PIKO
SMARTCONTROL
wlan

PIKO SmartControl*wlan* –

the future of digital control!

PIKO Handheld

PIKO
SMARTCONTROL
wlan

SD-Card   I   II   Stop   Power   Data   Run   Stop / Fail   WLAN

OWNER'S MANUAL

HO 1:87   N 1:160   TT 1:120

Dear PIKO fans,

We are pleased to present to you the all-new **PIKO SmartControl**_wlan_ Digital Command Control system, an innovative, user-friendly, and above all sustainable DCC system developed completely in-house for the needs of the average DC model railroader.

Running trains, throwing switches, controlling signals, creating routes, and programming CVs has never been so easy. The new **PIKO SmartControl**_wlan_ is the perfect DCC system for beginners and seasoned model railroaders alike. And, thanks to the **PIKO SmartControl**_wlan_ modular design, adding boosters is a snap for those wanting to expand the size of their layout. The Smart Controller's throttle features easy-to-understand symbols clearly arranged on the color display. This makes operating the SmartControlwlan simpler than traditional DCC systems which required the user to read lengthy manuals or attend a programming course. What's more, the **PIKO SmartController**_wlan_ is designed in such a way that it can be conveniently operated with one hand.

The **PIKO SmartControl**_wlan_ and **PIKO SmartBox**_wlan_ are connected to each other via a self-contained Wi-Fi network. This allows the operator freedom of movement around the layout. A special feature of the SmartControlwlan system is it allows up to four **PIKO SmartController**_wlan_ throttles to be paired with one **PIKO SmartBox**_wlan_ - for even more fun with family, friends or on a club layout!

PIKO SmartControl*wlan*

Owner's Manual

Table of Contents

PIKO SmartControl*wlan* is a Digital Command Control (DCC) system designed for model railroaders of all skill levels. It consists of the **PIKO SmartController*wlan*** hand held throttle and the **PIKO SmartBox*wlan*** command center which are connected to each other via WiFi.

The **PIKO SmartControl*wlan*** lets you control DCC-equipped locomotives and cars as well as accessories like turnouts and signals. It also allows the operator to program train routes so that turnouts and signals are automatically aligned for a particular train routing.

The **PIKO SmartBox*wlan*** serves as the heart of the PIKO SmartControlwlan system. Clearly labeled buttons and ports make for trouble-free operation while colored LEDs give you a quick overview of the system status.

The **PIKO SmartController*wlan*** is a state-of-the-art wireless handheld throttle for the **PIKO SmartControl*wlan*** system. Up to four SmartControllers can be used simultaneously on a single **PIKO SmartBox*wlan***. The ergonomic shape of the **PIKO SmartController*wlan*** is designed to sit perfectly in the average hand. The buttons and keypad are arranged such that everything can be controlled with one hand; whether for right-handed or left-handed individuals.

System attributes

- Up to 16 locomotives can be controlled individually or as part of a consist. An almost unlimited number of locomotives can be managed on the SD card*.

- The **PIKO SmartControl*wlan*** is RailCom Plus® compatible, so all locomotives and rolling stock equipped with RailCom Plus decoders will automatically register with the system when placed on he track.

- The **PIKO SmartBox*wlan*** supports the 14, 28 and 128 speed step format.

- The data format can be set individually for all locomotive addresses.

- Up to 69 functions can be activated for each locomotive address.

- The system allows up to 128* accessories with addresses ranging from 1 to 2048.

- The **PIKO SmartControl*wlan*** system features a route memory for up to 18* different train routes. Nine different turnouts and signals can be programmed for each route.

- Each route can have any accessory from address 1 – 2048 programmed into it along with pause times for accessories.

- The command station delivers a 2 A output to the main track and features short circuit and overload protection. This enables multi-train operation of up to 5 trains (depending on the gauge) without having to use additional boosters.

- The **PIKO SmartBox*wlan*** has a separate programming track output. When programming on the programming track, the main track output is switched off.

- The **PIKO SmartControl*wlan*** supports both a programming track as well as Programming on the Main (POM and XPOM).

- PIKO SmartDecoders from version XP 5.1 and upwards can be updated with the SmartControl.

- All **PIKO SmartControl*wlan*** components can be updated.

- The **PIKO SmartControl*wlan*** can be operated via Wi-Fi in AccessPoint mode (the system's self contained Wi-Fi network), or by integrating the system into an existing home network in Station mode.

* Start Set versions of the **PIKO SmartControl*wlan*** allow a maximum of 16 locomotives, 54 accessories, and 3 train routes with 6 switching commands. Programming can only take place on the programming track. Start Set SmartControl systems can be upgraded to the full SmartControl system..

