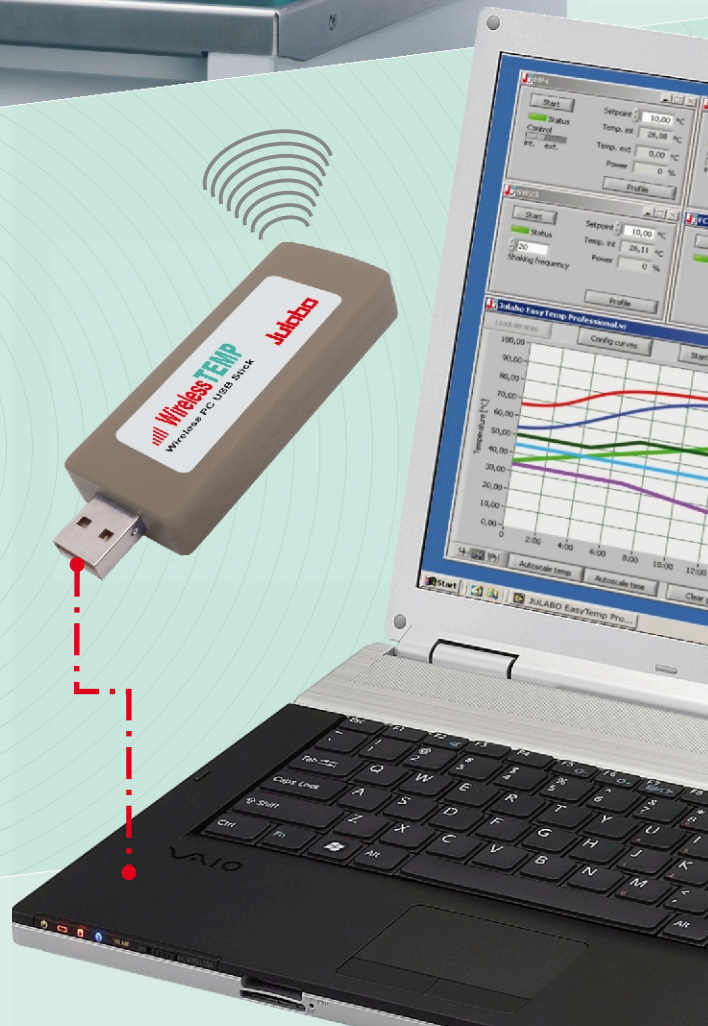


Julabo

WirelessTEMP

Wireless Communication
for JULABO Temperature
Control Instruments

NEW!



www.julabo.de

Wireless Monitoring and Control of JULABO Temperature Control Instruments via PC or Remote Control

Functions:

- ▶ Wireless monitoring and control of JULABO temperature control instruments
- ▶ Wireless transmission and display of parameters, such as set points, actual values, output, warning messages and error messages from large distances
- ▶ Communication with up to 8 JULABO temperature control instruments

Benefits:

- ▶ A convenient way to operate JULABO instruments from your workstation
- ▶ Spend less time and resources monitoring the instruments
- ▶ Greater flexibility in choosing location for the instrument
- ▶ Cost reduction because the hassle of running cables is eliminated
- ▶ Ideal solution as 'Remote Display' for your application
- ▶ Works with virtually all JULABO temperature control instruments with RS232 interface

Overview of Products



Remote Control
Handy remote control unit for display and control of up to 8 JULABO instruments

- Display and adjust set points and actual values
- Display output data, warning messages and error messages
- Display and select units within wireless range

Transmitter
Send/receive module for JULABO temperature control instruments with RS232 interface

- Inserted into the temperature instrument's RS232 port
- Receives control commands
- Sends instrument data, status messages, and measurement values to a PC or 'Remote Control' unit

Wireless PC USB Stick
Send/receive module for PC's with USB interface

- Connect to USB interface on PC
- Sends control commands
- Receives data, status messages, and measurement values from the temperature control instruments

