Operation guidance for digital CPU Control

TX Control

|		STATUS
20	▲ ●	TEMP. RAISE
	▼ ●	TEMP. LOWER
04	▲ ●	FAN SPEED RAISE
	▼ ●	FAN SPEED LOWER
	⧖ ●	TIMER
	⏻ ●	ON/OFF
		STATUS
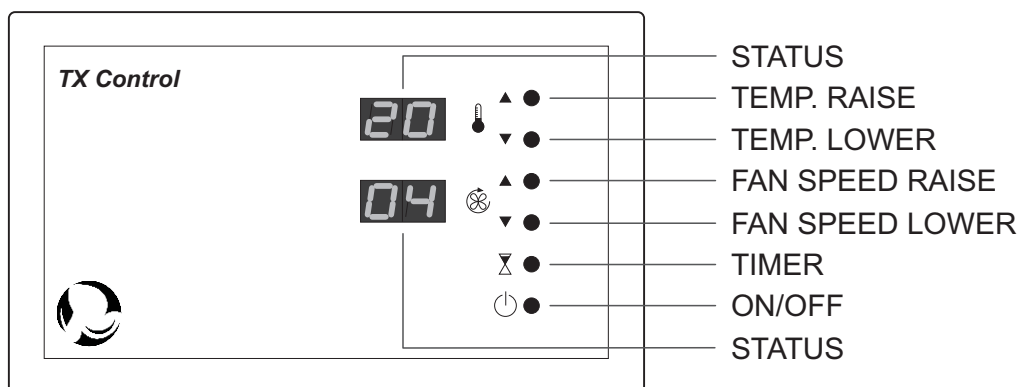
Unit in stand-by mode / stop.

When the unit is connected to 230 V AC supply and the controller is connected to the unit with the data cable, a red spot in the lower right corner of the bottom display, will be lit, wich indicates that the unit is in stand-by mode and ready to operate.
If the unit is working, it can be stopped by

1 pushing the *ON/OFF* button.
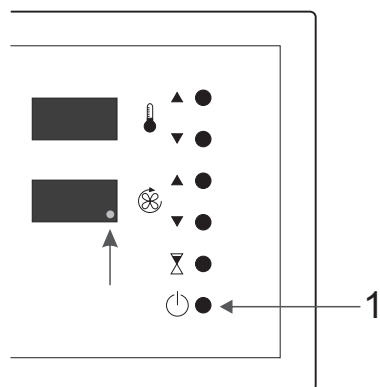
Starting the unit.

1 Push the *ON/OFF* button, and the unit will start with the pre-defined parameters for temperature and blower speed.

2 The inlet temperature will be raised to the desired value by pushing the button.

3 The inlet temperature will be lowered to the desired value by pushing the button.
The fan speed is as standard adjusted to step 1.

4 A higher air exchange is reached by pushing the button.
Max value is step 5.
Unit with internal damper Max value is step 4

5 Less air exchange is adjusted by pushing the button.
Min. value is step 1.
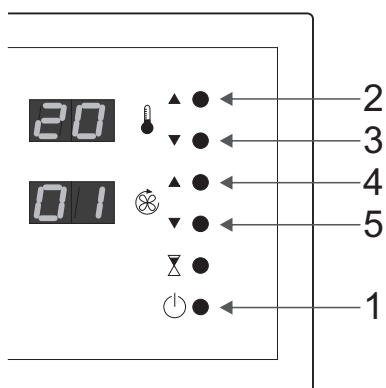
Start of the unit with timer function.

It is possible to run the unit by timer function, and it will run until it reach the first comming half or full hour, according to the clock.

1 Push the button, and the unit will start with the pre defined values. If you push more times, the running time will be extended with half an hour for each push.
The timer function will be indicated by a red flashing spot in the bottom display.

