

FP1600/OMEGA 64

KT0216 MASTER BOARD UPGRADE KIT

All Versions of FP1600/OMEGA 64

INSTALLATION INSTRUCTIONS

1. Contents of Kit (KT0216)

- FP1600 Mk3 Master Board
- FA1205 – FP1600 Mk3 Gear Plate.
- LT0312 Installation/Configuration Manual to match latest software.
- Diagnostics Reference label to match latest software.
- FRC loom for connecting to LED board in rear service cabinet (short).
- FRC loom for connecting to LED board in front service cabinet (long).
- PCB standoffs (8 x plastic) and fastening screws (3 x M3).
- Zone display fastening screws and washers (2 x M4).
- EOL resistor for Brigade Keyswitch Loom (220kΩ).
- LT0430 (these instructions).

2. Use of this Kit

This kit can be used to:

- Replace a Mk1 FP1600 Master Board, Rear Service or Front Service.
- Replace a Mk2 FP1600 or OMEGA 64 Master Board, Rear Service or Front Service.
- Replace a Mk3 FP1600 or OMEGA 64 Master Board, Rear Service or Front Service.

This kit cannot be used to:

- Replace a Mk2 or Mk3 OMEGA 64 Slave Board. That requires a KT0215 Slave Board kit plus (in some cases) a FA1205 gear plate.

Brigade Connections:

SGD - Older SGDs fitted to Mk1 or Mk2 Master Boards cannot be directly connected to a Mk3 board, since the wiring arrangements are different. Choices are:

- Fit a PA0862 GP SGD (ordered separately) onto the new Master Board in place of the old SGD. This is a straightforward plug-on.
- Fit a PA0861 GP Brigade Relay Board (ordered separately) to the new Master Board and wire the relay outputs to the old SGD. This is physically more complicated.

SAFE or other systems connected to the brigade relays – there is only one choice:

- Fit a PA0861 GP Brigade Relay Board (ordered separately) to the new Master Board and wire the relay outputs to the SAFE or other system's transmitter.

OMEGA 64 Systems:

Mk3 and Mk2 Boards with their various software versions will correctly operate together in any combination in OMEGA 64 systems. The Mk3 slaves or master will have more capabilities than Mk2 versions, but these new capabilities may not all be available in a mixed system.

3. Identification of Replaced FP1600 Master Circuit Board

Old Master Board has:	Old Board Type is:
<ul style="list-style-type: none"> • 3 digit display in top right corner. • 4 pushbutton controls. • A label "4512:2003" near the FUNCTION pushbutton. 	Mk3 – post-2003 (FP1600 or OMEGA 64) No special action required.
<ul style="list-style-type: none"> • 3 digit display in top right corner. • 4 pushbutton controls. • No label "4512:2003" near the FUNCTION pushbutton. 	Mk3 - pre-2003 (FP1600 or OMEGA 64) Go to Section 6.
<ul style="list-style-type: none"> • 2 digit display in bottom right corner or on zone display board for front service. • 16 smoke circuit inputs. • A label "FP1600 Controller 1930-6 Rev C". • Large and small 4-way connector for J10 at bottom right corner. 	Mk2 (FP1600 or OMEGA 64) Go to Section 5.
<ul style="list-style-type: none"> • 2 digit display in bottom right corner or on zone display board for front service. • 4 smoke and 12 thermal circuit inputs. • A label "FP1600 Controller 1930-6 Rev A or B" • Small 4-way connector for J10 at bottom right corner. 	Mk1 (FP1600 only) Go to Section 4.

