Titan V6 Upgrade Guide

For Tiger Touch, Pearl Expert and ShowSafe

www.avolites.com/V6Upgrade

Version 1.6

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1. Introduction

This document is a step by step guide on how to prepare a Tiger Touch, Pearl Expert and Expert Show Safe for Titan Version 6 and install Titan V6 on the console.

During this update you will perform the following updates depending on the console:

- Clean the CPU fan
- Apply ECN (for some Tiger touch consoles only)
- Identify what drive is fitted
- Update the SSD drive firmware if applicable
- Update the BIOS
- Install V6
- Run a HealthCheck on the console
- Update the Recovery stick inside the console

The guide applies to the following products:

Tiger Touch, Pearl Expert, Expert ShowSafe

It is vital that the steps including the various checks are followed in the correct order and manor to assure that the installation is correct. Failure to do this may decrease the reliability of your console.

The upgrade and installation takes a little over 90 minutes for the fist console and about 60 minutes for subsequent ones (assuming files have been downloaded and no ECN needs applying), you should allow half an hour on top of this to read and familiarise yourself with what needs to be done. Please follow the instructions in the order specified here.

The V6 installation will wipe the internal drive and therefore all the user files need to be backed up before you start on this upgrade.

Allow enough time for complications, this is a major upgrade and it is always possible something will need extra time. We suggest that the upgrade is carried out during UK office hours so you can contact us should you need to.

We have placed a strong support system for this upgrade here at Avolites, which can be reached by phone (**UK office hours**) and by email. The phone numbers can be found on the second page of this document.

Please contact us in case of doubt rather than to carry on, our wish is that the upgrade is successful and we are here to help you.

Alternatively we will carry out the upgrade at Avolites free of charge; this can usually be carried out on the same day providing it is booked in advance.

Outside of the UK, contact you local reseller about their upgrade service.

We strongly suggest you print this document and use it as a reference guide as you work through the upgrade.

Please note that section 15 has some common problems explained

1.1　What you need

- Four USB stick between of at least 2Gb capacity each
- Windows Computer with a free USB port where you have administrator rights (preferably Vista or Windows 7) and access to the internet.
- External VGA monitor
- USB or PS2 keyboard (for Tiger Touch and ShowSafe only)
- ECN-193 Pn:8002-9193 components (for some consoles only)
- At least 90 minutes of your time for the first console , and then about 60 for subsequent consoles
- No. 2 Pozi drive and a T20 Torx screwdriver
- Small flat-blade screw driver
- Vacuum cleaner

Important note on USB sticks

Not every USB stick is capable to boot from, we have tested Integral, HP and Corsair to work. Transcend, Verbatim "Store "n" Go" and Cruzer tend not to work.

1.2　What you get – background information

Avolites Titan V6 is a major release which has many new features and reliability improvements that require other components in the console to be updated as well.

Over a 6 months period Avolites has worked with various component suppliers to upgrade firmware and BIOS firmware to resolve occasional failures found in our test program and reported in the field. Some tests involved power cycling a pool of consoles every 2 minutes for weeks, or interrupting the mains supply while the drive was accessed 10,000 times. The BIOS in particular has been extensively tested to verify it improved the USB resilience. Additionally parts of the operating system have been upgraded to increase reliability.

As part of Titan V6 install the Hard Disk will now retain information between upgrades making future upgrades easier, and the whole restore process is generally faster.

1.3　WARNING

Before you start, make sure that the show files are backed up away from the console. During this upgrade the console drive will be erased.

This update manual assumes you connect an external screen and Keyboard to the Tiger Touch and Expert ShowSafe, not doing so will make it harder to support you.

1.4 Internet Connection

We are assuming you have a reasonably fast internet connection. If you have a slow connection you may decide to download and create the required USB pens before starting the upgrade. In which case download the following files onto separate USB sticks (and mark the USB stick with appropriately!)

www.avolites.com/V6Upgrade

BIOS Upgrader: see section 4.1

OCZ Solid 2 Firmware: see section 7.1

OCZ Vertex 2 Firmware: see section 6.1

Titan Version 6, appropriate to your console: Tiger Touch or Expert.

See section 12.2

1.5 What processes need to be followed

There are many steps to follow and a number of them depend on what hardware is inside the console, therefore follow the matrix and mark which steps you have done to guide you thought the process.

Please note that there is only one choice of drive in a console, if the drive fitted is not listed below contact Avolites for support.

