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## Welcome

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Congratulations on your purchase of the LUD 36 power supply. Your new product offers many exciting features and can work in harmony with all other products in the Ledion Ultra range to produce a versatile architectural colour-changing tool. You can integrate the LUD 36 power supply with an existing DMX system to give more sophisticated control or use the built in colour changing features.(see pages 7-9.)This manual contains important information to help you to achieve the best results from this product. Please read through the manual before operating the product.

This power supply is designed for the Ledion Ultra LED products, and will not operate LED units from any other manufacturers.

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## Instant features

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- If you are using the LUD 36 as the main controller for the lights, go to pages 7-9
- If you are integrating the LUD 36 with DMX512 as a system, go to pages 5-6

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## Specification

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Power supply: AC 90V - 250V @ 60W  
LED output: 36 LED Max Load 6 LED Min Load.  
DMX input/thru: RJ45 Pin 1 Hot, Pin 2 Cold, Pin 8 Ground.  
DMX Addressing: 1 - 508  
External Dimensions: Metric. 320mm x 63mm x 50mm.

Imperial. 12.6" x 2.5" x 2"

Weight: Metric 1 Kg. Imperial 2.2 lb

**THIS POWER SUPPLY WILL ONLY RUN 36 LED's.**

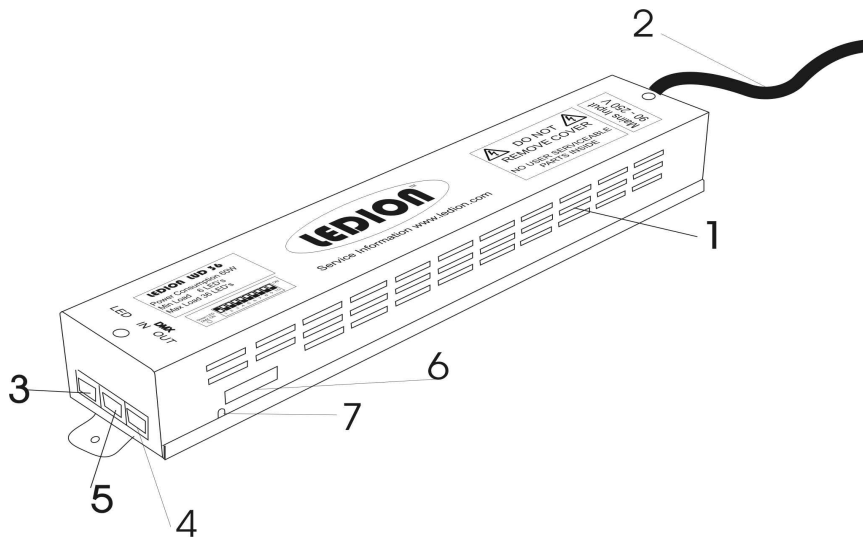
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## Guided tour of the LUD 36

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1. **Power On (Green) LED.** (Seen through side casing).
2. **Mains Input.** 90V - 250V AC
3. **LED output socket.** The LED fixtures are connected to this socket with RJ45's. (Max Load 36 LED's.)
4. **DMX Out/Thru socket.** Connects RJ45 data cable to input of next DMX unit. (When using an XLR socket, you will need a converted data cable.)
5. **DMX Input socket.** Connects RJ45 data cable either from a DMX controller, LUD 36 or other DMX controlled device. (When using an XLR socket, you will need a converted data cable.)
6. **Dipswitches.** If you are using the DMX input, the switches set the DMX address for the power supply to respond to. If using stand-alone mode switch 10 sets the solid colour scroll mode of the unit; Switch 10+9 sets static colours; Switch 10+8 sets pastel colour scroll. (See page 4 for full switch settings.)
7. **DMX Indicator.** Illuminates when DMX signal is received.

