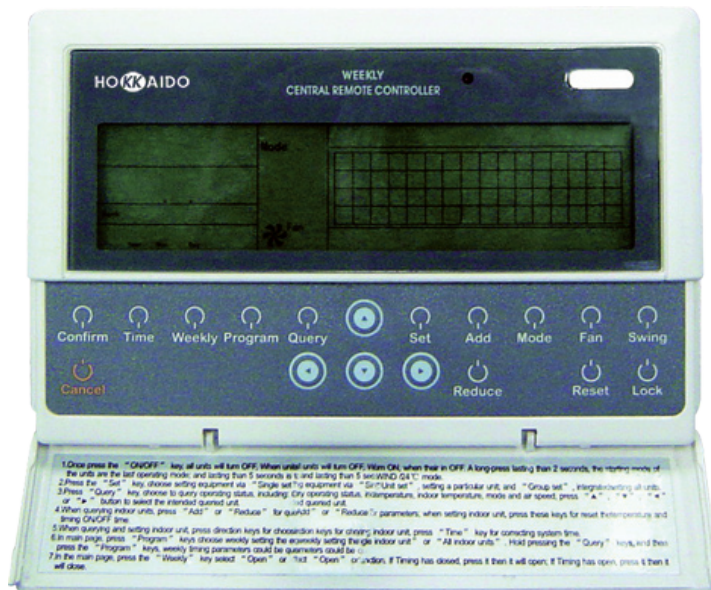


WEEKLY CENTRALIZED CONTROLLER FOR INDOOR UNITS

USER'S MANUAL



DTCWT IHXR Model



HOKKAIDO

WARNING!

PLEASE READ THIS MANUAL BEFORE USING YOUR NEW WEEKLY CENTRALIZED CONTROLLER.

Table of Contents



<i>SAFETY PRECAUTIONS</i>	3
<i>INSTALLATION</i>	4
<i>INDICATORS ON WEEKLY CENTRALIZED CONTROLLER</i>	8
<i>BUTTONS ON WEEKLY CENTRALIZED CONTROLLER</i>	10
<i>HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER</i>	12
<i>ERROR CODES</i>	21

SAFETY PRECAUTIONS



Please read the Safety Precautions carefully before using DTCWT - IHXR Weekly Centralized Controller. Do observe the following Safety Precautions, for they are very important.

Before reading the text, please be familiar with the following markers and icons, and comply with the Precautions.

■ Markers

Markers	Indication
 WARNING	The sign shows the risk of death or serious injury will be caused due to the wrong operation.
 CAUTION	The sign shows the risk of injury or the damage to the property will be caused due to the wrong operation.


■ Icons


Icons	Indication
	FORBID. Action or procedure not allowed, with serious effects on objects and people.
	ENFORCE. Compulsory action or procedure. The missed observance could bring serious effects on objects and people.


• A strict observance of the following instructions will prevent personal hurt and incidents to the User. Moreover, correct operation and long life of the appliance will be ensured.

• **The User must never attempt to install or repair the Weekly Centralized Controller by himself.**

WARNING

INSTALLATION WARNING	 Installation commitment	<ul style="list-style-type: none"> • Please always contact the Retailer or the Authorized Technical Service for installation of the Weekly Centralized Controller. <p>Users must not install the Weekly Centralized Controller by themselves. A wrong installation may cause electric shocks, injuries or fire.</p>
-----------------------------	---	---

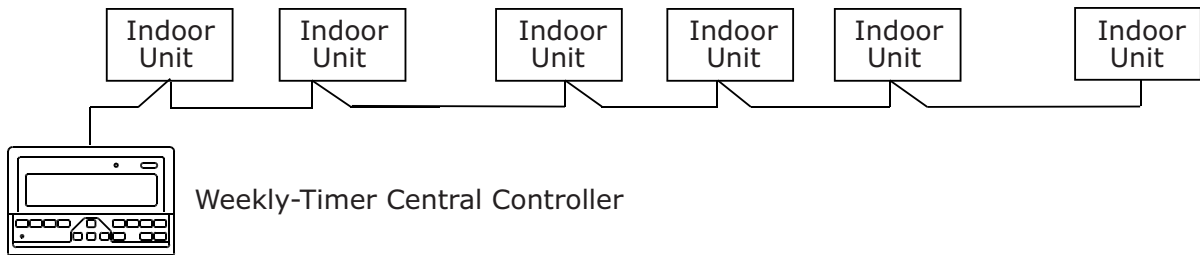
OPERATION CAUTION	 FORBID	<p>Do not spray inflammable liquid on the Weekly Centralized Controller, or fire may be caused.</p> <hr/> <p>Do not operate with wet hands. Do not let water go into the Weekly Centralized Controller, to avoid the danger of electric shocks.</p>
--------------------------	--	---

MOVE AND REPAIR CAUTION	 FORBID	<p>If you want to move or re-install your Weekly Centralized Controller, please always contact the Authorized Technical Service.</p> <hr/> <p>Do not disassemble your Weekly Centralized Controller. If you need to disassemble the Weekly Centralized Controller, please contact the Authorized Technical Service. A wrong disassembly may cause abnormal operation or overheating, which may result in fire.</p>
--------------------------------	--	--

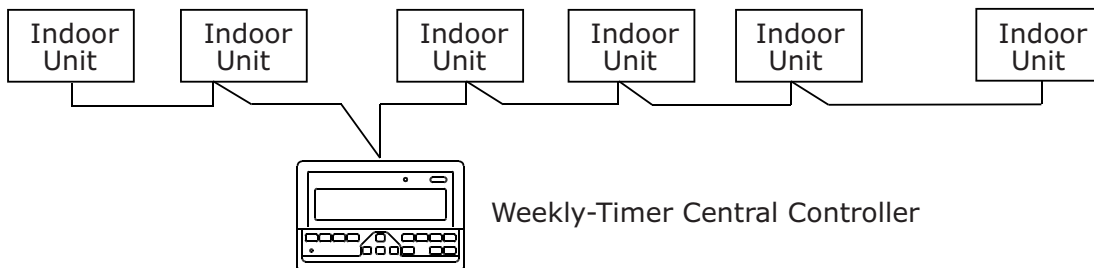
System Wiring Instructions

1. Connecting diagram for air-conditioning system with central network

a) Connecting diagram 1



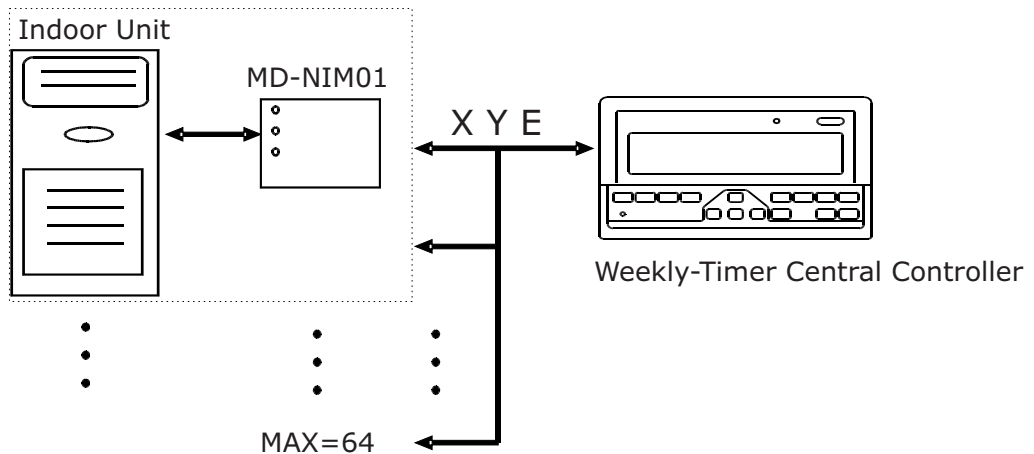
b) Connecting diagram 2



2. Other relevant explanation

There are two kinds of Indoor Unit:

- Indoor Unit with built-in network module
- Indoor Unit with external network module.



INSTALLATION

Accessory List

The following is the packing list of DTCWT - IHXR Weekly-Timer Central Controller. Confirm whether it contains all accessories.

Nb.	Name	Quantity
1	Weekly-Timer Central Controller	1 piece
2	Cross-head screw	6 pieces
3	Screw anchor	6 pieces
4	User's Manual (Installation & Operating Instructions)	1 piece
5	120 Ohm resistor for XY line	4 piece

Field installation accessories prepared

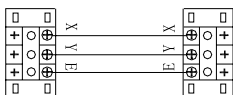
Nb.	Name	Quantity	Remarks
1	Three-core shielded cable	1 piece	Used for communicating with the Indoor Unit of the air conditioning system
2	Three-core cable	1 piece	Used for the supplying power to the Weekly-Timer Central Controller
3	Switch case	1 piece	
4	Cable tubes	3 pieces	
5	Cable tie	several	Used for binding cable (according to the specific situation)

Installation Instructions

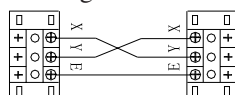
Installation Instructions to the Central Controller:

1. Directly connect 20V~50/60Hz to ends L and N of the socket on the back of the Central Controller.
2. The signal cable and power cable of the Central Controller cannot be contained in the same cable tube. The distance between the signal cable tube and power cable shall be between 300 mm ~ 500 mm at least.
3. The total signal cable length of the Central Controller shall not exceed 1,200 m.
4. Make sure there is no joint in the middle of the shielded cable. If such a joint exists, use a socket to connect it.
5. After finishing the connection of the Central Controller, do not use megger to check the insulation of the signal cable.
6. Connecting mode between the Central Controller and network interface:
The communication port between the Central Controller and the network interface of the air conditioning system is polar. The X, Y, E pins on both sides shall be corresponding and cannot be cross-connected.