System connections

The **PIKO SmartBox**_wlan_ has ports for a main track, a programming track, a PIKO SmartBooster, the PIKO SmartTester, as well as USB-C port and a socket for the power cord.

Connection points on the PIKO SmartBox _wlan_

Back side
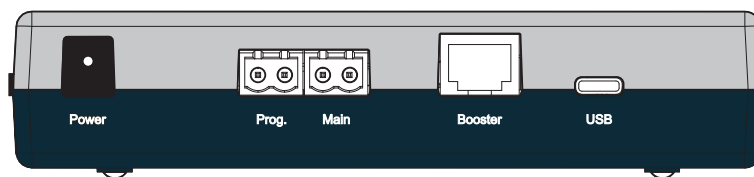
Power:	Connection port for the 16V DC power cord
Prog.:	Port for the programming track (only for decoder programming; No digital traction voltage)
Main:	Port for the Main track connection with DCC digital voltage
Booster:	Connection port for a PIKO Booster
USB:	USB-C port for PSCw app and firmware updates (cable included)

Right side
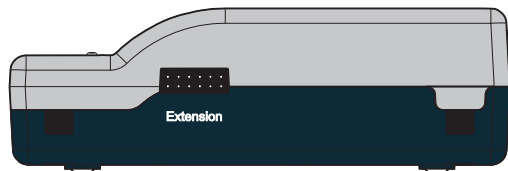
Extension: Connection port for SmartController accessories like the PIKO SmartTester

Front side
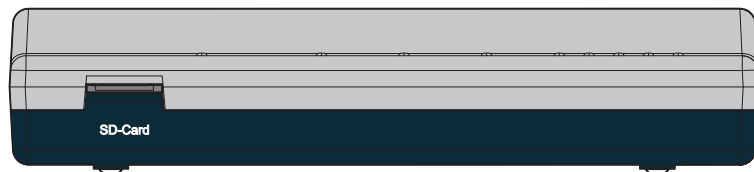
SD-Card: SD card: Slot for the micro SD card

The included micro SD card is used to store locomotive images and to transmit updates to the command station. In addition, the information stored in the system about locomotives, accessories and routes can be saved on the micro SD card and later transferred back to the SmartController (backup function). **The SD card must be inserted to operate the SmartBox.**

Controls and display elements of the PIKO SmartBox *wlan*
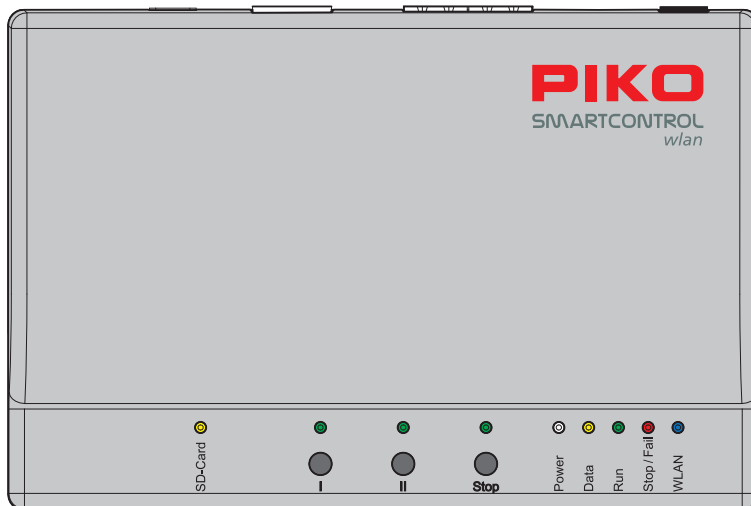
Buttons

I:	Open use button (you can program this button for any function you want)
II:	WLAN "Fast Connect" (adjustable)
Stop:	Track power On/Off switch
	A long press on start-up resets the SmartBox to factory settings

LEDs

SD-Card:	SD card data transfer
I:	Button I on/off
II:	Button II on/off
Stop:	Stop button on/off
Power:	System is powered on
Data:	SmartController is receiving data
Run:	Main track is switched on
Stop/Fail:	Main track is switched off / system fault
WLAN:	Wi-Fi On/Off

1. Putting the PIKO SmartControl$_{wlan}$ into operation

First connect the main track port (Main) of the **PIKO SmartBox$_{wlan}$** to the main track and, if necessary, the programming track port (Prog.) to the programming track. The main and programming tracks should not be connected to each other in any way or it will damage (and possibly destroy) your

PIKO SmartBox$_{wlan}$.

Make sure the SD card is inserted into the SD card slot.

