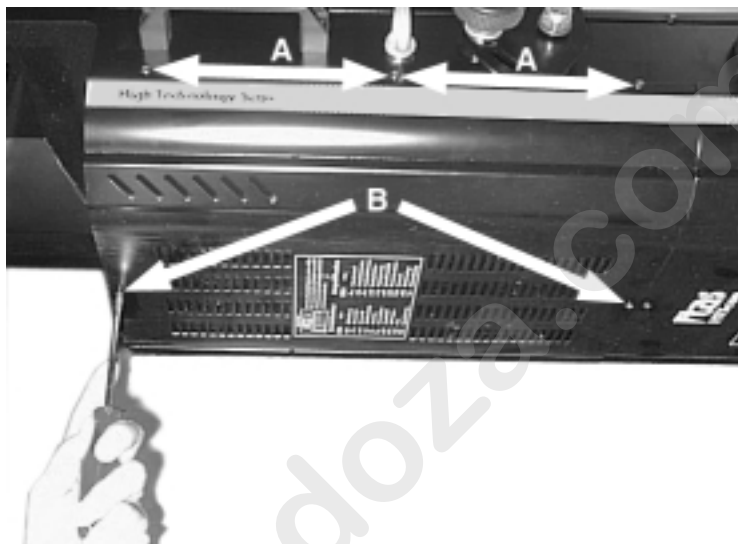
Whilst every possible precaution has been taken to ensure the trouble-free operation of your **HTScan**, the following periodic maintenance is highly recommended. Prior to undertaking any maintenance procedure, make sure the fixture is disconnected from mains power.

Attention

Disconnect mains power prior to opening the housing.

Opening the housing:

- 1) Using a Philips screwdriver, loosen the 6 screws **A** and remove the 2 screws **B** which affix the cover of the **HTScan**.



- 2) Remove the housing lid.

replacing the fuse

Locate the lamp protection fuse, located at the rear of the unit.

Use a multimeter to check the condition of the fuse, replacing it with one of similar value if required.

periodic cleaning lenses and reflectors

Even a fine layer of dust can reduce the luminous output substantially. Regularly clean all lenses and the reflector using a soft cotton cloth, dampened with a specialist lens cleaning solution.

fans and air passages

The fans and air passages must be cleaned approximately every 6 weeks; the period for this periodic cleaning will depend, of course, upon 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.

periodic maintenance lamp

The lamp should be replaced if there is any observable damage or deformation due to heat. This will avoid the danger of the lamp exploding.

mechanicals

Periodically check all mechanical devices for wear and tear; gears, guides, belts, etc., replacing them if necessary. Periodically check the lubrication of all components, particularly the parts subject to high temperatures. If necessary, lubricate with suitable lubricant, available from your tas distributor.

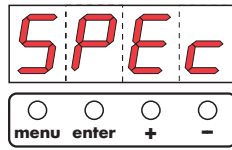
electrical components

Check all electrical components for correct earthing and proper attachment of all connectors, refastening if necessary.

16. Test

The display panel on the **HTScan** allows several tests to be performed which may be useful when installing or testing a projector.

- 1) Press the **+** or **-** buttons to display **SPEC** (for special).



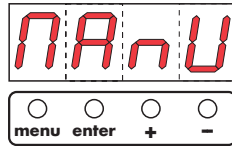
- 2) Press the **enter** button.

17.1 Manual testing of each motor (MANU)

This test allows access to testing of each motor used in the **HTScan**

From the **SPEC** function (point 2)

- 3) Press the **+** or **-** buttons to display **MANU** (for manual).



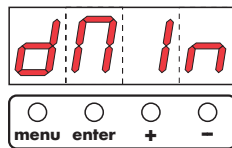
- 4) Press the **enter** button.
- 5) Press the **+** or **-** buttons to display the motor which you wish to test:
 - **Pan** (base motor movement). From **Pan1** to **Pan3** for 3 different positions
 - **tilt** (yoke motor movement). From **tilt1** to **tilt3**.
 - **SPEd** (movement speed). From **1** to **5**.
 - **CoL1** (color). From **Co10** to **Co19** for single colours and rotation of colour wheel
 - **CoL2** (color). From **Co20** to **Co28** for single colours and rotation of colour wheel
 - **EFEC** (prism). **HOLE** (for use with no prism lens inserted) from **Pr10-Pr13**....**Pr20-23**....**Pr30-Pr33** (for use with prism lens inserted).
 - **SGob** (fixed gobos). From **SG0** to **SG7**.
 - **rGob** (rotating gobos). From **rGo0** to **rGo4**.
 - **rotG** (gobo rotation). From **roG1** to **roG9**.
 - **IriS** (IriS diaphragm). From **Iri1** to **Iri7**.
 - **Foc** (focusing). From **Foc1** to **Foc9**.
 - **Stro** (strobe effect). From **Open** to **Str9**.
 - **dinr** (dimmer). From **din0** to **dinC**.
- 6) Press the **enter** button. At this point, you have noted the facility available to test every motor function of the **HTScan**.

