

FLUKE®

Biomedical

Nuclear Associates 57-440

CLEAR-Pb® Podiatry X-Ray Compensation Filter System

Users Manual

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Section 1

General Information


1.1 Introduction

CLEAR-Pb Compensation X-Ray Filters are made of lead-plastic material that is 30% lead by weight. Since lead is an efficient absorber of x-rays, the filters will attenuate the x-ray beam. By varying the shape and thickness of the filters, many combinations of filtering action can be achieved...from almost complete attenuation to full penetration.

CLEAR-Pb Podiatry Filters are translucent and lightweight. By means of our "Quick-Stik" system of magnetic strips, the filters can be held firmly in place or repositioned instantly, You can see and/or adjust the area of filter coverage as necessary by observing the light shadow projected on the region being radiographed. Last minute positioning checks of the patient, x-ray collimator and filters are possible. Selected beam shaping has never been so simple and effective.

CLEAR-Pb Filters should be used with a rare-earth film screen combination to improve image quality. Consult your film manufacturer for the proper combination. CLEAR-Pb may also be used with positive Polaroid instant radiographic film.

1.2 Applications and Specifications

	Podiatry Filter	Filter Holder
Model #	57-440	-
Applications	PA Foot	-
	PA Foot Weight-Bearing	-
	LAT Foot	-
	LAT Foot Weight-Bearing	-
Length x Width	6.5" L x 2" W	7" L x 3" W
Thickness	5/32"	1/16"
Configuration		

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Section 2 Usage

2.1 Filter Holder and Mounting Instructions

- A. For conventional, square collimator mounting: Attach two strips of 1" wide tape fastener to collimator housing outside the field of view. See Figure 1-1. The filter holder should be oriented perpendicular to the axis of the foot. The filter attaches to the filter holder via the "Quick Stik" magnetic mounting system.

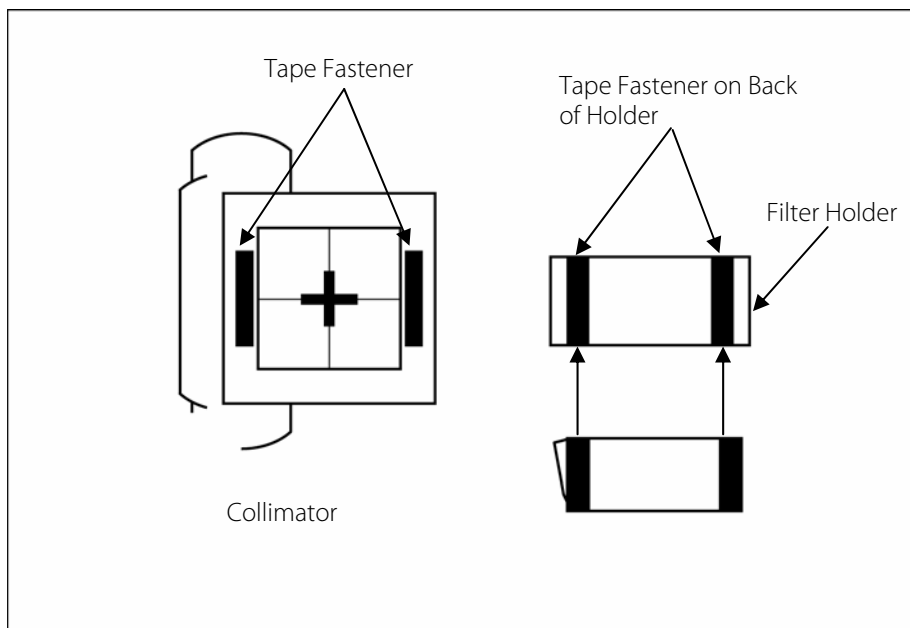


Figure 1-1. Mounting to a Square Collimator

- B. For older model beam-restricting cones, the 1" wide tape fastener should be applied at opposite, ends of the cone, perpendicular to the axis of the foot. The filter then attaches to the filter holder in the same manner as conventional collimators. See Figure 1- 2.

