GARMIN

Astro® 320
quick start manual

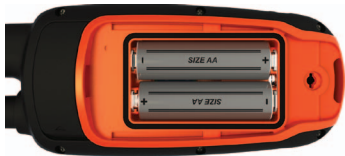GPS-enabled dog tracking system

Getting Started

NOTICE
Do not attempt to track your dog using the Astro® and the DC™ 40 until you have completed these tasks.

1. Install batteries in the Astro (page 2).
2. Charge the DC 40 (page 2).
3. Register your device (page 3).
4. Turn on the devices (page 3).
5. Acquire satellites (page 4).
6. Calibrate the compass (page 5).
7. Attach the DC 40 to your dog (page 5).
8. Start a new hunt (page 5).

Installing Batteries in the Astro

The Astro operates on two AA batteries (not included). Use NiMH or lithium batteries for best results.

1. Remove the battery cover by turning the D-ring 1/4 turn counterclockwise and pulling up.
2. Insert the batteries, observing polarity.

3. Replace the battery cover.

Charging the DC 40

Charge the DC 40 completely before using it on a hunt. Charging a depleted DC 40 battery takes 4½ hours.

1. Connect the power cable ① to an appropriate electrical source.

2. Slide the charging clip ② onto the DC 40.

3. Charge the DC 40 completely.

   The blue LED flashes when the DC 40 is charging. The blue LED is solid when the DC 40 is fully charged.

Registering Your Device

Help us better support you by completing our online registration today.

- Go to http://my.garmin.com.
- Keep the original sales receipt, or a photocopy, in a safe place.

Turning On the Devices

1. On the Astro, press and hold ①.

2. Follow the on-screen instructions.

3. On the DC 40, press and hold ⏻ ②.

   The red LED ③ flashes (single blink) when the DC 40 is on and searching for satellite signals.

   TIP: Turn on the DC 40, and let it acquire satellites before you put it on your dog.

Acquiring Satellite Signals

Before you can track your dog using the Astro and the DC 40, both devices must acquire GPS satellite signals. Acquiring satellite signals can take a few minutes.

1. Go outdoors to an open area, away from tall buildings and trees.

2. Press and quickly release ⏻.

   The status page appears. The ▂▃▄▅ bars indicate satellite strength.

3. Wait for the DC 40 to acquire satellite signals.

Single blink	DC 40 is searching for satellite signals.
Double blink	DC 40 has acquired satellite signals.
Triple blink	DC 40 is tracking seven or more satellites (best GPS performance).

Calibrating the Compass

NOTICE

Calibrate the electronic compass outdoors. Do not stand near objects that influence magnetic fields, such as cars, buildings, or overhead power lines.

The Astro has a 3-axis electronic compass. You should calibrate the compass after moving long distances, experiencing temperature changes, or changing the batteries.

1. From the main menu, press **DOG** > **MENU**.

2. Select **Calibrate Compass** > **Start**.

3. Follow the on-screen instructions.

Attaching the DC 40 to Your Dog

Attach the DC 40 to your dog's neck with the VHF antenna pointing up (page 8) and the LED facing forward.

Starting a New Hunt

1. From the main menu, select **Start New Hunt**.

2. Follow the on-screen instructions.

   Your current location is saved as "Truck" so you can easily navigate back to this location after the hunt.

Adding Dogs

The Astro can track up to 10 dogs with DC 40 collars. If you purchase additional DC 40 devices, you can link them to the Astro. To link, the Astro must be close enough to the DC 40 to touch it, or you must know the DC 40 ID number.

1. From the main menu, press **DOG** twice.

2. Select **Add Dog**.

3. Follow the on-screen instructions.

   By default, the new dog is named "Dog" and an ID number is randomly assigned.

An error message could appear if there is a conflict with the ID number of another dog.

Dog Signal Troubleshooting

Each dog you track has its own ID number. If two dogs within range of the Astro have the same ID, the Astro warns you of a conflicting ID signal. Follow the on-screen instructions to resolve the conflict.

When possible, you should allow the Astro to automatically assign IDs. If necessary, you can manually assign a new ID number to a dog.

Assigning a Dog ID Manually

This requires wireless communication with the DC 40. You must turn on the DC 40 and bring it within range of the Astro. You must assign a new ID number to the dog and change the update rate.

1. From the main menu, press **DOG** twice.

2. Select a dog.

3. Select **Show Info**.

4. Press **MENU**.

5. Select **Comm. Settings**.

6. Select an unassigned and nonconflicting ID.

7. Change the update rate (optional).

   Both 30-second and two-minute rates reduce battery drain, but they create a less-detailed dog track and collected statistics.

8. Bring the Astro within a few feet of the DC 40.

9. Follow the on-screen instructions.

Device Overviews

Astro

NOTICE

Avoid using a high-powered radio (greater than 5 watts) in close proximity to the Astro. It may cause irreversible damage to the Astro.

