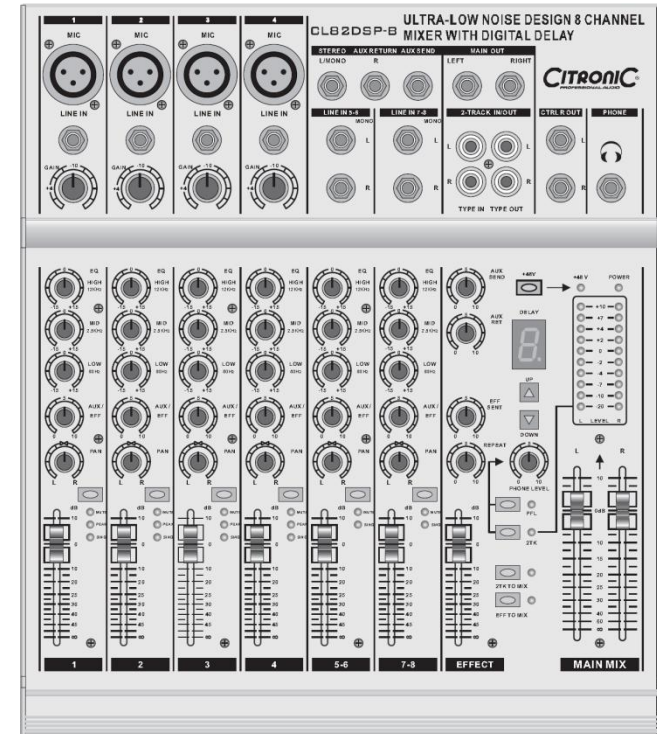


# CITRONIC®



# CL82DSP-B

**170.901UK**

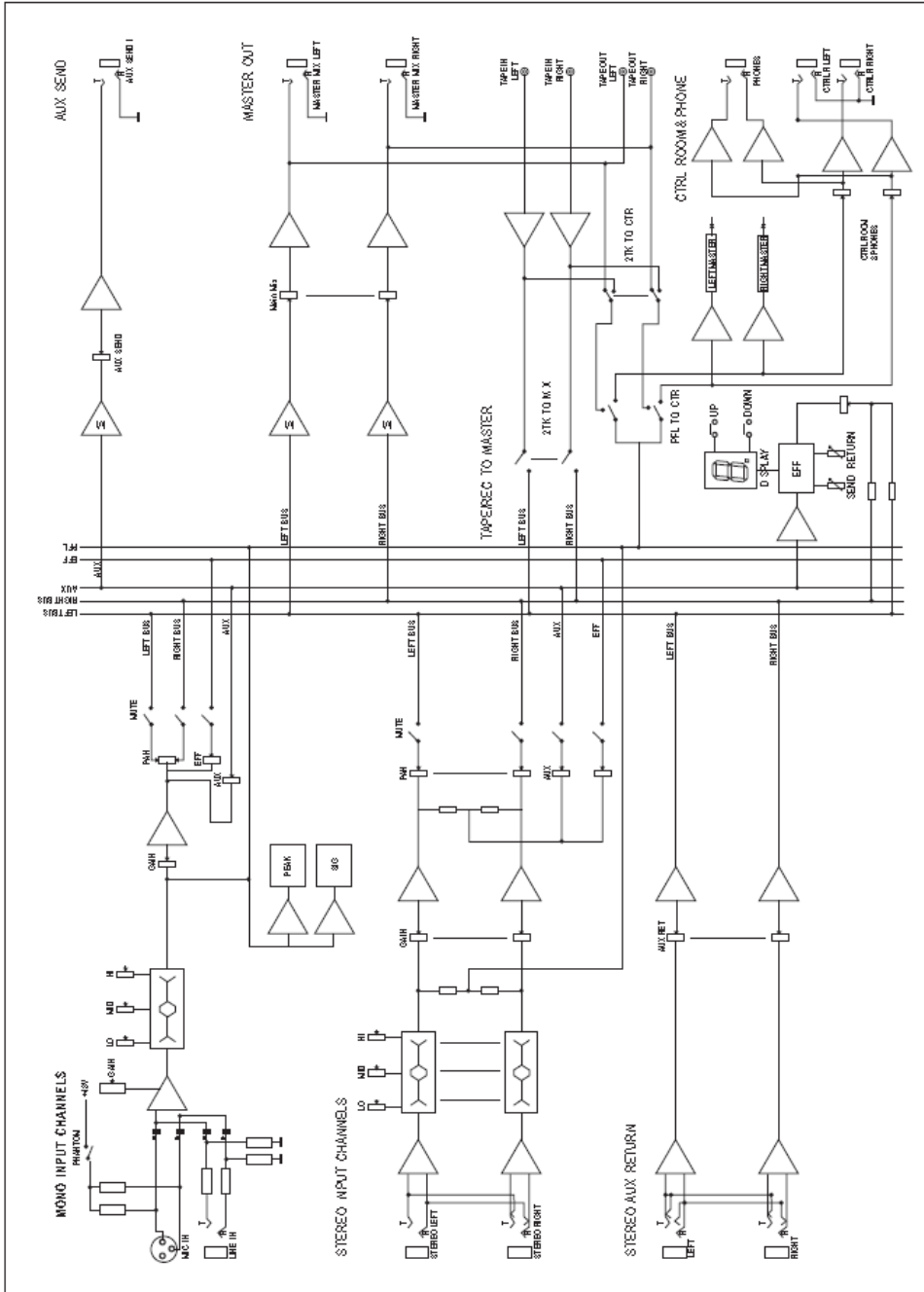
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**There are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the equipment during storms to prevent damage.**

