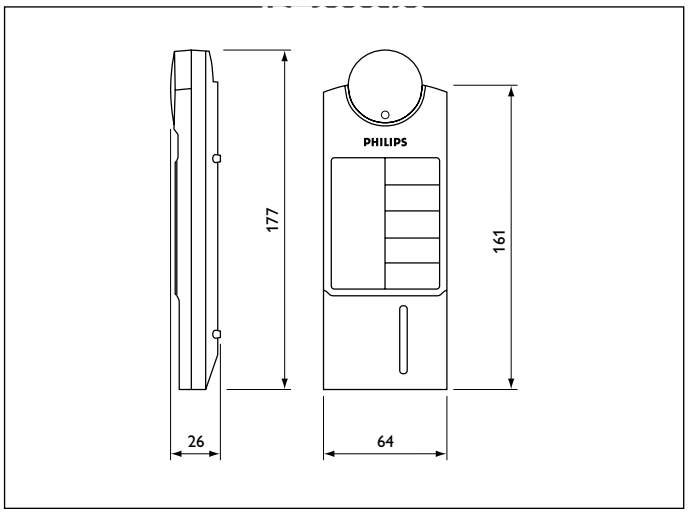
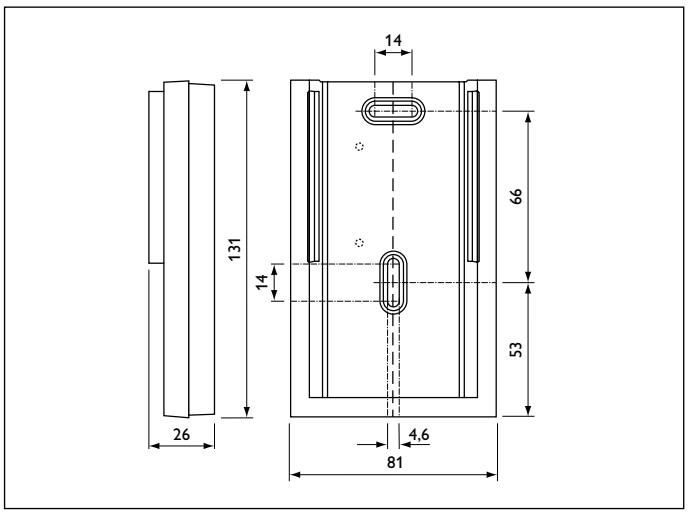
IRT8080/00

Multi-functional Hand - / Wall transmitter





Dimensions

Product details

- The IRT8080 is a hand-held infrared transmitter complete with wall holder, suitable for the remote control of a variety of lighting control systems, building management systems, and combinations thereof.
- The unit is primarily intended to be used in projects that require specific transmitters in a relatively small quantity, which makes custom-made versions not economically feasible.
- The transmitter can easily be adapted to project specification by selecting the required functionality (or "transmitter type"), with a DIP switch, from a pre-programmed library (see figure 1). This can be achieved without any tools, and even after installation. The corresponding text plates can be taken from a sheet with all possible versions (see figure 2). The text plate can be inserted into the transmitter without any tools. The text plate sheet is supplied with the unit.
- Five to ten functions can be controlled with the large front keys. The actual number depends on the selected functionality.
- Under a hinged cover 5 additional keys are provided for less frequently used functions.
- The transmitter type and the group address of the transmitter itself can be selected with DIP switches
- A red LED at the front of the unit indicates the transmission of infrared signals and gives a warning when the unit is in "teach mode".
- For HVAC applications the selected temperature setpoint is indicated by one of 7 LED's
- Battery lifetime (with Philips Powerlife batteries – 1050 mAh) is at least 4 years, when used 50 times per day as an average.
- The unit is delivered complete with wall holder, batteries, text plate sheet and installation instructions.

