

GENDEX INFOFAX

O65 General Operation

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Rev: 0000

1. Collimator/position indicator device (P.I.D.)

Your system is supplied with a 8" (20 cm) S.S.D. open-end round collimator/position indicator 1 (fig. 1). This is suitable for either bisecting or paralleling radiographic techniques. It is designed for use in proximity with the patient and provides a maximum beam diameter of 2 3/8" (60 mm) at the distal end.

The P.I.D. is designed to attach positively to the tubehead via a "twist lock" or bayonet mechanism, simply press the cone against the cone attachment bracket located on the tubehead and twist one-quarter turn.

The focal spot center 2 (fig. 1) is marked on the tubehead cover.

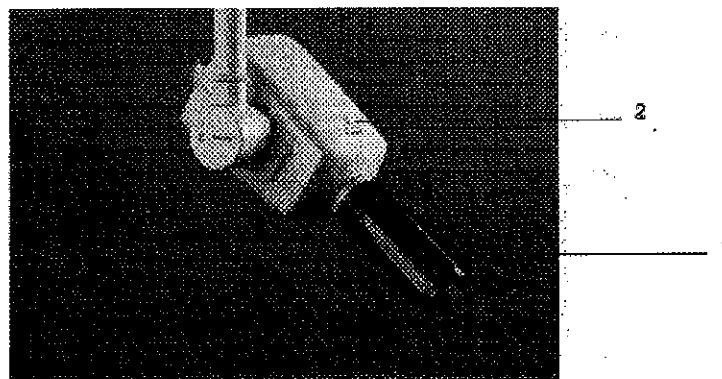


Fig. 1

2. Secondent E timer/exposure control

This is an extremely user friendly, basic Intraoral X-ray timer, designed for long-life and minimal maintenance. A large rocker switch 3 (fig. 2) at the top of the timer is provided to control the mains power, it is provided with a green "power on" L.E.D. Indicator 4 (fig. 2).

A single large dial 5 (fig. 2) is provided to allow adjustment of individual exposure times, 0.05 s to 3.2 s in 19 increments. This allows the system to accommodate many film, processing, and exposure requirements. The SECONDENT E timer compensates automatically for mains fluctuations.

3. Operation

1. Position film and the P.I.D. at the desired location.
2. Set the main dial to the desired exposure time.
3. Press the mains switch 3 to the "on" position.
4. Grasp the exposure switch 6 (fig. 2) and move to a position as far removed from the patient as possible.
5. Apply pressure to the handswitch pushbutton. The exposure visual 7 (fig. 2) and aural indicators will alert you to X-Ray emission. REMEMBER, the handswitch must be held till the alert indicators cease.
6. Release the handswitch or the hook, remove and process the film.

Caution:

The exposure button employs a "dead man" type switch as a safety feature. If the operator releases the button prematurely, the exposure is immediately terminated. To obtain full exposure selected, the exposure button must be held depressed until the visual and aural "X-Ray Alert" indicators have ceased.

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4. Exposure factors

Your Oralix 65S X-Ray system provides a nominal 65 kVp, 7.5 mA, grid controlled energy source which is controlled by a stable timer featuring the following settings:

Switch pos.	Exposure time	X-Ray pulses @ 60 Hz	Accuracy (pulses)
1.	0.05 sec.	3	± 1
2.	0.063 sec.	4	± 1
3.	0.08 sec.	5	± 1
4.	0.1 sec.	6	± 1
5.	0.125 sec.	8	± 1
6.	0.16 sec.	10	± 1
7.	0.2 sec.	12	± 1
8.	0.25 sec.	15	± 1
9.	0.32 sec.	20	± 1
10.	0.4 sec.	24	± 2
11.	0.5 sec.	30	± 2
12.	0.63 sec.	38	± 2
13.	0.8 sec.	48	± 3
14.	1.0 sec.	60	± 3
15.	1.25 sec.	75	± 4
16.	1.6 sec.	96	± 5
17.	2.0 sec.	120	± 6
18.	2.5 sec.	150	± 8
19.	3.2 sec.	192	± 10

Compare the chart expose times (and pulse counts) with your film manufacturer's guidelines concerning film speed and processing to determine proper exposure technique.