# Block Diagram



# Introduction

Thank you for choosing this CL82DSP-B mixer. Before operating your new mixer, please take some time to read this instruction manual and familiarize yourself with its control layout and functions. A few minutes spent in reading this manual can help you avoid problems in the setup and operation of this high-quality audio product.

# Description

## A. INPUT CHANNEL SECTION

### 1. BALANCED INPUT (MIC)

Mic balanced inputs accept a standard XLR male connector. +48V Phantom Power is available on each XLR input and the switch is found to the left of the level meters [29].

### 2. LINE INPUT

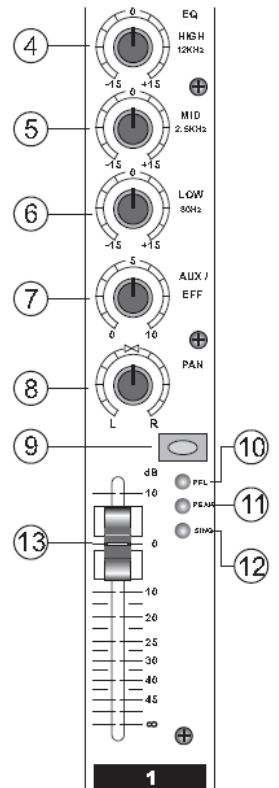
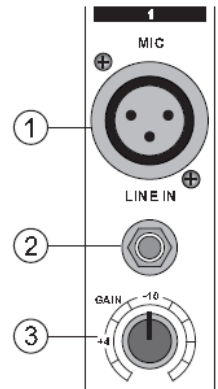
The 1/4" TRS jack socket is designed to accept a high impedance input signal. (eg. CD player, Guitar preamp, Keyboard etc.)

### 3. GAIN

Adjusts the input sensitivity for the relevant channel

### 4. HIGH

Provides  $\pm 15$ dB of fixed frequency equalization that shelves at 12kHz



## 5. MID

Provides  $\pm 15\text{dB}$  of fixed frequency equalization that shelves at 2.5kHz

## 6. LOW

Provides  $\pm 15\text{dB}$  of fixed frequency equalization that shelves at 80Hz

## 7. AUX/EFF

This routes the signal to the Internal EFFECTS or if a jack is plugged into the AUX SEND, it routes out via the AUX SEND. The signal is tapped after the EQ and channel fader (post-fade, post EQ) and therefore follows changes in the channel EQ and fader level.

## 8. PAN

The PAN control varies the balance of the left and right feed of the signal to the master output. This has the effect of positioning the signal at a particular point within the stereo field

## 9. MUTE

When pushed in, the signal from this channel is muted.

## 10. MUTE LED

Indicates the status of MUTE

## 11. PEAK LED

Indicates the signal at 5dB below clipping to help avoid overdriving the channel.

