# Tactile Code Reader Guide

## What is the TacTile Code Reader?

The Tactile Code Reader is a great tool to use alongside Blue-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 allows children to create sequences by placing physical tiles in order, each representing a different command.



## How do I charge the Tactile Reader?



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

- Charging can take up to 10 hours, depending on how low the battery is.
- If the battery is low, the Status LED (see diagram above) will flash red.
- To charge, use the USB lead supplied to connect to any suitable USB port or charger.
- When **charging**, the Status LED will change to solid **red.**
- When **fully charged**, the Status LED will change to solid **green**.

## How do I pair Blue-Bot to the Tactile Reader?

Follow these simple steps to connect Blue-Both to a tactile code reader:

1.  On the underneath of the Tactile Code Reader (see picture below) is the 'Power' and 'Sound' switch. Slide the 'POWER' switch to the 'ON' position. If sound is required, also slide the 'SOUND' switch to the 'ON' position.



- A switch is turned on if it is next to the 'I' symbol on the underneath of the Tactile Reader.
- A switch is turned off if it is next to the 'o' symbol on the underneath of the Tactile Reader.

2.  Next, turn on the Blue-Bot:
    - Slide the 'POWER' switch to the 'ON' position.
    - Slide the 'SENSOR' switch to the 'ON' position. This will enable Bluetooth.
    - If sound is required, ensure the 'SOUND' switch is also set to 'ON'.

3.  Ensure that the Blue-Bot is within 10m of the Tactile Reader, to pair successfully.

4.  Hold down the blue 'Pairing' button. The Status LED (see picture below) will flash blue while it is connecting and then will turn solid blue once connected. The Blue-Bot's eyes will also glow solid blue when paired with the Tactile Code Reader.



Status LED

**Please note:** If pairing is lost for any reason, the Blue LED on the Tactile Reader and the Blue LEDs on the Blue-Bot will switch off.

**Top Tip.** If pairing multiple Blue-Bots with Tactile Readers in a shared spare, follow a systematic approach to avoid confusion, such as:

tts

- Pair each Blue-Bot with a Tactile Reader one at a time. This method will help to keep track of which Blue-Bot is connected to which Tactile Reader.
- To further enhance clarity, label both the Blue-Bot and the corresponding Tactile Reader with the same symbol or name etc. This will help to differentiate the pairs easily.

## What do the symbols on the Tactile Code Reader Tiles mean?

A Tactile Code Reader Starter Pack will contain a 25-piece set of the following tiles:
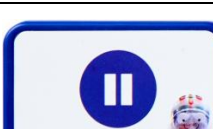


These tiles will enable the user to program Blue-Bot to perform the following commands:

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

A Tactile Code Reader Tiles Extension Pack will contain a 25-piece set of the following additional tiles:

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

| | |
|---|---|
|  | Turn right 45 degrees |
|  | Turn left 45 degrees |
| x3 | Perform a set number of repeats, as shown on the tile (e.g. 3 times, 8 times etc) |
|  | Open repeat brackets |
|  | Close repeat brackets |
|  | Pause multiple times |

## How do I program with the Tactile Reader?

The tiles can be placed either portrait or landscape depending on how the user wants to lay out their program.



Aligned Blue-Bot images

Aligned 'tts' symbols
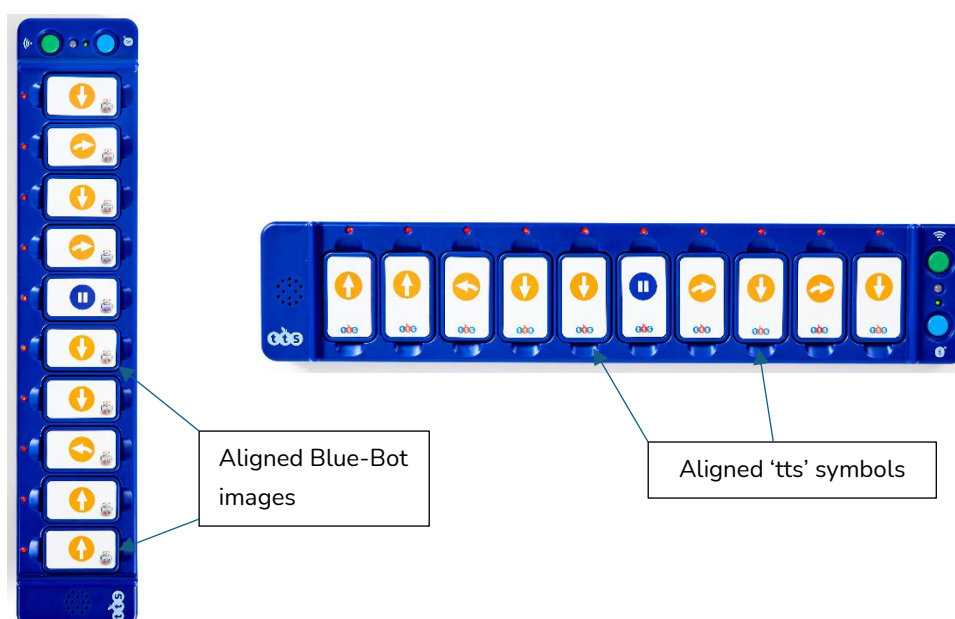
**Using the Tiles in the Horizontal (Landscape) Position:**

Ensure the 'tts' symbols on the tiles are aligned (as shown above), to ensure the correct orientation. This is especially important for the direction tiles, so the user knows which direction they are inputting.

**Using the Tiles in the Vertical (Portrait) Position:**

Ensure the Blue-Bot images on the tiles are aligned (as shown above), to ensure the correct orientation. 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 from the end of the Tactile Reader marked with the 'tts' symbol (see picture below).



- **Important Note:** If the order is started from the end of the Tactile Reader where the 'SEND' and 'PAIRING' buttons are, Blue-Bot will perform the commands in reverse order.

2. **Press the green 'SEND' button (see picture below):** If the 'SOUND' is on, three peeps will sound, and Blue-Bot will perform the commands on the tiles in the given order.



'Send' Button

3. **Observe:** The LED light next to each tile will light up when the command on the tile is being performed.

## 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 'SEND' button:** Blue-Bot will then perform the new set of commands.

- **Observe:** Watch Blue-Bot to see if it performs the new set of commands in the correct order for the desired task. If Blue-Bot does not perform as expected, 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 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 to another, follow these simple steps:

1. **Turn over the Tactile Readers:** It's easier to access the USB ports and connect the USB leads when the Tactile Readers are turned over.
2. **Connect the USB lead:** Simply attach the USB lead from the speaker side of one Tactile Reader (see pictures above) to the switches side of another Tactile Reader.
3. **Repeat** this process if you are connecting three Tactile Readers.

**Things to note:**

- When daisy-chaining Tactile Readers, everything operates from the Tactile Reader on the rightmost side. The buttons on the other Tactile Readers will be inactive.
- There can be gaps amongst the tiles (as shown below) on any of the Tactile Code Readers. Blue-Bot will still perform all the commands in order and ignore the gaps.



- The sequence of commands will start from the rightmost Tactile Reader in both the vertical and horizontal orientation.

## Additional Resources:

For further information and guidance on how to use the Tactile Reader, see our Tactile Reader Manual and Tactile Reader Teacher's Guide.