Time Synchronization

All devices in your cluster must agree on the current time and date. Technically the time/date doesn't even have to be correct, they just have to agree on it.

Functions Dependent on Time

- Knowing cluster's current frequency
- Signing messages/packets (non-expired)
- Validating signed messages
- Mesh packet delivery
- Knowing GPS location staleness
- Identifying neighbors
- Interpreting mesh graph data

Sources of Time

Secure Pings (Signed)

The most trusted source of time is the Cluster's consensus. This is constantly being shared throughout your cluster.

Onboard Realtime Clock

If your device is equipped with a high precision RTC, this will be considered a *primary* source of time.
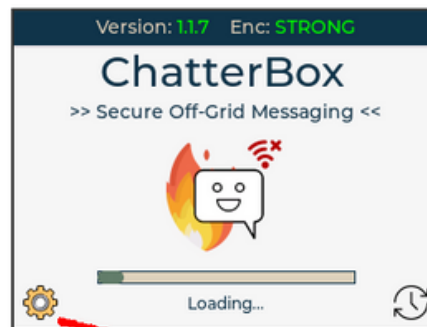

View startup logs

Listen for time from nearby device instead of GPS

GPS/GNSS

If your device is equipped with GPS/GNSS, this will be considered a secondary source of time.

Other Nearby ChatterBoxes

Unless disabled, all ChatterBoxes broadcast time about every 120 seconds. Using this is a time source is considered a last resort, but it can be done. You can force any startup-stuck device to listen for nearby time broadcasts instead of using GPS or onboard RTC. If the stuck device is a communicator, tap the time sync icon on the startup screen. If the stuck device is a node, tap the button farthest from the reset button once.

You can instantly broadcast time from any ChatterBox by touching the clock on the home screen.