

## **FP1600 32 ZONE UPGRADE INSTALLATION INSTRUCTIONS**

### **1. APPLICATION**

These instructions describe the procedure for extending an FP1600 MkII or MkIII system to 32 zone capacity (using MkIII or later components). A MkIII slave can be used to extend a MkII system, but some of the programmable Ancillary facilities in the MkIII board will not be available.

Reference is made to the FP1600/OMEGA 64 Technical Manual (LT0196) in places. You will require this manual if the battery size has not been determined, or you are unfamiliar with FP1600/OMEGA 64 programming and configuration.

### **2. ORDERING INFORMATION**

Ordering codes are detailed in LT0200 "How to Order FP1600/OMEGA 64 Panels" for both R/S and F/S configurations. A cabinet and upgrade kit are required.

The upgrade kits contains:

- New software chip for Master board (required for MkII Master only)
- Slave board, 16 zones,
- Loom for connecting the two boards
- Zone Numbering , Diagnostics labels
- Installation/Configuration Instructions
- These installation instructions

### **3. CABINET MOUNTING**

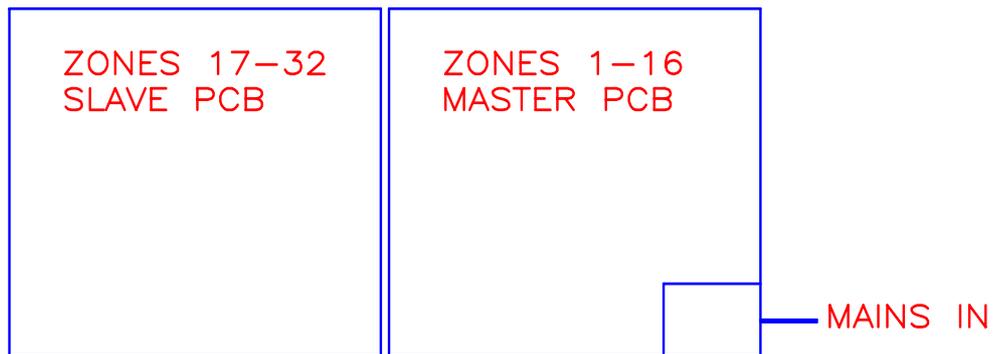
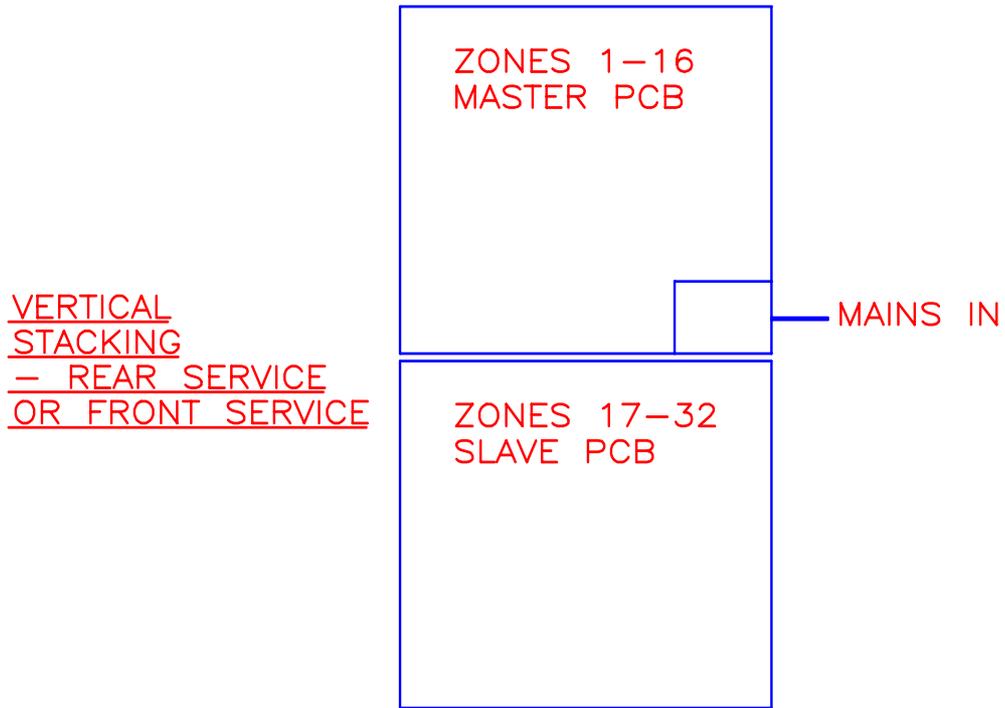
The extender cabinet must be mounted adjacent to the existing cabinet, since the data link between the PCBs will not work reliably over greater distances.