An example of how to use the process checklist:

Hint; Take this page out and use as checklist next to console

Process checklist

Process:	Applies to	Relevant Yes/No	Document section	Completed
Show and log file backup	All units	Yes →	2	[ ]
Open console and clean Fan	All units	Yes →	3	[ ]
Update Bios	All Units	Yes →	4	[ ]
Identify Hard Disk type installed in console	All units	Yes →	5	
	If OCZ Vertex 2 fitted	[ ] →	6	[ ]
	If OCZ Solid 2 fitted	[ ] →	7	[ ]
	If Intel 320 fitted	[ ] →	8	HealthCheck
	If Intel 330 fitted	[ ] →	9	No action
	If Fujitsu, Toshiba, or Hitachi fitted	[ ] →	9	No action
ECN-193 (Tiger Touch only)	TT Sn. 899-968 only	[ ] →	10	[ ]
ECN-194 (Pearl Expert only)	PE Sn.1445-1650 only	[ ] →	11	[ ]
Install Titan V6	All Units	Yes →	12	[ ]
Follow any on screen feedback from Titan HealthCheck	All Units	Yes →	13	[ ]
	Intel 320 updated with Titan HealthCheck			[ ]
Fit Recovery stick into console	All Units	Yes →	14	[ ]
This concludes the full Titan V6 upgrade… Thanks and congratulations from the Avolites team				

2. Show file and Log file backup

Before proceeding with this update, you should make a back-up of your shows stored on the internal drive. Although the firmware update should leave the drive data intact, if anything goes wrong during the update (e.g. an unexpected power outage) you could lose the data on the drive.

A- Save your shows on a USB stick (not the one used to upgrade with)

B- Run the Log collector from the "Tools" menu

Mark this process as Completed in the **Process checklist** above

		Yes/No	section	
Show and log file backup	All units	Yes →	2	([√])
Open console and clean Fan	All units	Yes →	3	( )

This concludes section 2. Follow the Process Checklist.

3. Open console and clean Fan

3.1 Open the Tiger Touch

Switch off the console and disconnect from the mains and other networks

Open the console by removing the three screws at the front edge of the console, these screws may be No.2 Pozi drive or T20 Torx, lift the front and hook the stand on the right side of the console to the moulding fixing.

Open the Pearl Expert

Switch off the console and disconnect from the mains and other networks

Open the console by twisting the 4 DZUS screws ¼ turn anti-clockwise and then lifting the panel all the way up

3.2 Clean the CPU fan

Using your finger or a small flat bladed screwdriver carefully stop the CPU fan from spinning whilst cleaning the CPU fan with the vacuum cleaner

Mark this process as Completed in the **Process checklist** above

Open console and clean Fan	All units	Yes →	2	([√])
Update Bios	All Units	Yes →	3	[ ]

This concludes section 3. Follow the Process Checklist.

4.   Updating the Bios firmware

4.1   Creating BIOS bootable USB stick

Download the BIOS update tool from the Avolites Titan V6 upgrade landing page: www.avolites.com/V6Upgrade

A- Insert the blank USB stick in your PC or Laptop.

B- Double click on the downloaded "Avolites BIOS Update Creator.exe" file. This will open a new window with a brief copy of these instructions.

> **Note**:   Windows may warn you about running the application as an Administrator or that it is from an "Unknown Publisher", in either case select "**Run**" or "**Yes**" to continue.

C- Click on "**Next**" in the Avolites application.

D- **Select the USB stick** from the Drives pull down menu.

E- Click on "**Install**", a new window with a progress bar is shown during the creation of the stick data.

F- Click on "**Next**" in the Avolites application once upgrade stick creation is finished this will show a brief instruction on the BIOS upgrade process.

G- Click on "**Close**" to end the Avolites application.

H- Ensure that the USB stick is safely ejected and removed from the PC.

> **Note**:   Please note that the BIOS upgrade USB stick made above can be used on multiple consoles.