2 To cancel the timer function, just push the *ON/OFF* button.
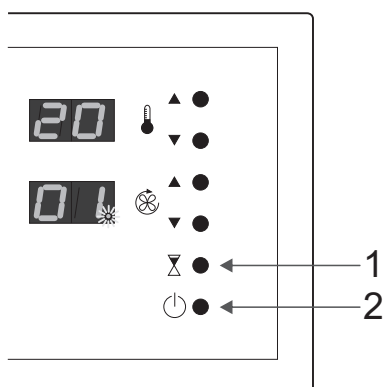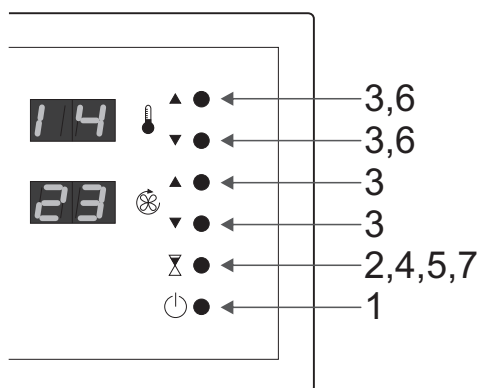
Adjusting the clock.

1 Start the unit, if it is not already running.
2 Push the *TIMER* button, and keep it down for 2 seconds. Now the current time will show up, showing hours in the upper display and minutes in the bottom display.
3 Changes of hours and minutes can be done by pushing the buttons for *UP/DOWN* opposite the respective display.
4 Note that all changes must be stored by pushing the *TIMER* button for each change.
5 To change the day of the week, push once more at the *TIMER* button, and the number of the week-day will show up in the upper display.
6 Changing the week-day to for instance Wednesday = 3, push the buttons for *UP/DOWN* opposite the respective display.
7 All changes must be saved, by pushing the *TIMER* button.
  If no canges has been made within 4 seconds, the display will return to show the status.
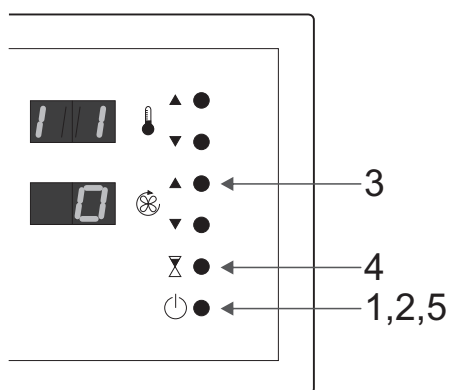
Encoding for time swich.

To encode the clock relay, the unit must be set to a special mode called SERVICE STAND-BY, where adjustable parameters are shown in relation to a specific address.
1 Start the unit, if it is not already running.
2 Push the *ON/OFF* button, and keep it down for apr. 4 seconds. Now 4 strokes will show up in the displays. Still holding
3 down the button, push the *FAN SPEED RAIS* button.
  The address 11 will appear in the upper display, and the related value for day/days in the bottom display. If the clock has not been encodet before, the value in the bottom display will show 0.
  Addresses and related values will appear from the attached table, and can be adjusted with the buttons for *UP/DOWN* opposite the related display.
4 Remember to store any change of value at a new address, by pushing the *TIMER* button. The display will respond with a flash to indikate the storage.
5 After encoding all desirable parameters, the unit will start again by pushing the *ON/OFF* button twice.

Address Upper display	Function	Value Bottom display	Description
11	Clock-relay 1 , day	0 - A	0 = no action 1 = monday 2 = tuesday 3 = wednesday 4 = thursday 5 = friday 6 = saturday 7 = sunday 8 = mond. to frid. 9 = saturd. and sund. A = all days
12	Clock-relay 1,hour	00 - 23	Hour for action
13	Clock-relay 1,minute	00 - 59	Minutes for action
14	Clock-relay 1,action	0 - 1	0 = off , 1 = on

The table shows the parameters for clock-relay number 1, where the second digit shows respectively day, hour, minute and action. It is possible to activate 10 clocks, numbered 1-A.