16.2 DMX level readout (dMin)

This function allows the level of each DMX channel being received by the **HTScan** to be read.

From the **SPEC** function (point 2)

- 3) Press the **+** or **-** buttons to display **dMin** (DMX values).



- 4) Press the **enter** button to confirm your selection.
- 5) Press the **+** or **-** buttons to display the DMX channel you wish to read a level, from 0 a 255:

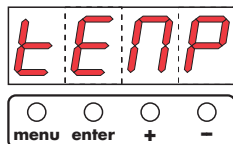
| | |
|------------------------------------|---------------------------------|
| - Pan (for pan movement). | - rGob (rotating gobos) |
| - tilt (for tilt movement). | - Grot (gobo rotation). |
| - SPEd (speed of movement). | - IriS (IriS diaphragm). |
| - CoL1 (colour). | - Foc (focusing). |
| - CoL2 (colour). | - Stro (strobe effect). |
| - EFEC (prism and macro). | - dinr (dimmer). |
| - SGob (fixed gobos). | |

16.3 Internal temperature readout (tEMP)

This function allows the internal temperature of the **HTScan** in degrees Celsius to be inspected. If the temperature is below 80°, this is acceptable. If, however, the temperature is 80° or above, the lamp must be switched off. Note that the external temperature should not exceed 55°.

From the **SPEC** function (point 2)

3) Press the **+** or **-** buttons to display **tEMP** (for temperature).



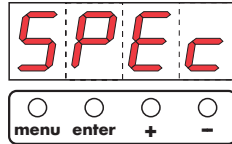
4) Press the **enter** button to view the internal temperature of the **HTScan**.

17. Function settings

The display panel of the **HTScan** allows several parameter settings to be altered, which may prove useful on installation or later.

ATTENTION! Altering the **tas** factory settings may vary the functioning of the projector, causing it to not respond to external **DMX 512** signal. Please read and familiarise yourself with the following information very carefully before altering any selections.

- 1) Press the **+** or **-** buttons to display **SPEC** (for special).



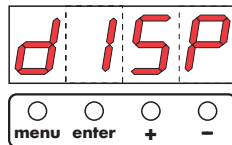
- 2) Press the **enter** button.

17.1 Turning off the display (disp)

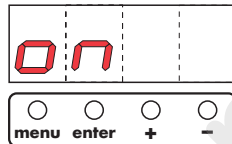
This function allows the display to be switched off should it be distracting.

From the **SPEC** function (point 2)

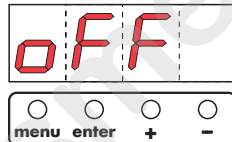
- 3) Press the **+** or **-** buttons to display **DISP** (for display).



- 4) Press the **enter** button.
- 5) Press the **+** or **-** buttons to display **On** if you wish the display to stay on.



- 6) Press the **+** or **-** buttons to display **Off** if you wish the display to be off.



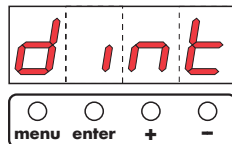
- 7) Press the **enter** button to confirm your selection. the display will turn off after 2 minutes.
Pressing any of the 4 **menu** display buttons will cause the display to switch on again.

17.2 Adjusting display intensity (dint)

This function allows the display's intensity to be adjusted.

From the **SPEC** function (point 2)

- 3) Press the **+** or **-** buttons to display **dint** (for display intensity).



- 4) Press the **enter** button to confirm your selection.
- 5) Press the **+** or **-** buttons to display the intensity level (from 20 to 100) required.
- 6) Press the **enter** button to confirm your selection of intensity.

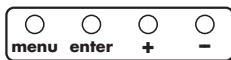
17.3 Inhibiting lamp on/off via DMX (dLoF)

This function controls the lamp on/off switching via DMX.

From the **SPEC** function (point 2)

3) Press the **+** or **-** buttons to display **dLoF** (for Lamp Off Via DMX).

