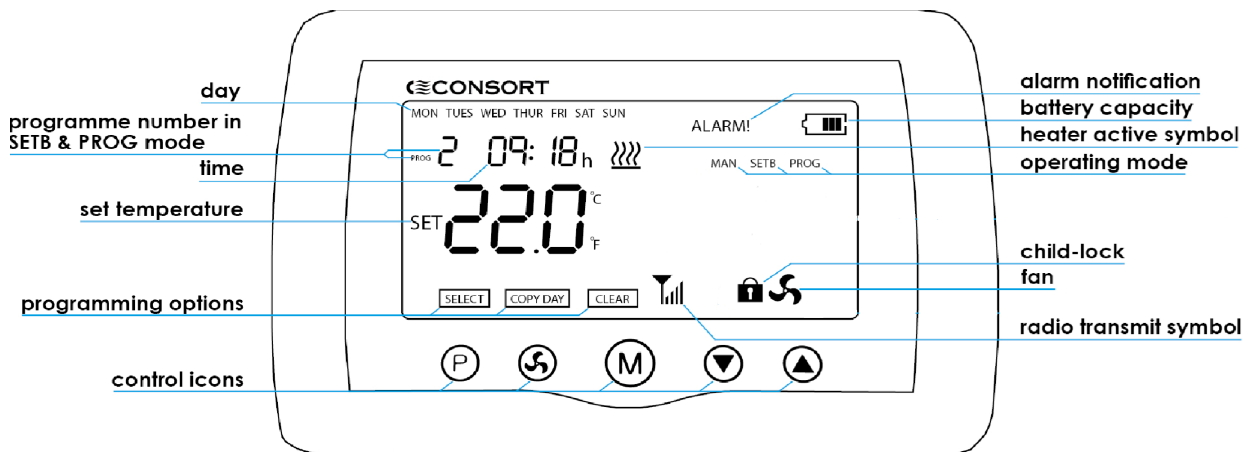*≋* CONSORT

MLC-01 Master Landlord Wireless Controller Installation and User Guide

1. Getting to know your MLC

The MLC master controller can only be used in conjunction with LC room controllers. It is used for a group control, system override and setting up of the LC room controllers. An unlimited number of LC can be connected to a single MLC. Multiple master controllers can be used in one building. It is mains powered only with battery backup. The communication between the MLC and LC is wireless. In some situations where RF range is a problem, some LC room controllers can be used as room controllers and range extenders at the same time. In this case, the LC must be mains powered. Do not set more LC as repeaters than necessary for correct functionality of the system.

An illustration of functions available on MLC

Ⓟ : set time, day and accessing programming menu
Ⓢ : activate fan function (for fan heaters only)
Ⓜ : select operating mode
▲ : increase value
▼ : decrease value
ALARM!: flashes to indicate error in temperature settings for the day e.g. the timing set for 2ⁿᵈ temperature setting precedes the 1ˢᵗ temperature setting.

2. Basic operation

When installing the system, the MLC should be turned ON first. It should be set up before pairing with the room controllers. It should stay ON all the time. Because of time synchronisation for exchanging data between the MLC and room controllers, if MLC loses power, it can take up to 1 day to regain connection with all room controllers.

It is recommended to use batteries as a backup power as well as the mains power. 4 x AAA batteries can be also used when setting up the system and pairing MLC with the room controllers LC. If the batteries are used as a backup power, they must be replaced every 2 years. Any changes made on the MLC are transmitted to every room controller. The time period of signal transmission can be set in Set-up menu (follow section 8 for details).

2. Basic operation (cont'd…)

Before you can use MLC, it has to be activated by tapping any control icon. The LCD screen backlight will turn on. To operate any control icon, touch within 2 seconds of MLC activation.