The next clock-relay number will be address 21-24, where the values must be encoded.
The next clock-relay number will be address 31-34, e.t.c..

Encoding a cyclus, Example.

In this example we show the digits in upper an lower display in a step-by-step procedure, according to the desired values.
Do not forget to store the values for each change, push *TIMER*.

To run this cyclus, we use only 3 of the possible 10 clock-relays.

We want the unit to run monday to friday from 8.00 - 16.00 except friday, where we want to stop at 12.00.

First we encode all the values for START according to the table.

1.   Address 11, Value; 8 (monday-friday)
2.   Address 12, Value; 08 (hour on day/days)
3.   Address 13, Value; 00 (minutes in hour of day/days)
4.   Address 14, Value; 1 (start parameter ON)

Now we encode all the values for STOP according to the table.

5.   Address 21, Value; 8 (monday-friday)
6.   Address 22, Value; 16 (hour on day/days)
7.   Address 23, Value; 00 (minutes in hour of day/days)
8.   Address 24, Value; 0 (stop parameter OFF)

Now we encode the earlier stop value for friday.

9.   Address 31, Value; 5 (Friday)
10. Address 32, Value; 12 (hour on day/days)
11. Address 33, Value; 00 (minutes in hour of day/days)
12. Address 34, Value; 0 (stop parameter OFF)

As seen in the example, we have encoded 2 stop values for friday, both 12.00 and 16.00, but because we have not encoded any start value in the period between 12.00-16.00, the unit will stop at 12.00 and try to stop at 16.00 again, without any succes, as the unit has already stopped at 12.00.

Connecting peripheral devices..

It is possible to connect other peripheral devices to the controller to optain a varios number of ways to control the unit. The controller is prepared for direct connection of CO2-sensor, motion-sensor (PIR), thermostat, hygrometer, CTS-input and network interface from PC.

With a CO2-sensor connected to the controller, the unit will work as demand controlled ventilation (DCV), according to the current value of PPM in the room, so that the ventilation automatically increase when the intencity of CO2 rais, and automatically reduce the ventilation when the value of CO2 is reduced to the decired value.
Clean air is by definition 400 PPM, and max. value for comfort air is 1000 PPM. At higher values, people will feel tired and get headache.

With a motion-sensor (PIR) connected to the controller, the unit will work with the pre encoded values, for temperature and flow, as soon as there is any movement in the room, and stop when no movement is registrated. Instead of stopping, it is possible to encode the controller to work with other parameters than those related to the values in the normal working situation. This feature is also possible in relationship with the clock-relay.

Mode status
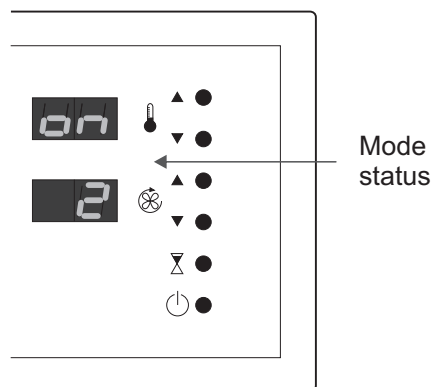
Illegal stop of the unit.

If you try to stop the unit when it has been startet by means of one of the above mentioned periphecal devices, or the internal clock-relay, the display will show an ON MODE without stopping the unit, because it was told to run by one of the above mentioned devices.

ON MODE - codes.

2 = Contact-relay
3 = CO_2-sensor
4 = PIR or CTS
5 = Network-interface (PC)

Unintended stop of the unit.

Fault status

If the controller registrates a deviation comparring the encoded parameters, an F-CODE will be shown in the display, and the unit will stop running. If a red spot in the lower display shows up, the fault does not exist any longer, but the controller has to be attended by pushing the *ON/OFF* button to start the unit again.

Error codes.

F 1 = No answer on databus to relayprint.
F 2 = No power on databus to relayprint.
F 3 = Fault in temperature gage.
F 6 = Signal from CO2-sensor is under minimum.