



# Firmware Upgrade Instructions for Taktis Fire Alarm Control Panels

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## Important!

**Panel firmware upgrades must only be carried out by competent fire engineers who have been trained on the Taktis system.**

1. Laptop installed with the following:
  - a. Loop explorer LE2 (Downloadable through <https://virtualresource.global>).
  - b. WIN32 Disk Imager (Free software downloadable from internet).
3. Clean USB Flash drive (USB 3.0 preferred).
4. Firmware image file(s).

**Note: These instructions are for upgrading firmware in Taktis control panels only, separate instructions are provided for upgrading firmware in Vision repeaters.**

On multi-panel networks the time taken to upgrade the system can be significantly reduced by preparing multiple USB flash drives allowing simultaneous upgrades to be instigated.

## Important!

**Before proceeding with any firmware updates use Loop Explorer LE2 to save a download of the system config.**

### Preparing the USB flash drive

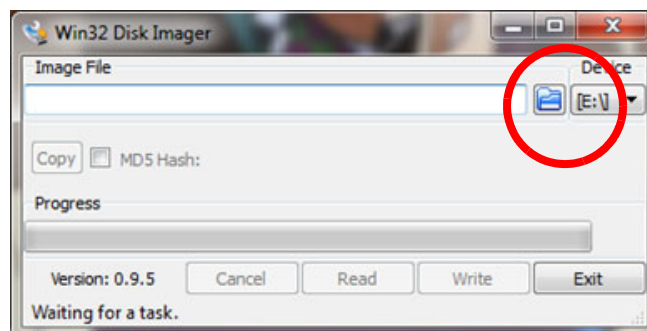
Upgrade of Taktis panels requires a USB Flash drive installed with the correct firmware upgrade file. Please follow the below process for preparing USB Flash drive.

1. Save the Taktis firmware update file in an easily accessible folder on the PC.
2. Insert a clean USB Flash drive in to any available USB port on the PC.

## Warning!

**If the USB flash drive is not clean, this process will format the USB drive and delete all existing files/folders.**

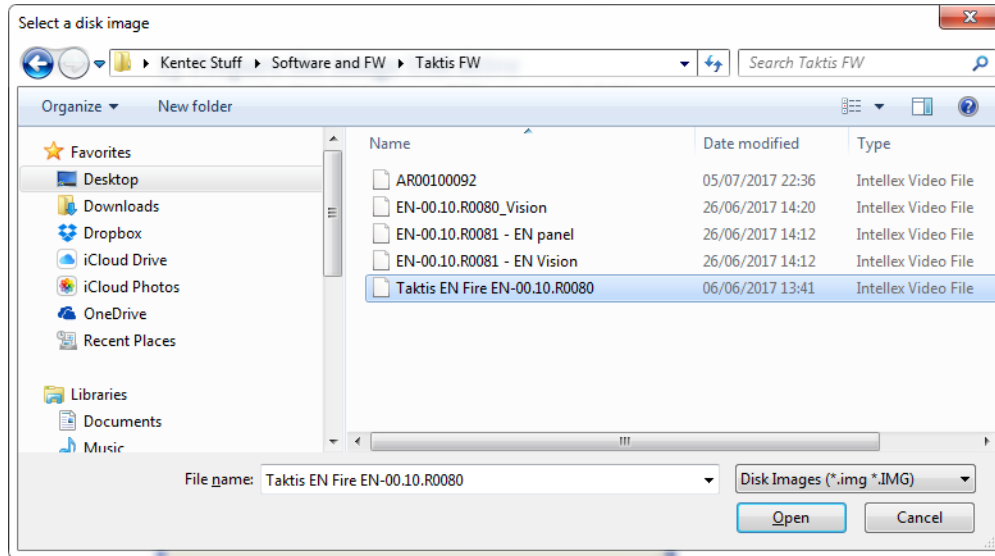
3. Run the WIN32 Disk Imager program, the following window will appear:



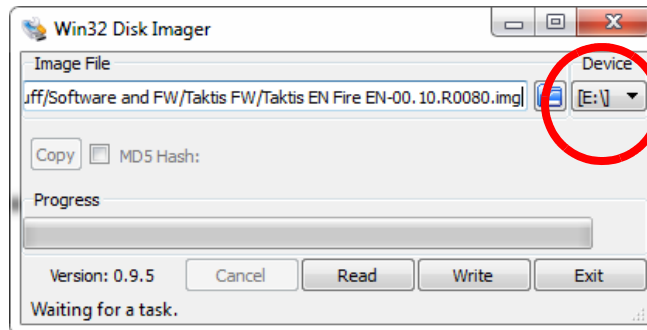


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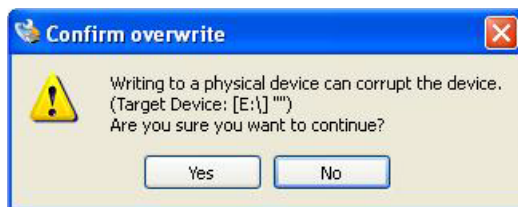
- Click on the blue folder icon (highlighted above) this will open the “Select a disk image” window.



- Locate the firmware upgrade file required for the Taktis control panel, click on the file to highlight it and click the “open” button. This window will close and return you back to the main “WIN32 Disk Imager” window.
- Click on the device button (highlighted below) and set the destination drive letter of the USB Flash drive being used for the upgrade:



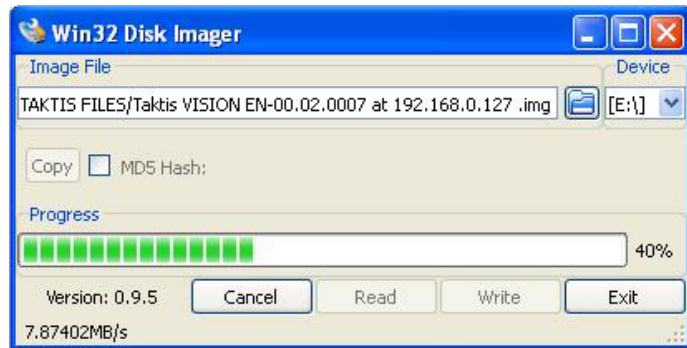
- Click on the “Write” button and the following warning window appears:



- Click “Yes” to continue. The file will now be written to the USB Flash drive, the progress bar will be visible in the window.



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9. Safely remove the USB flash drive from the PC. On completion the "Write Successful" Message window will appear:



10. Safely remove the USB flash drive from the PC.

### Updating the Taktis Panel Firmware

#### **Important!**

**The following are strongly recommended before proceeding with any firmware updates.**

**Use Loop Explorer LE2 to save a download of the system config.**

**Disconnect all loops from the panel – this will prevent any possible alarms during the upgrade process.**

**Disconnect all network cables – this will prevent any possible corruption from network traffic during the upgrade.**

Upgrade instructions:

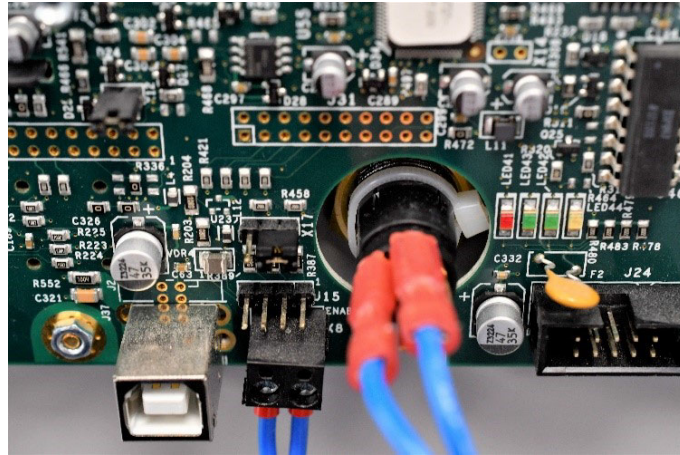
1. Connect a laptop to the Panel and download the configuration file using the Loop Explorer 2 software.
2. On completion of the download disconnect the laptop from the Taktis panel.
3. DO NOT commence upgrade if any alarms are present on the panel, these must be cleared before upgrade. It is preferable that the panel should be fault free however this is not critical.



