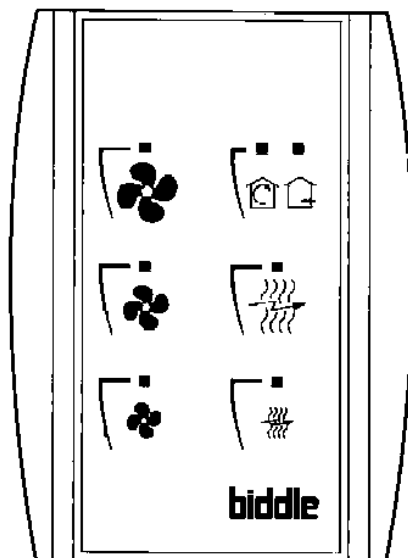


# Touchpad controller

User Manual – installation – operation

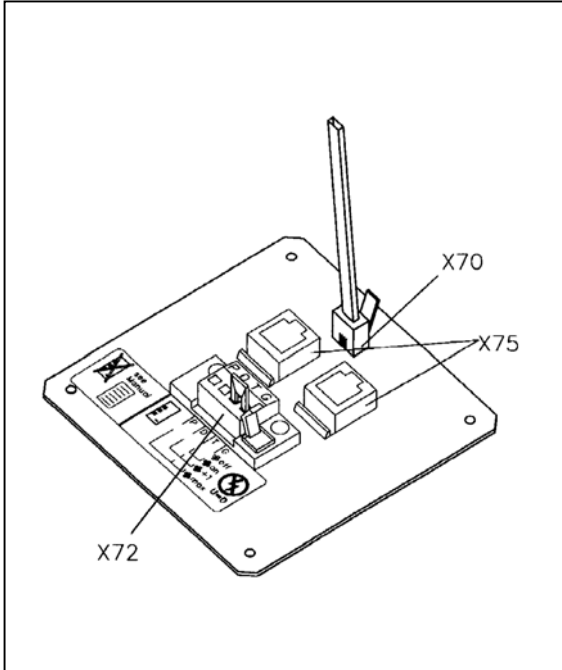
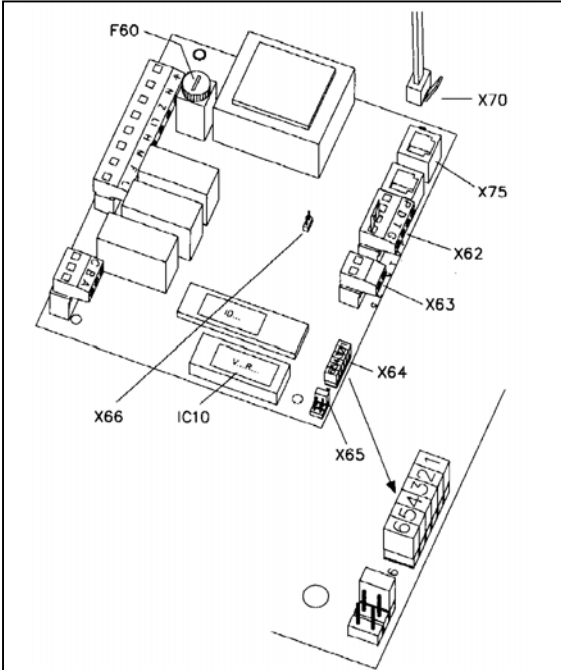