Applications

- The IRT8080 can be used with Trios, Scenio and Helio, also in combination with building management systems. In these applications it replaces the IRT8070.
- The transmitter types in the pre-programmed library include manual control commands for lighting (presets as well as individual control circuits), heating (setpoint setting), fan control (on / off and speed) and sunblind control (up/down/stop). The generic "absent" command allows system specific interpretation.
- The standard transmitters for Scenio, Trios / Helio and HAVC are also available as a ready to use product under separate type numbers: IRT8020, IRT8030 and IRT8040 respectively.
- Programming functions for Trios and Scenio are incorporated as well, so the IRT8080 will replace the IRT1090 and IRT1590.
- Although designed for handheld or tabletop operation, the unit will frequently be used from a fixed position, i.e. in the wall holder. The Infrared radiation pattern has been optimised for this application.

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IRT8080/00

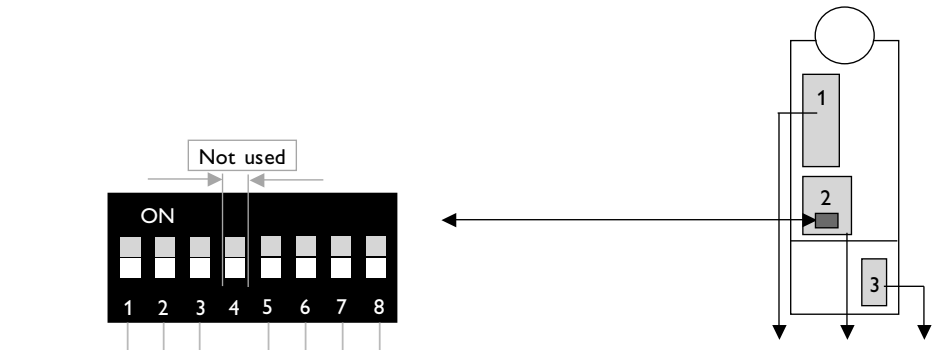
Multi-functional Hand - / Wall transmitter

Functionality

The IRT8080 offers a choice of 15 different transmitter configurations: 11 for control of Trios or Helio, 2 for control of Scenio and two programming tools (for Trios and Scenio). The Trios / Helio transmitters hold a variety of remote control functions for lighting systems with and without integrated building management systems.
For control of Scenio one transmitter is optimised for control of presets, whereas the other type facilitates the control of individual channels and the programming of presets.
The programming tools are used for programming infrared addresses, operational modes and other system parameters.
Figure 1 shows the DIP switch settings for the various transmitter types and the corresponding text plates.

For incidental changes of system parameters, each of the transmitter types can be switched temporarily into a corresponding "teach mode". This "teach mode" provides the same functions as the corresponding programming tool.
As an extra feature both the Scenio preset control transmitter and the Scenio programming tool can temporarily enter into the Scenio "preset programming mode".
Switching between normal and temporary modes is achieved by pressing the two relevant keys simultaneously. The transmitter will automatically revert to normal operation (as defined by the DIP switch) 1 minute after the last key press. For details see "operating instructions" below.

Figure 2, 3 and 4 show the functions and key allocations of the various programming tools



TRIOS / HELIO group address	Dip switch in position ON							Transmitter type	Text Plates 1, 2 and 3 (see figure 2)
	1	2	3	5	6	7	8		
A								Downloadable transmitter type	project specific
B	•			•				SCENIO, 8 presets	1
C		•			•			4 Lighting presets	2
D	•	•		•	•			3 Lighting channels, HVAC	3
E			•			•		2 Lighting channels, blinds, HVAC	4
F	•		•	•		•		2 Lighting channels, fan, HVAC	5
G		•	•		•	•		3 Lighting channels, blinds	6
General	•	•	•	•	•	•		TRIOS, Programming tool	7
							•	1 Lighting channel, blinds, fan, HVAC	8
				•			•	SCENIO, preset programming	9
					•		•	4 Lighting channels	10
				•	•		•	3 Lighting presets, HVAC	11
						•	•	2 Lighting presets, blinds, HVAC	12
				•		•	•	2 Lighting presets, fan, HVAC	13
					•	•	•	3 Lighting presets, blinds	14
				•	•	•	•	SCENIO, programming tool	15

