



CONTROL PACK WIRING INFORMATION

INSTALLATION INSTRUCTIONS

Each of the controls in the pack individually contain full installation instructions.
 All user booklets and operating instructions should be left with the householder.
 The wiring box included with the pack has a 12 way terminal block which should be used in conjunction with the relevant wiring chart provided overleaf.
 Terminals 11 and 12 are provided for circuit looping or extra circuit connections where required. (See charts overleaf)
 Simply connect the numbered component terminals and the flying lead wire colours to the 12 way terminal block as shown

COMPLETING THE WIRING CHART

Four charts are shown overleaf, one for each of the control systems available in the packs, which are as follows:

- Programmer with a 3 port mid-position valve. (Heatshare).
- Timeswitch with a 3 port mid-position valve. (Heatshare).
- Programmer with two 2 port zone valves. (Heatplan).
- Timeswitch with two 2 port zone valves. (Heatplan).

The programmers and timeswitches available for inclusion in the packs are shown below, together with which terminals must be connected to which terminals of the 12 way block.

Carefully copy the required programmer or timeswitch terminal numbers to the relevant chart overleaf, in precisely the positions shown below.
 The completed chart can then be used to connect the system components, and left inside the wiring box for future reference.

*DHW OFF connection is NOT required with HEATPLAN packs. Only copy to HEATSHARE wiring charts.												
PROGRAMMERS	L	N	E	HTG		DHW	DHW					
				ON		ON	OFF					
MP15, MP75	L	N		4		3						
CP15, CP75, CP715 FP15, FP75, FP715	L	N		4		3	1*					
SET2E	L+2	N		4		1+5						
SET 3E, SET 3M, FP975	L+2+5	N		4		1	3*					
102, 102E5, 102E7	3+6	5		2		1						
3060, 3020P	6	7	E	2		4						
4033	6+1	7	E	2		4	5*					
TP9 Programmable Room Thermostat	L	N		4		3	1*					
TIMESWITCHES	L	N	E			ON						
TS15, TS75, TS715	L+1	N				4						
SET 1E, TS975	L+5	N				4						
103, 103E5, 103E7	3+6	5				1						
12 way Terminal Block	●	●	●	●	●	●	●	●	●	●	●	●
	1	2	3	4	5	6	7	8	9	10	11	12
	●	●	●	●	●	●	●	●	●	●	●	●

IMPORTANT: These instructions conform to the wiring terminal information provided with some earlier versions of the WB12 Wiring Box. The programmer and timeswitch connections have not changed. The system wiring charts overleaf vary from earlier issues in that spare terminals are now used for neutral and other connections, with the necessary links shown.



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HEATPLAN pack with timeswitch, (2 X 2 port valves)

Timeswitch	Grey	Blue	Brown	Orange
Heating Valve	Grey	Blue	Brown	Orange
D.H.W. Valve	Grey	Blue	Brown	Orange
Mains via 3 amp fuse	L	N	E	

12 way terminal block	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	1	2	3	4	5	6	7	8	9	10	11	12	●	●

RMT/TWP room stat	4	TP ONLY	1	2										
RET 230 room stat	N		L	3										
AT cyl stat		E			1COM									
Pump		E				N						L1		L2
Boiler	⌘	E				N							L	Pump supply

Note: With TP9 packs link 4 to 6

Link 4 to 6

Link 9 to 10

- ⌘ If the boiler requires a permanent live, this should be connected to terminal 1
 - L1 Pump Live connection in systems with boiler having basic electrical connections
 - L2 Alternative Pump Live connection for boilers requiring pump over-run
- For boilers not having basic electrical connections, always check the boiler manufacturers instructions.

