

# Installation Instructions for the Manifold Electronic Control System

**MECA01  
MECB01**

**Rinnai INFINITY**



## Note:

- A maximum of 5 INFINITY units can be manifolded together
- For Use with Rinnai INFINITY 24 Ext., 2425 or HD250 Ext.

# Rinnai

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Cost of a local call. Higher from mobile or public phones.

After-Hours refer to the Yellow Pages, under Hot Water.

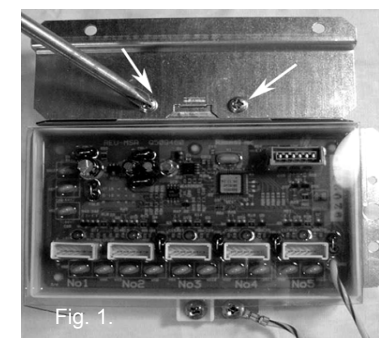
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## WARNING

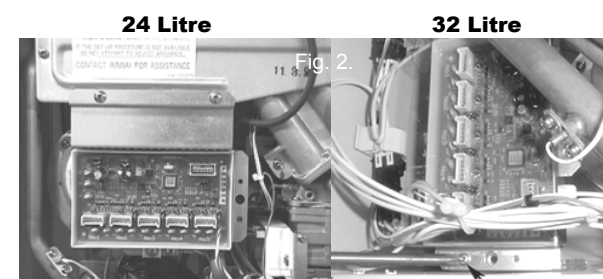
- (1) Wiring inside this appliance may potentially be at 240 Volts.
- (2) Remove the plug from the power source before carrying out the following procedure.

## Installation Procedure – Pack A Manifold Unit 1

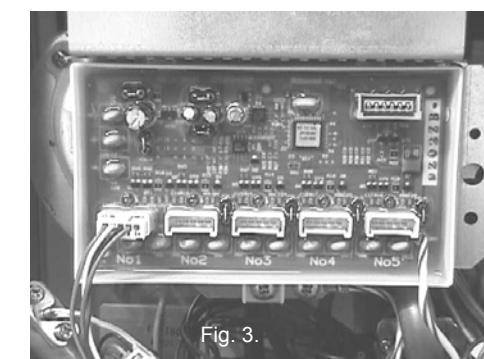
- 1). Remove (4) screws from the front panel of Manifold Unit Number 1 and remove front panel.
- 2). Remove Master Communication PCB from MECA01 (Pack A). For the 32 Litre only remove (2) screws from mounting bracket and discard smaller bracket. (Fig.1).



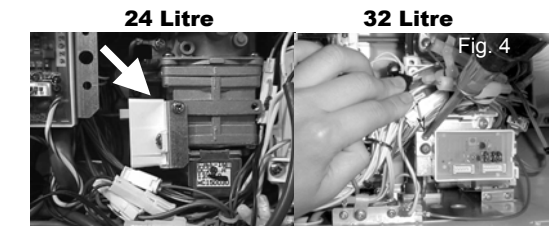
- 3). Locate the Master PCB as shown below (Fig 2).



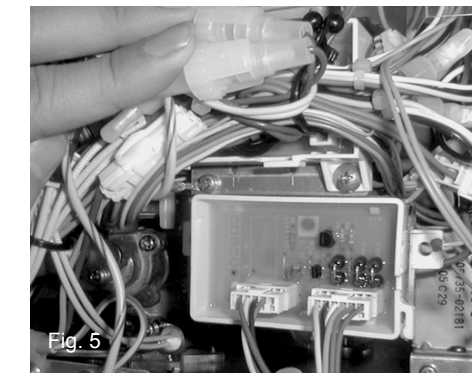
- 4). Connect Communication Cable B (4 wire) to socket No.1 on Master Communication PCB. (Fig. 3).



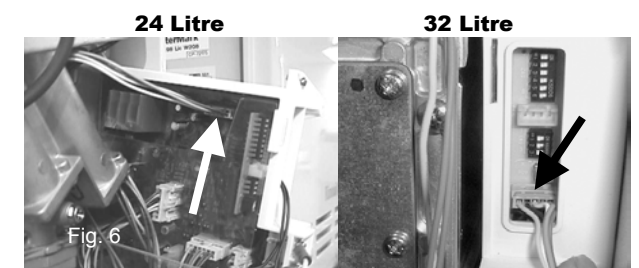
- 5). Fit the Sub Communication PCB in position as shown in Fig 4.