Now turn on the operating voltage by plugging the 16V power supply cord into the Power connection port. The following control LEDs will now illuminate: SD card (yellow, briefly), Power (white), Stop/Fail (red) and WLAN (blue; blinking)

Now insert the included battery into the battery compartment on the back of the **PIKO SmartController$_{wlan}$** . Make sure the battery is oriented correctly to its contacts. Reattach the battery compartment cover with the enclosed screw. Now the **PIKO SmartController$_{wlan}$** will turn on automatically. If the battery is already inserted and the throttle is turned off, press and hold the "STOP" button for approx. 3 seconds to turn the throttle on again. After the PIKO start screen, the locomotive selection menu will appear on the display and the "STOP" button will flash (track voltage is turned off).
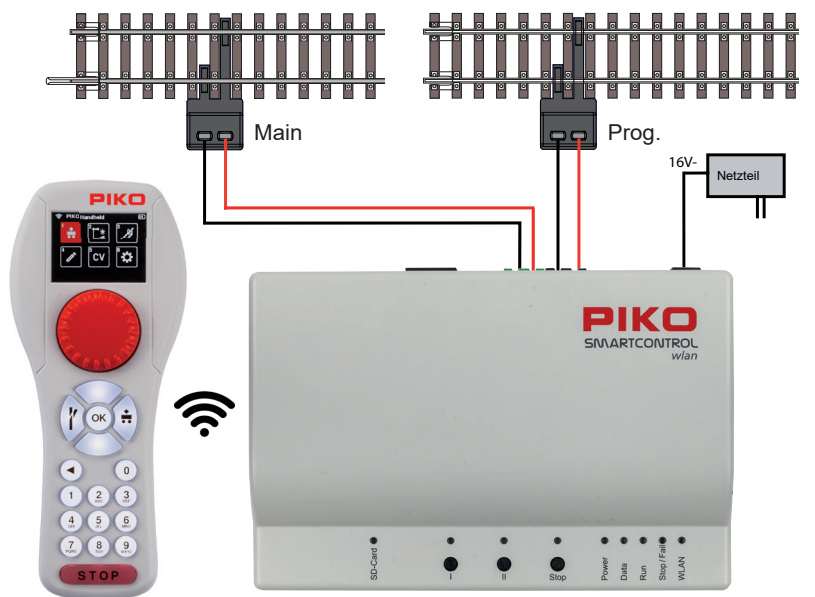
CAUTION:

The SmartController throttle and SmartBox are not paired to each other from the factory. There is no Wi-Fi connection and the Wi-Fi symbol on the throttle's display is crossed out!

You must first activate the Wi-Fi connection, which will then pair the throttle and command center to each other. If both devices have not been used before, please carry out the "FastConnect" function by following the instructions on the SmartController's screen and pressing and holding button II on the control panel until the "Run" and "Stop/Fail" LEDs flash in-synch. Then confirm seeing the two information windows on the throttle by highlighting "Yes" within 30 seconds.

The devices are now paired when the two LEDs on the control panel stop flashing and the active WLAN symbol appears on the throttle.

More information on "FastConnect" can be found in Chap. 3.8.5 "Select WLAN".

2. The controls of the PIKO SmartController*wlan*

Overview of the controls

Display

The **PIKO SmartController*wlan*** vfeatures an illuminated TFT color display that can be adjusted to the user's preference. The display icons are largely self-explanatory. Each icon is clearly marked for easy use of the **PIKO SmartControl*wlan*** digital system.

The Wi-Fi signal strength, throttle ID and battery level are displayed in every menu on the top line of the display. Depending on what it is being used for, an hourglass icon will appear (data is being loaded or processed), the letters "ABC" or "abc" will appear to differentiate between upper and lower case, the letter "R" will appear to signify RailCom Plus® registration and the letter "P" will appear during CV programming mode via the programming track.

Throttle

The throttle features endless rotary dial control for setting the speed, changing direction of travel and emergency stop for the currently active locomotive.
Adjustable for AC drive controller mode (factory setting) and DC drive controller mode (chap. 3.8.3).

Buttons
All train control and layout operation can be carried out comfortably using the backlit keyboard of the PIKO SmartControllerwlan. The durable keys have a clearly perceptible pressure point and are nearly wear-free.

USB-C port
The **PIKO SmartControl**$_{wlan}$ contains a USB cable that is used to charge the system via the USB-C port. Charging can also be carried out while the system is in operation. If need be, a 5V DC, 1A power supply to charge the system, provided it has the correct USB plug.

3. Operation of the PIKO SmartController$_{wlan}$

3.1. Start

When the SmartController is turned on, it is in the locomotive selection menu and the STOP button flashes (track power is switched off).
Power to the main track output can now be turned on with the STOP button. The STOP button light will switch off and the "Run" LED on the SmartBox will light up green.
Track power can be shut off at any time using the STOP button on the throttle or the "Stop" button on the SmartBox.
In the locomotive selection menu, you will find all locomotive data that has been created via the editing menu or that has been automatically generated from RailCom Plus®-equipped locomotives. DCC locomotives are factory-set to address "3" and will show up on your system as "3" until you give the locomotive a new address.

