



RADENSO DS1



DS1 USER MANUAL

VERSION 1.07

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QUICK START

Button Operation



A. Power	Press	Power On/Off
	Press	Volume Level Up (0-9)
B. Vol +	Press (in Menu)	Move Right (in the main menu), or Down (in the submenu)
	Press	Volume Level Down (0-9)
C. Vol -	Press (in Menu)	Move Left (in the main menu), or Up (in the submenu)
	Press	Menu Mode
D. Menu	Press (in Menu)	Select an Option
	2 sec Press	Go back a menu
E. Mute	Press	Toggle Mute Off/On (During Alert). Store or Delete Lockout
	1 sec Press	Delete Red Light/Speed/Red Light & Speed Camera (During Alert)
	2 sec Press	Store or Delete User Point (While not Alerting)



COMMON FEATURES

Understanding Mute

1. Mute Mode can be activated by pressing [MUTE] during laser or radar alerts. Laser, radar, and over speed alerts will be muted.
2. Unit automatically turns Mute Mode off 20 seconds after the radar/laser alert ends.
3. Unit automatically turns Mute Mode off if the laser or radar band changes.
4. Unit automatically turns Mute Mode off if the Menu is used.

Factory Reset

Select **Factory Reset** in the Menu to reset all the settings except **GMT** and **Region** settings. **GMT** and **Region** settings will stay the same even after Factory Reset.



ACCESSORIES

This QR code will take you to everything you need regarding your new DS1: optional accessories, optional extended warranty, replacement parts, firmware updates and more

Radenso USB-C Direct Wire Kit with Mute Button



- Allows you to easily mute and create GPS lockouts without having to reach up to your radar detector
- Wiring can be hidden behind your car interior panels to provide a stealthy look
- Compatible with the Radenso DS1

Radenso Magnetic Suction Cup Mount



- Easily mount your detector to the windshield of your car
- One comes complimentary with your DS1, but replacements and additional mounts are available for purchase
- Compatible with the Radenso DS1

2 Year Extended Warranty



- An optional feature that adds 2 years to your warranty and the Radenso Ticket Free Guarantee



MENU SETTINGS

The default menu settings are denoted in bold.

Menu	Submenu	Option Menu
User Preference	Mode	Auto , Custom
	Voice	On , Off
	Ka Frequency Voice	On , Off
	Frequency Display	On, Off
	Low Speed Mute	Off, 5-45mph : 5mph step, 10-70km/h : 10km/h step Default: US/CAN: 15mph; AUS/NZ: 40km/h
	K X Low Speed Mute	Off, 5-65mph : 5mph step, 20-100km/h : 10km/h step Default: US/CAN: 15mph; AUS/NZ: 20km/h
	MRCD Low Speed Mute	Off, 5-65mph : 5mph step, 20-100km/h : 10km/h step Default: US/CAN: 15mph; AUS/NZ: 20km/h
	Overspeed Warning	Off , 65-105mph : 5mph step, 100-170km/h : 10km/h step
	BT	On, Off
Band On/Off	Laser	On , Off
	Ka	On , Off
	MRCD	On, Off Default: US, AUS, NZ: off; CAN: on
	K	On , Off
	X	On, Off
	POP Ka	On, Off
	POP K	On, Off
	K Gatso	On, Off



Menu	Submenu	Option Menu
Band Setting	K Notch	Block All Signals , Block Weak Signals, Off
	K Notch Display	On, Off
	Ka Radar Sensitivity	100% , 90%, 80%, 70%, 60%, 50%
	K Radar Sensitivity	100% , 90%, 80%, 70%, 60%, 50%
	X Radar Sensitivity	100% , 90%, 80%, 70%, 60%, 50%
	Ka	Wide , Narrow, Segment
	K	Wide, Narrow, NA K Narrow (AUS/NZ) Default: US, CAN: narrow; AUS/NZ: NA K Narrow
	Ka Segment Settings	Ka Seg1 - Ka Seg9, All On
	Ka Filter	On , Off
	K Filter	On , Off
	TSR Filter	On, Off
	Alert Priority	Band , Signal
Display Setting	Brightness	Auto , Bright, Dim, Dimmer
	Display Color	Red , Blue, White, Gray, Pink, Purple, Green, Amber
	Laser Alert Color	Red, Blue , White, Gray, Pink, Purple, Green, Amber
	Ka Alert Color	Red , Blue, White, Gray, Pink, Purple, Green, Amber
	MRCD Alert Color	Red, Blue, White, Gray, Pink, Purple , Green, Amber



