Panasonic

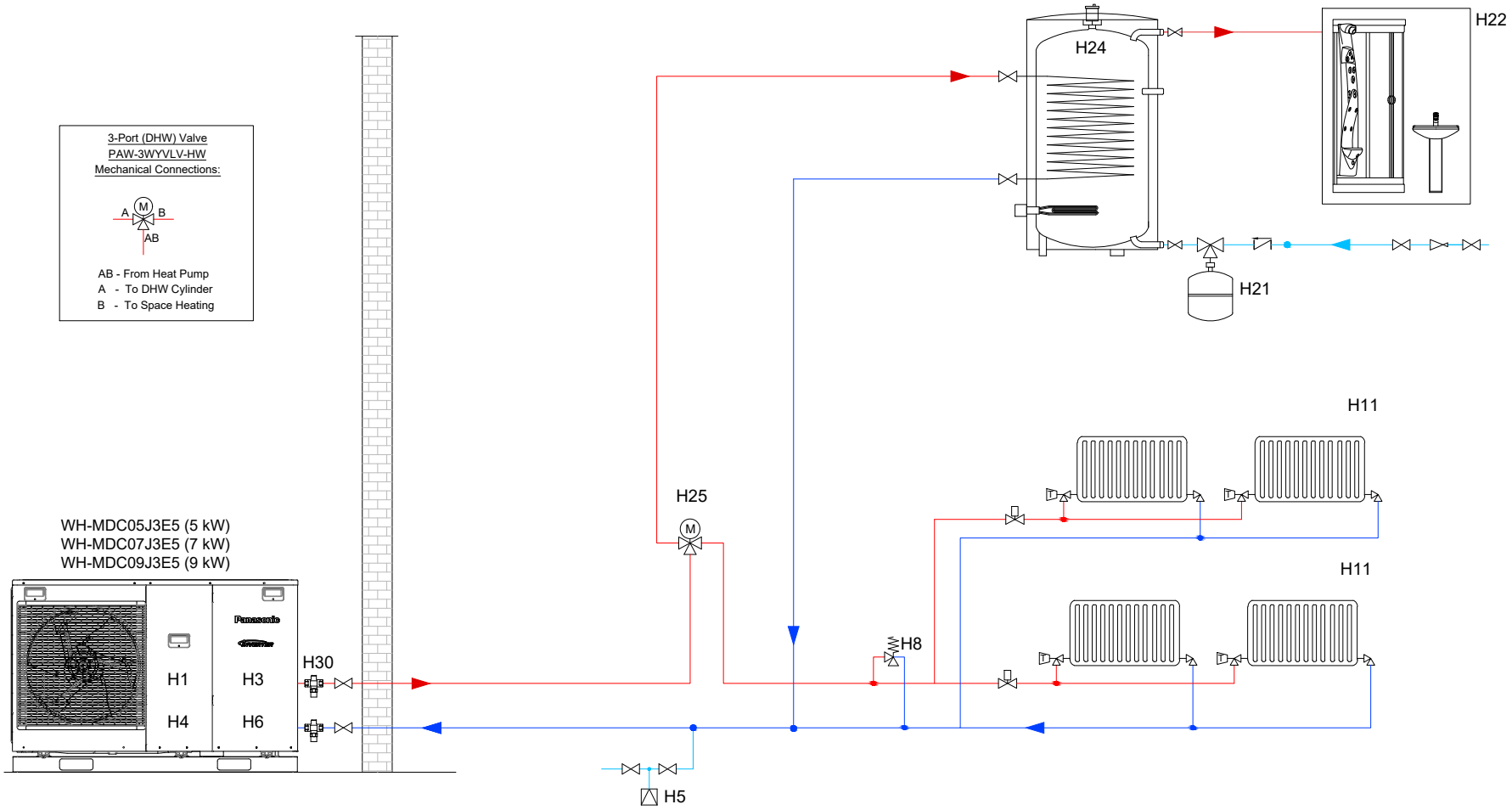
heating & cooling solutions

PANASONIC AQUAREA DESIGN PACK

Project: **Client:**

Project no: **Issue:**





General Notes:

- Scan QR Code for a link to the Aquarea Installation Guide

- **Please ensure that you have attended training and have read the installation and operation manuals regarding this product**
- Panasonic accept no responsibility for the design or errors, schematic is for indication purposes only
- Pending of water test, correct inhibitor levels and biocide should be used
- Freeze protection must be considered using either glycol or anti-freeze valves
- Bypass required if flow rate is not sufficient when radiator valves are closed

Flow Pipework
Return Pipework
Electrical Wiring
Isolation Valve
Magnetic Filter
Pump
Non Return Valve
Pressure Regulator
Security Valve
Thermostatic Mixing Valve
3-Port Mixing Valve (for DHW)
2-Port Motorised Zone Valve

Legend:

H1 Heat Pump Outdoor unit (provide outdoor unit drain)
H3 Refrigerant inside the Heat Pump is R32
H4 Magnetic Particle Filter is inside Monobloc unit
H5 Mains (city) water connection
H6 6L Expansion Vessel (heating) is inside Monobloc unit, additional vessel maybe required to meet system requirements
H8 Auto Bypass - minimum 1" recommended

H11 Heat distribution system
H21 Expansion Vessel (Cold Water)
H22 Domestic Hot Water Circuit
H24 Domestic Hot Water Cylinder
H25 3-Way valve (PAW-3WYVLV-HW)
H30 Anti-freeze valves (optional) 2 required per heat pump

Aquarea Single Fan Monobloc		
Model	Flow Rate	Min. Pipe Size Ø*
5kW	14.3 l/min	22 mm
7kW	20.7 l/min	22 mm
9kW	25.8 l/min	28 mm

* minimum pipe sizes stated in Copper
* calculated at dT5.

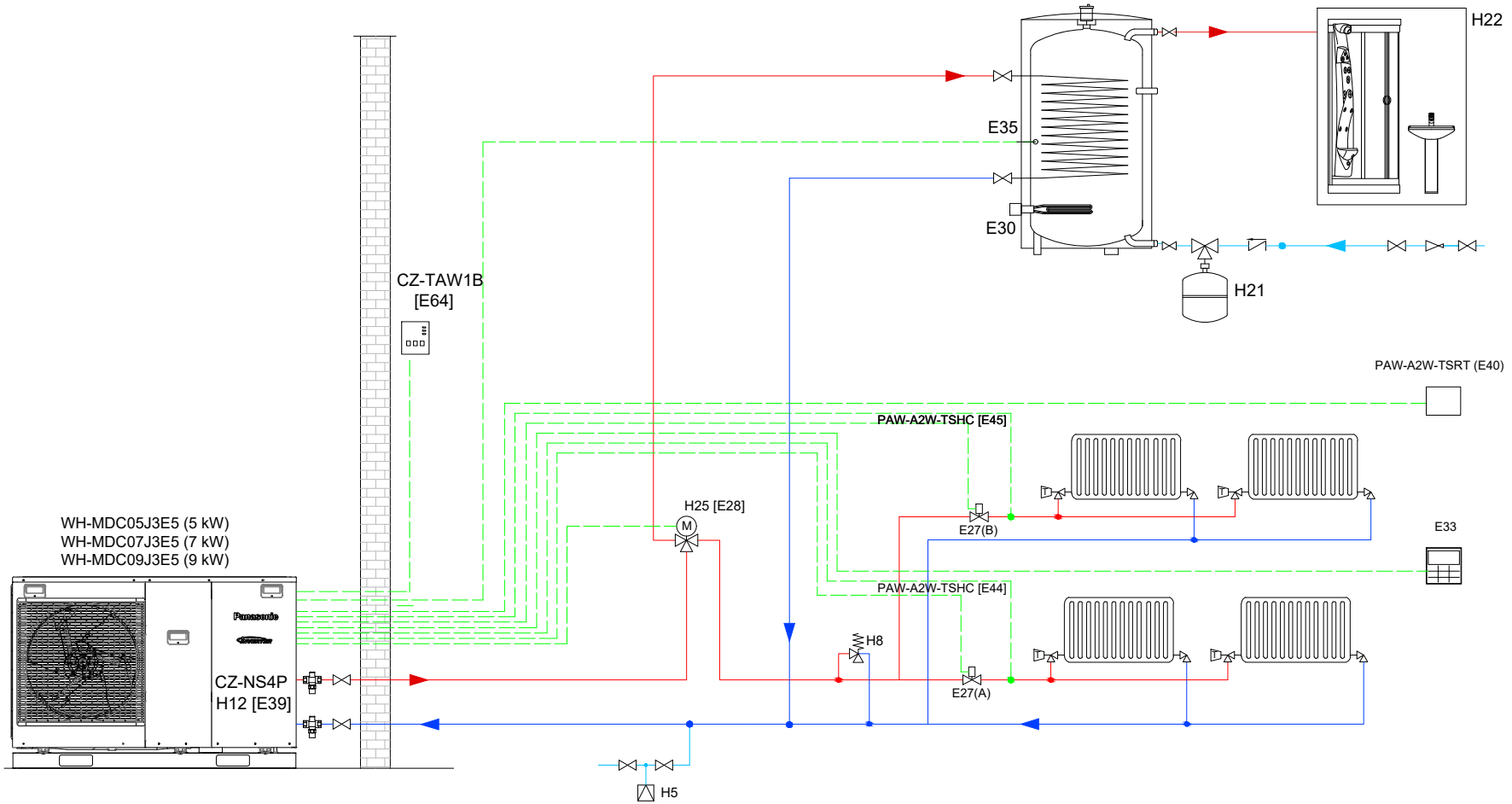
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Description:
Typical schematic drawing for piping layout of monobloc heat pump system