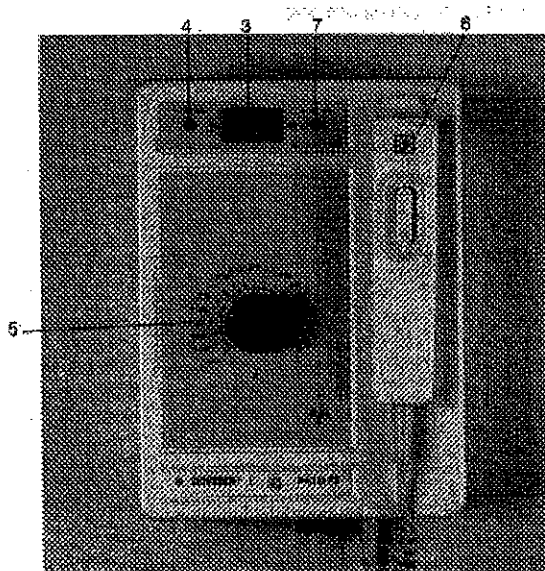


Fig. 2

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065 Exposure Guidelines

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FILM SPEED		TYPE E KODAK [TM] EKTASPEED [TM]					TYPE D KODAK [TM] ULTRASPEED [TM]				
TECHNIC		BISECTING EXPOSURE T.	ANGLE	PARALLEL EXPOSURE T.	OCCUSAL EXPOSURE	BITEWING EXPOSURE	BISECTING EXPOSURE T.	ANGLE	PARALLEL EXPOSURE T.	OCCUSAL EXPOSURE T.	BITEWING EXPOSURE T.
M A X I L L A	INCISORS	0.20 s	+50°	0.20 s	0.50 s	—	0.50 s	+50°	0.50 s	1.25 s	—
	CUSPID	0.16 s	+45°	0.20 s		0.20 s	0.40 s	+45°	0.50 s		0.50 s
	PREMOLARS	0.20 s	+40°	0.25 s			0.50 s	+40°	0.63 s		
	MOLARS	0.40 s	+30°	0.40 s			1.00 s	+30°	1.00 s		
M A N D I B U L A	INCISORS	0.125 s	20°	0.20 s	0.40 s	—	0.32 s	-20°	0.50 s	1.00 s	—
	CUSPIDS	0.16 s	-20°	0.20 s		0.20 s	0.40 s	-20°	0.50 s		0.50 s
	PREMOLARS	0.16 s	-10°	0.20 s			0.40 s	-10°	0.50 s		
	MOLARS	0.20 s	-5°	0.25 s			0.50 s	-5°	0.63 s		

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Exposure Factors

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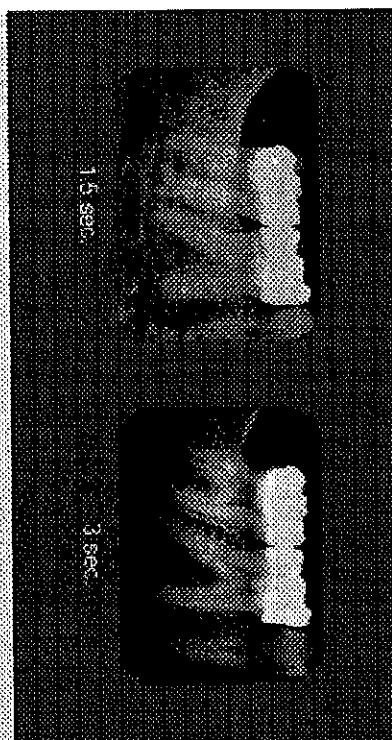
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Exposure Factors

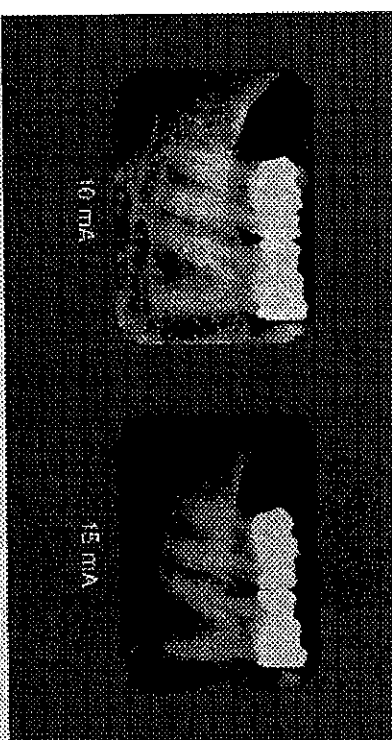
Exposure Time (Seconds)

If two radiographs are taken of the same area using a fixed milliamperage and kilovoltage BUT VARYING THE EXPOSURE TIME, the one taken at the longer exposure time will display a greater overall density.



