

Tactile Reader Pro Guide



What is the Tactile Reader Pro?

The Tactile Reader Pro is a great tool to use alongside Blue-Bot, Rugged Robot and Loti-Bot. This resource takes programming off the screen or robot, and into the hands of your pupils, making coding a more tactile and engaging experience.

The Tactile Reader Pro allows children to create sequences by placing physical tiles in order, each representing a different command.



The Tactile Reader Pro comes with:

- 1x Tactile Reader Pro
- 1x USB-A-USB-B charging cable
- 1x set of 25 standard movement tiles.

The Tile Packs

To offer a range of programming opportunities, there are 3 tile packs available:

- **Standard Tile Pack:** 8x Forward tiles, 8x Backward tiles, 4x Left (90°) tiles, 4x Right (90°) tiles, 1x Pause tile.
- **Extension Tile Pack:** 4x Left (45°) tiles, 4x Right (45°) tiles, 3x Repeat Open tiles, 12x Repeat tiles, 2x Pause tiles.
- **Loti-Bot Tile Pack:** 8x Sound tiles, 13x RGB tiles, 4x Headlight tiles.

How do I charge the Tactile Reader?



Before using the Tactile Reader Pro, make sure that it has enough charge.

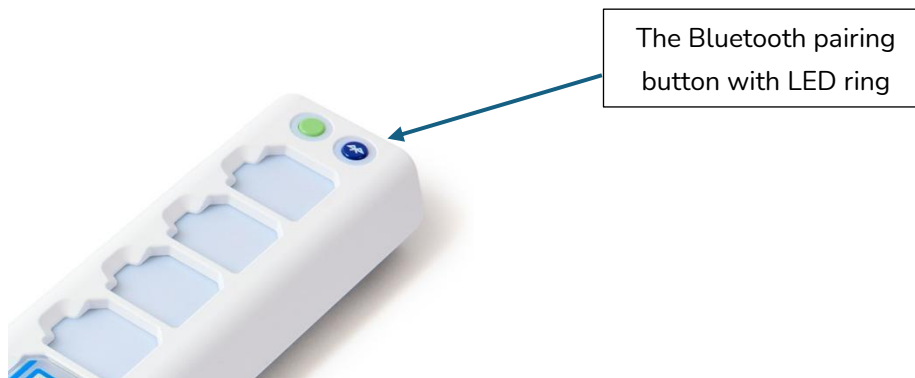
- Charging can take up to 5 hours, depending on how low the battery is.
- If the battery is low, the LEDs underneath will show red.
- To charge, use the USB lead supplied to connect to any suitable USB port or charger.
- When **charging**, the LEDs underneath will change to solid **red**.
- When **fully charged**, the LEDs underneath will change to solid **green**.

How do I pair Blue-Bot, Rugged Robot or Loti-Bot to the Tactile Reader Pro?

Follow these simple steps to connect Blue-Bot, Rugged Robot or Loti-Bot to a Tactile Reader Pro:

1. On the underneath of the Tactile Reader Pro is the 'Power' switch. Slide the 'POWER' switch to the 'ON' position.
 - The switch is turned on if it is next to the 'I' symbol.
 - The switch is turned off if it is next to the 'O' symbol.

The Tactile Reader Pro LEDs will be green when not connected to a robot and will change colour (dependent on the robot) when successfully connected.



2. Next, turn on your robot:

For Blue-Bot:



- Slide the 'POWER' switch on Blue-Bot to the 'ON' position.
- Slide the 'SENSOR' switch on Blue-Bot to the 'ON' position. This will enable Bluetooth.
- On the Tactile Reader Pro, hold down the blue 'Bluetooth' pairing button. The LED ring will flash blue while it is connecting and will turn solid blue once connected. The LEDs underneath the Tactile Reader Pro will also change colour and Blue-Bot's eyes will glow blue when paired.
- Whilst pairing, it is best to have the Tactile Reader Pro close to the Blue-Bot.