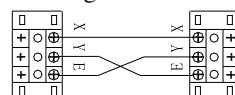
Correct connection



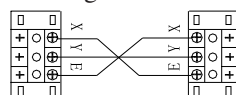
Wrong connection



Wrong connection



Wrong connection



INSTALLATION

Installation Method

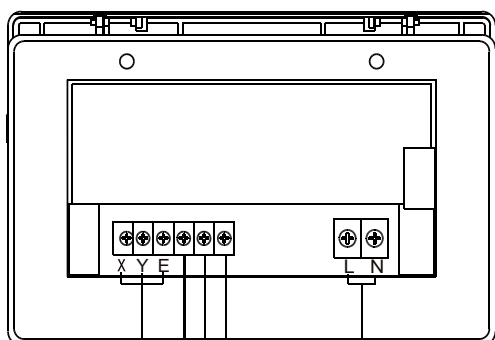
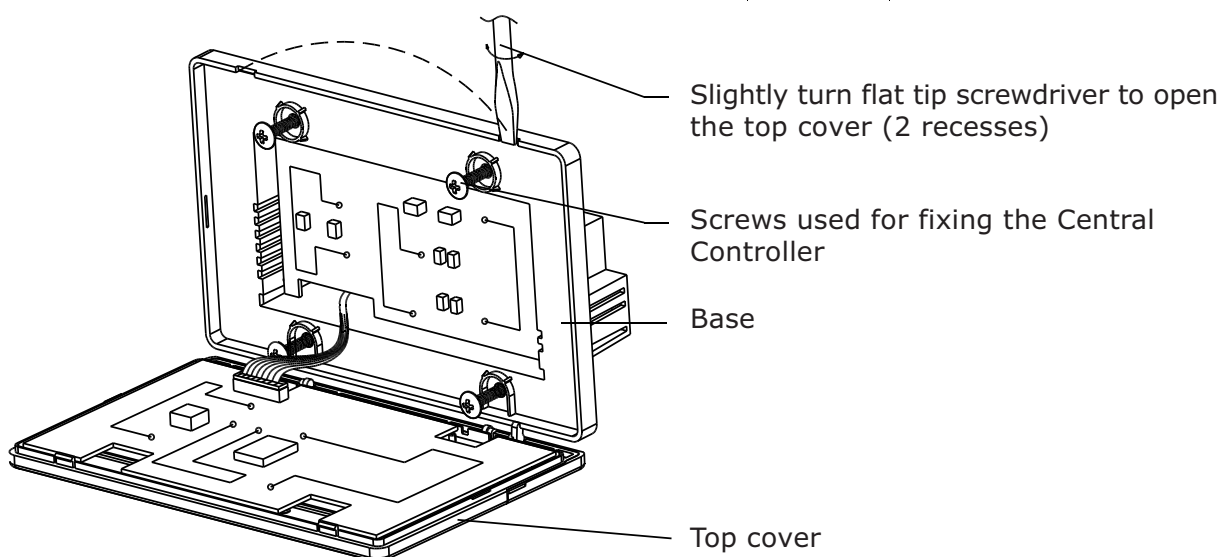
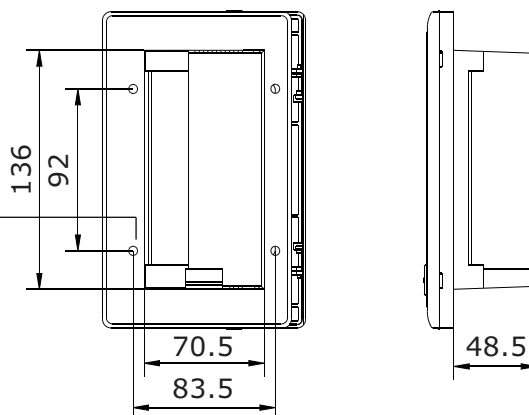
The installation method of the Central Controller using electrician switch case.

The thickness of the Central Controller cable shall be adjusted according to the length of the cable. A proper cable tube shall be used to install the cable of the Central Controller.

Insert the flap tip screwdriver into the 2 recesses on the top panel of the case and slightly turn to open the top cover of the Central Controller.

Dimensions: as shown in the right diagram.

Installation screw hole (4)



Power connector of the Central Controller 220V/AC

ON

OFF

COM

OFF---COM: Emergency Stop Switch, used to shut down all air conditioners.

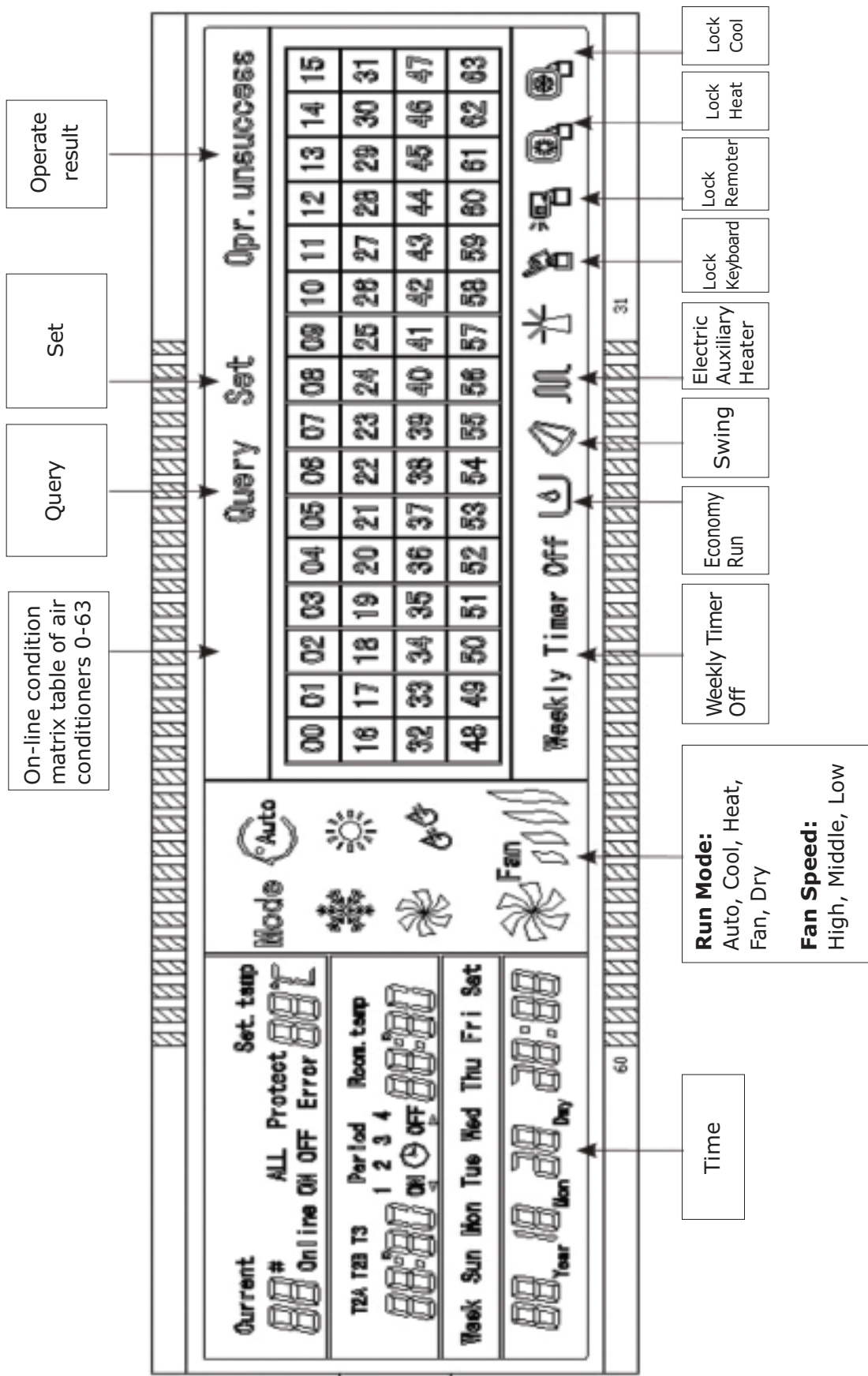
OFF---COM: Emergency Open Switch, used to start up all air conditioners.