HEATSHARE pack with timeswitch, (3 port valve)

Timeswitch	Blue	Brown	White	Grey	Orange
Valve	Blue	Brown	White	Grey	Orange
Mains via 3 amp fuse	L	N	E		

12 way terminal block	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	1	2	3	4	5	6	7	8	9	10	11	12	●	●

RMT/TWP room stat	4	TP ONLY	1	2										
RET 230 room stat	N		L	3										
AT cyl stat		E			1COM									
Pump		E				N							L1	L2
Boiler	⌘	E				N							L	Pump supply

Note: With TP9 packs link 4 to 6

Link 4 to 6

Link 8 to 9

- ⌘ If the boiler requires a permanent live, this should be connected to terminal 1.
 - L1 Pump Live connection in systems with boiler having basic electrical connections
 - L2 Alternative Pump Live connection for boilers requiring pump over-run
- For boilers not having basic electrical connections, always check the boiler manufacturers instructions.

HEATPLAN pack with programmer, (2 X 2 port valves)

Programmer	Grey	Blue	Brown	Orange
Heating Valve	Grey	Blue	Brown	Orange
D.H.W. Valve	Grey	Blue	Brown	Orange
Mains via 3 amp fuse	L	N	E	

12 way terminal block	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	1	2	3	4	5	6	7	8	9	10	11	12	●	●

RMT/TWP room stat	4	TP ONLY	1	2										
RET 230 room stat	N		L	3										
AT cyl stat		E			1COM									
Pump		E				N							L1	L2
Boiler	⌘	E				N							L	Pump supply

Note: With TP9 packs link 4-5

Link 4 to 5

Link 9 to 10

- ⌘ If the boiler requires a permanent live, this should be connected to terminal 1
 - L1 Pump Live connection in systems with boiler having basic electrical connections
 - L2 Alternative Pump Live connection for boilers requiring pump over-run
- For boilers not having basic electrical connections, always check the boiler manufacturers instructions.

HEATSHARE pack with programmer, (3 port valve)

Programmer	Blue	Brown	White	Grey	Orange
Valve	Blue	Brown	White	Grey	Orange
Mains via 3 amp fuse	L	N	E		

12 way terminal block	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	1	2	3	4	5	6	7	8	9	10	11	12	●	●

RMT/TWP room stat	4	TP ONLY	1	2										
RET 230 room stat	N		L	3										
AT cyl stat		E			1COM									
Pump		E				N							L1	L2
Boiler	⌘	E				N							L	Pump supply

Note: With TP9 packs link 4-5

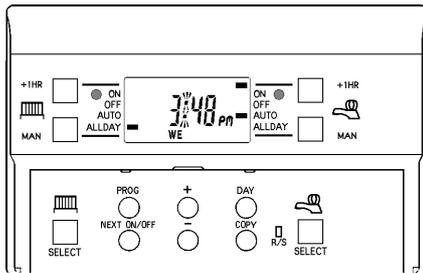
Link 4 to 5

Link 8 to 9

- ⌘ If the boiler requires a permanent live, this should be connected to terminal 1.
 - L1 Pump Live connection in systems with boiler having basic electrical connections
 - L2 Alternative Pump Live connection for boilers requiring pump over-run
- For boilers not having basic electrical connections, always check the boiler manufacturers instructions.

USER INSTRUCTIONS

Programmer with separate outputs for Heating & Hot Water, which can be set at independent times.



Features include:

- + Can be set for either 24 hour, 5/2 day or 7 day operation
- + Simple change between GMT & BST
- + 12 hour or 24 hour clock
- + Can be set for either 2 ON/OFF's or 3 ON/OFF's per day
- + Battery back-up

CHOICE OF 12 HR OR 24 HR CLOCK

At any time during RUN mode the time displayed can be toggled between a 12 hour clock with am/pm indication or a 24 hour clock by pressing and holding both DAY and NEXT ON/OFF buttons for 1.5 seconds.

G.M.T. / B.S.T.

While in RUN mode the change from Greenwich Mean Time to British Summer Time and back is achieved by pressing and holding the + button to add one hour in the Spring, or the - button to put the clock back in the Autumn. After the first time this change has been made this feature will only allow the clock to be changed in the correct direction. Take care when making this change for the first time. If it is made in the wrong direction the unit will have to be reset and any user-settings re-entered.