4.2   Installing the new BIOS into the console

1. **Plug in an external VGA monitor to the console**

2. **Plug in an external keyboard in the Tiger Touch & Expert ShowSafe**

3. Connect the BIOS USB stick in one of the USB ports at the back of the desk.

4. Start-up the console and press [Delete] on the keyboard.

5. When prompted, type in the password "68340" followed by [Enter], to access the BIOS.

6. Once in the BIOS, use the arrow keys to select the "Advanced BIOS Features" menu and enter to open this.

7. Then use the arrow keys to select the "Hard Disk Boot Priority" menu and [Enter].

8. Use the [PgUP] key to move the USB drive in position 1. (top line)

9. Press [F10] then [Y] followed by [Enter] to save the BIOS settings and re-boot.

10. When the console restarts it will boot automatically into the memory stick and BIOS updater.

11. Once the memory stick has booted it will ask if you wish to "Program", press the [Y] key. The BIOS will now be updated, during this time do not power down.

12. After the BIOS update is done the computer will try to boot, and then fail on the first BIOS screen with a floppy seek error, this is intentional; At this point shut down the console using the Power button on the front and <u>remove the USB stick.</u>

4.3 Configuring the new BIOS

The next steps are required to correctly configure the new BIOS. An external screen will be required.

⚠️ **PLEASE TAKE EXTREME CARE TO CONFIGURE THE BIOS CORRECTLY. FAILURE TO DO THIS WILL REDUCE THE RELIABILITY OF THE CONSOLE.**

Note: The Pearl Expert and the Tiger touch have different settings in some of the fields, these settings are presented in a table form below

1. Start-up console and enter the BIOS again by pressing the [Delete] Key.
2. Once in the BIOS, use the arrow keys to select the "**Load Optimized Defaults**" menu then press [Enter] followed by [Y] and then press [Enter] to confirm.
3. Use the arrow keys to select the "**Set Supervisor Password**" menu and press [Enter], type in "**68340**" when prompted followed by [Enter] then confirm the password and press [Enter]
4. Use the arrow keys to select the "**Set User Password**" menu and press [Enter] , type in "**68340**" when prompted followed by [Enter] then confirm the password and press [Enter]
5. Use the arrow keys to select the "**Standard CMOS Features**" Menu and press [Enter]
6. Set the correct "**Date and Time**",
7. Set "**Drive A**" to: **None**,
8. Set "**Halt on**" to: **All, But Keyboard**
9. Press Exit then Select "**Advanced BIOS features**"
10. Set the "**First Boot Device**" to: **USB Device**
11. Set the "**Second Boot Device**" to: **Disabled**
12. Set the "**Third Boot Device**" to: **Disabled**
13. Set the "**Boot Other Device**" to: **Disabled**
14. Set "**Swap Floppy Drive**" to: **Disabled**
15. Set "**Boot Up Floppy Seek**" to: **Disabled**
16. Set "**Boot Up NumLock Status**" to: **Off**
17. Press [Esc] then Use the arrow keys to select the "**Advanced Chipset Settings**" Menu and press [Enter]
18. Set the "**PEG/Onchip VGA Control**" to: **Auto**
19.

Pearl Expert	Set the "**Boot Display**" to: CRT
Tiger Touch	Set the "**Boot Display**" to: AUTO

20. Set the "**LCD Type**" to: **7**
21. Press [Esc] then enter the "**Integrated Peripherals**" Menu, and then enter the "**Onboard Device**" Menu.
22. Set the "**USB Keyboard Support**" to: **Enabled**, then press [Esc] to get back to the previous menu.

23. In the "**Integrated Peripherals**" Menu, use the arrow keys to select "**Super IO Device**" Menu, and the press [Enter].
24. Set the "**PWRON After PWR-Fail**" to: **Former-Sts**
25. Press the [F10] button and then [Enter] to save the changes, the console will attempt to re-boot. An error will appear saying there is no system disk, at this point shutdown the console using the soft power button on the left hand side.

Mark this process as Completed in the **Process checklist** above

Fan				
Update Bios	All Units	Yes →	3	[√]
Check what drive is fitted	All units	Yes →	4	

This concludes section 4. Follow the Process Checklist.

5.   Identifying the Hard Disk Drive type

During the years of production Avolites has fitted a number of drives brands and types. There are different upgrades for different drive types. In order to select the correct upgrade procedure identify which drive is fitted in the console and mark it in the Process checklist above.

Note: Only one drive type can be selected.

