



ORBIT TEACHER REMOTE

Parents User Guide

13th July 2021
Version 1.2

Revision History

Rev.	Date	Description of Changes	Author
1.0	25 th June 2021	First public release	
1.1	05 th July 2021	Updated language as per CC teams suggestions	
1.2	13 th July 2021	Updated install the application section	

1 Introduction

The Orbit Teacher app is a revolutionary platform allowing teachers and students to connect and interact with blind or visually impaired students.

Teachers are now able to connect to their student's Orbit Reader 20 braille display by connecting to the app via Bluetooth on a smartphone or tablet. It then provides a real-time text translation of the braille being typed or read by the student using the device.

The Orbit Teacher Remote allows teachers to effectively teach in a remote setting. Through an internet connection, the teacher can view the student's braille display and can type the text that will appear on the student's braille display.

The student needs:

1. An Orbit Reader 20 braille display
2. The Orbit Teacher app running on an Android phone or tablet

The Orbit Reader is connected via Bluetooth to the Orbit Teacher app on the phone or tablet. This document uses the term "tablet" to mean either a cell phone or tablet. Tablets must be connected to the Internet through Wi-Fi, while phones have the option to link cellularly.

The Orbit Teacher app is fully accessible through the Talkback screen reader that is available for Android.

2 Connect with Wi-Fi

If your device is not connected to Wi-Fi you need to connect it with Wi-Fi to get internet access. To configure Wi-Fi, you need to perform the following steps

Option 1:

1. Swipe down from the top of the screen.
2. Tap and hold Wi-Fi.
3. Turn on Use Wi-Fi.
4. Tap a listed network. Networks that require a password.
5. After entering a password tap on connect.

Option 2:

1. On some devices, the Wi-Fi option is directly available. If the Wi-Fi option is not available then tap on Network & Internet or Connections then tap on Wi-Fi.
2. Open your device's Settings app.
3. Tap on your desired Wi-Fi listed on the networks.
4. Enter the password for the Wi-Fi.
5. After entering a password, tap on connect.

3 Download TalkBack

To check whether TalkBack downloaded on your android device, you need to perform the following steps:

- Go to Settings
- Tap on Accessibility
- In some devices, you can directly see the TalkBack, if you cannot find TalkBack in Accessibility, then tap on option installed services/additional settings option from Accessibility
- You can see the option TalkBack if it's installed.
- If TalkBack is not installed on your device you can download it from Google Play. To download TalkBack, you need to perform the following steps:
 1. Go to the application list and open the Play Store application
 2. After opening the Play Store you can search for the Android Accessibility suite or use this link to download the Android accessibility suite:
<https://play.google.com/store/apps/details?id=com.google.android.marvin.talkback>
 3. Now tap on Install
 4. After installation is completed, you can find the TalkBack on the above-mentioned path

4 Turn on-off TalkBack

To enable TalkBack, you need to follow the following steps:

- You can directly turn on/off TalkBack by pressing the Volume Up + Volume Down - keys together. If you are not able to use these keys then you need to activate TalkBack from Android settings, by performing the following steps:
 1. Go to Settings
 2. Tap on Accessibility
 3. In some device you can directly see TalkBack. If you cannot find TalkBack in Accessibility, then tap on the option 'Installed services/Additional settings' option from the Accessibility
 4. Tap on TalkBack and you will be asked to turn on/off TalkBack

5 How to use

The first step is to establish an Internet connection between the student's tablet and the teacher's tablet. As the Orbit Teacher app does not include voice communication capabilities, the teacher and student must be able to speak over a normal phone call or platform such as Zoom or Skype for effective interaction.

Next, the student selects "Student Profile" from the menu in the app, and will log in to the app using a valid email ID. The app automatically generates a user ID and password that are displayed to the student. The student must then share his

user ID and password with the teacher over the phone, text, email, etc., allowing the teacher to initiate the connection.

This login and sign-up is a one-time process.

When the teacher's app is connecting to the student's app, the student will receive a notification regarding the incoming connection request, along with the name of the person requesting the connection. They will then either accept or reject the connection request.

Both sides will receive a notification once the student accepts or rejects the connection request.