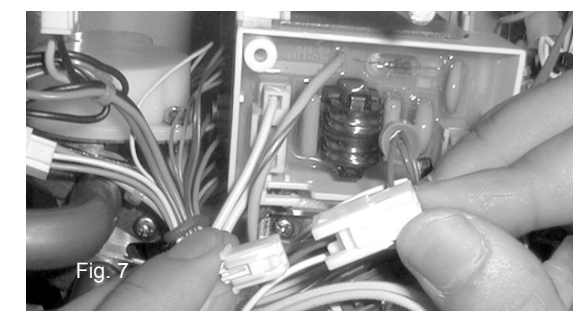
- 6). Connect Communication Cable B (4 wire) from the Master Communication PCB to the 5-pin socket on the Sub Communication PCB. Connect Communication Cable A (6 pin) to the 6-pin socket on the Sub Communication PCB. (Fig 5).



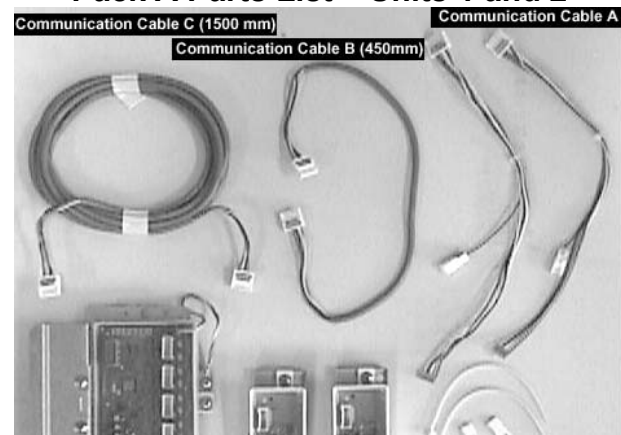
- 7). Connect the tail of Communication Cable A to the Infinity Main PCB as shown in Fig. 6



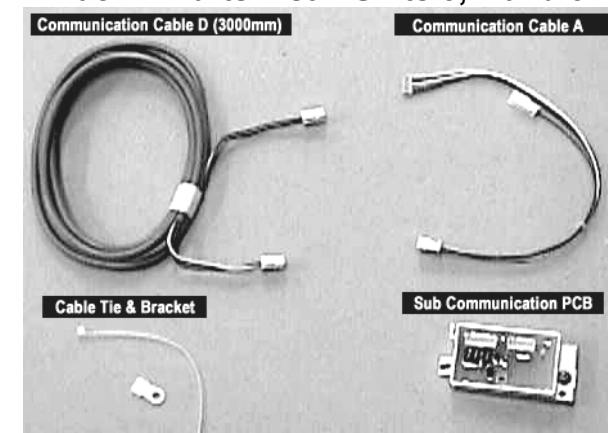
- 8). For the 32 Litre only, locate the 2-pin connector on the Infinity wiring loom and remove the blanking plug. (Fig 7).



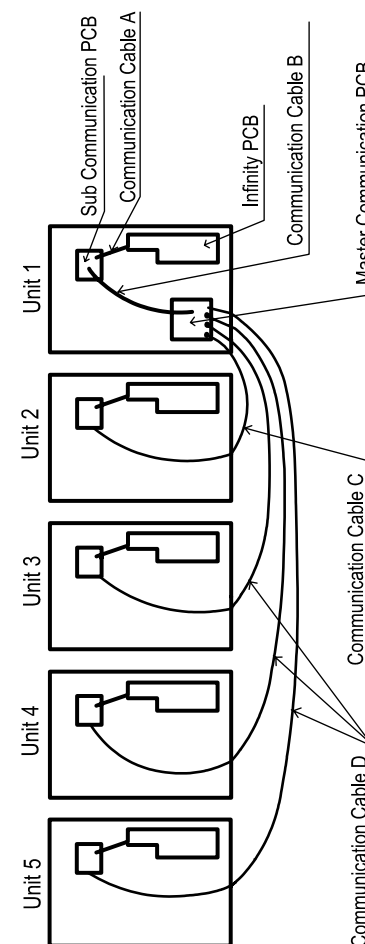
## Manifold Electronic Control System Pack A Parts List – Units 1 and 2



