

DS330 Camera Instructions

Taking Facial Pictures

- Settings: a) Set camera to the "P" mode. See settings section for details.
b) Push UP and hold the "zoom" button until the lens stops moving.
c) Set monitor to "Play" mode.
- Positioning: a) Patient should be about 1 foot away from light box.
b) Patient's head should be centered in light box.
- Sequence: a) Front
b) Front Smile
c) Lateral, Right
- Framing: a) Instruct patient to bite down.
b) Align top of patient's head to top of viewing area in preview monitor.
c) Align bottom of the chin to the bottom of the preview monitor.
d) Center image in preview monitor.
The idea is to have a reference point and to be consistent from one picture to the next. Make sure that the patient's ear is fully visible on the lateral view.
- Capture: a) Press and hold shutter button half way to focus.
b) Frame and center picture in preview monitor while holding button.
c) Press the shutter button all the way.
d) If preview is acceptable, capture picture by holding "set" button and then pressing the shutter button.
e) If preview is NOT acceptable, discard by pressing the shutter button.
Turn off camera and monitor when not in use.

Taking Intraoral pictures.

- Settings: a) Set camera to the "P" mode. See settings section for details.
b) Push and hold the "zoom" button until the lens stops moving.
c) Attach macro lens(#4).
d) Set monitor to "Play" mode.
- Positioning: a) Dental chair positioned at about 45 degree angle.
b) Patient's head rotated towards camera operator.
c) Patient to hold cheek retractors on both sides of mouth.
- Sequence: a) Central (Large cheek retractors on both sides of mouth).
b) Right (Small retractor in right and large retractor on left).
c) Left (Small retractor in left and large retractor on right).
- Framing: a) Instruct patient to bite down.
b) Align the occlusal plane in preview monitor.
c) Center picture. Must be able to see first molar on side views.
- Capture: See capture procedure above.

Taking Occlusal pictures.

- Settings: Same as Intraoral.
- Positioning: a) Dental chair positioned at about 45 degree angle.
b) Patient's head rotated towards camera operator.
c) Small cheek retractors on both sides of mouth to open mouth for mirror.
d) Insert mirror in mouth.
e) Patient to hold retractors at 10 and 2 o'clock positions for upper and at 4 and 8 o'clock for lower.
f) Support end of mirror on back molars and put pressure to open mouth(Do not pinch opposite lip).
- Sequence: a) Upper
b) Lower
- Framing: a) Align and center the occlusal arc in preview monitor. Keep in mind that the image being captured in of the mirror not the actual arc.
- Capture: See capture procedure above.
- Download: a) Turn off camera
b) Turn off monitor
c) Remove card from camera and insert in computer reader
d) Select or enter the patient in program
e) Assign a "Timepoint" (Visit name – i.e. Exam, Initial, Progress or Final)
f) Select the capture mode.
g) Select the "One-click" option.
h) Make any adjustments (Rotate, Enhance, Swap)
i) Select the "Capture" button.
- Erase Card a) Remove memory card from computer and insert in camera.

b) Initialize card. For more details refer to settings section.

DOLPHIN IMAGING DS330 CAMERA INSTRUCTIONS, SETTINGS AND QC PROCEDURE

DS330 Camera Settings (Factory default settings in page 55)

Programmed Mode (P on wheel):

Use the “P” setting for all pictures.

Quality: Normal (34 pictures using a 12MB memory card)
FL: 1280 x 1000 image quality
Preview: ON (PREV). Page 67 in manual.
Live: 30 (seconds). Page 74 in manual.
IMG.: St (as opposed to CL, clear).
Zoom: none.
White balance: STD.
ISO: 100 (normal).
Set date accordingly.

Manual Mode (M on wheel)

In conditions where the lighting is low, use the “M” setting for occlusal shots (with custom settings for F-stop and speed) so that those pictures are brighter. I.e., start with s=60 and f=11, then adjust from there. The higher the “s” setting, the darker the picture is. But, lower the “s” (at around 45 or 30), it'll become blurry if you move the camera while capturing. Also, the “f” setting will make pictures darker when it's higher. But, at a low setting you will lose depth of field, especially on occlusal shots.

