



ROBOQUAD™

A FUSION OF TECHNOLOGY AND PERSONALITY



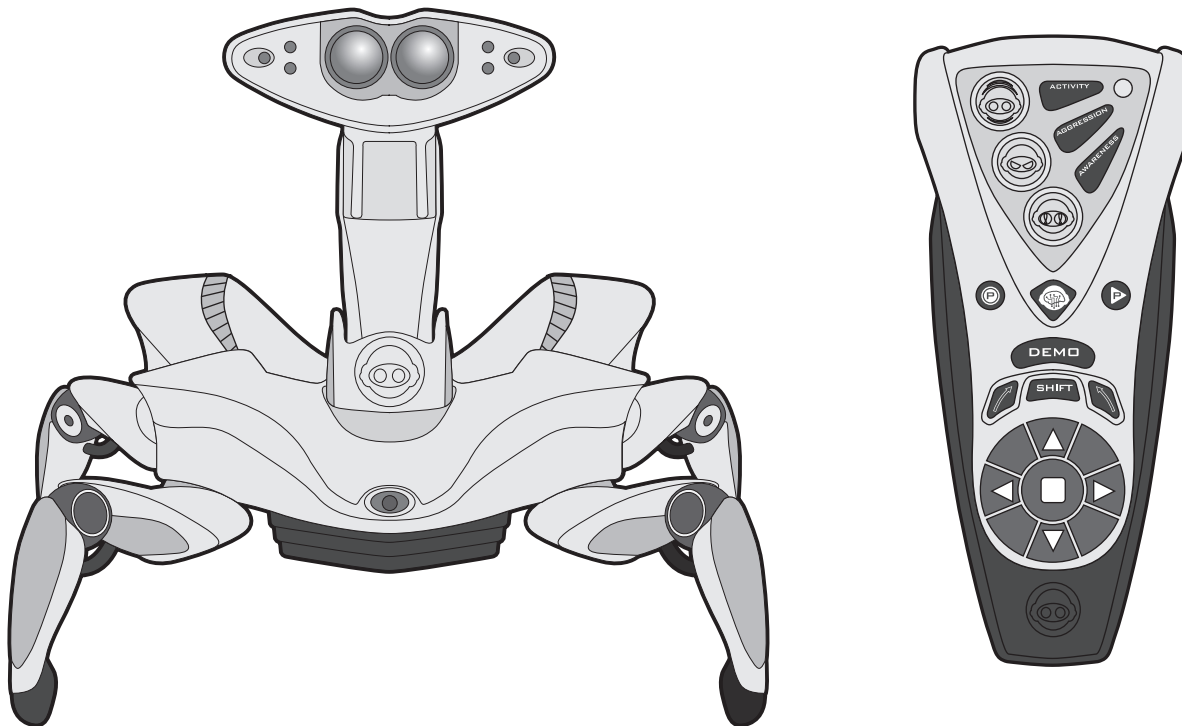
User Manual

Item No. 8039 | Ages 8+



Congratulations on purchasing your new Roboquad™ from Wowwee!

Before using this product, carefully read this manual and retain it for future reference.



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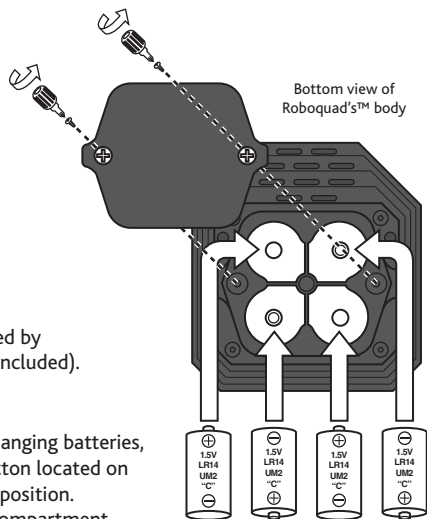
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Getting started

To use your Roboquad, insert batteries (see below), turn him on, and then try some of his functions from the remote controller, or read on to discover more about the abilities of this friendly alien invader.

Battery Details

Roboquad



Battery requirements

Your Roboquad is powered by 4 "C" size batteries (not included).

