

Technical Bulletin

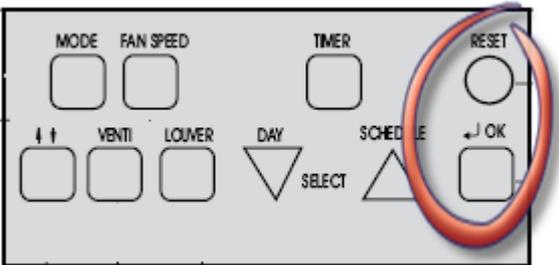
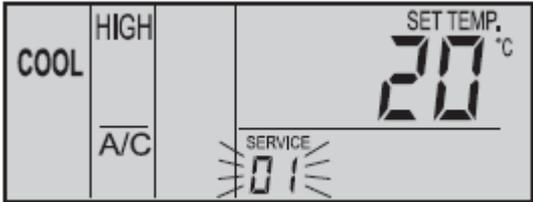
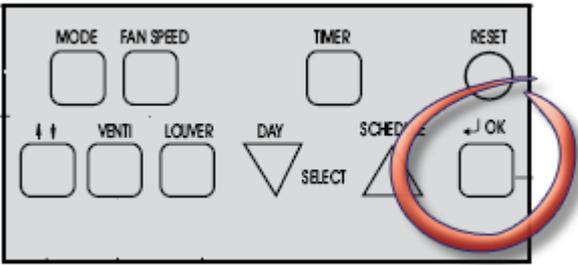
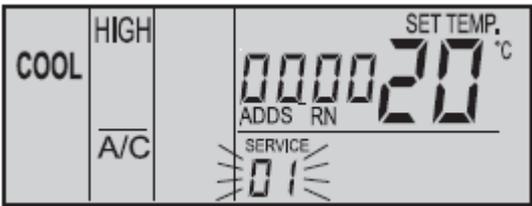
Number	033a
Subject	SERVICE MODE 01 - Commissioning
Date	13 February 2015

This is a step-by-step guide to enabling additional functions on Hitachi Utopia products specifically for commissioning split systems via the PC-ART controller. This document particularly focuses on Comms Room commissioning as an example although many additional functions exist. These can be found in the Installation or User manual or by contacting Logicool.

This commissioning guide will ensure the following status operations:

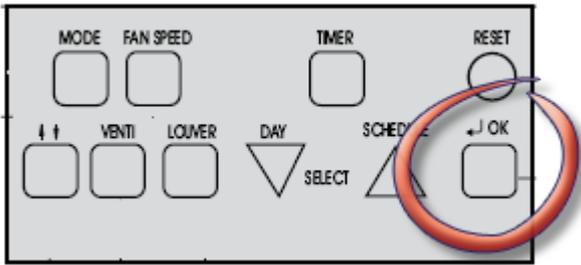
Cooling Only
 Locked to 19°C
 Auto Restart after power failure

Low ambient cooling
 Low pipe run adjustment

Instruction	Status
<p>1) Put the unit into COOLING and 19°C. Turn controller "OFF"</p> <p>2) Press "OK" and "RESET" together for more than three seconds</p> 	<p>Service Mode status "01" will appear in the bottom window.</p>  <p>Service Mode "01" is what we need to enter in order to set up optional functions.</p>
<p>3) Press "OK"</p> 	<p>Address "00" "00" will show in top window.</p>  <p><i>The first "00" digits represent the indoor unit address.</i> <i>The second "00" digits represent the outdoor (Refrigerant Number) unit address.</i></p>
<p>4) Press the Temperature Down button once</p> 	<p>Address display in top window will change from "00" "00" to "AA" "AA" (all units)</p> <p>This setting is the most advisable when doing any modification.</p> <p><i>You would only select a specific indoor unit if you were commissioning a large group of units, such as a number of fan coils on a VRF system.</i></p>

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5) Press "OK"

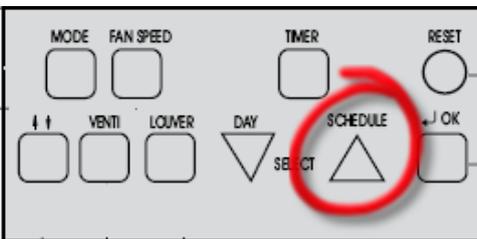


Optional setting "B1" will appear in top right window.

The "AA" "AA" display will be replaced by "00" status.



6) Press "SCHEDULE" continuously to scroll through to required function code, "B5" – Fixing the Operation Mode



Indication "B5" will appear in top right window.

("B5" is the Indication for locking the unit into cooling. "00" is the default status which is DISABLED.)