Communication interface to the Indoor Unit.

INDICATORS ON WEEKLY CENTRALIZED CONTROLLER

Indicators' description of the Weekly-Timer Central Controller

1) General drawing of the liquid crystal display of the Weekly-Timer Central Controller



INDICATORS ON WEEKLY CENTRALIZED CONTROLLER

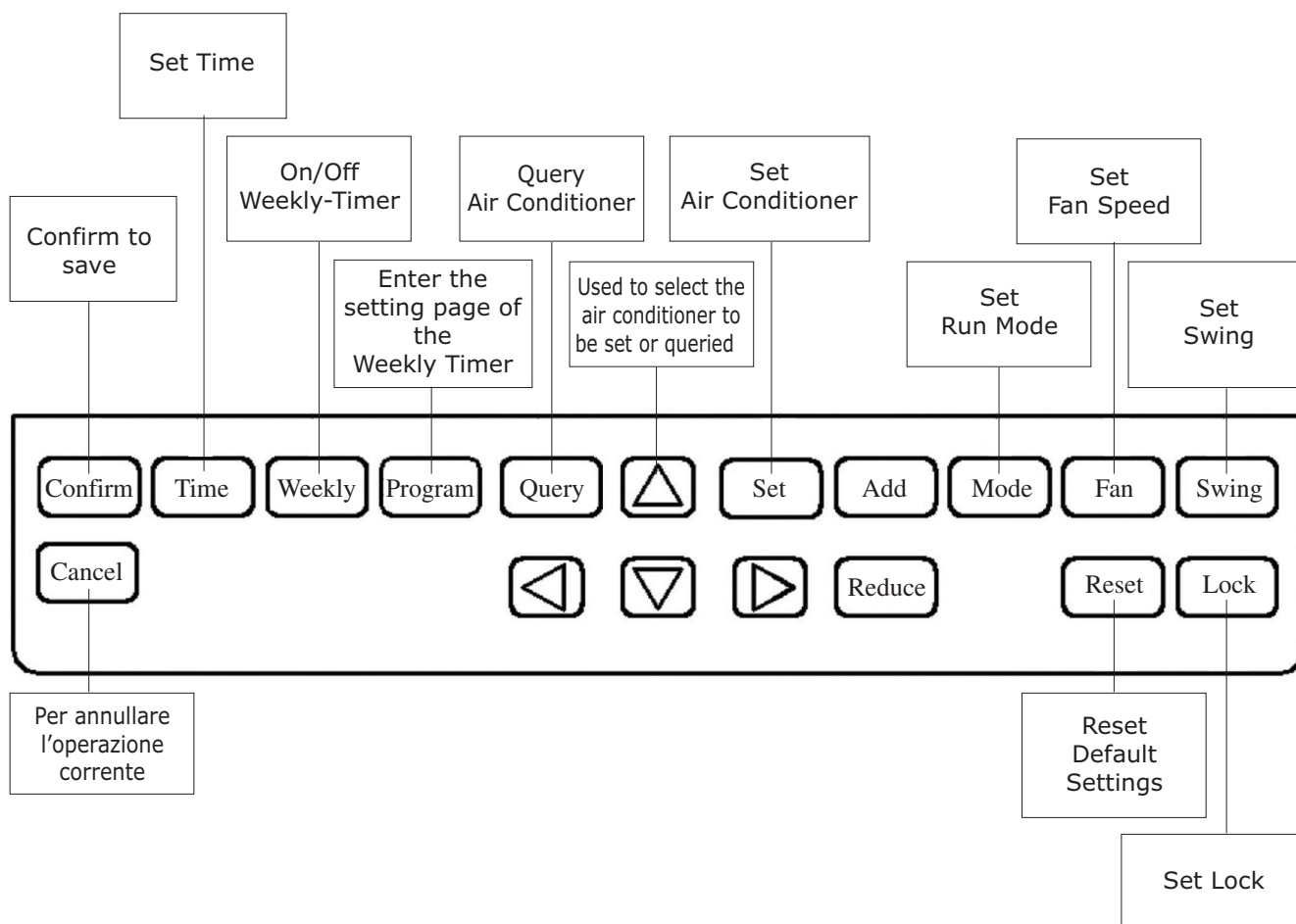
2) LCD icon description of the Weekly-Timer Central Controller

Icon	Meaning	Icon	Meaning
	Automatic Mode		Fan Only Mode
	Cool Mode		Dry Mode
	Heat Mode		Fan Speed: High/Medium/Low
	Electric Auxiliary Heater		Lock Heat
	Lock Cool		Lock Remoter
	Lock Keyboard	Set	Setting
Query	Querying	Opr. unsuccess	Operate Result
Weekly Timer Off	Weekly Timer Off	ALL	All
Online	Online	Protect	Protecting
Error	Error	Set. temp	Set Temperature
Period 1 2 3 4	Period 1, 2, 3, 4	Room. temp	Room Temperature
T2A T2B T3	T2A Liquid Side Temp. (I.U.) T2B Gas Side Temp.(I.U.) T3 Outdoor Pipe Temp.	Mon	Monday
Tue	Tuesday	Wed	Wednesday
Thu	Thursday	Fri	Friday
Sat	Saturday	Sun	Sunday



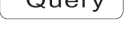


BUTTONS ON WEEKLY CENTRALIZED CONTROLLER

Buttons' description of the Weekly-Timer Central Controller




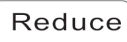










1) General key layout of the Weekly-Timer Central Controller



2) Key instructions of the Weekly-Timer Central Controller

Key Name	Usage
	Press "ON/OFF" button. All air conditioners will be shut down if they are running. On the contrary, they will be started up. If you press the button for less than 5 seconds, the startup mode is the last running mode of the air conditioner. If you press the button for more than 5 seconds, the startup mode is Cooling, High Speed, 24°C.
	Press "SET" button and select "set single" or "set all". "Set single" indicates to set the parameter (such as Mode/Temperature/Fan Speed/Weekly Timer) of a selected air conditioner. "Set all" indicates to set the parameter of all air conditioners controlled by the Central Controller.
	Press "QUERY" button to query the running condition of the air conditioner, such as On/Off, Temperature Setting, Indoor Temperature, Running Mode and Fan Speed. Press "Up", "Down", "Left" and "Right" buttons to select the air conditioner that you would like to query.
	"Up" button. When querying or setting the Indoor Unit, press this button to select the Indoor Unit to be set or queried.
	"Down" button. When querying or setting the Indoor Unit, press this button to select the Indoor Unit to be set or queried.

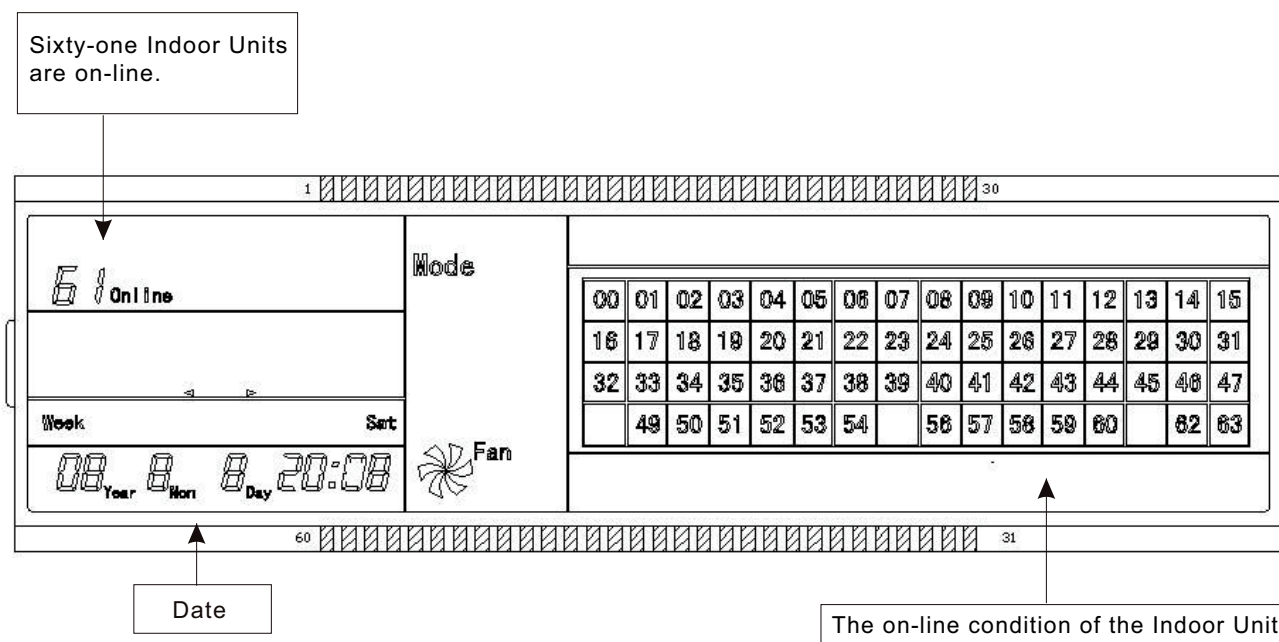
BUTTONS ON WEEKLY CENTRALIZED CONTROLLER

