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## INSTRUCTIONS FOR INSTALLING/UPGRADING TO AS4428.1 F3200/NDU V5.XX SOFTWARE

### General

F3200/NDU software V5.XX provides AS4428 operation but may also be installed in panels that have an AS1603.4 keyboard to give partial AS4428 operation. This document describes the procedure for installing V5.XX software for both AS4428 and AS1603 panels. If an AS1603 panel is being converted to be fully AS4428.1 compliant then a new Controller must be fitted and the procedure for this is described in LT0254. Product Bulletin **PBG0154** describes the F3200/NDU V5.00 software release.

LT0256 F3200 AS4428.1 Programming Manual Section 1.3 Product History Log gives detail of the differences between AS4428 software versions and should be used to determine what programming changes are needed when upgrading from older AS4428 software. When upgrading from AS1603.4 software, also refer to LT0256 the section titled "Installing AS4428.1 Compliant Software in an AS1603.4 F3200/NDU" and refer to LT0250 F3200 AS4428.1 Operator's manual section titled "Operating an F3200 with AS1603.4 Keyboard" for operational details.

V5.XX software requires a 1931-111 Issue B onwards Controller (it cannot be installed in 1931-111 Issue A or earlier boards). For systems with one of these earlier boards, AS4428 F3200/NDU V3.XX software can be used and the procedure for this is described in LT0264. If the 1931-111 Issue B Controller is revision 2 or 3, then a wire must be fitted to the back of the board. Refer later in these instructions.

If a new Controller is to be purchased then order:

**PA0804 1931-84, F3200, AS1603.4 CONTROLLER, NO S/W**  
for AS1603.4 systems and

**PA0909 1931-111-1, F3200, AS4428.1 CONTROLLER, NO S/W**  
for AS4428.1 systems

To upgrade to F3200/NDU V5.XX software from V2.XX, V3.XX, or V4.XX, the following kit is needed.

### **KT0429 KIT, F3200/NDU UPGRADE TO V5.00 SOFTWARE**

This kit includes the new software (SF0423), a RAM chip (IC0382), a 512K flash chip (IC0483), a PAL chip (SF0427), an operator's manual (LT0250), this document (LT0333) and Controller link settings information (LT0330).

Upgrading to V5.XX from V1.XX directly is not possible. The panel must be upgraded to V2.XX or V3.XX first using KT0157, then upgrade to V5.XX.

To upgrade to the latest V5.XX software from an earlier V5.XX version, the product bulletin applying to the newer version should be referred to. Most likely the upgrade will be a software download only and KT0429 will not be needed. FlashX is used to upgrade the software.

### Upgrade procedure for systems with V3.XX software or earlier.

NOTE: Use anti-static (ESD) precautions when handling the controller board.

1. If the existing database is to be used with the new software then ensure that the current database is saved on disk. This is **essential** because the only way to use the old V3.XX database with the new software is to reload the database from a PC. V3.XX and earlier systems kept their database in an EEPROM fitted to U3. V4.XX or later software stores the

database in Flash memory in U2, the same IC that holds the firmware. The firmware in U2 is protected by the Code Protect link LK20 and the database in U2 is protected by LK7.

2. Ensure that the Database Protect Link LK7 and Code Protect link LK20 (if present) are in the PROTECT position and power down the panel.
3. For 1931-111 Issue B revisions 2 & 3, fit a wire to the back of the board (see later). For older controllers replace the existing controller.
4. Fit the new V5.XX software (SF0423) to U2 of the new Controller and the RAM chip to U4. Do not use any old software or RAM. Fit IC0483 512K Flash (29F040 or 39F040) to the U3 socket and SF0427 V1.10 PAL to the U8 socket.

Ensure the ICs are orientated correctly and that all pins are correctly inserted (not bent underneath). Set the links on the controller board according to the accompanying LT0330 - some links **will** need to be changed.

5. **IMPORTANT:** - For existing AS1603 systems, cut out resistors R52 and R53 on the MAF/PSU, if fitted, and disconnect any extra battery test resistors that may be wired to J16/1 and J16/2.
6. Power-up the panel. After the panel has restarted, move the Database Protect link LK7 to the WRITE position and enter programming mode and reload the database from the PC/laptop. Carry out any programming changes required, then save the database to disk. As mentioned previously, refer to LT0256 for information on what programming changes are needed. After all changes have been completed and the database saved to disk/PC, the database should be viewed on the PC (Print Database) to check that all items have appropriate settings (especially for AS1603.4 systems).
7. Check that non volatile history is working as follows. From the base display press the RECALL key, then select option 2 History. When a history event is displayed, press the SET key and check that the display shows "Non volatile history is enabled".
8. Move the Database Protect link LK7 to the PROTECT position and test the panel thoroughly.

#### **Upgrade procedure for systems with V4.XX or later software using FlashX**

When a F3200 already has V4.XX or later software, the software can be upgraded using the FlashX utility. If the controller board does not already have an IC0483 512K flash fitted to U3 and SF0427 V1.10 PAL in U8 then these chips need to be fitted to use the non-volatile history. If IC0483 is not fitted to U3 then the U3 socket **must be left empty**, and the history will be stored in RAM and will be lost when the panel is powered down.

1. Save the database to a PC (S2/S8 "binary" format). A Print Database command should also be done to capture the database to a PC in a readable format for later comparison. Refer to LT0256 "Saving the Database" section for information on this.
2. Use the FlashX utility to upgrade the software. Follow the on-screen instructions or refer to LT0334 FlashX user guide for more detail or see the FlashX help. Check that FlashX includes the latest firmware in its list of available firmware.
3. When the firmware download with FlashX has completed, the panel will be restarted automatically. Set LK20 to the protect position and power the panel down. Fit IC0483 to U3 and SF0427 V1.10 PAL to U8 if not already fitted or else leave the U3 socket empty. Set the links on the controller board according to LT0330 and the version of software that has just been installed.