If your **PIKO SmartControl**$_{wlan}$ came as part of a **PIKO SmartControl**$_{wlan}$ Start-Sets
then "Startset" will appear on the throttle display. The Startset version allows you to immediately begin operating trains once track power is turned on and the Start Set locomotives are placed on the track. Each Start Set locomotive is equipped with a RailCom Plus® PIKO SmartDecoder, so they identify automatically with the **PIKO SmartControl**$_{wlan}$ the minute they are placed on the track. It's true plug-and-play operation!

NOTE: During operation, the throttle may display information windows. These windows can be closed with any key, or they will disappear automatically after about 10 seconds. The information displayed should be noted respective to its content.

3.2. The Main menu

The menus for controlling rolling stock and accessories as well as device settings are available under the main menu.

The menus displayed can either be selected with the keypad using their associated number (top left in the menu field) or selected using the navigation buttons (up / down / left / right) and then confirmed with the "OK" button

1 [▥]: Locomotive menu (for selecting available locomotives)

2 [▣]: Accessories menu (for selecting available accessories)

3 [▨]: Routes menu (for selecting train routes you have created)

4 [✎]: Edit menu (for editing locomotives, accessories, and train routes)

5 [CV]: CV programming menu (CV programming and decoder updates)

6 [⚙]: Settings menu (for selecting device settings)

You can return to the main menu from each of these menus by pressing the "back" button.

3.3. The Locomotive menu [▥]

In the locomotive menu, you can choose from all available locomotives which one you want to operate. Up to 16 locomotives can be run simultaneously. If a locomotive is selected and is currently running on the layout, you can still switch to another one. The previous locomotive will continue to run at the speed you left it at until you select it again and change its speed.

The locomotive menu is factory set to locomotive address 3.

To begin operating a locomotive with the **PIKO SmartController**_wlan_ , you first call it up from the locomotive selection list by pressing the number key that matches the locomotive's address (found in the top left of the field). The locomotive can also be selected by using the navigation buttons (up / down / left / right) and pressing the "OK" button.

If numerous locomotive data sets have been created and they do not all show up on the display, you can scroll down through the list and select the locomotive you want to run.

If more than six locomotives are available, two triangles will appear above and below the list. The solid triangle shows the direction in which further locomotives can be reached using the "up" or "down" buttons. If the desired locomotive is not in the list, it must first be created in the locomotive data editing menu (chap. 3.6.1). If the selected locomotive has not yet been called up by the throttle you are using and "Last command applies" is not activated in the throttle's settings menu, a query window will appear asking whether the locomotive should be selected. If this question is answered with "Yes", then the locomotive will be requested from another throttle that may be present. If the locomotive is not being operated from another throttle, it is taken over directly by your throttle. If the locomotive was last called up by the previous throttle, it will display a green dot in its data field and is therefore immediately available.

After the desired locomotive has been called up, it can be run directly using the throttle's dial. The dial will automatically turn to the speed the locomotive was traveling at when overtaken from the previous throttle.

The display will now show the locomotive image stored in the locomotive editor, the current speed step, and the direction arrow including the speed bar underneath it on the lower left.
If the direction arrow points right, this indicates the locomotive is moving forward. If the arrow points left, this indicates the locomotive is moving in reverse. If the dial is turned to the right, the locomotive will move at increasing speed in the indicated direction of travel . Pressing the dial reverses the direction of travel when the speed is set to zero. If the dial is pressed once while the locomotive is running, the locomotive will stop at its programmed deceleration rate. The direction of travel is only reversed by pressing the dial again (Like with AC throttles). If the dial is pressed twice quickly while a locomotive is running, the locomotive stops instantly without any braking delay. Whichever DCC speed step setting the locomotive is programmed for, 14, 28, or 128, will be displayed under the speed bar. Below the speed bar the locomotive address and name are displayed. The current status of all available locomotive functions is found in the right half of the display. If a function is switched on, the corresponding function icon displays a colored background (see F0 here).

Locomotive functions are activated using the SmartController's keypad. The light function (F0) is always activated using the "0" key. For all other functions, the field in the display screen shows which keypad button to press to activate a function.

The two triangles to the left of the function field indicate whether additional functions are available. If a triangle is solid white, you can scroll line by line in the corresponding direction of the triangle by using the Up or Down keys.A locomotive may have even more functions available, but they have been turned off during locomotive data entry

Fun fact:
If the "up" button is pressed for approx. two seconds, the display changes to a DEUTA "tachometer display" of the speed step levels. The F0 function can also be switched here. Pressing the "back button" or the "down button" for approx. two seconds switches back to the standard display.

