

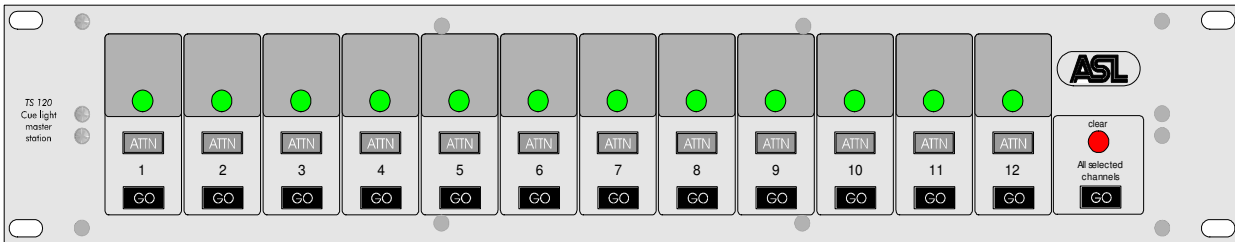
# THEATER SERIES

## USER MANUAL

FOR THE

*TS 120 / TS 10 / TS 99*

# CUE LIGHT MASTER STATION CUE LIGHT RECEIVER CUE LIGHT PRESET CONTROL



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## 1.0 GENERAL DESCRIPTION

The TS 120 is a twelve channel cue light master station designed for use in both portable and fixed systems. It contains 12 cue light channels, with an "All selected channels GO" and a "clear" push button.

Each channel of the TS 120 has an ATTN (attention) push button and a GO push button, accompanied by a large bi-colour LED that is red illuminated in ATTN mode and green in GO mode.

The receivers (TS 10) are powered by the TS 120. The presence of a receiver is detected by the TS 120 automatically, if a receiver is not present the channel is ignored by the TS 120.

The connection between master station and receivers is made by standard microphone cable (two conductors and one shield) with XLR-3 connectors.

Up to twelve units can be linked through the D9 connectors and then controlled by the TS-99 preset control, allowing a maximum of 144 cue light channels.

The unit may be connected to mains voltages from 90 - 240 V AC (auto select) 50/60 Hz.

## 2.0 UNPACKING

The shipping carton contains the parts listed below:

- \* The TS 120
- \* User manual
- \* Mains cord

If any are missing, contact your dealer.

ASL has taken great care to ensure this product reaches you in flawless condition.

After unpacking the unit please inspect for any physical damage to the unit, and retain the shipping carton and relevant packing materials for use should the unit need returning.

If any damage has occurred, please notify your dealer immediately so that a written claim can be initiated. Please also refer to the guarantee section of this manual.

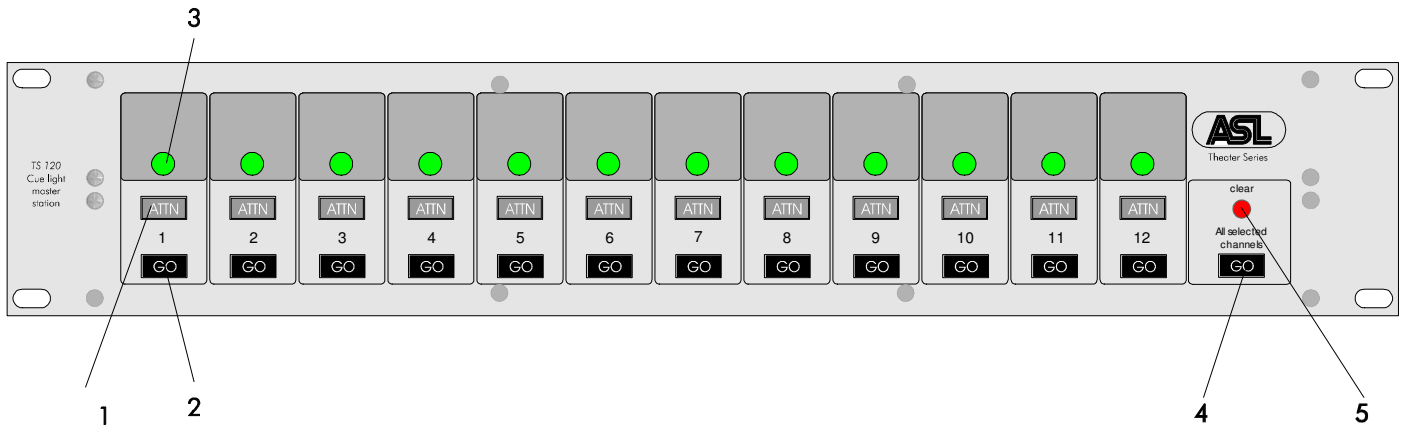
## 3.0 INSTALLATION

A vertical rack size of 2U (2.5", 88mm) is required for the TS 120. It is not necessary to provide rear support by extra bracing or shelving.

