

## Troubleshooting

Bear in mind that the ballast is only part of a system which on the output side includes cabling, the light head, the HMI bulb (globe), and a High Voltage ignitor. On the input side there is often a network of cables, connectors and circuit breakers. All components in the system need to be correctly maintained to ensure reliable operation. Particular care needs to be taken with the ignitor which can feed dangerous voltages back to the ballast. A faulty ignitor can damage multiple ballasts if a light head is simply moved from ballast to ballast without attempting to identify the root cause of a problem. If a problem cannot be diagnosed then the complete system of light head, ballast and cable should be sent to a qualified service technician for examination.

Symptom	Action
Nothing happens when the Start switch is pressed.	Check that the correct type of light head is being used with the ballast as different manufacturers use their own wiring scheme. The socket type is indicated on the underside of the ballast. Check that there is no break in the safety loop. This can be due to the door being open or slightly ajar on the light head (particularly if the lamp is pointing downwards). Alternatively there could be a problem with the door Switch, or a break in one of the cables. The continuity of the safety loop can be checked with a resistance meter. Try swapping the head feeder cable. With ARRI fixtures ensure the rocker switch on the fixture is in the ON position.
Lamp ignites as soon as power is applied	The Auto-Switch may be in the 'Auto' position. Push downwards to deselect. Check whether DMX control is connected. If the DMX channel is above 10% then the ballast will start immediately.
Lamp reignites after Stop button is pressed	The Auto switch may be in the 'Auto' position. Push downwards to deselect. DMX may be connected with the channel set above 10%. If DMX is being used the ballast must be stopped using the DMX controller.
Ballast attempts to start but then shuts down and Trip LED flashes .	Check there is a bulb (globe) fitted in the fixture. Is there any ignitor sound or sparking within the globe? If not then the ignitor may be faulty. Try a known good fixture on the ballast to confirm. If there is sparking within the globe but no ignition inspect the globe - does it appear old (white, opaque rather than clear) ? If so the lamp may be end-of-life and should be replaced. If there is no ignitor sound then there could be a short circuit on the head feeder cable or within the fixture. Try a known good cable and fixture to confirm. Is there any rasping or arcing sound coming from the fixture? The High voltage leads may be flashing cover to. ground. This is more likely to. happen if the lamp is hot so. leaving the fixture to cool for 10 minutes may cure the issue. However the High Tension leads should be inspected as Soon as possible for signs of ageing. Rasping or arcing sounds can sometimes be caused by break over between the pins within the lamp - some ignitor & lamp combinations have poor hot strike performance, so again, waiting for the lamp to cool may clear the issue. If a light head is suspected as having ground-fault or ignitor issues then it should not be used on other ballast as it may cause damage. It should be sent to a qualified technician for servicing. If the ballast continues to trip even with a known good fixture then there may be an internal fault and the unit should be referred to a qualified service technician.
Light goes out while running	Check the condition of the door switch on the light head. Due to heat expansion of the head the door switch contacts can open if they are poorly adjusted. The lamp may be end-of-life: examine its condition. Check the condition of the head feeder cable. If the contacts are in poor condition they may heat up and become high-resistance in use. The ballast may have gone into. Over Temperature shutdown. This would be indicated on the front of the ballast. Ensure that the ballast ventilation is not obstructed, that the ballast is protected from direct sunlight, and raised from the ground where the air can be hotter. Ensure the line voltage is sufficient.
Light Flickers	This may be due to arc movement- try using 300Hz operating mode. The lamp may be end-of-life leading to arc instability.