DC throttle mode
When the dial is turned to the right, starting at speed step zero, the locomotive will move forward with increasing speed. When the dial is turned back to the left, the speed of the locomotive is reduced until it stops. Another left turn will cause the locomotive to move in the opposite direction of travel.
DC throttle mode is activated in the settings menu of the **PIKO SmartController**$_{wlan}$ (chap. 3.8.3).

## 3.4. The Accessory menu [ ]

The SmartControl system will accommodate up to 128 DCC accessories with addresses between 1 - 2048 (up to 54 addresses in the StartSet version). Symbols (icons) are available for accessories such as street lamps up to four-aspect illuminated signals, which must be switched via three different DCC addresses. The accessory menu automatically recognizes RailCom® accessory decoders. The SmartController is not pre-programmed for any specific accessory, so they must be entered into the system via the "Edit accessory" menu. (see Chapter 3.6.2)

Once an accessory is entered into the SmartControl system, it can be selected on the SmartController by using the keypad (matched to the accessory's icon on the display) or by highlighting the accessory's icon using the navigation keys and pressing "OK".
Note: While in Accessory mode, the locomotive that was last being operated from your throttle will continue to be operated by your throttle. The name of the locomotive, it's speed and direction of travel will continue to be displayed in the lower left corner of the display. Just because you changed the throttle to Accessory mode does not mean that you loose control of the train you were operating.
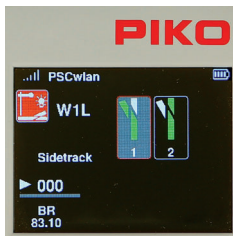
If an accessory is called up, its settings (on/off, red/green, etc.) are displayed on the screen and can be switched directly via the keypad or the navigation buttons and subsequently confirmed by pressing "OK".

Multi-aspect signals, three-way turnouts and slip switches (turnouts/crossovers) with multiple drives can be switched at the same time using just one command. The accessory menu will then display them according to their current position.

Switching accessory addresses directly (without programming them)

The accessories menu allows you to switch an accessory that has not yet been programmed into the SmartControl system. This is convenient for testing some accessory decoders or for testing out a train routing. To do this, enter the accessory menu and press the "up button" for approx. 2 seconds. Enter the desired switching address in the "Address" field and confirm by pressing "OK". You can now switch the accessory directly using buttons 1 (red) or 2 (green). The fields "R" and "G" can also be selected via the navigation buttons and then confirmed by pressing the "OK" button. This will switch the accessory. During switching, the relevant field (R or G) displays a colored background, and no other switching command can be triggered at this time.

3.5. The Route menu [🖊]

The route menu is used to send a sequence of commands to digitial accessories like turnouts with the push of a button. It makes operating a complicated track plan much easier, where, for example, a train may need to leave a large station and three-way turnouts and multiple-aspect light signals need to be switched at the same time. In this situation, at least four switching commands would have to be sent at once.

The route menu is accessed up by pressing number 3 in the main menu or by the navigation buttons followed by pressing the "OK" button.
A maximum of 18 routes with 9 accessory commands each (3 to 6 with StartSet versions) can be stored in this menu.
Routes consist of a sequence of accessory commands, pause commands, and/or calling up other routes (sub-routes). They can be provided with two-line designations and thus there are hardly any limits to creativity for the routes to be created.

No routes have been pre-programmed at the factory. They have to be created in the "edit routes" menu (chap. 3.6.3).
If several routes are created, they can be selected from their position in the list by pressing their matching number on the keypad or by using the navigation keys to highlight a particular route and then pressing the "OK" button.
When a route has been activated, the display field for the route will flash until all the commands for that route have been sent.

Note: While in Route mode, the locomotive that was last being operated from your throttle will continue to be operated by your throttle. The name of the locomotive, it's speed and direction of travel will continue to be displayed in the lower left corner of the display. As noted before, just because you are in a different menu does not mean you lose control of the train you are operating.

3.6. The Editor menu [✎]

The SmartControl's Editor menu allows you to edit data for locomotives, accessories, and routes. To begin editing, you must first select the editor menu icon. After selecting the editor menu, a locomotive icon, an accessories icon, and a route icon will appear on the display.


Select the application you wish to edit from these three icons. Since the icons in these application menus and the editor menu are the same in places, their field color changes from red to blue to avoid any confusion. In the editor menu, the application menu whose data is to be edited can be selected using the keypad or the navigation keys and confirmed by pressing the OK button.

Here you can select the "Locomotive menu", the "Accessories menu" and the "Route menu".