For Rugged Robot:

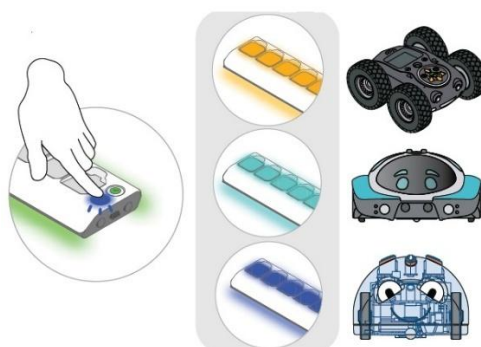


- Turn Rugged Robot on using the on/off switch.
- On the Tactile Reader Pro, hold down the blue 'Bluetooth' pairing button. The LED ring will flash blue while it is connecting and will turn solid blue once connected. The LEDs underneath the Tactile Reader Pro will change colour when successfully connected.
- Whilst pairing, it is best to have the Tactile Reader Pro close to the Rugged Robot.

For Loti-Bot:



- Slide the 'POWER' switch on Loti-Bot to the 'ON' position.
- Wait for Loti-Bot to calibrate (circle to find north).
- On the Tactile Reader Pro, hold down the blue 'Bluetooth' pairing button. The LED ring will flash blue while it is connecting and will turn solid blue once connected. The LEDs underneath the Tactile Reader Pro will also change colour and Loti-Bot's internal light will glow blue when paired successfully.
- Ensure that Loti-Bot is within 10m of the Tactile Reader Pro to pair successfully.



Please note: If pairing is lost for any reason, the LEDs on the Bluetooth pairing button ring will flash and the underneath LEDs will return to green.

Top Tip. If pairing multiple Blue-Bots, Rugged Robots or Loti-Bots with Tactile Readers in a shared space, pair each Blue-Bot/Rugged Robot/Loti-Bot with a Tactile Reader Pro one at a time. This will help to keep track of which robot is connected to which Tactile Reader Pro.

What do the symbols on the Tactile Reader Pro Tiles mean?

A [Tactile Reader Pro Standard Tile Pack](#) will contain a 25-piece set of the following tiles:



These tiles will enable the user to program Blue-Bot/Rugged Robot/Loti-Bot to perform the following commands:

 x8	Move forwards
 x8	Move backwards
 x4	Turn right 90 degrees
 x4	Turn left 90 degrees
 x1	Pause – a useful command to break problems into smaller chunks.

The [Tactile Reader Pro Extension Tile Pack](#) will contain a 25-piece set of the following tiles:



These tiles will enable the user to program Blue-Bot/Rugged Robot/Loti-Bot to perform the following commands:

 x4	Turn right 45 degrees
 x4	Turn left 45 degrees
 x12	Perform a set number of repeats, as shown on the tile (e.g. 5 times)
 x3	Repeat Open
 x2	Pause

The Tactile Reader Pro Loti-Bot tile pack will contain a 25-piece set of the following tiles:



These tiles will enable the user to program Loti-Bot to perform the following commands:

 x13	A range of different RGB tiles which will change the colour of Loti-Bot's sidelights
 x8	Sound tiles with 8 pre-recorded sounds
 x4	Headlight tiles which can turn Loti-Bot's headlights on or off



How do I program with the Tactile Reader Pro?

The Tactile Reader Pro can be used either horizontally or vertically depending on how the user wants to lay out their program.

Using the Tactile Reader Pro in the Horizontal Position:

The Tactile Reader Pro should be positioned so that the green and blue buttons are on the right-hand side. When placing the tiles, make sure that the blue line on each tile is at the top. This is especially important for the direction tiles, so the user knows which direction they are inputting.



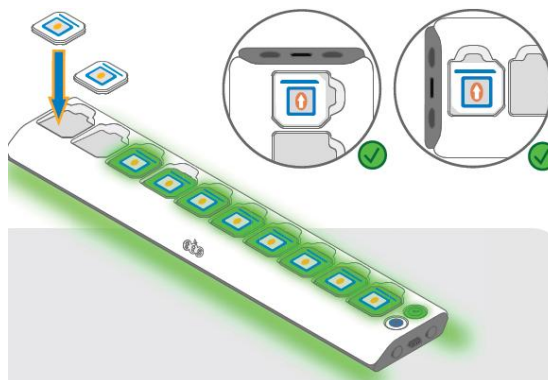
Using the Tactile Reader Pro in the Vertical Position:

The Tactile Reader Pro should be positioned so that the green and blue buttons are at the bottom. When placing the tiles, make sure that the blue line on each tile is at the top. This is especially important for the direction tiles, so the user knows which direction they are inputting.