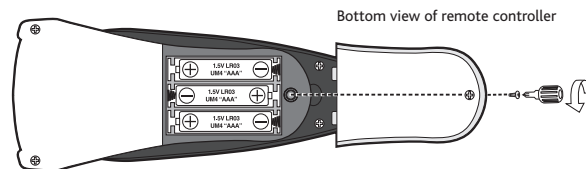
Battery installation

1. Before installing or changing batteries, be sure the power button located on his back is in the OFF position.
2. Remove the battery compartment cover using a Phillips cross head screwdriver (not included).
3. Insert batteries into Roboquad as shown in the diagram.
4. Replace the battery compartment cover and the screws.

Low Power

When Roboquad's batteries are low his animation lights will pulse in bursts of three. When this pulsing is constant, all batteries need replacing. He will not respond to commands while in this state.

Remote controller



Battery requirements

Roboquad's remote controller is powered by 3 x "AAA" size batteries (not included).

Battery installation

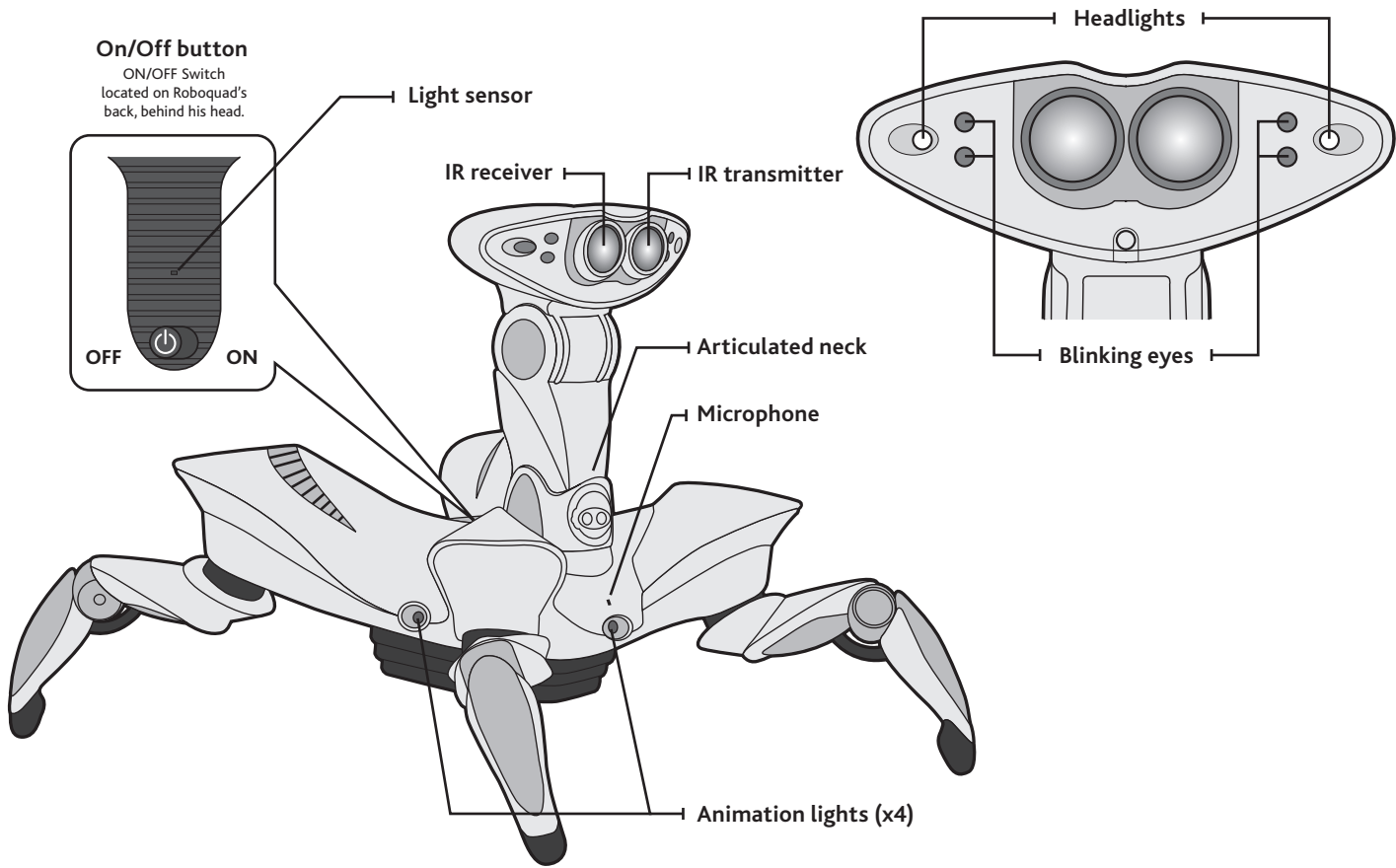
1. Remove the battery compartment cover using a Phillips cross head screwdriver (not included).
2. Insert batteries into the controller as shown in the diagram.
3. Replace the battery compartment cover and the screw.

