

Combi Control

Toshiba heat pump control by mobile phone



User manual



Combi Control

Quick start guide
Suitable for everybody!

Contents

Quick start guide

Suitable for everybody!

What Combi Control does?	6
Indicator lights	8
Buttons	10
Power	12
SIM card	12
Installing Combi Control	14
Testing Combi Control	19
Turning heat pump ON/OFF	20
Commands	22
User levels	24
Owner setup	26
Owner number reset	27

Contents

Advanced guide

For the brave!

Setup reset	30
User setup	31
Multiple commands	32
Heat pump model setup	34
Alarm messages	36
Error messages	39
Report messages	40
Combi Control command sheets	44
Get in touch with us	46

What Combi Control does?

Combi Control is a heat pump controller you operate with a mobile phone. It is compatible with most popular Toshiba heat pumps and all mobile phones (see CombiControl.eu for the complete list).

The easiest way to use Combi Control is with a Smartphone, using the Combi Control app downloadable from the Android Market (for Android phones) or App Store (for iPhone). It can also be controlled with regular mobile phone text messages (SMS). Combi Control allows you to have long distance control over the mode of the pump, room temperature and fan speed settings. Combi Control can also inform you about low room temperature, power failures and heat pump service intervals.



Indicator lights

The controller has 3 LED indicators and 2 buttons for easy setup. It has also 2 infrared LEDs that transmit your commands to the heat pump.

LED 1 - Power

on switched on

blinking no power, working on battery

off switched off

LED 2 - mobile phone LED

on restart time, SIM missing or SMS processing

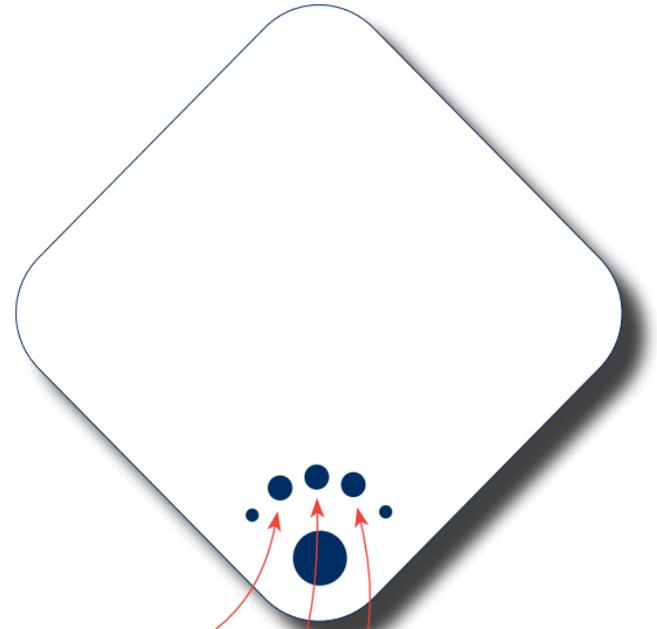
1 blink (3 s interval) normal status

3 blinks (3 s interval) no signal from mobile phone or not connected to a mobile network

blinking (500 ms interval) data call session is active

LED 3 - IR LED

blinking transmitting by IR



LED 1 - Power

LED 2 - mobile phone LED

LED 3 - IR LED

Buttons

Use a straightened paper clip or something similar to push the recessed buttons.

