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10345

Betriebsart 1 (Ersatz für 0090)

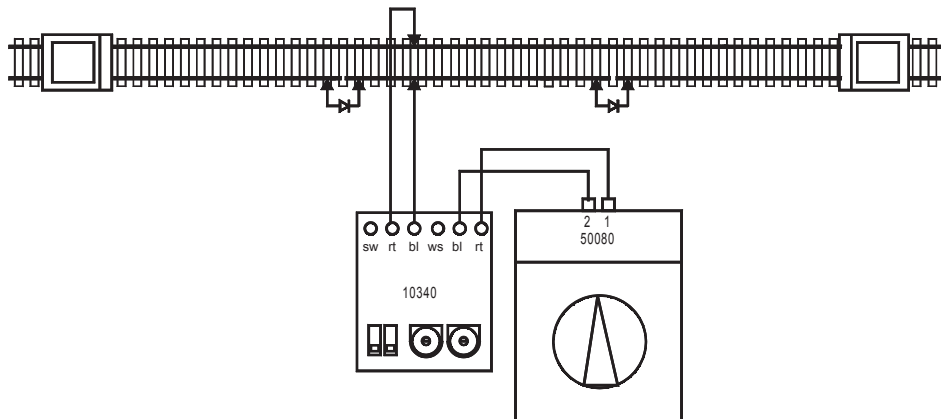
Mode of operation 1

Mode de operation 1

Bedrijfsmodus 1 (vervanger voor 0090)

Modo de funcionamiento 1 (sustituye a 0090)

Tipo di funzionamento 1 (sostitutivo per 0090)



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With the 10340 Automatic Reversing Unit, your train can shuttle automatically between two stations.

Features include:

- two operating modes
 - “basic” with adjustable acceleration
 - “prototypical” with adjustable acceleration and braking
- adjustable stopping time at stations
- Adjustable locomotive acceleration
- short circuit and overload protection

This package includes:

- 1 track bumper with circuit board
- 2 insulated track sections with factory-installed diodes
- 1 blue/red track power cable
- 1 blue/red connecting cable (transformer/track bumper)

Attention! This product cannot be used with the LGB Multi-Train System. However, locomotives with decoders can be operated with the reversing unit and an analog power pack.

OPERATION

CAUTION! Make sure there is enough stopping distance in each station to prevent accidents. Changing the speed of your train or the settings of the 10340 will change the required distance. For example, faster trains require longer stopping distances.

Operating modes

Inside the track bumper, there is a circuit board with two switches and two control knobs. To reach the controls, turn the track bumper upside down. The “Mode” switch selects the operating mode:

Mode 1 (factory preset): “Basic” with adjustable acceleration and abrupt braking. In this mode, the 10340 can be used as replacement for older LGB reversing units (80090, 0090).

Mode 2 “With prototypical braking:” adjustable acceleration and braking.

Attention! Changes to the operating mode settings will not take effect until the power has been shut off for at least 15 seconds.

Hint: The 20670 Track Cleaning Locomotive cannot operate in “cleaning” mode on a layout connected to a 10340.

MODE 1 (“BASIC”)

Preparation

1. Install one of the insulated track sections at the entrance to each station.
2. Use the blue/red track power cable to connect the connectors marked “bl” (blue) and “rt” (red) on terminal “A” of the circuit board to the tracks.
3. Use the blue/red connecting cable to connect the connectors „bl” (blue) and „rt” (red) on terminal “Power” of the circuit board to the DC output of an LGB throttle or power pack.
4. Plug the power supply cord into a house current outlet.

Operation

Place a train on the track between the stations. Adjust the throttle to a medium setting. After a short pause, the train will start and proceed to one station. At the station, it will pass over one of the insulated track sections and stop. After the pre-set waiting time, it will slowly accelerate in the opposite direction and proceed to the other station. The train will shuttle between the stations until the power is switched off.

MODE 2 (“WITH PROTOTYPICAL BRAKING”)

Preparation

Hint: To set up this mode, you need two single-strand wires (for example, LGB 50220) to connect the insulated track sections.

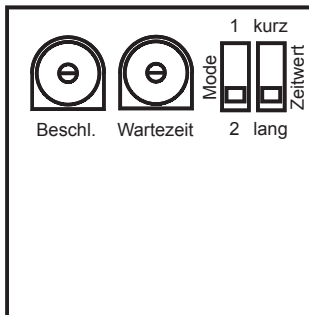
1. Loosen the screws on the tracks and remove the diodes. Install one of the insulated track sections at the entrance to each station. The interrupted rails of the two insulated track sections must be on opposite sides of the track. The track between the stations must be longer than the train.
2. Connect terminals “sw” (black) and “ws” (white) on the circuit board to the insulated track section. Loosen the screws on the insulated track sections and trap the wire between the screw and the rail.
3. Use the blue/red track power cable to connect the connectors “bl” (blue) and “rt” (red) of the terminals “A” and “B,” respectively, to the tracks.
4. Use the blue/red connecting cable to connect the connectors “bl” (blue) and “rt” (red) on terminal “Power” of the circuit board to the DC output of an LGB throttle or power pack.
5. Plug the power supply cord into a house current outlet.