Piping Layout Schematic:
Direct, two zone, Panasonic controls

Drawing Number: 1-111-1022
Issue: Prelim



Notes:

Note: Main Board PCB

- The maximum cable length for sensor inputs is 30 meters and the maximum cable length for outputs and other inputs is 50m

Note E39: optional PCB:

- If the optional PCB (CZ-NS4p) is installed, the external room thermostat 1, the room sensor 1 and the extra pump control contacts of the main PCB are disabled.

Legend:

H12 Optional PCB - CZ-NS4P - needed for this scheme
E28 3 way valve: open for DHW and close for heating
E30 Booster Heater
E33 Remote Controller
E35 DHW Tank Sensor
E39 Optional PCB - CZ-NS4P - needed for this scheme
E40 Zone 2 room sensor (PAW-A2W-TSRT)
E44 Water sensor Zone 1
E45 Water sensor Zone 2

Field Supply:
E27(A) 2-way valve Zone 1
E27(B) 2-way valve Zone 2

Aquarea Single Fan Monobloc			
Model	Power Supply Cord	Isolating Devices	Recommended RCD
WH-MDC05J3E5	1	15/16A	30mA, 2P, type A
	2	15/16A	30mA, 2P, type AC
WH-MDC07J3E5 & WH-MDC09J3E5	1	25A	30mA, 2P, type A
	2	15/16A	30mA, 2P, type AC

* Refer to installation manual for IEC/EN61000-XX compliance requirements

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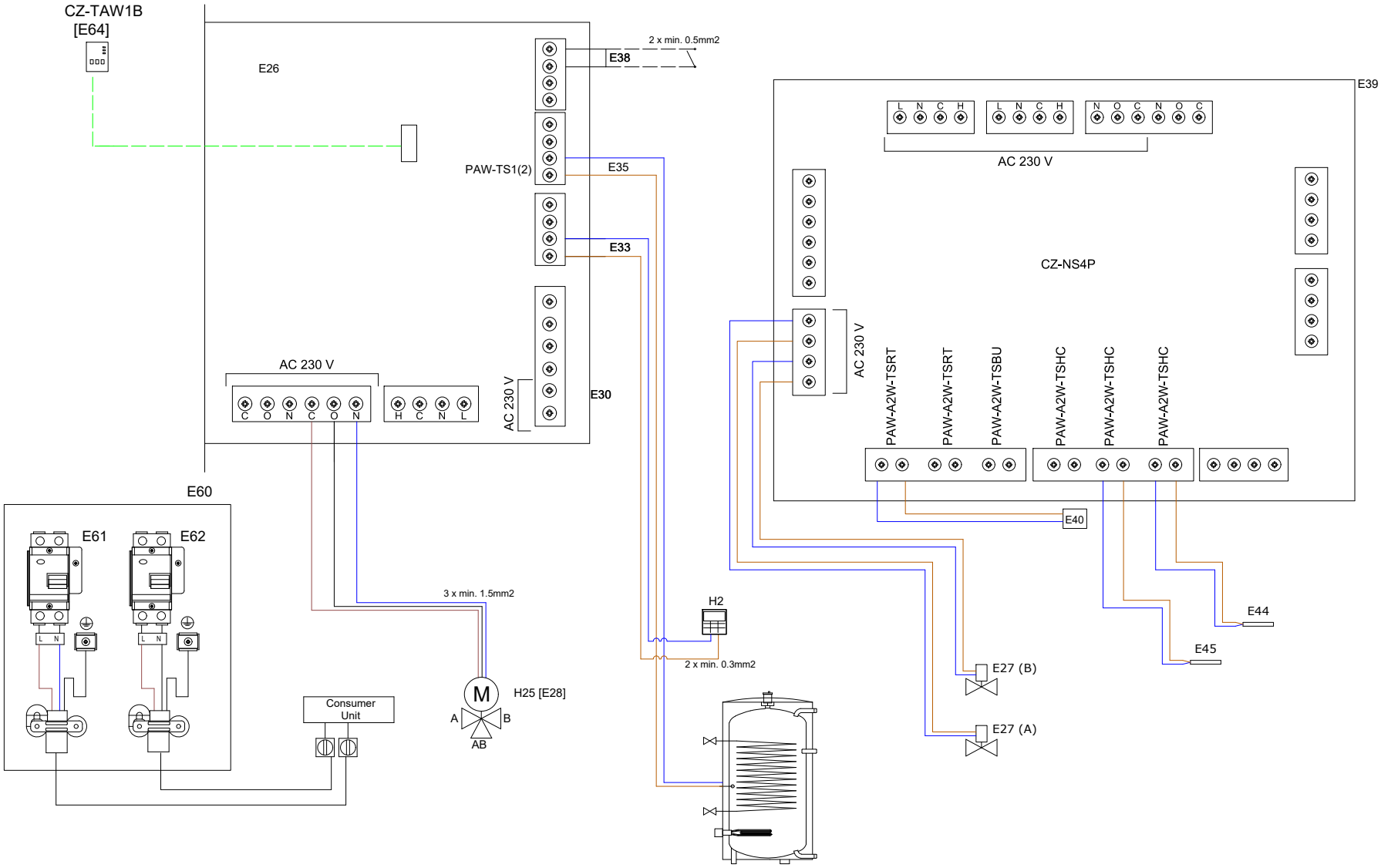
Panasonic

Description:
Typical schematic drawing for electrical layout of monobloc heat pump system

Piping Layout Schematic:
Direct, two zone, Panasonic controls

Drawing Number: 1-111-1022

Issue: Prelim



Notes:

Note E26: Main Board PCB
- The maximum cable length for sensor inputs is 30 meters and the maximum cable length for outputs and other inputs is 50m

Note E28: 3-Port (DHW) Valve Mechanical Connections:
- AB - From Heat Pump
- A - to DHW Cylinder
- B - to Space Heating

Note E38: OLP Booster Heater
- On the OLP contact a jumper must be installed if an external booster heater is used and controlled by Panasonic Heat Pump
- Second method of wiring the immersion heater dotted lines

Note E39: optional PCB:

- If the optional PCB (CZ-NS4p) is installed, the external room thermostat 1, the room sensor 1 and the extra pump control contacts of the main PCB are disabled.