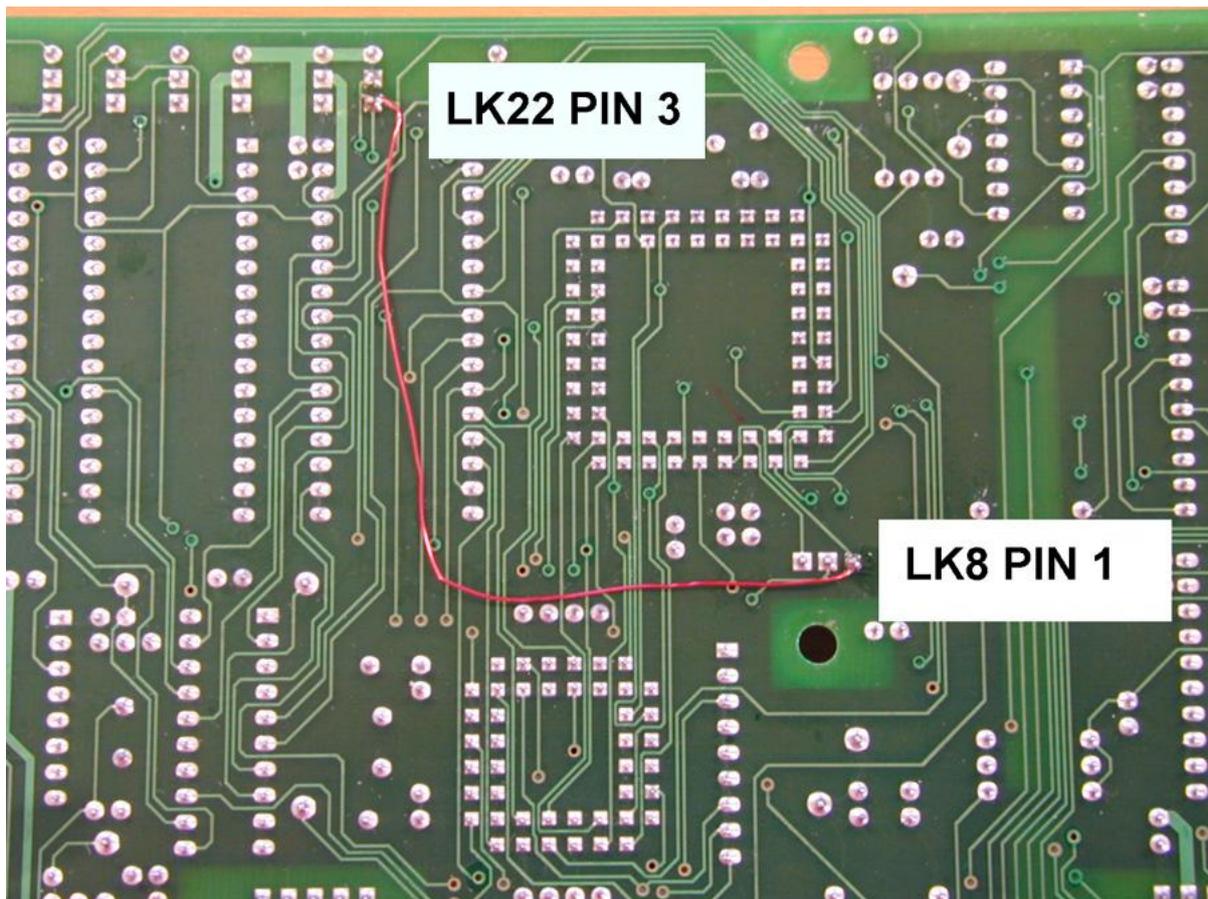
4. Power the panel up and check that there are no system faults and especially that there is no database checksum fault. If there is a database checksum fault, the database will need to be reloaded from the PC.
5. Check that non volatile history is working as follows. From the base display press the RECALL key, then select option 2 History. When a history event is displayed, press the SET key and check that the display shows "Non volatile history is enabled".
6. Set LK7 to the write enable position and make any database changes necessary. Refer to the Product History Log section of LT0256 and to the product bulletin associated with the latest software to determine what programming changes are needed. When programming is complete, save and "print" the new database and compare it with the original database that was saved in step 1.
7. Set LK7 to the protect position and test the panel reasonably thoroughly.

**Upgrade procedure for systems with V4.XX or later software not using FlashX**

If preferred, the IC in U2 can be physically swapped instead of using FlashX, in which case, the procedure above for V4.XX or later systems using FlashX can be followed except that it is essential to save the database to a PC first and to re-load the database from the PC after the new software has been fitted if it is desired to continue using the existing database.

**Modifying the Controller**

As mentioned above, V5.XX software requires a 1931-111 Issue B onwards Controller – Rev 2 or higher (it cannot be installed in 1931-111 Issue A or earlier boards). If the 1931-111 Issue B controller board is revision 2 or 3, then a wire must be fitted to the back of the board to allow V5.XX software to be installed. On the track side of the Controller solder a wire from pin 3 of Lk22 to pin 1 of Lk8, as shown in the following photograph. Refer to PBG0123A for more detail on this.



**Photograph 1 - Fitting Wire Link to Rev 2&3 1931-111 Iss B Controllers**

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