Settings

Manual focus 0.4m
Exposure compensation Override +1.8
Manual mode:
 F5.6
 S30
 No. 4 lens
 ISO: (normal)

Camera Batteries:

Lithium-Ion: Duration about 800 frames without flash. 200 frames with flash.
Recharge time: 100 minutes.
Life: Reuse at least 500 times.
Battery does NOT need to be drained completely before recharging.

3Volt Battery: Holds camera settings (Date, time, etc..) Will last about a year. If the display flashes for about 3 seconds when camera is turned on, the battery needs to be replaced.

Erasing the memory card: (For more details see page 35 in camera manual)

Erase all pictures - Press both the “INIT” and the “ERASE” buttons at the same time using the thumb.

Erase the last picture taken - Press both the “INIT” and the “MACRO” buttons at the same time using the thumb.

Selectively erase one picture - Set camera to “PLAY” mode, find image to be deleted and press both the “INIT” and the “MACRO” buttons at the same time using the thumb.

Preview Monitor (Turn off whenever NOT in use)

The 4 AA batteries in preview monitor last about 60 minutes IF operator always remembers to shut off the monitor after each photo session. Rechargeable batteries are recommended. A scrambled image in preview monitor is an indication that the batteries are low and need to be replaced.

Lighting System (Used for facial pictures only)

Patient should stand about 1 ft. from the light box. If the facial pictures turn out dark, the patient needs to stand further from the light box or muffle the light bulb more by using paper towels.

Resolution: 1.3 million pixel(1280x1000).

Capacity(MB)	Basic	Normal	Fine	H
12	71	34	17	4
16	94	48	23	6
24	139	71	34	9

DOLPHIN IMAGING DS330 CAMERA INSTRUCTIONS, SETTINGS AND QC PROCEDURE

DS330 Camera Quality Control Internal Procedure

Physical Inspection:

Inspect all components to make sure that the following are included in kit packages.

- Camera Box (122-0254)
 - Camera Body, DS330
 - Neck Strap, Camera
 - Battery, 3Volt Memory Settings (CR2025-Small round battery)
 - Warranty Card
- Power Pack Box - PK-D3 (122-0192)
 - Charger, AC-D22
 - Battery, Rechargeable (NP-510)
 - AC adapter, Power extension
 - Warranty Card
- Monitor, Preview (122-0258)
 - Monitor
 - Hot Shoe (This has been modified by drilling a hole using a #11 drill and the special tap) ???
 - Mounting Screw
- Stock Room
 - Cable, Camera to Monitor (125-0082)
 - Lens, Macro Adapter (122-0194)
 - Memory Card, 24MB (122-01238)
 - Template, Monitor (130-0015)

Inspect all components for manufacturing defects, fit and scratches.

Any items that do not pass inspections will need to be returned to vendor along with completed RTV form.

Assembly Procedure

- Attach Neck-strap to camera (Refer to page 5 of manual for instructions)
- Load the battery (Refer to page 14 of manual for instructions)
- Load the button-type battery (Refer to page 18 of manual for instructions)
- Insert memory card into camera (Refer to pages 22-23 of manual for instructions)
- Attach Monitor to camera
- Attach RCA end of 125-0082 cable to camera's video output(Page 32) and the other end to the monitor's video input.
- Attach modified step-up ring to camera by screwing it to end of focus lens
- Attach Macro lens by sliding onto step-up lens. Fit should be snug but not too tight or too loose.

Setup Procedure

Turn the Mode dial to "Setup"

- Set time and date accordingly. (Page 20)
- Quality: Normal (34 pictures using a 12MB memory card)
- FL: 1280 x 1000 image quality
- Preview: ON (PREV). Page 67 in manual.
- Live: 30 (seconds). Page 74 in manual.
- IMG.: St (as opposed to CL, clear).
- Zoom: none.
- White balance: STD.
- ISO: 100 (normal).