

How to use the manual

The instructions in the present manual are meant to be self-explanatory. Each page displays one examination. Read through the text, look at the images, and follow the instructions given, step by step.

Techniques: BASIC or ADDITIONAL

All BASIC views must be taken whenever an examination is ordered.

ADDITIONAL views are taken only when:

- (a) the condition of the patient does not permit a basic view; or
- (b) the diagnostic information provided by the basic view is insufficient.

Position of the patient

ERECT	standing or sitting up,
SUPINE	lying on the back,
PRONE	lying on the stomach,
DECUBITUS	lying on the side,
OBLIQUE	turned a little, usually at a given angle,
LATERAL	standing or sitting or lying with one side close to the cassette or cassette holder.

X-ray beam direction: AP or PA

AP = Antero-Posterior (front to back) and
 PA = Posterior-Anterior (back to front)
 indicates the direction of the X-ray beam through the patient onto the cassette.

Instructions on each page

The position of the X-ray equipment.
 The cassette size and nominal speed of the screen-film combination (see below).^{*}
 When appropriate to use Right or Left marker.
 Recommendation to collimate (the X-ray field).
 Exposure factors (see below).^{**}
 The position of the patient.
 An example of resulting radiograph.

* *Film speed and cassettes*

The speed of the screen-film combination should be written on the cassettes.

In the "blue" system (calcium-tungstate and rapid yttrium-tantalate screens) the nominal speed is equal to the actual speed at any kV value. In the manual, the used speeds of the screen-film combinations are 50 and 200 for the "blue" system.

In the "green" system (gadolinium-oxysulfide) the actual speed varies with the kV value, low speed at low kV values, nominal speed at 70–75 kV and a little higher speed at higher kV values. In the manual, the used speeds of the screen-film combinations are 100, 200, and 400 for the "green" system. Actual speed is shown for different kV values as nominal speed/actual speed, for example 100/63 and 400/500.

In a few cases a loose grid is recommended, but a grid cassette is preferable.

** *Exposure factors*

The presented exposure values are based on a standard WHIS-RAD installation, with a focus-film distance (FFD) of 140 cm, a fixed Pb/Al grid (with a ratio of 10:1 and 40 lines/cm focused at 135–140 cm) built into the cassette holder. Where shown, the cassette is placed outside the cassette holder, adjacent to the body part examined.

The exposure factors are based on a "reference man" with a height of 180 cm (6 feet) and a weight of 80 kg (175 lbs).

Note that the exposure factors also are dependent on the brand of screens, brand of films, and the film processing. The values have to be locally adjusted.

Exposure factors for children are very difficult to give, depending on the different shape of children with the same weight or age. Approximate values are given but have to be individually adjusted.

The kV value will determine the contrast in the image.

The mAs value will determine the image blackening.

For detailed exposure tables, see chapter 11.