Menu	Submenu	Option Menu
Display Setting, cont.	K Alert Color	Red, Blue, White, Gray, Pink, Purple, Green, Amber
	X Alert Color	Red, Blue, White, Gray, Pink, Purple, Green , Amber
	Idle Mode	Time , Scan, Smart Dark, Dark
	Sub Mode	Speed, Compass, Speed + Compass , Altitude, Off
Tone	Laser Tone	1 , 2, 3, 4, 5, 6, 7, 8, 9, 10
	Ka Tone	1, 2, 3 , 4, 5, 6, 7, 8, 9, 10
	MRCB Tone	1, 2, 3, 4, 5 , 6, 7, 8, 9, 10
	K Tone	1, 2, 3, 4 , 5, 6, 7, 8, 9, 10
	X Tone	1, 2 , 3, 4, 5, 6, 7, 8, 9, 10
GPS	GPS	On , Off
	GPS Signal Announce	On , Off
	Auto Lockout	On , Off
	Home Auto Lockout Radius	No Limit, 50 miles , 100 miles, 150 miles, 200 miles
	Pin Home	Set (no default setting)
	Red Light Camera	On , Off
	Speed Camera	On , Off
	Red Light & Speed Camera	On , Off
	GPS Alert Distance	Auto , Short, Medium, Long



Menu	Submenu	Option Menu
GPS, cont.	RLC Auto Mute	Off , 55-70mph : 5mph step, 90-110km/h : 10km/h step
	Delete All User Points?	Reset?
	Delete All Lockouts?	Reset?
	Delete All Auto Lockouts?	Reset?
Unit	Region	US , Canada, AUS/NZ
	GMT	-12 to 0 to +12 / 1 step Default: US/CAN: -5, AUS/NZ: +12
	DST	On , Off
	Time 12/24	12 hr , 24 hr
	Unit	English (mph), Metric (km/h) Default: US: english; CAN/AUS/NZ: metric
	Auto Power Off	Off , 15 min, 30 min
	Auto Mute	On , Off
	Auto Mute Start	1 sec, 2 sec, 3 sec
	Auto Mute Vol	50% , 40%, 30%, 20%, 10%, 0%
	Factory Reset Mode	Reset?
	Firmware Version Mode	Vx.xx



Menu	Submenu	Option Menu
Unit, cont.	Database Version Mode	xx.xx.xx
Etc	Volume Level	0, 1, 2, 3, 4, 5, 6, 7, 8, 9



DISPLAYS

Speed Unit

Speed Unit can be changed mph or km/h in the Menu

1. Set mph : Speed : mph, Distance and altitude : feet
2. Set km/h : Speed : km/h, Distance and altitude : meter

Idle Display

Set the standby mode.

3. **Scan Display:** A moving scan graph is displayed.
4. **Time Display:** The current time is displayed. User can select 12hr or 24hr in the menu.
5. **Smart Dark, Dark:** Shows only one dot on the right bottom side. Smart dark only operates when the button clicks and it alerts. In Smart Dark mode, the display turns on and the brightness level is changed to the brightness setting in the brightness mode when a button is pressed or an alert goes off.

Sub Display

Set the display information that is located on the upper left side.

6. **Speed:** Shows your current speed.
7. **Speed + Compass:** Shows your current speed and direction.
8. **Compass:** Shows your current direction.
9. **Altitude:** Shows your current altitude.
10. **Off:** Displays nothing.



ADDITIONAL SETTINGS

Low Speed Mute

If the current speed is slower than the speed in Low Speed Mute which user set, Speed Camera, User Point, Auto Lockout, X, K, User Point Limit Speed Voice, Over Speed Warning Voice will be Mute.

RLC Auto Mute

If the current speed is slower than the speed set by the user in RLC Auto Mute, the alert for Red Light Camera and Red & Speed Camera will be muted.

Lockouts

The user can mute the frequency at the specific location during X or K band alerts. Then, if the same frequency (X, K band: +/- 10MHz) is detected at the same location, X and K alert will mute and the display will show 'Lockout' in green at the lower right corner until DS1 goes out of the 500m radius.

Lockout Range

Entry: approximately 450m

Exit: approximately 500m

If both Lockout and Auto Lockout are detected at the same time, the display will show "Lockout."

To save a lockout

1. When X or K alerts, press [MUTE] to mute the voice and beep alerts.
2. Press [MUTE] again to store the current location and the frequency of the false alert. The display and voice will say "Lockout Stored."



