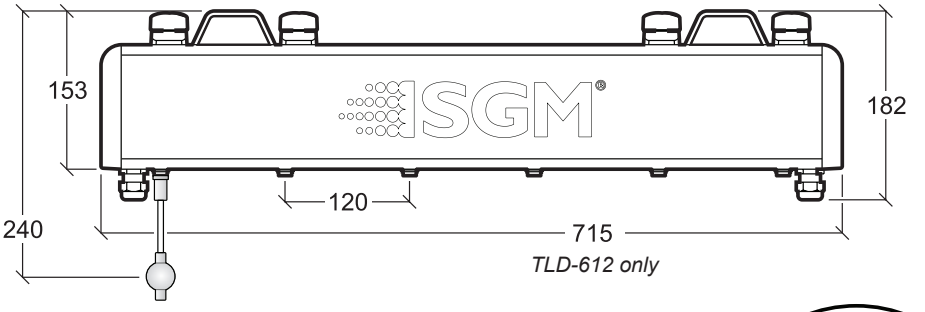
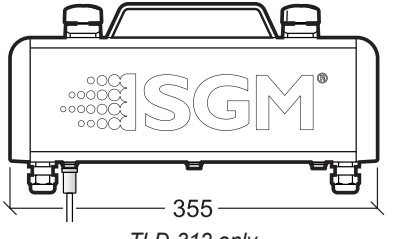
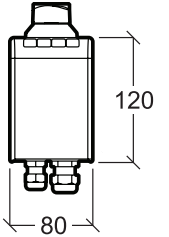
SGM®

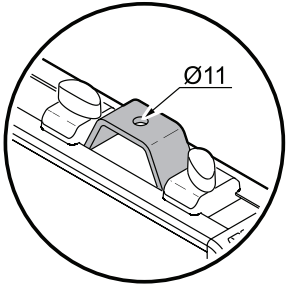
TLD·612 / 312
TOURING PIXEL DRIVER

TLD-612 / 312 Touring Pixel Driver dimensions









All dimensions in mm.
Drawing not to scale.

TLD·612 / 312 PIXEL DRIVER USER MANUAL REV. 1

TLD-612/312 Pixel Driver uk

Contents

Safety Information

WARNING! *Read the safety precautions in this section before installing, powering, operating or servicing this product.*

To guard against electric shock

DANGER! Risk of electric shock. Do not open cabinet.

- **This product is for professional use only. It is not for household use.**
- This product presents risks of severe injury or death due to fire hazards, electric shock and falls.
- Do not open the cabinet. No inside parts are user-serviceable.
- Always ground (earth) the system electrically.
- Use only a source of AC power that complies with local building and electrical codes and has both overload and earth leakage protection.
- Never attempt to bypass the fuse. Always have defective fuses replaced with ones of the specified type and rating.
- Verify that the power feed cable is rated for the total current draw of all daisy-chained products.

Read the manual

DANGER! Risk of electric shock. Do not open cabinet.

Read this manual before installing, powering or servicing the system, and follow the safety precautions. Always observe all warnings in this manual and printed on the Touring Pixel Driver. If you have questions about how to operate the system safely, please contact your SGM representative.

Protection from injury

- Ensure that any structure used for support as well as all fastening and connecting hardware can hold at least 10 times the weight of all supported devices and equipment.
- Use a minimum of two approved secondary attachments (such as safety wires) to secure each product as described in this manual. Safety wires must be approved by an official body such as TÜV as a safety attachment for the total weight of the products it secures. Safety wires must be capable of supporting a static suspended load of ten times the weight of the product.
- Check that all external covers and rigging hardware are securely fastened.
- Block access below the work area and work from a stable platform whenever installing, servicing or moving the product.
- **NOTE:** All illustrations in this manual pictures depict only the dual DMX universe TLD-612 system, but all terminology, connection lay-outs, power and data principles also apply to the single DMX universe TLD-312.

Introduction

Parts identification and terminology

See Fig. 1 for part terminology and identification.