Milliamperage (mA)

If radiographs are taken of the same area using a fixed exposure time and kilovoltage BUT VARYING THE MILLIAMPERAGE, the overall density will be increased as the milliamperage is raised.



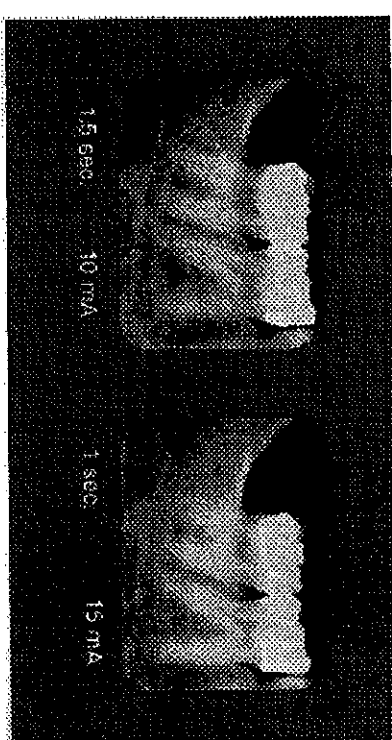
Conclusion

Since exposure time and milliamperage both control the density of a radiograph, they can be combined as a single factor known as milliamperage-seconds (mAs).

Example:

5 mA X 3 sec. = 15 mAs
 10 mA X 1.5 sec. = 15 mAs
 15 mA X 1 sec. = 15 mAs
 = Constant Density

NOTE: It is recommended that maximum milliamperage be used to permit the shortest exposure time.



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Exposure Factors

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Exposure Factors

Kilovoltage

If two radiographs are taken of the same area using a fixed exposure time and milliamperage BUT VARYING THE KILOVOLTAGE, the one taken with the greater kilovoltage will display a greater density and a diminished contrast.



A radiograph taken with LOW KILOVOLTAGE will display HIGH CONTRAST since the number of densities which comprise the image are relatively few in number because of the limited penetrating power of the x-ray beam. This is known as short-scale contrast; densities are limited and change abruptly from black to white.

A radiograph taken with HIGH KILOVOLTAGE will display LOW CONTRAST since the number of densities in the image are increased because of the greater penetrating power of the x-ray beam. This is known as long-scale contrast since additional densities are recorded on the film and the result is a more gradual change from black to white. These added densities may detract from the esthetic quality of the image BUT they also may reveal information which is obscured on the more esthetic, high contrast radiograph.