Router
Extends wireless range

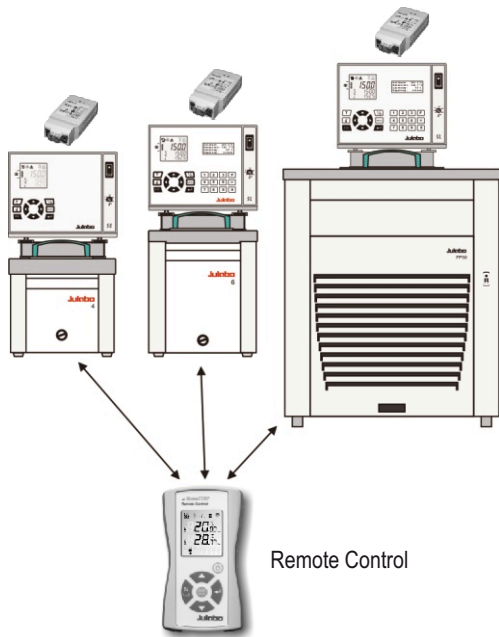
- Plug into any standard electrical socket
- Extends the range of the wireless connection

The 'WirelessTEMP' series of products gives you a variety of ways to communicate with up to eight JULABO temperature control instruments using a PC or the JULABO 'Remote Control'. 'WirelessTEMP' works with virtually all JULABO instruments equipped with an RS232 interface.

Intelligent technology makes it easy to get started. Just switch on the system and connections will be established automatically. With 'WirelessTEMP Configurator' software, users can set up even complex networks with several separate, independent groups of instruments (PAN's). This enables disturbance-free operation in neighboring laboratories.

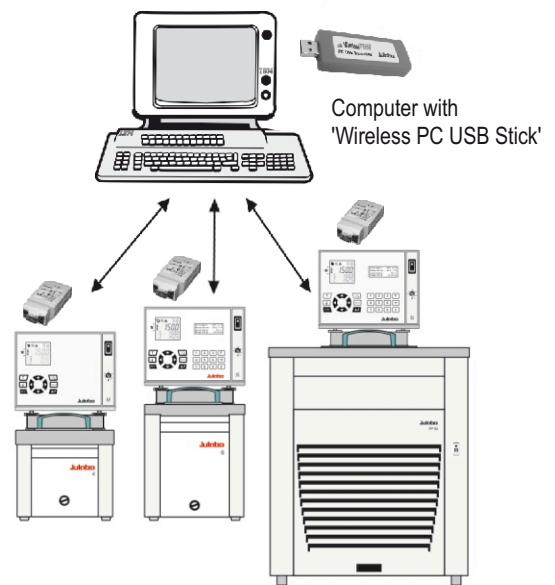
Example 1

Standard instrument combination with 'Remote Control' for controlling and querying up to eight JULABO instruments



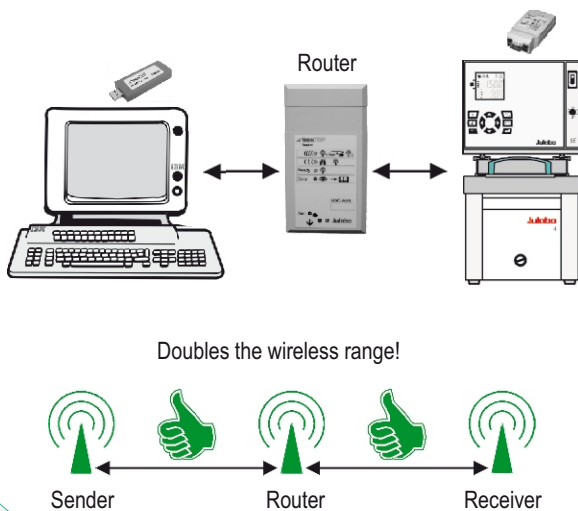
Example 2

Standard instrument combination with PC and 'Wireless PC USB Stick' for controlling and querying up to eight JULABO instruments



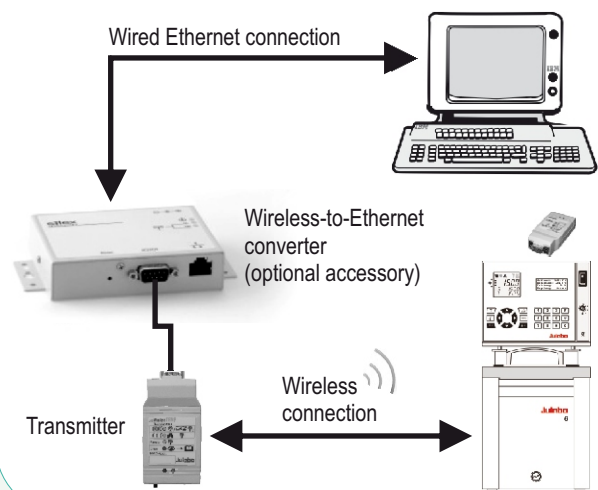
Example 3

Wireless range can be extended simply by adding a 'Router'. Cascading several 'Routers' is also possible.