RESET

Should the unit be disconnected from the mains a small battery symbol will blink on the left hand side of the display. After the second midnight, i.e. between 24 and 48 hours, the display will go blank and the unit will lose its settings. When mains power is restored it is recommended that the unit be reset by lowering the front flap and using a small non-metallic object, e.g. matchstick, press and release the recessed reset button (marked R/S). This installs the factory pre-set programme and sets the time to 12:00pm on Monday (MO). The outputs will be OFF, (see Fig. 1). Note that the colon between the hours and minutes is blinking. This means the unit is in RUN mode and will switch the Central Heating and Hot Water on and off in accordance with the programme. The colon only blinks in RUN mode.

SETTING THE CLOCK & PROGRAMMES

- 1) Pressing PROG once enters SET TIME mode, see Fig. 2. While setting the time, pressing and releasing the + or - buttons will change the time by one minute; pressing and holding down + or - will change the time quickly in ten minute steps. (This also applies when adjusting the ON/OFF times). Use DAY button to set day. When the time and day are correct, press the PROG button once to start the clock and display SET CH ON TIME.
- 2) **CHECKING/ADJUSTING CENTRAL HEATING PROGRAMMES:** Pre-set programmes may be checked using the NEXT ON/OFF button to step through the available settings, which can be changed if required using the + or - buttons. The display now shows SET CH OFF TIME, with OFF blinking.
- 3) **PROGRAMMING NEXT DAY (7 day & 5/2 day mode only):** Press DAY to advance to next day (not 24 hour mode), repeat step 2 for each day (7 day mode) or SAT-SUN (5 day/2 day mode), **ALTERNATIVELY** follow COPYING PROGRAMMES instructions below.
- 4) **COPYING PROGRAMMES (7 day & 5/2 day mode only):** When a day's settings are as required they may all be copied to the following day with just two button presses. Press DAY to change the day, then press COPY. When a model that has been converted to **5 day/2 day** operation the programme set for Monday to Friday (MOTUWETHFR on the display) can be copied to the weekend (SASU).
- 5) **CHECKING/ADJUSTING HOT WATER PROGRAMMES** Press PROG, to display SET HW ON TIME. Use NEXT ON/OFF button to step through the available settings, which can be changed if required using the + or - buttons.
- 6) **RUN MODE:** Having completed the programming for each day, press PROG to go to the run mode.

RUN MODE

OPERATION: In RUN mode the unit will automatically switch the Central Heating and Hot Water on and off at the times set. However, useful overrides are provided which enable the user to make temporary changes to the ON/OFF times without having to re-programme the unit. The facilities offered by the overrides are detailed on the back cover.

REVIEWING PROGRAMMES FROM THE RUN MODE: Press PROG twice, follow steps 2, 3, 5 & 6) above.

SELECTING THE OPERATING MODE

Behind the flap are two SELECT buttons, one each for Central Heating () and Hot Water ().

The operating modes available are:

- ON - The output is on constantly.
- OFF - The output is off constantly, unless +1HR is pressed.
- AUTO - The output switches on and off to the set programme.
- ALLDAY - The output switches on at the 1st ON time and stays on until the last OFF time.

MANUAL OVERRIDES

While in OFF, AUTO or ALLDAY modes the plus one hour (+1HR) button can be used to switch from off to on for just one hour, or to extend an existing on period by one hour. The extra hour is cancelled by pressing the button again, pressing the MAN button, or when an on event is reached.

While in AUTO or ALLDAY modes pressing the manual (MAN) button will switch an output which is on to off, and vice versa. This over-ride will last only until the next programmed switching event is reached, when the automatic programme will resume control, or until the button is pressed again.

When the above overrides are selected a bar appears in the display against the appropriate legend.

Sequence of button presses whilst adjusting time, day and programme settings

Read the section "Error free programming" first.

Press and release + or - to change the time by one minute. Press and hold down + or - to change the time quickly.

