

The Shade ARM

Manufactured and distributed by Dental Learning Centers

The Shade ARM (Adjustable, Reliable, Measurement), provides precision, consistency and predictability of images acquired from a camera for tooth shade determination. The Shade ARM locks in distance, angle, position and lighting of camera images to shade tabs slid into a black and white painted suspended holder.

Design Features of the Universal Shade ARM

Distance: The **ARM** has telescoping adjustable tubes to accommodate differences in the working distance between cameras. Working distance is the distance between the end of your cameras lens and your subject.

Left to right adjustment: Lets the user align his/her camera lens perpendicularly to the shade tab held inside of the **Standard**. Lens placement varies between camera models.

Up or down adjustment: Let's the user adjust the height of the **ARM** relative to the **Camera Base** to accommodate different sized cameras.

Angle of shade tab and Standard to the flash: An optimal angle was determined that slants toward the patient. Not enough angle, as when the shade tab is perpendicular to the cameras flash, results in reflections that conceal the color of the middle of the shade tab and the black part of the **Standard**. Too much angle reduces the area of the shade tab that can be seen. Reflections are best if they are at the cervical of the shade tab.

Consistent lighting: When everything is locked in, the cameras flash is consistent to the shade tabs and **Standard**.

Multiple Shade Tabs can be used: For referencing, the **Standard** will accommodate more than one shade tab. One can be for normalization of images and one to match the tooth shade or two different shade systems can be selected giving freedom of choice to the fabricator (dentist or technician).

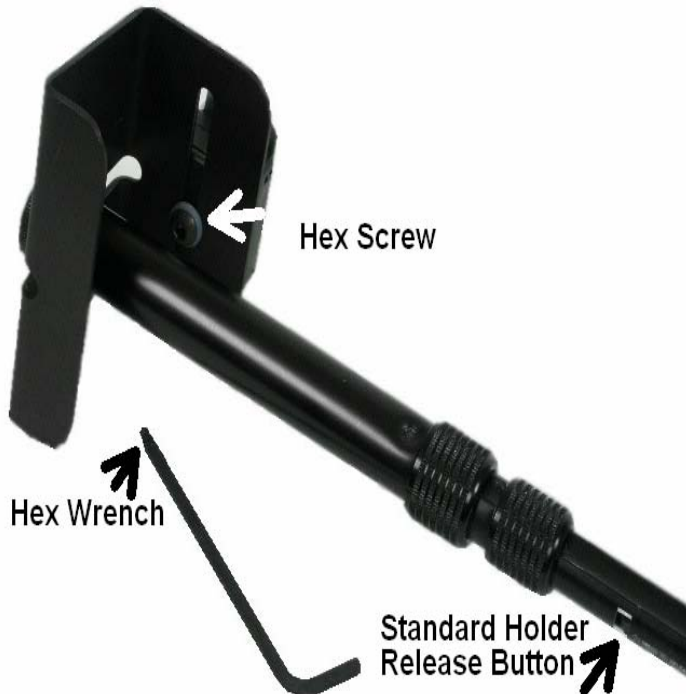
Quick Disconnect: Makes the connecting of the camera to the **ARM** convenient and fast.

Your feedback please...

Please help us; we are asking for before and after cases whether they match or not. Our quest is to learn from the cases in order to help others and to make future improvements.

so we may help technicians and dentists and we can learn from you(email to info@DLCenters.com). Also, please fill out the enclosed questionnaire form and fax to (425) 557-1991

Part Names and Location



Attachment Instructions

Step 1 DETACH THE TOP HALF OF THE QUICK DISCONNECT. (Leave the bottom attached to the camera bracket).



Step 2 ATTACH TO CAMERA. Screw top of **Quick Disconnect firmly** on to your camera's tripod mount (keep it squared up with your camera).

Step 3 LOWER TELESCOPING ARM and LOOSEN the HEX SCREW. Loosen the **Height Adjustment Screw** and slide the **Telescoping Arm** to its lowest level. Slightly tighten (Lower Left).

Loosen **Hex Screw** with **Hex Wrench** slightly so you can move it Left to Right (Lower Right)



Step 4 ATTACH AND ALIGN CAMERA. Attach your camera to the **Quick Disconnect** half on the camera bracket. Align the **midline of the lens** with the **midline of the Telescopic Arm**. Keeping your camera square, **firmly** tighten the **Hex Screw** with the **Hex Wrench**. (NOTE: HOLD IN THE QUICK DISCONNECT BUTTON TO ATTACH OR REMOVE YOUR CAMERA)



Step 5 SLIDE SHADE TABS in the STANDARD.
 Use an **A2** on the Left and a **D3** on the Right
 Unless directed to do otherwise. Incisal edges up.

Step 6 DETERMINE WORKING DISTANCE.
 Set length of **Telescoping Arm** so when the **Standard**
 is resting on the chin there are 6 to 12 teeth in view
 (about two inches left to right).
 Note, Point and Shoot
 cameras are the
 shortest distance
AROUND 6 INCHES;
 Digital SLR (DSLR)
 cameras are the
 farthest distance at
ABOUT 12 INCHES.

Step 7 Raise the
 Telescoping Arm and
tighten so the shade
 tabs and just beyond
 the black and white
wings can be seen in the lower part of the image. See the pictures below.



Before tightening the **Arm Adjustment Screw** rotate the **Telescoping Arm** and you will feel a "stop" designed to keep it plumb to the camera base.

Key Technique Points

PLEASE READ CAREFULLY

1. For accurate shades, a quality dental picture is required. Not all cameras have the ability to do this. Call us should you need assistance. (425) 557-7788.
2. Take the shade picture before you prep the teeth due to the effect of tooth dehydration.
3. The shade tabs are there as a reference not necessarily to match the shade tabs with the tooth.
 - a. Keep a Vita Classic **A2** on the **Left** and a **D3** on the **Right**.
 - b. Should you want two different shade systems or advised other wise, make note of what the shade tabs are in the picture and let the lab know. **If you do not know what the shade tabs are then accurate analysis cannot be done.**
4. External light, such as your overhead florescent lights, your overhead dental light or light through a large window can significantly alter accurate shades. To avoid poor pictures:
 - a. Have the back of the dental chair sitting up as opposed to lying down. If the patient is lying back overhead light often alters the information.
 - b. Use your cameras flash.
 - c. Do not shine the dental light in the mouth during **Shade ARM** photography.
 - d. If you have light coming in from a large window have the patient face a different direction when you take a shade picture.
5. Photography process
 - a. Attach your camera to the **Shade ARM**, turn it on and make any other adjustments such as zooming in to the correct distance. See Step 6 above.
 - b. Choose a tooth or teeth you want matched. **I advise you to get patient input as to what tooth they want matched and document the decision.** Retract the lips (preferably with cheek retractors).
 - c. Think of using a contra lateral tooth.
 - d. You want the incisal edges of the teeth slightly apart.
 - e. Square your “eyes” then camera perpendicular to the tooth.
 - f. Move the camera in square to the tooth and rest the end of the **Shade ARM** against the chin.
 - g. Put the top of the **Standard** below the tooth. This includes a mandibular tooth as well.
 - h. Always take three pictures of a given tooth.
 - i. **IMPORTANT: Take a Shade ARM picture of the prosthetic tooth whether it matches or not. This can be very helpful documentation and helpful feedback.**
 - j. Do **Shade ARM** photography before and after tooth lightening for patient education and documentation.
6. Cleaning. Use an alcohol wipe of the **Shade ARM** components. Do not put the **Shade ARM** in an autoclave or let soak in cold sterilizing liquid.

For Sales and Support:

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