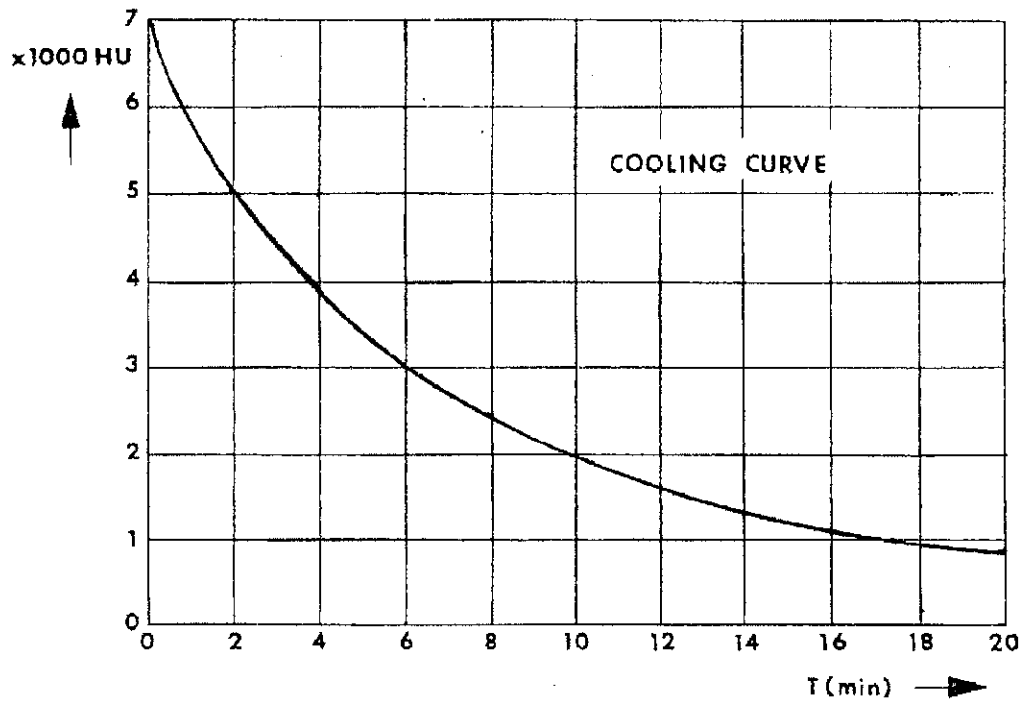
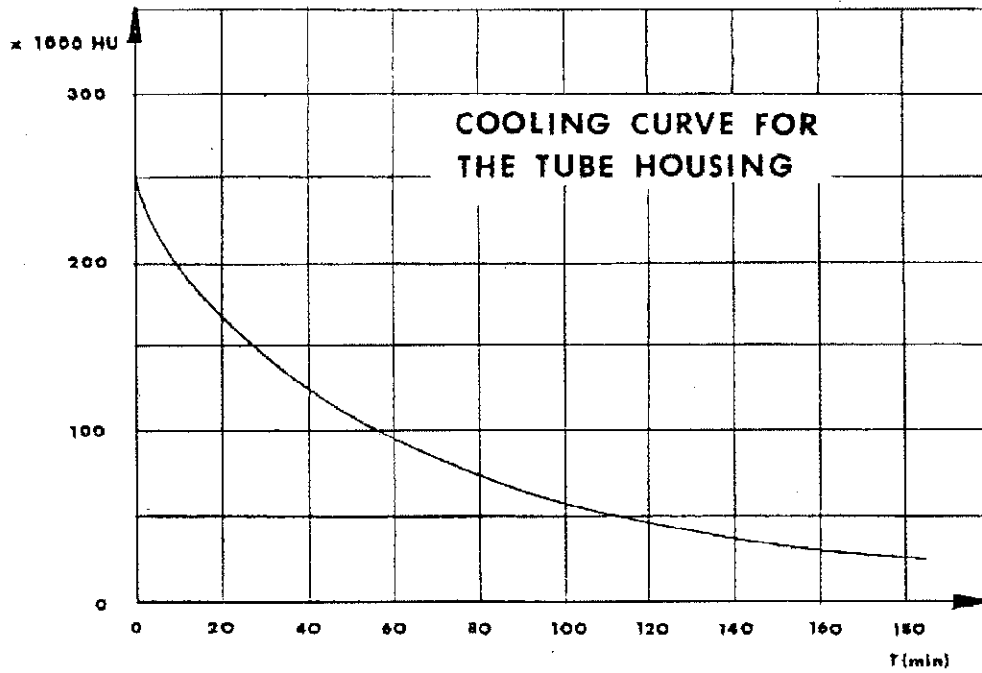
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O65 Cooling Curve

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Asepsis

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Cleaning & Disinfection

Always disconnect the equipment from the wall outlet or disconnect power at the circuit breaker supply before cleaning.

Do not allow water or any other liquids to enter the equipment, as they may cause short-circuit and corrosion. Do not use abrasive polishes. Suggested liquids for equipment cleaning: mild detergent products

Always disconnect the equipment from the main power source before disinfection.

All the equipment including accessories and connecting cable, can be disinfected by wiping with a cloth dampened with a **Iodophor*** disinfectant solution. Do not use solvent, Gluteraldehydes, Alcohols, Phenols, or corrosive disinfectants. Do not soak components for more than manufactures recommended time.

GX-Pan, Panelipse I & II, Bite guides may be autoclaved at **no greater than 250 deg.F @15P.S.I. for no longer than 30 minutes.**

Spray disinfectants are not recommended, as the disinfectant may enter the equipment causing short circuits or corrosion.

If the use of a spray disinfectant is unavoidable, the following precautions must be taken:

- If the room in which the equipment is installed is to be disinfected by means of an atomizer, the equipment should be carefully covered with a plastic sheet.
- The equipment should be switched off and allowed to cool down well in advance in order to prevent convection currents drawing the disinfectant mist into the equipment.
- After dispersal of the disinfectant mist, the plastic sheeting can be removed and the equipment can be disinfected by wiping.
- The equipment may not be used in the presence of disinfectants which vaporize to form explosive mixtures. The vapor must be allowed to disperse before the equipment is returned to use.

** Caution: Iodophors will cause varying degrees of discoloration. Cleaning with soap and water or an iodophors neutralizer may reduce this discoloration.*