

**Lionel ZW controller with 135 Watt or 180 Watt Powerhouse**

**1. The ZW controller shipped with the 135W or more recently with 180W PowerHouses operates in exactly the same way as a Post War Lionel ZW transformer. In addition, the new ZW controller can be used as four separate PowerMasters and controlled by a Lionel TMCC Cab-1 wireless remote controller.**

**2. How can I tell if my 180W PowerHouse is out-of-phase?**

There is a date code heat-stamped into the bottom of the case near the plug of the 180W Powerhouse, at the time of manufacture. Any 180W Powerhouse with a date code of 2000 48 or lower is out-of-phase with other transformers.

**3. What will Lionel do to correct my out-of-phase 180W PowerHouse?**

Lionel will provide a Phase Adapter plug, which will attach between the Powerhouse and ZW controller to correct the out-of-phase condition.

The most recent production of the ZW controller with 180W Powerhouse will not have this condition and will not require a Phase Adapter. See #3 above.

**4. Can I use my out-of-phase 180W PowerHouses before I have a Phase Adapter plug?**

Until the Phase Adapters are available you may still use the 180W ZW controller and transformers without causing damage to your controller or engines, provided your track is only powered from this controller. Until the Phase Adapter is available, we do not recommend adding additional 135W or 180W PowerHouses to the controller.

**5. My 180W PowerHouse circuit breaker trips more quickly than the 135W PowerHouse circuit breaker. Why?**

As a safety feature, the 180W PowerHouse has an electronic circuit breaker which will trip quickly under short circuit conditions. The 180W PowerHouse breaker will not trip because of sparks created at switches or from dirty track. It will supply the rated 10 Amps under all normal operating conditions.

**6. Does the ZW controller have built in overload protection?**

**YES**

The ZW controller has an internal, electronic overload protection circuit. This operates by reducing power supplied to the track in the event of an overload condition. See your operating manual for specific overload information.

**7. Can I use 180W and 135W PowerHouses together on a ZW controller?**

**YES**

A ZW controller supplied with 135W PowerHouses can be used with up to four 180W PowerHouses or any combination of the two.

**8. Can I use a 180W PowerHouse to power my PowerMaster?**

**YES**

**9. How much current can a PowerMaster supply with a 135W or 180W PowerHouse?**

**No more than 7Amps.**

**10. Can I use a 180W PowerHouse to power my direct lockon?**

**YES**

**11. How much current can a direct lockon supply with a 135W or 180W PowerHouse?**

**No more than 7Amps.**

**12. Will the 190W PowerHouse be produced ?**

**Not at this time.**

**To go to the letter regarding the ZW controller, click here.**