Figure 1: setting the group address and transmitter type and selecting text plates

IRT8080/00

Multi-functional Hand - / Wall transmitter

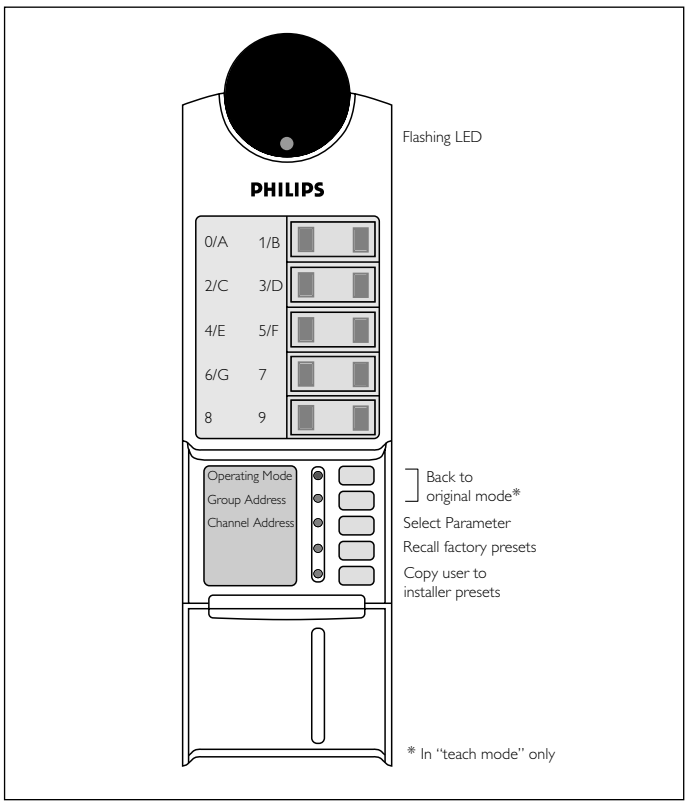


Figure 2: Key functions as Trios Programming tool (or in "teach mode")

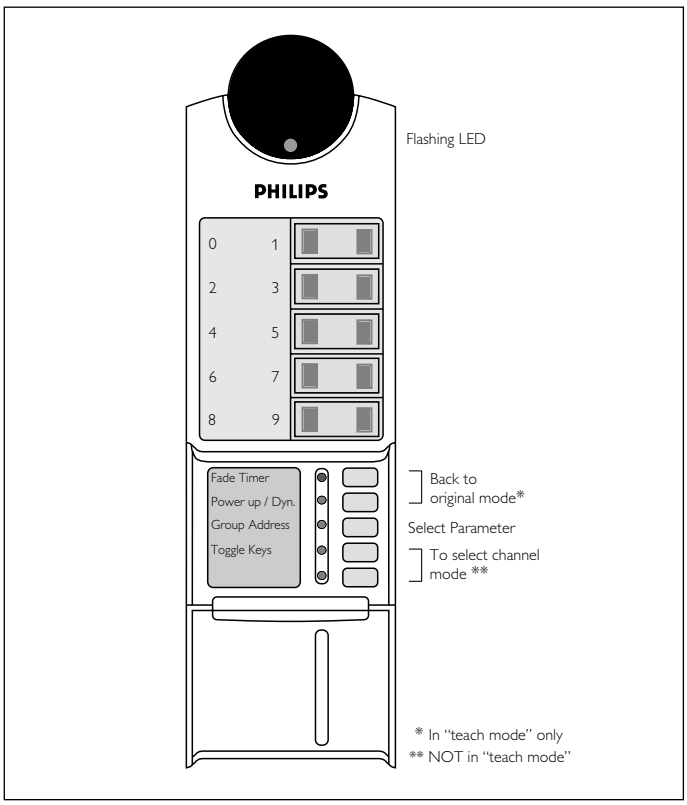


Figure 3: Key functions as Scenio Programming Tool (or in "teach mode")

