**MAC Quantum Wash**

**Beam Twister Adjustment.**

**Applies to fixtures with software 1.1.0 or later installed.**

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Introduction

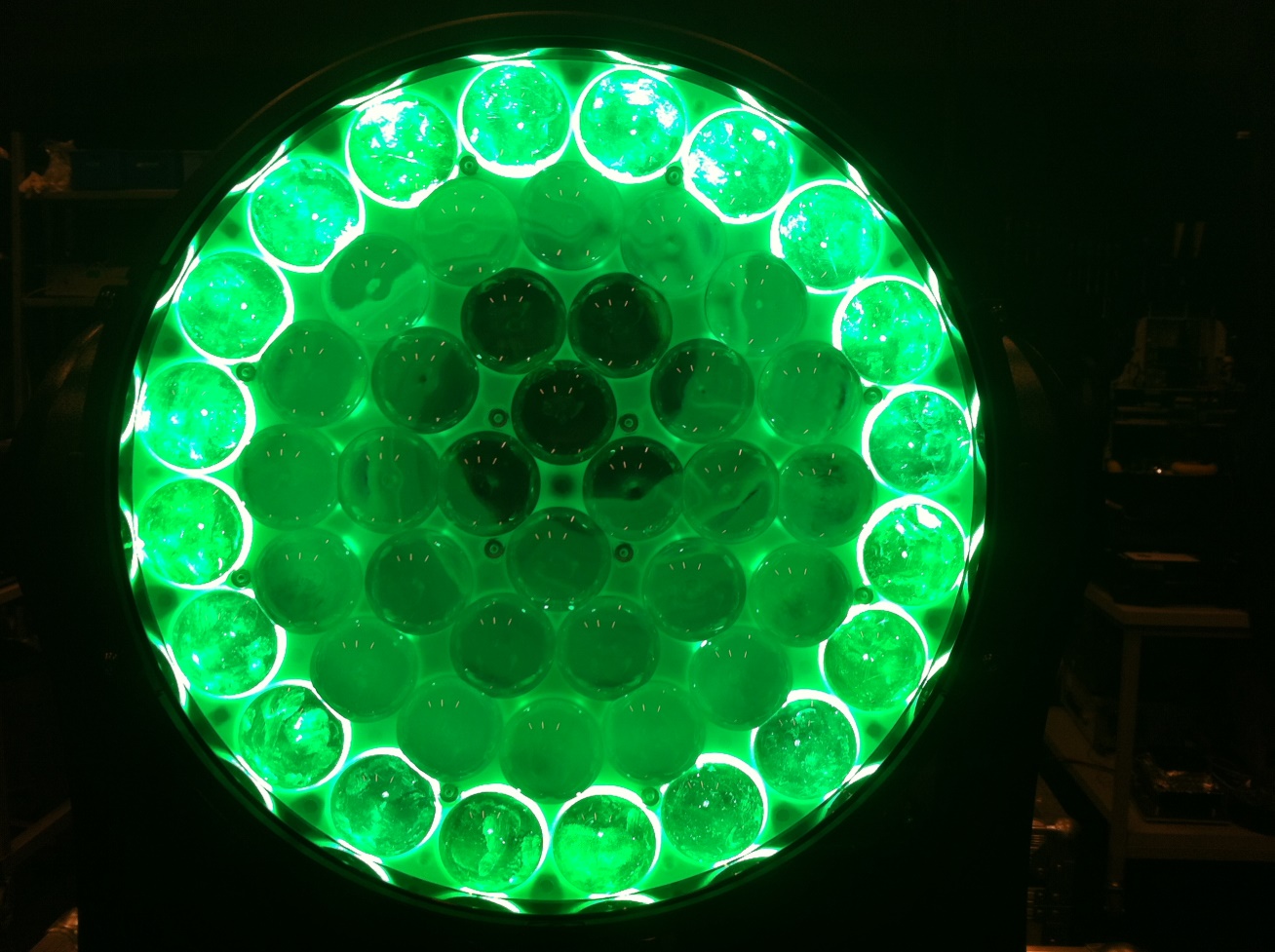
Implementation of software version 1.1.0, has several changes and improvements since software version 1.0.0, which is installed in the first MAC Quantum products in the market.  
Unfortunately we had to make some changes to the software after the release of version 1.0.0 that affects the way the beam twister is adjusted. The changes to the adjustment of the beam twister are necessary to ensure that all MAC Quantum Wash products are adjusted correctly, and to ensure as much consistency in adjustment as possible.

