



Dental Photography
Technique Guide
by Edward B. Walk, DMD

Macro 5SLR
Dental Photography
Technique Guide

frontal images

Preview image

Seat the patient upright, head propped in a vertical position. Set the magnification. Hold the camera at the approximate distance: 10" for 1x, 5" for 2x, and 3" for 3x. (The ranging lights will be used later, for final focusing.) Preview the area of interest through the viewfinder, using the grid screen for alignment. The front of the camera should be parallel to the patient's face. If necessary, use lip retractors to allow light in.

Focus and shoot

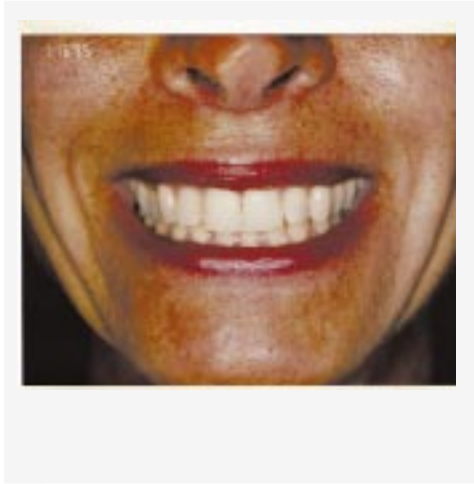
Press the shutter button lightly to turn on the ranging lights. Move the camera nearer or farther until the lights merge. Check that the subject is composed as required, then press the shutter button all the way to take the picture. The picture will be ejected from the front of the camera.

Evaluate sharpness, color saturation and composition

The area around the merged ranging lights will be sharpest; areas that are farther from the camera will be less sharp. The depth of field decreases at higher magnifications, and is split equally in front and behind the point of sharpest focus. The depth of field at 1x is 0.9", at 2x 0.3", at 3x 0.2".

Color saturation will vary, as teeth are highly reflective. Take 2 or 3 pictures using different Lighten/Darken settings. (Note that skin tones will darken as teeth become more saturated.)

Composition will be improved by cropping out unwanted areas. Use a higher magnification and move in closer so that the entire picture will be filled with the area of interest.



1x



2x



3x

portrait images

Preview image

Rotate the camera 90 degrees for a vertical format. The flash units will be above and below the lens in this position. Set the camera at .4x to show the entire face; at .2x for a head and shoulders view. The background should be flat white and seamless, placed about 2 feet behind the subject. To create a .25x (orthodontic format, quarter life-size) portrait, set the camera at .2x. Use the ranging lights to focus the camera, then move about 2" closer, until the lights form a "figure 8."

Focus and shoot

At .4x, frame the subject so the ranging lights merge on the bridge of the nose; at .2x place the lights on the chin. Align the grid screen with the subject's eyes to keep the portrait level.

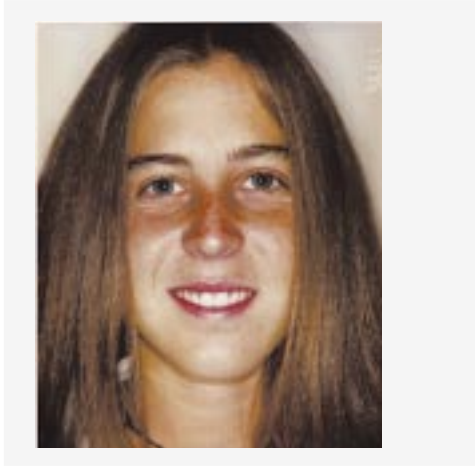
Evaluate sharpness, color saturation and composition

The depth of field at .4x (face) is almost 4"; at .2x (head and shoulders) it is nearly 9".

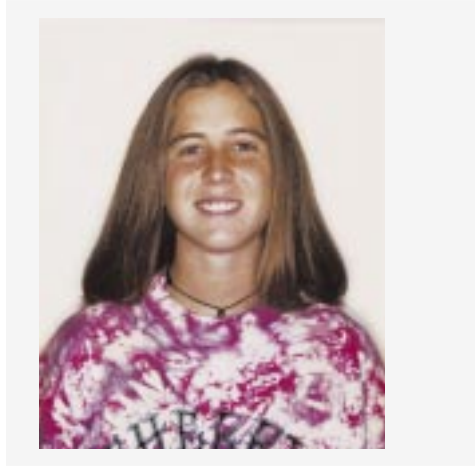
note

When skin tones are properly exposed, the teeth may be too white, due to their high reflectivity. A second exposure at a darker setting may be necessary to show more detail in the subject's teeth.