Figure 1 shows recommended cabinet configurations, which give a consistent zone numbering order on the index panels. The most suitable arrangement will depend on the space and wiring constraints of your particular installation.

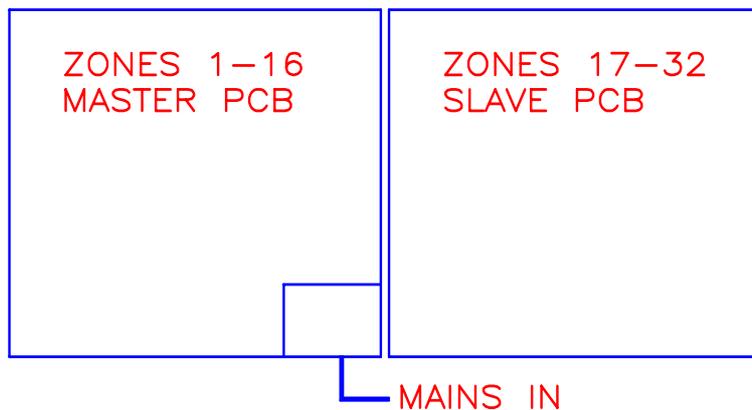
It is possible to move the existing master PCB and power chassis into the extender cabinet, if this will give a better layout to the index panels. Alternatively, the whole cabinet could be moved.

Note: whichever cabinet contains the Slave board will require 3 index holes to be blanked off (unused common LED positions).

Do not fit the PCB into the new cabinet until all drilling and cutting work associated with the mounting is complete and cleaned up.



HORIZONTAL STACKING - REAR SERVICE



HORIZONTAL STACKING - FRONT SERVICE

FIGURE 1  
RECOMMENDED CABINET MOUNTING ARRANGEMENTS

#### **4. WIRING**

The general arrangement of internal wiring and inter-wiring between cabinets is shown in Figure 2 (MkII Master) and Figure 3 (MkIII Master) below.

Brigade and Alerting device circuit wiring and the internal keyswitch loom connect to the Master board (label as zones 1-16 on the gear plate) as usual.

An FRC loom with central "bulge" (LM0074) interconnects the Master and Slave boards, via J20 "TEST PORT" on MkII boards, or J19 "OMEGA COMMS" at the top edge of MkIII boards. Ensure the correct orientation of the plug-on connectors as there is no shroud on MkII boards to locate them.

Wiring from all batteries should join at a single point (preferably near the Master board battery terminals), and then feed to the Slave board. Two 6.5Ah batteries next to each other can be wired directly in parallel. If more than one larger battery is required, then each battery should be separately "fused" by a 10A self-resetting thermal cutout (Tyco order code SU0159).

Circuits on the Slave board should be labelled on the gear plate 17-32 using the label supplied.

If necessary, the Master PCB can be moved to the extender cabinet by this procedure (only if actual cabinet cannot be physically moved across):

- Disconnect the detector circuits, key switch loom, battery, and AC wiring from the PCB.
- Undo the barrel nuts holding the gear plate and lift the PCB and gear plate free. Take care of the LEDs.
- Undo the barrel nuts fastening the power supply chassis, disconnect the mains wiring from the terminal block, and the earth lead from the earth stud on the chassis.
- Fit the power supply chassis and gear plate in the extender cabinet, and re-fit the wiring as before.
- Un-fasten the keyswitches from the door of the original cabinet, and transfer the switches to the extender cabinet. Connect the switch loom to the PCB.
- Blank off switch holes in existing cabinet and label new ones (or swap doors; this may require rivets to be drilled out).

#### **5. BATTERY CAPACITY**

When extending a system beyond 16 zones, the battery capacity will probably need to be increased to cope with the additional load. The necessary battery should be determined from the information in Section 3.6 of the FP1600/OMEGA 64 Technical Manual (LT0196) if this has not already been done. The extender cabinet can accommodate at least 2 x 6.5Ah 12V sealed lead-acid batteries connected in parallel, which will be sufficient for many installations.

## 6. PROGRAMMING

Refer to Section 4.4 of the FP1600/OMEGA 64 Technical Manual or the FP1600/OMEGA64 Installation and Configuration Manual (LT0312) (or the Programming Information label for MkII Masters) if you are unfamiliar with how to program the PCBs. The master will default to having no slaves connected, and the slave defaults to address zero (=0), i.e., not active. Both boards will require programming.

## 7. COMMISSIONING

The initial testing should be done on battery power so the switchboard mains fuse should remain disconnected.