Fig 1.1



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## NOTES

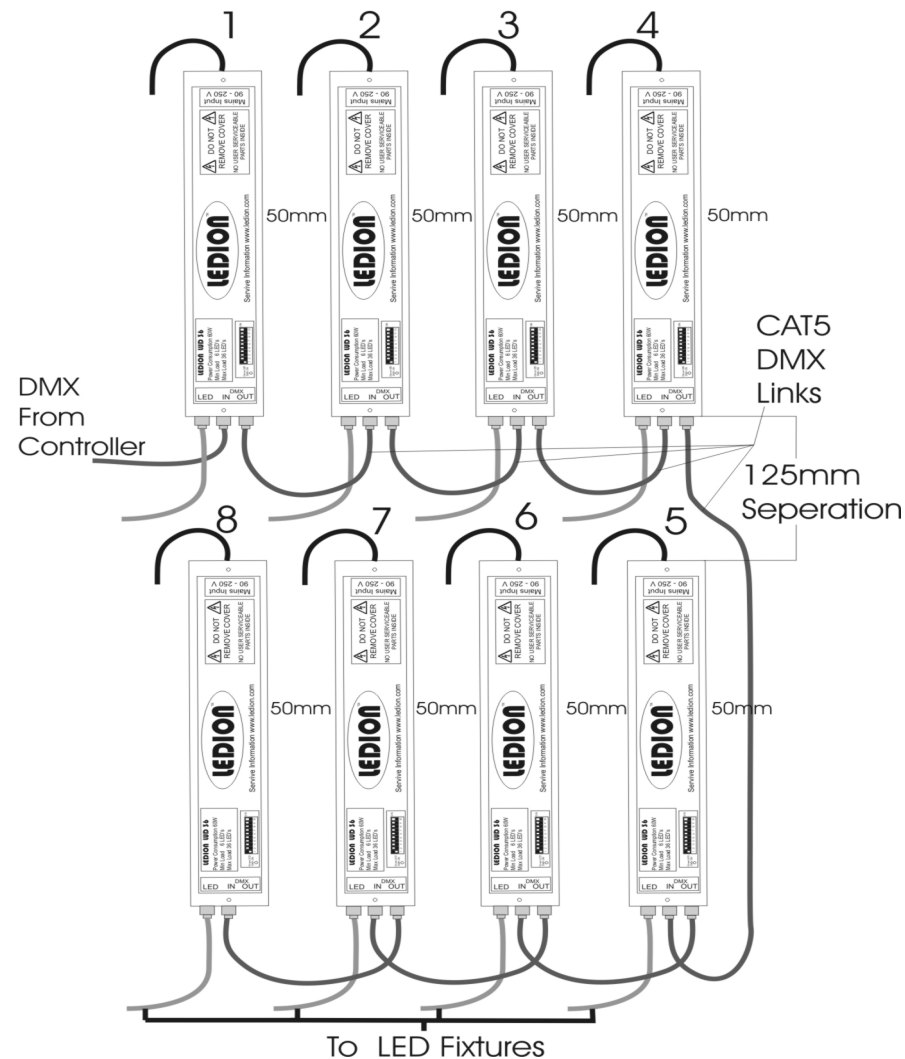
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## Trouble Shooting

Problem	1st Action	2nd Action	Final Action
The power is on but nothing is happening.	Check the lights are connected correctly to the LED socket on the power supply.	Turn of power to unit set dipswitch 10+1 (2 sec Colour Scroll) On re-power lights will now change. Always re-power unit after re-setting dipswitches.	When operating correctly, see pages 5-7 for all colour scrolling speeds and configurations.
Nothing happening after carrying out the above operation.	Plug one light only directly into the driver box.	If the fixture now works you must have a bad cable in the installation.	Trace the faulty cable by elimination and replace it.
I have DMX connected and the green LED is on, but do not have any control over the fixtures.	Check that the address on the dipswitches corresponds with the address on the DMX controller.	If that is correct, make sure that the dimmer channel (forth channel) is above 10% to illuminate the fixtures	If no response check that the Hot pin is the same in the patch lead as it is in the outputting DMX controller.
I have some control but one colour will not respond.	Make sure the DMX level for that colour is above 10%.	Test all fixtures on the line individually. One LED out will pull down the whole line.	If you do have a faulty fixture, depending on age of the fixture it will be replaced or repaired.
The power supply is making a high pitched sound.	The correct minimum loading has not been achieved.	The minimum loading for this unit is 6 LED's. The maximum loading is 36 LED's.	Add another fixture until you have more than 6 LED's and the noise will stop.

For further assistance contact, [info@ledion.com](mailto:info@ledion.com)

## Installation Of LUD36 Driver Units.



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## DMX Addressing

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This power supply requires 4 channels of DMX for each unit on the DMX line. This unit can be individually addressed using the Dipswitches (see page 4 fig 1.1 no 6) to give you individual control over an amount of power supplies. Note you will not have individual control over the LED fixtures on a single power supply, regardless of the number fixtures plugged into the unit, will all do the same thing.