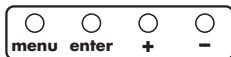
The LED display shows the characters 'dLoF' in red. The 'd' is in the first segment, 'L' in the second, 'o' in the third, and 'F' in the fourth.



4) Press the **enter** button to confirm your selection.

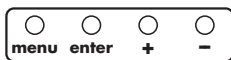
5) Press the **+** or **-** buttons to display **On** if you wish the lamp to be switched off via DMX.

The LED display shows the characters 'On' in red. 'O' is in the first segment and 'n' is in the second.



6) Press the **+** or **-** buttons to display **Off** if you wish to inhibit lamp on/off via DMX.

The LED display shows the characters 'Off' in red. 'O' is in the first segment, 'F' in the second, and 'F' in the third.



7) Press the **enter** button to confirm your selection.

17.4 Adjusting fan speed (FAnS)

This function allows the selection of 3 different minimum fan speeds for the **HTScan** cooling fan.

The 3 possibilities are:

rEG, LoOF, LoHI.

From the **SPEC** function (point 2)

3) Press the **+** or **-** buttons to display **FAnS**.

The LED display shows the characters 'FAnS' in red. 'F' is in the first segment, 'A' in the second, 'n' in the third, and 'S' in the fourth.



HIGH

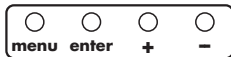
This function allows the max fan speed.

From the **FAnS** function (point 3)

4) Press the **enter** button

5) Press the **+** or **-** buttons to display **HiGH**.

The LED display shows the characters 'HiGH' in red. 'H' is in the first segment, 'i' in the second, 'G' in the third, and 'H' in the fourth.



6) Press the **enter** button to confirm your selection.

rEG

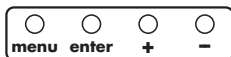
This function allows the fan speed to be adjusted automatically by the unit, in order for the unit to maintain its own optimum internal temperature **HTScan**.

From the **FAnS** function (point 3)

4) Press the **enter** button

5) Press the **+** or **-** buttons to display **rEG**.

The LED display shows the characters 'rEG' in red. 'r' is in the first segment, 'E' in the second, and 'G' in the third.



6) Press the **enter** button to confirm your selection.

LooF

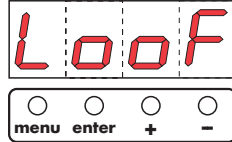
This function allow the fan level to be maintained at a minimum level as determined by the operator (via DMX).

When maximum operating temperature is reached, the lamp will turn off automatically without adjusting the fan speed.

From the **FAnS** function (point 3)

4) Press the **enter** button

5) Press the **+** or **-** buttons to display **LooF**.



6) Press the **enter** button to confirm your selection.

LoHI

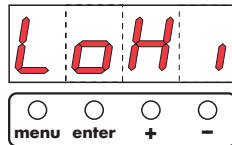
This function allow the fan level to be maintained at a minimum level as determined by the operator (via DMX).

When maximum operating temperature is reached, the fan will automatically switch to maximum speed.

From the **FAnS** function (point 3)

4) Press the **enter** button

5) Press the **+** or **-** buttons to display **LoHI**.



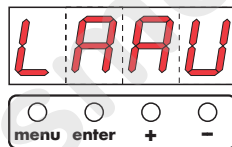
6) Press the **enter** button to confirm your selection.

17.5 Automatic lamp on when fixture is switched on (LAAU)

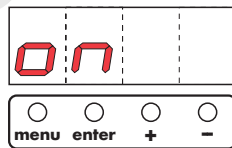
This function allows the lamp turning on automatically (**ON**) when the fixture is switched on.

From the **SPEC** function (point 2)

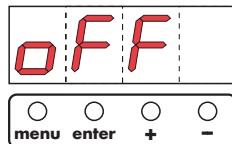
3) Press the **+** or **-** buttons to display **LAAU** (Lamp on automatically).



4) Press the **enter** button then press the **+** or **-** buttons to display **on** for automatic lamp on when the projector is turned on.



5) Press the **enter** button then press the **+** or **-** buttons to display **off** to inhibit the lamp turning on when the projector is turned on.

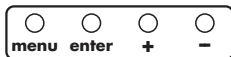
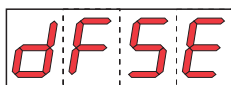


6) Press the **enter** button to confirm your selection.

17.6 Resetting default function settings (dFSE)

This function resets the function settings of the **HTScan** which **tas** has determined as factory presets, with the exception of **AdJ** (adjustment) From the **SPEC** function (point 2).