## 12. SIGNAL LED

Indicates the presence of a signal at the input

## 13. CHANNEL FADER

Adjusts the level of the channel routed to the master section

## B. STEREO CHANNEL SECTION

### 14. LEFT (MONO) / RIGHT

Line input via 6.3mm jack. Plug into both for a stereo input or the LEFT (MONO) for a mono input.

### 15. HIGH

Provides  $\pm 15\text{dB}$  of fixed frequency equalization that shelves at 12kHz

### 16. MID

Provides  $\pm 15\text{dB}$  of fixed frequency equalization that shelves at 2.5kHz

## Equalization

Hi Shelving	$\pm 15\text{dB}$ @ 12kHz
Mid Shelving	$\pm 15\text{dB}$ @ 2.5kHz
Lo Shelving	$\pm 15\text{dB}$ @ 80Hz

## Master Mix Section

Max Output	+22dBu balanced
AUX SEND Max Out	+22dBu unbalanced
CONTROL ROOM Out	+22dBu unbalanced
SNR	>112dB, all channels @ unity gain

## Power Supply

Mains Voltage	230V @ 50Hz
PSU	15V a.c.

## H. APPENDIX

### Specifications

#### Mono Inputs

Mic Input	Electronically balanced, discrete input
Bandwidth	10Hz – 60kHz $\pm$ 3dB, 20Hz – 20kHz $\pm$ 1dB
Distortion (THD & N)	<0.01% @ +4dBu, 1kHz, bandwidth 80kHz
Mic E.I.N. (22Hz – 22kHz)	-129.5 -129.5 dBu, 150 Ohm source -117.3 dBqp, 150 Ohm source -132.0 dBu, input shorted -122.0 dBqp, input shorted +10 dB to +60dB

#### Gain range

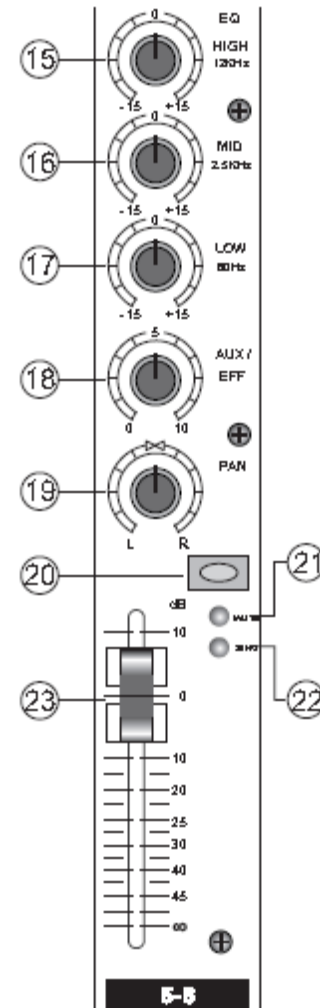
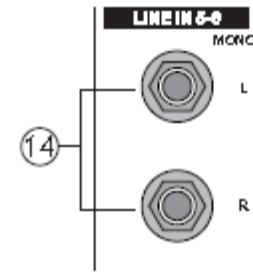
Line Input	Electronically balanced
Bandwidth	10Hz – 60kHz $\pm$ 3dB, 20Hz – 20kHz $\pm$ 1dB
Distortion (THD & N)	<0.01% @ +4dBu, 1kHz, bandwidth 80kHz
Line Level Range	+10dBu to -40dBu

#### Equalization

Hi Shelving	$\pm$ 15dB @ 12kHz
Mid Shelving	$\pm$ 15dB @ 2.5kHz
Lo Shelving	$\pm$ 15dB @ 80Hz

#### Stereo Inputs

Line Input	Unbalanced
Bandwidth	10Hz – 55kHz $\pm$ 3dB
Distortion (THD & N)	<0.01% @ +4dBu, 1kHz, bandwidth 80kHz



#### 17. LOW

Provides  $\pm$ 15dB of fixed frequency equalization that shelves at 80Hz

#### 18. AUX/EFF

This routes the signal to the Internal EFFECTS or if a jack is plugged into the AUX SEND, it routes out via the AUX SEND. The signal is tapped after the EQ and channel fader (post-fade, post EQ) and therefore follows changes in the channel EQ and fader level.