## Manifold Electronic Control System Pack B Parts List – Units 3, 4 and 5

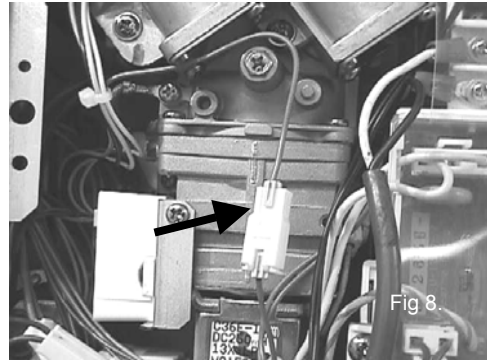


## TYPICAL INSTALLATION

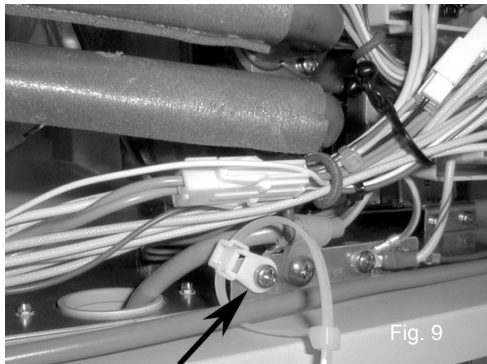


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- 9). Connect the 2-pin connector from Communication Cable A to the 2-pin connector on the Infinity wiring loom. (Fig 8).



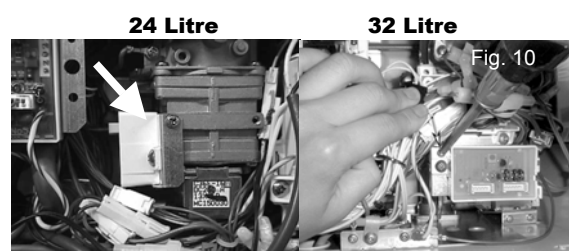
- 10). Remove (1) screw from the bottom cable support bracket and fit the white cable support supplied. Pass the cable tie through the loops and around the Communication Cable B. (Fig 9).



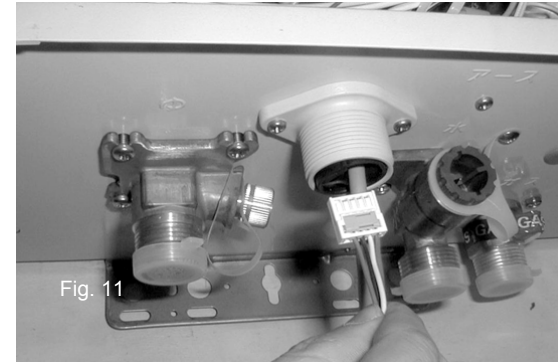
**NOTE:** Do not tighten cable ties until all units have been installed.

### Installation Procedure – Pack A Manifold Unit 2 and Pack B Manifold Units 3, 4 and 5

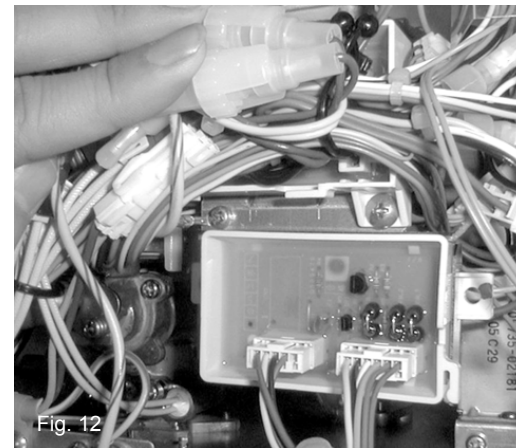
- 1). Remove (4) screws from the front panel of Manifold Unit Number 2 (Pack A) or Manifold Unit Numbers 3, 4 and 5 (Pack B) and remove front panel.
- 2). Fit the Sub Communication PCB in position as shown in Fig 10.



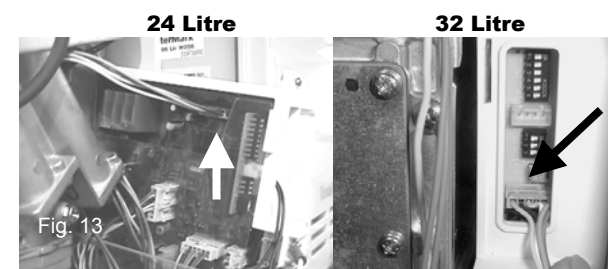
- 3). Pass one end of Communication Cable C (unit 2) or Cable D (units 3, 4 and 5) through the cable entry point of the Infinity. (Fig 11)



- 4). Connect Communication Cable C (unit 2) or Cable D (units 3, 4 and 5) to the 5-pin socket on the Sub Communication PCB. Connect Communication Cable A (6 pin) to the 6-pin socket on the Sub Communication PCB. (Fig 12)



