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Transponder and Reader Engineered Systems

Mobile App Documentation

Intro

This documentation will walk you through the various features and functionality of the TRES Mobile app, available on both Android and iOS. The app can be downloaded on the Apple App Store and Google Play free of charge. Tablets and smartphones are both supported, as long as they meet the minimum version requirements shown on the respective app stores.

The first sections of this documentation will cover setup and then each individual screen and control to let you know how to use the app. Afterwards, there will be a section for frequently asked questions.

Setup

First, you will need to download the app to a supported tablet or smartphone. You will also need a TRES reader that supports Wi-Fi connectivity and has been set up as an 'Access Point'. Please review the documentation provided with the reader for more information on how to set the reader up in 'Access Point' mode.

Once you've got these preemptive steps completed, you will need to connect to the reader's network from the device you have the app installed on. This varies depending on your platform, but in general, you will have to go to the 'Settings' app and then find the 'Wi-Fi' section.

By default, the reader will have a network name of 'readernet', so assuming it has not been changed, you will need to choose this as your wireless network on your device. The default password to connect to the reader is 'reader123' (without the apostrophes). If you have trouble connected, consult the documentation provided with the reader. You may need to use the TRES desktop software to reset the reader name or password to successfully connect.

NOTE: Only one device can connect to the reader at a time over Wi-Fi.

Now that you are connected, you can start the app.

App Screens

Connection Screen

When first starting the app, you will be presented with a screen that has two text fields and a button. One correlates to the IP address of the reader and the other to the port that you want to communicate over. These fields are pre-filled with the defaults needed to communicate with the reader out of the box, so assuming no network changes have been made, you should be able to tap the 'Connect to Reader' and connect with no issue.

You will hear the reader beep (if you're nearby) and be brought to the next page if your connection was successful. If you aren't connected to the reader's network, you will get a warning telling you to connect to the reader network before continuing.

If another device is already connected, it will disconnect that device, restart the reader, and then let you connect. You will hear the reader beep once the restart is complete and then you can connect again.

NOTE: Some Android devices will disconnect from the reader network and not automatically reconnect when it restarts, so you may need to check your settings page to see if you're still connected when the above situation occurs.
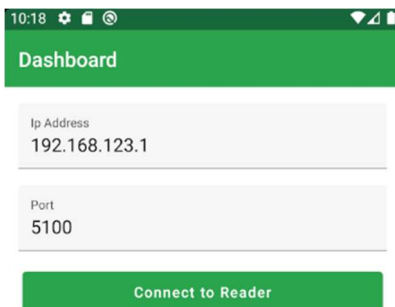

Figure 1: Connection Page

Settings Tab

Once connected, you'll be redirected automatically to the dashboard, where there are three tabs. The first of which you'll be presented with is the 'Settings' tab.

From here, you will see a long list of controls and buttons you can scroll through.

Each of these corresponds to a parameter on the reader that you can adjust. Simply find the parameter you want to change, then depending on what type of control it is, you will either have to scroll through a list of options, or type a value.

NOTE: Each control that allows you to type a value has a set minimum/maximum value allowed. If you put an incorrect value, you will get a notification telling you what the min/max values are for you to correct.

After selecting a value, you can tap the corresponding button below the control to send the command to the reader. You should hear a beep (if you are nearby) and get a notification that the command was successfully sent to the reader. The command will also be logged if your log is not paused (covered in next section).

At the very bottom of the page (you will have to scroll down) there is a button to disconnect from the reader. This will return you to the connection page.
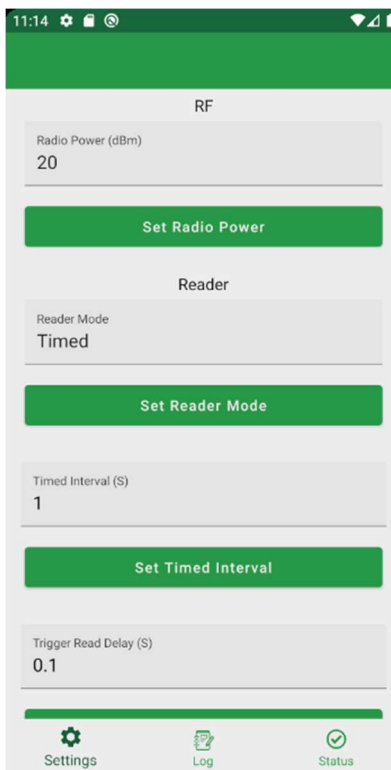

Figure 2: Settings Tab

Log Tab

Tapping the 'Log' button at the bottom of the screen will redirect you to the 'Log Tab'. Here you can see all the commands that have been sent from the app, as well as all tags that have been scanned.