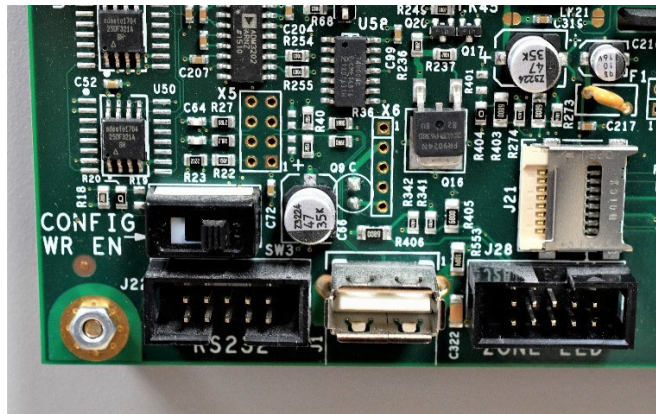
## Firmware Upgrade Instructions for Taktis Fire Alarm Control Panels

4. Locate the three-pin header X17 on the display PCB, this is to the left of the access level 2 keyswitch.

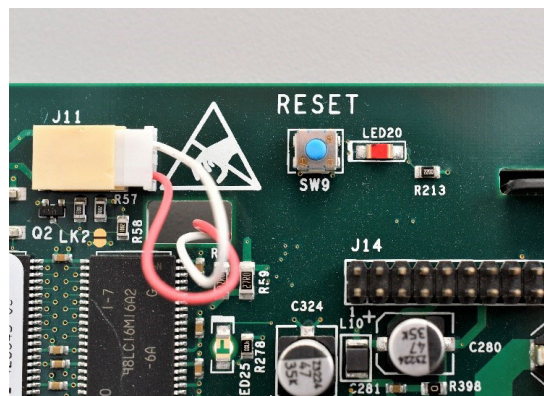
Place a jumper link across the centre and right-hand pins of the header as shown in the photograph:



5. Insert the USB Stick containing the upgrade file(s) into the USB port (J1) on the display card:



6. Reboot the Panel by pressing and releasing the blue “RESET” button (SW9) at top left of the display card:

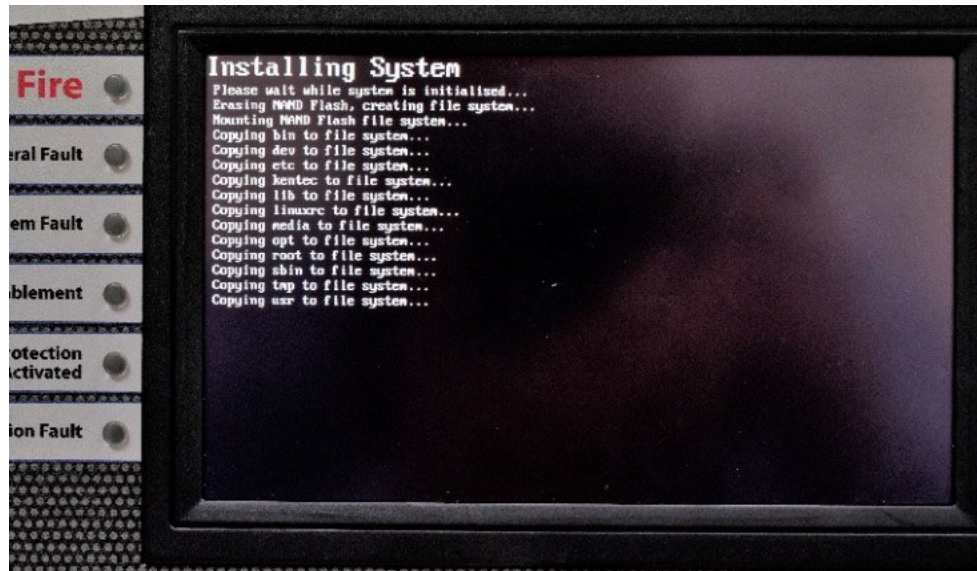




## Firmware Upgrade Instructions for Taktis Fire Alarm Control Panels

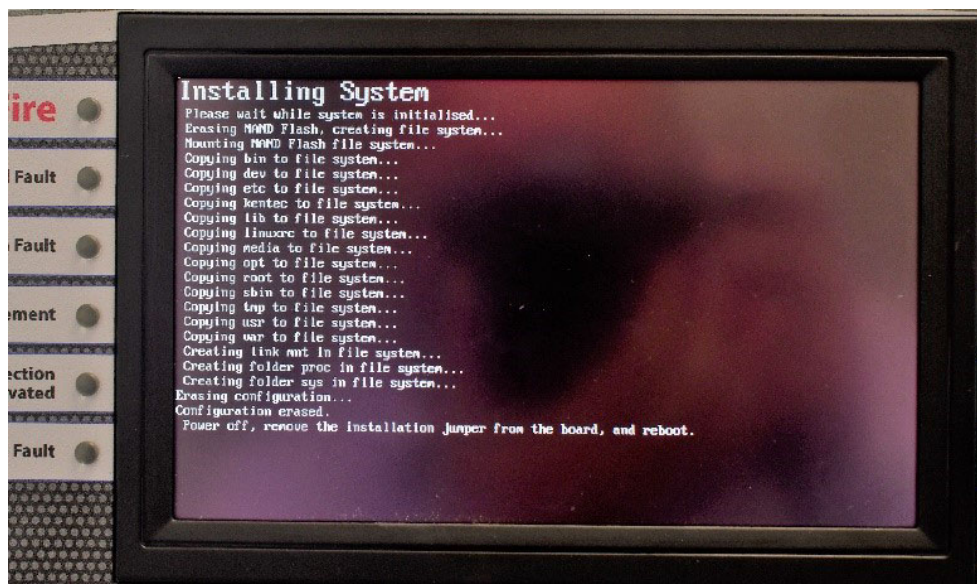
The panel will reboot and automatically load the firmware update file from the USB flash drive.

The panel screen will go black and after a few seconds the header “Installing system” will appear followed by a sequence of copying file messages as shown below:



**Note:** The “usr” file takes longer to copy and it may appear as though the reboot has stopped, please be patient. Estimated time for file copy is 10-15 minutes (if using a USB 1.0 flash drive this can take up to 25 minutes).

When all files have been copied the panel will beep three times and the message “Power off, remove the installation jumper from the board and reboot.” will appear at the bottom of the file list:



7. Remove the USB Flash drive from the display PCB.
8. Remove the jumper link from header X17.



## Firmware Upgrade Instructions for Taktis Fire Alarm Control Panels

9. Switch the Taktis "Write Enable" switch to the ON position.
10. Turn the power off to the panel as requested, after approx. 20 seconds turn the power back on the panel will start its boot process.
  - a. Screen will be black with the text "S721 Bootloader":



- b. The text will disappear and after a few seconds a blue screen with a rotating circle will appear:



10. During this sequence all the LED's on the panel fascia will illuminate briefly.
11. After a short while (allow up to 4 minutes) the following screen will appear with the text "Loading Graphics" at the top of the screen and the instruction "Please Wait" at the bottom of the screen:

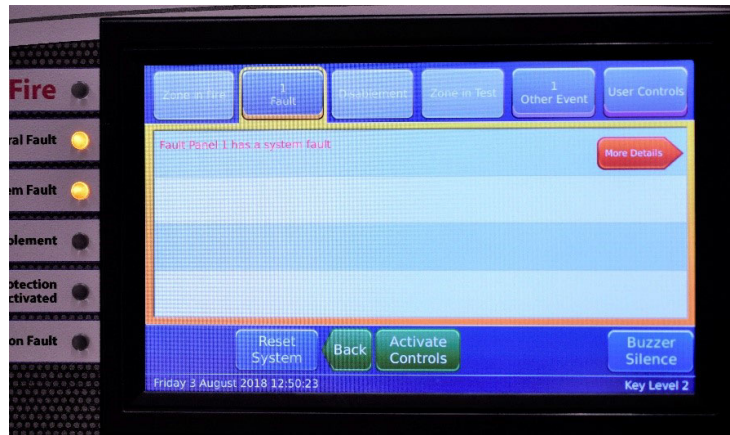


**Note: Do not attempt to set the date and time until the panel has fully initialised.**

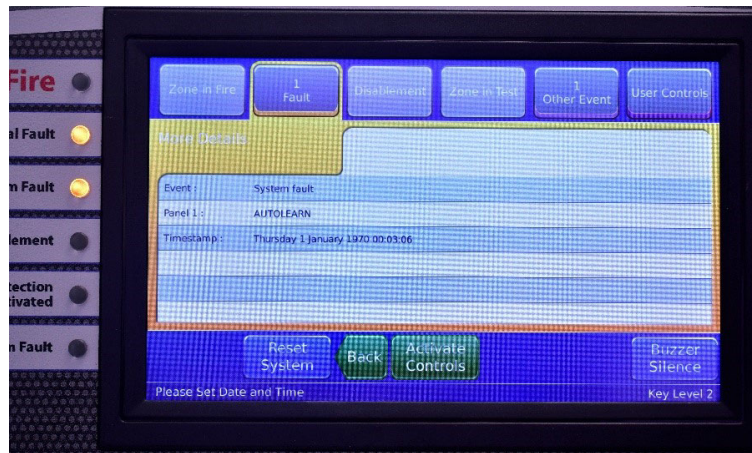


## Firmware Upgrade Instructions for Taktis Fire Alarm Control Panels

- The “General Fault” and “System Fault” LED’s will be illuminated this is nothing to cause concern.
- The panel buzzer will activate, press the “Buzzer Silence” button on the touch screen.
- After a short period the panel display will show the fault screen with 1 active fault “System fault”:



- Press the more details button on the touch screen and the display will show that this is an Autolearn fault:

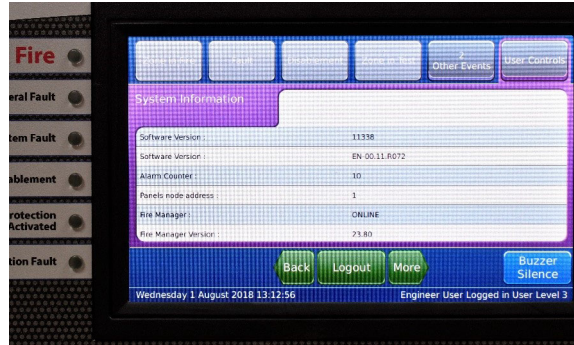


- Press the “Activate Controls” button and enter the level 3 password 333333.  
  
The system fault is generated as part of the leaning process. This fault can be cleared, only when the panel has completed the update process and the “Fire System Normal” message appears at the top of the display. The fault is cleared by pressing the “Reset System” button.

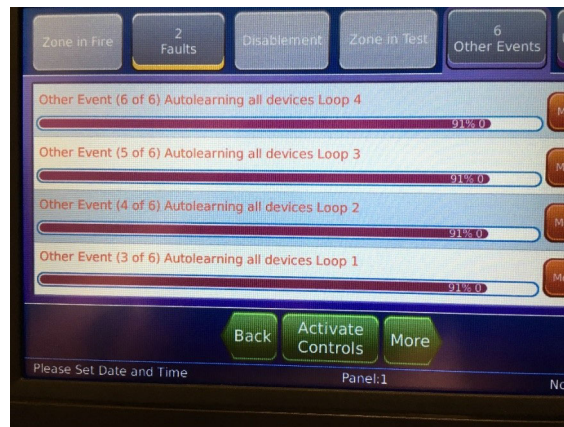


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17. Press the "System Information" button on the display and confirm the software version displayed matches with the upgraded firmware:



18. To complete its upgrade the panel must carry out an auto learn of the system. Select the "Other Events" tab to view the progress of the Autolearn. DO NOT do anything with the panel until all autolearn tasks are complete
19. "System Auto Learn" message will be displayed in the "Other Events" tab this signifies the panel is learning the number of loops and ancilliary boards in the panel. This can take 5 minutes to complete.
20. Once the System Auto Learn is complete the panel will begin learning loop devices with status bars visible on the display, as shown below. "



It may take up to 5 minutes after reboot for the above status bars to appear - please be patient. The time taken to complete these tasks will vary dependent on the number of loop cards installed within the panel. Approx. it will take 6 mins per loop card.

21. Following the device learn the "Other Events" screen will show "Saving Configuration" message along with a status bar once this is full the autolearn is complete.



