

## Handheld Controller

Tech 4's optional walkaround controller allows full remote control capability and is equipped with memory. You can unplug the walkaround controller and move to a different area of your layout without effecting the operation of your loco. There is a throttle, direction button, brake button and a stop button on the walkaround controller, and they function in the same way as on the main unit.

## Service

Your Tech 4 Power Pack has been thoroughly tested at the factory. If, for some reason, your Tech 4 is properly connected and still not functioning correctly, it may have to be returned for service. Please telephone our service department at 732-225-6360 before returning your unit.

If it should ever become necessary to return your system, pack it in its original box prior to placing it in a larger carton. Be certain to send the unit Parcel Post Insured or United Parcel Service and include a clearly printed letter with your name, your address and daytime telephone number, and a detailed description of the problem you are experiencing. Send the unit to:

**Model Rectifier Corporation**  
**Attn: Power Pack Service Dept.**  
**80 Newfield Avenue**  
**Edison, NJ 08837**

All of us at MRC would like to join in wishing you many happy years of model railroading with your new Tech 4 train control.

### Accessories

Optional Hand held controller may be purchased at your local hobby shop. If you are unable to locate one that carries the MRC Tech 4 hand held controller, you may purchase it from MRC.

AB800	Tech 4 Walkaround Controller with 15' coil cable	\$32.98* each x _____ = _____
		NJ Tax            6%            _____
		Postage & handling            \$4.50
		Total                                    _____

\* Price is subject to change without notice

Mail Check or money order payable to Model Rectifier Corporation to the address above. Please allow four to six weeks for delivery

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80 Newfield Ave. Edison, NJ 08837 Tel: 732-225-6360

# TECH<sub>4</sub>

## Rail Power 350

## Caution - Electrically Operated Product

As with all electric products precautions should be observed during handling and use to reduce the risk of electric shock

- Not recommended for children under 8 years of age.
- Do not use or store in damp areas.
- Do not open the cabinet and try to repair it by yourself.

**Parents, please note:** As with any electrically operated unit, it is always best to periodically examine it and have repaired or replaced any potentially hazardous part.



**Model Rectifier Corporation**  
80 Newfield Ave., Edison, NJ 08837 Tel: 732 255-6360  
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## ***Congratulations!***

You have just purchased the most advanced DC train controller on the market. With the microcontroller embedded control and nonvolatile memory technology, the Tech 4 offers many features that will bring more realism to your layout than ever before possible. We are confident that you will enjoy using your new Tech 4 now and for many years to come.

### **Electrical Specification**

**Input:** 120 VAC / 60HZ

**Output:** 18.5DC, 16 VAC, 21 VDC

**Total Output:** 30 VA

#### **Output Terminal:**

**Variable DC** - For track - You can program the top end (maximum) voltage from 4 to 18.5 Volt (no load) with linear, full range of throttle knob.

**Fixed AC** - For AC accessories - 16VAC.

**Fixed DC** - For DC accessories - 21 VDC.

### **Operation**

**Power Switch** - Turn off the power switch when the unit is not in use. If you need to turn off your Tech 4 and then wish to reactivate it immediately, you must wait about 30 seconds before turning the power back on.

**Throttle Control** - The throttles adjust the loco speed setting in Run Mode and the program value setting in Program Mode.

**Throttle Selection** - If you have not purchased a walkaround controller please skip this paragraph. With the walkaround controller plugged in the main unit, you can select either main throttle control or walkaround throttle control. A quick movement of one throttle will automatically engage it and disengage the other throttle. Once engaged, the throttle will respond normally and remain engaged until it is disengaged by a quick movement of the other throttle.

**Mode Select** - You can switch between Run Mode and Program Mode by pushing the **Program** button. When **Prog.** LED (yellow) light is on, it indicates Program Mode and when it is off, it indicates the Run Mode.

**Direction Control** - Pressing the **Direction** button will change the locomotive's direction. If you have programmed in some momentum, the locomotive will slow down gradually and then change its direction after it has come to a full stop.

**Brake** - When programmed with momentum, the **Brake** button permits realistic slow, steady stops. When you press and hold the **Brake** button, the locomotive will slow down and stop. When you release the button it will return to its original speed.

**Emergency Stop** - Pushing the **Stop** button will cause the locomotive to stop immediately and the two end red LEDs will blink to show the Emergency Stop. Pushing the **Stop** button again will restore normal operation.

#### **Short Circuit or Overload**

Whenever a short circuit or an overload occurs the unit will immediately shut down and three red LEDs will blink back and forth to indicate that an overload has occurred. It will try to restore the output in three seconds. If the short circuit or overload is still there it will shut down again until you correct the overload.

### **Programming**

You can program the unit anytime you like even while a locomotive is running. In Program Mode, the red LED indicator will blink to indicate the setting. The locomotive will not respond to the throttle change in the Program Mode. It follows the last speed setting. However the locomotive speed will change when you program a different maximum voltage speed. All the programmed values you select will remain in the unit until you change them again.

#### **A. Program the momentum**

A real locomotive changes its speed gradually, so your model train should take a certain amount of time to speed up or slow down when you change the throttle setting or apply the brake. Now you can program this amount of time (momentum) to make your model railroading more realistic. While in Program Mode, adjust the throttle to the desired value and then push the **Momentum** button. The maximum momentum is about 30 seconds.

#### **B. Program the maximum voltage**

You can program the maximum voltage to match your model. The maximum voltage is the output voltage of the full throttle position. While in the Program Mode, adjust the throttle and then push the **Max.volt** button.

#### **C. Program ultra slow speed**

While in Program Mode by pushing the **Direction** button you can switch between **normal mode** and **ultra slow mode**. In **ultra slow mode**, the maximum voltage will be cut in half to provide you with an ultra slow speed control.

**Tip for programming the top speed** - Set the full throttle in Run Mode and then switch to Program Mode. The unit will be locked in top speed setting. And then change the top speed by above **B** and **C** until you get the desired top speed.

You can check the programmed momentum in Run Mode by pushing **Momentum** button. The indicator will blink for a couple of seconds to show the programmed momentum value and then return to show output level. You can check the maximum voltage in the same way.