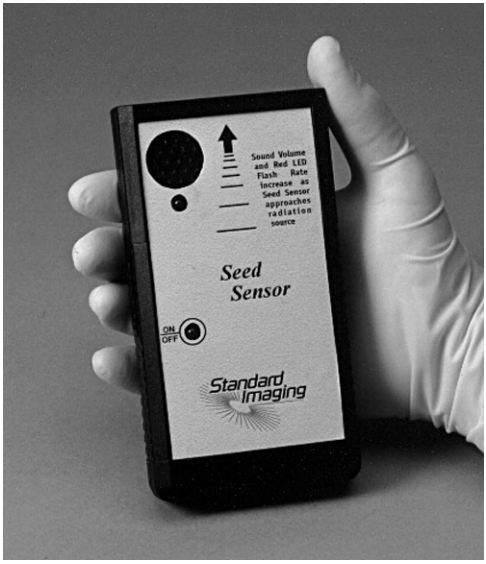
SeeDOS Product User Manual

# Seed Sensor™



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# General Precautions

Failure to observe these precautions may result in damage to device.

⚠ CAUTION: Do not steam sterilize (autoclave), ETO sterilize, or gamma ray sterilize.

⚠ CAUTION: Do not drop or mishandle unit.

⚠ CAUTION: Battery is only operator serviceable part. Refer service to Standard Imaging.

⚠ WARNING: Electrical Shock Hazard. Do Not Remove Cover. Refer service to Standard Imaging.

# Customer Responsibility

This product and its components will perform properly and reliably only when operated and maintained in accordance with the instructions contained in this manual and accompanying labels. A defective device should not be used. Parts which may be broken or missing or are clearly worn, distorted or contaminated should be replaced immediately with genuine replacement parts manufactured by or made available from Standard Imaging Inc.

⚠ CAUTION: Federal law in the U.S.A. and Canada restricts the sale, distribution or use of this device to, by or on the order of a licensed medical practitioner. The use of this device should be restricted to the supervision of a qualified medical physicist. Handling of radioactive sources is potentially hazardous and should be performed by qualified personnel.

Should repair or replacement of this device become necessary after the warranty period, the customer should seek advice from Standard Imaging Inc. prior to such repair or replacement. If this device is in need of repair, it should not be used until all repairs have been made and the product is functioning properly and ready for use. The owner of this device has sole responsibility for any malfunction resulting from abuse, improper use or maintenance, or repair by anyone other than Standard Imaging Inc.

# Features and Specifications

Dimensions

Width.....8.4 cm (3.3 inches)
Length.....15.7 cm (6.2 inches)
Height.....3.0 cm (1.2 inches)
Weight.....195 g (6.9 oz)

Power

Requirements.....9 VDC Battery
Approx. Lifetime.....20 hours continuous use

Operating Conditions

Pressure.....680 to 770 mm Hg
Temperature.....10 to 40 °C
Relative Humidity.....20 to 80%, non-condensing

Storage and Transport Conditions

Pressure.....600 to 800 mm Hg
Temperature.....-15 to 50 °C
Relative Humidity.....10 to 95%, non-condensing

Specifications subject to change without notice.

# Description

The Seed Sensor™, REF 90065, is a hand-held, battery-powered device which incorporates a collimated (or directional) radiation sensor with an audible and visual strength indicator. This provides a simple and effective method of locating dropped or misplaced radioactive brachytherapy sources. The audible indicator clicks faster and visual indicator flashes faster as the approximate distance from the seed decreases. The approximate area of the field detected, called field of view (FOV), and its diameter at various distances is given in Table 1.

The Seed Sensor is also ideal for a quick survey of patient implant rooms and needle loading stations following implant procedures, to ensure no radiation sources remain present.

The Seed Sensor is shielded to provide directionality, and to resist extraneous sources of radiation. It is therefore very useful in detecting sources in areas where other radioactive sources are stored.

Table 1: The FOV and diameter of the field at various distances

| Distance of Seed Sensor from the Surface | Diameter of detected field | FOV or Area of the field detected |
|---|---|---|
| 10 cm | 4.5 cm | 16 $cm^2$ |
| 20 cm | 8 cm | 51 $cm^2$ |
| 50 cm | 19 cm | 280 $cm^2$ |
| 100 cm | 41 cm | 1330 $cm^2$ |

# Operation

## Preparation for use:

1. If necessary, install a 9 Volt DC battery into the battery compartment of the device. The green ON/OFF indictator LED will light whenever there is sufficient power to properly run the device.
2. Push the slide switch on the side of the Seed Sensor forward to the ON position. No warm-up time is required for proper operation.

## Finding Lost Seeds:

For quickest seed location, it is recommended the user remove all other sources of radiation from the immediate area that is being searched.

1. Position of seed not known:

   Slowly move the Seed Sensor sweeping out the entire area in a methodical fashion. The arrow on the top label points in the direction of the radiation sensor. Be alert for an increase in the audible clicks and in the flashing of the red LED indicator. In this manner limit the portion of the area in which the seed may be located. Then proceed as in #2 below.

2. Position of seed approximately known:

   Point the arrow on the top label of the Seed Sensor in the suspected direction of the lost seed. Slowly sweep the device across the field, listening for an increase in the audible clicks or looking for an increase in the flashing of the red LED on the front face. As the seed is approached, the audible clicks will increase and the red LED will flash more frequently. Move the Seed Sensor closer to the potential seed, while slowly sweeping the area to determine the greatest intensity of audible or visual signal. The Seed Sensor will end up "pointing" at the seed. Visually note the seed and safely pick it up and return it to its shielding.

## Maintenance

As is standard practice, it is recommended that the Seed Sensor be examined after each use for deterioration.

## Service

There are no serviceable parts on the device.

## Parts and Accessories List

| REF | Description |
|---|---|
| 90065 | Seed Sensor |
| 80195 | Instruction Manual |

***Notice:*** *We welcome your evaluation of this manual.*
*Your comments and suggestions help us improve our publications.*

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# Warranty

This product is sold by Standard Imaging Inc. under the warranty herein set forth. The warranty is extended only to the buyer purchasing the product directly from Standard Imaging Inc. or as a new product from an authorized dealer or distributor of Standard Imaging Inc.

For a period of twelve (12) months from the date of original delivery to the purchaser or a distributor, this product is warranted against functional defects in materials and workmanship, provided it is properly operated under conditions of normal use, and that repairs and replacements are made in accordance herewith. The foregoing warranty shall not apply if the product has been disassembled, altered or repaired other than by Standard Imaging Inc. or if the product has been subject to abuse, misuse, negligence or accident.

Standard Imaging's sole and exclusive obligation and the purchaser's sole and exclusive remedy under the above warranties are limited to repairing or replacing free of charge, at Standard Imaging's option, a product: (1) which contains a defect covered by the above warranties; (2) which are reported to Standard Imaging not later than seven (7) days after the expiration date of the 12-month warranty period; (3) which are returned to Standard Imaging promptly after discovery of the defect; and (4) which are found to be defective upon Standard Imaging's examination. Transportation charges are the buyer's responsibility. STANDARD IMAGING INC. SHALL NOT BE OTHERWISE LIABLE FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO, INCIDENTAL DAMAGES, CONSEQUENTIAL DAMAGES, OR SPECIAL DAMAGES.

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