

Notice

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Background

Visi-X is a field position analyser for X-ray fields. The analyser is cassette sized and is based on the phosphorescence of an X-ray sensitive phosphor compound. The phosphor is also excitable from ambient light hence the daylight filter which always should be kept in place except when doing read-outs.

**The maximum permissible deviation for X-ray fields is usually
1 % of the focus-plate distance.
Check with Your national standards.**

Operation

- 1) Darken the room. (All light sources should be switched off. A rule of thumb: the Visi-X scales should be hardly noticeable through the daylight filter.)
- 2) Make sure that the Visi-X has the daylight filter in place.
- 3) Set the distance.
 - a) Conventional X-ray lab: between 0.5 – 0.8 m. (20" – 30").
 - b) Dental units: at the end of the aiming piece.
 - c) Mammography: on top of the Bucky tray.
 - d) X-ray therapy units (i.e. 100 – 250 kVp): 1 m (40").
- 4) Adjust the light field according to the guiding scales, without removing the lid.
- 5) Set the exposure/radiation parameters.
 - a) Conventional X-ray lab: 100 kVp, 2 × 100 mAs. (>15 seconds intermediate pause).
 - b) Dental units: highest possible kVp, 1 s.
 - c) Mammography: highest possible kVp, 200 mAs.
 - d) X-ray therapy units (i.e. 100 – 250 kVp): 1 – 2 Gy.
- 6) Make an exposure / irradiate.
- 7) Remove the lid and read the misalignment between light field and radiation field directly on the scales. If the read-out fails due to ambient light, move the Visi-X to the nearest sufficiently dark room.
(Avoid darkrooms. The phosphorescence may give a fog on film).
The after glowing field will be visible for several minutes. It will be readable 2 – 4 minutes.
For the best results, it is recommended to do the read-out within 30 seconds.

Hints & advice

- Adapt Your eyes to the dark well before the exposure and read-out.
- Opening Visi-X just before an exposure, will increase the apparent light output avoiding attenuation of the daylight filter.
- The Visi-X can also be used to check the centering of the Bucky tray. Collimate the field to approximately 5 × 5 cm. (The daylight filter does not have to be used). Slide the Visi-X into the tray. Make an exposure. Use a preferably transparent ruler. Put it along the diagonal of the radiation field (i.e. the afterglow). Read the distance to the centre of the Visi-X.
- It is not necessary to wait for the afterglow to fade out between exposures. Provided that the following exposure gives the same dose or higher, it will be impossible to see the earlier afterglow due to the high contrast.
- Heavily filtrated tubes, such as chest stands etc., will have a negative effect on the afterglow intensity. If the tube filter is attached to a rotating or removable assembly, make the filtration as low as possible prior to the exposure.
- Avoid touching the surface of the light filter or the detection area. Always handle the Visi-X by the edges. Clean it with a cloth moistened with detergent, then wipe it off completely. Never use thinner or benzene. The perspex will be damaged.
- Never use running water on the Visi-X. The phosphor is hygroscopic (water absorbing) and will be damaged.

Specifications	
Visi-X 200/20	
Scales:	circular fields: 5 – 6 cm diameter square fields: 3.5 × 4.4 cm, 10 × 10 cm, 15 × 15 cm, 20 × 20 cm
Deviation shown:	±10 mm
Phosphor:	Cadmium-free long afterglow compound
Size:	220 × 276 × 11 mm
Weight:	1200 g
Recommended operational temperature:	15 – 45 °C
Recommended output for readable luminance:	130 µGy/mAs at 100 kVp and 75 cm
Recommended energy range for excitors:	15 – 200 keV
Typical luminance 30 s from exposure	300 mcd/m ²

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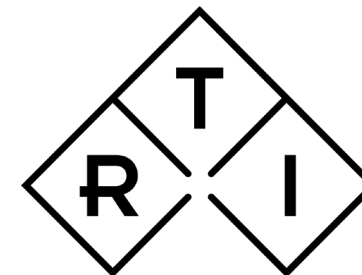
USER'S MANUAL

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