Operation

Place a train on the track between the stations. Adjust the throttle to a medium setting. After a short pause, the train will start and proceed to one station. When it crosses the insulated track section, it will slow to a stop. After the preset wait time has elapsed, it will slowly accelerate in the opposite direction and proceed to the other station. The train will shuttle between the stations until the power is switched off.

ADJUSTING PARAMETERS (BOTH MODES)

Adjusting the station stop time



The time for a stop at a station is set by means of the „Pause“ switch and the „Wait Time“ setting controller on the circuit board.

- Set the range of the time for the stop at the right switch:
 - „short“ short (approximately 2 – 60 seconds)
 - „long“ long (approximately 1 - 8 minutes)
- Turn the setting controller to set the time for the stop within these ranges.
- Turn the setting controller to set the acceleration after the stop (1 – 8 seconds).

Adjusting the acceleration and braking

The acceleration and braking are set with the “Delay” adjustment knob on the circuit board. Turn the adjustment knob for faster or slower acceleration and braking. The acceleration and braking cannot be adjusted separately.

Hints:

- In mode 1 “Basic”, only the acceleration can be adjusted. Braking always is abrupt when the train crosses the insulated track sections.
- New settings for station stop time and acceleration/braking will take effect after the next station stop. It is not necessary to turn off the power.

Overload Protection

The 10340 is protected against short circuits and overloading. If an overload current of more than 3 amps occurs, the unit will switch off for 10 seconds. However, this overload protection functions only when using a power supply with an output of 3 amps or more. After 10 seconds, the unit will switch on again. When using a power supply with an output of less than 3 amps, a short circuit will trigger the overload protection of your LGB power supply.

Maximum current

The 10340 can be used with trains that draw up to 3 amps. If you are double-heading locos with sound or running long trains with lighted cars, your trains may trigger the overload protection (see Overload Protection).

Minimum Voltage

To operate properly, the 10340 requires an input voltage of 10 volts or more.

1. Emergency stop circuit for Mode 2 “Prototypical”

To prevent your train from hitting the track bumper at the end of the tracks, you can install “emergency stop” circuits at the end of each station. Using two additional insulated track sections (10153, not included), install the diodes (see page 11, Mode 2, paragraph 1). The loco will stop abruptly if it crosses the second insulated track section.

Hint: If the loco continues beyond the diodes, reverse the directions of the diodes.

2. Adjusting braking in mode 1 “Basic”

In mode 1 “Basic,” the acceleration controls also control the braking, just as in mode 2 “Prototypical.” The braking is activated when the reversing time has elapsed. However, the diodes installed in the insulated track sections usually cause the train to brake abruptly. This can be prevented by carefully adjusting the station stop time to make the braking start before the train reaches the insulated track sections. Adjusting this requires a skilled hand and some patience.

Hints:

- Instead of reducing the travel time, you can decrease the speed slightly at the throttle/power pack (and vice versa). This allows a finer adjustment and is effective immediately.

- With this setting, the duration of the stop is short and not adjustable.

3. Adjusting train speed on grades

If you use your 10345 to run a train on a grade, the train will run faster downhill than uphill. However, with a simple electronic circuit, you can reduce the voltage the train receives when going downhill. This circuit works in both modes, Mode 1 “Basic” and Mode 2 “Prototypical”:

- Install an additional insulated track section (for example, 10153) between the original insulated track sections.
- Wire a number of diodes (1N5400, not included) in series in the downhill direction. For each diode wired in series, the track voltage will drop by 0.7 – 1 volt.
- Wire a single diode in the uphill direction, parallel to the series of diodes. The train will run at normal speed uphill, but slow on the return trip downhill.

Hint:

In Mode 1 “Basic,” you can use a directional “slow section” before the train reaches the station to provide braking in steps.