A. Mounting bracket left
B. Mounting bracket right
C. Touring Pixel Driver / Power supply cabinet. (In this document referred to as: TLD-612 & TLD-312).
D. Connections. (“Connections Overview” page 10).
E. LED pixel outputs from 1 to 6 rows (Illustrated by LED Balls)

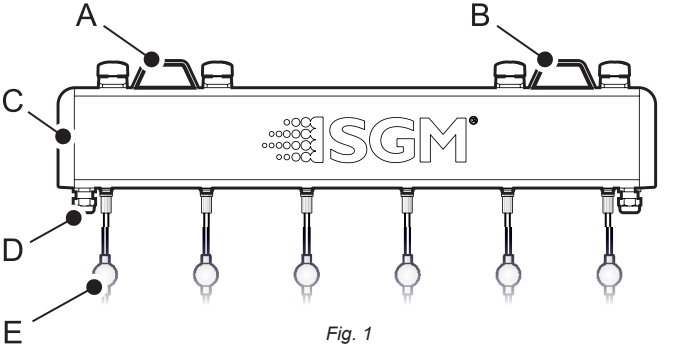


Fig. 1

Connections Overview

See Fig. 2 for location of plugs, cables and indicators on the Touring Pixel Driver connection panel.

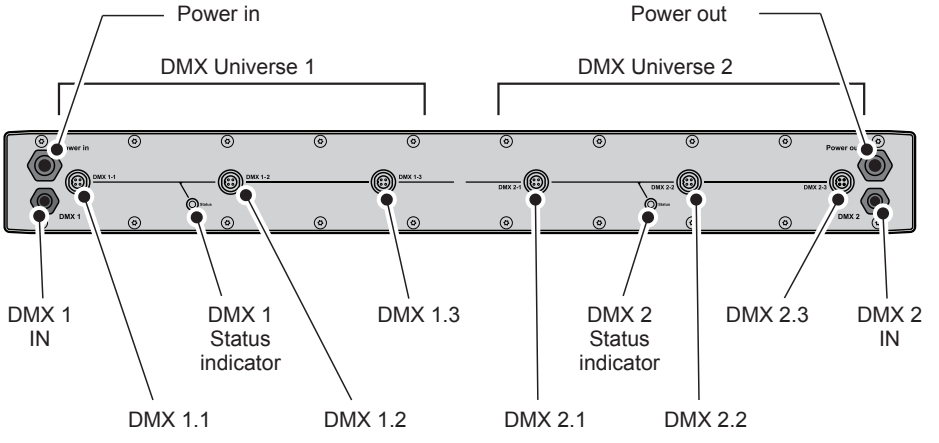


Fig. 2

Cabling and Connectors

The following connectors are used on the Touring Pixel Driver (Fig. 3):

- 5 pin male XLR connector for data input. (See pin assignments, Fig. 4)
- 3 lead power cable. A power plug must be installed on the power input cable. (See “AC Power Connection”, page 12-13)
- 6 x RJ765 output connectors supply 12VDC power and data to the LED products. (See pin assignments, Fig. 5)

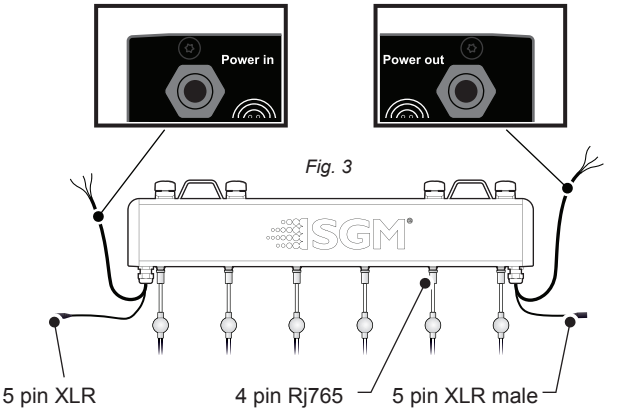


Fig. 3

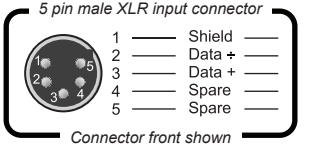


Fig. 4

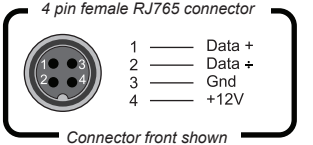


Fig. 5

Status Indicator Readout

Two status indicator readouts are visible on the Pixel Pixel driver; one for each DMX universe.
(See p. 9, “Connections Overview” for location of the status indicator readouts).

Fig. 6 clarifies the status indicator readouts.

Indicator	Status
Continuous green light	Waiting in bootloader mode
Continuous red light	No DMX is received
Continuous red, flashing yellow light	DMX is received

Fig. 6

Preparation for use

Unpacking

- Touring Pixel Driver
- User manual

The packing material protects the Touring Pixel Driver during shipment. Please save it for future transportation.