	“Left” button. When querying or setting the Indoor Unit, press this button to select the Indoor Unit to be set or queried. In setting the Weekly Timer, it is used for selecting the day of the week and the time of startup and shutdown.
	“Right” button. When querying or setting the Indoor Unit, press this button to select the Indoor Unit to be set or queried. In setting the Weekly Timer, it is used for selecting the day of the week and the time of startup and shutdown.
	When querying the Indoor Unit, press “ADD” button to query more parameter of the Indoor Unit. In setting the Indoor Unit, it is for modifying the setting temperature. In setting the Weekly Timer, it is for modifying the time of startup and shutdown.
	When querying the Indoor Unit, press “REDUCE” button to query more parameter of the Indoor Unit. In setting the Indoor Unit, it is for modifying the setting temperature. In setting the Weekly Timer, it is for modifying the time of startup and shutdown.
	When setting the Indoor Unit, it is used for setting the running mode, which includes Automatic, Cool, Heat, Fan, Dry modes and Off (shutdown of the air conditioner). You can select among them.
	When setting the Indoor Unit, it is for setting the fan speed, which includes High speed, Middle speed, Low speed and Automatic speed. You can select among them.
	When setting the Indoor Unit, it is for setting the swing function. The running mode is selected between “Swing-on” and “Swing-off”.
	When setting, press “LOCK” button to lock the remote controller of all or single Indoor Unit. Press the “QUERY” button and hold under the main page, then repress the “LOCK” button again to lock the keyboard of the Central Controller; press the “MODE” button and then repress the “LOCK” button to lock the running mode.
	If you press this button, default settings are restored, as when power is restored after a power failure.
	Under the main page, press “PROGRAM” button to set the Weekly Timer of “single indoor unit” or “all indoor units”. Press the “QUERY” button and hold, and press the “PROGRAM” button to query the Weekly Timer parameters of the Indoor Unit.
	Under the main page, press the “WEEKLY” button to start up or shut down the Weekly Timer function.
	Under the main page, press the “TIME” button for 5 seconds to enter the time-modifying status, and then press “ADD” or “REDUCE” button to modify the time. Press “Left” or “Right” button to select Minute / Hour / Day / Month / Year. Finally, press the “CONFIRM” button to save the modification.
	Save data and send the command required to the Indoor Unit, such as setting the mode of the air conditioner.
	Cancel the last operation and return to the last interface.

HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER

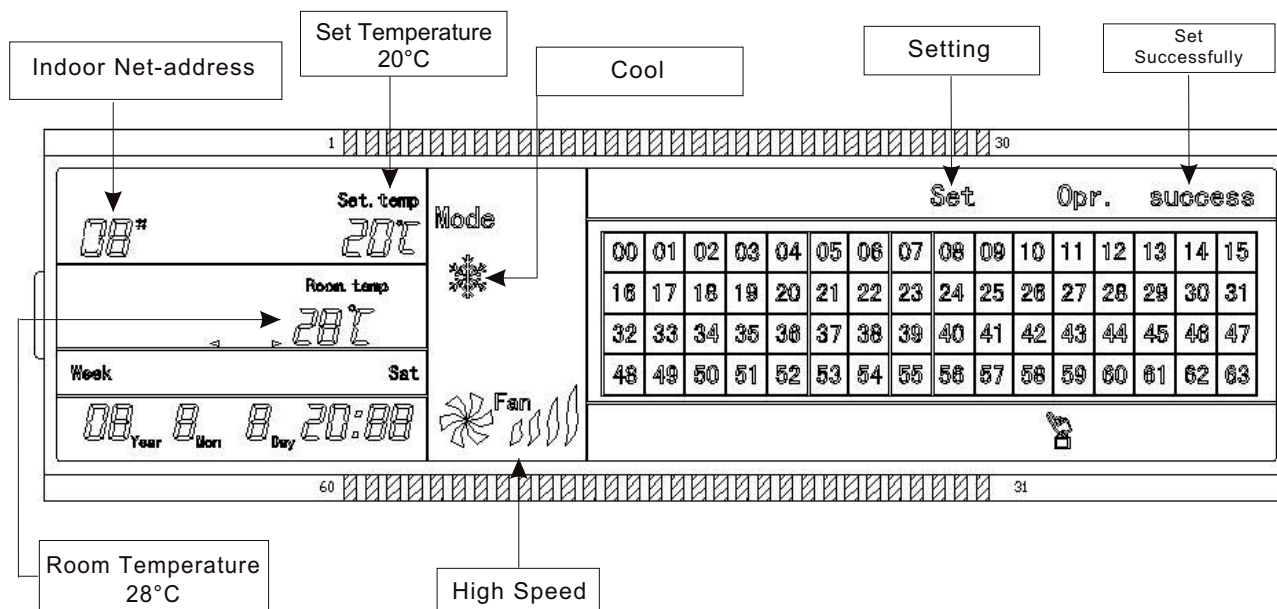
a) The main interface of the Weekly-Timer Central Controller (User Interface)

- 1) Under the other pages, press button to return to the main interface.
- 2) Under the other pages, automatically return to the main interface when no operation is performed for a period of time.
- 3) The main interface displays the on-line condition of the Indoor Unit.



b) Setting interface of single Weekly-Timer Central Controller

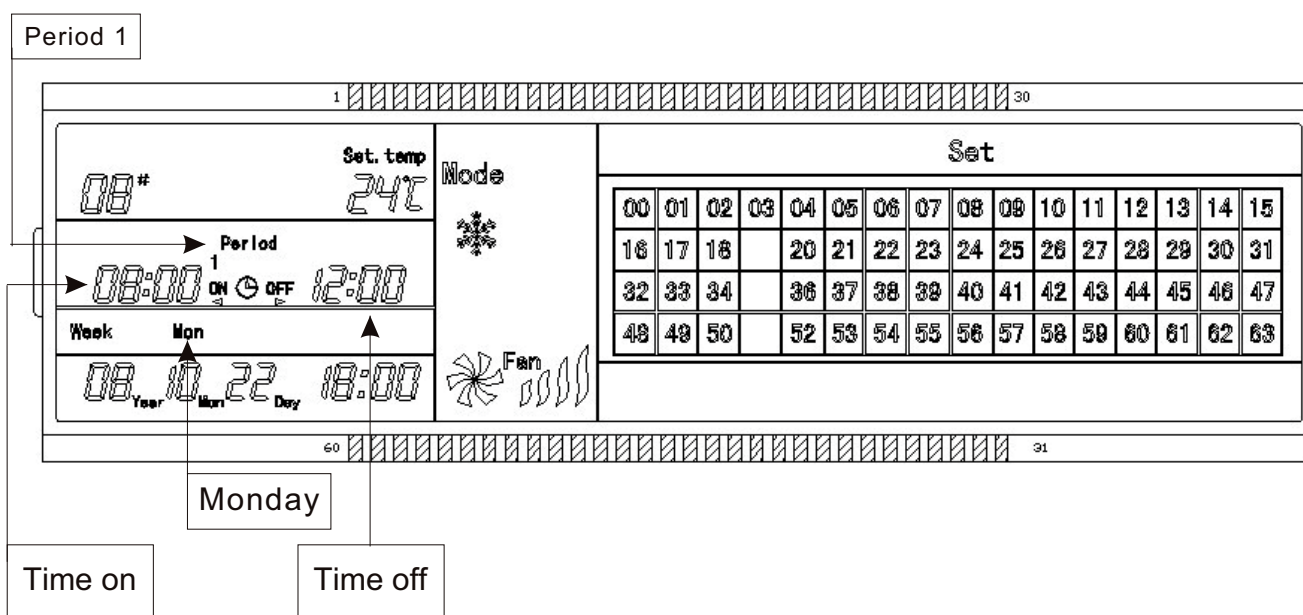
- 1) Under the main interface, press button to select the interface for the setting of a single air conditioner.
- 2) Automatically return to the main interface when no operation is performed for a period of time.
- 3) Set the running status of a single air conditioner under this page.



HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER

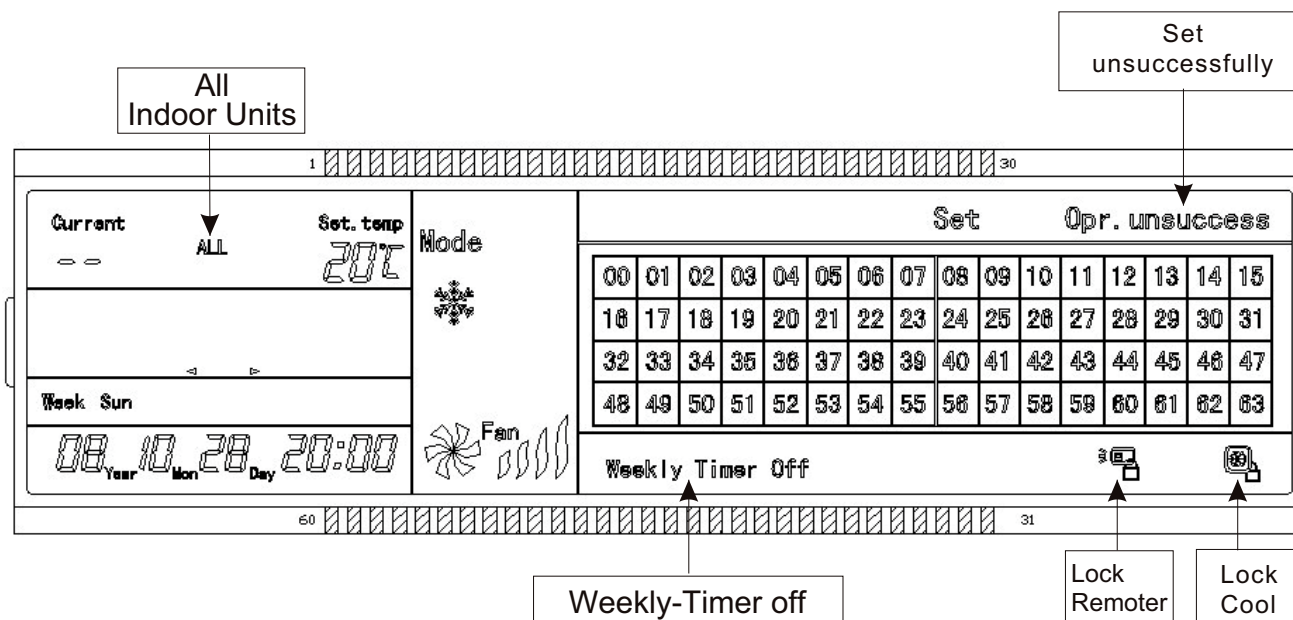
c) Setting interface of Weekly Timer parameters of a single air conditioner

- 1) Under the main interface, press **Program** to display the parameter setting interface of a single Weekly Timer.
- 2) Automatically return to the main interface if no operation is performed for a period of time.
- 3) Under this page, set the Weekly Timer parameters of a single air conditioner, including Startup Time, Shutdown Time, the Running Mode of this period, Temperature and Fan Speed.
- 4) One air conditioner can be at most st with four periods in one day from Monday to Sunday, seven days in total.



d) Unified setting interface of the Weekly-Timer Central Controller (all air conditioners)

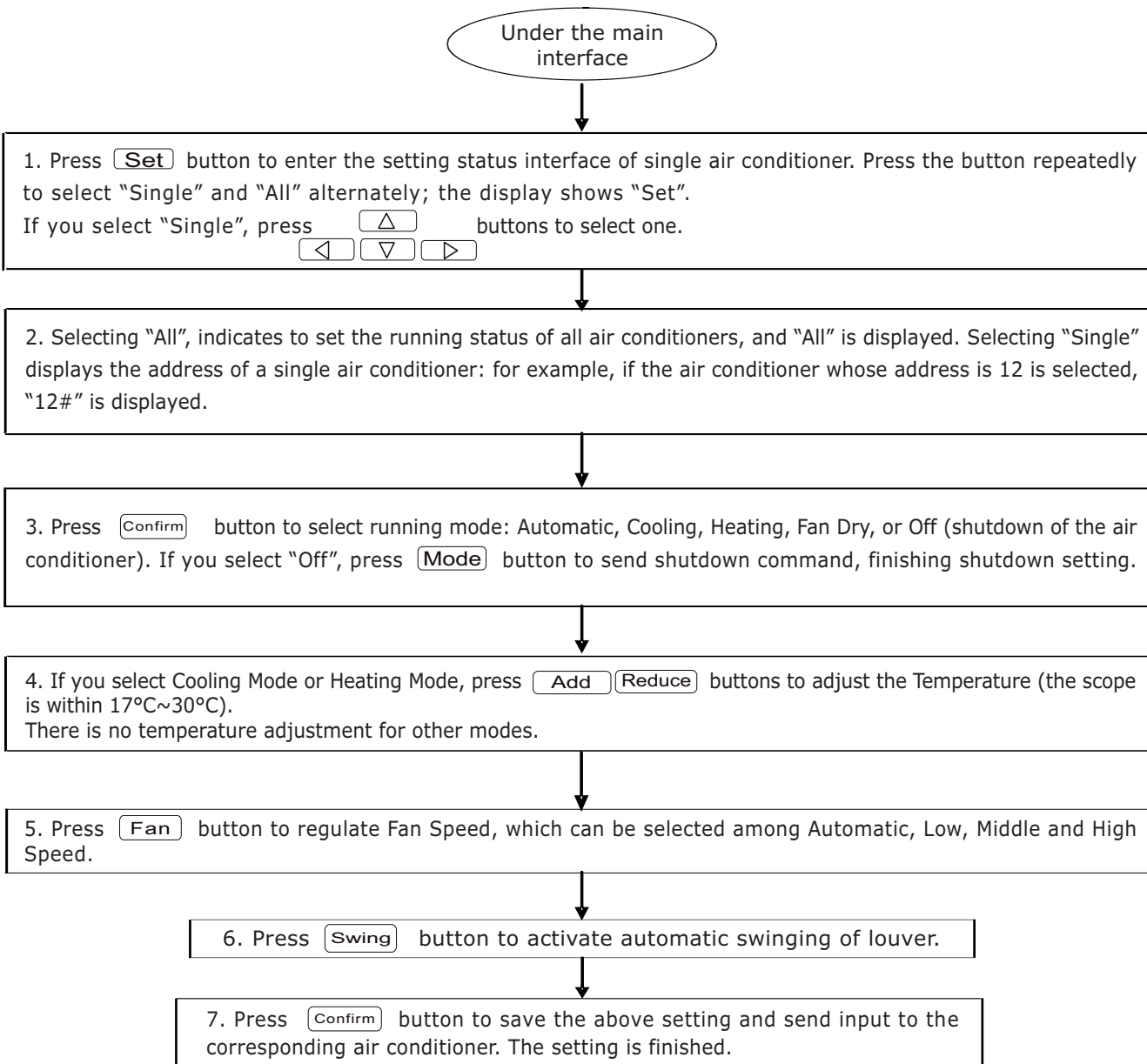
- 1) Under the main interface, press **Set** button to display the unified setting interface.
- 2) Automatically return to the main interface if no operation is performed for a period of time.
- 3) Set the running mode of all air conditioners under this page, including Mode, Temperature and Fan Speed.



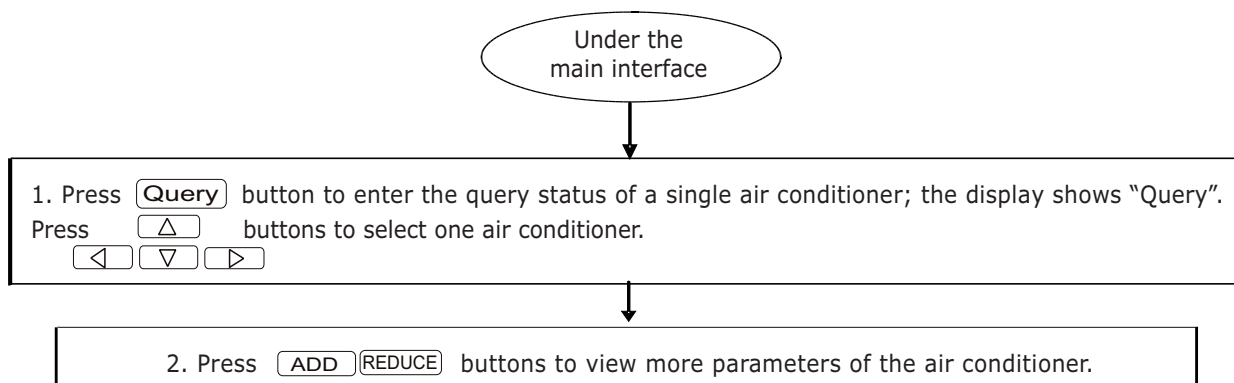
HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER

e) The operating flow description of the Weekly-Timer Central Controller

1) How to set the running status of the air conditioner?

