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INSTRUCTIONS FOR INSTALLING/UPGRADING RDU V2.XX TO AS1603.4 RDU Mk2 V5.XX SOFTWARE

General

RDU Mk2 software V5.XX provides both AS1603.4 and AS4428.1 operation so it may be installed in an existing RDU that has an AS1603.4 keyboard and AS1603.4 operation. For this, the following kit is needed.

KT0510 KIT, RDU AS1603 V2.XX TO V5.XX SOFTWARE UPGRADE

This document (LT0501) describes how to use KT0510. If it is necessary to upgrade the RDU to full AS4428 operation (i.e., keyboard and LEDs) then the RDU is generally replaced with an AS 4428 version. This is described in LT0502 RDU AS1603.4 TO AS4428.1 CONVERSION INSTRUCTIONS.

LT0499 RDU Mk2 Programming & Installation manual describes the differences between RDU Mk1 and RDU Mk2 programming options and how to convert an RDU Mk1 database to RDU Mk2. The database conversion requires a PC utility SF0425, that is available on the Tyco Fireplace website.

RDU Mk2 V5.XX software requires a 1931-111 Issue B Controller onwards (it cannot be installed in 1931-111 Issue A or earlier boards). A 1931-111 Issue B controller board can be identified by the presence of a DB9 connector (J27) immediately adjacent to the J1 serial port (printer/programmer) connector, plus a code write protect link (LK20) to the right of the memory sockets. Controller boards 1931-111 Issue A and earlier do not have the DB9/J27 connector or LK20. 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 the existing controller can't be used then a new controller can be ordered - part number PA0804.

PA0804 1931-84, F3200, AS1603.4 CONTROLLER, NO S/W

KT0510 includes the new RDU V5.XX software, a RAM chip (IC0382), the RDU Mk2 AS1603.4 operator's manual (LT0494), this document (LT0501), Controller link settings information (LT0330), a new PAL chip (SF0427), a 512K flash chip (IC0483), and a mini-jump for LK5.

If the RDU contains software older than V1.25 then a database re-initialize will need to be done and the database reprogrammed (refer also to LT0227).

Upgrade procedure for systems with V2.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 first saved on disk. This is **essential** because the only way to use the old database with the new software is to use the PC utility SF0425 to convert it, then reload the database from the PC into RDU Mk2 V5.XX. Refer to LT0499 RDU Mk2 programming manual for information on how to use SF0425 to convert the database. V2.XX and earlier systems keep their database in an EEPROM fitted to U3. RDU Mk2 V5.XX 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 RDU.

3. For 1931-111 Issue B revisions 2 & 3, fit a wire to the back of the board (see later). For older controllers remove the existing controller and replace with PA0804.

4. Fit the new V5.XX software to U2 of the Controller and the RAM chip to U4. Do not use any old software or RAM. Fit the PAL chip SF0427 V1.10 to U8 on the controller board and fit IC0483 512K Flash to U3.

   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 RDU. After the RDU has restarted, move the Database Protect link LK7 to the WRITE position and enter programming mode and reload the converted database from the PC/laptop. Carry out any programming changes required, then save the database to disk. As mentioned previously, refer to LT0499 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 to check that all items have appropriate settings.

7. Move the Database Protect link LK7 to the PROTECT position and test the RDU thoroughly.

Upgrade procedure for systems that already have V5.XX software

For future releases of V5.XX software, RDUs with V5.XX can be upgraded using the FlashX utility and there is no need to change any ICs. If preferred, the IC in U2 can be physically swapped instead of using FlashX - the database must be saved to a PC first and then reloaded after fitting new software. If the software in U2 is upgraded using FlashX, then the database in U2 will be retained and does not need to be reloaded from a PC, but it should be saved to a PC before using FlashX to change the firmware.