4. Mk1 FP1600 Replacement

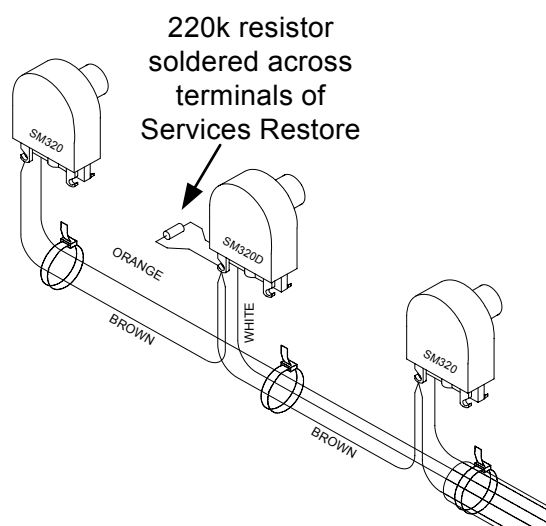
1. Remove old Master Board and gearplate. If front service, remove display bracket from inside door.
2. Mount new Master Board onto the new gearplate as in Figure 2.
3. On the new Master Board, carefully cut off R78 (see Figure 3). This adjusts the battery charger current limit value down to 1A to match the Mk1 mains transformer.
4. Fit the new gearplate into the cabinet and fasten it with the old barrel nuts.
5. Solder the 220k resistor from the kit across the Services Restore brigade keyswitch (see Figure 1).
6. Fit Zone LED display to gearplate barrel nuts (rear service) or index barrel nuts (front service). (See Figure 4).
7. Reconnect detector circuits, brigade keyswitch loom, bell wiring, AC input.

5. Mk2 FP1600 or OMEGA 64 Master Replacement

1. Remove old Master Board and gearplate. If front service, remove display bracket.
2. Mount new Master Board onto the new gearplate as in Figure 2.
3. Fit the new gearplate into the cabinet and fasten it with the old barrel nuts.
4. Solder the 220k resistor from the kit across the Services Restore brigade keyswitch (see Figure 1).
5. Fit Zone LED display to gearplate barrel nuts (rear service) or index barrel nuts (front service). (See Figure 4).
6. Reconnect detector circuits, brigade keyswitch loom, bell wiring, AC input.

6. Mk3 FP1600 or OMEGA 64 Master Replacement

1. Remove old Master Board. If front service, remove display bracket (if fitted).
2. Mount new Master Board in place of the old board.
3. Fit Zone LED display to gearplate barrel nuts (rear service) or index barrel nuts (front service). (See Figure 4).
4. Reconnect detector circuits, brigade keyswitch loom, bell wiring, AC input.