6 Getting Familiar with Android phones and Talkback

If you are unfamiliar with the use of Android phones and Talkback, please refer to the "Operating Android Phone- Beginner's Guide" document supplied with the package before proceeding further.

Downloading and Installing the application

If you have an Android device from Orbit Research, the application will already be installed and ready to use; therefore, you can skip this section.

If you are using your Android device, you will need to download and install the Orbit Teacher application. Please refer to the following sections for more details:

7 Install the application

7.1 Install the application

You can either search for "Orbit Teacher Remote" download page in google play store, or directly go to this link

<https://play.google.com/store/apps/details?id=com.orbitteacherremote> and click on install button. It will download and install the app in your device

7.2 Permissions

While installing the Orbit Teacher, the Android system will ask you to grant permission to the application to access various capabilities. Orbit Teacher needs the following permissions to run:

1. **Access Bluetooth Settings:** This permission is required so that if the Bluetooth is turned off at the time of using the Orbit Teacher, it can request the user to turn the Bluetooth on.
2. **Approximate Location:** This permission is required because Android relies upon location services to retrieve the identity of the nearby Bluetooth devices. It is required only while pairing. The location can be turned off once the app is paired with OR-20.

3. **Storage:** The application needs permission to let it read a text/BRF file from the storage. The application will not modify or delete any storage contents.

Note: On denying any of the above permissions, the application will not work properly.

8 Launching the application

Now that the application is downloaded and installed on the device, you can now launch the application.

This will take you to a welcome screen you will see two options. “Orbit Teacher Tutorial” and “Take me to app”.

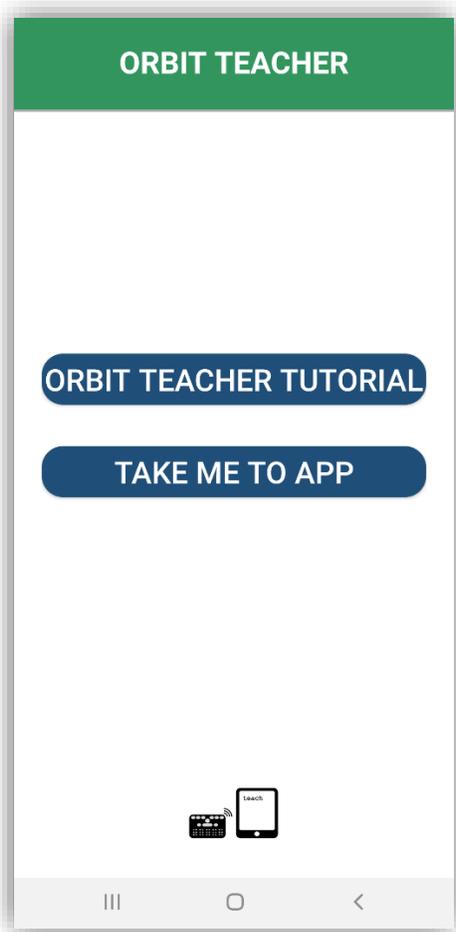


Figure-1: Welcome Screen

If you are a new user and wish to learn about how to use this application, you can select “Orbit Teacher Tutorial” to open the tutorial.

Otherwise, you can select the “Take me to app” option which will redirect you to a screen from where you can select your role and further use the application.

9 Main Application

Once you launch the main application using the “Go to App” option, it redirects you to the screen asking you to choose your role between a teacher or a student. If you are a teacher or a person helping a visually impaired student remotely, choose “I am a teacher”. If you are a student receiving help from the teacher, choose “I am a student”.