7) Press "OK"

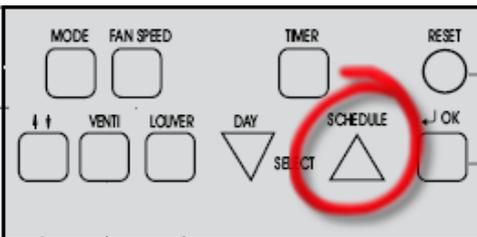
This will scroll to the required optional setting for "B5"

00 – Disabled
01 – Enabled

Status "00" will change to "01".



8) Press "SCHEDULE" once to scroll through to "B6" – Fixing the Set Temperature



Indication "B6" will appear in top right window.

("B6" is the Indication for locking the temperature. "00" is the default status which is DISABLED.)



9) Press "OK"

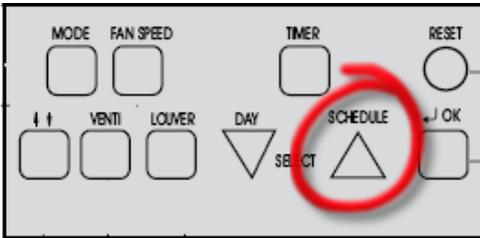
This will scroll to the required optional setting for "B6"

00 – Disabled
01 – Enabled

Status "00" will change to "01".



10) Press **"SCHEDULE"** once to scroll through to **"B7"** – "Fixing the Operation as Exclusive Cooling Unit"



Indication **"B7"** will appear in top right window.

(**"B7"** is the Indication for fixing the system as an exclusive cooling unit. **"00"** is the default status which is **DISABLED**.)



11) Press **"OK"**

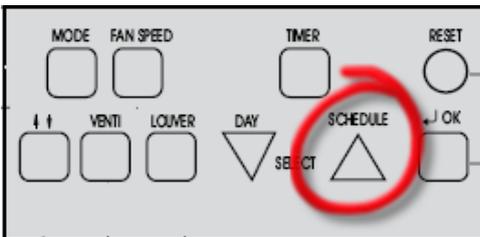
*This will scroll to the required optional setting for **"B7"***

00 – Disabled
01 – Enabled

Status **"00"** will change to **"01"**.

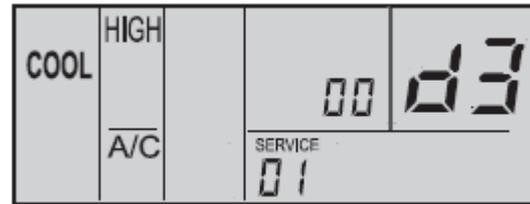


12) Press **"SCHEDULE"** once to scroll through to **"D3"** – "Restart Function after Power Failure"



Indication **"D3"** will appear in top right window.

(**"D3"** is the Indication for ENABLING Auto Restart after Power Failure. **"00"** is the default status which is **DISABLED**.)



13) Press **"OK"**

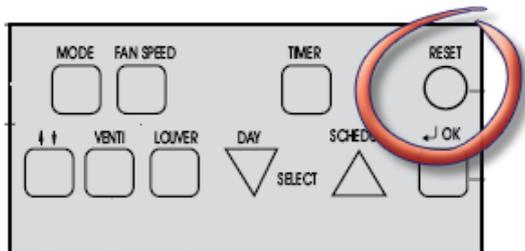
*This will scroll to the required optional setting for **"D3"***

00 – Disabled
01 – Enabled

Status **"00"** will change to **"01"**.



14) Press **"RESET"**



Remote controller will return to normal operation mode.

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15) Turn remote controller “ON”	<p>Normal Operation.</p> <p>To test, press MODE button to ensure COOLING operation is locked and temperature button to ensure temperature is LOCKED.</p>
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Additional Settings.

These functions may also be considered for Comms Room applications.
Full list of functions available on request

Item	Optional Function	Set	Desc.	Content
b4	Change of filter cleaning time	00	Standard	Change the time and frequency that the FILTER warning light appears.
		01	100 Hrs	
		02	1200 Hrs	
		03	2500 Hrs	
		04	None	
		01	Available	
C8	Return Air Thermistor at Remote Controller	00	Not avail	Return Air Thermistor located in Remote Controller is activated.
		01	Available	
D1	Auto Restart (Option to D3)	00	Not avail	Restarts operation regardless of whether the power was on or off prior to power failure
		01	Available	
b9	Fixing the fan speeds	00	Not avail	Lock the fan speed setting on the remote controller
		01	Available	
Cb	Enforced Stoppage logic	00	Input A	Forced stoppage (Fire alarm) input from PCC-1A
		01	Input B	
		01	Available	