#### 19. PAN

The PAN control varies the balance of the left and right components of the stereo signal or the stereo placement of a mono signal.

#### 20. MUTE

When pushed in, the signal from this channel is muted.

#### 21. MUTE LED

Indicates the status of MUTE

#### 22. SIGNAL LED

Indicates the presence of a signal at the input.

## 23. STEREO CHANNEL FADER

Adjusts the level of the stereo channel routed to the master section

## C. MASTERSECTION

### 24. AUX SEND

Adjusts the output level of the AUX Send signal

### 25. AUX RET

Adjusts the input levels of the AUX Return signals

### 26. EFFECT SEND

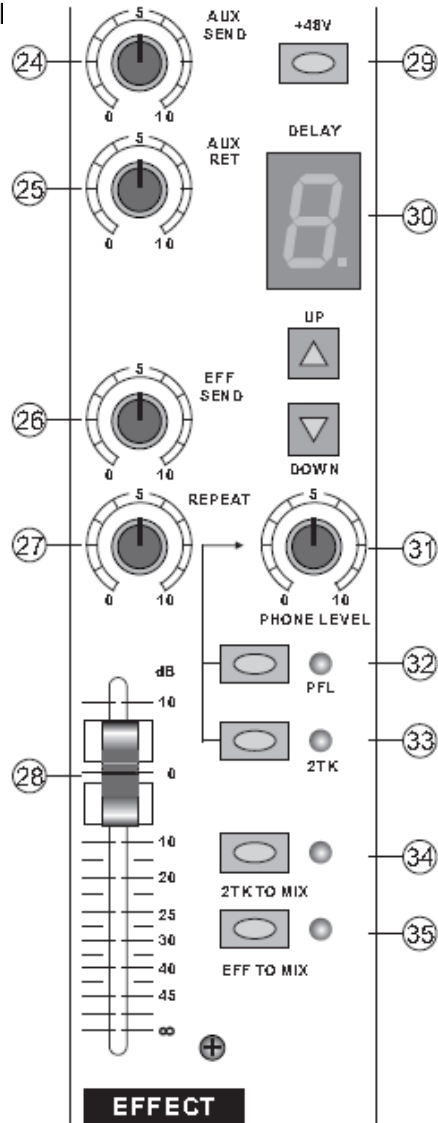
Master input level to the internal Effects, controlling a mix from each channel via the AUX/EFF controls

### 27. EFFECT REPEAT

Varies the level and number of delay repeats. (Caution – too high a value can induce oscillation and feedback)

### 28. EFFECT FADER

Adjusts the level of effect fed into the main mix



### Balanced use of stereo 1/4" jack plugs

tip= \_\_\_\_\_  
hot(+ve)  
ring= \_\_\_\_\_  
cold(-ve)

sleeve= \_\_\_\_\_  
ground/shield

tip \_\_\_\_\_  
ring \_\_\_\_\_  
sleeve \_\_\_\_\_  
strain relief clamp \_\_\_\_\_

For connection of balanced and unbalanced plugs, ring and sleeve have to be bridged at the stereo plug.

### Unbalanced use of mono 1/4" jack plugs

tip= \_\_\_\_\_  
signal

sleeve= \_\_\_\_\_  
ground/shield

tip \_\_\_\_\_  
sleeve \_\_\_\_\_  
strain relief clamp \_\_\_\_\_

### Balanced use of stereo 1/4" jack plugs

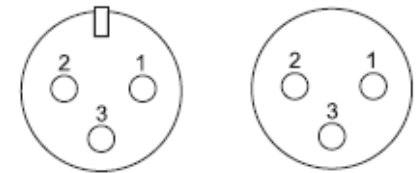
tip= \_\_\_\_\_  
hot(+ve)  
ring= \_\_\_\_\_  
cold(-ve)

sleeve= \_\_\_\_\_  
ground/shield

tip \_\_\_\_\_  
ring \_\_\_\_\_  
sleeve \_\_\_\_\_  
strain relief clamp \_\_\_\_\_

For connection of balanced and unbalanced plugs, ring and sleeve have to be bridged at the stereo plug.