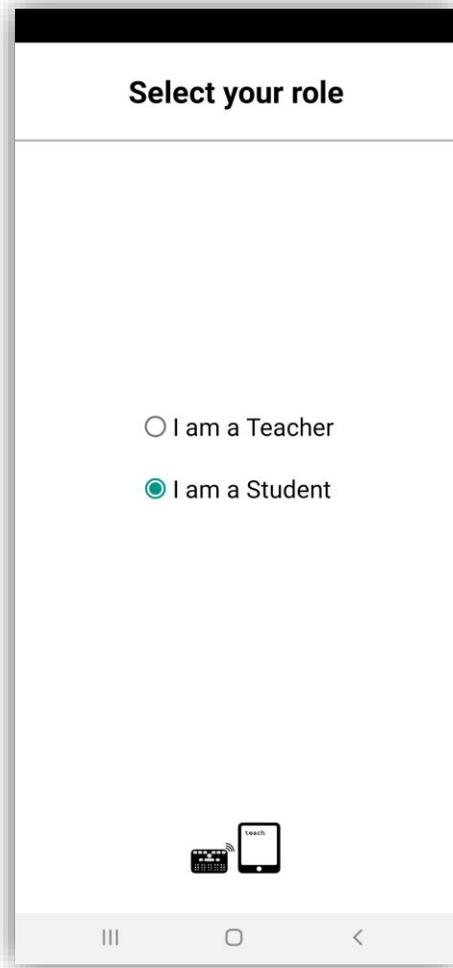


Figure-2: Select Your Role Screen

The application will launch the respective home screen depending on the role chosen, teacher, or student. The home screen and available controls are slightly different between the two roles.

10 I am a student

If you selected the “I am a student” option, it takes you to the home screen for the student’s role.

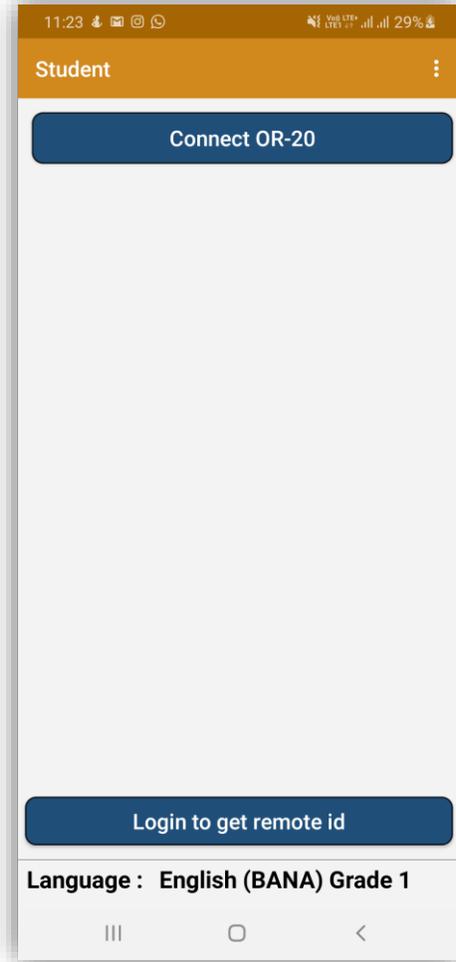


Figure-3: Home Screen for Student's Role

10.1 Connect with the Orbit Reader 20

First, the student must connect their OR-20 with the application so that the teacher can see the OR-20 display on their phones. It is recommended that the OR-20 is connected with the app before establishing the connection between the student and teacher over the Internet, but not mandatory.

To connect to an OR-20 for the first time, tap on the “Connect OR-20” button. It opens a page showing a list of already paired OR-20 available for connection. If your OR-20's serial number appears on the listed devices, tap on it to initiate the connection.

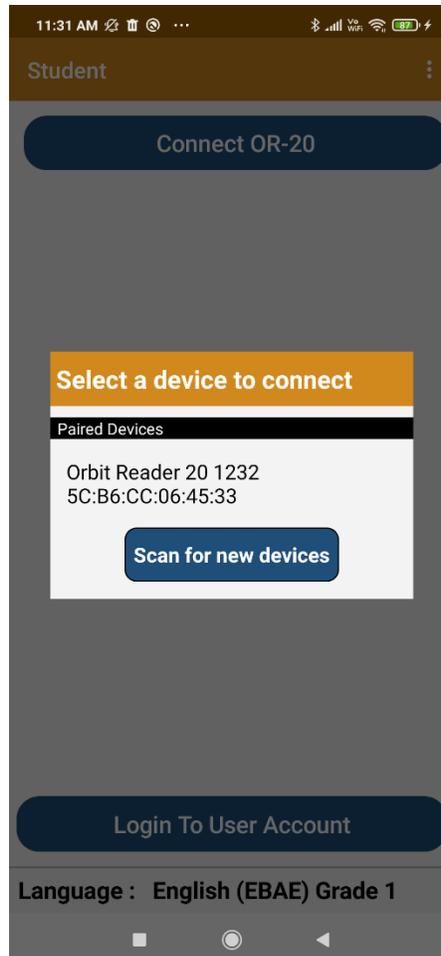


Figure-4: Paired devices list dialogue box

If your OR-20 is not already paired with your phone, it will not be shown on the list. You can tap on the “Scan for devices” button to initiate the first-time pairing. It will show all the OR-20 in the range to be paired.