2.1.5.2. Optional functions list

Control concept	Elem.	Optional functions	Setting	Condition	Description
Setting the internal control functions of the IU.	b1	Resetting heating temperature calibration.	00	Not available	This function is used to reset a difference of 4 °C.
			01	Available	
	b2	Maintaining ventilation speed during thermostat stoppage in heating mode.	00	Not available	This function is used to maintain the ventilation speed when the thermostat stops in a unit which is in heating mode.
			01	Available	
	C4	Drain pump activated in heating mode.	00	Not available	This function is used to activate the drain pump in heating mode.
			01	Available	
	C5	Selecting static pressure.	00	Average static pressure (factory setting)	This function is used to change static pressure levels in RPI units using the remote control.
			01	High static pressure	
			02	Low static pressure	
		Increase fan speed (RCD) (RCI).	00	Normal	This function is used to change the fan speed for rooms with high ceilings.
			01	Speed increase 1	
			02	Speed increase 2	
	C6	Maintaining the fan speed increase during a thermostat stoppage in heating mode (RCD)(RCI).	00	Not available	This function is used to increase the ventilation speed when the thermostat stops in a unit which is in heating mode. The speed maintained is the speed set with C5.
			01	Available	
	C8	Remote control thermistor.	00	Indoor suction thermistor control	This function is used to control the unit with the remote control thermistor.
			01	Control with the remote control thermistor	
02			Unit control using the average value of the indoor suction thermistor and the remote control thermistor		
Cb	Selection of logic of the contact used for external controls.	00	Normally open contact	This function is used to select the logic of the forced shutdown.	
		01	Normally closed contact		

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Control concept	Elem.	Optional functions	Setting	Condition	Description
Setting the control functions of the OU	b3	3 minute minimum forced compressor operation	00	Not available	This function is used to protect the compressor when it is frequently started and stopped. This function is used to cancel the "3 minute minimum forced compressor operation".
			01	Available	
	C7	Cancellation of the 3 minute minimum forced compressor operation	00	Not available	
			01	Available	
Remote control internal control functions	b4	Changing filter cleaning times	00	Standard	This function allows you to change the time indicated by the remote control for changing the air filter of the indoor unit.
			01	100 hours	
			02	1200 hours	
			03	2500 hours	
			04	No indication	
	b5	Locking operation mode	00	Not available	This function makes it impossible to change the operation mode.
			01	Available	
	b6	Locking the temperature setting	00	Not available	This function makes it impossible to change the setting temperature.
			01	Available	
	b7	Locking unit to cooling-only mode	00	Not available	This function switches off heating mode.
			01	Available	
	b8	Automatic cooling/heating operation	00	Not available	This function switches automatically from cooling to heating.
			01	Available	
	b9	Locking air flow	00	Not available	This function makes it impossible to change the fan speed.
			01	Available	
	F2	Setting primary and secondary remote controls	00	Primary	This function is used when two remote controls are installed for one system
			01	Secondary	
	F8	Mode lock	00	Unlocked	This function is used to lock the "indicated setting points" on the remote control when applying the "Operating Lock Procedure" described in point 2.1.4.1.X
			01	Locked	
	F9	Temperature lock	00	Unlocked	
			01	Locked	
	FA	Fan lock	00	Unlocked	
			01	Locked	
	Fb	Swing louver lock	00	Unlocked	
			01	Locked	
	FC	Setting the minimum temperature in cooling mode	01 a10	+1 ~ +10	
Fd	Setting the maximum temperature in heating mode	01 a10	-1 ~ -10	In Heat mode, the temperature range is set as: - Max. = from 20 to 30 - Min. = 17	
FE	Temperature during automatic heating operation	00	Set to 5 °C	Freeze protection	
		01	Set to 10 °C		
		02	Set to 15 °C		

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Control concept	Elem.	Optional functions	Setting	Condition	Description
Setting remote control additional systems.	d1	Switching unit on/off after mains power failure/ restoration.	00	Not available.	This function saves the unit settings if the power should fail. The unit will restart when the power supply is restored.
			01	Available	
	d3	Saving the unit status after an electrical power failure.	00	Not available	This function saves the unit settings if the power should fail. The unit will restart when the power supply is restored, provided that it was on before the power failure.
			01	Available	
Setting additional system control functions.	E1	Cooling mode using outdoor air only.	00	Not available	This function allows the intake of outdoor air only, by opening the corresponding grille (keeping the indoor air grille closed).
			01,02	Available	
		(KPI) Ventilation mode.	00	Automatic ventilation	
	01		Ventilation through total heat exchanger.		
	02		Ventilation bypass (without total heat exchanger)		
	E2	(Econofresh) Outdoor humidity sensor.	00	Not available	This function allows the user to control the outdoor air intake based on the humidity sensor connected.
			01	Available	
	(KPI) Increased air supply.	00	Not available	This function is used to ensure that the air pressure in the room is greater than the pressure in the adjoining rooms.	
		01	Available		
	E4	(Econofresh) Gas sensor.	00	Not available	This function is used to force the recycling of air in the room when the gas sensor (CO2) is activated.
			01, 02	Available	
		(KPI) Previous cooling/ heating periods.	00	Standard	This function delays the start-up of the total heat exchanger.
01	30 minutes				
02	60 minutes				