3.6.1 Edit locomotive data

After calling up the locomotive menu, a maximum of sixteen locomotives currently available in the system are displayed along with empty fields, if less than sixteen locomotives are available. You now select an existing locomotive data set for editing, or a newly entered locomotive that you have just placed in service. The desired locomotive is selected using the keypad or the navigation keys and confirmed by pressing the OK button.
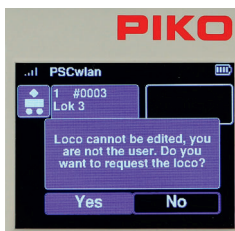
If you want to edit a locomotive data set that has previously been edited yet the particular locomotive has not been run by your throttle during the current operating session (no green dot), the screen will display a message asking whether this locomotive should be requested from the command center. If necessary, this must be answered with "Yes". If this locomotive data set does not need to be edited, use the navigation key to change your answer to "No" and confirm with the OK button.

If you wish to create a new locomotive data set, you should select an empty locomotive data field using the keypad or navigation keys followed by the OK buttont.

The following example shows how to create a new locomotive data set for the BR 83.10. This locomotive, which is not RailCom Plus® compatible, will be entered into the system under DCC address "4" with 28 speed steps, a name of "BR 83.10" and several function keys.

Since this is a new locomotive data set, we choose an empty locomotive data field, whose DCC address appears as "0".

Editable data fields are always highlighted in blue. In the first step, the locomotive image is highlighted with the blue editing frame. If you wish to change the image, press the OK button. If not, scroll down to the next highlighted frame

To select the image for the BR 83.10, we scroll to the "PIKO" option and select it, as all PIKO locomotive images are available under the PIKO option. If a message appears about a non-existent image (while the SD card is inserted), please use the bottom menu option "Update" to display the entire image database.

RailCom® locomotive images and your own customer-specific images can be saved to the image database. Your own pictures must first be saved to the SD card using the PSCw app in order to automatically get the correct display size.

All PIKO locomotive images are now available for selection.

You can scroll through the list page by page using the "up/down" navigation keys.

If the "BR 83 10" page appears, use the "right" navigation key to select one of the four locomotives offered.

Now highlight "8310" with the "down" button and then confirm with the OK button.

The locomotive image is saved when the "save" symbol is selected and confirmed with the OK button.

The display then jumps back to a list of other locomotive data.

The new locomotive image for the BR 83.10 retains a blue editing frame and can be changed again if desired.

To set the number of DCC speed steps, move to the speed step display under the speed bar using the "down button". This is now highlighted in blue.

Press the OK button to open the selection field for DCC speed steps.

Now use the "down" button to select the desired number of speed steps and confirm with the OK button.

If you plan to use the SmartController throttle with just one hand, then the 28 speed step setting is usually most comfortable.

NOTE: If you select the 14 step setting, which was common in the past, then your locomotive's headlight will not function properly using a current decoder. The 14 step setting will cause the headlight to be switched on and off from speed step to speed step. If this happens, adjust CV 29, Bit 1 to 0.

To enter the locomotive's DCC address after setting the speed steps, scroll down to the next field, which will now be highlighted in blue.

By pressing the OK button, the previous address becomes a sequence of gray zeros, which can now be overwritten with the desired locomotive address.

As with previous data entry, the address is saved by pressing the OK button.

At this point, the locomotive name can be changed. To do so, use the "down" button to navigate down another line to highlight the previous name in blue.

By pressing the OK button, the old name is displayed in gray.

It can now be deleted character-by-character using the "left" navigation button. Then the desired locomotive name is entered using the keypad in the same way a telephone keypad is used to enter text.

If you want to switch between upper and lower case letters (the active spelling appears in the top line of the display "abc / ABC"), you can do so by using the "down" key.
Special characters are be found under the 0 and 1 keys. A space is inserted with the "right" navigation key.
0: 0 . : ; % & [ ] { } ~ ` | #
1: 1 , ! ?-_+ / ( ) @$ ' " *=<> \ ^

Finally, the entry is confirmed by pressing the OK button.

The function keys can also be changed in each locomotive data set. Function keys can be re-mapped, symbols/icons changed, and new function keys up to F68 can be created.

To change the functions of the current locomotive, press the "right" navigation button. Now all functions are displayed in blue

By pressing the OK button, the two navigation arrows next to the function key field turn blue and the functions to be changed can now be selected via the keypad.

If functions other than those shown are to be changed, you can use the "up" or "down" keys to scroll line by line to the desired area. The solid navigation arrow indicates the direction in which you can scroll.

Swapping two function keys is achieved by first highlighting one of the two function keys using the keypad (field turns blue). The second function to be exchanged is then selected with the keypad.

In the example shown, it would be the function keys F2 and F3, if the key F3 were now pressed.

To change the symbol/icon of a function key, first highlight it using the keypad and then press the OK button.