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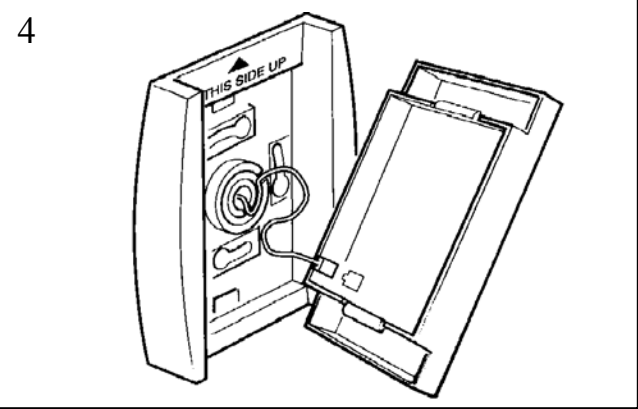
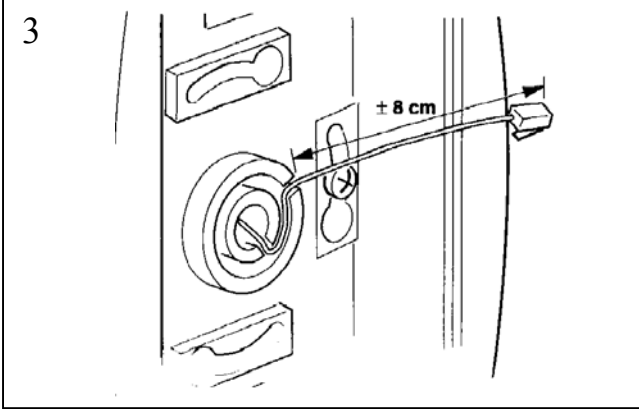
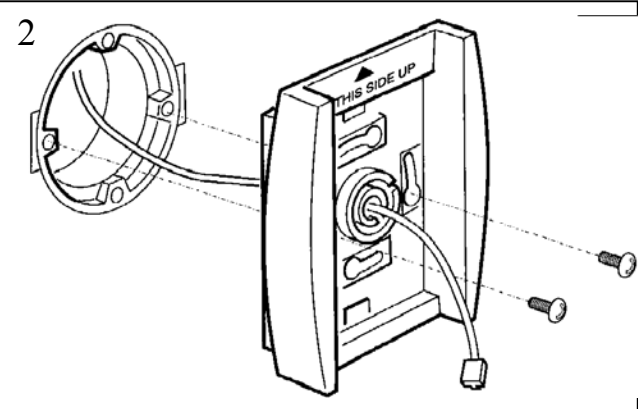
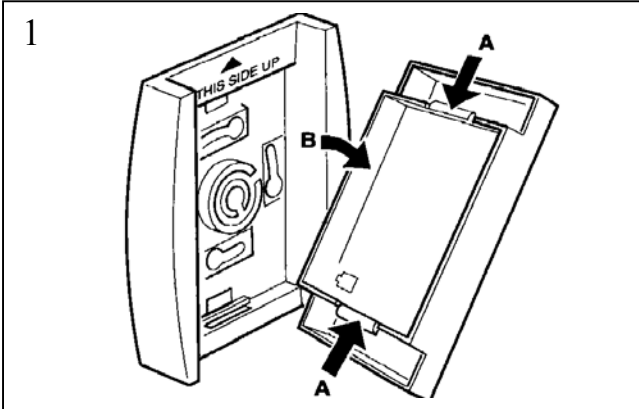
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# General drawings



# Fixing control panel to wall



# 1. General installation instructions



- Read this page carefully before starting the installation.
- All installation work must be carried out by expert personnel.
- Ensure that the appliances are disconnected from the mains before they are opened.
- Avoid unnecessary contact with electronic components.

## Introduction:

1. This manual is intended for all Biddle appliances with a built-in electronic interface.
2. This manual describes the installation and use of the Biddle electronic control system.
3. Several functions in this manual are only available from a certain version of a control system component. These functions are marked. Whenever you change an existing system you should compare the version number on the component with the version number in the manual.

## Installation details:

1. Up to 10 appliances may be connected to one control panel.
2. The total length of all modular cables in one system must be less than 100 metres.
3. When installing the modular cable care should be taken to avoid interference with the cable by (electro)-magnetic fields as far as possible (therefore do not lay the cable close to high-voltage cables, fluorescent light starters, etc.)

## Components:

The control system comprises the following components:

1. Control panel consisting of 3, 4, 5 or 6 keys.
2. Built-in interface with 3 or 6 output contacts, depending on the type of appliance.
3. Modular cable including modular plugs, for connecting the control panel to one or more appliances. **N.B.:** B.T. type telecommunication cables are not suitable! The cable can be ordered from Biddle and is available in various lengths.

## Installation procedure:

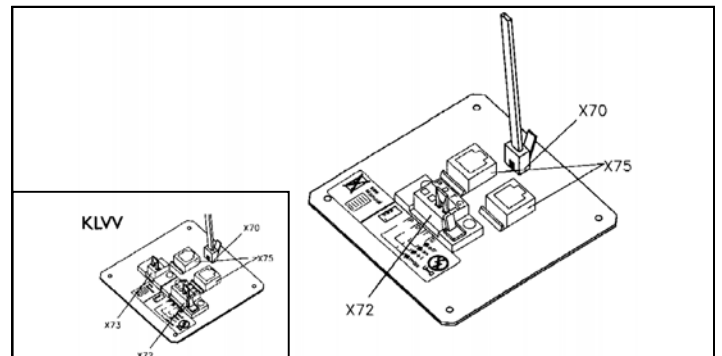
1. Connect modular cables + install control panel.
2. Connect any customised controls, with control components with potential-free contacts.
3. Provide all appliances with a power supply.
4. Initialise the system.