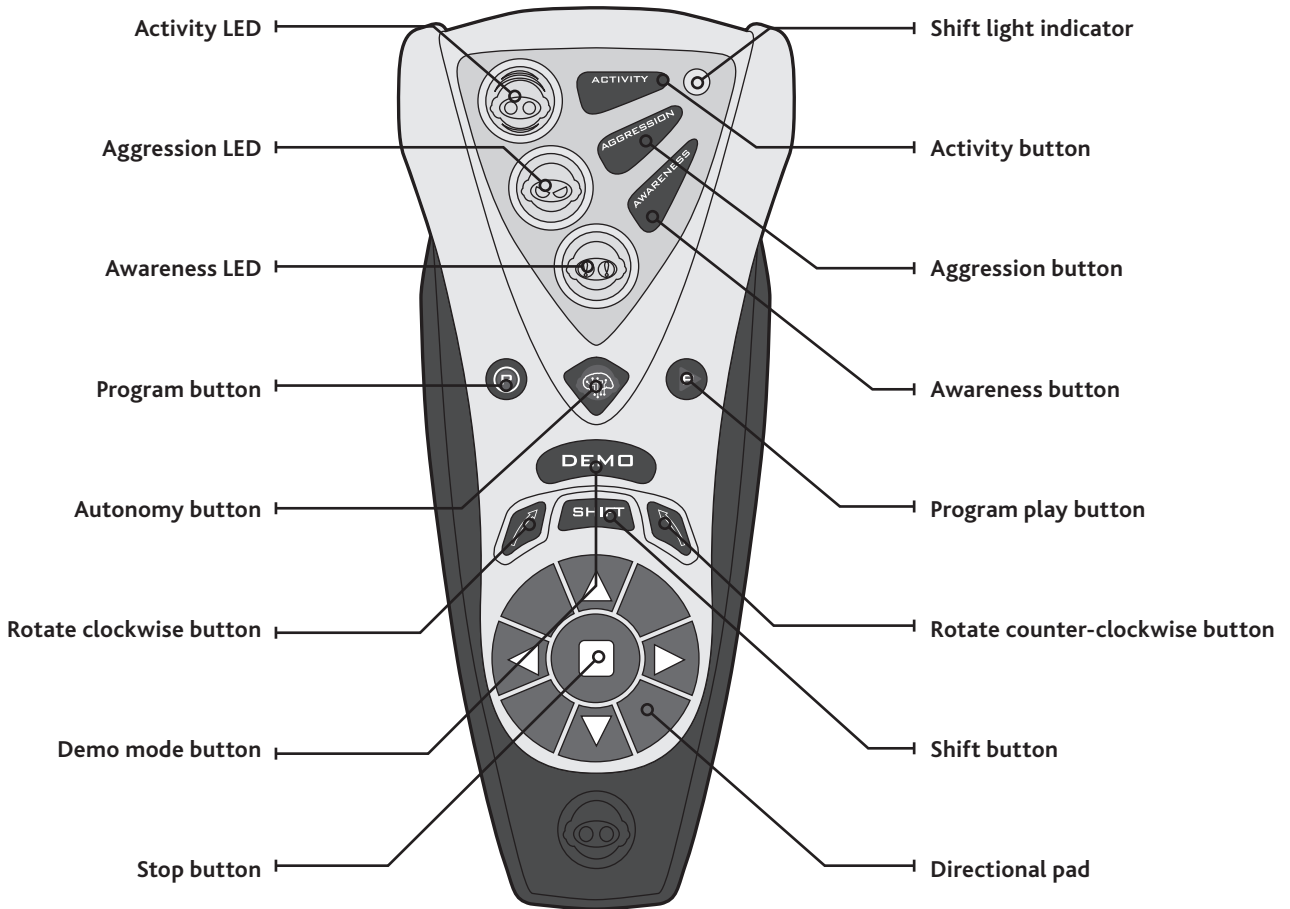
Low Power

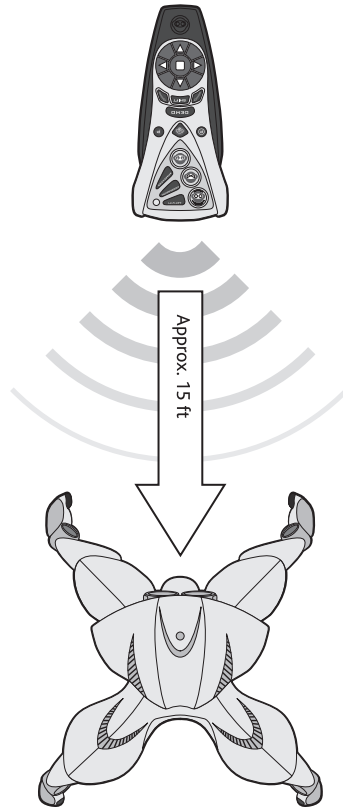
If Roboquad is not responding well to controller commands or the LEDs start to dim, you may need to replace the controller batteries.

Attention: Important Battery Information

- Use only fresh batteries of the required size and recommended type
- Do not mix old and new batteries, different types of batteries [standard (Carbon-Zinc), Alkaline or rechargeable] or rechargeable batteries of different capacities
- Remove rechargeable batteries from the toy before recharging them
- Rechargeable batteries are only to be charged under adult supervision
- Please respect the correct battery and contact polarity, (+) and (-)
- Do not try to recharge non-rechargeable batteries
- Do not throw batteries into fire
- Replace all batteries of the same type/brand at the same time
- The supply terminals are not to be short-circuited
- Remove exhausted batteries from the toy
- Batteries should be replaced by adults
- Remove batteries if the toy is not going to be played with for some time









Roboquad's maximum remote control distance from the front is about 15 feet (4.6 meters).

REMOTE CONTROLLER FUNCTION CHART

The Remote Controller has 4 layers (see p.9 for further details).

 Level 1. Unshifted

 Level 2. Shift-Green

 Level 3. Shift-Orange

 Level 4. Shift-Red



Activity button

Activity toggle