Note: If the drive fitted is not listed in the Process Checklist contact Avolites for support

Example of checklist when a Solid 2 is fitted

Check what drive is fitted	All units	Yes →	4	
	OCZ Vertex 2 fitted	[ ] →	5	[ ]
Example	OCZ Solid 2 fitted	[√] →	6	[ ]
	Intel 320 fitted	[ ] →	7	HealthCheck
	Intel 330 fitted	[ ] →	8	No action
	Fujitsu fitted	[ ] →	8	No action

In the console locate the Drive (follow the RED SATA cable)

Identify which drive you have fitted and mark in the process checklist

Intel 330	Hitachi	Fujitsu	Toshiba
	spinning disks **no action required**		

Continued on the next page

Intel 320	OCZ Solid 2 (Red label)	OCZ Vertex 2 (Black label)

Mark this process as done by selecting one drive type in the **Process checklist** above

This concludes section 5. Follow the Process Checklist.

6. OCZ Vertex 2 SSD fitted, update procedure

6.1 Creating the OCZ Vertex 2 bootable USB stick

Download the OCZ Vertex 2 Update creator file from the Avolites Titan Version 6 upgrade landing page www.avolites.com/V6Upgrade onto your PC.

I- Insert the blank USB stick in your PC or Laptop

J- Open the downloaded Zip file and double click the "Avolites OCZ Vertex 2 Firmware Update Creator V1.37.exe"file, This will open a new window with a brief copy of these instructions.

Note: Windows may warn you about running the application from a compressed folder, select "**Run**" to continue. You may also get a "Unknown Publisher" warning, select "**Yes**" in this case

K- Click on "**Next**" in the Avolites application

L- **Select the USB stick** from the Drives pull down menu

M- Click on "**Install**", A new window with a progress bar is shown during the creation of the stick data, a second window will appear that creates the environment on USB stick, No user action is required on this window.

N- Click on "**Next**" in the Avolites application once upgrade stick creation is finished this will show a brief instruction on the firmware upgrade process.

O- Click on "**Close**" to end the Avolites application and automatically eject the USB stick.

P- Remove the USB stick from the PC.

Note: Please note that the SSD firmware upgrade USB stick made above can be used on multiple consoles if they have the same SSD fitted

6.2 Upgrading an OCZ Vertex 2 Solid State Drive

Make sure the console BIOS upgrade is done

1- Connect the USB stick in one of the USB ports at the back of the desk.

2- Plug in the External VGA screen

3- Plug in an external keyboard (Tiger Touch and Expert ShowSafe only)

4- Start-up the console AND press the [Delete] on the keyboard to enter the BIOS.

5- When prompted, type in the password "**68340**" followed by [Enter], to access the BIOS.

6- Once in the BIOS, use the arrow keys to select the "**Advanced BIOS Features**" menu and [Enter] to open this.

7- Check that the "**First Boot Device**" is set to "**USB Device**" use the

8- Press the [F10] then [Y] to save the changes and then [Enter].

9- When the console restarts it will boot automatically into the memory stick and requires no user action.

10- The updated will first start the "UNetbootin" environment and then after 10 seconds the OCZ application

11- The firmware will now be updated, and once completed the screen should show firmware updated succeeded with a firmware **version of 1.37** in green text

> Note: The screen above will also show a failed message which can be ignored

12-   Shut down the console and remove the stick

Mark this process as done by selecting one drive type in the **Process checklist** above

This concludes section 6. Follow the Process Checklist.

7. OCZ Solid 2 SSD fitted, update procedure

The OCS tool can only upgrade one version per cycle, therefore you may be required to run this process, follow the instructions below.

7.1 Creating the bootable USB stick for OCZ Solid 2 Drives

Download the OCZ Solid 2 Update creator file from the Avolites Titan Version 6 upgrade landing page www.avolites.com/V6Upgrade onto your PC.

A- Insert the blank USB stick in your PC or Laptop

B- Open the downloaded Zip file and double click the "Avolites OCZ Solid 2 Firmware Update Creator V170.exe" file, This will open a new window with a brief copy of these instructions.

> **Note**: Windows may warn you about running the application from a compressed folder, select "**Run**" to continue. You may also get a "Unknown Publisher" warning, select "**Yes**" in this case

C- Click on "**Next**" in the Avolites application

D- **Select the USB stick** from the Drives pull down menu

E- Click on "**Install**" , A new window with a progress bar is shown during the creation of the stick data, a second window will appear that creates the environment on USB stick, No user action is required on this window.

F- Click on "**Next**" in the Avolites application once upgrade stick creation is finished this will show a brief instruction on the firmware upgrade process.

G- Click on "**Close**" to end the Avolites application and automatically eject the USB stick.

H- Remove the USB stick from the PC.