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ALTERNATIVE TO THE ABOVE – ANTI TAMPER MODE (PC-P2HTE ONLY)

OPERATION LOCK – PRESS AND HOLD **DAY** and **SCHEDULE** buttons for more than three seconds when unit is operational

Outdoor Unit Settings – to be done before unit is installed

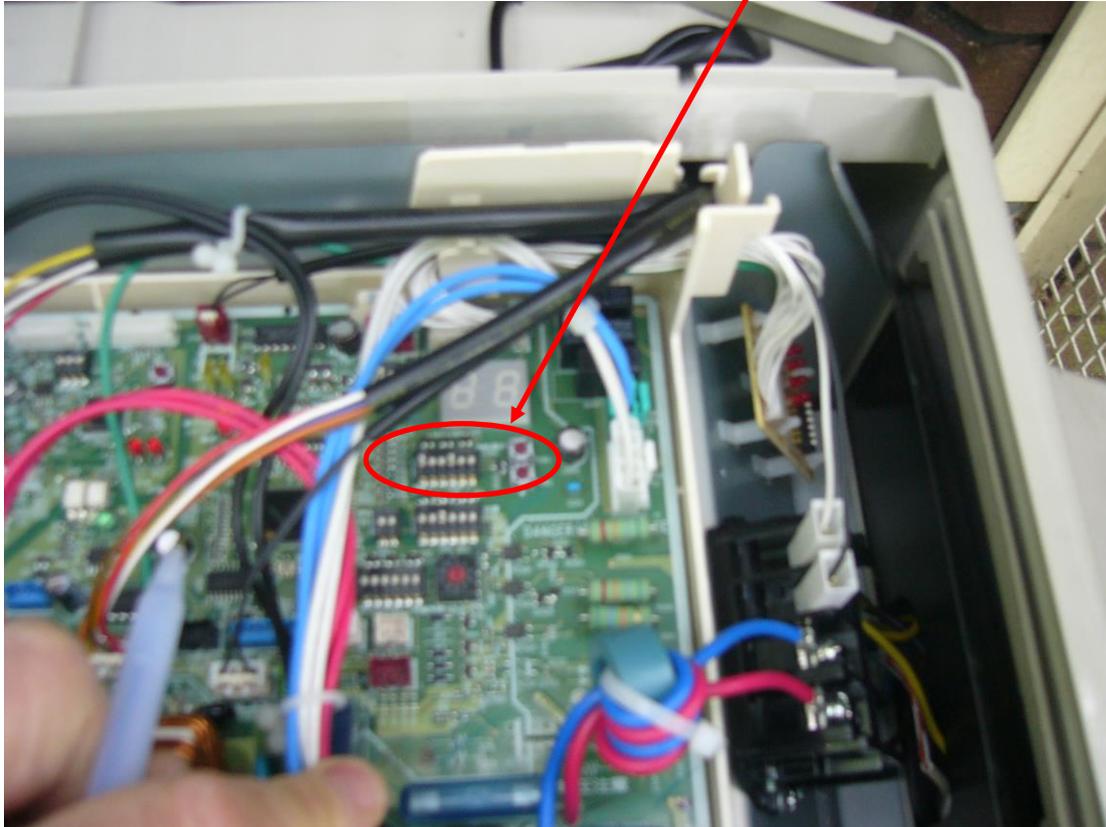
Remove the top cover of the condensing unit.

The main PCB is located underneath the protective metal panel. This is not held in with screws. The panel should just come off.



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Locate Dipswitch **DSW2**. This should be adjacent to the two red Microswitches and below the 7 Segment Display



Set **DSW2** as follows:

Put DSW2 Pin 1 into the ON/UP position if the pipe run is less than 5 metres.

Put DSW2 Pin 4 into the ON/UP position to enable cooling in low ambient conditions.

Function		Setting position
Setting before shipment		ON □□□□□□ 123456
Piping length	5 m < Lt	ON ■□□□□□ 123456
	Lt > 30 m	ON ■□□□□□ 123456
	5 m < Lt < 30 m	ON ■□□□□□ 123456
Enable cooling at low ambient conditions (-15°C)		ON □□□■□□ 123456