

Blue-Bot App Guide

Welcome to the Blue-Bot App Guide. This guide will provide you with information about the benefits of using the Blue-Bot App, how the app has been designed and how to navigate it effectively.



Benefits of the Blue-Bot App

The free downloadable Blue-Bot App enables children to program and explore increasingly complex algorithms, including functionalities such as 45 degree turns, repeats and navigating obstacles. There is a command sequencer too, so children can see the commands they have inputted, making debugging easier. Additionally, the app features a block-based programming mode, which serves as a stepping stone for children to learn more advanced coding skills as they move through school.

Connecting Blue-Bot to the APP

To connect Blue-Bot to the Blue-Bot App, follow these simple steps:

- **Power ON:** Ensure both the POWER and SENSOR switches on Blue-Bot's base are set to the ON position.
- **Sound:** If you require sound, make sure the SOUND switch is set to the ON position
- **Open the App:** Launch the Blue-Bot App and press START
- **Search for Devices:** The app will search for available Blue-Bots, displaying them in a list.
- **Proximity Requirement:** Stand Close to the Blue-Bot. This is especially important if connecting multiple Blue-Bots at the same time. The Blue-Bot closest to the screen device is most likely to appear at the top of the list. You may wish to connect each Blue-Bot one at a time, to avoid any confusion.
- **Connect:** Click CONNECT next to the desired Blue-Bot, When the Blue-Bot is connected to the app, it will turn BLUE.
- **Rename (Optional):** When connecting multiple Blue-Bots, it is advisable to rename each one for easier identification. To rename a Blue-Bot, press the RENAME button and enter a new name. Additionally, labelling the real-world Blue-Bot with stickers or a permanent marker is recommended. This practice simplifies matching the correct Blue-Bot to the corresponding device on the screen.
- **Finalise Connection:** After connecting or renaming, press GO. This will take you to the menu page on the app.

Important Note: When a Blue-Bot is connected to the app, it disables the ability to program the Blue-Bot screen-free until the device is disconnected from Bluetooth.

Settings

In **Settings**, you have the following options:

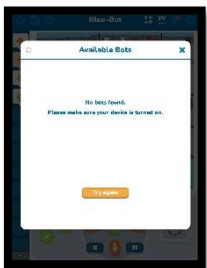
Buttons



In the Buttons section, you can enable or disable buttons. This feature is useful for focussing children on a specific set of programmable functions on the Blue-Bot. Alternatively, you can offer more challenge by making one or more functions unavailable.

Additionally, there is an option to enable or disable the save or load functionality. This is a useful feature in preventing accidental deletion of any saved programs.

Bluetooth



Pressing the Bluetooth section in Settings or the **Bluetooth icon** in the toolbar will display a list of connected Blue-Bots. This list will show you how many Blue-Bots are currently connected via Bluetooth.

Voice



In the Voice section, you can record audio for each control button. When those buttons are pressed to program the robot, the audio will sound. This is a particularly useful feature for children with visual impairments or children who need support with directional language.

About

Select this option to view TTS's privacy policy.

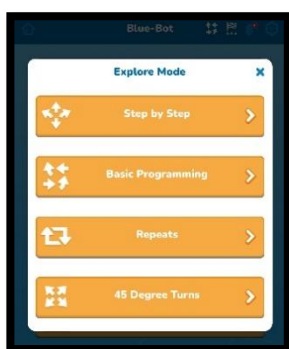
Menu Options

Controller Mode



This option allows you to control Blue-Bot via the app, using its basic functions. In this mode, you can program Blue-Bot to move forwards, backwards and turn 90 degrees right or left.

Explore Mode

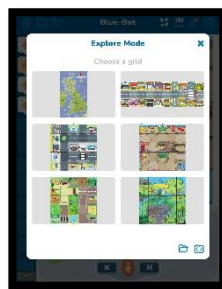


Step by Step



In this option, you can program a virtual Blue-Bot one step at a time, allowing children to test the outcome of their programming one step at a time.

- First, select a TTS mat/grid that you already have from the list, or upload or take a photograph of one you have created. If a mat/grid is already visible, press the mat icon to change it.