①	GPS antenna
②	VHF antenna
③	⏻ Power key
④	Display
⑤	Keypad
⑥	USB port (under weather cap)
⑦	microSD™ card slot (under battery door)
⑧	Mounting spine
⑨	Battery cover D-ring

Keypad

DOG	Press to view the Dog Tracker page.
MARK	Press to mark your current location.

BACK	Press to cancel data entry or return to the previous menu or page.
MAP	Press to view the map.
MENU	Press to open the menu for the active page. Press twice to open the main menu.
ENTER	Press to select options and acknowledge messages.
Rocker	Press to view or scroll through options and to move the map pointer.
IN	Press to zoom in on the map.
OUT	Press to zoom out on the map.

DC 40

Locking the Keypad

1. Press and quickly release ⏻.

2. Press **OUT**.

①	VHF antenna
②	Collar
③	GPS antenna
④	⏻ Power key

Adjusting the Backlight

NOTE: The backlight brightness may be limited when the remaining capacity in the batteries is low.

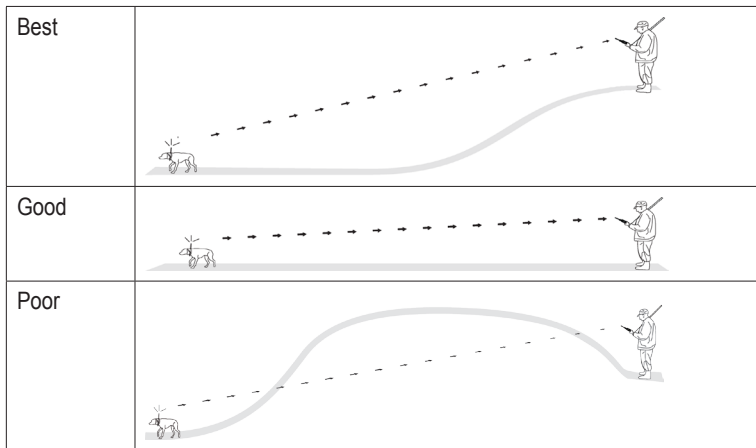Extensive use of screen backlighting can significantly reduce battery life.

1. Press and quickly release ⏻.
2. Use the **Rocker** to adjust the brightness levels.

   TIP: You can also press and quickly release ⏻ to cycle through the brightness levels.

3. Press **ENTER** to select a brightness level and close the menu.

Astro and DC 40 Tips

- Turn on the DC 40 and allow it to acquire satellites before you put the DC 40 on your dog. This allows the DC 40 to acquire satellite signals much faster.

- Bring extra AA batteries for your Astro.

- Use a fully charged DC 40. A fully charged DC 40 operates for approximately 17 hours when using five-second interval reporting.

- Use line-of-sight radio communication (page 10).

- The Astro can track up to 10 dogs with DC 40 collars. Only three dogs can be viewed at one time on the Dog Tracker page. To reduce the text size, press **MENU**, and select **Small Numbers**.

- Go to www.garmin.com/products /astro for more information and www.garmin.com/astro for a tutorial.

About Line-of-Sight Radio Communication

The Astro and DC 40 use radio signals to communicate. Objects in the path of radio signals degrade the quality of the signals. Keeping an unobstructed line of sight between your Astro and your dog's DC 40 produces the best communication signal. Obstructed radio waves result in a poor signal. To achieve the best line-of-sight conditions, move to the highest elevation point in your area (for example, on the top of a hill).

Best	
Good	
Poor	

Free Software

To get the most from your Garmin device, download BaseCamp™ software. Go to www.garmin.com /basecamp. You can view and organize your maps, waypoints, routes, and tracks and send them to your device.

VHF Radio Specifications

MURS (Multiuse Radio Service) frequency	151.82 MHz 151.88 MHz 151.94 MHz 154.57 MHz 154.60 MHz
VHF range	Up to 7 miles (11.2 km) - line of sight
DC 40 output power	2 watts

Troubleshooting

Resetting the Device

If the device stops responding, you can reset the device.

1. Remove the batteries.
2. Reinstall the batteries (page 2).

NOTE: This does not erase any of your data or settings.

Status Information

Status information is provided on the main menu and when you press and quickly release ⏻.

📶	Indicates the satellite signal strength.
🔁	Blinks when the device detects a signal (for example, a DC 40) on the channel it is receiving.
🔋	Indicates the remaining battery power.

Optional Accessories

Optional accessories, such as mounts, maps, fitness accessories, and replacement parts, are available at http://buy.garmin.com or from your Garmin dealer.

Contacting Garmin Product Support

- Go to www.garmin.com/support and click **Contact Support** for in-country support information.

- In the USA, call (913) 397.8200 or (800) 800.1020.

- In the UK, call 0808 2380000.

- In Europe, call +44 (0) 870.8501241.