> **Note**: Please note that the SSD firmware upgrade USB stick made above can be used on multiple consoles if they have the same SSD fitted

7.2 Upgrading the OCZ Solid 2 Solid State Drive firmware

Make sure the console BIOS upgrade is done

The Solid 2drive has been shipped with V1.5 and 1.6 firmware. Titan V6 requires this to be V1.7. The OCZ upgrade tool can only upgrade one version at the time. Therefore the updater may have to be run twice.

1- Connect the USB stick in one of the USB ports at the back of the desk.

2- Plug in the External VGA screen

3- Plug in an external keyboard (Tiger Touch and Expert ShowSafe only)

4- Start-up the console AND press the [Delete] on the keyboard to enter the BIOS.

5- When prompted, type in the password "**68340**" followed by [Enter], to access the BIOS.

6- Once in the BIOS, use the arrow keys to select the "**Advanced BIOS Features**" menu and [Enter] to open this.

7- Check that the "**First Boot Device**" is set to "**USB Device**" use the

8- Press the [F10] then [Y] to save the changes and then [Enter].

9- When the console restarts it will boot automatically into the memory stick.

10- A warning message is displayed, Type [Y] to continue

11- The firmware will now be updated, and once completed the screen should shows a the following line:

"Drive 0: OCZ-SOLID2 SNxxxxxxxx Rev: 1.7"
then continue to section 7.4

or

Drive 0: OCZ-SOLID2 SNxxxxxxxx Rev: 1.6

12- When the version is 1.6 shut down the console using the power button

13- Restart the console, the application will start again.

14- enter [Y] again to continue with the upgrade, once finished the version should be:
"Drive 0: OCZ-SOLID2 SNxxxxxxxx Rev: 1.7"
continue with section 7.3

7.3   Solid 2 update conclusion

Shut down the console and remove the stick

Mark this process as done by selecting one drive type in the **Process checklist** above

This concludes section 7. Follow the Process Checklist.

8. Intel 320 SSD fitted, update procedure

The Intel 320 drive will be updated after Titan V6 is installed using Titan HealthCheck, this process does not require a bootable disk .

Mark this process as done by selecting one drive type in the **Process checklist** above

This concludes section 8. Follow the Process Checklist.

9. Fujitsu, Toshiba or Hitachi Spinning Drive or Intel 330 SSD fitted

No software update is required for these drives

Mark this process as done by selecting one drive type in the **Process checklist** above.

This concludes section 9. Follow the Process Checklist.

10. ECN-193 Tiger Touch Inverter Start-up delay

Tiger Touch consoles with serial number 899 to 968 will need a modification to their LCD inverter. For this there is an ECN and parts kit available from Avolites.

The parts kit order number is 8002-9193

The ECN information (ECN-0193.pdf) can be found on the Avolites website support pages or the Titan Version 6 landing webpage:

www.avolites.com/V6Upgrade

Once the ECN has been applied mark this process as done by selecting one drive type in the **Process checklist** above

This concludes section 10. Follow the Process Checklist.

11. ECN-194 Pearl Expert SSD DVD

Pearl Expert consoles with serial number 1445 to 1650 will need the SATA CD drive cable removed.

The ECN information (ECN-0194.pdf) can be found on the Avolites website support pages or the Titan Version 6 landing webpage:

www.avolites.com/V6Upgrade

Once the ECN has been applied mark ark this process as done by selecting one drive type in the **Process checklist** above

This concludes section 11. Follow the Process Checklist.

12. Creating a Recovery Stick

12.1 Which USB stick to use.

Tiger Touch and recent Pearl Expert consoles will have a USB recovery stick fitted inside. When updating to V6 you can use this stick from the console, however doing so will prevent you from going back to V5.

If you think there may be a need to go back to V5 then use a new USB stick.

It is important to leave the recovery stick that was used to update inside the console. The reason for this is that you will have tested the USB stick and its content.

The safest option is to fit both the original V5 and the new V6 stick inside the console.

Note: If you decide to re-use the original stick (V5 or earlier),then delete the files before installing V6 recovery on it.

12.2 Creating the Titan V6 recovery stick

The recovery stick is dependent on the console, therefore download the correct recovery creator form the Avolites website

A- Insert the blank USB stick in your PC or Laptop

B- Double click on the downloaded "recovery stick creator.exe" file, This will open a new window with a brief copy of these instructions.