# 2. Connecting modular cables

## A. Appliances with external connections

### Type of appliance:

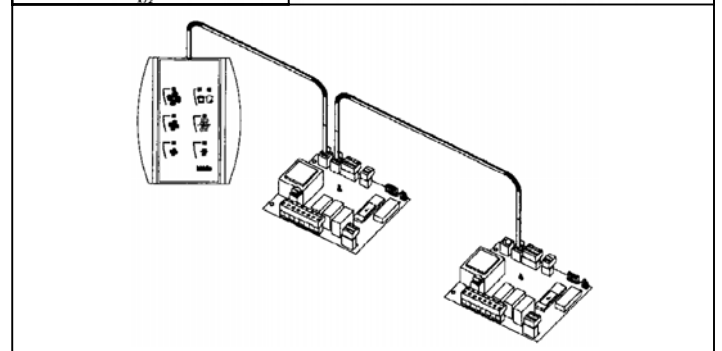
- Modular fan coil unit (PS-B)
- Air curtain (KW/MW/GW/KE/ME/GE/CAT/CAT-V)
- Cassette air heater (KLV/KLV-E/KLVV)



## B. Appliances with internal connections

### Type of appliance:

- Fan coil unit (B)
- Extractor fan cabinet



**N.B.:** The modular cables (X70) can be connected to both connectors (XiS) (see fold-out sheet, page 2).

### 3. Connecting additional control components

If you have no control components to install, you can skip this section and go on to section 4 'Initialise the system'.

#### 3.1 Introduction

As well as the basic system functions, there is also a possibility of connecting control components (e.g. room thermostat, timer BMS-controlled relay or door switch) to an appliance. Combinations of control components can also be used.

**N.B.:** For remote switching on blocks X62/X72 **volt free contacts** are required. These contacts are advised to be gold plated and to have a low relay less than 20 mΩ to handle 1 mA at 5Vdc.

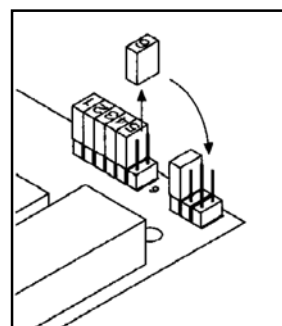
#### Possible control functions:

Control function	Control range	Adaptation to interface of connected appliance	Connection points on block X62/X72	Connection summary
switch on/off	one appliance (local)	none	terminals T and G	see § 3.2
switch on/off	all appliances in system (general)	remove jumper 6	terminals T and G	see § 3.2
change fan speed	one appliance (local)	none	terminals D, P and G	see § 3.3
change fan speed	all appliances in system (general)	remove jumper 5	terminals D, P and G	see § 3.3

**N.B.:** The function 'switch on/off' does not apply to the KLVV-unit. Consult the user manual of the unit when you want to connect control components to terminals T and G.

#### 3.2 Control function 'switch on/off'

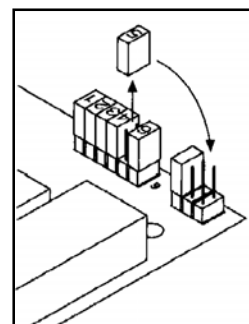
- Remove T-G bridge (X62/X72. see fold-out sheet, page 2) only from the appliance to which the control component is to be connected.
  - Contact made between T and G: Appliance stand-by.
  - No contact between T and G: Appliance/system off.
- General switching If the control function is to apply to the whole system, remove jumper 6 (X64). This should only be done in the appliance to which the control component is connected. Place the jumper on the reserve positions intended for it (X65), so that it can be used again later.



#### 3.3 Control function 'change fan speed'

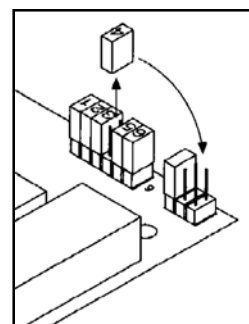
- Connect the control component between D and/or P and G (X62/X72, see fold-out sheet, page 2). Important: do not disconnect T-G bridge.
  - Contact made between D and G : Appliance/system runs 1 speed higher than the control panel indicates (both speed and electric heating).
  - No contact between D and G Appliance/system working as indicated on the control panel.
  - Contact made between P and G Appliance/system runs at fan speed three (electric heating stage remains unchanged, either one or two).
  - No contact between P and G Appliance/system working as indicated on the control panel.
  - Contact made between D, P and G: Appliance/system runs at fan speed three and electric heating stage two.

**N.B.:** The functions using terminals P and G only are available from interface version V4.0 Rev.06. Code IC 10 in the illustration on page 2 shows where you can find the version number.



- General switching: If the control function is to apply to the whole system, remove jumper 5 (X64) as indicated in the facing illustration. This should only be applied to the appliance to which the control component is connected. Place the jumper on the reserve positions intended for it (X65), so that it can be used again later.