3. If the lockout is saved properly, the display will show "Lockout" in green in the lower right corner until the DS1 is out of the 500m radius.
4. If the user exceeds 5000 lockouts, the oldest lockout will be deleted and will be replaced with the newest lockout.

To Delete a Lockout

1. When the DS1 gets a lockout signal, you will see "Lockout" in green in the bottom right corner
2. While "Lockout" is still displayed, press [MUTE]. The voice and display will say "Delete Lockout?"
3. Press [MUTE] again to delete. The voice and display will confirm that the lockout was deleted.

If the DS1 can't save the Lockout due to an issue receiving the GPS location, the voice will say "GPS Error."

Delete All Lockouts

Select "Delete All Lockouts" in the menu and press [MENU] to confirm.

User Point Alert

When User point is detected, the voice announces ("User Point Ahead") and shows User Point display.

User Point Alert Range

Entry : approximately 450m

Exit : approximately 500m

To Save a User Point

Press [MUTE] for 2 seconds to save a User Point. When a User Point alert is detected, User Point can not be saved. The user can save a maximum of 500 points.



To Delete a User Point

During a User Point alert, press [MUTE] for over 2 seconds to delete User Point.

Delete All User Points

If the user selects "Delete All User Point?" in the menu, all User Points will be deleted.

To Delete Speed, Red Light, Speed & Red Light Camera

During a Speed Camera, Red Light Camera, Speed & Red Light Camera Alert, press [MUTE] for over 1 second to delete the camera alert.

Auto Lockouts

If the same signal (X Band : $\pm 10\text{MHz}$, K Band : $\pm 10\text{MHz}$) is detected at the same location three times (1st + 2nd + 3rd), DS1 will automatically lock the signal out as a false alert. Once a signal is saved in Auto mute memory (the 1st counting), DS1 will not save the same signal for 8 hours even though it is detected again, which means it takes at least 16 hours (1st + 2nd + 3rd) to automatically lock a signal out. The interval of 8 hours is to avoid saving too many signals in Auto mute memory.

The DS1 can store 16,500 Auto Lockout points.

The user can set the radius using Auto Lockout and Pin Home.

If both Lockout and Auto Lockout are detected at the same time, the display shows "Lockout" as a priority. **Auto Lockout Range**

Entry : approximately 450m

Exit : approximately 500m



Delete All Auto Lockouts

If choose "Delete All Auto Lockout?" in the menu, all Auto Lockout will be deleted

K-notch

The DS1 will mute the alert voice when K Band is within the specified K-notch ranges. Display will turn gray and display "K-notch" in green if K-notch display setting is on. If K-notch is set to "Blk all signals", the DS1 will not alert for all signals within the range. If K-notch is set to "Blk weak signals", the DS1 will not alert for any weaker signals within the range but still alert for stronger signals of the same frequencies.

Current K-notch ranges:

24.199 $\pm$ 0.005Ghz

24.121-24.124Ghz

City Mode

1. **Auto**
DS1 sets Highway or City automatically depending on the vehicle speed. Auto mode is not activated when GPS is disconnected. If vehicle speed is over 50mph, Highway Mode is set, and if vehicle speed is under 50mph, City Mode is set.
2. **Custom**
User can set the sensitivity of each band (50%-100%)

K Narrow/Wide

1. **K Narrow:** K Band : 24.080 thru 24.200GHz
2. **K Wide:** All K Band : 23.900 thru 24.250GHz
3. **NZ K Narrow:** K Band 24.000 thru 24.100GHz. This option is only available when the DS1 is set to AUS/NZ in the Region Menu.



Ka Narrow/Wide/Segmentation

1. **Ka Narrow:** Ka Band – 33.8Ghz +-99Mhz, 35.5Ghz+-99Mhz, 34.6Ghz thru 34.85Ghz
2. **Ka Wide:** All Ka band: 33.399 thru 35.700GHz
3. **Ka Segmentation:** This feature allows users to select, from 9 filtered settings, a customized sweep of Ka band.
 - a. Ka 1: 33.399 thru 33.705 Ghz On/Off
 - b. Ka 2: 33.705 thru 33.903 Ghz On/Off
 - c. Ka 3: 33.903 thru 34.191 Ghz On/Off
 - d. Ka 4: 34.191 thru 34.587 Ghz On/Off
 - e. Ka 5: 34.587 thru 34.803 Ghz On/Off
 - f. Ka 6: 34.803 thru 35.163 Ghz On/Off
 - g. Ka 7: 35.163 thru 35.379 Ghz On/Off
 - h. Ka 8: 35.379 thru 35.613 Ghz On/Off
 - i. Ka 9: 35.613 thru 35.701 Ghz On/Off

Threat Display

Threat display will show up to 3 radar bands being detected at the same time. The display will first prioritize laser alerts, then MRCD, Ka, K, and X (in that order).