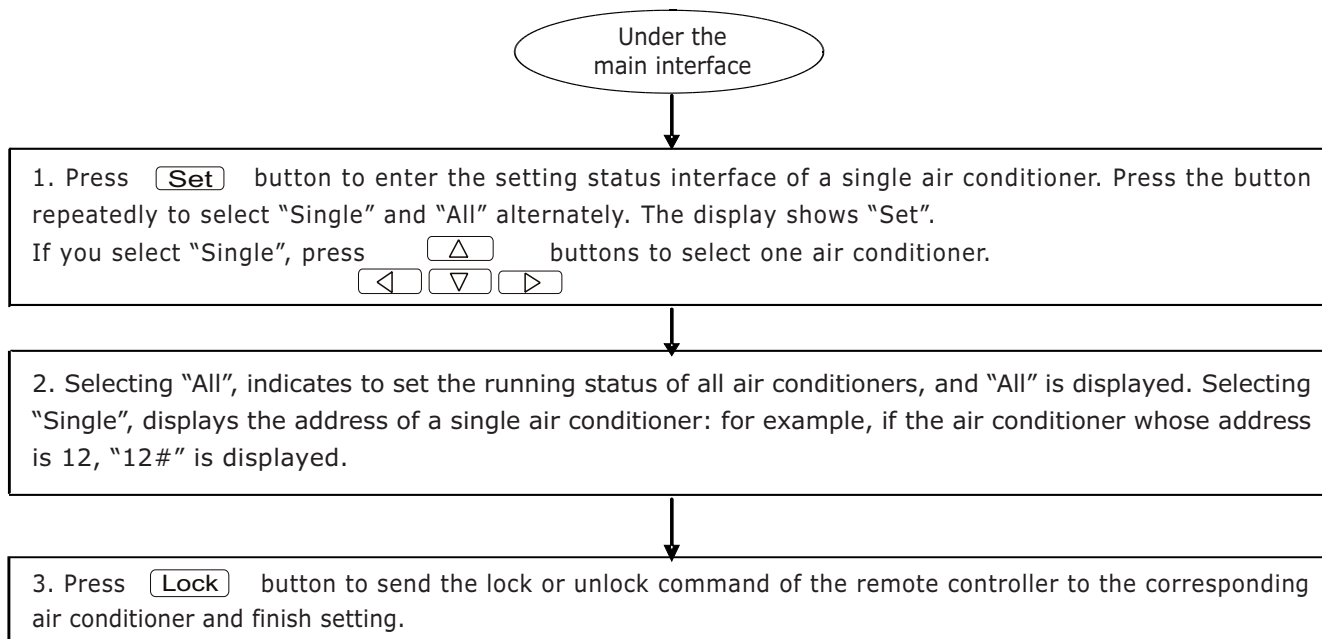


2) How to query the running status of the air conditioner?

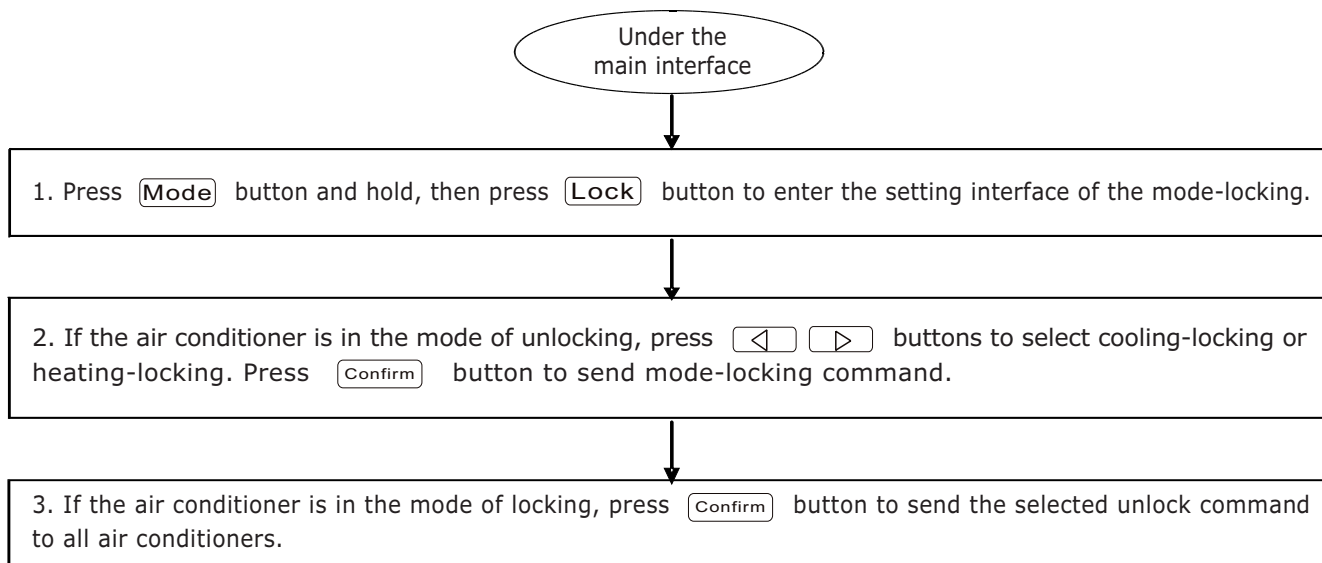


HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER

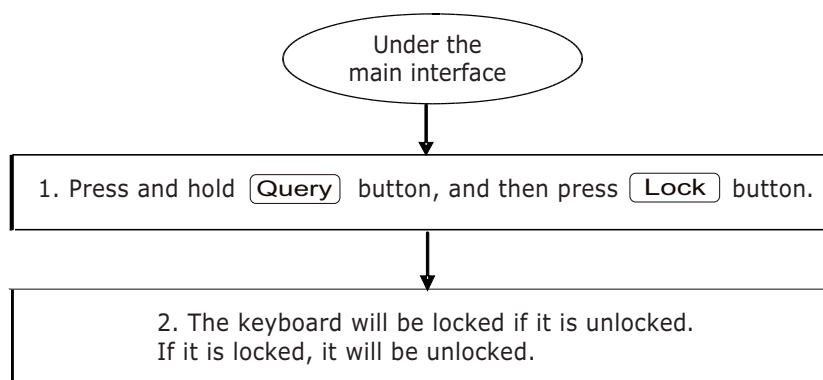
3) How to lock and unlock the Remote Controller of the air conditioner?



4) How to lock and unlock the mode of the air conditioner?

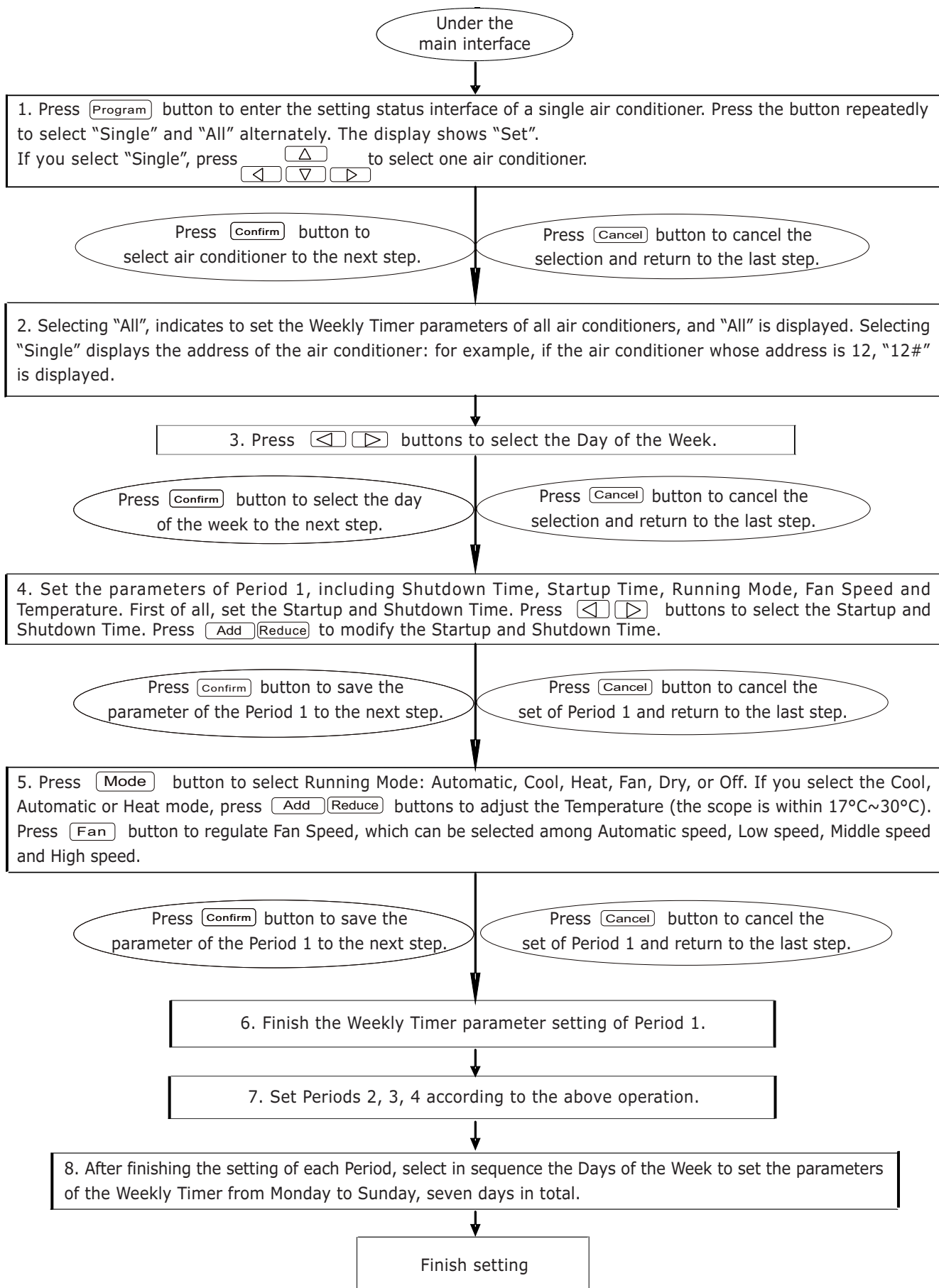


5) How to lock and unlock the keyboard of the Weekly-Timer Central Controller?