NOTE: The log will not reset until you manually reset or close the app completely. You can disconnect/reconnect and the log will persist.

There are also two buttons on this page. The 'Pause' button will prevent any new commands/tags from being logged. Once pressed, it will change to say 'Unpause'. Tapping it again will unpause the log and allow new commands/tag reads to be added.

The second button is the 'Clear' button. This is only available if there are items in the log that can be cleared. Tapping it will instantly clear out the log.

As more items get added, the page will allow you to scroll to view every item. They are listed from oldest to newest.
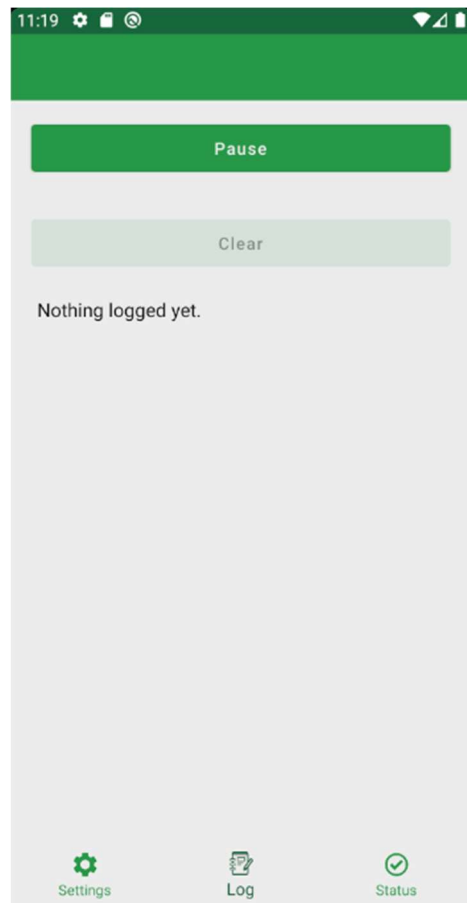

Figure 3: Log Tab

Status Tab

Finally, if you tap the 'Status' icon in the bottom right of the screen, you will be redirected to the 'Status Tab'. Here you can view all the status indicators obtained from the reader when you first connect. It will update every time you reconnect.
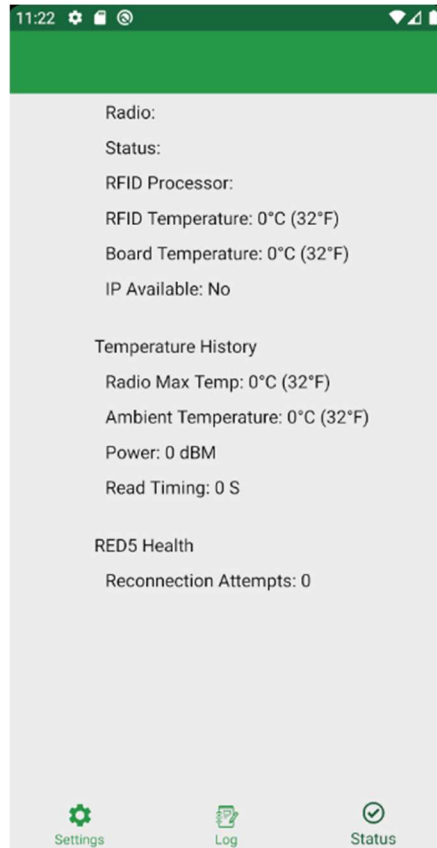

Figure 4: Status Tab

Frequently Asked Questions

Q: Why can't I connect to the reader?
A: Double check that you are connected to the readernet wireless network, try restarting the app, and then try again. Do note that if another device is already connected, you will have to wait for the reader to restart (it will beep when done) and then try to connect again. Some Android devices don't automatically reconnect to the readernet network when it restarts, so double check your network settings.

Q: Why can't I input a specific value on the Settings tab?
A: Certain parameters have minimum and maximum values that the reader supports. The app will prevent you from setting to an impossible value.

Q: Why is nothing showing up in the log?
A: It's possible that you have paused the log by accident. If you see the button on the Log Tab saying 'Unpause', then you will need to tap that button to change it to say 'Pause' so that data can keep being recorded.

Q: Why aren't tags showing up in the log when I scan them even though the log isn't paused?
A: As of April 19th, 2021, there is an issue with the wireless reader that causes a large majority of tag reads over Wi-Fi to result in an error code rather than parsing out correctly. This issue also occurs on the TRES desktop software as of this time. The tag will need to be repeatedly scanned until it appears on the log.

Q: Is the Status tab dynamically updating?
A: No, it pulls the data when you connect/reconnect. This is the same as the TRES desktop software.