Example 4

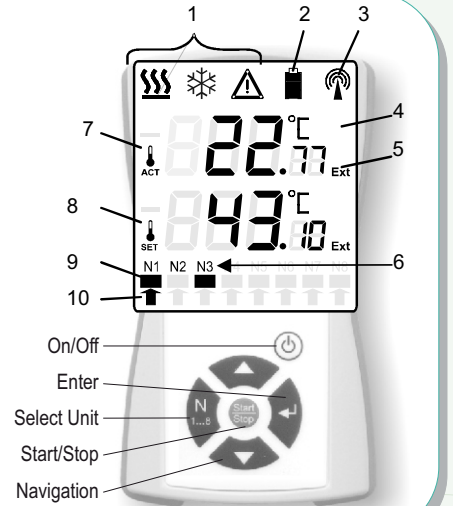
By combining 'Wireless' and 'Ethernet', even very long distances can be covered. Please contact JULABO for additional information.





'Remote Control' functions

1. Status displays for heater, cooling, alarms
2. Battery charge status
3. Wireless connection status
4. Temperature in °C/°F or heater output in %
5. Internal/external temperature control
6. Display of located units
7. Display of actual working temperature value
8. Display of working temperature set point
9. Display of unit's start/stop status
10. Display of selected unit

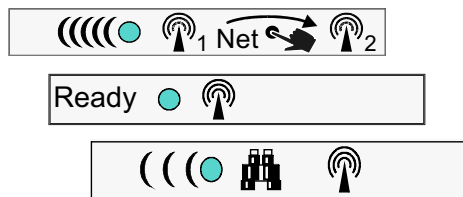


'Transmitter' and 'Router' functions

Status lights continuously indicate the send and receive status of a 'Transmitter' or 'Router' that is active in the network.

The following information is provided:

1. Status of network connection or search
2. Data transmission
3. Fault conditions, such as "no network found"



An included adapter (gender changer) makes it possible to connect the 'Transmitter' directly to the RS232 interface on the rear side of the instrument.

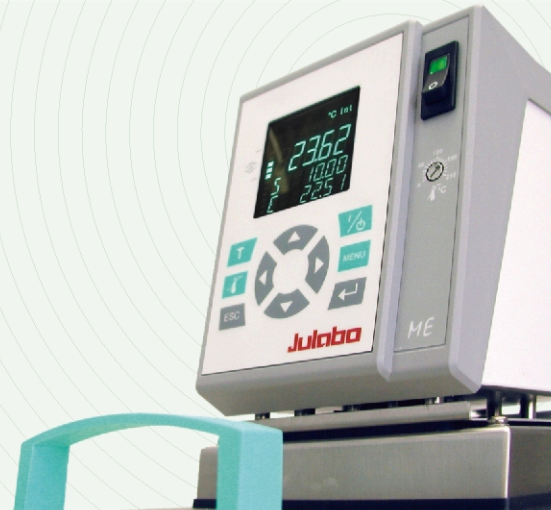


'Wireless PC USB Stick' functions

The 'Wireless PC USB Stick' turns a PC into a centralized control station for all 'WirelessTEMP' components. 'WirelessTEMP Configurator' software is included to facilitate convenient setup, administration and monitoring of the network.

'Wireless PC USB Stick' enables:

1. Administration of network units
2. Assignment of unambiguous names
3. Establishment of multiple PAN's (separate, independent network groups)
4. Extensive control procedures and recording of measurement data in conjunction with 'EasyTemp Professional' software (not included).



'WirelessTEMP Configurator' software for PCs makes it easy to set up extensive communication networks. 'WirelessTEMP Configurator' is included with 'Wireless PC USB Stick'. With this software, users can configure individual units within a wireless network directly from their PC. This makes the task of establishing or expanding networks quick and easy.