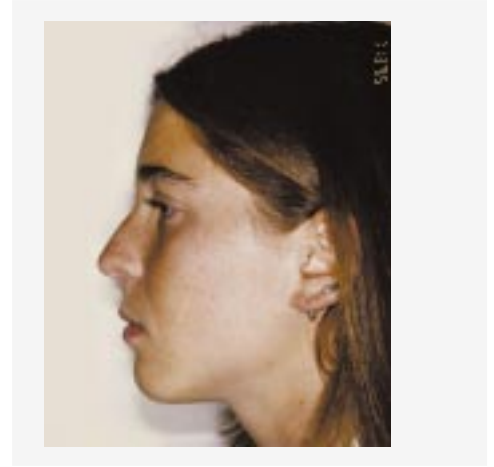
Portrait magnifications



.4x



.2x

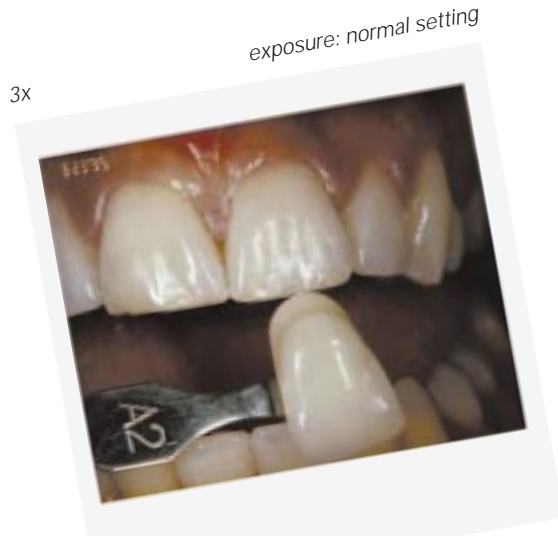


.4x

laboratory photo-communication

- 1 At the beginning of the office visit (before teeth become dry), use a standard shade guide to select the basic shade.
- 2 Set the magnification at 3x. Retract the lips. The shade button is held by an assistant at the incisal edge of the incisor to be matched. The shade button number should be visible in the viewfinder. Take the picture.
- 3 Take 3 progressively darker photographs: i.e., photo #1 with the Lighten/Darken control set at mid-point, photo #2 at minus one and photo #3 at minus two.
- 4 The resulting pictures will have a photo-layering effect, revealing intensely saturated subsurface characteristics of internal anatomy. Send all 3 photos to the laboratory with the study model for surface texture and dimensions.

Take 3 photographs at darker settings: photo #1 at mid-point, photo #2 at minus one, and photo #3 at minus two.



Walk photo-layering technique

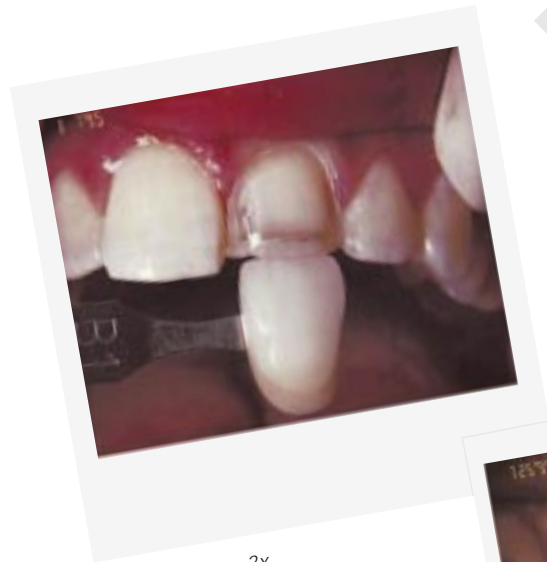
- 5 Tetracycline mapping is precisely revealed for porcelain opaquing. The photo can be marked to show the start of the translucent porcelain application. This technique is especially useful for mixed crown and veneer cases.



Veneer cases:
Shoot the shade guide at the incisal edge of the prepared tooth for photo-mapping of areas to be opaqued (tetracycline cases and intensely stained substructure).

3x

exposure: -2



stain mapping 3x

tetracycline mapping 3x



mirror views: buccal, palatal

Patient set-up

Seat the patient upright, head propped in a vertical position. Use a lip retractor on the side opposite the area to be photographed. Place a mirror of the proper size at the distal of the 2nd molar; then rotate it laterally, retracting the cheek. (Tip: warm the mirror prior to insertion to prevent fogging.)

Camera set-up

Set the magnification at 2x and turn off the flash unit that is opposite the mirror. (The camera automatically increases the flash output when a single flash is used.)

Preview image

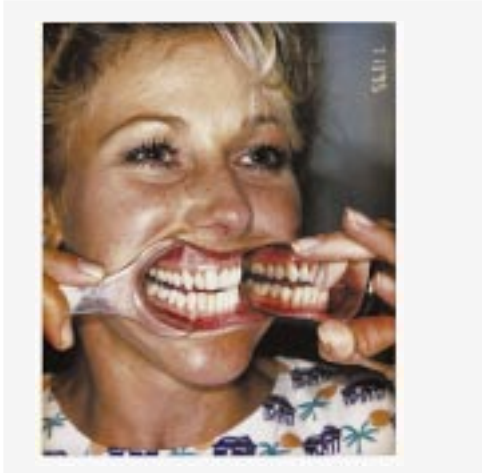
Use the viewfinder grid screen to keep the occlusal plane level. Frame the mirror image only—crop out unwanted areas. Center the merged ranging lights midway between the nearest and farthest areas for best depth of field. Take the picture.