### Balanced use with XLR connectors



Input

output

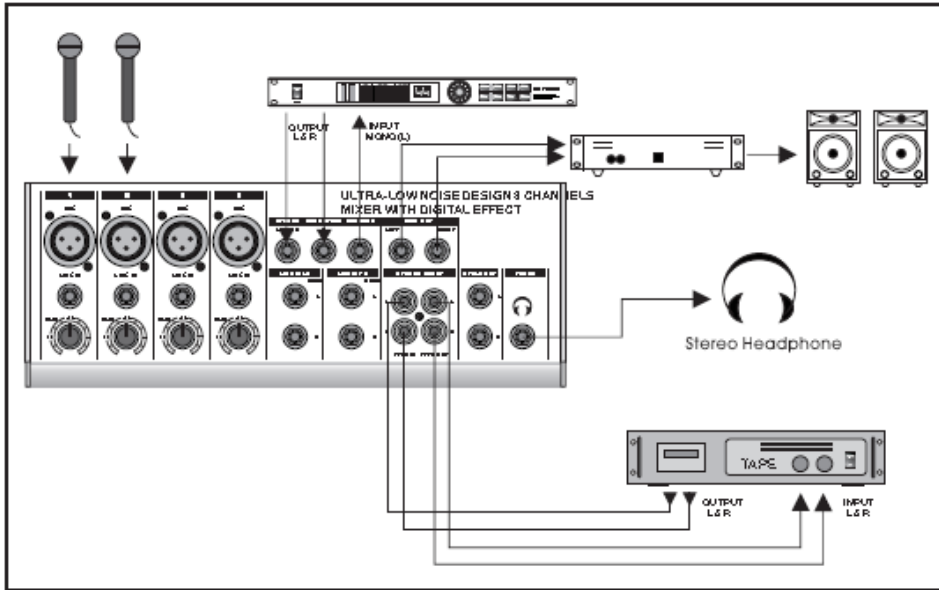
1=ground/shield  
2=hot(+ve)  
3=cold(-ve)

For unbalanced use pin 1 have to be bridged

Fig . 2: Different plug types

## F. INSTALLATION

See below for a typical configuration showing various connections.



## G. CONNECTION

For different mix configurations, different cables and connections may be required, check the following diagrams to ensure that the correct connections are used. Unbalanced equipment may be linked to balanced outputs but the result will still be treated as an unbalanced signal.

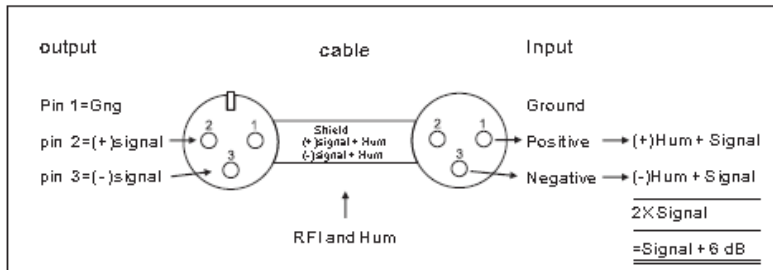


Fig. 1: Compensation of interference with balanced connections

### 29. PHANTOM POWER SWITCH

Global switch for +48V DC supply to all XLR Inputs for condenser mics, DI boxes etc.

### 30. DISPLAY

Shows the selected delay effect type. Use the UP and DOWN keys to select from 16 different types

### 31. PHONE LEVEL

Adjusts the headphone level and control room output level together

### 32. PFL

Pre-Fade Listen routes the monitor signal to the output meters for accurate monitoring