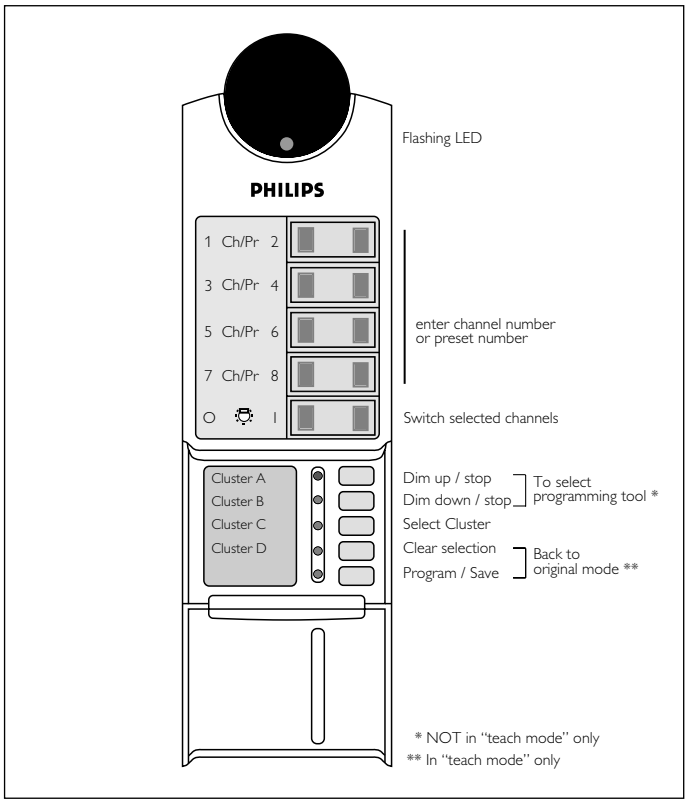


Figure 4: Key functions in Scenio Preset programming mode

IRT8080/00
Multi-functional Hand - / Wall transmitter

The following remote control functions are available:

Control lights	select presets
	switch and dim individual control circuits
	switch off all lights
	program presets
	recall installer presets
	switch on dynamic pattern (Scenio)
	switch to channel control (Scenio)
Control BMS:	control HVAC (switch to "comfort" mode and adjust setpoint)
	control blinds (up / down and tilting)
	control fans (on / off and speed)
Generic commands:	absent
	switch to "teach mode" (for temporary use as programming tool)

The actual mix of control commands depends on the selected transmitter type.

With the programming tool (or in "teach mode") the following functions can be executed:

For Trios:	set infrared group address
	set infrared channel address
	set controller mode
	recall factory presets
	copy user presets to installer presets
	revert to original mode
For Scenio:	set infrared group address
	power up mode
	select dynamic pattern
	set fade timer
	define toggle buttons
	revert to original mode

Operating instructions

General information

In each transmitter type the allocation of keys is such that the most common functions can be operated with the large upper keys and the less important functions with the keys under the hinged cover.

Some of the additional and supporting functions require a "two-step" operation: First the correct parameter must be selected, then the required operation can be executed or the selected value entered.

The following paragraphs only describe the control functions that relate to the typical characteristics of this transmitter. Obviously these descriptions are only relevant provided that this function is included in the selected transmitter (and supported by the corresponding control system).