- Then, drag the virtual Blue-Bot on to the grid square where you want to start. You can also rotate the Blue-Bot to a desired orientation, before dragging it to the mat, by pressing the rotation symbol.



- Next, place the real-world Blue-Bot physically on the same mat shown on the app. Check that your physical mat is the same orientation as the one shown on the app, and the orientation of Blue-Bot matches that of virtual Blue-Bot.
- After that, program the virtual Blue-Bot on the App using the direction keys. When a direction key is pressed, the virtual Blue-Bot will move in that direction. All the inputted commands will appear in the command sequencer on the lefthand side.
- If children wish to plan out their sequence of commands first, drag the virtual Blue-Bot to its starting position, once all the commands have been inputted.
- Pressing GO on the app, at any point, will make the real-world Blue-Bot perform all the commands inputted (shown in the command sequencer). The virtual Blue-Bot will also go back to its starting position and perform the commands in the command sequencer simultaneously with the real-world Blue-Bot.
- Pressing the PENCIL icon will also draw out the programmed route.
- Children can debug by moving the tiles around in the command sequencer. Dragging tiles to the bottom of the screen will delete them.
- Remember to use the CLEAR key on the app to clear any code before inputting a new set of commands.



- Press the HOME icon to return to other mode options.
- First, select a TTS mat/grid that you already have from the list, or upload or take a photograph of one you've created. If a mat/grid is already visible, you can press the mat icon to change it.
- Then, drag the virtual Blue-Bot on to the grid square where you want to start. You can also rotate the Blue-Bot to a desired orientation, before dragging it to the mat, by pressing the rotation symbol.
- Next, place the real-world Blue-Bot physically on the same mat shown on the app. Check that your physical mat is the same orientation as the one shown on the app, and the orientation of Blue-Bot matches that of virtual Blue-Bot.

Basic Programming



This option is very similar to the 'Step by

Step' option, except the virtual Blue-Bot will not move one step at a time when being programmed.

- After that, program the virtual Blue-Bot on the App using the direction keys. The inputted demands will show on the left-hand side command bar.
- Pressing the PENCIL icon will also draw out the programmed route on the app.
- Press GO when all commands have been inputted. Both the virtual and real-world Blue-Bot will move at the same time.
- Children can debug by moving the tiles around in the command sequencer. Dragging tiles to the bottom of the screen will delete them.
- Remember to use the delete key on the app to clear any code before inputting a new set of commands.
- Press the HOME icon to return to other mode options.

Repeats



This option has all the same features as the 'Basic Programming' option, except you can also add repeats into the program.

- For this option, follow the steps above for 'Basic Programming'.
- To include a repeat, click on the REPEAT icon – a grey dot will appear on all tiles in the command sequencer.

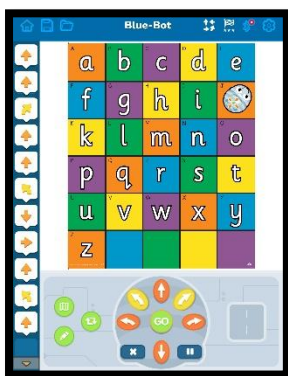


- Double press the command tile that you would like to repeat. The tile will turn orange and a '+' and '-' symbol will appear next to it.
- Press '+' to increase the number of repeats and press '-' to decrease the number of repeats. Pressing the 'x' button will delete the repeats.



- When you press 'Go', Blue-Bot will execute the repeat commands.

45 Degree Turns



- To understand how to use this option, follow the steps above for 'Basic Programming'.
- To include a repeat, follow the steps above for 'Repeats'.
- To add 45 degree turns, press the yellow direction keys.

Important Note: As Blue-Bot has been programmed to move in 15cm steps, the real-world Blue-Bot will not end up exactly in the middle of the square after taking a 45-degree turn. The virtual Blue-Bot, however, will end up in the middle of the square after taking a 45-degree turn. This is a good discussion point to have with children, as to why the real-world Blue-Bot does not end up in the same position as the virtual Blue-Bot, after making 45-degree turns.

This option has all the same features as the 'Basic Programming' option, as well as the ability to add repeats and 45 degree turns.

Challenge Mode



Get from A to B



This option challenges children to program Blue-Bot to get from its starting position to the finish.