Betriebsart 2, mit Auffahrschutz

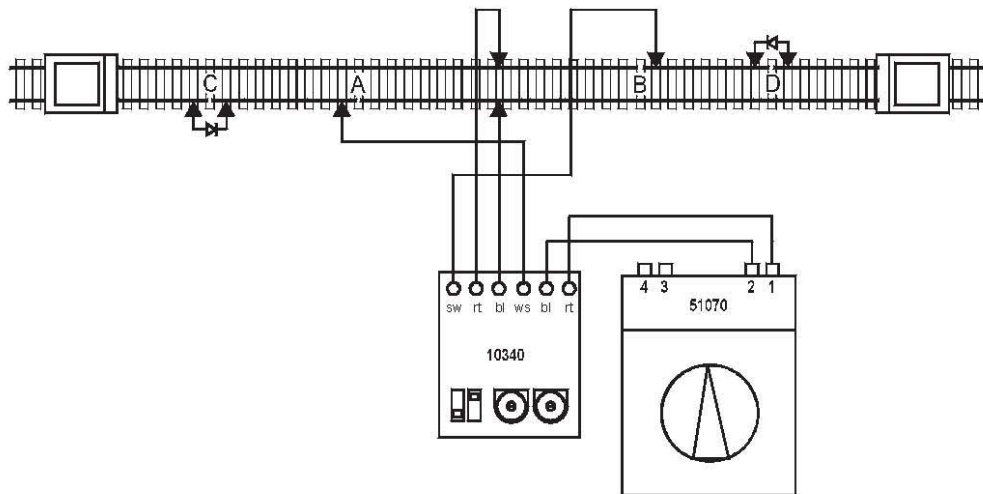
Mode of operation 2

Mode de operation 2

Bedrijfsmodus 2, met botsbeveiliging

Modo de funcionamiento 2, con protección contra colisión por alcance

Tipo di funzionamento 2, con protezione da avanzamento



Betriebsart 1, Kompensieren der Geschwindigkeit auf Gefällstrecke

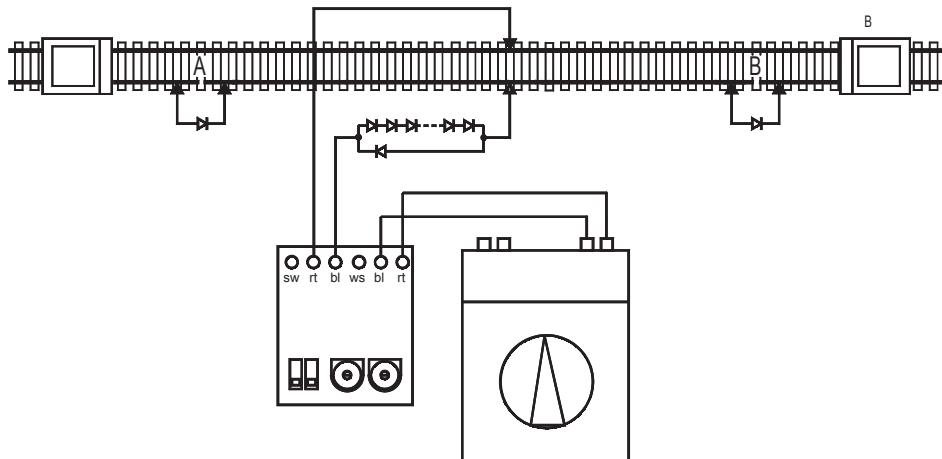
Mode of operation 1, Adjusting train speed on grades

Mode de operation 1, Réglage de la vitesse du train sur les pentes

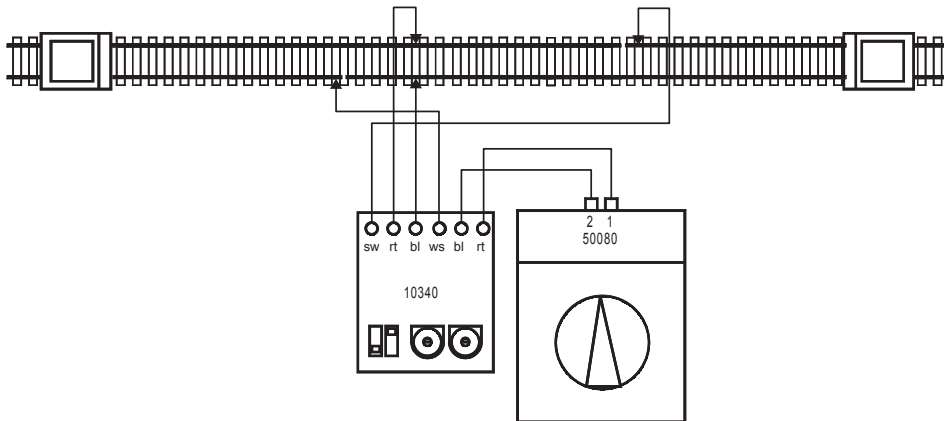
Bedrijfsmodus 1, compenseren van de snelheid op dalende trajecten

Modo de funcionamiento 1, compensación de la velocidad en el tramo en pendiente

Tipo di funzionamento 1, compensazione della velocità su tratta in discesa



Betriebsart 2, vorbildgetreu
Mode of operation 2, Prototypical
Mode de operation 2, identique au prototype
Bedrijfsmodus 2, voorbeeldgetrouw
Modo de funcionamiento 2, fiel al modelo real
Tipo di funzionamento 2, fedele al prototipo



Due to different legal requirements regarding electro-magnetic compatibility, this item may be used in the USA only after separate certification for FCC compliance and an adjustment if necessary.

Use in the USA without this certification is not permitted and absolves us of any liability. If you should want such certification to be done, please contact us – also due to the additional costs incurred for this.

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