3. Time and day setting

1. To enter time setting touch and hold Ⓟ for 5 seconds.
2. The minutes will flash.
3. Use ▼ or ▲ to set minutes.
4. Touch Ⓟ , the hours will flash.
5. Use ▼ or ▲ to set hours.
6. Touch Ⓟ , the MON will flash.
7. Use ▼ or ▲ to select day.
8. Once you are happy with the settings, leave the MLC for 20 seconds. The settings will be saved and MLC will return to the main screen.

4. Selecting operating mode

MLC has 3 operating modes:
MANUAL, **SET BACK** and **PROGRAM**

Each mode can be selected by activating the MLC and touching (M) to cycle through the options.

5. Comfort temperature time period

To enable this feature, number 7 in the set-up menu must be set to 2 (see section 9).

The Comfort temperature time period allows a 1-4 hour timer to start once the target temperature has been changed on the LC.

The time period of 1-4 hours can be set in 1 hour increments (see section 9).

If the master controller is in programme or setback mode this feature will take priority over the programmes time settings.

6. MAN - Manual mode

In manual mode, the heater maintains the set temperature.

1. Touch (▼) or (▲) to set the temperature.

To amend the set temperature, tap any control button once to activate, then touch (▼) or (▲) to change the temperature. Once the temperature is set, leave the thermostat and the settings will be saved.

7. PROG - Automatic time mode

In this mode, the MLC will follow the week's time / temperature programme.

You can override the temperature in **PROG** mode by simply activating the MLC and using the (▲) or (▼) icons to set the new temperature. The new set temperature will be then maintained until the next program step.

Touch (P) to ADVANCE program, tap again to go back.

8. SETB - ECONOMY automatic time mode

In the setback (ECONOMY) mode, MLC lowers all temperatures in the 7-day programme by a set value. You can set how much to lower the programme temperatures in SETB mode by simply activating the MLC and using the (▲) or (▼) icons to set the new value. The display will first show the temperature difference and after 2 seconds the new set temperature.

9. Set-up menu

To enter the set-up menu touch and hold (M) and (↺) Once in the menu, the number on the right shows what setting you are in. You can use the (▼) or (▲) to change the setting displayed on the right. To cycle through the menu touch (M).

1. Temperature Calibration +/- 5ºC
2. Temperature units ºC or ºF
3. Minimum Temperature 4 - 10ºC
4. Maximum Temperature 20 - 35ºC
5. Signal Transmit frequency 1-30 Mins. For battery power this must be set to 30 to save battery life, if the unit is mains powered it can be set to 1.
6. Must always be set to 1
7. Comfort temperate time period, See section 5.
8. Time period 1 - 4 Hours, see section 5.

To exit the menu touch (↺).

10. Setting up repeaters

The LC can be used as a signal repeater to boost the signal of the MLC. If a LC is out of range, a repeater should be installed between the MLC and the LC. Any LC being used as a repeater must be mains powered. To activate it as a repeater, touch and hold the (▲) & (▼) icons until you get to pairing screen.
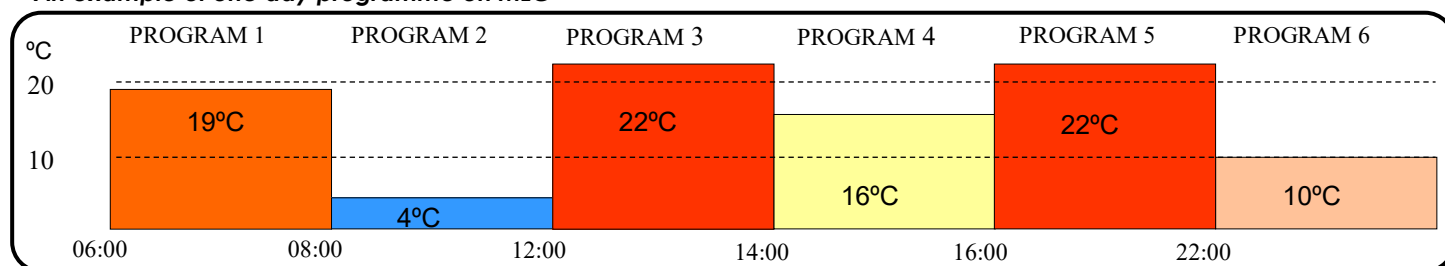
Touch (▼) and the last number should change to a 1, touch (▲) to exit. The LC will now act as a repeater. To test RF range between MLC and room controllers, install all the room controllers and pair them with the heaters and the MLC. Install the MLC at the location where it will be used from. Set signal frequency in Set-up menu to 1.