Note: If the PC that you use is **not** running Vista or Windows 7 you will have to make the stick bootable. The Installer will guide you on this by clicking the "how to make a USB bootable.." link on the application.

Note: Windows may warn you about running the application from a compressed folder, select "**Run**" to continue. You may also get a "Unknown Publisher" warning, select "**Yes**" in this case

C- Click on "**Next**" in the Avolites application

D- **Select the USB stick** from the Drives pull down menu

E- Click on "**Install**" , A new window with a progress bar is shown during the creation of the stick data, a second window will appear that creates the environment on USB stick, No user action is required on this window.

F- Click on "**Next**" in the Avolites application once upgrade stick creation is finished this will show a brief instruction on the firmware upgrade process.

G- Click on "**Close**" to end the Avolites application and automatically eject the USB stick.

H- Remove the USB stick from the PC.

Note: We strongly advice you to make a stick for every console and use that stick to update the console with and to leave it in the console as recovery stick. This assures you that if a recovery is needed at a later date it will work.

12.3 Installing Titan Version 6

The following actions are performed on the console.

1. Connect the USB stick in one of the USB ports at the back of the Console.

2. Plug in the External VGA screen

3. Plug in an external keyboard (Tiger Touch and Expert ShowSafe only)

4. Start-up the console AND press the [Delete] on the keyboard to enter the BIOS.

5. When prompted, type in the password "**68340**" followed by [Enter], to access the BIOS.

6. Once in the BIOS, use the arrow keys to select the "**Advanced BIOS Features**" menu and [Enter] to open this.

7. Check that the "**First Boot Device**" is set to "**USB Device**" use the

8. Press the [F10] then [Y] to save the changes and then [Enter].

9. When the console restarts it will boot automatically into the memory stick which will install the Titan V6 software.

10. Accept the license agreement (scroll down to activate the agree button)

11. Type in the serial number of the consoles when prompted

12. Remove the stick when prompted,

13. The console will restart and fail on "Disk Boot failure" this is intentional, power down the console using the front power button.

14. Start-up the console AND press the [Delete] on the keyboard to enter the BIOS.

15. When prompted, type in the password "**68340**" followed by [Enter], to access the BIOS.

16. Once in the BIOS, use the arrow keys to select the "**Advanced BIOS Features**" menu and [Enter] to open this.

17. Check that the "**First Boot Device**" is set to "**Hard Disk**" use the

18. Press the [F10] then [Y] to save the changes and then [Enter].

19. Once Titan V6 is up (either with the normal screen layout or with the HealthCheck window shut down the console

20. **Expert consoles only**:
In order to train the external screen orientation it is necessary to boot the Pearl Expert without a screen attached and then attaching the screen once booted, you will notice that the screen is upside down. At this stage press the following 4 keys on the keyboard at the same time: **[ctrl], [alt], [shift]** and **[esc]**. This will set the screen properly.

Mark this process as done by selecting one drive type in the **Process checklist** above

This concludes section 12. Follow the Process Checklist.

13. HealthCheck

HealthCheck is a new utility which is run every time the console is started but will only be displayed if an action is required.

The application checks various firmware versions to make sure that the console is compatible and reliable to use.

A console that is up to date will not show the screen, a console that is not up to date will show the screen similar to the one below

This one shows that the OCZ firmware needs updating.

You will always have the option of fixing a problem or continuing to use the console. HealthCheck gives an indication of how long a fix may take. Obviously ignoring HealthCheck has may reduce the stability of the console, however if you are about to start a show this may be preferable to fixing at that moment in time.

13.1 Intel 320SSD fitted

Consoles fitted with the Intel 320 may need a firmware update, if this is required

(Red Cross next to the Intel drive name) click on "FIX" and the Titan HealthCheck will update it for you.

Mark this process as done by selecting one drive type in the **Process checklist** above

This concludes section 13. Follow the Process Checklist.

14. Internal Recovery stick

The recovery stick that was used to update the console should be fixed inside the console.

Depending on your choice either re-fit the existing recovery back or fit a new one. Make sure the recovery stick cannot come loose and block the CPU fan or Pearl Expert drawer.

And **finally**…

14.1 Closing the Tiger Touch

Close the console, and fix using the 3 screws at the front edge of the console

14.2 Closing the Pearl Expert

Close the console, and fix using the 4 quarter turn screws around the front.

This nearly concludes the full Titan V6 upgrade, Thanks and congratulations from the Avolites team….