To Program:

1. **Insert the tiles:** Ensure that the tiles are placed in the desired order. Each window will light up when a tile is inserted.



2. **Press the green button (see picture below):** Blue-Bot/Rugged Robot/Loti-Bot will perform the commands on the tiles in the given order. The tile windows will light up as the robot performs each command.



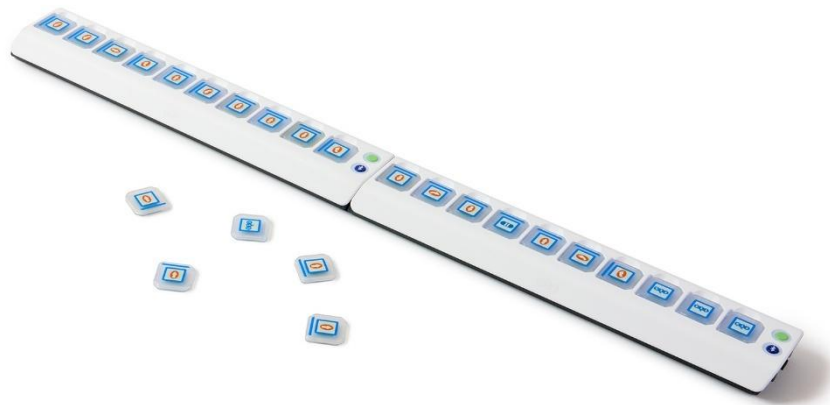
How do I debug using the Tactile Reader?

To debug, follow these simple steps:

- **SWAP the Tiles:** Rearrange, add, or remove tiles in the desired order.
- **Press the green button:** Blue-Bot/Rugged Robot/Loti-Bot will then perform the new set of commands.
- **Observe:** Watch Blue-Bot/Rugged Robot /Loti-Bot to see if it performs the new set of commands in the correct order for the desired task. If not, the tiles can be rearranged, and another set of commands tried until the desired outcome is achieved.

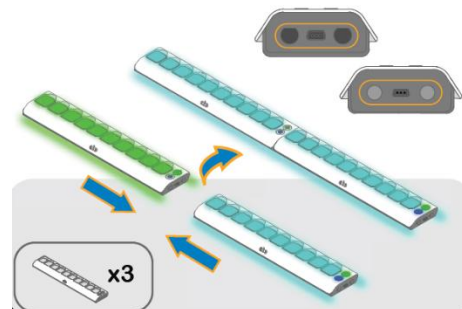
How do I Daisy Chain the Tactile Reader?

If you want to increase the number of commands that Blue-Bot/Rugged Robot/Loti-Bot performs, you can daisy chain up to three Tactile Readers. This will allow for up to 30 commands to be programmed.



To daisy chain a Tactile Reader Pro to another, follow these simple steps:

1. Place the Tactile Reader Pros together and the magnetic connectors will click together.
Note: This will need to be done on a flat surface as they are held together with magnets. They should not be carried about like this.



2. If one of your Tactile Reader Pros is already connected to a robot, once daisy chained the other Tactile Reader Pro will automatically connect to that robot and the LEDs underneath the Tactile Reader Pro will change to be the same colour to show it is connected.

3. If the Tactile Reader Pros are not connected to a robot before the daisy chaining, press the blue Bluetooth button on the furthest right Tactile Reader Pro to connect and the other Tactile Reader Pros will all automatically connect.
4. To carry out commands on the daisy chained Tactile Reader Pros, use the green button on the furthest right Tactile Reader Pro.

Things to note:

- When daisy chaining Tactile Reader Pro's, everything operates from the Tactile Reader Pro on the rightmost side. The buttons on the others will be inactive.
- There can be gaps amongst the tiles on any of the Tactile Reader Pros. Blue-Bot/Rugged Robot/Loti-Bot will still perform all the commands in order and ignore the gaps.
- The sequence of commands will start from the leftmost Tactile Reader Pro in the horizontal orientation or top to bottom in vertical orientation.
- The Tactile Reader Pro will go into sleep mode after 15 minutes of inactivity.

The Tactile Reader Pro is an engaging screen-free device for coding and computational thinking.
Explore the world of programming with hands-on activities.

We hope you enjoy using the Tactile Reader Pro.