**Figure 1 - EOL
Resistor on
Keyswitches**

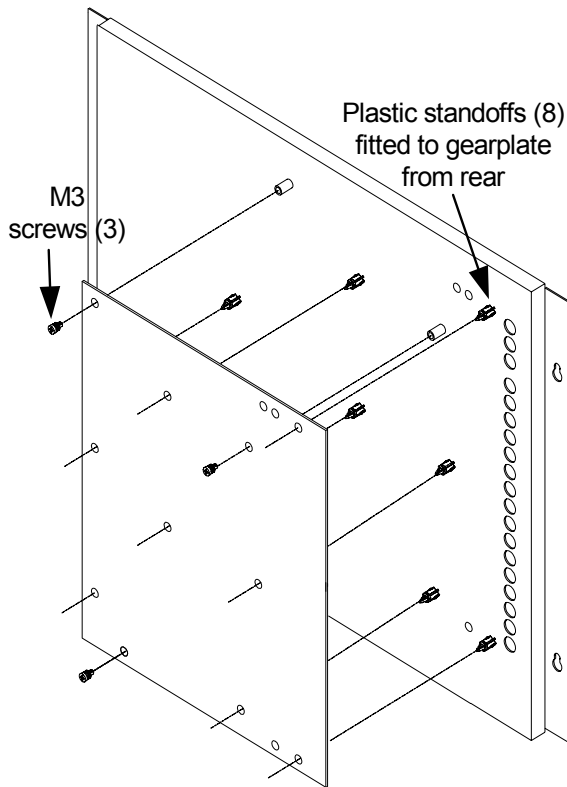


Figure 2 - Mounting the new Master Board on the new Gear Plate

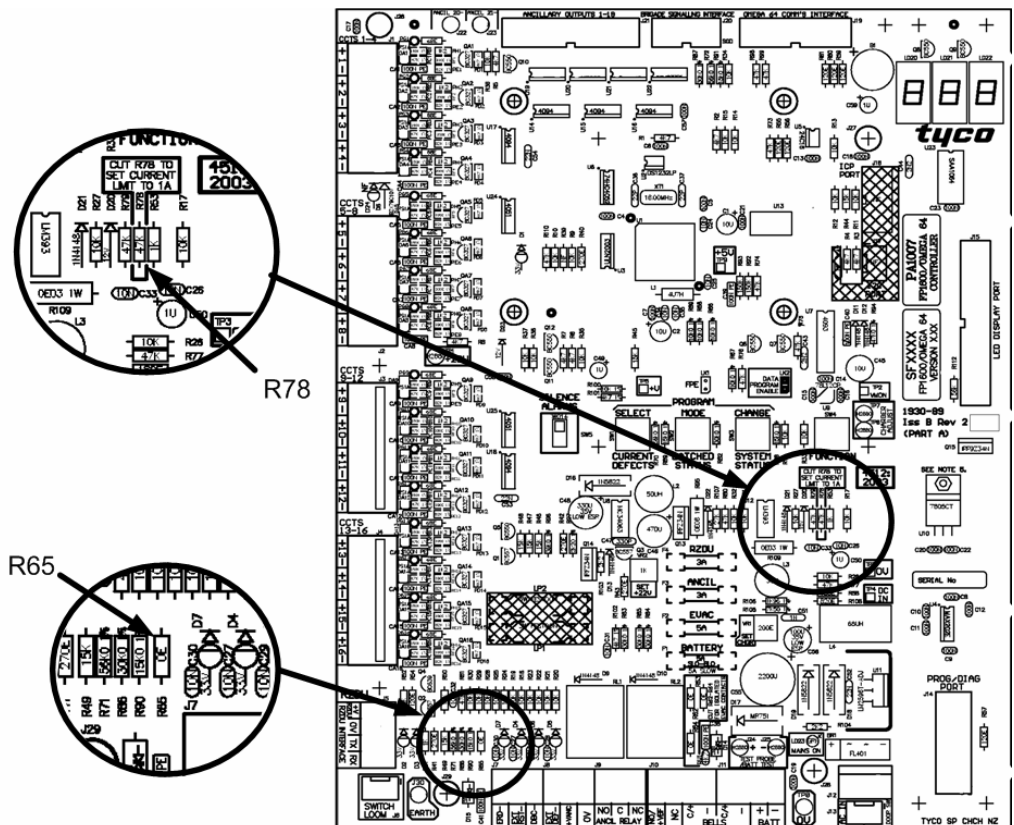


Figure 3 - Locations of R65 (lower left corner) and R78 (centre right)

7. Configuration of New Master Board

1. If pre-NZS 4512:2003 “legacy” circuit operation is required, enter programming mode on the new Master Board (see Installation/Configuration Manual for detail). Pressing **SELECT**, step through to “**SC**”; press **MODE** to select. Pressing **MODE**, step through to “**Ld**”; press **CHANGE** to change it to “**LE**”. This enables legacy-style thermal and flowswitch circuits in the Programming menu.
2. Program the new Master Board to match the old board’s configuration (see the Installation/Configuration Manual for detail). This programming can be done manually using the push button controls on the new Master Board, or it can be done on a PC beforehand with the software tool SmartConfigLite and downloaded into the new Master

Board on site.

SmartConfigLite provides a number of advantages such as “point’n’click” settings, spreadsheet-like appearance, additional commentary notes in the database, saved copy of a database on disc. See Product Bulletin NZ211 for more details. SmartConfigLite and the bulletin can be downloaded from the Fireplace (www.tycosafetyproducts-anz.com) as part number SF0323.

3. Mk3 FP1600 Master Boards have an **Earth Fault** detection facility which earlier versions do not have. In general, fire alarm field wiring should not be directly connected to earth, since this can lead to increased noise pickup and less reliable operation. A system with an earth fault may not show any obvious signs of malfunction, but if a second earth fault occurs in the wiring, there may be spurious alarm and defect indications.