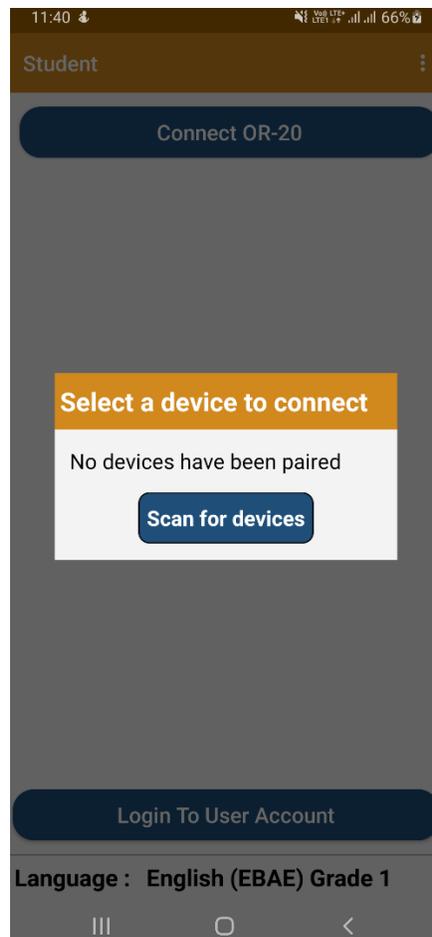


Figure-5: Scan devices button

Tap on the serial number of the OR-20 you wish to connect to. If that unit is not paired already, the Orbit Teacher will generate a pop-up message asking to pair with the new OR-20. Tap on the “Pair” button on the pop-up message to establish the connection.

Once connected, it displays the serial number of the connected device at the bottom of the screen and mirrors the display on the display area of the application showing the display in the translated visual fonts as well as Braille fonts.

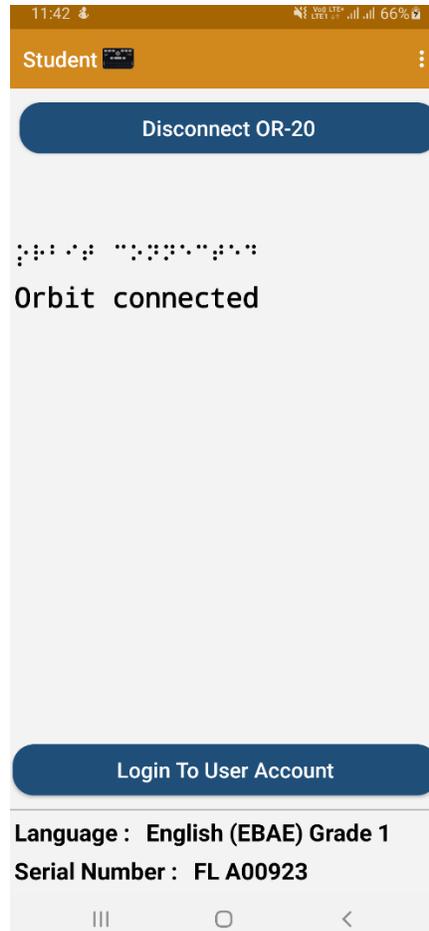


Figure-6: Home Screen for Student's Role showing the mirrored text of student's OR-20 display

Once the connection is established, the “Connect to OR-20” button turns into the “Disconnect OR-20” button. To disconnect the OR-20, tap the same. To manually disconnect from the OR-20 keypad, press SPACE + D (Dots 1 4 5 7).

The connection is closed automatically when you put the OR-20 to sleep or turn it off. The connection is also closed automatically when you close the application. Note that the application and the OR-20 remain connected when you put the phone/tablet on standby (screen lock).