Smart-scan
Twitch BodyCon
High stance



Aggression button

Aggression toggle
Roar
Attack
Aggressive stance



Awareness button

Awareness toggle
Scan left for nearest object
Scan right for nearest object
Aware stance



Autonomy button

Autonomy On/Off
Guard mode
Approach nearest object
Escape walk



Program button

Program
Program back
Program erase
Volume down



Program button

Program play
Sound & vision sensors On/Off
Dizzy BodyCon
Volume up



Demo button

Dance demo
Movement demo
Leg check
Wave



Rotate clockwise button

Rotate clockwise*
Clockwise 4 steps
Single shot
Head clockwise



Rotate counter-clockwise button

Rotate counter-clockwise*
Counter-clockwise 4 steps
Burst
Head counter-clockwise



Forward

Walk forward*
Forward 4 steps
Stomp walk
Head up



Backward

Walk backward
Backward 4 steps
Surprise BodyCon
Head down



Right

Right crab walk*
Right crab 4 steps
Right legs IN
Right legs OUT



Left

Left crab walk*
Left crab 4 steps
Left legs IN
Left legs OUT



Stop button

Stop (double tap for full reset)
Leg reset
Full reset
Sleep mode toggle



Top right

Top right shuffle
Right strafe
Right forward leg IN
Right forward leg OUT



Top left

Top left shuffle
Left strafe
Left forward leg IN
Left forward leg OUT



Bottom right

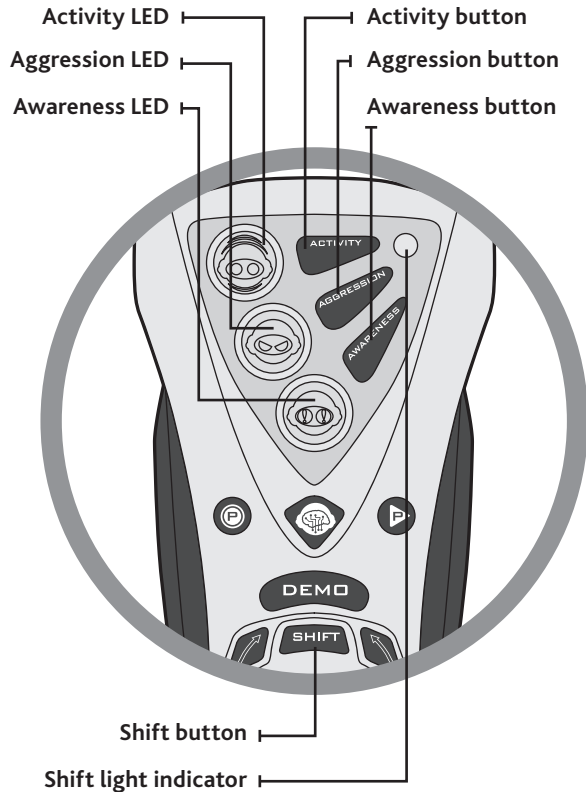
Bottom right shuffle
Right turn roll
Right backward leg IN
Right backward leg OUT



