Focus on Photography

How to Capture Orthodontic Photographs Quickly and Efficiently

A Technique Guide for the EyeSpecial C-II Camera

by Anna Kataoka, MS, MBA

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This article discusses the techniques and patient positioning required for achieving ideal patient photographic records for Clear Aligner Therapy. The presented technique guide will assist an orthodontic office in capturing the high-quality photographs indispensable in evaluation, treatment planning, and care for orthodontic patients. All required images will be created with the EyeSpecial C-II, a digital dental camera from Shofu Dental Corporation, introduced in the second article in this series, "Dental Photography with the EyeSpecial C-II" (*AACO Journal,* Summer 2016).

Getting to know the EyeSpecial C-II

The EyeSpecial C-II incorporates 8 preset dental shooting modes. Three of these modes—Face, Standard, and Mirror—can be utilized to successfully complete an orthodontic photo record, typically consisting of 8-9 clinical photographs (*AACO Journal,* Spring 2016).

In the EyeSpecial C-II, a shooting mode can be selected by either pressing down the F1 button or touching the word "Mode," both situated in the top left corner of the screen. After specifying the mode, the operator should determine the cropping range to establish a desired frame (e.g., head, neck and/or shoulders; facial lower third; smile; half arch; single tooth). This can be done by rotating the thumb dial located in the upper right-hand corner of the camera. After the dial is set to an appropriate position, the top left corner of the screen will display an ideal distance for capturing a specific photography task (**Figures 1a, b**).

Using the built-in blue and gray horizontal and vertical grid lines, the operator can establish an ideal focus plane (e.g., horizontal/vertical midline, incisal plane, interpupillary line) and a focal point (e.g., central/lateral incisor, premolar).

To determine the optimal positioning of the camera and the quality of the image, the shutter button should be depressed to its halfway position. During this operation, either green or red icons will light up on the screen, providing additional information about the selected frame, distance, and focus. When the camera is in an ideal position, the recommended distance, the cropping icon, and the focus dot will all appear in a green hue. However, even if the camera is outside of preferred parameters, for as long as the focus dot is marked green, a quality image can still be achieved (**Figure 1c**).

Achieving a patient photographic record with the EyeSpecial C-II

The following is a technique guide for capturing predictable and consistent orthodontic photographs for effective case documentation and patient care.

Extraoral full-face views (**Figure 2**)

Recommended mode: Face mode

Optimal distance: 39.4 in (1.0 m) or less to obtain images in horizontal orientation; between 39.4 in (1.0 m) and 66.9 inches (1.7 m) to capture images in vertical orientation.

Positioning: The patient should be standing in front of a plain, nondistracting backdrop, with hands at the sides, hair pulled back or tucked behind ears, about 11.8 in (0.3 m) away from the background. The camera angle should be at the same level as the patient's nose. For full-face images, smiling and in repose, the camera should be level with the patient's interpupillary line, along the vertical axis of the face. For full-face profile images,

Figure 1a: EyeSpecial C2 modes.

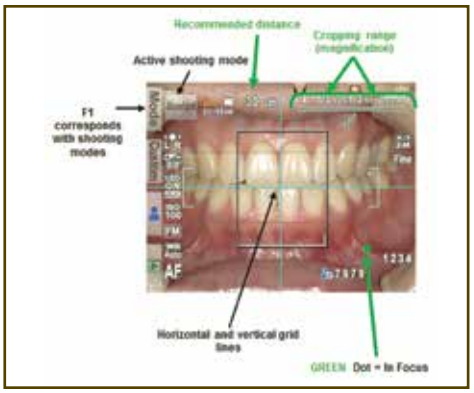

Figure 1b: cropping range and distance.

Figures 1c: how to capture images with ESC2.

Figure 2a: facial in repose.

Figure 2b: facial smiling.

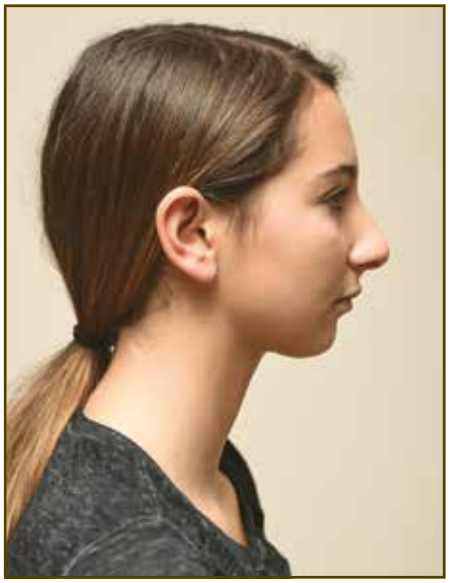

Figure 2c: facial profile.

Figure 3a: anterior retracted.

Figure 3b: anterior auxillary.

Figures 4a: right retracted.

Figures 4b: left retracted.

Figures 5a: occlusal maxillary.

Figures 5b: occlusal mandibular.

the point of focus should be the patient's eyebrows, with the nose lined up with the horizontal midline of the image.

Anterior photographs (**Figure 3**)

Recommended mode: Standard mode

Optimal distance: 11.8 in (0.3 m) from the subject

Positioning: Ideally, the patient should be seated facing the photographer, knee to knee. C-shaped cheek retractors should be used, with the lips pulled outward, away from the teeth. The horizontal midline should be the occlusal plane, and the vertical midline should be the anatomic midline. The patient's central teeth should be the focal point of an image.

Buccal images (**Figure 4**)

Recommended mode: Standard mode

Optimal distance: 11.8 in (0.3 m) from the subject

Positioning: Buccal images are achieved using the same patient-photographer positioning and the same camera settings as anterior images. For ideal results, V-shaped retractors should be used, with the retraction being shifted to the photographed side. The teeth should be in maximum intercuspation. The horizontal midline should be the occlusal plane, and the vertical midline should be the cuspid. The goal is to capture an entire buccal corridor, from second molar to incisors, and to visualize the canine/molar relationship.

Occlusal images (**Figure 5**)

Recommended mode: Mirror mode

Optimal distance: 11.8 in (0.3 m) from the subject

Positioning: The patient should be reclined to the photographer's waist level. Metal retractors should be used to keep the buccal soft tissue and lips away from the teeth. To capture maxillary occlusal images, the photographer should be standing behind the patient, navigating the camera from above. To capture mandibular occlusal images, the photographer should be positioned in front of the patient. The wider end of a mirror should be placed perpendicular to the opposing arch to ensure visualization of the teeth, incisal edges and embrasures. The vertical midline should be the anatomic midline of the patient, with the focus set on premolars.

Disclosure

The author is an employee of Shofu Dental Corporation. All images were photographed with the Shofu EyeSpecial C-II digital dental camera. Figures 2a-c courtesy Luciana Arcaro. Figures 3a-b courtesy Shofu Dental Corporation. Figures 4a-b courtesy The Dawson Academy. Figures 5a-b courtesy Shannon Pace Brinker. ■

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