OR-20 reconnects to the last connected host when you wake it up from sleep or turn it on provided the Phone/Tablet's Bluetooth is ON and the Orbit Teacher application is running. If you had locked the phone screen, while the application was still running, any activity on the OR-20 wakes the Phone/Tablet and re-connects.

To connect manually, follow the same process as you followed for the first-time connection except that you don't have to pair it again this time.

10.2 Login

If you are using the application for the very first time, you must sign-up and login using your authenticated email ID. This is required so that the application server can create a unique identity for you which will be then used by the teacher to identify and connect with your application. You can still connect to your OR-20 without the login. Login is required only when you wish to connect to another application over the internet.

You can tap on the “Login To User Account” button to open the sign-up/login page.

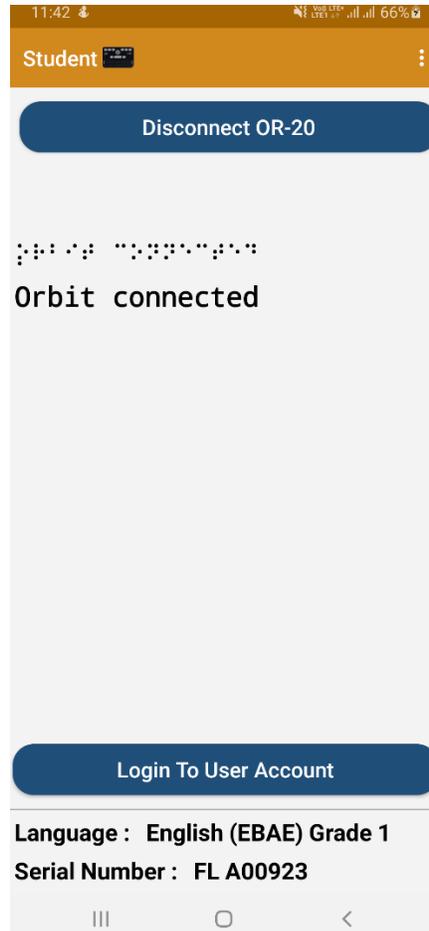


Figure-7: Home Screen for Student’s Role with login option

Login is a one-time process. The login account information remains with the application on the phone. Unless the user logs out or the application data is cleared or deleted from the phone settings, you are not required to fill out the login again. If you are already logged in once, the home screen shall always show the connection credentials (user id and password) by default.

There is an option for sign-up for an account for first-time users. For the sign-up, you will be required to provide your full name, username (alias), email ID, and the password of your choice.

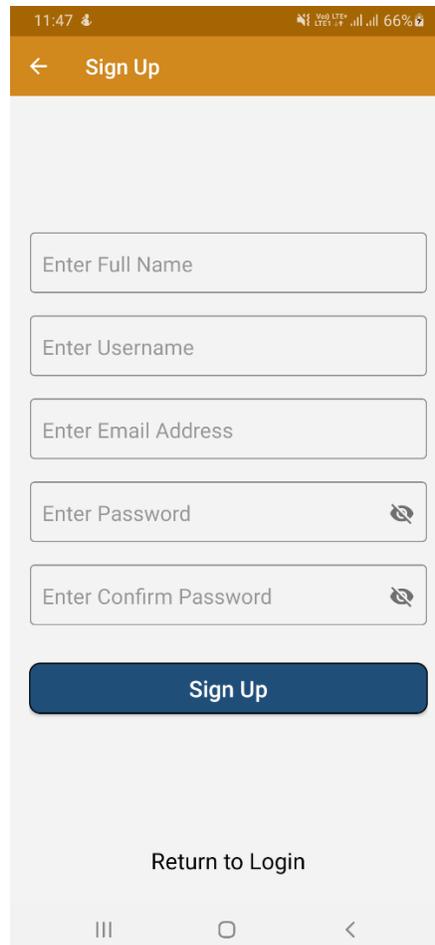
A screenshot of a mobile application's sign-up page. The page has a white background with a blue header bar at the top containing a back arrow and the text "Sign Up". Below the header are five input fields: "Enter Full Name", "Enter Username", "Enter Email Address", "Enter Password", and "Enter Confirm Password". The password fields have a small eye icon to the right of the text. Below the input fields is a large blue button with the text "Sign Up". At the bottom of the page, there is a link that says "Return to Login". The bottom of the screen shows the standard Android navigation bar with three icons: a home button, a back button, and a recent apps button. The status bar at the very top shows the time as 11:47, signal strength, Wi-Fi, and 66% battery.