RESET button

Short push turns the controller off when working on battery

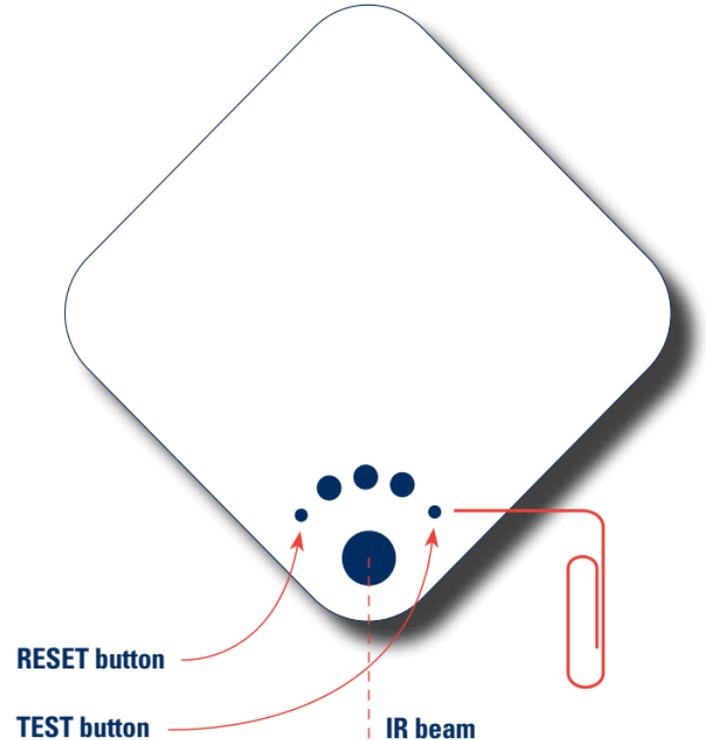
The controller has a battery that keeps it operational even if it's disconnected from a wall outlet. To fully turn off the controller, push the RESET button. The 3 LED lights will blink for about a second and the controller switches off.

Use this button also to clear the most recent settings (the Owner number will remain unchanged).

TEST button

Short push turns the heat pump ON/OFF

Use the TEST button to confirm that the IR beam from the controller reaches the heat pump.



NB! Pushing both buttons simultaneously for 3 seconds initiates the hard reset: restores factory settings, deletes Owner number and heat pump settings (same function as with