EB125P  
EB180P  
Electronic Ballast

## Operating Guide

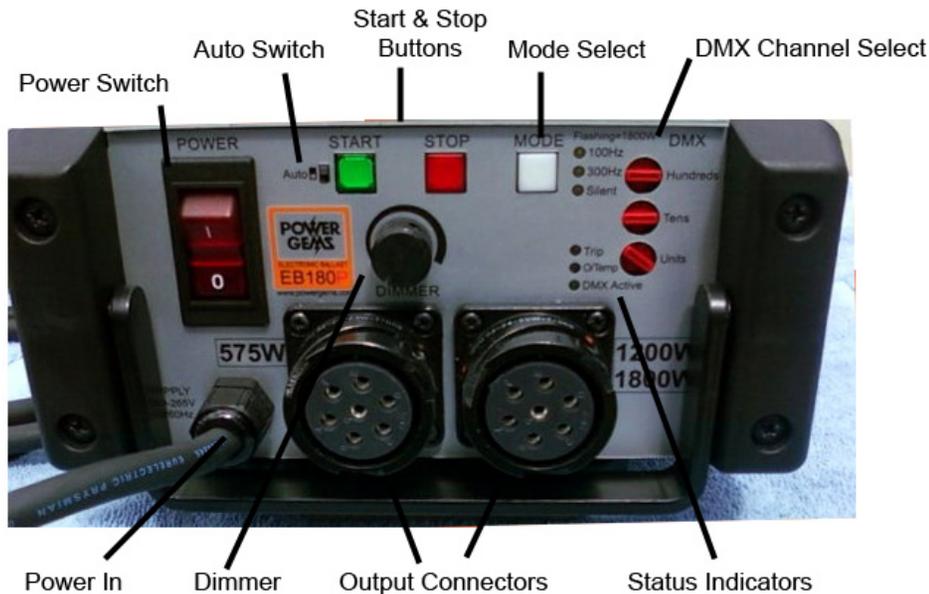


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## Front Panel Controls



**POWER SWITCH:** The power switch is illuminated to indicate whether the switch is in the ON position, and that the ballast is connected to a power supply. The switch also acts as a circuit breaker to protect ballast in the event of a serious internal fault.

**POWER IN:** The input voltage range for the EB125P is 90-265V AC, and for the EB180P is 100-265V AC. The ballast has a power factor correction stage so it draws a sinusoidal current (the same as a tungsten lamp). If the input voltage dips below the minimum rated value the ballast will switch into an under-voltage mode -the lamp keeps running, but switches to a low power until the voltage is restored. In the case of severe under-voltage (less than about 65V) the ballast will shut down. Although the ballast can tolerate brief over-voltages (>265V) it is important to avoid severe over-voltages as this may damage the ballast. This is particularly important to note in European and Asian countries with 400V cross-phase voltages which can cause damage to ballasts. Note that the Earth lead (green/yellow) must be connected to the supply safety earth to ensure operator safety.

**OUTPUT CONNECTORS:** The ballast may be fitted with one or two output connectors, however only one lamp may be connected at any time. The connectors may be able to supply a range of different lamp powers depending on the wiring configuration. This is indicated beside each output socket. The ballast in the photograph above, for example, can supply a 575W or 1200W lamp from the left hand socket, and a 575W, 1200W or 1800W lamp from the right socket.

The ballast will automatically detect which socket is in use and apply the appropriate power to the lamp.

**START & STOP BUTTONS:** When power is applied to the ballast the Stop button will light up. Once a fixture has been attached then press start to ignite the lamp. The Start button will then light up. If there is no fixture present, or if the safety loop is open (e.g. because the lamp door is open) then the Start button will not remain illuminated. [TIP: With ARRI fixtures ensure that the rocker switch on the fixture is switched on before attempting to start the lamp]. Note the Stop button will remain illuminated for a short while after the power switch is turned off as the internal supplies retain power for a time. This is normal operation.

**AUTO SWITCH:** When this switch is in the ON position (upwards) the ballast will start immediately when power is applied, provided that the lamp safety loop is closed, and there is no DMX controller attached. This feature is provided to allow remote starting of the ballast.

**MODE SELECT:** Pressing this button toggles through the various output frequencies. In 100Hz & 300Hz mode the ballast generates a square-wave current output which produces flicker-free light for shooting speeds up to 10,000 fps. In 'Silent' mode the ballast produces a rounded square wave which can reduce any noise produced by the light head, but the light is no longer flicker-free. Sometimes lamps can suffer from arc movement which shows up as a flutter in the light output. Selecting 300Hz mode can reduce this, although may increase objectionable noise emitting from the light head. The selected mode is remembered by the ballast and will remain the same even after a power-off. If an 1800W lamp is detected then the mode LED will begin to flash once the lamp has warmed up and is running at 1800W.

**DIMMER:** The dimmer knob allows the output power to be varied between 50% and 100%. The ballast ignores the dimmer setting during ignition so the position of the knob will not affect ignition performance.

**DMX CHANNEL SELECT:** Sets the channel which the ballast responds to. On/Off and dimming is done through a single DMX channel. Below 10% on DMX the ballast is off. Above 10% the ballast ignites and can be dimmed from minimum to full light when DMX is at 100%. The DMX connectors are on the rear of the ballast. When a valid DMX data stream is detected the ballast will ignore the front panel start button and dimmer setting, and respond only to DMX.

**STATUS INDICATORS:** TRIP LED: If the lamp fails to ignite, or the ballast detects a fault such as an output short circuit or flashover to earth then the ballast will shut down and the Trip LED will flash. Pressing Start will reset the trip and the ballast will attempt to restart, however if repeated trips are experienced then the problem should be investigated as there may be a serious underlying fault. O/TEMP: (over temperature). If the internal heatsink becomes too hot then the ballast will shutdown and light the a/Temp LED. The ballast has a wide operating temperature range and over-temperature faults should only be experienced if the cooling to the ballast has been obstructed, or under extreme operating conditions. After cooling, the LED will extinguish. The power should be left connected to allow the fan to run. DMX ACTIVE: This LED lights when an active DMX data stream is detected. When the LED is lit, the front panel Start and Dimmer controls are not active. The output Mode can however still be changed by pressing the Mode button.