Adequate ventilation must be provided by allowing sufficient space around the sides and rear of the unit to ensure free circulation of air. Forced cooling is not required.

The power supply is located on the rear of the unit, and after a period of time it will feel hot to the touch. This is quite normal, and should be no cause for alarm.

## 4.0 FRONT PANEL CONTROLS



### 1 ATTENTION button

This push button activates the ATTENTION signal for that specific channel. The large LED (3) will start flashing in red on both the TS 120 and the TS 10 receiver. (If a receiver is not connected to the selected channel the LED will extinguish)

### 2 GO button

This push button activates the GO signal for that channel. It can only be activated when that channel previously was in ATTENTION mode (LED 3 red illuminated)

### 3 Indicator LED

This LED indicates the status of the channel. When an ATTENTION has been given by pushing the ATTN button (1) it will start flashing in red. When the receiver acknowledges the reception of the ATTENTION signal it will be lit red continuously. When the GO signal is activated by pushing the GO button (2) the LED will be lit green continuously. When a TS 99 preset control is connected this LED can flash green to show a preset preview or a preset in program mode.

### 4 All selected channels GO button

This push button activates the GO function for all selected channels.

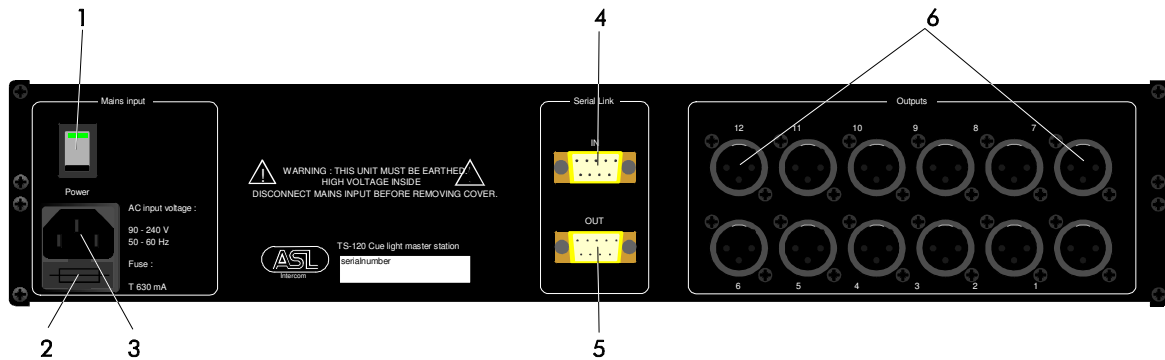
A channel is selected when it is in ATTENTION mode (red flashing) or when it is in ACKNOWLEDGE mode (lit red continuously).

This way multiple channels can be switched from ATTENTION to GO at the same moment.

### 5 CLEAR button

With this button all channels that are in GO mode (lit green continuously) can be switched off in one action; clearing the channels for the next action.

## 5.0 REAR PANEL CONNECTORS



### 1 MAINS power switch

With this switch the unit can be switched on or off.

### 2 MAINS Fuse

This part of the MAINS entrance hold the fuse. There is also an extra fuse. The fuse needs to be a 1,25Amp slow blow type.

### 3 MAINS entrance

This MAINS entrance accepts any voltage from 90 - 240 Vac at 50-60 Hz.

### 4 LINK connector IN

When the unit is controlled by a TS-99 or it is a part of a system with more TS-120's, this connector should be used as input to link the units together.

### 5 LINK connector OUT

When the unit is one of more units in a system this connector supplies the output to the next unit.

### 6 XLR connectors

These XLR-3 connectors are for connecting the TS-10's to the unit.

Pin assignments:

1. 0 V / ground shield
2. +30 V power wire
3. signalling line

The TS-120 is designed to have only one TS-10 on each output XLR. More than one TS-10 connected to a line will disturb the proper functioning of the TS-120 and TS-10.

## 6.0 INTERNAL CONTROLS

The internal dipswitch, located on the far left of the bottom PCB has two functions:

### Dipswitch numbered 7

Demonstration mode, the unit will not require TS-10 to be connected and will ignore any connected TS-10. All Channels will function like everything has been connected to TS-10.

### Dipswitch numbered 8

Clear function works on ATTN and GO status

## 7.0 PROGRAMMING WITH THE TS-99

With the TS-99 unit the presets of the TS-120's can be programmed.

- Select the requested preset number on the TS-99 with the "left" and "right" buttons.
- Preview the current settings with the "preview" button, all selected channels will be shown in green flashing LED's
- To change the setting, press "program". All selected channels will be shown in green flashing LED's, you may change the setting by pushing the GO buttons of the TS-120.

After completing your selection of the preset push and hold "Store" until the TS-120 returns to its normal state.