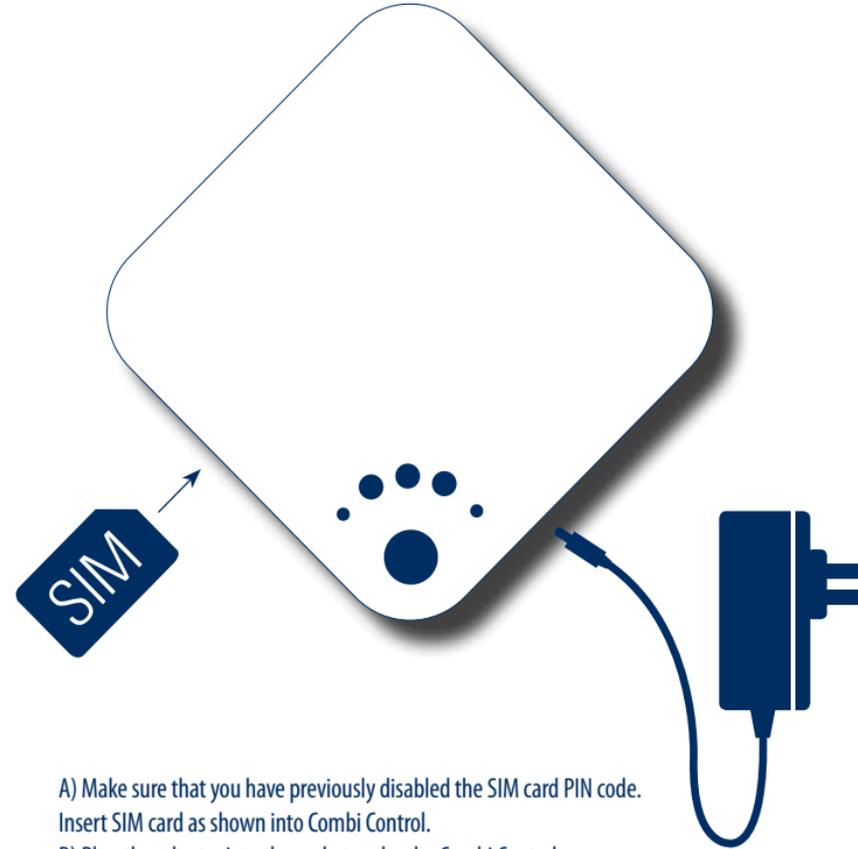
Power

When the power is out (power = 0V) the controller continues to work on the battery and turns off after the battery's voltage drops below 3.5V. A fresh battery lasts for approximately 24 hours (note that over time the battery's capacity decreases). After the controller is turned off the run time will be saved. To save battery life when the power is out the controller can be turned off with a short push on the RESET button.

SIM card

NB! Make sure you disable the PIN code of the SIM card you use in Combi Control.

NB! Make sure the SIM card you use in Combi Control can access 2G network. Combi Control is not compatible with SIM cards that use only 3G network.



- A) Make sure that you have previously disabled the SIM card PIN code. Insert SIM card as shown into Combi Control.
- B) Plug the adapter into the socket under the Combi Control.

Installing Combi Control

Combi Control should be mounted on the wall to the right of your heat pump's indoor unit (see fig. 1), with its IR transmitter pointing down. This way the IR beam is reflected from the floor and reaches the heat pump's sensor most efficiently.

Other mounting configurations are possible too as long as IR transmission from the controller to the pump works.

NB! Thick carpets and dark floors can distort the IR beam. Make sure the IR beam reaches the pump's sensor by using the controller's Test function (see page 19).

