

# decimal eRT User Guide

## Overview

The decimal ElectronRT (eRT) application is used for treatment planning of electron radiation therapy treatments. decimal eRT is an interactive end user application that allows users to create treatment plans and electron beam shaping devices (e.g.: bolus, blocks, and skin collimators) and order those devices to .decimal for fabrication.

## Purpose

The purpose of this document is to provide guidance on the setup, access, and usage of decimal eRT.

## Getting Started

Proper use of this software is critical to safe and effective treatment of patients using plans generated by this application. Users are expected to read and understand this complete User Guide including the [Instructions for Use](#), which outlines the general usage principles and limitations of the decimal eRT app. Users must read and understand these instructions before operating the system for clinical use. Refer to each section below for complete details:

- **Instructions for Use**
  - [Overview and Indications for Use](#)
  - [User Responsibilities](#)
  - [Warning](#)
  - [Intended Use](#)
  - [User Profile](#)
  - [Product Features](#)
  - [Data Model](#)

## Precautions

It is the responsibility of those utilizing this application to ensure all that all usages of this product relating to patient treatments are performed by trained and qualified personnel only and that such personnel is aware that the quality of any generated treatment plans is highly dependent on the quality and correctness of the input data; therefore if any questions or uncertainties exist regarding the quality, units, or identification of input data arise, they must be investigated and resolved before the data are used.

## Initial Setup

Once decimal eRT has been purchased, .decimal staff will assist with beam model creation, software installation, and user training. Users will be generally be trained at two separate levels, system administrators and end users. System administrators will be setup with appropriate access and tools for managing software including both the local resources and user accounts. End users will be primarily trained on the details of generating high-quality treatment plans using the local client portion of the application suite. The beam modeling and equipment setup processes are explained more fully in the Commissioning Guide.

## Installation

The decimal eRT application is installed via the [decimal Launcher](#) client application. Refer to the decimal Launcher [user guide](#) for details on using the decimal Launcher.

The main high level requirements for using the decimal Launcher and decimal eRT application are:

1. .decimal Direct (using Auth0) account credentials
  1. This account needs association with a site ID that has been granted use of the decimal eRT application
  2. This account needs specific .decimal Permission for accessing the eRT modules
2. The decimal Launcher installed

Please refer to the decimal eRT [System Requirements](#) page for complete details on hardware and network requirements.

## Site Settings and Facility Model

When using the decimal eRT app for the first time users will be required to setup and configure their site facility settings. This includes organization level details (name, report logo, override materials, etc) and specific site details (ordering address, physicians, DICOM export servers, QA options, and machine commissioning).

The [Organization Configuration](#) user guide section describes each of the blocks and configuration interfaces.

## Keyboard and Mouse Controls

The decimal eRT app utilizes keyboard shortcuts to help streamline many commonly used functions and display controls. A complete listing of these shortcuts along with a full description of the mouse controls is located at the [Keyboard and Mouse Controls page](#).

## Feature/Task Descriptions

The following task descriptions are thorough guides providing complete information about each task within the decimal eRT application.

- [Launching decimal eRT](#)
- [DICOM Patient Import](#)
- [Patient Courses](#)
- [Electron Plans](#)
  - [Imaging](#)
    - [Density Overrides](#)
  - [Electron Beams](#)
    - [Electron Block Creation](#)
    - [Electron Bolus Creation](#)
    - [Electron Intensity Modulator](#)
  - [Plan Approval](#)
  - [Plan Reports](#)
  - [Plan QA](#)
  - [DICOM Export](#)
- [Organization Configuration](#)
- [Sandbox Testing](#)
- [App Settings](#)

## System Usage

### Improper System Usage

When using decimal eRT, as with any complex program, there is the potential for misuse. The decimal eRT app is a radiotherapy treatment planning tool that is intended to be used by experienced and knowledgeable professionals working in the field of radiation therapy.

## Known Application Limitations

Below are listed the known application limitations, defects, or inconsistencies.

### General

1. Astroid uses DICOM patient space coordinates for all slice and 3D views and IEC 61217 coordinate systems for BEV (other options, such as machine based coordinate systems are NOT available at this time)

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