Using the GPS Coursemarker Detector

Searching for Coursemarkers...

Last CM Seen: E 66

On today's rallye, coursemarkers will be located using your smartphone's browser to access a website that uses GPS to tell you when you're approaching a CM (as shown in the example screenshots here).

You'll need:
- A smartphone
- A car charger for your phone
- A navigator or hands-free mount

Getting Set Up

You may need to change a few settings to make sure you can use your phone for today's rallye (details for iPhone and Android are provided on the third page):

- Turn off auto-sleep functionality to ensure your phone will stay on and monitoring for CMs (we also recommend keeping your phone plugged into a car charger throughout the rallye to avoid running out of battery)

- Ensure location services are enabled for your browser

- Turn up your volume to hear alerts when you approach CMs

Use the QR code or URL to the right to access the site in your phone's browser. When you're at the traffic light at the parking lot exit and ready to begin the rallye, click **"Start the Rallye"** on the site. It should prompt you to allow it to use your location – hit **"allow"** and it should begin searching for CMs (as in the screenshot above).

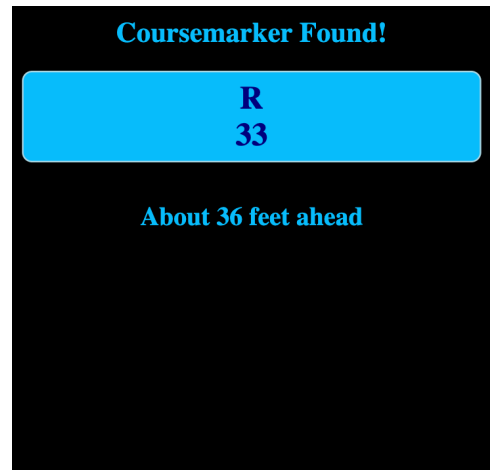**https://tinyurl.com/zodiac-cms**

Detecting Coursemarkers

When you're approaching a CM, the screen will change and it will play two long tones to alert you. The screen will display the contents of the coursemarker and how far away it is from you (see example on the right).

A few tips to keep in mind during the rallye:

- **CMs are signs: anything in the blue box is what is what you would see on the physical CM** (everything outside the box is just informational and never used for gimmicks)

- **Assume you've reached the CM once you're within 30 feet of it** (because of uncertainty in measuring your location, this might never read exactly 0 ft)

- **If a CM appears to be in the middle of an intersection**, consider it to be just on the side of the intersection that you're approaching from

- If you make a U-turn very close to a CM, you **might briefly pick up the same CM again** as it takes the site a few seconds to catch up with your new direction of travel – you can **ignore the repeated detection** when this happens (note: there are no "parallel" CMs on today's rallye)

- If you hear the alert for a detected CM but don't get a chance to check it while it's being displayed, note that **the "searching" page also shows the last CM detected**

- **The tracking won't work in the background**, so make sure you keep it open during the course of the rallye to avoid missing any CMs (note if you want to answer a phone call, be sure to pull over and then return to the site after completing your call)

- The direction of travel is based on your location, so **the phone <u>doesn't</u> need to be pointing toward the front of your car** – keep it somewhere it can get a good GPS signal and you can see/hear it.

Error Messages

You may encounter two types of errors with the pages. In either case, a warning will appear at the top of the screen and it will play 6 short beeps.

- **Degraded location accuracy:** This issue usually resolves itself within a few seconds, but you'll want to revisit where you've driven over the last minute or so to ensure you didn't miss any CMs. If the issue lasts for more than a few seconds, try using the "reload" button on your browser to reload the site.

- **Stale location data:** If your location data hasn't updated in several seconds, you may see an error message telling you to try reloading the page.

In either case, note that the website isn't keeping track of your progress on the rallye, so it's fine to reload it in the middle of the rallye. If problems persist, please reach out to the rallyemasters.

Details for iPhone
- To turn off auto sleep: Settings → Display & Brightness → Set "Auto-Lock" to "Never" (note: this may be grayed out if your phone is in "Low Power Mode" which you can turn off under your Battery settings)
- To turn on location services: Settings → Privacy & Security → Location Services → Set slide to "on"
- Ensure your web browser can access your location:
  - If using Safari (the default browser):
    - Settings → Privacy & Security → Location Services → (scroll down) Safari → Select "While Using App"
    - Settings → Safari → Location → Ensure this is set to either "ask" or "allow" (on some phones, this may be under Settings → Apps → Safari…)
  - If using another browser, ensure location access is allowed as well and "Precise Location" is turned on under the settings for that browser
- Turn up your volume to ensure you can hear alerts

Details for Android
- To turn off auto sleep: Settings → Display → Set "Screen Timeout" to "Never" (note: some phones may not have "never" available, in which case you may need to choose the longest option and ensure you periodically interact with your phone or may be able to turn on developer options[1] to enable a "stay awake" setting)
- To turn on location services: Settings → Location (or Settings → Security & Location → Location). Toggle the slider to "on" and ensure "Improve Location Accuracy" is on (on choose "High accuracy" under "Mode" on older versions of Android)
- If using Chrome, open the menu (three dots) → Settings → Advanced → Site Settings → Location → Ensure this is toggled to "on"
- Turn up your volume to ensure you can hear alerts

A brief note on location data privacy: Although the website is making use of your location to detect when you approach coursemarkers, all of these calculations are happening locally on your phone and your location data never leaves your device.

END SI

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[1] https://android.stackexchange.com/questions/98539/how-do-i-prevent-android-from-going-to-sleep