Evaluate

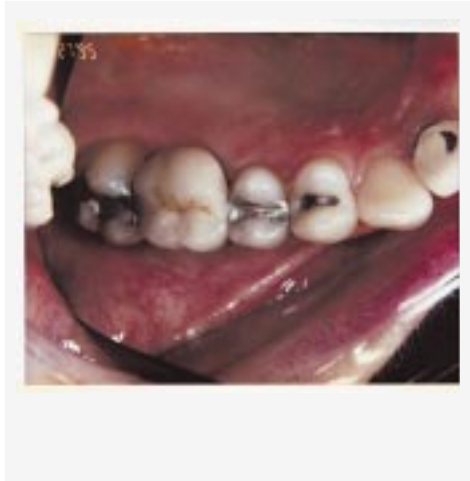
Composition, exposure and sharpness.



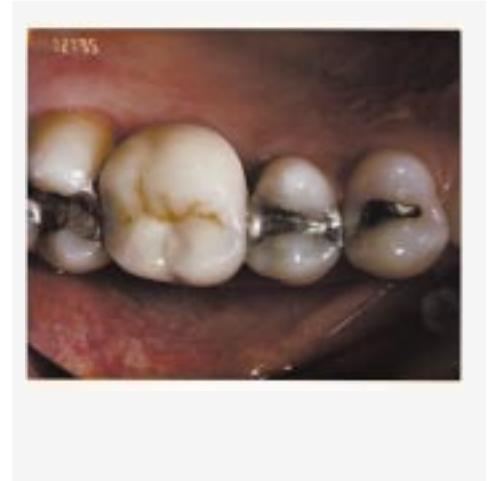
At 3x only one ranging light may be visible. Move the camera nearer or farther, until this light is at the center of the grid screen. The camera should be at the correct distance for sharp focus.



.4x placement of mirror at distal of 2nd molar

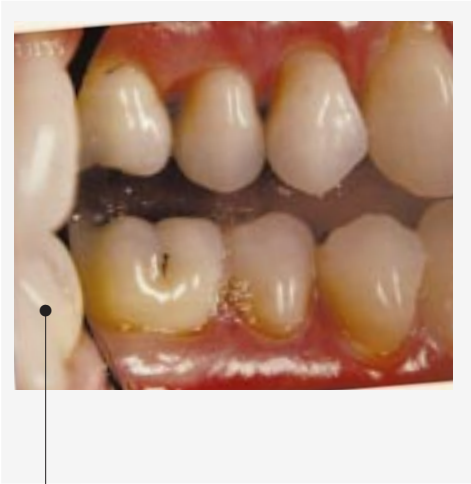


2x is the recommended magnification



3x requires advanced technique

3x



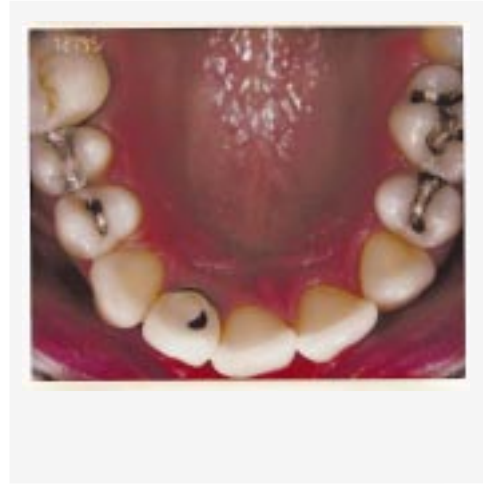
move right to crop out extra molars

1x



viewfinder grid keeps occlusal plane level

2x



*proper placement of mirror
(placement may vary with arch size)*

Macro 5 specifications

Polaroid Macro 5 SLR camera

Viewfinder:

Single lens reflex (SLR) with grid screen for consistent framing of subjects.

Lenses:

Built-in; “dial-up” magnifications.

Magnifications/reproduction ratios:

Five (.2X, .4X, 1:1, 2X, 3X)

Lighting:

Built-in electronic flash (2). May be operated individually or together.

Focusing system:

Ranging lights intersect at point of optimum focus.

Weight: Approx. 4 lbs.

Polaroid color film:

(ISO 640/29°; 10 pictures/pack):

Type 990 film (Recommended)

Spectra HighDefinition

Picture size:

4 x 4.06 in. (Image area: 3.6 x 2.9 in.)

Power source:

Battery in each film pack. Ranging lights are powered by 4 AA batteries in one hand grip.

Optional accessories:

Polarizer filter kit; Fluorescein filter kit (ophthalmic imaging)

Warranty:

1 year

To arrange for a demonstration or for information on the dealer nearest you call **1-800-343-5000** (U.S. only).

For
information
please call
Customer Care Center,
toll free, at
1-800-343-5000