For a detailed description of the standard operating procedures please refer to the data sheets indicated below and the manuals of the various controlled systems.
IRT8020/00 for Scenio functions
IRT8030/00 for Trios and Helio functions
IRT8040/00 for HVAC and other BMS functions

Selecting a parameter (for "two-step" operations)

Selection is achieved with the "Select" key. An LED indicates the selected parameter. When the "Select" key is pressed momentarily (less than 1/2 sec.) the LED shows the (last) selected parameter.
When the key is pressed continuously or repeatedly, the next parameters are selected. This action can be continued or repeated until the required selection is reached. If no further keys are pressed the LED stays on for 5 seconds after the last key release.
Values (e.g. an address or a mode) can be entered using the appropriate upper keys.
A selected channel can be switched and /or regulated, as allowed by the corresponding controller(s), with the "**▲ I**" and "**▼ O**" keys.
During the transmission of infrared signals, the LED flashes for verification of the selected channel. After transmission the LED is switched off.

Switching to "teach mode" (for temporary use as programming tool)

By pressing the top two keys under the hinged cover simultaneously for at least 3 seconds, the transmitter can be brought into the corresponding "teach mode". The transmitter reverts to normal operation when the same two keys are pressed simultaneously for at least 3 seconds again or automatically 1 minute after the last key press. This mode can be entered from all transmitter types.

Switching to "preset programming mode" (Scenio only - for temporary use to dim individual channels and to store presets)

By pressing the lower two keys under the hinged cover simultaneously for at least 3 seconds, the transmitter can be brought into "preset programming mode". The transmitter reverts to normal operation when the same two keys are pressed simultaneously for at least 3 seconds again or automatically 1 minute after the last key press. This mode can be reached from both the "Scenio Preset control" and the "Scenio programming tool".

Generic commands:

In all transmitter types that support building management functions, the "**O**" key includes both the "all off" and the "absent" command. The "absent" command can be interpreted by the building management system as appropriate. A vertical "LED sweep" indicates that the "absent" command has been sent.

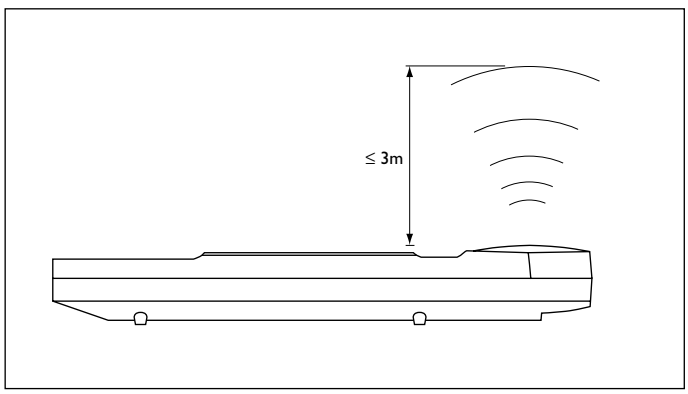


Figure 5: Radiation pattern in teach mode

IRT8080/00

Multi-functional Hand - / Wall transmitter

Notes:

1. When used as programming tool (or in "teach mode") the infrared radiation pattern of the IRT8080 is reduced to a narrow beam, in order to facilitate selective programming of luminaires or controllers. Therefore the transmitter must be pointed at the receiver and the distance from transmitter to receiver must be less than 3 meters. (See figure 5)
2. All commands of the Trios programming tool are transmitted in the "general" group, in order to assure proper reaction regardless the group address of Trios.

Related equipment

Lighting Management Systems				
Helio	Room controllers:	LRC5040	LRC5042	LRC5048
	Multisensor	LRI5133		
Stand-alone controls				
Trios installer	Room controllers:	LRC1010	LRC1015	
		LRC1020	LRC1025	
		LRC1030	LRC1035	LRC1620
Scenio	Room controllers	LRC1555		
Trios infrasense	Luminaire controller	LLC1120		
Trios multisense	Luminaire controller	LLC1130		
	Multisensor	LRI 1110		
General Purpose Components				
	IR transmitters:	IRT8020	IRT8030	
		IRT8040	IRT8050	
	IR receivers	IRR1224	IRR8124	IRR8125
	Multisensor	LRI8133	LRI8134	