Bottom left

Bottom left shuffle
Left turn roll
Left backward leg IN
Left backward leg OUT

*2 speeds, press again to change speed.



1. Shift

Shift levels

The tricolor LED shift light indicates the shift layer in use. There are 4 levels:

Level 1	Unshifted
---------	-----------

Level 2	Shift-Green
---------	-------------

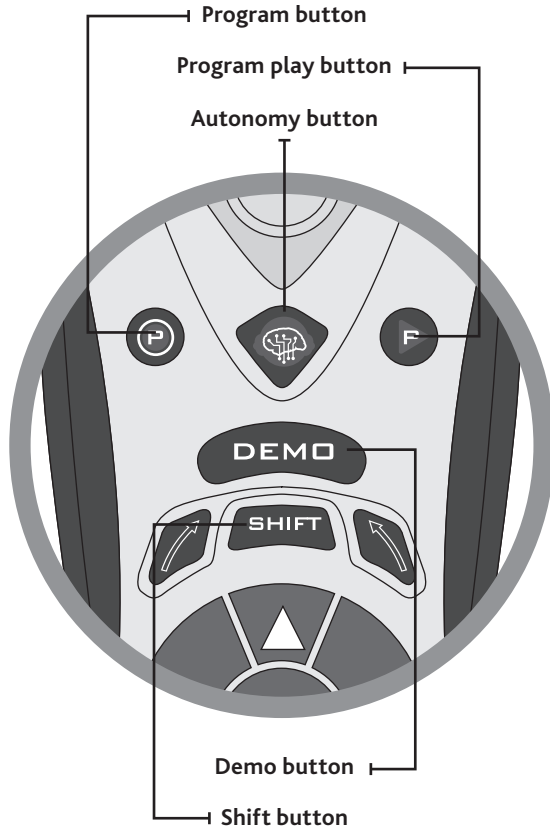
Level 3	Shift-Orange
---------	--------------

Level 4	Shift-Red
---------	-----------

The shift light stays on for around 20 seconds after the last button press, unless the shift is pressed again or pressed until the LED goes back to blank.

2. Personality settings - Activity, Aggression, Awareness

	Activity button	Aggression button	Awareness button
Unshifted	Activity toggle	Aggression toggle	Awareness toggle
Shift-Green	Smart-scan	Roar	Scan left for nearest object
Shift-Orange	Twitch BodyCon	Attack	Scan right for nearest object
Shift-Red	High stance	Aggressive stance	Aware stance



3. Program button and Program play button

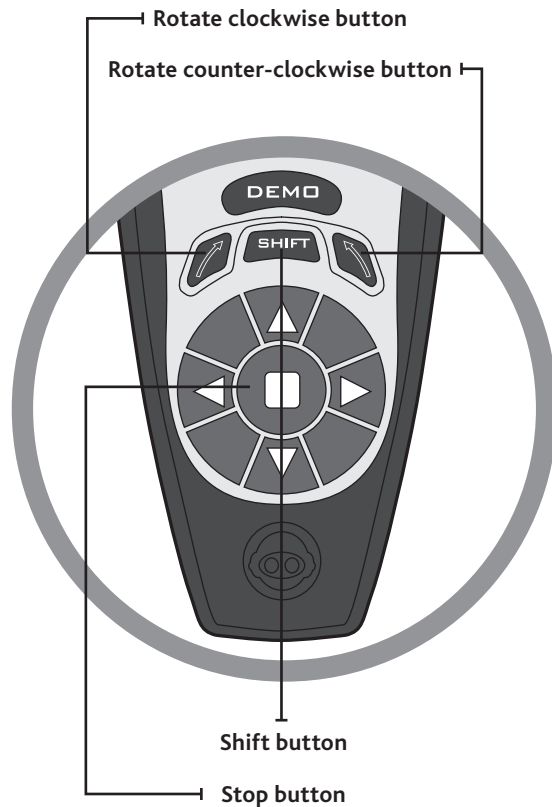
	<i>Program button</i>	<i>Program play button</i>
<i>Unshifted</i>	Program	Program play
<i>Shift-Green</i>	Program back	Sound & vision sensors On/Off
<i>Shift-Orange</i>	Program erase	Dizzy BodyCon
<i>Shift-Red</i>	Volume down	Volume up