By default, the Mk3 FP1600 has earth fault detection enabled, and will signal a defect if there is $3k\Omega$ or less leakage resistance from any wiring to earth. The recommended approach is to leave this facility enabled when replacing a Master Board. If the new board reports an earth fault, there are two ways of dealing with it:

- a. Hide it – by cutting resistor R65 off the new Master Board (see Figure 3), earth fault detection is disabled and the defect indication will go away. However, the fault will still be there. Earth faults are usually indications of incorrect wiring or damage to field cabling, and therefore of future problems.
- b. Fix it – the wiring with the earth fault (or faults, if you are unlucky) can be localised by progressively removing field wiring connections from the Master Board until the Earth Fault indication clears. The last circuit disconnected is where the fault is located. Progressively restore all other connections to the Master Board and check that there is no other Earth Fault indication. If there is, repeat the localisation procedure.

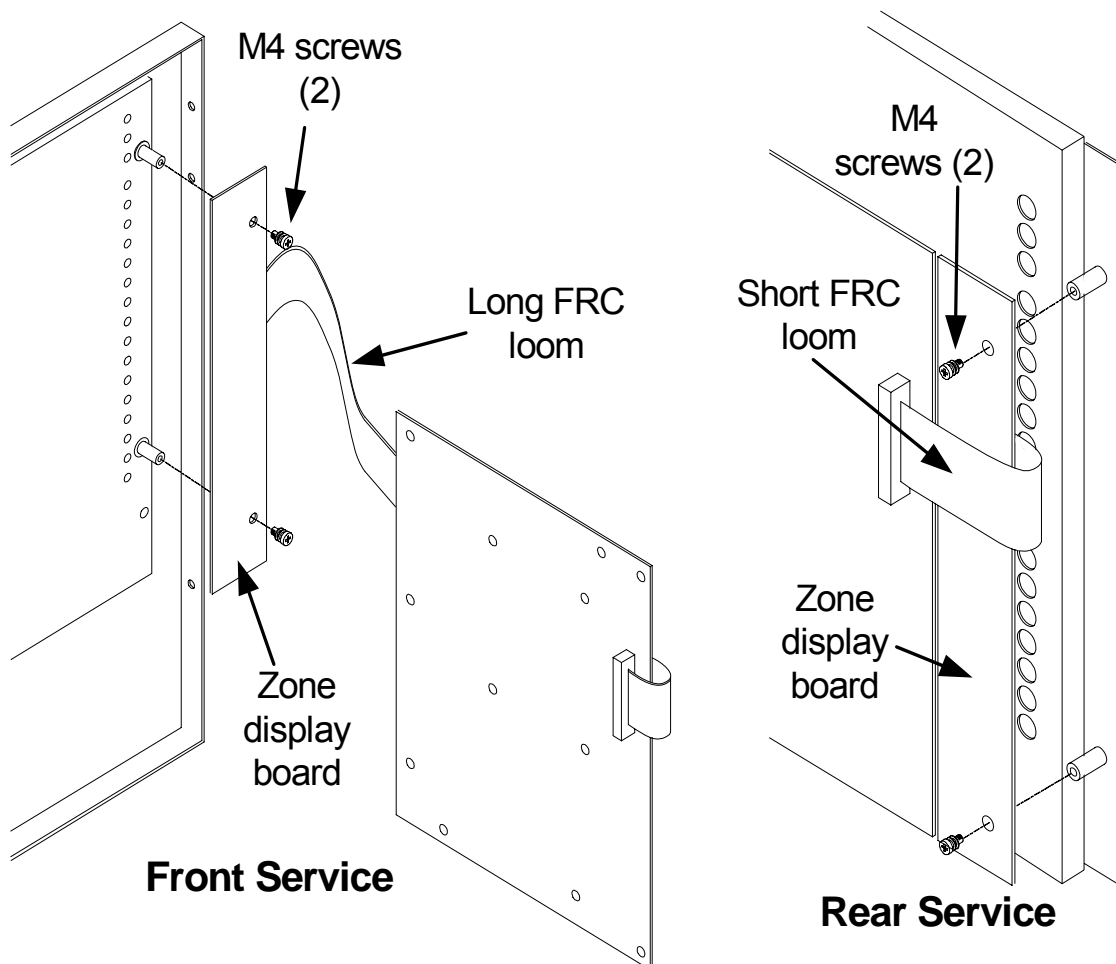


Figure 4 – Zone Display Mounting

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