Technical data

Number of keys	: 15
LED indicators	: 1 Red LED for indication of IR transmission and "teach mode" 7 Red LED's for indication of the HVAC setpoint 5 of those are also used for indication of the selected channel or parameter
Number of IR-LED's	: 5 (in "teach mode" only one active)
Carrier frequency	: 36 kHz. (RC5 standard)
Supply voltage	: 6.0 V nominal
Number of batteries	: 4 each 1.5 V nominal
Battery type	: LR03, AAA, alkaline, capacity at least 1000 mAh
Battery life	: over 4 years (calculated with Philips Power Life batteries -1050mAh- and 50 commands per day)
Environmental conditions	
- Operating	
Temperature	: 5...50°C
Relative humidity	: 20...85 % Condensation not allowed The IRT8080 should not be exposed to direct sunlight or to high temperatures and should not be used in damp rooms such as bathrooms
- Storage conditions	
Temperature	: -25...85°C
Relative humidity	: 5...95 %
Dimensions	: transmitter: 177x 64 x 26 mm (max. height x width x depth) Wall holder: 131 x 81 x 26 mm
Weight	: 0.119 Kg (without batteries) 0.164 Kg (with batteries) 0.212 Kg (with batteries and wall holder)
Housing transmitter	
- Material	: ABS
- Colour	: White (Bayer 0177 - close to RAL 9010)
- Mounting	: in wall holder (loose or fixed)
- Fixation in wall holder	: two Parker screws in battery compartment. (see figure 8b)
Housing wall holder	
- Material	: ABS
- Colour	: White (Bayer 0177 - close to RAL 9010)
- Mounting	: with screws or double-sided tape (see figure 8a)
EMC	
- Immunity	: in accordance with EN 50082-1
- Radiated interference	: in accordance with EN 50081-1
Reliability	
- Call rate	: 0.2 - 0.5% per year (estimated)
- Lifetime	: 10 years (estimated)

IRT8080/00

Multi-functional Hand - / Wall transmitter

Installation

Inserting text plates

Once the transmitter type has been defined the appropriate text plates must be inserted. This can be done prior to, during or even after installation. The transmitter can have two or three text plates, depending on the type. Please refer to figure 6 for the complete survey.
Text plate 1 indicates the functions of the upper keys and is located behind the transparent door of the battery compartment.
To insert text plate 1 follow these steps:

1. open the battery door by lifting it from the right hand side
2. remove the plastic foil from the inside of the door
3. put the text plate in place (i.e. inside the door)
4. replace the plastic foil behind the text plate in the door; it will hold the text plate in place
5. close the battery door

Text plate 2 indicates the functions of the lower keys or the LED's and is located next to the LED's under the hinged cover.

To insert text plate 2, follow these steps:

1. open the hinged cover by swinging it downwards
2. remove the plastic foil covering the DIP switch
3. put the text plate in place
4. replace the plastic foil on top of the text plate
5. close the cover

It is recommended to combine this action with the adjustment of the DIP switch (see figure 1).