Using the presets:

- the active preset number is indicated by the blinking dot next to the preset number. An active preset must be finished (sent ATTN and sent GO) before the next preset maybe selected.
- On the active preset activate ATTN by pushing the ATTN button. All programmed channels will go to ATTN mode.
- Then push the GO button on the desired moment and all channels will switch from ATTN to GO (red to green). Now you are allowed to switch to the next preset number where you start from pushing the ATTN button again.

## 8.0 CABLING

For the THEATER Series system the interconnecting cables are of the shielded two-conductor microphone cable type and the intercom line connectors are of the XLR-3 type. The signals are on XLR pin 3, DC power is on XLR pin 2. XLR pin 1 is connected to the shield of the cable which functions as the common return for audio and power.

Since the DC signals are transferred in an **unbalanced** way, certain rules have to be obeyed when installing the cables of an intercom network. This is to minimize power loss and the possible effects of electromagnetic fields.

These rules are:

**\* Use high quality (multipair) cable.**

For interconnecting user stations, power supplies and accessories in an ASL Intercom network, use high quality shielded two-conductor (minimum 2x 0.30 mm<sup>2</sup>) microphone cable only.

In case of a two channel intercom network, use high quality microphone 'multipair' cable only, each pair consisting of two conductors (minimum 2x 0.15 mm<sup>2</sup>) with separate shield. Multipair cable should also have an overall shield.

**\* Use flexible cables.**

Use flexible single and multipair microphone cable instead of cable with solid cores, especially when the cable is subjected to bending during operation or installation.

**\* Separate cable screen to XLR pin 1.**

The screen of each separate microphone cable and/or the screen of each single pair in a multipair cable, should be connected to pin 1 of each XLR-3 connector. Do not connect this cable screen to the metal housing of the connector or to metal wall boxes (outlets).

See page 10 for Earthing Concept.

**\* Cable trunks, connection boxes and overall multipair cable screen to clean earth.**

Metal cable trunks, metal connection boxes and overall multipair cable screen should be interconnected and, at one point (the 'central earthing point') in the intercom network only, be connected to a clean earth or a safety earth.

See page 10 for Earthing Concept.

**\* Keep metal connection boxes and cable housings isolated from other metal parts.**

Metal housings for intercom cables and connectors should be mounted in such a way that they are isolated from other metal cable and connector housings and from any other metal construction parts.

**\*\* See Party Line, Technical Concept**

**\* Keep cables parallel as much as possible.**

When two (two channel) units in a network are connected by more than one cable, make sure that these cables are parallel to each other over the whole distance between those units. When using multipair cable, parallelism is ensured in the best possible way.

**\* Avoid closed loops.**

Always avoid that cables are making a loop. So-called 'ring intercom' should not physically be cabled as a ring. All cable routes should have a 'star' configuration, with the central earthing point (usually close to the power supply position) as the centre of the star.

**\* Keep cables away from electromagnetic sources.**

Keep intercom cables away from high energy cables, e.g. 110/220/380V mains power or dimmer controlled feeds for spotlights.

Intercom cables should cross high energy cables at an angle of 90° only.

Intercom cables should never be in the same trunking as energy cables.

**\* Place power supply in a central position.**

In order to avoid unacceptable power losses, place the power supply as close as possible to where most power consumption occurs or, in other words, most user stations are placed.

**\* Connect ASL power supply to a 'clean' mains outlet.**

The ASL power supply may be connected to the mains power outlet to which other audio equipment is connected. Avoid using mains outlets which also power dimmer controlled lighting systems.

In case of more complex installations, don't hesitate to contact us. Please send us a block diagram of the planned network with a list of all user stations and their positions, and we are happy to advise you on cabling lay out.

## 9.0 WARRANTY

This unit is warranted by ASL Intercom to the original end-user purchaser against defects in workmanship and materials in its manufacture for a period of one year from date of shipment to the end-user.

Faults arising from misuse, unauthorised modifications or accidents are not covered by this warranty. If the unit is faulty it should be sent in its original packing, to the supplier or your local ASL dealer, with shipping prepaid. A note must be included stating the faults found and a copy of the original suppliers invoice.

### **THIS PRODUCT WAS DESIGNED, DEVELOPED AND MANUFACTURED BY:**

**ASL Intercom B.V.**  
**UTRECHT HOLLAND.**  
**<http://www.asl-inter.com>**  
**Email : [info@asl-inter.com](mailto:info@asl-inter.com)**

## 10.0 TECHNICAL SPECIFICATIONS TS-120

### **POWER CONSUMPTION**

Max 45 Watts

### **LINE DRIVER**

max. output current 3 mA rms  
output impedance > 150 Kohms

### **DIMENSIONS AND WEIGHT**

width 480 mm  
height 88 mm  
depth 126 mm  
weight 1200 grams

### **GENERAL SYSTEM SPECIFICATIONS**

Mains voltage: 90 - 240 V AC (auto select)  
50/60 Hz.

Power: 45 Watt

ASL reserves the right to alter specifications without further notice.