Make a change to the MLC setting eg. change time or mode. Check if the changes made are reflected on the room controllers. If no changes are reflected on a controller, use a room controller which is in a good RF range, ideally located halfway between the MLC and the out-of-range room controller and set it as a repeater. Repeat the test.
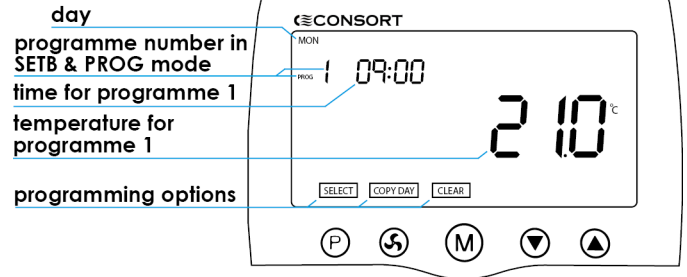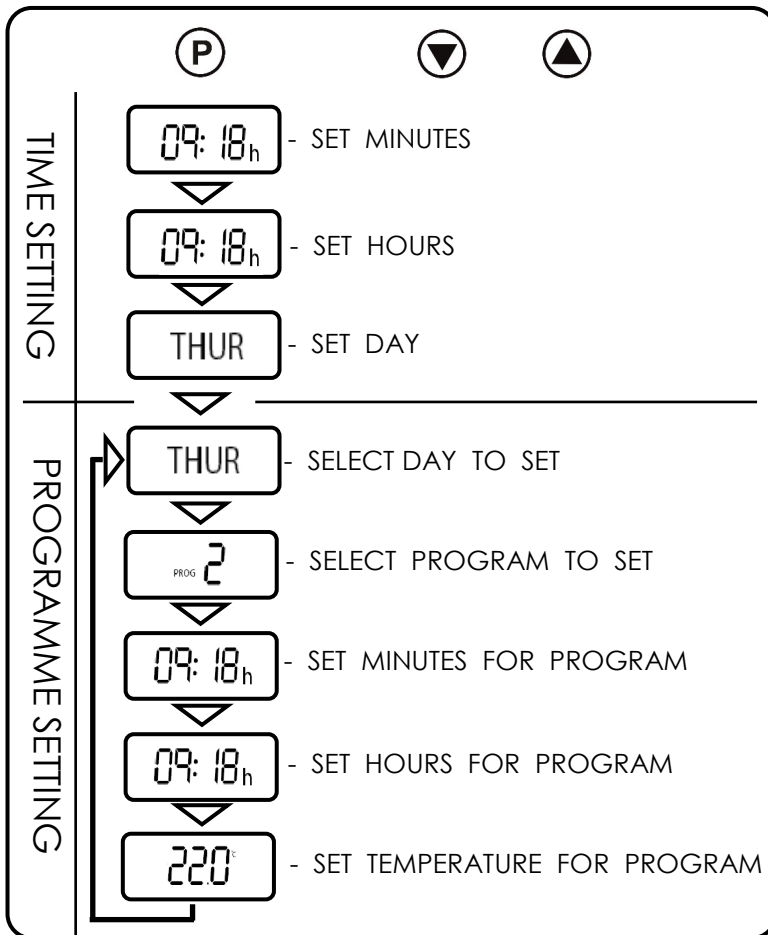
11. Set 7-day programme