These changes to the software mean that all products with version 1.0.0 installed, will have incorrect adjustment values after updating to software version 1.1.0.

To ensure that products are correctly adjusted afterwards, this step by step guide is to be followed, and it will guide you through the same adjustment procedure that is performed in the production.  
It is also recommended that this procedure is followed after servicing the MAC Quantum, where the zoom lens has been removed from the product and reassembled. This will ensure that products that have been serviced will have the same look and beam size as new products.

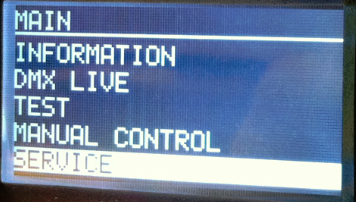
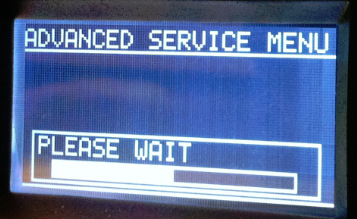
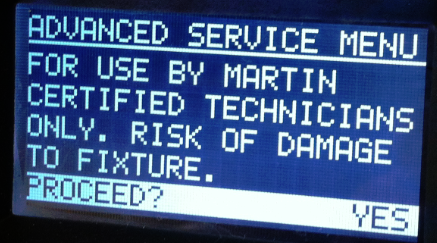
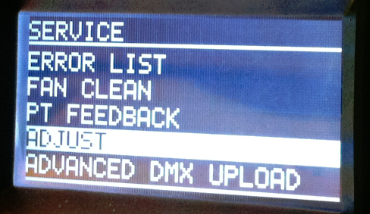
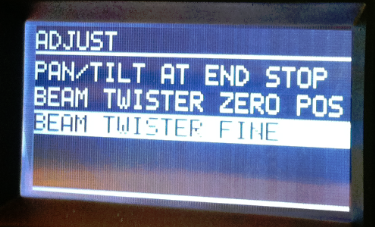
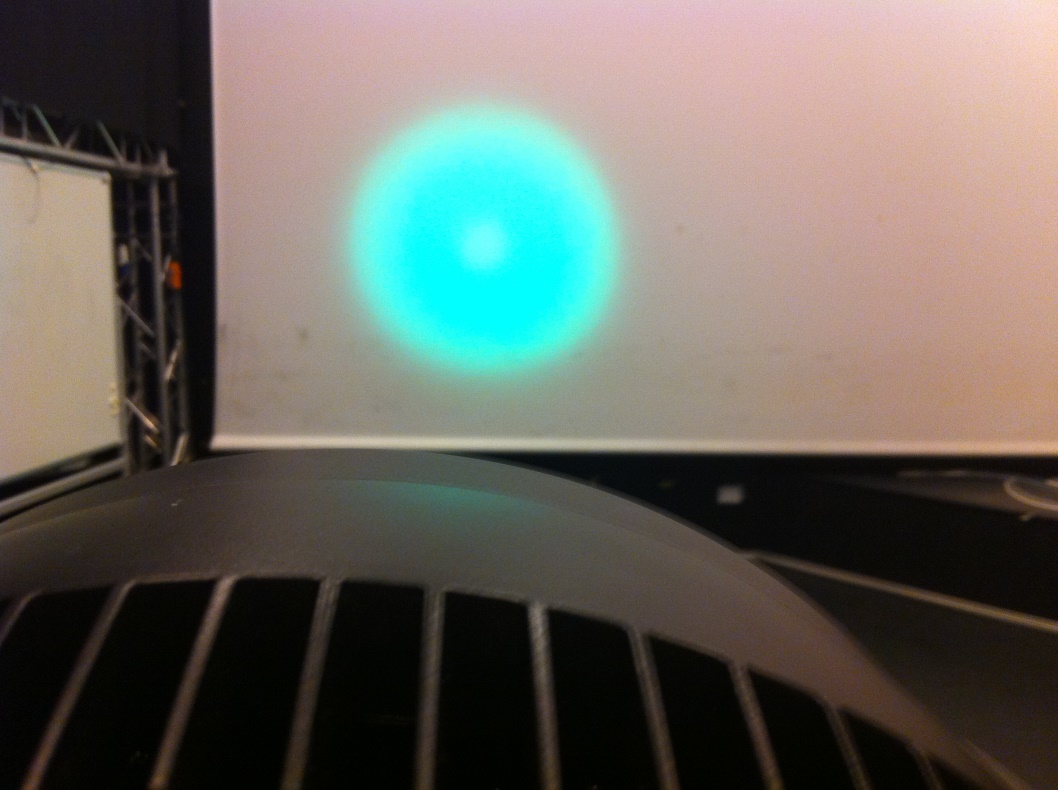
Step by step guide.