Modifying the Controller

1931-111 Issue B Controllers Rev 2 and 3 are missing a track connecting LK22 pin 3 and LK8 pin 1. Revision 4 of the board was manufactured with a wire fitted between LK22 and LK8 (as shown in photograph 1) to replace the missing track. Revision 5 and later of the Controller have the track actually etched in copper on the board and need no wire fitted. If a revision 2 or 3 board is to be used, then it must have a wire fitted between pin 3 of LK22 and pin 1 of LK8 as shown in Photograph 1. If the Controller has no LK22 then it is not an Issue B and must be replaced.
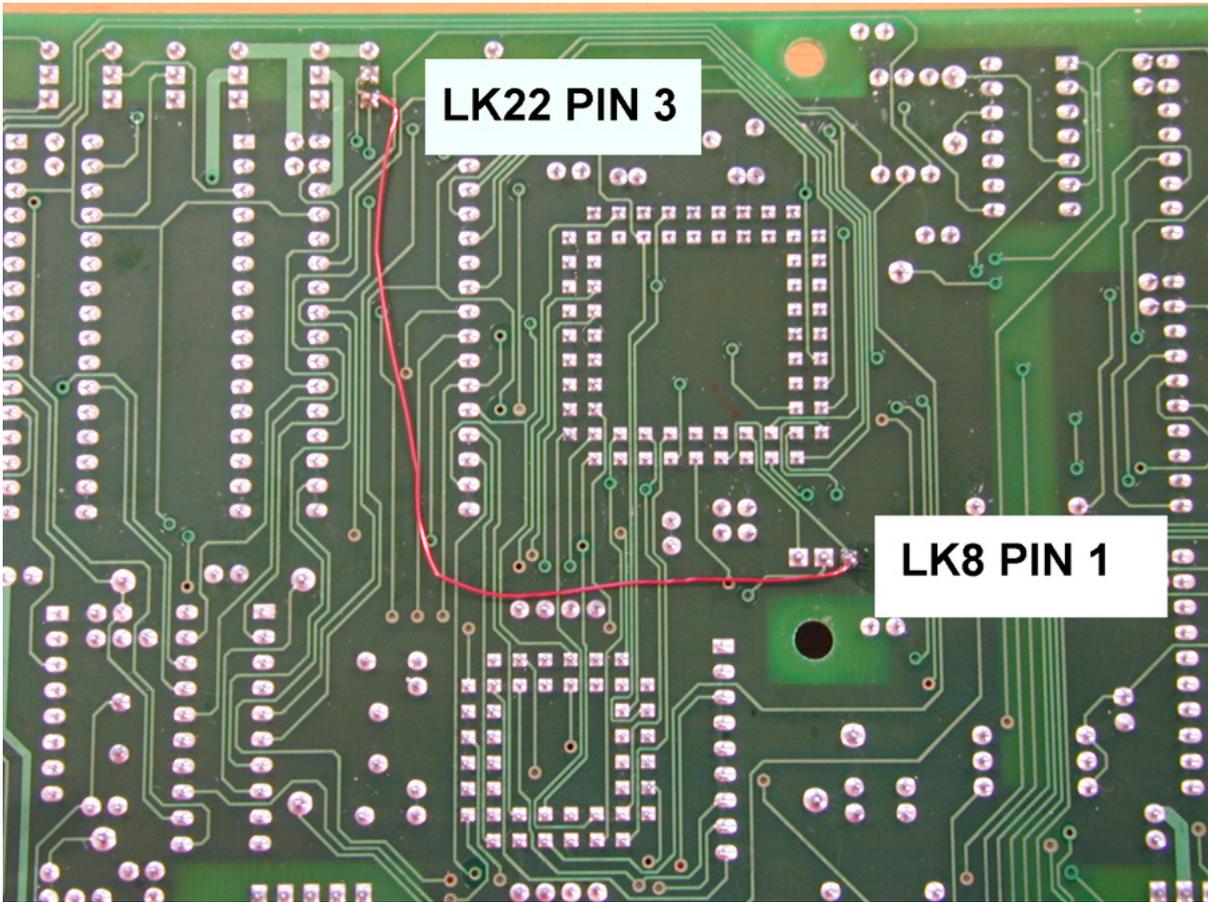
Photograph 1 - Fitting Wire Link to Rev 2&3 1931-111 Iss B Controllers

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