AC Power Connection

Connect the Touring Pixel Driver directly to AC power. Do not connect this product to a dimmer system as it will damage the fixture.

The Touring Pixel Driver is delivered with a 0.6 meter power cable in both “Power in” and “Power out”. The “Power out” connector is fitted with a CEE female mains connector for test and protection only. The customer must provide and install a connector that enables the Touring Pixel Driver to receive AC Mains Power.
Install a grounding-type (earthed) industrial 3-prong type B plug that complies with IEC 60309 or a comparable national standard and is rated 16 A minimum, and use corresponding power outlet sockets. Follow the manufacturer’s instructions and all locally applicable laws and electrical safety codes.

When connecting to mains power

- Connect the green/yellow ground (earth) conductor to the terminal marked with the earth symbol.
- Connect the brown live conductor to the terminal marked L.
- Connect the blue neutral conductor to the remaining terminal (marked N).

Wire Color	Conductor	Symbol
Brown	Live	L
Blue	Neutral	N
Green / Yellow	Ground (earth)	⏚ / ⏚

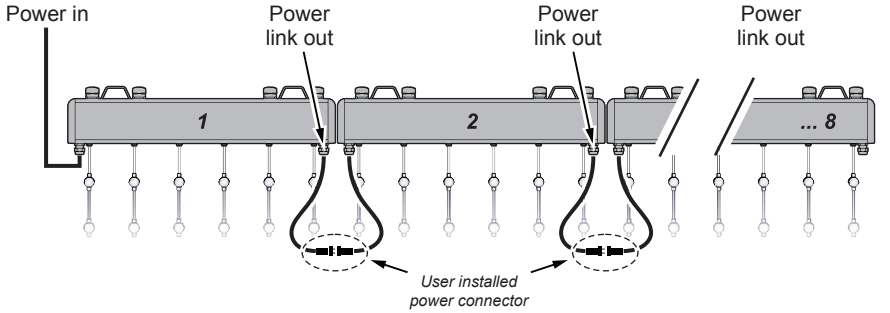
The auto-ranging power supply automatically adjusts to AC power from 85-264 volts nominal at 50/60 Hz.
If the pins are not clearly identified, or if you have any doubts about proper installation, consult a qualified electrician.

Daisy Chain Power to other Touring Pixel Drivers

When using the Power-in / Power-out cables that are pre-installed in the Touring Pixel Driver:
Up to 8 TLD-612 (16 TLD-312) Touring Pixel Drivers can be daisy-chained @ e.g. 230VAC, 13A.
Up to 4 TLD-612 (8 TLD-312) Touring Pixel Drivers can be daisy-chained @ e.g. 115VAC, 13A. (Not shown)

Important

The pre-mounted CEE female connector on the “Power out” cable are for protection only and should be replaced with a connector that meets local standards.



WARNING! Always secure LED system with secondary fixing such as safety wires

To rig the fixture

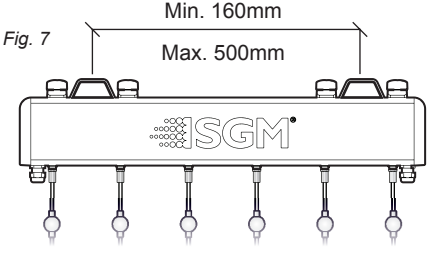
Before installing, verify that;

- The attachment hardware is in good condition and designed to support at least 10 times the fixture's weight.
- The structure can support at least 10 times the weight of all installed Touring Pixel Drivers, clamps, cables, auxiliary equipment, etc.

Rigging the system:

- Start the rigging process by blocking the work area below and make sure the work is performed from a stable platform.
- Loosen the mounting brackets and slide the brackets to the desired length (Fig. 7) and turn the thumb screws fully clockwise until the bracket is locked in place.

Fig. 7



- When using more than one Touring Pixel Driver to form a wider LED curtain, the Touring Pixel Drivers needs to be spaced 6mm apart to obtain the correct 12cm pixel pitch (Fig. 8).
- Connect and arrange the power and data cables.
- Fasten the Touring Pixel Driver securely to a fixed surface or structure, ensuring that the supporting structure and / or hardware used can hold at least 10 times the weight of all the devices they support.
- If suspended from a rigging structure, fasten the Touring Pixel Driver to a rigging clamp with a M10 bolt using the top hole in the mounting bracket.
- Complete the rigging procedure by securing the Touring Pixel Driver with a safety wire using the hole in the mounting bracket shown in Fig. 9

This safety wire must be approved by an official body such as TÜV as a safety attachment for the weight that it supports. The safety wire must be capable of supporting a static suspended load that is ten times the weight of the fixture and all installed accessories.