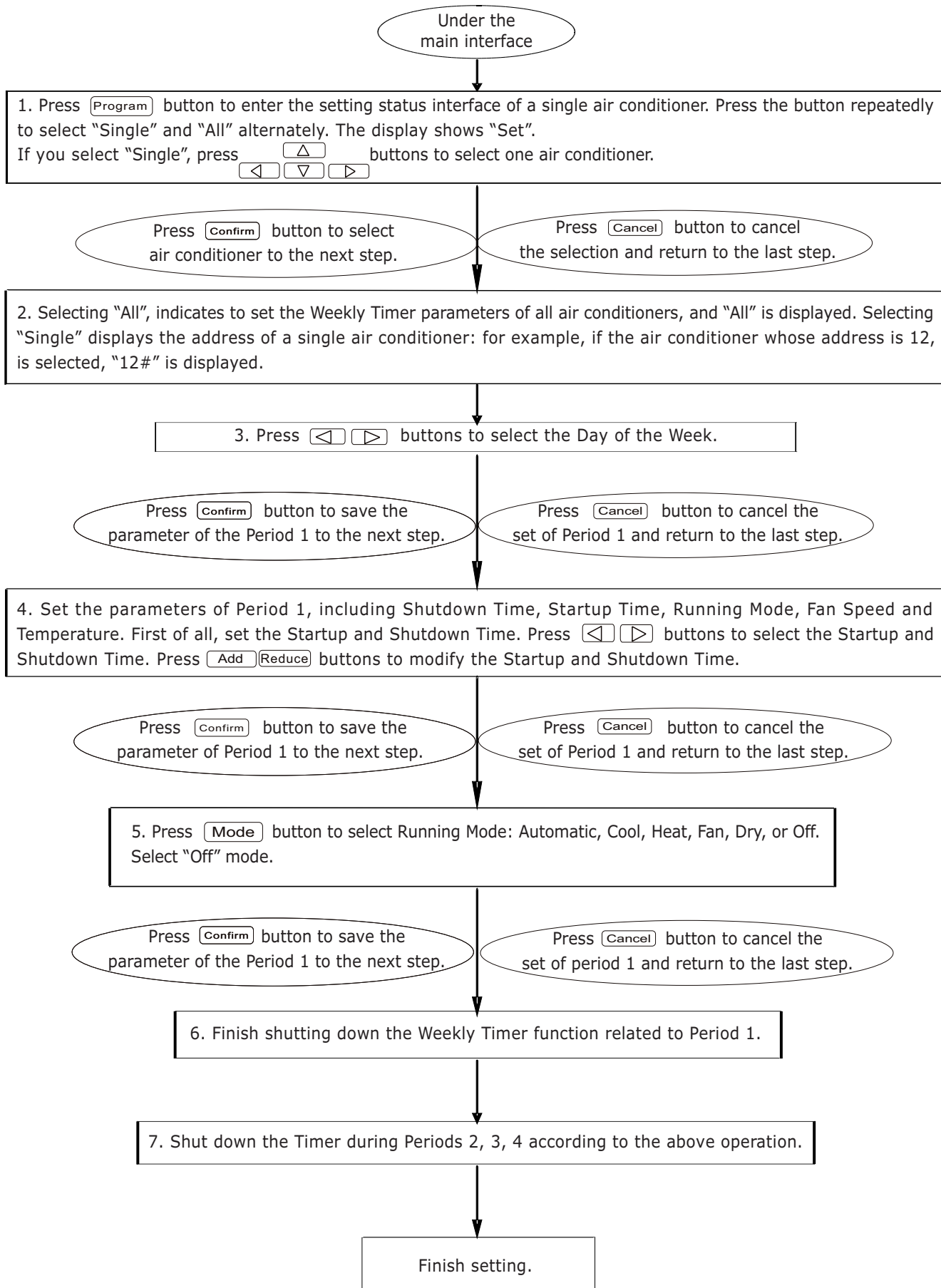
HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER

6) How to set the function and relevant parameters of the Weekly Timer of the air conditioner?



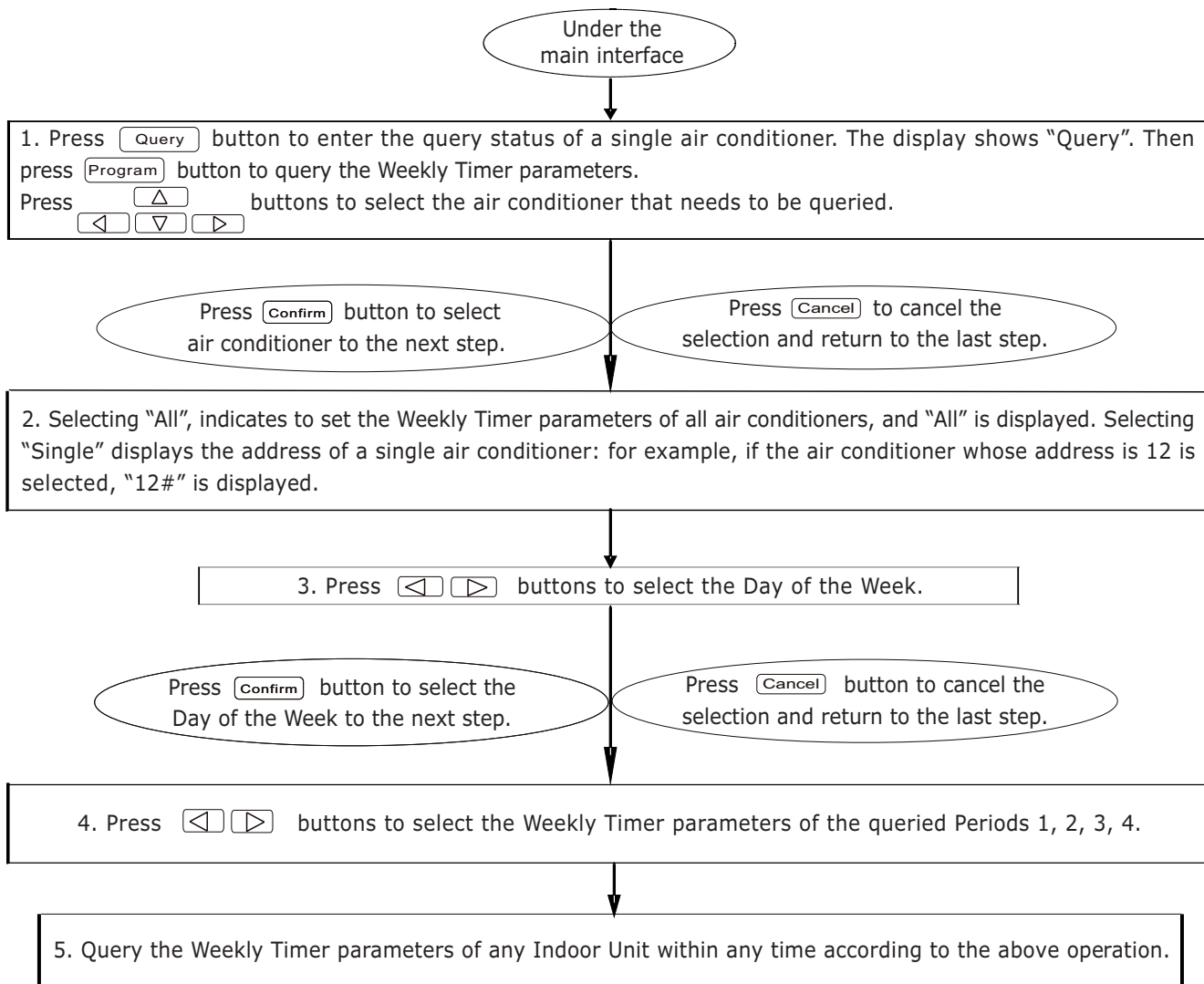
HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER

7) How to close the Weekly Timer setting related to a Period?