This Step by step guide only applies to fixtures with software version 1.1.0 installed. For instruction on updating software on a MAC Quantum Wash, please refer to the user manual.

1. Connect the MAC Quantum Wash to power and, power up the product, connect to any DMX Source at any given DMX address.
2. In the menu of the MAC Quantum, under “Control Mode”, make sure that it is set to “Extended Mode”.
3. Place the MAC Quantum Wash fixture, at a distance of approx. 5 Meters from a wall or any other straight surface..  
   There is no special requirement to the wall or surface, simply a flat wall or surface is sufficient.
4. Tilt the head of the MAC Quantum towards the wall or surface, make sure that the product is not at an angle to the wall, but that it is in a straight angle.  
   
5. On the DMX Controller, set any intensity for the MAC Quantum Wash, the intensity can be decided by the user, and is not important for the adjustment, as long as the beam is clearly seen on the wall or surface.  
   **Intensity** : DMX Channel 2(Coarse) & Channel 3 (Fine), Value : Any   
   **Shutter Open** : DMX Channel 1, Value : 20\*
6. On the DMX Controller, set only the outer ring of the MAC Quantum to a green color, the middle and center ring all RGB values are set to 0.  
   **DMX Channel 20,** Value : 255 **DMX Channel 19,21,22,23,24,25,26,27,** Value : 0  
     
   ****
7. On the DMX Controller, set Zoom to the following way.  
   **Zoom :** DMX Channel 6, Value : 200
8. On the DMX Controller, set Beam Twister the following way.  
   **Beam twister** : DMX Channel 7 & 8, **16 Bit value : 16274**

**For 8 Bit faders :**  
**Channel 7**, Value : 63

**Channel 8**, Value : 146

1. On the MAC Quantum Wash, enter the menu and select scroll down to the menu item “Service”.  
   
2. Press and hold down the “Enter” button on the MAC Quantum Wash, While holding the “Enter” button pressed, the following screen will be seen.  
   
3. Keep the “Enter” button pressed, until the following screen is seen.  
   
4. Using the “Up/Down” buttons on the MAC Quantum Wash, make sure that you say “Yes” to the following, and confirm by pressing “Enter”  
     
   **Please note that you have now entered an advanced service menu, this menu is only intended to be used by special trained service technicians, there are in this menu options, that a normal users should not tamper with, as this could change critical parameters in the product.  
   As long as this document is followed as written, you will not compromise any parameters in the product.**
5. In the advanced service menu, select the menu “Adjust”  
   
6. In the “Adjust” menu, select the submenu “Beam Twister Fine”  
   
7. Look at the wall, depending on the fixtures, you will see different sizes of the image shown on the wall, below is are pictures of the 2 outer positions.  
     
   
8. Depending on how your fixture looks, you will need to adjust the twister in either one direction, this is done, using the “Up/Down” buttons on the MAC Quantum Wash.  
   Adjust the beam so that you only just start to see a black “Hole” in the middle of the spot.  
   
9. Once you have adjusted the beam, to the correct position, press the “Enter” button of the MAC Quantum Wash, to confirm the values.  
   NOTE : There is feedback from the fixture after confirming the new value, exiting the menu without confirming the new set value, will cause fixture to return to the original set value.
10. Exit the menu, and reset fixture.

The adjustment of the MAC Quantum Wash Beam Twister, is now completed, and will be equal to product’s in Martin Professional’s production line.

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