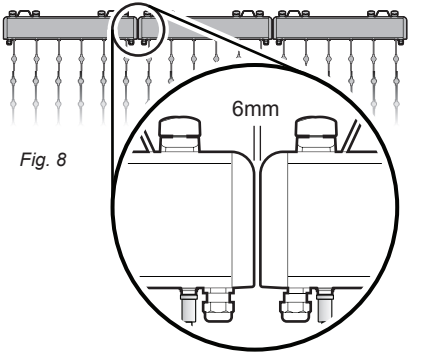


Fig. 8

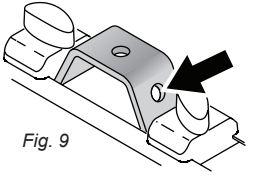


Fig. 9

Connecting the DMX Data Link

This section describes how to operate the Touring Pixel Driver with a DMX controller.

Data Connection

The TLD-612 Touring Pixel Driver uses 2 DMX universes, each with 3 outputs that can support up to 168 DMX channels each.

The TLD-312 Touring Pixel Driver uses 1 DMX universe with 3 outputs that can support up to 168 DMX channels each.

Light Desk DMX source

Connect the Touring Pixel Driver directly to a light desk with DMX output (Fig. 10).

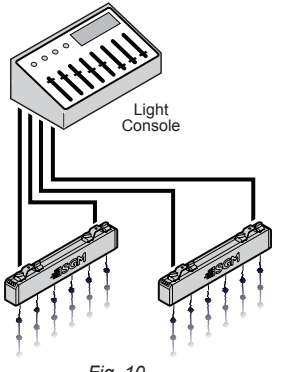


Fig. 10

Light Desk with ArtNet

Use a Light Desk or computer-based ArtNet controller via an Ethernet switch and an Artnet to DMX converter to control multible Touring Pixel Drivers. (Fig. 11)

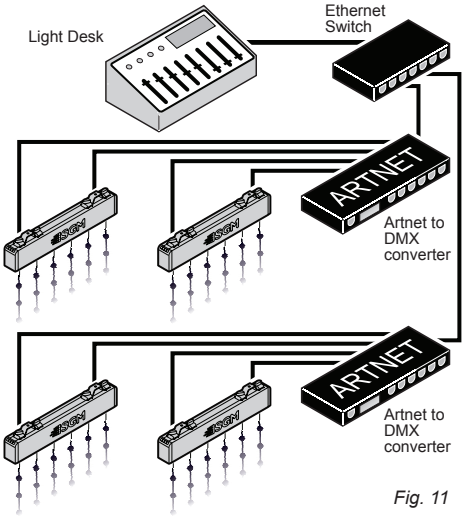


Fig. 11

DVI source

The Touring Pixel Driver can also connect to any DVI source, e.g. media server or analog camcorders, via a DVI / VGA to DMX converter. (Fig. 12)

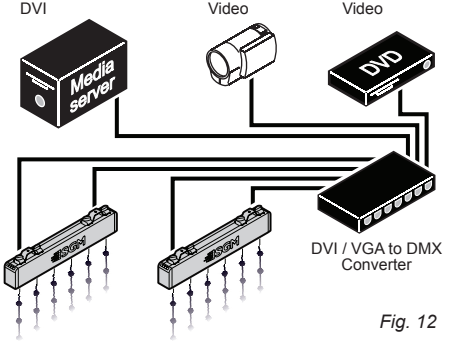


Fig. 12

DMX address lay-out

Each LED pixel uses 3 DMX channels for RGB. The #1 pixel (1.1 DMX output) uses channel 1, 2 and 3, #2 pixel uses 4, 5 and 6, etc. (Fig. 14). These channels are assigned to their designated pixel in every situation. E.g. if row 1 consists of only 14 pixels, the #1 ball in the second row (1.2 DMX output) will still use DMX channels 169, 170 and 171.

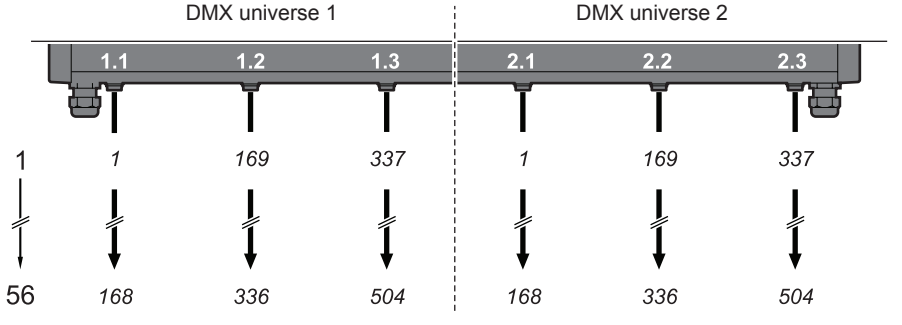


Fig. 14

Firmware upgrade

Log on to **www.sgmsupport.com** to access all relevant firmware and follow the instructions for download and installation.

Service

WARNING! *Read the safety precautions in this section before installing, powering, operating or servicing this product.*

Fuse Replacement

The TLD-612/312 uses a time-delay fuse for protection against current overload. The fuse is located inside the base on the main PCB of the fixture – next to the low voltage power supply. Fuses must be replaced by a certified professional.

Cleaning

To obtain optimal performance, regular cleaning is essential. Cleaning schedules will vary greatly depending on the operating environment, and the installation should therefore be checked at frequent intervals within the first few weeks of operation to see whether cleaning is necessary. This procedure will allow you to assess cleaning requirements in your particular situation. If in doubt, consult your SGM dealer for a suitable maintenance schedule. Clean the TLD-612/312 with a soft cloth dampened with a solution of water and a mild detergent. Do not use products that contain solvents, abrasives or caustic agents for cleaning, as they can cause damage to both hardware, cables and connectors.

Troubleshooting

Problem	Probable cause(s)	Remedy
No light in status LED	Blown fuse	Replace fuse (Qualified personnel)
	Power supply failure	Refer to SGM
	No power to system	Check power cables
Green Status LED on for more than 5 sec.	Corrupted software	Upload new firmware
Status LED continuous red	No DMX data is received	Inspect cables and correct poor connections and/or broken cables

Specifications

PHYSICAL TLD-612 *Part #: 80070201*

Length / width / height (Refer to fig.1, page 2 for all dimensions).....715 x 80 x 182mm
Weight.....4kg

PHYSICAL TLD-312 *Part #: 80070202*

Length / width / height (Refer to fig.1, page 2 for all dimensions).....355 x 80 x 182mm
Weight.....2kg

CONSTRUCTION

Housing.....Aluminum
Finish.....Electrostatic powder coating

INSTALLATION

Orientation.....Any
Minimum distance to combustible materials.....50mm
Distance between drivers.....6mm

AMBIENT OPERATING CONDITIONS

Maximum ambient temperature (Ta).....40°C (104°F)
Minimum ambient temperature (Ta).....-10°C (14°F)
Operating humidity.....100%
IP rating.....IP 55

SIGNAL SOURCE

According to standard.....USITT DMX 512

CONNECTIONS

AC Power input.....CEE male
AC Power output.....CEE female
DMX Data input.....Locking 5-pin XLR male sockets
Driver Data output.....Locking 4-pin RJ765 sockets

ELECTRICAL

AC power.....85 – 264V, 50/60Hz
Build in power supply - Daisy chainable
Maximum total power consumption, TLD-612.....360W
Power consumption without load, TLD-612.....14W
Maximum total power consumption, TLD-312.....180W
Power consumption without load, TLD-312.....7W

TYPICAL POWER AND CURRENT

100V, 60Hz.....346W, 3,50A, 0.99PF
120V, 60Hz.....344W, 2.90A, 0.99PF
208V, 60Hz.....335W, 1.66A, 0.97PF
230V, 50Hz.....334W, 1.50A, 0.97PF
240V, 50Hz.....334W, 1.45A, 0.96PF

Power factor is measured at full load with all LEDs 100% driven.

FUSES

Mainboard fuse (not user-replaceable).....T12.5A
Power supply (not user-replaceable).....F5A

APPROVALS

Safety.....EN 60950-1
EMC.....EN 55103-1 , EN 55103-2

INCLUDED PARTS

- Touring Pixel Driver TLD-612 / TLD-312
- User manual

ACCESSORIES

LB-100, LED Balls - 1 meter string containing 7 balls.....Part # 80080001
LT-100, LED Tube 1 meter (27 pixels).....Part # 80080003
LT-200, LED Tube 2 meter (54 pixels).....Part # 80080004

Specifications subject to change without notice

User notes

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