4. Autonomy

	<i>Autonomy button</i>
<i>Unshifted</i>	Autonomy On/Off
<i>Shift-Green</i>	Guard mode
<i>Shift-Orange</i>	Approach nearest object
<i>Shift-Red</i>	Escape walk

5. Demo button

	<i>Demo button</i>
<i>Unshifted</i>	Dance demo
<i>Shift-Green</i>	Movement demo
<i>Shift-Orange</i>	Leg check
<i>Shift-Red</i>	Wave



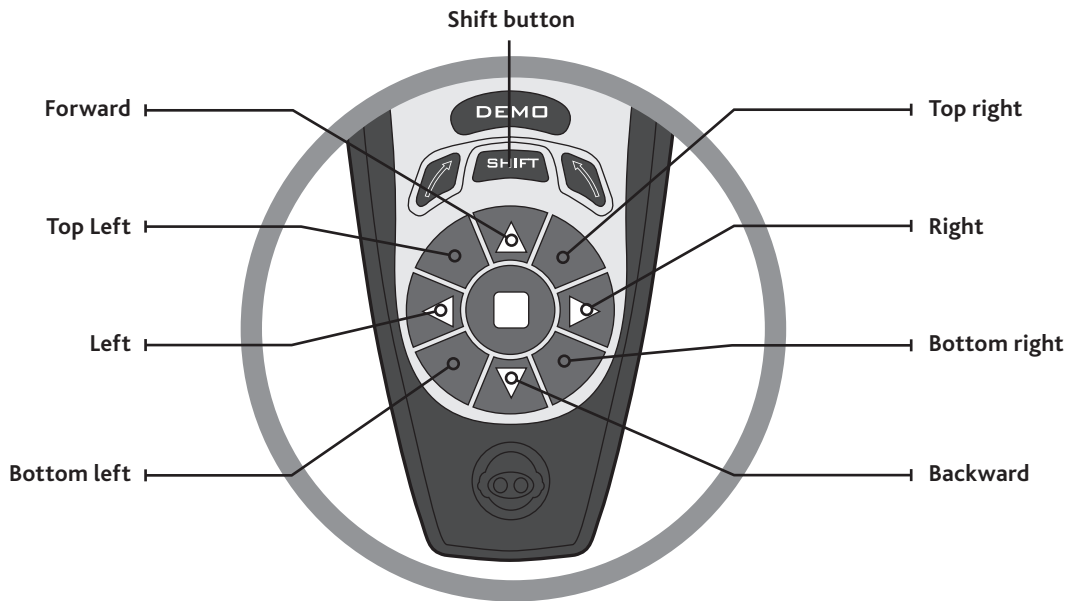
6. Rotation buttons

	<i>Rotate clockwise button</i>	<i>Rotate counter-clockwise button</i>
<i>Unshifted</i>	Rotate clockwise*	Rotate counter-clockwise*
<i>Shift-Green</i>	Clockwise 4 steps	Counter-clockwise 4 steps
<i>Shift-Orange</i>	Single shot	Burst
<i>Shift-Red</i>	Head clockwise	Head counter-clockwise

**2 speeds, press again to change speed.*

7. Stop button

	<i>Stop button</i>
<i>Unshifted</i>	Stop (<i>double tap for full reset</i>)
<i>Shift-Green</i>	Leg reset
<i>Shift-Orange</i>	Full reset
<i>Shift-Red</i>	Sleep mode toggle



8. Directional pad

	<i>Forward</i>	<i>Backward</i>	<i>Right</i>	<i>Left</i>	<i>Top right</i>	<i>Top left</i>	<i>Bottom right</i>	<i>Bottom left</i>
<i>Unshifted</i>	Walk forward*	Walk backward	Right crab walk*	Left crab walk*	Top right shuffle	Top left shuffle	Bottom right shuffle	Bottom left shuffle
<i>Shift-Green</i>	Forward 4 steps	Backward 4 steps	Right crab 4 steps	Left crab 4 steps	Right strafe	Left strafe	Right turn roll	Left turn roll
<i>Shift-Orange</i>	Stomp walk	Surprise BodyCon	Right legs IN	Left legs IN	Right forward leg IN	Left forward leg IN	Right backward leg IN	Left backward leg IN
<i>Shift-Red</i>	Head up	Head down	Right legs OUT	Left legs OUT	Right forward leg OUT	Left forward leg OUT	Right backward leg OUT	Left backward leg OUT