Some of the features in 'WirelessTEMP Configurator' software:

- ▶ Automatic discovery of networks within wireless range
- ▶ Display of located networks, grouped according to PAN ID if several networks found
- ▶ Network configuration, such as setting device names, wireless channels, etc.

Note:

Use of this software is necessary if several neighboring networks exist or if using more than one 'Remote Control' unit. In these cases, each unit requires one-time configuration using the 'Wireless PC USB Stick' (to set wireless channel, PAN ID, etc.).

Software is included with the 'Wireless PC USB Stick'!





ID	Node.Type	Type	Name	pref. PAN-ID	Channel Mask	Firmware
Local						
000D6F0000085075	FFD	Transmitter	USB-Stick	FFFF	FFFF	0.00
PAN-ID:313E						
000D6F00000C50AF	COO		REMOTE CONTROL-1	FFFF	FFFF	0.00
000D6F0000084C7A	FFD	Transmitter	Thermostat 1	FFFF	FFFF	0.86
000D6F000008501F	FFD	Transmitter	SL-6	FFFF	FFFF	0.86
000D6F00000F3D3E	FFD	Transmitter	HighTech	FFFF	FFFF	0.86
000D6F00000C5708	FFD	Router	ETRX2	FFFF	FFFF	0.85
PAN-ID:3772						
000D6F00000F3D97	COO	RemoteControl	REMOTE CONTROL-2	FFFF	FFFF	0.93
000D6F00000F3D75	FFD	Transmitter	TopTech	FFFF	FFF0	0.86

a b c d e f g h

- a. Display PAN ID (Personal Area Network for closed network group)
- b. Display MAC addresses of connected devices
- c. Display each unit's function in the network, such as Coordinator (COO) or Full Function Device (FFD)
- d. Display unit type, such as 'Remote Control', 'Transmitter', or 'Router'
- e. Display and assign any desired unit names
- f. Display and set a unit to a single, specific PAN ID
- g. Display and set open wireless channels
- h. Display firmware version of each unit




Main Components

Remote Control	Transmitter for JULABO instruments	Wireless PC USB Stick for PC connection	Router for extending wireless range
Order No.: 8 900 500 Order No.: 8 900 505 (ATEX version)	Order No.: 8 900 520	Order No.: 8 900 540	Order No.: 8 900 530
			
<p>Included items:</p> <ul style="list-style-type: none"> ✓ Remote control unit ✓ 3 Batteries 1.5 V Micro (AAA) ✓ Power supply unit with plug adapters for EU, USA, UK, CH, AU Input: 100-240V~ / 50-60Hz Output: 5V= / 1A (not with ATEX version) 	<p>Included items:</p> <ul style="list-style-type: none"> ✓ Transmitter ✓ Adapter (gender changer) for connection to RS232 interface of JULABO instrument ✓ Power supply unit with plug adapters for EU, USA, UK, CH, AU Input: 100-240V~ / 50-60Hz Output: 5V= / 1A 	<p>Included items:</p> <ul style="list-style-type: none"> ✓ Wireless PC USB Stick ✓ Software 'WirelessTEMP Configurator' ✓ Driver software ✓ USB extension cable <p>For Microsoft® Windows® Versions 98SE / 2000 / XP</p>	<p>Included items:</p> <ul style="list-style-type: none"> ✓ Router ✓ Available with choice of AC adapter for EU, USA, UK, CH <p>Please indicate choice when ordering!</p>

Accessories

'EasyTEMP Professional' Software

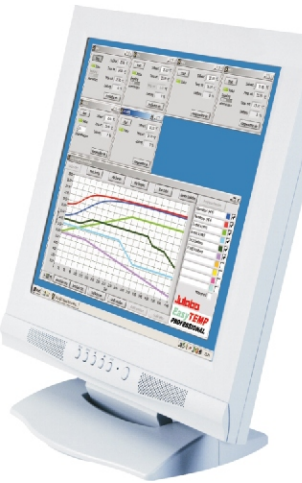
Order No.: 8 901 105



Software solution for controlling, visualizing, and documenting temperature-based and time-based procedures.

With 'EasyTEMP Professional' software, you can control and monitor up to eight JULABO instruments. The connection is established either directly through an RS232 data cable or wirelessly with the 'WirelessTEMP' products described here. 'Wireless PC USB Stick' is required for wireless communication between temperature control units and a PC.

A free version of 'EasyTEMP' software for simple control tasks with just one JULABO instrument is available as download at www.julabo.de.



Batteries (ATEX)

Order No.: 8 900 590




3 Replacement batteries for using 'Remote Control' unit without being dependent on mains power.

Special ATEX-approved battery!

Notice:
The ATEX version of 'Remote Control' unit must be powered with ATEX-approved batteries only.

JULABO 'Wireless TEMP'

The new 'WirelessTEMP' products uses the 'ZigBee' wireless standard for industry, which ensures stable and secure connections even in an industrial environment.

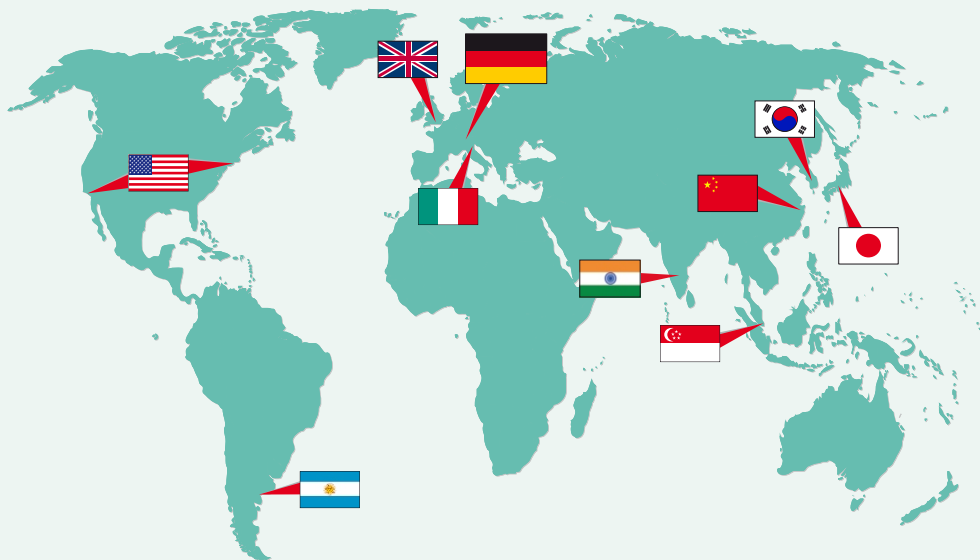


JULABO Model:		Remote Control	Transmitter	Wireless PC USB Stick	Router
JULABO Order No.:		8 900 500 8 900 505 (ATEX)	8 900 520	8 900 540	8 900 530
Power consumption (send mode):	mA	45	45	45	45
Permissible operating temp.:	°C	+5 ... +40	+5 ... +40	+5 ... +40	+5 ... +40
Receiver sensitivity:	dBm	-92	-92	-92	-92
Max. transmitting power:	dBm	+5	+5	+5	+5
Max. data transmission rate:	kbps	256	256	256	256
Frequency range:	GHz	2.4	2.4	2.4	2.4
Range in open area:	m	~ 70	~ 70	~ 70	~ 70
Range in rooms with few obstacles:	m	~ 30	~ 30	~ 30	~ 30
Range in Buildings:		1-2 masonry obstacles (about 10-25 m) with bricks 0-1 masonry obstacles (less than 10 m) with steel-reinforced concrete			
Dimensions (W x D x H):	mm	70 x 32 x 122	43 x 24 x 88	29 x 12 x 85	67 x 78 x 125
Weight:	g	170	45	21	230
Power supply:		With plug-in power supply unit 100-240V~/50-60Hz or 3 batteries type 1.5 V Micro (AAA)	With plug-in power supply unit 100-240V~/50-60Hz	Directly through USB interface on PC	Mains socket 230V / 50Hz or 115V / 60Hz
Notes:		ATEX version may be operated with batteries only, so a power supply unit is not included	When used with HighTech circulators, power is supplied through the circulator		



JULABO provides custom programs, device drivers, and even control hardware for customers with specialized requirements.

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