# K-DT1 RADAR Doppler Target

Product Information

## Features

- Handheld K-Band Doppler Target Simulator
- Battery Operation
- Programmable Speed Range 1 ... 300km/h
- Programmable Movement Direction
- Programmable Signal Time
- 3 Programmable Presets
- Standalone or Hosted Operation
- USB Interface to Host Computer
- Compact and Rugged Construction
- DT1-Remote PC Software included

## Applications

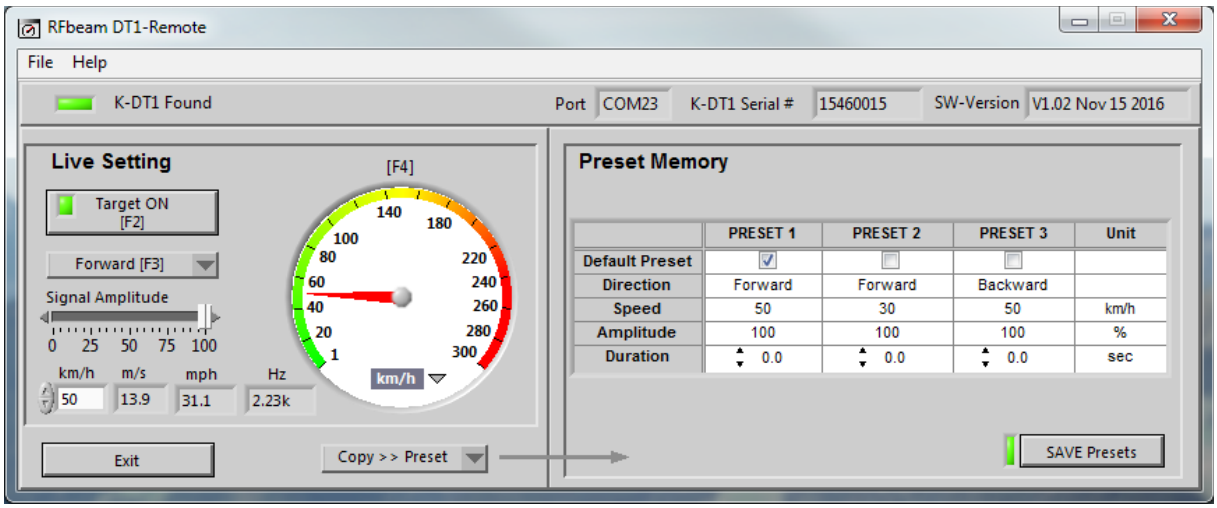
- Mobile Test Equipments
- Production Final Inspection
- Incoming Components Inspection
- System Tuning and Adjustment

## Description

K-DT1 is a portable moving target simulator for K-band Radar transceivers. It can be used for calibrating and testing speed displays, door openers, safety systems and other radar based Doppler sensors. K-DT1 uses a circular polarized antenna. You can use K-DT1 in any orientation independently of the sensor orientation.
A software generated modulation signal allows generation of low distortion and directional Doppler signals from 44Hz to 13.4kHz corresponding to speeds from 1km/h to 300km/h.

## Configuration Software

K-DT1 may be connected via USB to any Windows PC. The included DT1-Remote software allows realtime remote controlling and configuring the presets of the K-DT1.



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## Characteristics

| Parameter | Conditions / Notes | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **Operating conditions** | | | | | | |
| Supply voltage | Battery | $V_{ccBatt}$ | 3.6 | 6 | 7 | V |
| | USB | $V_{ccUSB}$ | 4.5 | 5 | 5.5 | V |
| Supply current | Operating | $I_{cc}$ | | 340 | | mA |
| | Standby | $I_{cc0}$ | | 50 | | uA |
| Battery Lifetime | Daily use 50 seconds, Alcaline cells | $T_{op}$ | | 1 | | Year |
| Operating temperature | non condensing | $T_{op}$ | 0 | | +60 | °C |
| Storage temperature | | $T_{st}$ | -20 | | +80 | °C |
| **Doppler Simulator** | | | | | | |
| Frequency range | Transmit frequency of UUT | $f_{TG}$ | 24.000 | | 24.250 | GHz |
| Doppler frequency range | Digitally adjustable | $f_{Doppler}$ | 44 | | 13400 | Hz |
| Simulated speed range | Digitally adjustable | $v_{Doppler}$ | 1 | | 300 | km/h |
| Simulated speed resolution | | $r_{Doppler}$ | | 1 | | km/h |
| Output power range | Adjustable simulated object distance | $P_{out}$ | 1 | | 100 | % |
| Antenna gain | | | | 14 | | dBi |
| Antenna polarization | Right hand circular polarized | | | RHCP | | |
| Overall gain | For circular polarized tranceivers | | | 38 | | dB |
| | For linear polarized tranceivers | | | 32 | | dB |
| Out of band spurious | | | | | -30 | dBm |
| Aequivalent reflectivity | For circular polarized tranceivers | $RCS_{circ}$ | | 800 | | $cm^2$ |
| | For linear polarized tranceivers | $RCS_{lin}$ | | 200 | | $cm^2$ |
| **Host Interface** | | | | | | |
| USB | Serial USB, Mini-USB connector | | | | | |
| **Body** | | | | | | |
| Outline Dimensions | | | | 68x128x24 | | $mm^3$ |
| Weight | Including batteries | | | 185 | | g |
| **Accessories** | | | | | | |
| Case protection, Softcase, USB Cable, USB Memory Stick, 4 AA-size Alkaline Cells, Windows Software “DT1-Remote” | | | | | | |

## Ordering Information

Part #: RFbeam K-DT1