

Model 37-001 Tel-Align™

Precision radiation therapy requires treatment geometry that is accurate and reproducible. Since machine geometry can easily become misaligned, it should be checked frequently. The Tel-Align™ permits a quick check of these parameters and facilitates the adjustment of those which require realignment. It is especially useful in an overall QA program.

The device consists of a rectangular plastic base, 17.5 cm x 14 cm, 1 cm thick, with a removable vertical scale, 18 cm high. The upper surface of the base has lead markers that form a square (10 x 10 cm) for visualization on film. A cross hair in the center of the square lines up with two additional sets of cross hairs, one on each outer edge of the base.

The Tel-Align™ is easy to use. After the machine field size (10 x 10 cm) has been set, the table height is adjusted until the base surface is at the isocenter distance. The collimator rotation angle is set at 0°. When positioned properly, the edges of the light field should coincide with the inscribed square. The field center should intersect the center cross hair, and the side lights should agree with the corresponding cross hairs at the edges of the base.

The vertical scale is placed on the base to check the optical distance indicator, or a film can be placed under the base to check the light field versus the radiation field. By rotating the gantry angle at $\pm 90^\circ$, the isocenter variation and optical back pointer are also checked. If adjustment of the machine geometry is needed, it can be done readily with the Tel-Align™ in place.

*Designed and developed by Medical Physics Dept., Memorial Sloan Kettering Hospital, New York, NY



Left: Model 37-001; **Right** Model LAD-4

Model 37-001 Permits checks of:

- ▶ Optical distance indicator over a 15 cm range
- ▶ Collimator and central cross hair
- ▶ Head rotation and pitch
- ▶ Isocenter variation
- ▶ Side lights and optical back pointer
- ▶ Light field vs. radiation field

Model LAD-4 Laser Alignment Device

The Model LAD-4 is an improved CNMC designed Laser Alignment Device for the test and alignment of isocenter beams. It allows for adjustments to be made by one person. One setup permits alignment of side, overhead and sagittal lasers, and it is usable on dot or line lasers. The materials for the LAD-4 have been chosen for improved ruggedness. It is precision made of acrylic. White surfaces are laminated, and the lines are precision engraved, eliminating paint chipping and jagged lines associated with other designs.

The LAD-4 measures 5.1 cm tall, 5.1 cm wide, and 5.7 cm long (2x2x2.25 in) and weighs 95 grams.

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