Channel 1 = Red

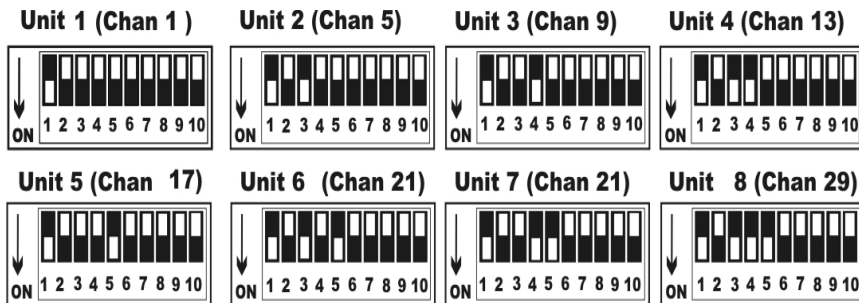
Channel 2 = Green

Channel 3 = Blue

Channel 4 = Dimmer

**Note.** The dimmer Channel must be over DMX value 10 out of 255 to illuminate the LED's.

### Example Dipswitch Settings.



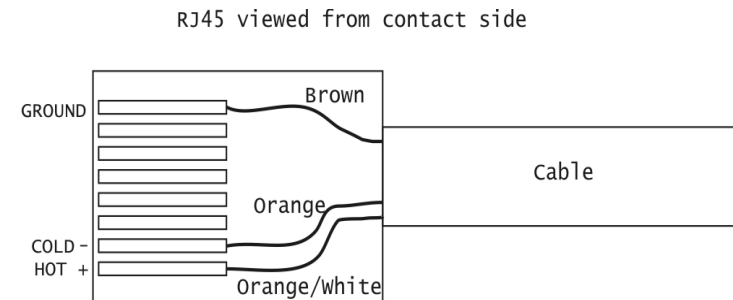
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## DMX OPERATION

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To run this unit via DMX 512 you must have a converted data cable that is either a 3 pin or 5 pin XLR. The DMX cable should be connected from either the DMX desk or other DMX device to the DMX IN socket, which is indicated on the end of the unit. If you are making your own cable the wiring diagram below must be used. CAT5e cable must be used to make this lead.

Fig 1.5



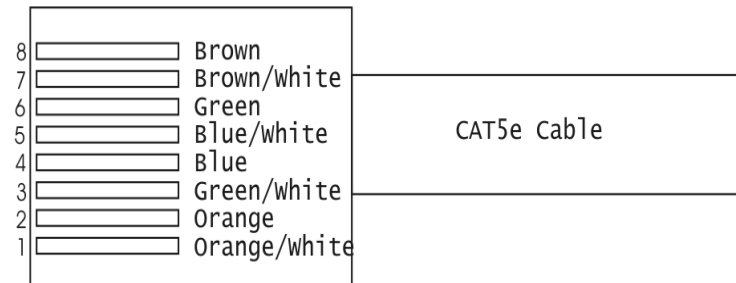
If this unit is to be used in the middle of a DMX line For example you will need two converted cables one IN and one OUT, to connect from the first DMX device to the power supply and out into the next DMX device.

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## Ending CAT5e Cable

If you are using your own CAT5e cable and want to make off the ends yourself the following diagram must be used to carry out that process.  
(Fig 1.6)

RJ45 viewed from contact side



**Note.** Some CAT5 Cable is not stranded, it is solid core, and you must make sure you have the correct RJ45 socket. We recommend only using stranded cable.

If you are buying pre-ended cables from another supplier, you must use (CAT5e PATCH) cables, the cable should have this printed on it, alternatively we will supply you with the correct cable and lengths to suit your requirements.

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## Setting up

The power supply is connected to all LED fixtures by linking RJ45 CAT 5 Data cables into each fixture.

Typical system examples for the entire Ledion Ultra range.  
(See Pages 9-13)

### Setting the dipswitches for stand-alone programs.

Table 1.

Dipswitch Setting	Colour	Cycle Time
10 on	Scrolling RGB	2 secs
10+1	Scrolling RGB	5 secs
10+2	Scrolling RGB	10 secs
10+3	Scrolling RGB	30 secs
10+4	Scrolling RGB	2 mins 30 secs
10+5	Scrolling RGB	5 mins
10+6	Scrolling RGB	20 mins
10+7	Scrolling RGB	1 hour

**Note.**

RGB signifies that all the colours used are mixed at full strength and brightness.

**Table 2.**

Dipswitch Settings	Colour	Cycle Time
10+9+1	Red	Static
10+9+2	Green	Static
10+9+3	Blue	Static
10+9+4	Amber	Static
10+9+5	Cyan	Static
10+9+6	Magenta	Static

**Note:** The following settings are best achieved when using the Ledion Ultra products fitted without optics, which are more suitable for precise short throw colour mixing.