A total selection of 46 function symbols will now appear which you can scroll through using the "right" and "left" navigation keys.

Once you reach the desired symbol, you can choose whether the function will be a one-touch momentary function or a function that stays in operation as long as the symbol is highlighted. To assign a momentary key function (m), use the "up" or "down" navigation keys. A momentary function means that the function is only switched on for as long as the function key is pressed.

These settings are then saved by pressing the OK button.

In the example shown, F3 horn function key has been changed to an "Up / Down" symbol.

Once all the entries have been made for this locomotive, press the "Back " button on your throttle ...

... to save the new locomotive data set with the "Save" icon.

At this point you can also delete this locomotive data record by using the "Recycle bin" icon.

The display then reverts to the locomotive editor icon of the editor menu.

By pressing the "back button" a second time, the display will return to the main menu, where the locomotive can then be selected and tested via the locomotive menu (chap.. 3.3 "The Locomotive menu").

3.6.2 Edit accessories

To add a digital accessory to the SmartControl system, you first select the accessories symbol in the editor menu by using key 2 or by using the navigation keys followed by the OK button.

The illustration to the left shows previously entered accessories and an empty field.

(No accessories have been programmed into the SmartController at the factory.)

In this example, we will add a left-hand turnout to the empty field and designate it W4.

The empty field for this new accessory is now highlighted by using the 5 key or the navigation keys and confirmed with the OK button.

The following illustration shows symbols available for various accessories. The left-hand turnout icon can now be selected using key 2 or the navigation keys.

Here, too, the blue navigation arrows show that more symbol options are available which can be reached using the "up" or, as in this case, "down" button.

Various steps can now be selected in this view. The first step is to enter the name and a brief description of the item.

To do this, select the "Name" field and confirm it with the OK button

The name will appear later in the accessories menu as an identifier for selecting the accessory and the description will appear when the desired item has been called up. After the "Name" field has been selected with the OK button, the name field is highlighted in blue and marked for entry with the OK button.

The name is entered using the "telephone keypad" and is a maximum of 4 characters long. To switch between upper and lower case letters, press the "down" key. The active case notation can be found in the top line of the display as "ABC" or "abc". The name entry is then completed with the OK button.

The input field for the accessory description will now be framed in blue by pressing the "down" button and marked for input with the OK button.

A short two-line description can be entered in the text field.

The description is confirmed by pressing the OK button.

Use the "back" button to go on to other entries

.

You can now use the "down" button to scroll to the "Type" entry and then select it with the OK button. Various switching options are available here, which can be activated depending on the type of decoder used.

The "Simple" entry is certainly the most common type and also the factory default setting. The desired decoder type is selected with the "up" or "down" button and confirmed with the OK button. The corresponding field is then highlighted in green.

The top, still grey entry "RailCom Decoder" can be used in the future for RailCom®-equipped accessory decoders.

The entries "Extended" and "Extended time" can be used for accessory decoders, which can be named according to the RCN standard 213.   More information can be found in the instructions for the particular accessory decoder.

Use the "back" button and then press the "down" button to scroll to the "Address" entry and select it with the OK button.

To ensure that the correct accessory decoder is addressed when activated later, the desired switching address must be entered in this submenu. The address field is highlighted using the "right" navigation key and activated with the OK button. Now the desired address (here "4") can be entered and confirmed with the OK button.

Now, use the "down" button to select the lower field for entering a desired "activation time" and highlight the entry with the OK button.

The activation time is entered in 100ms increments and determines the length of time the accessory is activated after receiving a command from the control panel. (pulse duration).

Confirm the activation time with the OK button and then press the "left" navigation button.

The two arrows next to the turnout symbol now appear in blue.

You can now use the "up" or "down" button to scroll to both directions for the two turnout positions.

The turnout position (here it is straight) to be set here "green / straight" or "red / diverging" is shown in green in the turnout symbol.

The selection is now activated with the "right" navigation key. This can be seen from the switching address now shown in blue.

The switching direction (here green) can now be selected via the OK button. The respective setting is shown in color in the corresponding field.

Once the first direction has been set, you must now use the "left" button to jump to the turnout symbol. The two arrows are now shown in blue again and the "down" button highlights the second turnout position, which is also shown in color in the turnout symbol (here it is the diverging track). Now press the "right" button again to enter the turnout position and set it with the OK button.

Use the "back" button to complete the address setting process.

IMPORTANT: At this point, the entries have not yet been saved. If you go up a menu level without saving using the "back" button, a message will appear asking if you want to abort your editing. If you answer yes, the data set will not be saved.

To save your settings, use the navigation buttons "up" or "down" to go to the "Save" option and confirm it with the OK button.

If an accessory that has already been saved is called up in the editing menu, it can be deleted via the "Delete" option after answering a security query.