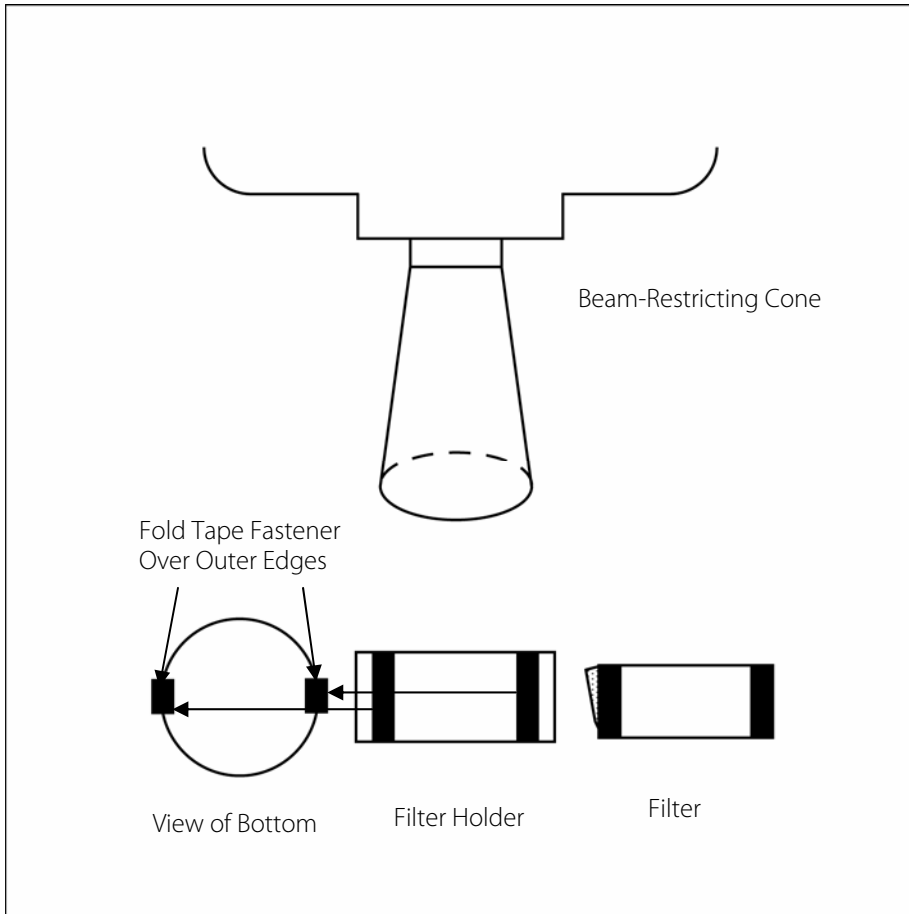


Figure 1-2. *Mounting to a Beam-Restricting Cone*

2.2 Filter Positioning

NOTE

This section contains a detailed description of filter positioning. Please read it thoroughly before continuing.

- A. A. AP Foot 40" F.F.D. When performing a single-exposure AP radiograph of the foot, the thin filtration portion of the filter should begin at the proximal end of the metatarsal bones. The thick edge of the filter should extend beyond the terminal phalanges (see Figure 2-1).
- B. Technique should be increased in order to image the tarsal bones; the attenuation of the filter will compensate for the exposure in order to prevent the terminal phalanges from becoming overexposed. The entire foot can be imaged with one exposure.