- First, select a TTS mat/grid that you already have from the list, or upload or take a photograph of one you've created. If a mat/grid is already visible, you can press the mat icon to change it.
- Next, place the real-world Blue-Bot physically on the same mat in the same grid position shown on the app. Check that your physical mat is the same orientation as the one shown on the app, and the orientation of Blue-Bot matches that of virtual Blue-Bot.
- After that, program the virtual Blue-Bot on the App using the direction keys to reach the finish (shown as a flag in a green circle). The inputted demands will show on the left-hand side command sequencer.
- Pressing the PENCIL icon will also draw out the programmed route on the app.
- Press GO when all commands have been inputted. Both the virtual and real-world Blue-Bot will move at the same time.
- Children can debug by moving the tiles around in the command sequencer. Dragging tiles to the bottom of the screen will delete them.
- If using the DELETE key to clear any code, press GO afterwards to return the virtual Blue-Bot back to the starting position.
- Remember to use the delete key on the app to clear any code before inputting a new set of commands.
- Press the HOME icon to return to other mode options

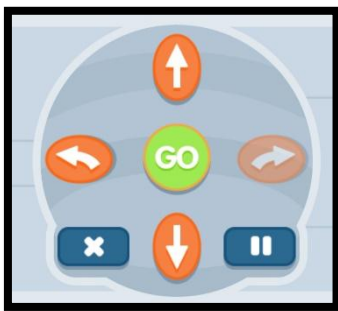
Obstacles



This option challenges children to program Blue-Bot to get from its starting position to the finish while also avoiding obstacles.

- To understand how to use this option, follow the steps above for 'Get from A to B'.
- Place obstacles on the physical mat in the same locations as indicated in the app so the real-world Blue-Bot can navigate around them.

Fewer Buttons



This option challenges children by making some of the programmable commands unavailable.

- To understand how to use this option, follow the steps above for 'Get from A to B'.
- The command that is not available will be greyed out on the keypad.

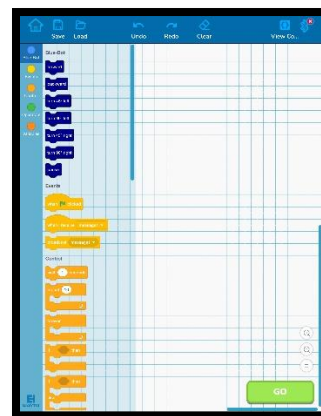
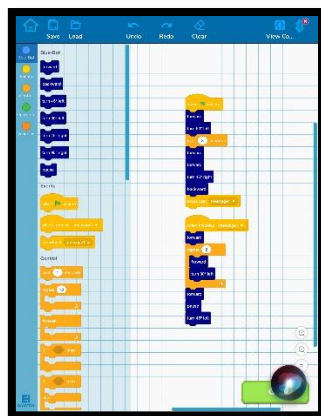
Random Instructions



This option challenges children to work out the final position of Blue-Bot by looking at the inputted commands in the command sequencer.

- First, select a TTS mat/grid that you already have from the list, or upload or take a photograph of one you have created. If a mat/grid is already visible, you can press the mat icon to change it.
- Next, place the real-world Blue-Bot physically on the same mat in the same grid position shown on the app. Check that your physical mat is the same orientation as the one shown on the app, and the orientation of Blue-Bot matches that of virtual Blue-Bot.
- After that, hold and drag the flag symbol to where you think Blue-Bot's final position will be. A similar symbol can be placed in the same position on the physical mat.
- Pressing the PENCIL icon will draw out the programmed route on the app.
- Press GO. Both the virtual and real-world Blue-Bot will move at the same time.
- If the flag has been placed in the correct place, another challenge will start automatically. If the flag has been incorrectly placed, you will have the option to restart.
- You can create your own set of random instructions by moving around tiles in the command sequencer and adding tiles using the direction buttons. Dragging tiles to the bottom of the screen will delete them.
- Press the HOME icon to return to other mode options.

Blue's Blocs



This mode allows children to move onto blocked based coding and to create more complex programs.

For a clear guide on understanding what each code block does and how to use it to program, see our 'TTS Visual Programming User Guide'.