PATTERN PROGRAMMER
Software Module
Version 1.0
By STAR, Inc.

The "Pattern Programmer" software module allows you to program your RB5X to execute a series of movements; for example, you can instruct your robot to do a funny dance (the Texas two-step?) or to follow a particular path through your room. Each of the RB5X's eight bumpers corresponds to a specific movement command; pressing the bumpers enters the commands into your robot's memory. You also use the bumpers to "play back" your pattern, to start your RB5X moving, dancing, spinning, etc.

Age Level

Adults and children of all ages will enjoy using the "Pattern Programmer."

Operation

To use your "Pattern Programmer" module:

l. Make sure your RB5X is switched off.

2. Insert the software module into the socket on the RB5X's interface panel, making sure the guide marks on the socket and the module match. Push the module firmly into the socket.

3. Check the label on your "Pattern Programmer" module and set the module switch located to the right of the socket to the appropriate position (2K or 4K).

4. Switch the RB5X on. The four corner LED's go on, then the center light-emitting diodes begin flashing. If this doesn't happen, check to be sure the software module is installed correctly, that the robot is adequately charged, and that the switch located to the right of the module socket is set to the proper position. If the LED's still do not light, check the "Troubleshooting" section of the RB5X-Reference Manual or call your dealer.

5. Wait until the center light-emitting diodes (LED's) begin to flash before beginning to program your robot. The bumpers are numbered l through 8, beginning with the bumper located under the sonar sensor (1) and proceeding clockwise around the robot as you look down on it. Initiate the pattern programming process by pressing bumpers 1 and 5 at the same time. The corner LED's will go out.

6.   Each bumper corresponds to a movement command as listed below:

Bumper	Command
1	FORWARD (the robot moves forward approximately four inches per press)
2	PIVOT ON RIGHT FORWARD (the robot pivots forward on right wheel; each bumper press equals about 1/7 turn)
3	SPIN CLOCKWISE (the robot rotates right on its axis; each bumper press equals about 1/4 turn)
4	PIVOT RIGHT ON REVERSE (the robot pivots backward on right wheel)
5	REVERSE (the robot moves backward approximately four inches per press)
6	PIVOT ON LEFT REVERSE (the robot pivots backward on left wheel)
7	SPIN COUNTERCLOCKWISE (the robot rotates left on axis)
8	PIVOT ON LEFT FORWARD (the robot pivots forward on left wheel)

Create your pattern program by pressing any combination of bumpers; your robot's LEDs flash and its horn chirps every time you press a bumper to enter a movement command. Be sure to press the bumpers fimrly and deliberately and watch for the flashing LEDs; the flash signifies that RB5X has entered your command in memory. Pressing a bumper several times repeats the corresponding movement. For example, if you want the robot to move forward 20 inches, you press bumper 1 five times.
Because you can enter several hundred commands at a time, you can generate very complex patterns.

7.   To play your pattern back, again press bumpers 1 and 5 simultaneously. Expect a two-second delay before your robot begins to execute the pattern. If you want your RB5X to repeat the pattern continuously, press bumpers 1 and 2 simultaneously instead of 1 and 5. (Your robot pauses for approximately five seconds between repetitions).

8.   To add more movements to your pattern after you play it back, wait for the robot to stop moving, then press the bumpers corresponding to the movements you want to add.

9. If you want to clear your pattern from RB5X's memory and start over, press bumpers 1 and 3 simultaneously, then press 1 and 5, wait for the center LED's to flash, and begin programming again.

10. The RB5X will not remember your pattern when you switch it off; if you design a pattern you want to play again, write down the bumper-press sequence.

11. Be sure to switch RB5X off before removing the "Pattern Programmer" software module.