### 33. 2TK

PFL monitor switch for 2 track input

### 34. 2TK TO MIX

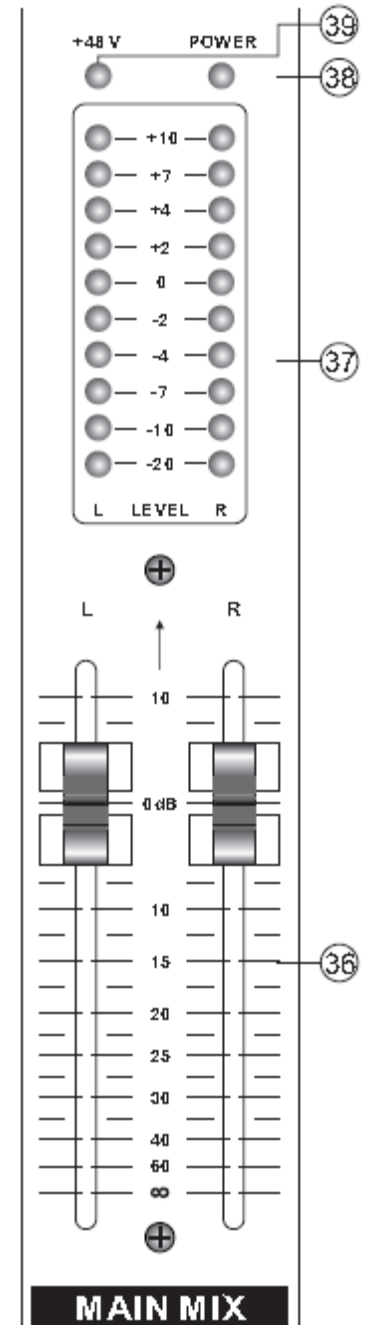
Routes the 2 track input into the main mix

### 35. EFF TO MIX

Routes the Effects into the main mix

### 36. OUTPUT MASTER FADER

Main mix L + R level control



### 37. LEVEL METER

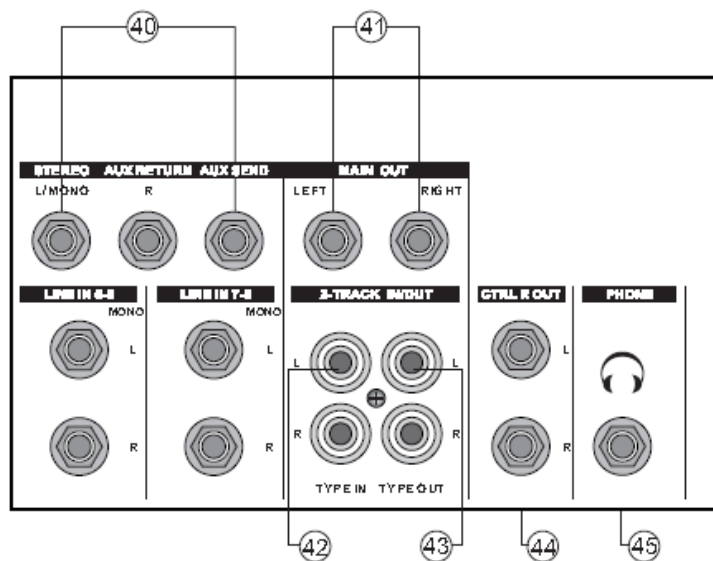
LED Indicator ladder for Control Room and Master outputs

### 38. POWER LED

Indicates mains power on

### 39. +48V LED

Indicates Phantom Power on



## D. OUTPUT SECTION

### 40. STEREO AUX RETURNS & SENDS

For connection of external processors

### 41. MAIN OUT

L + R main output on 6.3mm jack

### 42. 2-TRACK INPUT

L + R RCA input for playback etc

### 43. 2-TRACK OUTPUT

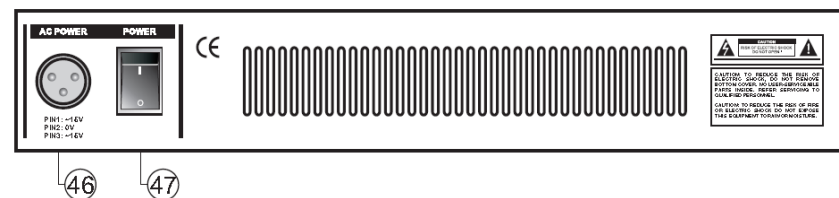
L + R RCA output to send to recording device

### 44. CTRL R OUT

L + R 6.3mm jack output for monitoring and control room speakers

### 45. PHONES OUTPUT

Stereo 6.3mm jack headphone output



## E. POWER SECTION

### 46. POWER SUPPLY INPUT

Connect the included 15Vac power supply unit here

### 47. POWER SWITCH

Mains on switch, power LED will light when on