Dipswitch Settings	Colour	Cycle
10+9+7	Warm White	Static
10+9+8	Cool White	Static

**Fig 1.4** Shows a typical set up for the Ledion LUS12, LUS24 or LUS36 the fixtures are connected to the LUD36 power supply with RJ45 data cables into the LUT (tee piece), (see fig 1.4) the fixture is then plugged into the port marked **LED**, the cable coming from the LUD36 is plugged into the port marked **IN** the cable to the next fixture is plugged into the port marked **OUT**. When you come to the last fixture an LUC/EL should be used in place of the tee as you do not need to carry on to any other fixtures, the LUC/EL can be used for the end of the line or as an in line connector to extend data cables.

3 x LU12's (2 x LUT, 1 x LUC/EL)

1 x LU24 (connected directly)

1 x LU24 + 1 x LU12 (1 x LUT, 1 x LUC/EL)

1 x LU36 (connected directly)

**NOTE.** The cable run must be terminated (i.e. have no open sockets on the tee pieces or connectors.)

**Warning.** The Max Cable run to the fixtures on each LUD36 should not exceed 20m.



Fig 1.4

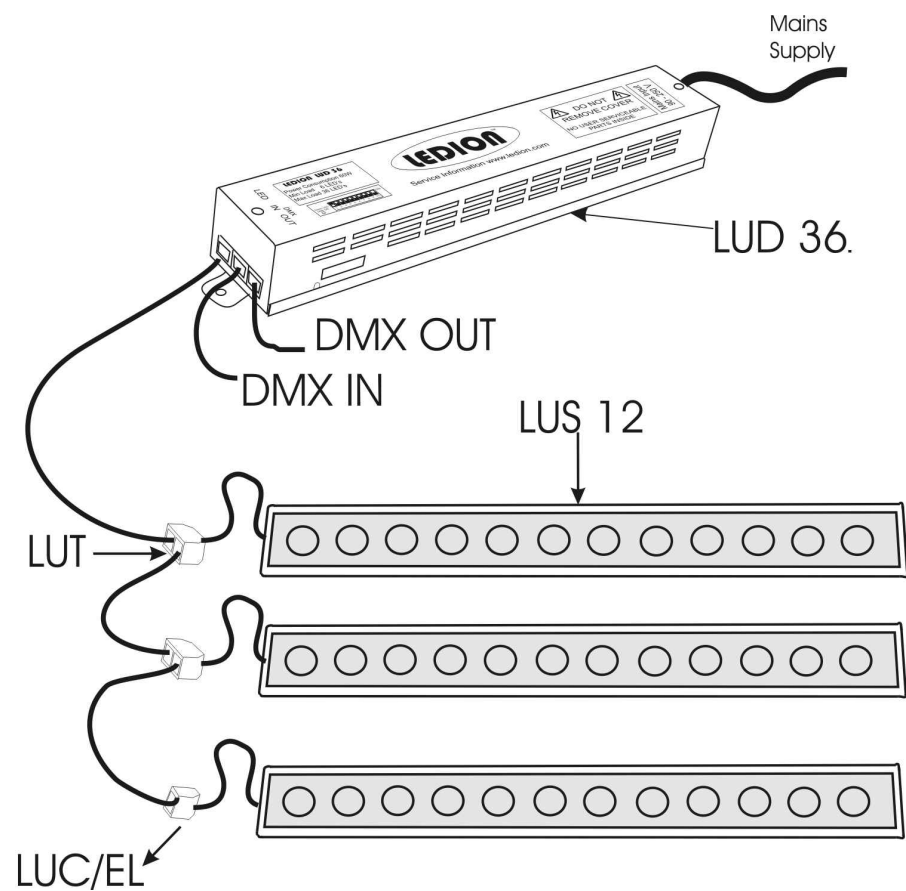


Table 3.