Legend:

E26	Main board PCB - see notes E26	E40	Zone 2 room sensor
E28	3 way valve: open for DHW and close for heating / cooling	E44	Water Sensor Zone 1
E30	Booster Heater (max. 3kW)	E45	Water Sensor Zone 2
E33	Remote Controller	E60	Indoor Unit Power Supply
E35	DHW Tank Sensor	E61	Unit Power Supply 1 - Main Compressor
E38	OLP booster heater - see note E38	E62	Unit Power Supply 2 - Electric Back-up Heater
E39	Optional PCB - CZ-NS4P - needed for this scheme		

Field Supply:
E27 (A) 2-way valve Zone 1
E27 (B) 2-way valve Zone 2

Aquarea Single Fan Monobloc			
Model	Power Supply Cord	Isolating Devices	Recommended RCD
WH-MDC05J3E5	1	15/16A	30mA, 2P, type A
	2	15/16A	30mA, 2P, type AC
WH-MDC07J3E5 & WH-MDC09J3E5	1	25A	30mA, 2P, type A
	2	15/16A	30mA, 2P, type AC

* Refer to installation manual for IEC/EN61000-XX compliance requirements

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Panasonic

Description:
PCB Connections - monobloc heat pump system

Piping Layout Schematic:
Direct, two zone, Panasonic controls

Drawing Number: 1-111-1022

Issue: Prelim

WH-MDC05J3E5, WH-MDC07J3E5, WH-MDC09J3E5 Direct Two Zone Panasonic Controls System ASHP- Selection/Schedule of Equipment – J Series Monobloc

Product Code	Product Description
WH-MDC05J3E5, WH-MDC07J3E5, WH-MDC09J3E5	J Series 5kW, 7kW, 9kW Monobloc
Additional Kit	
PAW-A2W-AFVLV	Anti-freeze valves x2 required per unit (unless glycol specified)
PAW-TS1 (6m)/ **PAW-TS2** (20m)	Cylinder sensors either one will be required with each unit cylinder, supplied in 2x different lengths.
PAW-3WYVLV-HW	3 port valves required on each system. Our systems are hot water priority, so this is a diverter valve.
CZ-TAW1B	Aquarea Smart Cloud for remote control and maintenance through wireless or wired LAN.
CZ-TAW1-CBL	10m extension cable for CZ-TAW1B
CZ-NS4P	PCB for advanced functions in J and H Generations
PAW-A2W-TSHC	Zone water sensor x2
PAW-A2W-TSRT	Zone room sensor
Cylinder options, please choose one from the below.	
KIT-G3TD201CE5-1 **KIT-G3TD301CE5-1**	200L and 300L domestic hot water cylinder with 1.8m2 coil
KIT-G3TD30C1E5HI-1	300L Domestic hot water cylinder with 2.35m2 coil

***Please refer to schematics for field supply items**

Panasonic

Edition	Details	Date

Client:

Project:

Title:

Scale:	Issue:
Drawn by:	Project No:
Checked by:	Date:

Download the Aquarea A2W Heat Pump Price Lists 2023/24

UK-AQUPLST0323-01 CTA.pdf (panasonicproclub.com)

Download the Aquarea Installation Guide

UK_INSTALLATION_MANUAL_H 2023v3.pdf (panasonicproclub.com)

A guide on checking the flow rate on your controller

Flow Rate Check Video – YouTube

A how to guide on re heating your tank via your controller

Tank Re Heat Video - YouTube

A how to guide on setting a weekly timer on your controller

Weekly Timer Setup Video – YouTube



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