The display then jumps back to the selection of editable accessories.

The entries for multi-aspect accessories such as three-way or double slip turnouts with two drives, or three- or four-aspect light signals which require more than one switching address are shown here in short form using the example of a three-aspect light signal.

Select three-aspect light signal.
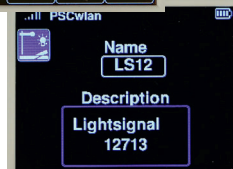

Enter name and description.
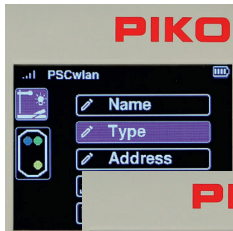
There is no need to enter the type, since the factory setting "Simple" is used automatically here.

Enter the first address for the red/green toggle, followed by the second address to toggle yellow on/off. Then enter the activation time in 100ms steps.

In the following steps, enter the switching directions red/green for the signal aspects shown and then save the data set.
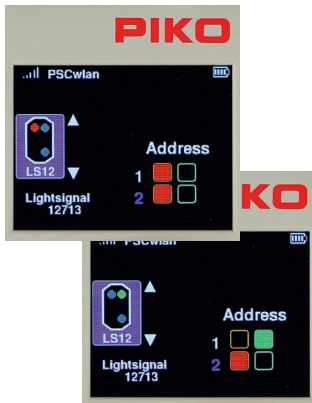
NOTE: For technical reasons, the final display order depends on the available open field locations. This means that when accessories have been deleted, the next newly created data set is automatically saved in the field location that was just deleted.

The display of the new article does not necessarily reach the position that was displayed when the empty field was selected.

3.6.3 Edit Route

To create train routes, the route symbol is highlighted in the editor menu by using key 3 on the keypad or using the navigation keys followed by the OK button.

A sequence of circuits of the edited accessories , pause times, previously edited routes, and so-called sub-routes can be added to a route. The limit for the maximum number of additions to a route is 9*. This limit can be significantly expanded if necessary thanks to the sub-routes just mentioned. A total of 18* routes are possible.

* Number in the starter set is lower.

The following view shows previously entered routes and one empty field.

When new, the SmartController has no routes stored in it; it just displays an empty field.

This field is selected using the OK button or the "2" key.

If routes have already been added, you can access an empty field (to add a route) by pressing its associated number or using the navigator buttons.

Like the editor menu for accessories, a selection menu will appear showing each possible process.

For example, we will make a "station arrival" route. This route switches turn-out W4 to straight, the three-aspect entry signal LS12 to green (Hp1) and after a pause of 50 seconds back to red (Hp0).

The first step is to enter the name of the new route.

To do this, select the "Name" field and confirm with the OK button.

After confirming the Name field by pressing OK, the new name can now be entered using the telephone keypad method. The name is then confirmed with a press of the OK button.

The "back" button takes us back to the selection menu for the possible processing steps.

The "Entries" field is then highlighted and activated with the OK button.

The display changes to the nine input fields for possible route commands.

The first field is now highlighted for entering the first switching command and confirmed with the OK button.

In the following view we can now decide which type of route command should be entered as the first step. There are "accessory circuits", "pauses" and previously edited "routes" (sub-routes) to choose from.

The selection can be made using the navigation keys or using the number shown in each field.

Since the first step is a switch command for turnout W4, the field for accessories is highlighted.
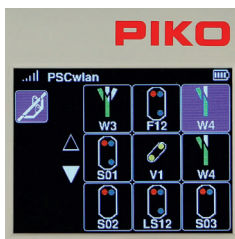
After the accessory symbol has been confirmed, the accessories already entered into the system are displayed as options.

Left-hand turnout W4 is selected using key 3 or using the navigation keys followed by the OK button.

Now we can decide what direction the turnout should be aligned to. The turnout needs be set to "straight". To do this, we either use key 1 or the navigation keys to highlight the relevant field and confirm with the OK button.

To keep the turnout motors from overheating, we set a delay time in 100ms increments in the input window that now appears and confirm it with the OK button.

Finally, we highlight the OK symbol and complete this step by pressing the OK button.

The first step of our route now appears in the command sequence.

In the second step, light signal LS12 needs to be added. To do this, we select the second field with key 2 on the keypad ...

... and in the next window we activate symbol 1, which is the symbol for accessories.

Accessories already stored in the system are displayed again.

Light signal LS12 is selected according to its position using key 6 or by using the navigation keys followed by the OK button.

Now we decide which signal aspect should be activated. The signal should display "green" (Hp1). To do this, we either use key 2 or the navigation keys to highlight the relevant field and confirm with the OK button.

Then we enter a delay time in 100ms increments and confirm it with the OK button and complete the entire step via the OK button in the "OK" field.