3) Press the **+** or **-** buttons to display **dFSE**;



4) Press the **enter** button to confirm your selection. **HTScan** begins a reset procedure, the display during this will show **rst**.

| Personality | Display | Default values (SHADED) |
|--------------------------------|---------|-------------------------|
| Pan reverse | rPAn | On |
| | | OFF |
| Tilt reverse | rtilt | On |
| | | OFF |
| Movement resolution | 16br | On |
| | | OFF |
| Lamp on automatically | LAAU | On |
| | | OFF |
| Automatic black-out of display | di SP | On |
| | | OFF |
| Display intensity | dInt | 20 40 60 80 100 |
| Lamp Off via DMX | dLOF | On |
| | | OFF |
| Fan speed operating | FAnS | HIGH |
| | | rEG |
| | | LoDF |

18. Electronic motor alignment

Attention!
This procedure should be undertaken only by qualified technicians and specialist personnel.

The display panel on the **HTScan** allows for the electronic alignment of the projector's motors. this procedure is performed by **tas** at the factory. It may be useful to perform this procedure in the case of internal components being replaced. Altering the factory settings may radically alter the functioning of the projector. Carefully read all of the following prior to attempting any changes.

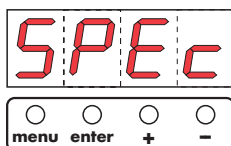
Adj

This function allows for the calibration and adjustment of the colour wheel, the gobos and effects (prism) into their correct standard position. You may effect a calibration either via the display panel or via external signal.

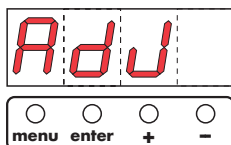
18.1 Calibrating via an external signal source

A DMX512 control source must be connected to the **HTScan**.

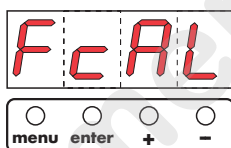
- 1) Press the **+** or **-** buttons to display **SPEC** (for special).



- 2) Press the **enter** button.
- 3) Press the **+** or **-** buttons to display Adj (for adjustment).



- 4) Press the **enter** button to confirm your selection.
- 5) Press the **+** or **-** buttons to display **FCAL** (for fixture calibration).

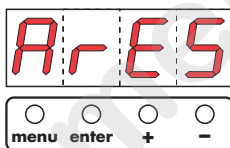


- 6) Press the **enter** button to confirm your selection.
- 7) Press the **+** or **-** buttons to display **Col1**, **Col2**, **EFEC**, **SGob**, **rGob**.
- 8) Press the **enter** button.

9) You may now calibrate the color wheels, gobo wheels, and effects wheel by altering the DMX signal level.

| Channel DMX | Function | | |
|-------------|----------------|---|-------------------|
| 1 | COL. | M S I M C O M R V E O S M T E H E N P | |
| 2 | SGOB. | | Calibration 0-255 |
| 3 | EFEC. | | Calibration 0-255 |
| 4 | RGOB | | Calibration 0-255 |
| 5 | ROTG | | Calibration 0-255 |
| 6 | — | — | |
| 7 | COLOURS | STANDARD PROTOCOL | |
| 8 | GOBOS STROBO | STANDARD PROTOCOL | |
| 9 | EFFECT | STANDARD PROTOCOL | |
| 10 | PRISM ROTATION | STANDARD PROTOCOL | |
| 11 | ROTATING GOBO | STANDARD PROTOCOL | |
| 12 | GOBO ROTATION | STANDARD PROTOCOL | |
| 13 | IRIS | STANDARD PROTOCOL | |
| 14 | FOCUS | STANDARD PROTOCOL | |
| 15 | STROBO | STANDARD PROTOCOL | |
| 16 | DIMMER | STANDARD PROTOCOL | |

- Centre the wheels in the optical path of the projector to achieve correct image projection.
- Press the **+** or **-** buttons until **ArES** (for registering the new calibrated settings into memory) is displayed.

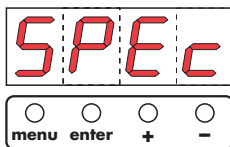


- Press the **enter** button to confirm your selection.
- After completing the calibration procedure, restart the projector and ensure that all settings are as required.

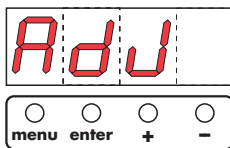
18.2 Calibrating via HTScan's on-board controls

This allows calibration to be performed even if there is no external DMX source available to **HTScan**

- Press the **+** or **-** buttons to display **SPEC** (for special).