**NB:** General switching' of the contact between P and G requires control pad version V2. I Rev.02 or higher and interface version V4.O Rev.07 or higher. You can find the version number on the printed circuit board of the control pad. In an existing system the control pad could be of a previous version. If the contact between P and G should still apply to the whole system, you should order a new control pad from Biddle.



- If the electric heating is not to be stepped up at the same time, remove jumper 4 (X64) as indicated in the illustration. This should be done in each appliance for which the function is required. Place the jumper on the reserve positions intended for it (X65), so that it can be used again later.

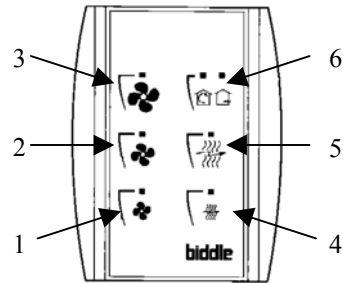
## 4. Initialising the system (prepare for use)

### When to use:

1. On first installation.
2. On each extension of the system.
3. When checking cables.

### To start the procedure:

1. Press keys 1, 2 and 3 simultaneously.
  - After 10 seconds the LEDs on keys 1 and 2 will start to flash. This flashing will continue for two minutes.
  - The LED on key 3 will then flash the same number of times as there are appliances in the system. The system is now ready for use.



## 5. Operation

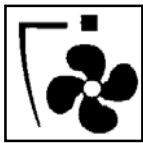
### 5.1 Functions of keys



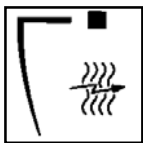
- LED lights when speed setting is 'low'.  
LED flashes during initialisation.  
— Set speed to 'low'.  
— Switch off appliance.  
— Start initialisation.



- LED lights when speed setting is 'medium'.  
LED flashes during initialisation.  
— Set speed to 'medium'.  
— Switch off appliance.  
— Start initialisation.



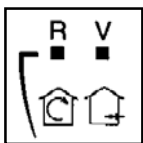
- LED lights when speed setting is 'high'.  
LED indicates number of appliances connected when initialisation is complete.  
— Set speed to 'high'.  
— Switch off appliance.  
— Start initialisation.



- LED lights when electric heating is set to 'low'.  
— Set electric heating to 'low'.  
— Switch off electric heating.  
— Set electric heating to 'low' and speed to 'low'.



- LED lights when electric heating is set to 'high'.  
— Set electric heating to 'high'.  
— Switch off electric heating.  
— Set electric heating to 'high' and speed to 'medium'.



- LED-R lights when setting is 'Recirculate' or standby.  
LED-V lights when setting is 'Ventilate'.  
— Set air intake valve to 'Ventilate'.  
— Set air intake valve to 'Recirculate'.

### 5.2 Operation

**A. Turn on appliance:** Press key 1, 2, 3, 4 or 5.

**B. Turn off appliance:** Press speed key (1, 2 or 3) on which the LED is illuminated. LED-R (if present) remains illuminated.

### Safety functions electric heating:

1. The following scenarios will automatically be corrected:
  - Speed off, electric heating on.
  - Speed low, electric heating high.
2. Appliance operates differently from control panel:  
If the appliance has just been switched off, it may start running again spontaneously.  
This is in order to discharge the heat stored in the heating elements.

## 6.Troubleshooting

### Appliance not working:

Check point	Possible cause	Action
1	no voltage on appliance	check power supply to appliance
2	system not yet initialised	start initialisation; see section 4 'Initialising the system'
3	poor contact in modular plug;	check contacts (ensure plastic packaging is completely removed)
4	no bridge between terminals T and G	fit bridge between terminals T and G on block X62/72. (see section 3 'Connecting Customised Control components')
5	fuse(s) in appliance defective	replace fuse (only to be done by skilled personnel)

### Appliance not working as expected:

Check point	Fault	Possible cause	Action/explanation
1	appliance (with electric heating) starts working spontaneously	continued running of electrically heated appliances	Biddle safety function; see section 5 'Operation'
2	appliance works differently from expectation	control components are not properly connected	check system; see section 3 'Connecting Customised Control Components'
		the jumpers(1-3 red) on the interface are no longer in accordance with factory setting	check jumper position against Specifications for factory setting jumper block X64
3	electric heating not working	appliance has overheated	check maximum thermostat (see appliance manual)

### Factory setting jumper block X64

Appliance type	Jumper 1	Jumper 2	Jumper 3	Jumper 4-6
appliance with electric heating with 2 positions	present	open	present	present
CAT-air curtain	open	present	present	present
KLV-E	open	present	open	present
KLVV	open	open	open	present
all other appliances	present	present	present	present