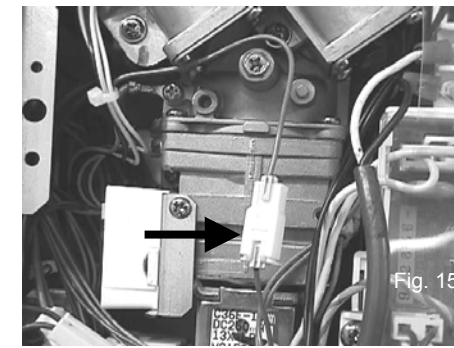
- 5). Connect the tail of Communication Cable A to the Infinity Main PCB as shown in Fig.13).



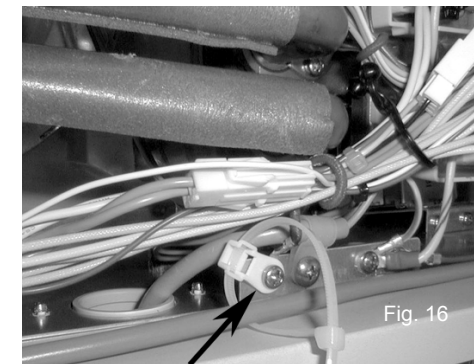
- 6). For the 32 only locate the 2-pin connector on the Infinity wiring loom and remove the blanking plug. (Fig 14).



- 7). Connect the 2-pin connector from Communication Cable A to the 2-pin connector on the Infinity wiring loom. (Fig 15).



- 8). Remove (1) screw from the bottom cable support bracket and fit the white cable support supplied. Pass the cable tie through the loops and around the Communication Cable C. (Fig 16).  
**NOTE:** Do not tighten cable ties until all units have been installed.



- 9). Run Communication Cables C and D neatly behind the pipework and feed through the cable entry point of Manifold Unit 1. Connect the Communication Cables to position No.2 for Manifold Unit No 2 on the Master Communication PCB, position No. 3 for Manifold Unit No. 3 etc. (Fig 17).



- 10). Restrain the cables inside Manifold Unit 1 once all cables have been connected to the Master Communication PCB, using the previously fitted cable support and cable tie.
- 11). Gently pull the excess cable back inside units 2, 3, 4 and 5. Secure the cables in place using the white cable support and cable tie. Replace the front covers on all units.

### System Operation

- The Master Communication PCB has five connection points to enable up to 5 manifolded units to be used together.
- There is an indicator light at each connection point to show that a unit is connected.
- The indicator light shows the current system settings. A continuous light above a connection point shows that this unit is ready and will be one of the first units activated depending on the flow demand.
- A flashing light at intervals of 1.5 seconds above a connection point indicates that this unit is on standby and will activate when and if required.
- The control panel randomly selects 3 units at the ready stage and 2 on standby. The system rotates the ready and standby units after 10 operations.
- The Master Communication PCB calculates the current water flow demand. Flow demands over 10 L/m will activate all three ready units for a period of 10 seconds. At this time adjustments are made in relation to flow demand.
- At maximum flow Unit 4 will activate after the initial 10-second period, for a period of 10 seconds after which time Unit 5 will activate.
- Gas valve modulation of each unit is performed equally via the Master Communication PCB so that no unit is working harder than the next unit. This calculation is performed in relation to water flow.

### Dipswitch Settings

Dipswitch settings on Unit 1 with the Master Communication PCB determine the output temperature of all units irrespective of the individual unit dipswitch settings. The switch settings conform to the new settings from Infinity Serial No. 99.05 onwards and allow the connection of a Temperature Flow Switch. For further information on dipswitch settings contact Rinnai HelpLine.

### Temperature Flow Switch Connection

The Temperature Flow Switch (TFS) can be connected without the use of control pads and must be connected to the unit containing the Master Communication PCB. The TFS should only be used when the maximum temperature dipswitch setting is 55°C to comply with the current 50°C Legislation passed in all states of Australia.

### Temperature Control Pads

Up to 3 Temperature Control Pads can be connected to the manifolded system.. The control pads must be connected to unit 1 with the Master Communication PCB installed. Temperature adjustments made on the Temperature Control panels will be communicated to each Infinity resulting in accurate temperature control of each unit. Contact Rinnai HelpLine for the Temperature Control Pad combinations available.

**NOTE:** Temperature Control Pads cannot be used with flow and return systems.