Text plates no. 1

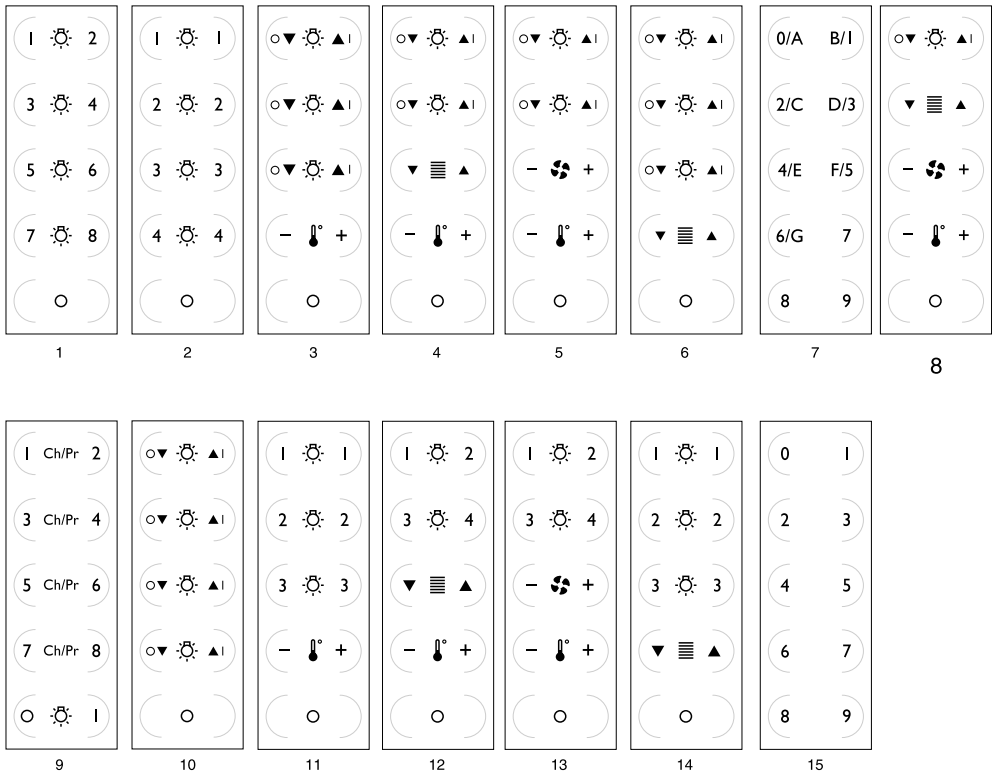


Figure 6a: survey of text plate 1

Text plates no. 2

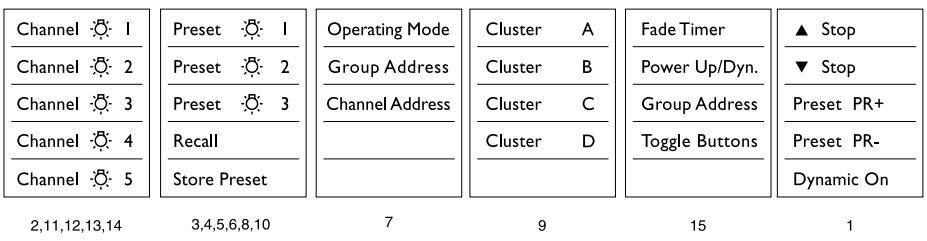


Figure 6b: survey of text plate 2

IRT8080/00
Multi-functional Hand - / Wall transmitter

Text plate 3 is a sticker that is located on the rear side of the hinged cover and indicates the functions of the 5 lower keys. It is only used in transmitters that use the "select" key.
To insert text plate 3, on the inside of the hinged cover, follow these steps:
1. open the cover by swinging it downwards
2. put the text sticker in place
3. close the cover

Text plates no. 3

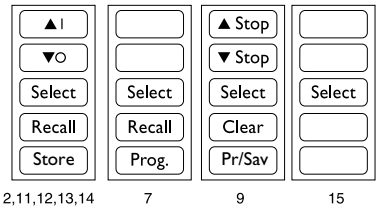
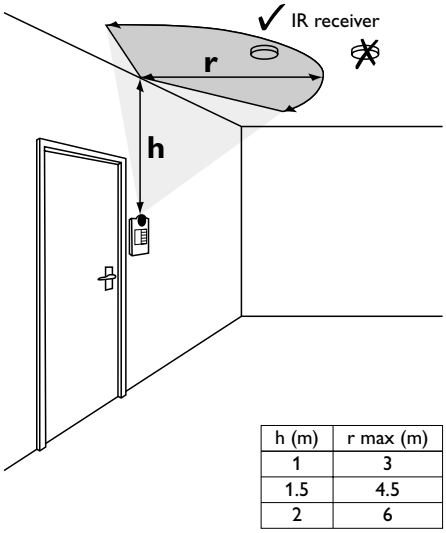


