

## Infrared Speed control for Direct and Alternating Current

### Description

The infrared speed controller for enclosed areas consists of a receiver module and the IRIS remote control. Depending on the version it can control a DC or an AC locomotive on analog model railway layouts.

Using IRIS remote control the following functions can be operated by the press of a key:

- Speed control in small or large steps
- Direct selection from 10 pre-defined speed steps
- Change of the running direction
- Selection of a shunting mode
- Start/brake inertia with four different delay values
- Emergency stop

The IRIS remote control operates with four different channels and can therefore be used with up to four different Receiver modules. Each receiver module supplies its own electric circuit which can be controlled independently of the others.

### Connection

#### Remote Control

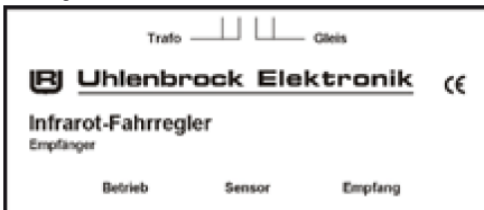
Put the batteries, according to the markings, into the battery compartment on the back of the hand control.

Suitable batteries are LR03-AAA-1.5V. The control LED should blink whenever a key is pressed on the remote control.

The transmitter has a range of about 10 M.

#### Receiver Module

Connect the cables from the track, also the connector marked "Gleis". Connect the transformer with 12V~ to 16V~ to the input marked "Trafo". Each module needs its own transformer. The transformers must not have their secondary windings inter-connected.



Place the receiver module where it will be in line of sight with the remote control while in use.

### Operation of the Speed Control

All functions are controlled with the IRIS remote control. Point the remote control toward the receiver module and press the appropriate Key. During the transmission of the instructions the remote control must be in "line of sight" of the receiver module as with a TV remote control.

#### Speed Control

The [+ ] and [- ] keys gradually increase and/or reduce the speed of the locomotive. If the keys are held down the speed gradually changes until the key is released again, the maximum speed is reached, or the locomotive stops. The speed control's step size is adjustable.



#### Selection of increment for [+ ]/[- ] keys

The step increment for keys [+ ] and [- ] for changing the locomotive speed is selected with the keys [f+4] and [f+8]. [f+4] selects the small increment, [f+8] selects the large increment.

#### Using Preset speeds

The numeric keys [0] to [9] directly select the preset speeds from 0% to 100% of the maximum velocity.

#### Selecting Driving direction

The [← ] and [→ ] keys select the driving direction in DC operation. If one of the keys is pressed while driving, the emergency stop is firstly activated and then the selected driving direction is implemented. In AC operation the keys will send the switching pulse. If one of the keys is pressed while driving, an emergency stop is activated.

#### Emergency Stop

If one of the two arrow keys pressed while the locomotive is running, then firstly, an emergency stop is activated and then the desired driving direction is set.

## Start/Brake Inertia

The [f1], [f2], [f3] and [f4] keys select the start/braking inertia for the controlled electric circuit. [f1] none and [f4] selects the largest delay. From [f1] to [f4] the delay becomes more obvious.

## Shunting Mode

With the shunting mode the locomotive can be controlled in particularly fine steps up to half the maximum velocity. It is switched on and off with the [f0] and [off] keys.

## Channel Selection

The [A] to [D] keys can select one of the four channels, and therefore a particular electric circuit.

## Lok Key

Initiates the procedure for the allocation of an electric circuit to the channel (see "Method").

## Stop Key

The [stop] key can switch the track power of the selected electric circuit on and off. If the key is pressed numerous times the locomotive will drive off with a preset speed.

## Keys without function

The S and T keys, as well as the red and green keys do not have a function in an analog layout.

## Messages of the control LED

The control LED of the remote unit always flashes if a key is pressed on the remote control. The control LED on the receiver module with the "Empfang" label always blinks when the module receives an infrared signal.

The control LED on the receiver module with the label "Betrieb" has different functions:

- *Speed indication*  
If the locomotive is running the LED is on, the LED is off if locomotive is stopped. In the DC operation it glows bright the higher the speed of the locomotive.
- *Slow blinking*  
The track power was switched off with the [stop] key.
- *Rapid blinking*  
The track has a short circuit. As soon as the short circuit is eliminated the [stop] key can be used to re-energize the track. The locomotive drives on with its previous Speed.

## Our contact Details:

Service: In the event of a defect or failure send the unit together with the invoice and a short description of the fault back to us for repair.

Hotline: We are available if you have any questions! Your direct line to a technician: **0 20 45 - 85 83 27**  
Mon - Tue - Thu - Fri, 14:00-16:00 and Wed 16:00-18:00

## Allocating an Electric circuit to a channel

The IRIS remote control works with four different channels. In that way it can address up to four different receiver modules, each of which supplies its own electric circuit. Each electric circuit can be controlled independently of the others. A channel (and thus an electric circuit) is selected with the [A] to [D] keys. By default each receiver module reacts to the control instructions of all channels. If several receiver modules are used on a layout a channel by which it is to be controlled must be assigned to each module.

## Method

- Press the [lok] key 3 times in succession:  
The Control LED on the receiver module blinks. The module awaits the assignment of a channel.
- Select the desired channel with the keys [A] to [D] or the [stop] key to restore the default state: the module reacts to the control instructions on all channels.

**NOTE!** During programming it is very important that only the receiver module which is to be assigned to a channel is supplied with power. All other modules must have the power switched off.

## Technical Data

Max. power output:	2A
Range:	10m
Batteries:	LR03-AAA-1.5V
Receiver Transformer:	12-16V, 2A

## Part Numbers

26 200 Set for DC  
26 300 Set for AC  
26 210 Receiver for DC  
26 310 Receiver for AC  
66 510 IRIS Remote control  
20 040 Transformer 45 VA

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Made in Germany

Electronic devices do not  
belong in household rubbish