Figure-8: Sign up page

Once you have an account, you can use your login ID and password on different phones, but not at the same time. You should log out from one phone before you log in to the other phone using the same account.

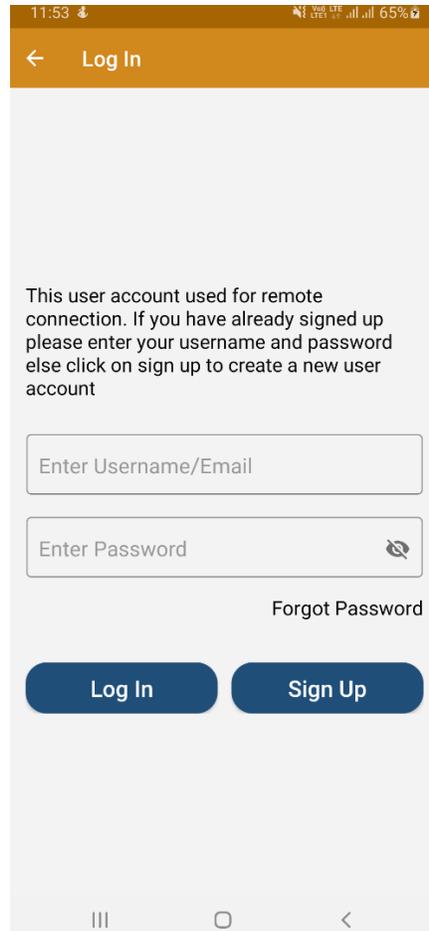


Figure-9: Login screen

In case you lost your password, you should be able to retrieve it using the “Forgot password” option from the sign-up/login page.

Once you log in successfully, it will take you back to the home screen where your connection credentials (remote ID and password) shall be displayed.



Figure-10: Home screen for student’s role after successful login

10.3 Allowing access to the Teacher

Students can share their connection credentials with the teacher through a separate platform such as email or text. The “Share Remote ID” button allows students to share the credentials over a third-party chat or email application on their phones.

Once the teacher has the student’s credentials, they will connect to the student’s app using that information. When the teacher is trying to connect, the student will get an incoming connection request (that also shows the name of the teacher) on the student’s screen. The student will then tap “accept” to allow the connection.

Once connected, the application switches to the mirrored screen page where it will display the mirrored data from the OR-20 and edits if any being done by the Teacher. The edits being done by the Teacher shall be also reflected on your OR-20 display.

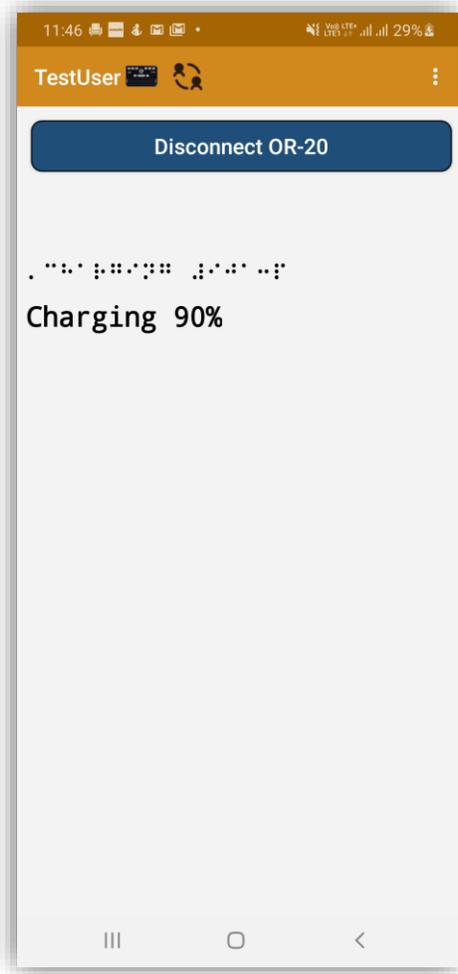


Figure-11: Mirrored screen page for Student