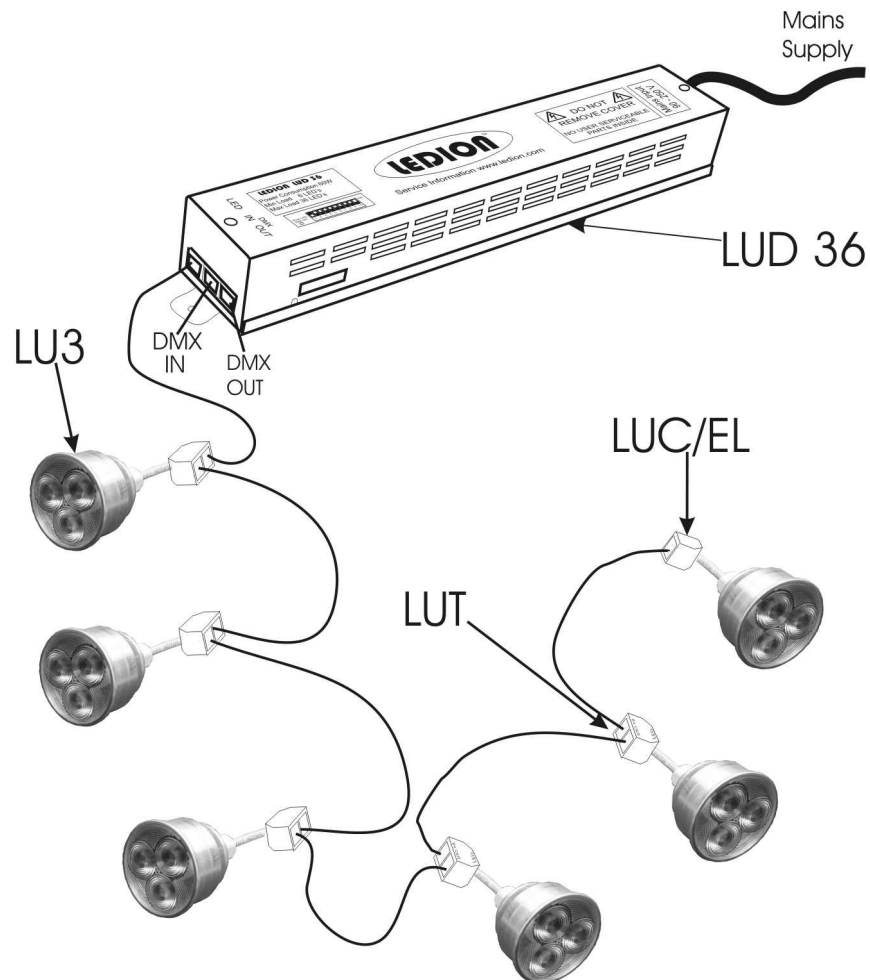
Dipswitch Setting	Colour	Cycle Time
10+8 on	Scrolling Pastel	2 secs
10+8+1	Scrolling Pastel	5 secs
10+8+2	Scrolling Pastel	10 secs
10+8+3	Scrolling Pastel	30 secs
10+8+4	Scrolling Pastel	2 mins 30 secs
10+8+5	Scrolling Pastel	5 mins
10+8+6	Scrolling Pastel	20 mins
10+8+7	Scrolling Pastel	1 hour

DMX Values To Achieve Set Colours

Colour	Red	Green	Blue	Dimmer
Red	255	0	0	255
Green	0	255	0	255
Blue	0	0	255	255
Amber	255	255	0	255
Cyan	0	255	255	255
Magenta	255	0	255	255
Warm White	120	255	96	255
Cool White	100	255	142	255

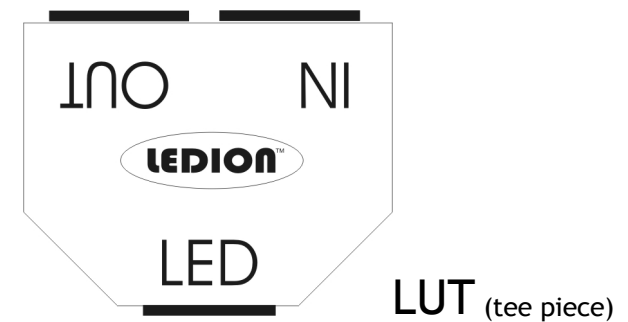
## Typical Wiring Diagrams

Fig 1.2



**Fig 1.2** shows a typical set-up of Ledian LU3's, LU6's or LU12's all fixtures should be connected to the LUD36 power supply with RJ45 data cables into the LUT (tee piece), (see fig 1.3) the fixture is then plugged into the port marked **LED**, the cable coming from the LUD36 is plugged into the port marked **IN** the cable to the next fixture is plugged into the port marked **OUT**. When you come to the last fixture an LUC/EL should be used in place of the tee as you do not need to carry on to any other fixtures, the LUC/EL can be used for the end of the line or as an in line connector to extend data cables.

**Fig 1.3**



The LUD36 will run 36 LED's therefore you can run as follows;

12 x LU3's (11xLUT, 1xLUC/EL)

6 x LU6's (5xLUT, 1xLUC/EL)

3 x LU12's (2xLUT, 1xLUC/EL

**Warning.** The Max Cable run on each LUD36 should not exceed 20m.