Figure 6c: survey of text plate 3

Positioning
The transmitter IRT8080 is suitable for wall mounted operation handheld operation and for tabletop operation. For details see figure 7: positioning.



h (m)	r max (m)
1	3
1.5	4.5
2	6

Figure 7: positioning

Mounting
The transmitter can be placed in a wall holder. If necessary the transmitter can be locked in the wall holder. For details see figure 8a and 8b: mounting the transmitter.

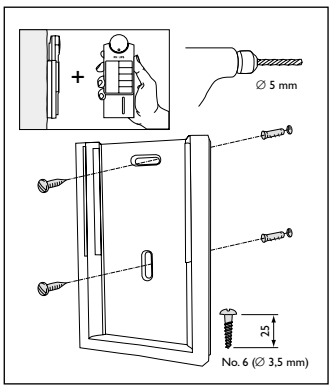


Figure 8a: mounting the wall holder

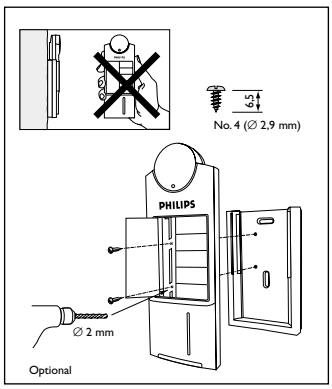


Figure 8b: locking the transmitter in the wall holder

Battery handling
The transmitter is powered by 4 batteries, type LR03 or AAA. Batteries must be replaced simultaneously. Always use a set of 4 batteries from the same brand with the same production date. Please make sure that batteries are inserted with the correct polarity. Inverted batteries may cause damage to the transmitter! For details see installation instructions. Disposal of batteries must be in accordance to local regulations.
Note: it is recommended not to use rechargeable nickel cadmium batteries, in view of their limited performance.

Setting of group address and selection of transmitter type
The functionality and the infrared group address of the transmitter (itself) can be set by DIP switches located behind the text plate under the hinged cover. The DIP must be operated carefully using a pencil, a paperclip or other pointed device. See also figure 1: DIP switch settings and refer to installation instructions).
It is recommended to combine this action with inserting the text plates.

Indications and diagnostics
1 Red LED, located in the infrared window, indicating:
- OFF : transmitter not used
- fast flashing : infrared transmission takes place
- slow flashing : transmitter in "teach mode"

7 Red LED's, located behind a window in the cover of the transmitter, indicating:
- steady indication : Selected setpoint for HVAC applications (during max. 0.5 sec)
- vertical LED flash : HVAC switched to stand-by mode

5 of these 7 LED's are used to indicate:
- fast flashing
  - in normal mode : channel for which control commands are being transmitted
  - in "teach mode" : parameters for which programming commands are being transmitted
- slow flashing:
  - in normal mode : selected channel
  - in "teach mode" : selected parameter (programming function)

IRT8080/00

Multi-functional Hand - / Wall transmitter

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Data subject to change

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Packing data

Type	Box dimensions (mm)	Quantity	Material	Weight (Kg) net	Weight (Kg) gross
Unit box	220 x 95 x 50	1	card board	0.215	0.285
Outer box	230 x 200 x 210	8	card board	1.720	2.580

Ordering Data

Type	MOQ	Ordering number	EAN code level 1	EAN code level 3
IRT8080/00	8	9137 003 12503	87 11559 517674	87 11559 517681

Related documentation

Installation Instructions	3222 636 40081
Helio Handbook (English)	3222 636 49000
UNILON Handbook (English)	3222 636 49010
Scenio system handbook (English)	3222 636 49020
Trios system handbook (English)	3222 636 49030
Trios luminaires handbook (English)	3222 636 49040