NOTE: The installer has set switches on the rear of the FP715 to select either 24 hour operation (same programme repeated each day) or 5/2 day operation (one programme repeated Monday to Friday with a different programme repeated Saturday and Sunday) or 7 day operation (a different programme for each day). The installer has also selected either 2 ON/OFFs or 3 ON/OFFs per day

Button Sequence		FP715	Typical Displays
Step	Press	Action	
1	PROG	To enter programming mode (Fig 2)	
2	DAY	To select day of week, repeat until display shows current day (Fig 2)	Fig 1
3	+ or -	To adjust time of day (Fig 2)	
4	PROG	To enter CH ON/OFF programming mode (Fig 3)	
5	+ or -	To adjust 1st CH ON time (setting no 1, Fig 3)	Fig 2
6	NEXT	To step to 1st CH OFF time (setting no 2, Fig 4)	
7	+ or -	To adjust 1st CH OFF time (setting no 2, Fig 4)	
8	NEXT	Repeat step 5-7 until all ON/OFF times are as required	
9	-	If unit is set for 24 hour operation, go to step 13, otherwise go to step 10	setting no Fig 3
10	DAY	To advance to next day. If a different programme from previous day is required go back to step 7.	
		If the same programme as previous day is required go to step 11.	
11	COPY	To copy previous days' programmes to current day	setting no Fig 4
12	-	Repeat steps 10 an d11 until all days are programmed	
13	PROG	To enter HW ON/OFF programming mode	
14	+ or -	To adjust 1st HW ON time (setting no 1)	setting no Fig 5
15	NEXT	To step to 1st HW OFF time	
16	+ or -	To adjust 1st HW OFF time	
17	NEXT	Repeat steps 14 - 16 until all HW events are set	
18	PROG	To return to RUN mode	
			setting no Fig 6

ERROR FREE PROGRAMMING.

ON/OFF times cannot be set out of sequence. The limits of adjustment are:

Setting 1 (first ON) 12:00am to 11:59pm (normally in the morning).
 Settings 2 to 6 (first OFF to last OFF) anywhere between the previous Setting and 23 hours 59 minutes after Setting 1.

The - button stops responding when the previous Setting is reached, but the + button continues to its limit, also changing any later Settings that would have been overlapped.

While becoming familiar with the Setting Sequence the ON/OFF times may become grouped together. If this should happen use NEXT ON/OFF to select Setting 1, then check/alter each Setting in turn, using + or -, until the desired programme is entered.

NOTES ON TYPICAL DISPLAYS (See left)

- Fig. 1 Immediately following a manual RESET [RUN mode with colon blinking]
- Fig. 2 SET TIME and DAY mode [colon steady, day, hours and minutes blink]
- Fig. 3 SET FIRST ON TIME ["CH"]
[setting number and day shown, "ON" blinks]
- Fig. 4 SET FIRST OFF TIME ["CH"]
[setting number and day shown, "OFF" blinks]
- Fig. 5 SET LAST OFF TIME AFTER MIDNIGHT
[day when output will switch off blinks]
- Fig. 6 SET "HW" FIRST ON TIME
[setting number and day shown, "ON" blinks]



Fig. 7 Typical "CH" ALLDAY, "HW" AUTO programme with "HW" +1HOUR selected.

When programming in 7 day mode, the day being set appears in the display, (see typical displays). In 24 hour mode, the day only appears in SET TIME mode. When programming in 5 day/2 day mode then the days will show as MOTUWETHFR or SASU.

Should the unit be disconnected from the mains a small battery symbol will blink on the left hand side of the display.

FACTORY PRE-SET PROGRAMME

The following ON/OFF times are programmed at the factory and are re-instated by pressing the recessed R/S button behind the flap.

Every day for 24 Hour control or Monday to Friday for 7 Day or 5/2 Day control					Saturday and Sunday for 7 Day or 5/2 Day control				
SETTING NO.		ON/OFF	TIME	SETTING NO.		ON/OFF	TIME		
2 ON/OFF's	3 ON/OFF's			2 ON/OFF's	3 ON/OFF's				
1	1	ON	6.30 am	1	1	ON	7.30 am		
2	2	OFF	8.30 am	2	2	OFF	10.00 am		
-	3	ON	12.00 pm	-	3	ON	12.00 pm		
-	4	OFF	12.00 pm	-	4	OFF	12.00 pm		
3	5	ON	5.00 pm	3	5	ON	5.00 pm		
4	6	OFF	10.30 pm	4	6	OFF	10.30 pm		



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