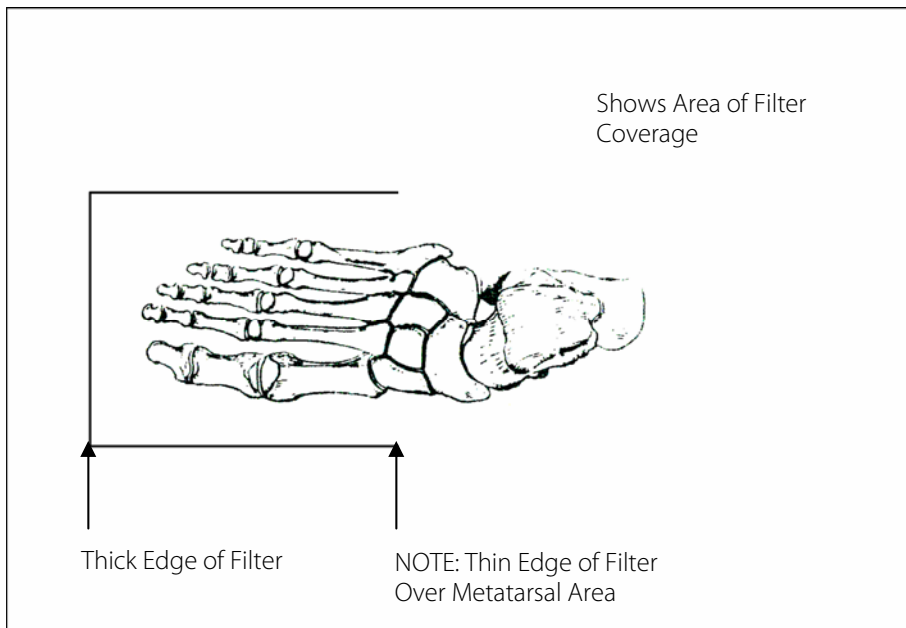


Figure 2-1. AP Filter Orientation

- C. When performing a single-exposure lateral radiograph of the foot, the thin filtration portion of the filter should begin at the proximal end of the metatarsal bones. The thick edge of the filter should extend beyond the terminal phalanges (see Figure 2-2).

Technique should be increased in order to image the tarsal bones; the attenuation of the filter will compensate for the less-dense terminal phalanges.

- D. For AP and lateral weight-bearing views, the positioning is the same as for conventional views.

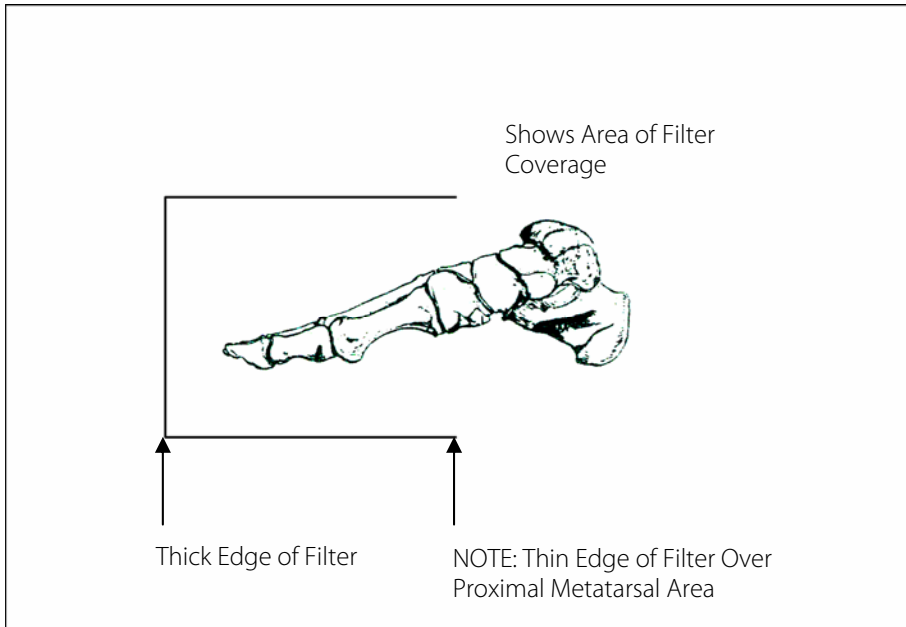


Figure 2-2. Lateral Filter Orientation

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