Put the Silence Alarms switch in the silence position. Check that Auxiliary equipment is disconnected or unpowered. Connect a fully charged battery observing correct polarity (note fuse will blow if battery polarity wrong) and press Reset (MkII), or select Panel Reset (**Pr**) with the FUNCTION button (MkIII).

- Watch for warning signs (e.g. smoke, fuses glowing)
- The 7-segment displays on both the Master PCB and the slave PCB should only be showing the right hand decimal point illuminated.

If the displays show other than this, check the conditions indicated and restore to normal as appropriate. If circuits are in unexpected conditions:

- Check voltages on detector circuit terminals (J1-4)
- All circuits should measure between 18 and 19.5V unless disabled (0V). Circuits are disabled as default.

With all indicators off except the right hand decimal point, put the silence alarms switch in the Normal position. The 7-segment displays should all show normal (**nl**). If not check Section 5.6.2 of the FP1600/OMEGA 64 Technical Manual.

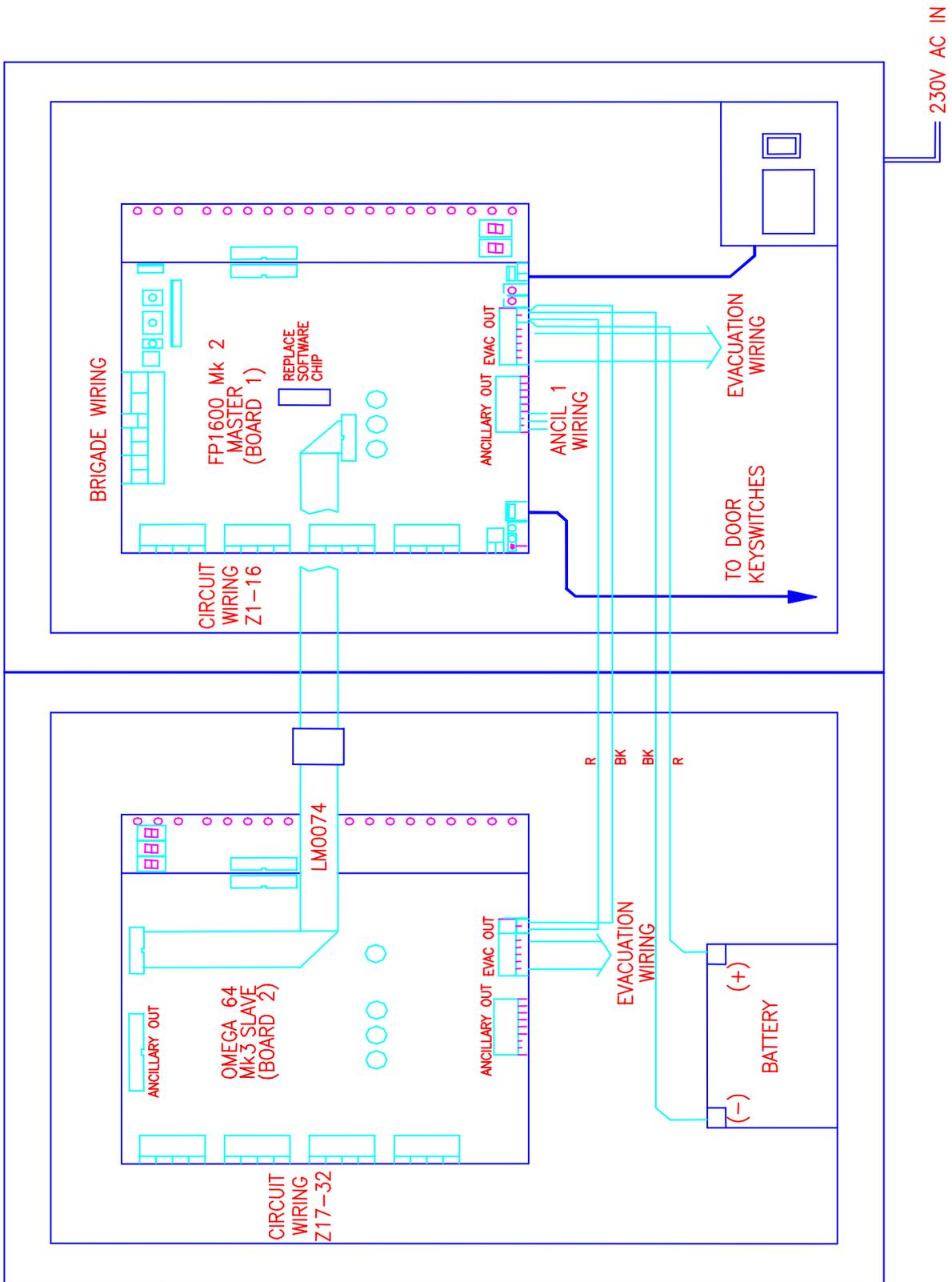


FIGURE 2  
INTERNAL CABINET WIRING – MKIII SLAVE WITH A MKII MASTER  
REAR SERVICE EXAMPLE

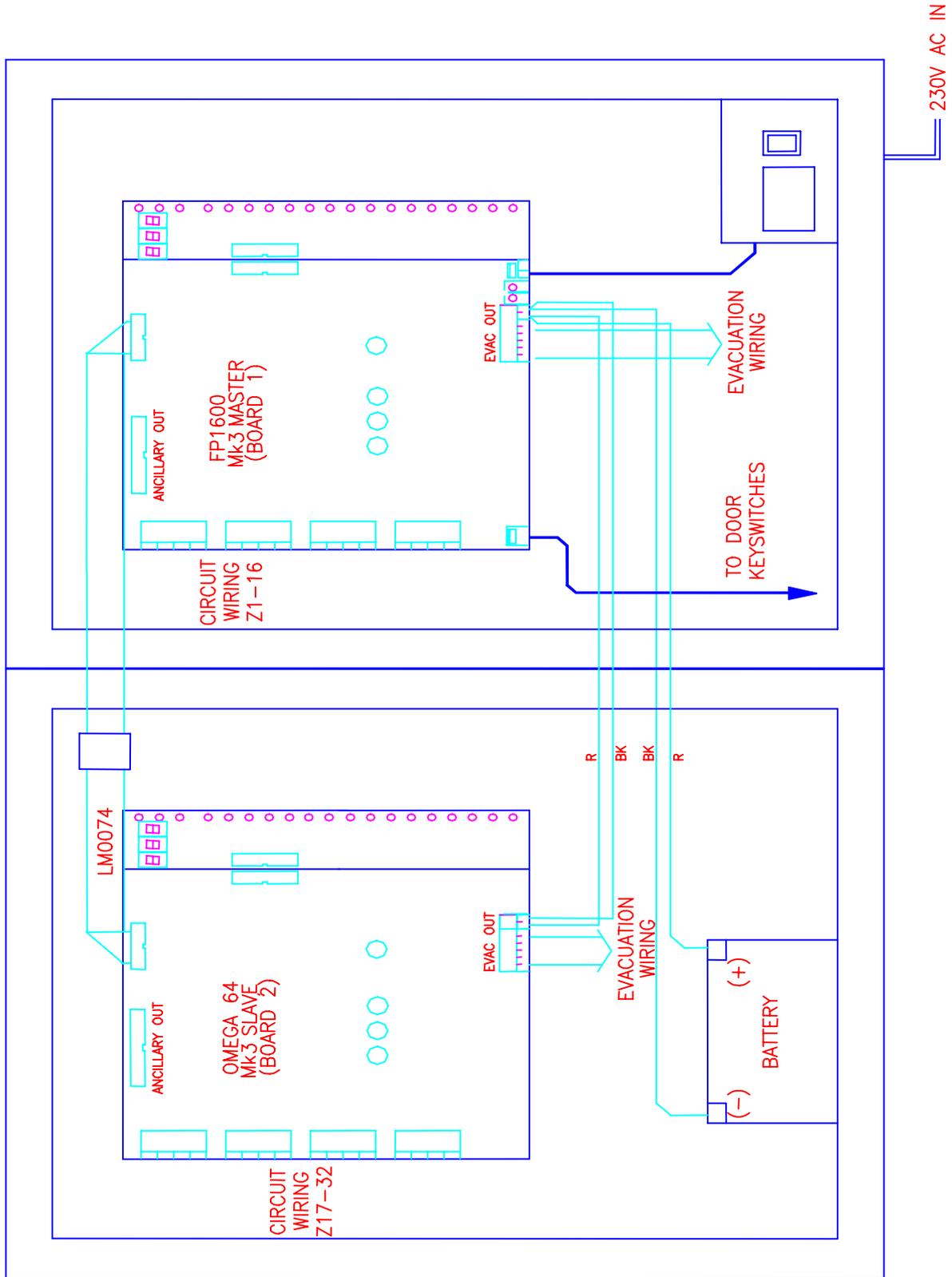


FIGURE 3  
INTERNAL CABINET WIRING – MkIII SLAVE WITH A MkIII MASTER  
REAR SERVICE EXAMPLE