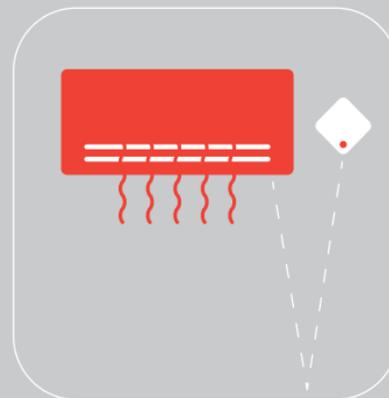


Fig. 1

On the right side of the indoor unit

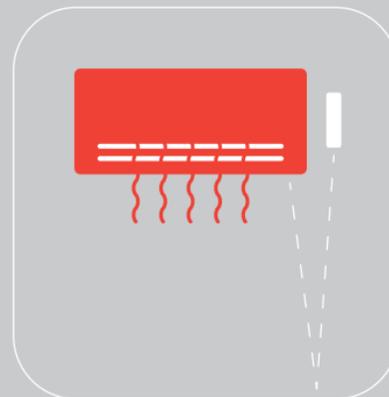


Fig. 2

Attached to the right side of the indoor unit



Fig. 3

Beneath the indoor unit

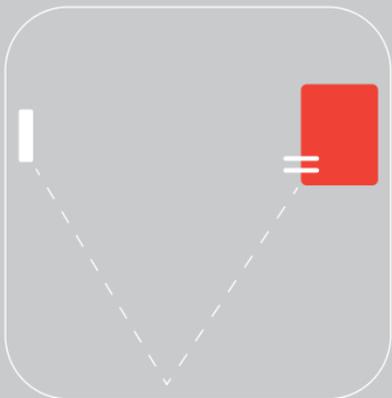


Fig. 4

On the wall, opposite to the indoor unit

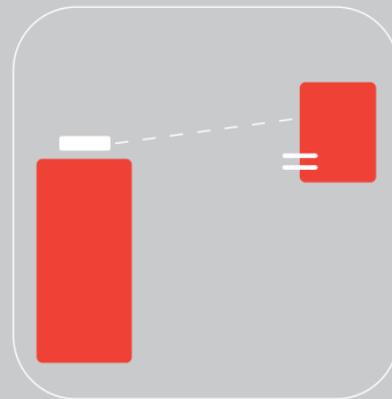


Fig. 5

On a ledge, opposite to the indoor unit

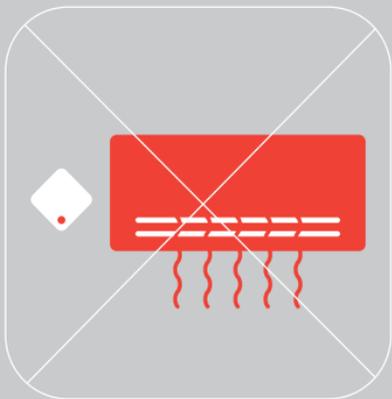


Fig. 6, 7

Do not place Combi Control on the left side of the indoor unit!

Indoor unit's internal condenser might block Combi Control's signal.



Testing Combi Control

To see if Combi Control can send commands to your heat pump, turn off the pump and press the controller's TEST button. When the connection is established, Combi Control turns the pump on with its last settings and you can proceed using the controller.

Turning heat pump ON/OFF

SMS Command **ON** turns heat pump on.
SMS Command **OFF** turns heat pump off.



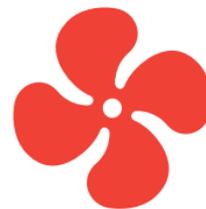
Commands

The range of heat pump temperature values Combi Control controls is 16-30 °C (default +20 °C) and the fan speeds are MIN, NORM, MAX (the default is NORM).

After selecting a mode (AUTO, DRY, COOL, HEAT, T8, T10) heat pump is turned on with 20 °C maximum temperature and normal fan speed, if not assigned differently by the Owner or the Users (see pages 24 and 29 for how to set the Owner and Users).

The pump can be assigned different temperature and fan speed values with Combi Control.

For example, the SMS: "COOL 19 MAX" orders the pump to cool until 19 °C and fan at maximum speed. When you change a heat pump function Combi Control always responds with an SMS that reports its STATUS (see page 39 for full STATUS report explanation).



AUTO

16

MIN

DRY

17

NORM

COOL

18

MAX

...

HEAT

28

T8

29

T10

30

Combine the pump mode, room temperature and fan speed values for a home atmosphere you like the best.

User levels

The amount of control Combi Control users have over the device and the amount of information they receive from the device can be set on a 3 level scale:

1. The **Owner** can send commands, report queries, setup commands and receive Combi Control report messages and alarm messages.
2. The **Users** can send commands and report queries to Combi Control but cannot send Setup commands.
3. The **All-level** users can make report queries about the status of the controller.



Owner setup

Setup can only be performed by the Owner. When no Owner has been previously set, Owner number can be sent from any mobile phone number. There are 2 ways to do this:

The to-be Owner sends the SMS “93” to the controller. The SMS containing “93” followed by the mobile number of the to-be Owner – e.g. “935012345” – is sent from any mobile phone.

The Owner number can be international (with the “+” symbol and country code) or local. The length of the number must be between 3-16 symbols (“+” counts as 1 symbol).

Successful Owner number entry/Owner number change is confirmed by “VERSION” report SMS sent to the new Owner (see page 40 for full “VERSION” report explanation).

After Owner number has been set up, setup can be done from this Owner number. All other numbers attempting

to change setup will be ignored. When no Owner number has been entered all numbers have Owner rights (all numbers can assign themselves as owners and no alarm messages will be sent). When the Owner has not set User numbers, all numbers have User rights.

Should you suspect Combi Control could be controlled from unapproved numbers, we recommend you set the Owner and User numbers.

Owner number reset

Once set, Owner number can be reset via mobile phone only by the Owner himself or by performing a hard reset by pushing both controller hidden buttons simultaneously for 3 seconds (hard reset can also be used when a wrong Owner number is entered by mistake).



Combi Control

Advanced setup
For the brave!

