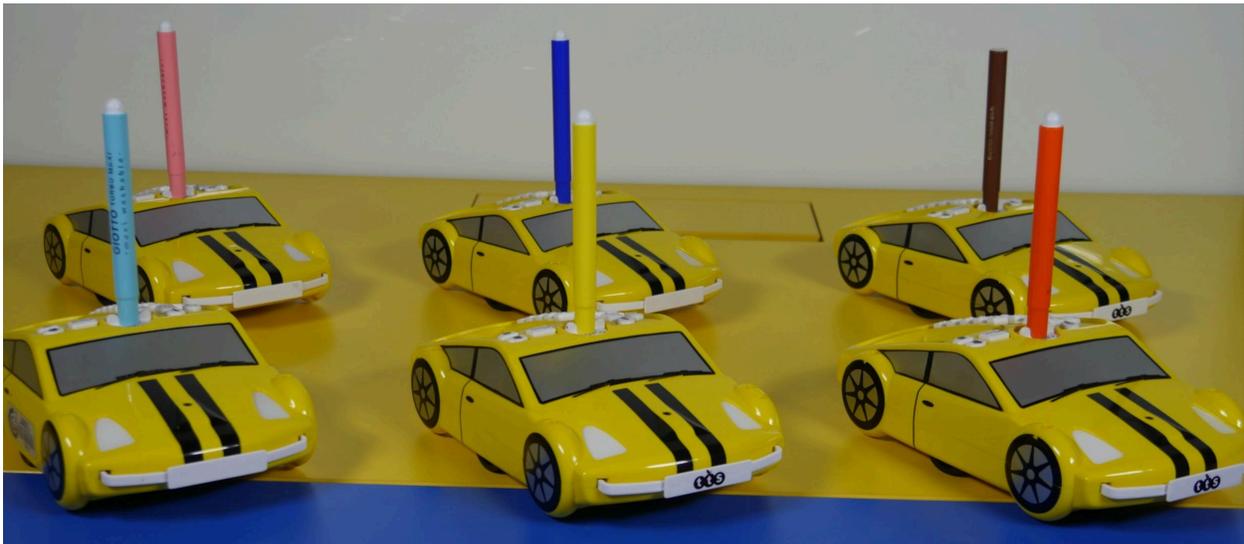


Pro-Bots

Pro-Bots can be used in KS1 and KS2. They are a great way to extend work done in EYFS and KS1 with Bee-Bots and are a useful tool to explore the programming elements of the Computing Curriculum.

This help sheet will explain how to use the Pro-Bot, and provide some ideas for classroom activities.



Power and batteries

The 'On / Off;' button is on the back of the Pro-bot

Next to this button is the 'Mute / Unmute' button.



Batteries can be replaced in the back of the robot. Please use a screwdriver to open the battery compartments. The top compartment contains 3 AA batteries. The smaller compartment contains one C2032 battery.

Basic Movements

You can use the LCD on the front of the robot to build up a list of instructions.

Like the Bee-Bots, the 'Forward' and 'Backward' buttons will move the Pro-Bot by its own length, and the 'Sideways' buttons will make the robot turn 90 degrees. Remember to press the 'Go' button to make the robot move.



For instance:

Fwd

Rt

GO

will make the robot move forward by its own length and then turn 90 degrees.

However you can also use the number keys to change the length of the move and the degree of turn. The Pro-Bot measures forwards and backwards movements in centimetres and measures turns in degrees.



For instance:

Fd 10

Rt 45

GO

will make the robot move forward 10cm and turn 45 degrees.



Managing instructions

You can use the 'Up' and 'Down' buttons to move up and down the menu to refine your program.

You can use the 'Clear' button to delete an instruction.

Repeats

You can use the 'Repeat' button to repeat a list of instructions.

Set the number of times you want to repeat, and remember to finish your repeat with the close brackets (']') symbol.



For instance

Rpt 4 [

Fd 5

Rt 90

]

GO

will draw a square with 5cm edges.

In your classroom

Pro-Bots are an excellent tool for teaching programming. They can help pupils develop lists of instructions (algorithms), and to test and refine their instructions. To do this, pupils need a task to accomplish. Here are a few example activities you could try in your classroom.

- Build a maze or obstacle course in your classroom and ask pupils to design instructions to navigate the course. You could do this on the carpet, using wooden blocks or anything else you have to hand. It is important that you keep the course fixed (if pupils constantly re-design the course it can get very confusing). Pupils could also build their own mazes and challenge one another.
- Program the robots to draw shapes by placing a felt tip pen through the hole in the top of the Probot. Start with regular shapes like square and triangles (see repeat instructions above). Then move onto simple irregular shapes, like 3D lettering. Ask pupils to plan their shape on grid paper and write out their instructions before they try it with the robot.
- Program a dance routine for the Pro-Bots. Ask pupils to start with one probot and then see if they can synchronise several robots to perform the same routine. You could also film the dance if you have a camera.