## Firmware Upgrade Instructions for Taktis Fire Alarm Control Panels

### **Important note!**

**Following a firmware upgrade the panel will return to its default loop protocol which is Hochiki. It is possible that following the upgrade process a “Firmware Upgrade Fail” message will appear, this is an error and will clear following a reset. It is possible this message will reappear following a power cycle and again can be cleared by performing a reset.**

**Networked panels and repeaters will default their node address to “1” following an upgrade, therefore the node addresses will need to be reconfigured accordingly.**

22. Once all tasks have been completed in the other events menu you can upload the original configuration file into the panel.
23. Following the loading of the original configuration it is necessary to perform an autolearn on the panel. “The learn” panel is found in the configuration menu options.
24. In line with BS5839 part 1 the system must be tested following an upgrade to ensure the system is functioning correctly.

If at any point during the firmware update a problem is experienced our technical team are available to provide support:

Tel: +44 (0)1322 222121. E-mail: [techsupport@kentec.co.uk](mailto:techsupport@kentec.co.uk)



# Firmware Upgrade Instructions for Taktis Fire Alarm Control Panels

## Appendix A - Firmware Upgrade Diagnostics

<b>Fault Description</b>	<b>Diagnostic Action</b>
Panel is stuck in an initialising loop.	Power cycle the panel by disconnecting the mains and the back-up batteries for at least 10 secs.
System Off-Normal displayed and unable to access GUI.	Power cycle the panel by disconnecting the mains and the back-up batteries for at least 10 secs.
System B board reported as missing by the panel.	Power cycle the panel by disconnecting the mains and the back-up batteries for at least 10 secs. Panel will report Card update Front Board Interface once complete system will return to normal.
Panel reports an active input on a Hochiki I/O module address following an auto learn and manual panel learn.	Disable all panel outputs i.e. relays, sounder circuits and plant outputs. Activate a local Manual Call Point. Silence alarms and reset the panel, the alarm and the active input fault should clear.
Panel reports devices with calibration errors following an Autolearn.	Disable all panel outputs i.e. relays, sounder circuits and plant outputs. Activate a local Manual Call Point. Silence alarms and reset the panel, the alarm and the active input fault should clear.
Unexpected or missing ancillary cards.	Perform a manual Autolearn to fully configure and correct the above.
Panel reports missing devices, double address or device type change following an upload of the site config file.	Power cycle the panel by disconnecting the mains and the back-up batteries for at least 10 secs.



# Firmware Upgrade Instructions for Taktis Fire Alarm Control Panels

## Appendix B - USB Flash Drive De-Partitioning

The USB flash drive used for the firmware upgrade process is automatically partitioned during the creation of the image file, which means if you wish to re-use the USB drive the available memory will be less than expected. The USB flash drive can be restored to full storage capacity by following the procedure below:

1. Insert the flash drive into an available USB port on your PC.
2. Open the windows "Command Prompt" window.
3. At the command prompt type DISKPART and press enter.
4. At the next command prompt (DISKPART>) type LIST DISK
5. A list of drives starting at Disk 0 will appear along with the memory size. It may be possible to identify the drive which represents the USB flash drive from the file size. If it is not possible to identify the USB flash drive from the file size remove the USB Flash drive and retype LIST DISK take a note of which drive has gone from the list. Re-insert the USB flash drive and retype LIST DISK the drive will have reappeared, note the disk number of the drive that disappeared and reappeared as this is the disk number associated with your USB drive.
6. At the command prompt (DISKPART>) type SELECT DISK n - where n is the disk number identified in step 5.
7. The message "Disk n is now the selected disk." Appears on the screen followed by the command prompt DISKPART>
8. Type SELECT PARTITION 1 and press enter.
9. The message "Partition 1 is now the selected partition."
10. Type DELETE PARTITION
11. The message "DiskPart successfully deleted the selected partition."
12. Type PARTITION and press enter.
13. A list of options will appear on the screen followed by the command prompt DISKPART>
14. Type CREATE PARTITION PRIMARY and press enter.
15. The message "DiskPart succeeded in creating the specified partition".
16. A new window will appear advising you to format the drive before you can use it. Click on the format drive button and the drive will be formatted back to its full storage capacity.