contents in detail

acknowledgmentsxi		
1		
getting started	1	
what's in the box?		
the hub		
the motors and sensors		
the app		
using this book		
conclusion		
2		
baseball batter	3	
building the baseball batter	4	
programming the batter	6	
getting around the app	6	
creating a program from scratch	7	
saving and running the program	10	
understanding the program	12	
what you've learned	12	
3		
the gobbler	13	
building the gobbler		
programming the gobbler		
creating the base program		
understanding the base program		
improving the base program		
understanding the enhanced program		
making the gobbler answer questions		
what you've learned	33	
4	-	
SARKIAP-1 the transformer		
building the walking core robot		
programming the walking core robot		
custom blocks		
understanding the walking core program		
moving the robot torso up		
finishing the transformer	67	

creating a custom remote-control interface	83
reacting to remote-control inputs	86
reading the orientation of the hub in spacestarting multiple stacks running together	87
	87
programming the transformer	87
become biped and become car custom blocks	88
custom blocks to make the robot walk and turn	89
car RC and biped RC custom blocks	89
program stacks that manage the widgets events	90
what you've learned	91
5	
shelly the turtle	93
building the turtle	94
programming the turtle	115
creating custom patterns on the Hub display	117
creating complex logic conditions	
understanding the blocks to walk and move the head	
using the timer	
creating more interesting behavior	
using variables	
understanding the advanced program	
what you've learned	
,	
6 whac-a-mole!	123
building the whac-a-mole game	
programming the whac-a-mole game	
playing the game	
understanding the main stack	
understanding the move up and move down blocks	
understanding the game logic	
what you've learned	
7	
, pinball	139
building pinball (part 1)	140
using lists	164
controlling the hub display with text strings	165
making the base pinball program	166
playing the game	
understanding the base program	168
understanding the base program	
finishing pinball	168
	168 169
finishing pinball	
finishing pinballcontrolling the distance sensor lights with text strings	
finishing pinball controlling the distance sensor lights with text stringsenhancing the pinball program	
finishing pinballcontrolling the distance sensor lights with text stringsenhancing the pinball programprogramming the bumpers	

8	
guitar	
building the guitar	
playing solos	
creating the program	
playing the guitar	
understanding the guitar solo program	
playing chords	
creating the program	
playing famous songs on the guitar	
understanding the guitar chords program	
adding the control knobs	209
adding transposition control to the solo program	212
adding transposition and tempo control to the chords program	212
playing further	212
what you've learned	213
9	
where to go from here	215
expanding the software	215
expanding the hardware	216
be social	216
what's next?	216
Α	
word blocks quick reference guide	
motors	
movement	
ight	
sound	
events	222
control	223
sensors	224
operators	225
remote control	227
variables	228
more movement (extension)	229
more motors (extension)	230
index	231