Bogey Tone

If another frequency is detected during X, K, Ka Band Alert, DS1 sounds the **Bogey Tone** and then the band alert continues.

Auto Mute Mode

Auto Mute Mode: Selectable (On/Off)

1. When Radar (X, K and Ka) alert starts, DS1 alerts for the time which set in Auto Mute Start Option (1, 2, or 3 seconds). After the Auto Mute On is triggered on the DS1, volume will reduce by Auto Mute Vol Option Percentage.

2. Auto Mute ends 10 seconds after the alert ends. If the same radar is detected within 10 seconds, the unit keeps Auto Mute On.
3. Auto Mute is not applicable to Laser alert.
4. If the current volume level is 0, DS1 keeps the current volume level.

Auto Dim Mode

DS1 has a light sensor to determine when the detector should use the **Bright** settings (daylight) and when it should use the **Dim** settings (nighttime). The brightness will adjust to **Bright** or **Dimmer**, depending on the brightness of surroundings.

Auto Power Mode

1. If DS1 detects its speed is 0 or if it cannot receive GPS location data for the set time (15 min or 30 min), the Auto Power Off alert will ring for 10 seconds before powering off the detector.
2. The Auto Power Off function stops if the user presses any button during the Auto Power off alert
3. The Brightness is automatically set to **Bright**.

Power Cord Alert LED

1. Power Cord Alert LED turns on with the power.
2. Power Cord Alert LED blinks during laser or radar (X, K, Ka) alerts
3. Power Cord Alert LED blinks slowly when the speed of laser or radar (X, K, Ka) alerts beeping sound is slowing and blinks fast when the speed of the laser or radar alert beeping sound increases.



Power Cord Mute Button

Power Cord Mute button operation is the same as the built-in [MUTE] of the DS1 unit.

Software Update

DS1 can be updated using Windows. Software updates include updates to red light and speed camera databases as well as new features from time to time.

For the best user experience, we recommend updating your detector every few months.

A step by step guide to updating your detector can be found at radenso.com under the **Support Menu**.



FCC COMPLIANCE

FCC ID : 2AZ4TDS1, CONTAINS FCC ID : W75-BTMO

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.



WARRANTY

Radenso products are guaranteed against manufacturing defects one (1) year from the original date of purchase shown on your invoice/proof of purchase from Radenso.com or a Radenso authorized dealer. Radenso's sole obligation in the event of such defects during this period is to repair or replace the defective part or product with a comparable part or product at Radenso's sole discretion. Except for such repair or replacement, the sale, processing or other handling of this product is without warranty, condition or other liability even though the defect or loss is caused by negligence or other fault. Damage resulting from use, accident, modification of hardware or software, or normal wear and tear is not covered by this or any warranty. Radenso assumes no liability for any accident, injury, death, loss, or other claim related to or resulting from the use of this product. In no event shall Radenso be liable for incidental or consequential damages relating to or resulting from the use of this product or any of its parts. Radenso windshield radar detector products are not warrantied against water or any resulting damage. Returns or replacements of parts and/or products may be subject to shipping, handling, replacement and/or restocking fees. Radenso reserves the right to refuse to perform warranty service where the product has been altered, modified, or serviced by someone other than Radenso or where the serial number has been tampered with or is missing and the product cannot be identified. Your warranty covers only the specific product you have purchased.

What you must do to maintain and take advantage of this warranty: Provide a copy of the original proof of purchase/receipt from Radenso.com or your Radenso Authorized Dealer.



SUPPORT

Thank you for purchasing the most advanced radar and laser detector in the world. Here at Radenso, we're committed to customer satisfaction. If you need support in any capacity, please contact us immediately.

Address

Radenso
1100 Sycamore Street
Floor 1
Cincinnati, OH 45202

Phone

1-888-RADENSO
(1-888-723-3676)

Email

support@radenso.com

Website

radenso.com

Hours

9AM-5PM EST, Monday - Friday

We hope you enjoy your product for many years!

Regards,
The Radenso Team



MEMO