Setup reset

For setup reset send the SMS “90” to the controller. Combi Control responds with SETUP report:

“Owner: All; Users: All; Pump: All; Ring 2,2,2; Param: 5, 24, 180”.

This means Owner is not specified; all users can send commands; the pump model is not specified, call commands are set to default; “LOW TEMPERATURE” message will be sent when room temperature drops below 5 °C, “NO POWER” message blackout is in 24 hours and the “SERVICE” alarm message interval is 180 days.

Setup SMS command you send	Response SMS	Controller function you activate
90	SETUP	Setup reset (Owner deleted) and controller restart

User setup

To set User numbers start your command SMS with “91”, followed by the mobile phone number of the User. For example: “91+495012345” or “915012345” to enter User1 number where “5012345” is the cell phone number of User1 and +49 is the country code. User numbers (Owner, User1, User2) can be international (with the “+” symbol and country code) or local. The length of the number must be between 3-16 symbols (“+” counts as one symbol). Multiple commands can be combined into one SMS. When a User has been set, Combi Control responds with a SETUP report message.

Setup SMS command you send	Controller function you activate
91xx*	User1 number entry (to delete: 910)
92xx*	User2 number entry (to delete: 920)
93xx*	Owner number entry (to delete: 930)

**xx marks the place of mobile phone number*

Multiple commands

If you want to set up several parameters with one SMS, separate commands with one of the following:

space

comma “,”

semicolon “;”

For example, the SMS „91+ 49550111111 92+ 49550222222 9522 9720” sets the User1 and User2 numbers, specifies the heat pump model as “Toshiba Daiseikai 5”, and determines that NO POWER message will not be sent in case of a power failure.

When a command in the multi-setup is incorrect, the Owner will receive an error message. All the correct commands that precede the error command in the multi-setup command will be activated.

Multi-setup sender will always receive SETUP report SMS from Combi Control to confirm that all commands arrived to the controller. There can be spaces before and after a command but not inside a command as this will interfere with the code.

Heat pump model setup

The pump can be chosen on 3 levels of precision:

1. The precise name of the pump: the manufacturer and the model.

This is recommended for the most efficient operation.

2. Pump manufacturer.

If you only choose the pump manufacturer, functions T8 will not be checked and the command will be sent even if the pump does not have T8 mode. If the exact pump model is not listed on our webpage or in this manual, Combi Control may or may not work with the heat pump, for which the Combi Control manufacturer will not be held responsible.

3. All pump models.

If you choose All pump models (SMS: “950”), then all supported brands IR commands will be sent to the pump, and Combi Control can be used without choosing the pump more precisely.

Setup SMS command you send	Heat pump model and series	T8*
950	All pump models	T8
952	Toshiba	T8
9521	Toshiba Daiseikai 3	T8
9522	Toshiba Daiseikai 5	T8
9523	Toshiba Daiseikai 6	T8

** T8 is a heat pump function that keeps the room temperature from dropping below 8 °C respectively.*

Alarm messages setup

The Owner can change the default values of the conditions on which alarm messages are sent. For example, SMS "9713" lowers the room temperature value at which "LOW TEMPERATURE" SMS is sent from the default 5 °C to 3 °C.

Setup SMS command you send	Response SMS format	Combi Control function you activate	Default values
91xx*	SETUP	temperature treshold for „LOW TEMPERATURE“ message	5 °C
92xx*	SETUP	“NO POWER” message blackout in hours	24 h
93xx*	SETUP	“SERVICE” message interval in days	180 days

* xx marks the place of the numeric value

The „LOW TEMPERATURE“ parameters (971) can be between 0-16

The “NO POWER” parameters (972) can be between 0-48

The “SERVICE” parameters (973) can be between 0-360

When you set parameter 971 to 0, (e.g. you send a text message “9710”) then the controller will not send you a “LOW TEMPERATURE” message.

When you set parameter 972 to 0, then “NO POWER” message will not be sent.

When you set parameter 973 to 0, then “SERVICE” message will not be sent.

Alarm messages

Alarm messages are only sent to the Owner.

Combi Control alarm SMS	Alarm message meaning	Message blackout/ alarm treshold
e.g. “LOW TEMPERATURE: 6 °C” (when the limit is 7 °C)	Room temperature is low	24h / +5 °C
NO POWER	220V power failure	Default: 24h
e.g. “SERVICE: 1 days”	Service date	Default: 180 days
VERSION	New Owner	After setting a new Owner or changing Owner



Error messages

“Error command: text”

SMS will be sent if there was an error in your command.

For example, an SMS “cool19max” receives the response “Error command: cool19max”. Note that Combi Control will only return your incorrect command without suggesting a correct one (the error in the example is the absence of spaces between commands).

“Error userrights: text”

SMS will be sent if the user had no rights for that command.

“Error pump command: text”

SMS means the operation T8 is not available for the specified pump.

When Combi Control fails to send an SMS it will retry after 1 minute.

Report messages

You can send report requests to Combi Control about your heat pump status, controller status and the setup of the controller. Report messages are sent only to the sender of the request.

SMS command you send	SMS command function	Response SMS example
STATUS	Pump status request	Pump: ON; Mode: HEAT; Fan: MAX;
VERSION	Controller status request	Ver: 1.01b05; Pump: Toshiba, ON; Power: ON (4.37V); Room: 19C; GSM: 14,1; Life: 00.05; Owner: +49550111111;
SETUP	Setup request	Owner: +49550111111; Users: All; Pump: Toshiba, ON/OFF/NO POWER; Ring: 2,2,2; Param: 5,24,180;

Pump "STATUS" report explanation

Pump "STATUS" report SMS Format	Response SMS example
Pump: ON/OFF/NO POWER	Pump ON/OFF/NO POWER
Mode: AUTO/DRY/COOL/HEAT/T8/T10	Pump mode
Fan: AUTO/MIN/NORM/MAX	Fan speed
Temp: xxC	Pump temperature
Room: xxC	Room temperature

Controller "VERSION" report explanation

SMS format	Explanation
Ver: version number	Combi Control firmware version
Pump: type,ON/OFF	Pump status: type and ON/OFF
Power: ON/OFF(x.xxV)	Voltage 5V input and battery voltage (3.50V- 4.20V)
Room: xxC	Room temperature in Celsius degrees
GSM: sq, cell	GSM signal strength (0-31,99) and GSM area info (1-local network, 5-roaming)
Life: mm.dd	Controller run time: months, days
Owner: number	Owner mobile phone number

"SETUP" report explanation

SMS format	Explanation
Owner: number / All	Owner number or All if not defined
Users: number1, number2 / All	User1 and User2 number or All if not defined
Pump: pump manufacturer's and model name	Chosen pump model: Toshiba ALL
Ring: x,x1,x2	Ring codes: Owner, User1, User2
Param: x1,x2,x3	Parameters: 971 (low temperature), 972 (no power), 973 (service)

Heat pump ON/OFF

Command SMS	Heat pump function
ON	Pump ON
OFF	Pump OFF

Restart and Owner number entry

Command SMS	Controller function
90	Setup reset (Owner deleted) and controller restart

Commands

Command SMS	Heat pump function
AUTO	AUTO (+20 °C, fan: NORM)
DRY	DRY (+20 °C, fan: NORM)
COOL	COOL (+20 °C, fan: NORM)
HEAT	HEAT (+20 °C, fan: NORM)
T8	T8 mode

Heat pump model setup

Setup command SMS you send	Heat pump model and series	T8
950	All pump models	T8
952	Toshiba	T8
9521	Toshiba Daiseikai 3	T8
9522	Toshiba Daiseikai 5	T8
9523	Toshiba Daiseikai 6	T8

Get in touch with us



Combi Control