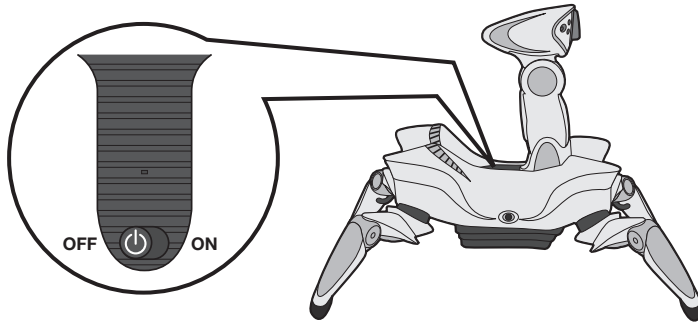
***2 speeds, press again to change speed.**

Terminology

The term 'BodyCon' is used throughout this manual. A BodyCon describes a motion associated with a specific sound.

Power on / off

Roboquad's power button is located on his back. Slide the button to turn him on or off.



Sleep and power down

Stop button

Shift-Red Sleep mode toggle

Sleep mode

If your Roboquad does not receive a signal from the remote controller for around 5 minutes, he will go into sleep mode.

Sleep mode toggle

You can manually put Roboquad into sleep mode by pressing the Sleep mode button combination. Press once to make Roboquad enter sleep mode. Press the stop button at any shift layer to wake up Roboquad (none of his user programming will be affected).

Power down

Roboquad will automatically power down and forget all user programming after around 24 hours in sleep mode.

Stop and reset

Stop button

Unshifted	Stop (<i>double tap for full reset</i>)
Shift-Green	Leg reset
Shift-Orange	Full reset

Stop

Press to stop Roboquad from performing his current action. Press again within around 6 seconds to perform a full reset to his default position.

Resets

Leg reset

Roboquad will reset his legs to the default (start-up) position.

Full reset

Roboquad will reset his legs and head to the default (start-up) positions. This can also be done by double tapping the stop button.

Twitch

With a high Activity setting Roboquad will twitch after a reset.

	<i>Forward</i>	<i>Backward</i>	<i>Right</i>	<i>Left</i>	<i>Top right</i>	<i>Top left</i>	<i>Bottom right</i>	<i>Bottom left</i>
Unshifted	Walk forward*	Walk backward	Right crab walk*	Left crab walk*	Top right shuffle	Top left shuffle	Bottom right shuffle	Bottom left shuffle
Shift-Green	Forward 4 steps	Backward 4 steps	Right crab 4 steps	Left crab 4 steps	Right strafe	Left strafe	Right turn roll	Left turn roll
Shift-Orange	Stomp walk	Surprise BodyCon	Right legs IN	Left legs IN	Right forward leg IN	Left forward leg IN	Right backward leg IN	Left backward leg IN
Shift-Red	Head up	Head down	Right legs OUT	Left legs OUT	Right forward leg OUT	Left forward leg OUT	Right backward leg OUT	Left backward leg OUT

***2 speeds, press again to change speed.**

	<i>Clockwise button</i>	<i>Counter-clockwise button</i>
Unshifted	Rotate clockwise*	Rotate counter-clockwise*
Shift-Green	Clockwise 4 steps	Counter-clockwise 4 steps
Shift-Red	Head left	Head right

***2 speeds, press again to change speed.**

Walking

You can make Roboquad walk in a variety of ways by pressing the directional pad in 4 directions (forward, backward, left and right) when unshifted or in shift-green.

Speed change

While Roboquad is moving forward, right, left, rotating right or rotating left press the same button again to change to his next speed. Each press will toggle between Roboquad's two walking speeds.

Note: At the end of the walk, Roboquad will perform a full reset.

Independent leg movement

Move Roboquad's legs in pairs (both left or both right) or independently using the directional pad.

CAUTION: When turning all legs under Roboquad's body, there may be a slight chance that Roboquad will get unbalanced.

Head movement

In shift-red, forward and backward will move Roboquad's head up or down, and the rotate clockwise/counter-clockwise buttons will turn his head left or right.