An example of one day programme on MLC

11. Set 7-day programme (cont'd…)

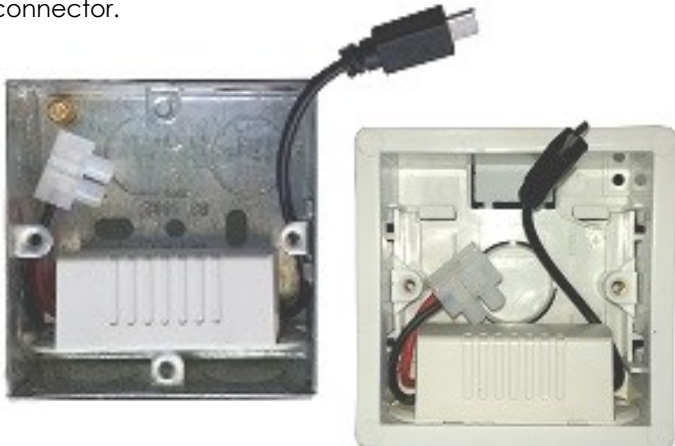### *Logic diagram for setting programme on MLC*

| day |
| programme number in SETB & PROG mode |
| time for programme 1 |
| temperature for programme 1 |
| programming options |

TIME SETTING

09:18h – SET MINUTES

09:18h – SET HOURS

THUR – SET DAY

PROGRAMME SETTING

THUR – SELECT DAY TO SET

PROG 2 – SELECT PROGRAM TO SET

09:18h – SET MINUTES FOR PROGRAM

09:18h – SET HOURS FOR PROGRAM

22.0° – SET TEMPERATURE FOR PROGRAM

1. Touch and hold Ⓟ for 5 seconds to enter the time setting.
2. The minutes will flash.
3. Touch ▼ or ▲ to set the minutes.
4. To set hour, touch Ⓟ and the hour will begin to flash.
5. Touch ▼ or ▲ to set the hour.
6. To set day, touch Ⓟ and the day will begin to flash.
7. Touch ▼ or ▲ to select the day.
8. Touch Ⓟ to access the 7-day programming mode.
9. Touch ▼ or ▲ to select the day you want to set.
10. Touch Ⓟ to set programme 1 for selected day. *This is indicated by the flashing number.*
11. Touch Ⓟ to select minutes.
12. Touch ▼ or ▲ to set minutes.
13. Touch Ⓟ to select hour.
14. Touch ▼ or ▲ to set hour.
15. Touch Ⓟ to select temperature setting.
16. Touch ▼ or ▲ to set temperature.

12. Power options

The MLC controller can be powered either by a 5V power adapter with a micro USB connector or supplied power adapter via USB port. There are 2 available USB ports for power. One port is located on the bottom and one at the back of the controller.

13. Power adapter for fixed installation

The LC controller is supplied with a power adapter that will fit a 35mm or a 25mm metal or dry lining back box. The power adapter should only be connected to a wiring protected by a 3A fuse. Connect line and neutral conductors to the terminal block. Please note that the adaptor supplied with the controller must be installed exactly as the figures show, otherwise the USB connector will not fit correctly. The centre of the back box must be kept clear to allow room for the USB connector.

When fitting the wall bracket, ensure that the adaptor is installed properly and feed the cable through the centre of the bracket. Screw the bracket to a back box taking care not to damage the power adaptor or leads by long screws. Connect the USB cable into the power port at back of the controller as shown on the photo. Check that the LC is working. Attach top of the LC to the wall bracket and slowly tilt it to place observing that the USB connector is moving in to the opening freely. Once the controller is in place secure the two screws on the bottom of the controller. **Please note that the controller screen will take up to one minute to display after powering up for the FIRST time.**

LC is now within MLC signal range using 1 repeater

LC acting as 1st repeater

1st repeater signal range

MLC signal range

MLC Master Landlord Controller

LC acting as 2nd repeater

2nd repeater signal range

LC acting as 3rd repeater

3rd repeater signal range

LC is now within the MLC signal range using 2 repeaters