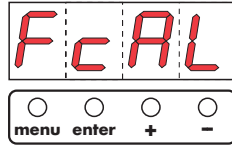


- Press the **enter** button.
- Press the **+** or **-** buttons to display **AdJ** (for adjustment).

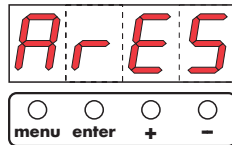


- Press the **+** or **-** buttons to display **PAn**, **Tilt**, **SPEd**, **Col1**, **Col2**, **EFEC**, **SGob**, **rGoB**, **Grot**, **IriS**, **Foc**, **Stro** and **dinr**, via which it is possible to adjust the position of the **HTScan** to where required, with the dimmer open and any effect, colour or gobo in place.

- 5) Press the **enter** button to confirm your selection of motor which you wish to adjust to position.
- 6) Press the **+** or **-** buttons to vary the level from 0 to 255 thereby adjusting the particular motor selected above.
- 7) Repeat points 3,4 and 5, to adjust your **HTScan** to the desired position.
- 8) Press the **+** or **-** buttons to display **FCAL** (for calibration)



- 9) Press the **enter** button.
- 10) Press the **+** or **-** buttons to display **Col1**, **Col2**, **EFEC**, **SGob**, **rGob**.
- 11) Press the **enter** button.
- 12) Press the **+** or **-** buttons which will allow an adjustment from 0 to 255 corresponding to an adjustment in the position of the particular motor being calibrated. Centre the wheels in the optical path of the projector.
- 11) Press the **+** or **-** buttons until **ArES** (for registering the new calibrated settings into memory) is displayed.



- 12) Press the **enter** button to confirm your selection.
- 13) After completing the calibration procedure, restart the projector and ensure that all settings are as required.

19. Error messages

HEAt

This message will appear should you attempt to reignite the lamp prior to 5 minutes passing since the unit was switched off. In this instance, the lamp may still be too hot to reignite. This message will appear in the display if the lamp does not ignite within 20 seconds. When **HTScan** has given this message, it will attempt to reignite the lamp automatically within 5 minutes.

LAEr

If lamp ignition does not occur within seven attempts (the **HEAt** message has been displayed six times), the display will show **LAEr**, indicating that the lamp may be damaged, failed, or absent.

This message is designed to protect the lamp ignition circuitry.

We recommend either installing or replacing the lamp. If the **LAEr** message continues to appear in the display, check the external temperature, fan operation, air passages, or contact your **tas** agent.

MbEr

This message indicates that the motherboard within the unit is not communicating properly with the control source.

CoE1 (Color-wheel 1 error)

This message may appear after a reset has been performed on the **HTScan** if the magnetic position indicator is not operating (either not operating or not reading properly) or the stepper motor is faulty (either defective or its cabling is not connected properly).

The colour wheel will not have repositioned itself correctly after the reset.

CoE2 (Color-wheel 2 error)

This message may appear after a reset has been performed on the **HTScan** if the magnetic position indicator is not operating (either not operating or not reading properly) or the stepper motor is faulty (either defective or its cabling is not connected properly).

The colour wheel will not have repositioned itself correctly after the reset.

SGEr (Static gobo-wheel error)

This message may appear after a reset has been performed on the **HTScan** if the magnetic position indicator is not operating (either not operating or not reading properly) or the stepper motor is faulty (either defective or its cabling is not connected properly). The gobo wheel will not have repositioned itself correctly after the reset.

FtEr

This error message indicates that the projector has overheated and that the lamp has been automatically switched off by the protection circuitry. The message will remain on the display until the temperature has fallen to an acceptable level. Subsequently, the display will show **HEAt**, indicating that the lamp is too hot (see above).

Should this message appear, the projector should be either moved to a more suitable position or, more simply, the air passages and fans should be checked.

SnEr

This message indicates that the lamp ignition sensor is not operating properly. This message indicates the need for attention from your **tas** service agent.

PoEr

This error message indicates that the projector has momentarily been disconnected from mains power.

FrEr

This error message indicates that the main voltage's frequency is other than the normal 50 or 60 Hz.

20. Spare parts

All the components of the **HTScan** are available as replacement spares from your authorised **tas** sales agent. Accurate description of the fixture, model number, and type will assist us in providing for your requirements in an efficient and effective manner.



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tas si riserva il diritto di apportare modifiche senza preavviso.
tas reserves the right to effect modifications without prior notification.

manuale istruzioni
instruction manual

HTScan

1[^] edizione settembre 1999
1st edition september 1999