Rotation walking

Pressing one of the rotate buttons when unshifted will rotate Roboquad clockwise or counter-clockwise. By pressing the same direction button again, you can toggle between Roboquad's two turning speeds.

Note: At the end of the rotation, Roboquad will perform a full reset.

The same buttons in shift-green will rotate Roboquad for only four steps.

State buttons

	<i>Activity button</i>	<i>Aggression button</i>	<i>Awareness button</i>
<i>Unshifted</i>	Activity toggle	Aggression toggle	Awareness toggle

Introduction

Roboquad's autonomous behavior is determined by his personality setting. His reactions will vary depending on the three settings (Activity, Aggression and Awareness) which you can change using the remote controller.

LEDs

Each personality setting has its own tricolor LED. You can press any State button to enable the state lights, but this will only toggle through the personality button states. The tricolor LEDs show the current state of the personality settings. The setting colors are:

- **Green** = Low
- **Orange** = Medium
- **Red** = High

The personality settings will reset to their default settings when the remote controller powers down or the batteries are replaced. The default setting for all personalities is Low.

Roboquad changes his personality when the personality buttons are pressed on the remote controller. If Roboquad does not receive the signal, his personality will not be altered but the controller will think it has. If this occurs, Roboquad will update his on-board personality with the controller the next time a personality button is pressed and he receives the signal.

Activity

This button will toggle through Roboquad's activity personality settings. This mainly affects his autonomous mode.

With a high Activity level Roboquad will spend more time exploring in autonomous mode.

Lower levels will make him more docile in autonomous mode.

Aggression

This button will toggle through Roboquad's aggression personality settings. This affects how he reacts to sensor inputs.

With a high Aggression level Roboquad has more aggressive responses.

At lower levels he is more nervous.

Awareness

This button will toggle through Roboquad's awareness personality settings. This affects the range of his scanner and how much he uses it in autonomous mode.

With a high Awareness level Roboquad will use longer scanning distances for his obstacle avoidance, guard mode and smart-scan. He will also spend more time scanning in autonomous mode.

At lower levels his scanning range is reduced.

Sensors

Note: For more on Roboquad's vision system, see Scanning on p.18

Program play button

Shift-Green	Sound & vision sensors On/Off simultaneously
--------------------	--

This button will toggle Roboquad's sound and vision sensors simultaneously on or off. Sensors cannot be turned off independently, even when Roboquad switches his sensors off due to too many sound or vision distractions.

Light sensor

Roboquad will react to changes in ambient light. His reactions depend on his personality settings.

Light changes always act as an interrupt for anything Roboquad is doing, with the exception of:

- program mode
- program playback
- guard mode

Sound sensor

Roboquad will react to sharp sounds when his sound sensor is turned on and he is not moving. Roboquad's sound sensor is on during:

- autonomous mode during rest periods
- guard mode (*when he is not moving*)
- normal mode (*when he is not moving*)

When Roboquad detects a sound he will perform a listening BodyCon. He will then scan for the nearest item (see Scanning, p.18) and if an object is detected, Roboquad's personality settings determine his reactions.

Continually triggering Roboquad's sound sensors 5 times in a row will turn the sound and vision sensors off.

Autonomy

Autonomy button

Unshifted	Autonomy On/Off
------------------	-----------------

Autonomy

The autonomy button toggles Roboquad's autonomous mode on or off. In autonomous mode, Roboquad will wander through his environment, scanning and avoiding obstacles.

Obstacle avoidance

If his awareness and activity are high, Roboquad will perform his escape walk when blocked by an obstacle, then start roaming again. If he is continually blocked three times, he will perform a frustrated sound.

Exiting autonomy

Pressing any button except for Activity, Awareness and Aggression will exit Roboquad from autonomous mode.

Guard mode

Autonomy button

Shift-Green	Guard mode
--------------------	------------

Entering guard mode

Pressing the autonomy button in shift-green will put Roboquad into guard mode. He will move into his aware stance to look and listen for any disturbances.

When Roboquad is put into guard mode, he will give you a short time to leave the area (around 7 seconds) before he fully enters guard mode. He will do this by counting down and performing an entry alert sound.

Guard mode scanning

The awareness level determines the scanning routine used in guard mode:

- **Awareness Low:**
 - Scanner uses short distance.
 - Head stays stationary
- **Awareness Medium:**
 - Scanner uses medium distance.
 - Head scans back and forth periodically.
- **Awareness High:**
 - Scanner uses maximum distance.
 - