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## #2354 YARD MASTER II

### wiring instructions:

Place the direction switch into the CENTER POSITION before proceeding to connect the YARD MASTER II throttle, this will help prevent any damage to the YARD MASTER II when an improper connection is made while preliminary wiring is done.

With the power transformer TURNED OFF, connect the BLACK and WHITE input wires to an appropriately protected power transformer. Be sure to connect the BLACK and WHITE wires to the low voltage side of the power transformer (12VAC minimum to 20VAC maximum). If fuse protection is desired, place a 3 ampere slow-blow fuse (no larger than a 4 ampere slow-blow fuse is recommended), in the power line (black or white wire) to the YARD MASTER II. The YARD MASTER II does provide electronic output overload protection.

With the direction switch in the center position, apply power to the power transformer. The GREEN LED should illuminate, indicating power is on. If it does not, make sure that you have the BLACK and WHITE wires connected to the low voltage AC power source and NOT the red or green wires! When the GREEN LED is illuminated, a proper input power connection exists, you can now connect the RED / GREEN wires to the appropriate track (CAB) and operate a train. BE SURE that you are not backfeeding another throttle, this type of operation is not a general practice in model railroad operation and will probably damage the YARD MASTER II !!

### main harness color code:

**BLACK \**  
**AC INPUT - TO LOW VOLTAGE POWER TRANSFORMER**  
**WHITE /** (this may not be filtered DC, if used no speed control will result)

**RED \**  
**DC OUTPUT - TO TRACK (CAB OUTPUT)**  
**GREEN /**

### Input requirements:

**12VAC / 29 VA (WATTS), 16VAC / 39 VA (WATTS), 20VAC / 48 VA (WATTS)**

It is suggested to use a 12 to 16 VAC transformer for 12 volt motors, higher voltages will yield faster top end speeds. It is not recommended to go higher than 16 VAC for 12 volt motors. Item #692, 12VAC, or #690, 16VAC, are good power transformer for this unit. Some "O" scale engines and "G" use 16 volts and higher. This only affects the full speed desired.

To insure from track back feeds from other sources, that might damage the YARD MASTER II, always leave the direction switch in the center position when not using the YARD MASTER II. When using common rail wiring with multiple YARD MASTER II's or other type speed controls, always use a separate power transformer for each YARD MASTER / YARD MASTER II.

### Operation:

With the SPEED setting to minimum, set the direction switch to the direction desired. Then turn the SPEED to the setting desired. The YARD MASTER II will then gradually increase it's output to that setting. The YARD MASTER II has a built in momentum which allows you to adjust the SPEED setting rapidly without making the train jump! It's always good to decelerate the train before operating the direction switch.

The YARD MASTER II has electronic LIMIT circuitry that allows various current spikes to go uninterrupted but reacts quickly when a short circuit occurs. When an over current condition occurs, the RED LIMIT LED is illuminated and power to the track is turned off. After a few seconds pass, the power is again applied to the track. If the over current condition has been rectified, the YARD MASTERII will continue to function as normal. If the over current still exists, the YARD MASTER II will immediately turn off the power to the track and illuminate the RED LIMIT LED. The YARD MASTER II will repeat this sequence until the short/overload current condition is rectified.

Some engines will emit an apparent "buzzing" sound. This is a mechanical noise generated from loose armature windings and/or shells/chassis. There is no danger of damage to your motor.