Mark this process as done by selecting one drive type in the **Process checklist** above

This concludes section 14. Follow the Process Checklist.

15. Things that can go wrong

This update is far reaching and requires many steps to be followed precisely; it is therefore possible to make a small mistake. Below is a list of problems and their likely cause

Pearl Expert or external USB keyboard	After the BIOS upgrade the keyboard stops working when not in the BIOS
Cause:	USB keyboard support not set in the BIOS
Resolution	BIOS "**Integrated Peripherals**" Menu, then enter the "**Onboard Device**" Menu. Set the "**USB Keyboard Support**" to: **Enabled**,

Stick not booting	BIOS, firmware or V6 stick not booting
Cause:	Removed the stick without ejecting BIOS first boot device not set to USB device USB stick can not be made bootable USB stick removed before ejecting it
Resolution	Remake the USB stick Press Exit then Select "**Advanced BIOS features**" Set the "**First Boot Device**" to: **USB Device** Find other brand/type of USB stick Properly eject the USB stick in windows

Appendix 1:
Navigating the BIOS menu on a Tiger touch

For the BIOS update we recommend using an external keyboard, but it is possible to use the program panel buttons to emulate a keyboard as shown below.

Whilst performing this update the four grey buttons below the keypad will be used as Left, Up, Down, and Right buttons

On the current desks these buttons are called [Bkspace], [Thro], [And] and [@ redo].

Use [Record Cue] for Yes. [Copy/Move/Link] for PgUp . [Speed] button for F10.

For the Disk update software the external keyboard is required, this will be made clear in the instructions below

Appendix 2:
Navigating the BIOS menu on a Pearl Expert console

The Pearl Expert has a conventional keyboard in a drawer at the right front of the desk, use this to navigate the BIOS and Firmware upgrade software

Appendix 3:

Floppy Disk BIOS upgrade procedure.

For use when the console cannot upgrade the BIOS because there is no USB memory stick boot option.

In this instance a floppy disk must be used to upgrade the BIOS.

You will require:

- The console requiring the upgrade
- A blank floppy disk (or floppy disk that can be reformatted)
- The USB memory stick containing the BIOS upgrader
- A USB or PS2 keyboard and mouse

1. Follow the instructions in section 4.1 (Creating BIOS bootable USB stick) to create a USB Bios upgrade memory stick

2. Turn on the console
3. Press the [Delete] button
4. Enter the Bios password (68340)
5. In "**Standard CMOS Settings**" set Drive A to "**1.44Mb 3.25in**"
6. Press [F10] to save the Bios settings
7. Put the blank floppy disk into the floppy disk drive
8. Once the console has select the "**Tools**" menu
9. From the "**Tools**" menu select "**Folders**", and then select "**Computer**"
10. You should be presented with a list of drives present, which will include the A drive
11. Right click on the 3.25 inch floppy and from the menu select "**Format**"
12. From the Format menu, tick the option at the bottom to create an MS DOS startup disk
13. Select "**Start**"

The floppy disk will now be formatted as a Boot Startup disk

14. Once formatting has completed connect the USB stick containing the BIOS upgrade into the console
15. Browse the this USB stick and copy to the A drive the files "**67721T6.DAT**" and "**AWDFLASH.EXE**"

You now have a bootable floppy disk containing the BIOS upgrade information

16. Leave the floppy disk in the console and restart the console
17. Press the [DELETE] button on the keyboard to enter the BIOS and enter the password (68340)
18. From the "**Advanced Chipset Menu**" set the "**First Boot Device**" to "**Floppy Disk**"
19. Press [F10] to save this and the console will restart, but booting from the floppy disk
20. At the prompt type "**AWDFLASH**" and press enter
21. You will then be prompted to enter a file name, type "**67721T6.BIN**" and press [Enter]
22. After about 20 seconds the prompt will change to "Please Wait", and the file will be read. This takes at least 90 seconds so be patient!
23. When prompted to save the old BIOS enter [N] (there is not enough floppy disk space to save this)
24. Then press [Y] to start programming.
25. The upgrading process will be displayed on screen.
26. The screen will confirm the upgrade has completed correctly, if any errors are reported then contact Avolites.
27. Once the upgrade is complete remove the USB stick and remove the floppy disk
28. Press [F1] to restart the console
29. Now follow the instructions from section 4.3 (Configuring the new BIOS)