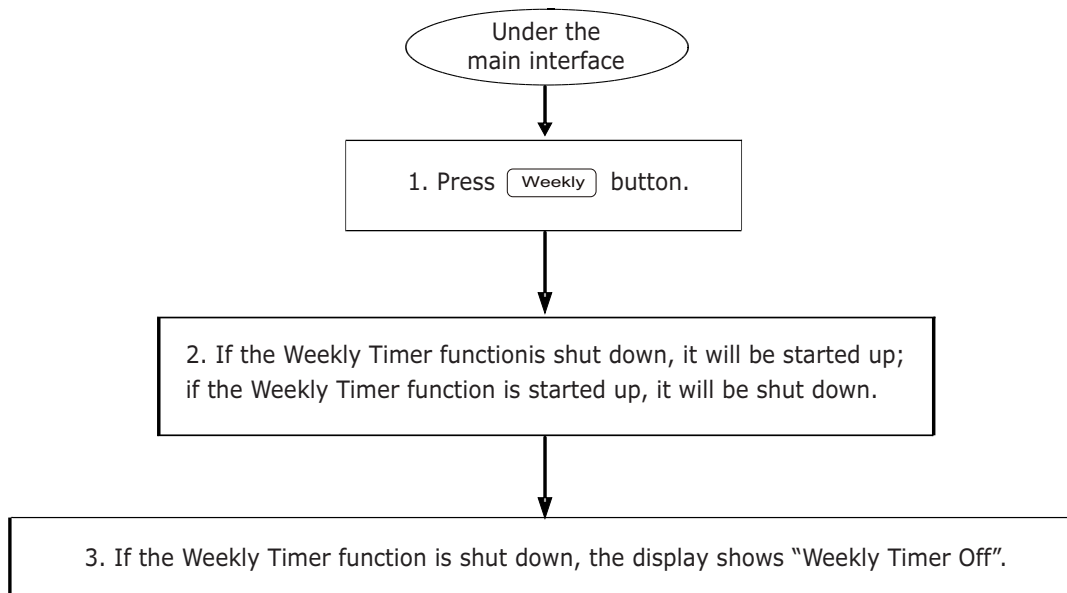


HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER

8) How to query the Weekly Timer setting parameters of the air conditioner?

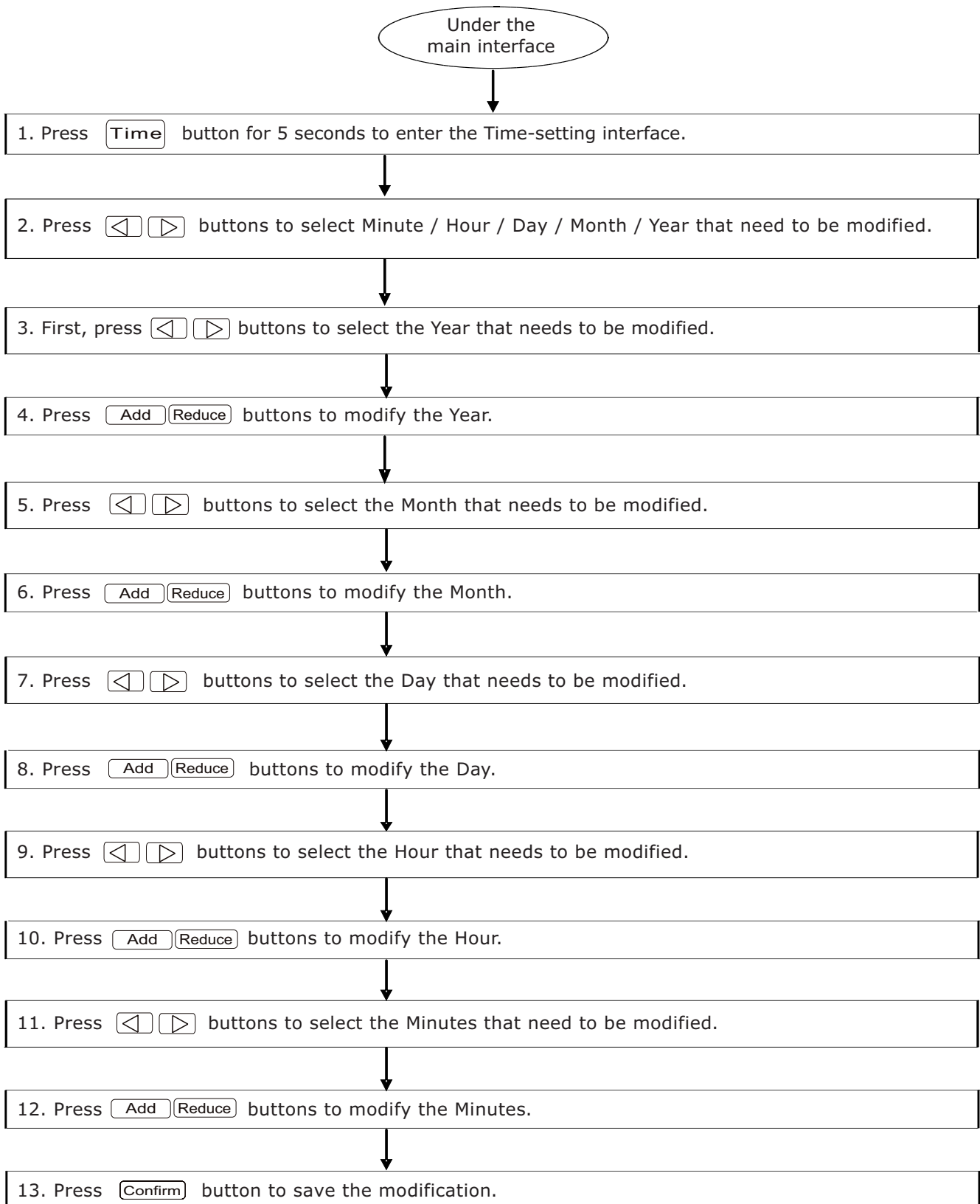


9) How to start up or shut down the Weekly Timer function of all air conditioners?



HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER

10) How to modify the system Time?



HOW TO USE THE WEEKLY CENTRALIZED CONTROLLER

f) Others

An example to show the function of the Weekly Timer

Example: Take the Indoor Unit with "04" address, set the Weekly Timer and start up the Weekly Timer function according to the procedure illustrated on the previous pages.

The following Table shows an example of Timer setting.

	Period 1	Period 2	Period 3	Period 3
Monday	Time on = 07:30 Time off = 18:00 Mode = Cool Temp. = 24°C Fan Speed = High	Time on = 18:30 Time off = 21:00 Mode = Fan only Temp. = Fan Speed = High	Time on = 21:30 Time off = 23:30 Mode = Cool Temp. = 24°C Fan Speed = High	
Tuesday	Time on = 07:30 Time off = 18:00 Mode = Cool Temp. = 24°C Fan Speed = Low	Time on = 18:30 Time off = 19:00 Mode = Off Temp. = Fan Speed =		

From the above Table, we can see that Timer has been set for 2 days every week, namely Monday and Tuesday.

In particular:

- Monday foresees 3 Periods of setting.

Period 1: Started Time is 07:30, Shutdown Time is 18:30, Running Mode is Cool, Temperature is 24°C and Fan Speed is High.

If the air conditioner is running within the set period of the Weekly Timer and another control device - as for example a wired controller - is active, the air conditioner will run according to the commands of the control device, till next Period (Period 2) of the Weekly Timer.

- Tuesday foresees 1 Period of setting: in fact, as no Running Mode is set in Period 2, (Mode = Off), Timer function is not active.

ERROR CODES

Error Codes on the Weekly Centralized Controller's display

Code	Content
EA	Compressor overcurrent error
EB	Inverter module protection
EC	Freshness fault
ED	Fault protection of the Outdoor Unit
EE	Water-level detection fault
EF	Other faults
E0	Phase-sequence error or phase-failure
E1	Communication fault
E2	T1 sensor fault
E3	T2 sensor fault
E4	T2B sensor fault
E5	Compressor discharge temp. sensor, T3 temp. sensor, T4 temp. sensor error
E6	Zero-crossing detection error
E7	EEPROM error
E8	Indoor fan-speed out of control
E9	Communication fault between main board and display board
00#	Communication fault between the network interface module and the main control board
01#	Communication fault between the central controller and the network interface module
P0	Temperature protection of evaporator
P1	Anti-cold air or defrosting protection
P2	High temperature protection of condenser
P3	Temperature protection of compressor
P4	Temperature protection of exhaust pipe
P5	Discharge high-pressure protection
P6	Discharge low-pressure protection
P7	Over-voltage or under-voltage protection
P8	Compressor overcurrent error
PF	Altre misure di protezione

EC DECLARATION OF CONFORMITY

We **TERMAL Srl** - 14, Via della Salute - 40132 Bologna - Italy

DECLARE

under our sole responsibility that **HOKKAIDO** Product

Weekly-Timer Central Controller

• **DTCWT - IHXR**

conforms with the following directives:

- *EMC Directive 89/336/EEC and its following 92/31 EEC by L.D. No. 476 dated Decdmbber 4th, 1992.*
- *LV Directive 73/23 EEC and applied Standards EN 60335-2-40.*

President
Giorgio Giatti





TERMAL Srl
14, Via della Salute
40132 Bologna - Italy
Tel. +39.051.41.33.111
Fax +39.051.41.33.112
www.termalgroup.com

Due to on-going technological development of the products by the Manufacturer, we reserve the right to vary the technical specifications at any time without notice.