



# AR1

All Scales

Automatic Reverse Controller  
For One Reversing Section

Auto Reversing Management  
8 Amp Peak, 6 Amp Continuous

## Features

- Cost effective automatic reversing for one reversing section or sub-district.
- User selectable trip current lets you adjust the AR1 to optimize operation with other equipment on your layout.
- Auto-reversing manages polarity mismatches on the reversing track section without manually throwing electrical toggle switches or adding another booster.
- No locomotive wiring modifications needed.
- No external power supply required, runs off track power.
- Easy 4-wire hookup.

## Parts List

1 AR1 Automatic Reverse Controller

1 Instruction sheet

Figure 1: AR1 top view

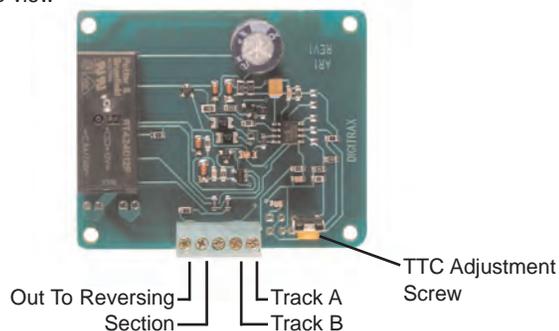
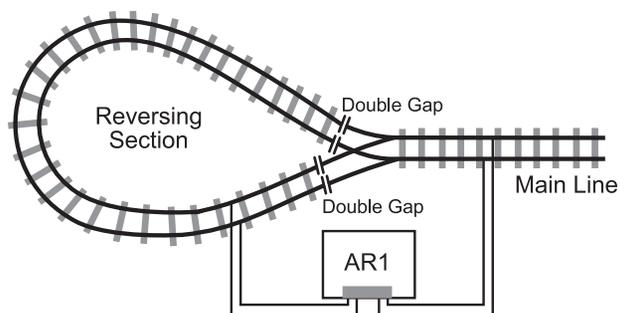


Figure 2: AR1 in the layout.



## Installation Instructions

The AR1 is usually located close to the point where the gap is cut for the reversing loop. The length of the reversing loop is determined by the maximum length of the train that will use it.

1. Turn off track power. (**Note: Failure to turn off power before connecting your AR1 may damage your AR1.**)
2. Connect Track Power from Rail A and Rail B mainline to terminals 4 and 5 on the AR1. (*Figure 1*)
3. Connect the wires from the reversing section to terminals 1 & 2 on the AR1. (Note: terminal 3 is not used.) (*Figure 2*)

## AR1 Tunable Trip Current Adjustment (TTC)

The TTC allows you to set the current at which the reversing section reverses when the train crosses the gap into the section. The TTC is adjustable from .25 amps to 8 amps. Turning the TTC screw clockwise increases the current trip point and turning the TTC screw counterclockwise decreases the current trip point. The total adjustment is approximately one half revolution of the TTC adjustment screw. The TTC adjustment is made using a full load on the reversing track--the total number of locomotives/cars that will be in the reversing loop.

1. Turn the TTC adjustment screw (*Figure 1*) to the midpoint position.
2. Turn on track power.
3. Place a locomotive on the mainline and operate it into the reversing section. It will trip 1 time at the beginning of the loop or at the end of the loop. It should not trip more than once while the train is in the loop.
  - a. If the AR1 trips more than once, the trip current is set too low. Turn the TTC clockwise slightly to increase the current trip point. Repeat the test until the AR1 trips once while the train goes through the reversing section.
  - b. If the AR1 does not trip and the booster shuts down, the trip current is set too high. Remove the train from the reversing section and allow the booster to reset. Turn the TTC counterclockwise slightly and repeat the test until the train trips the AR1 once without shutting down the booster.



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AR1 Auto Reverser

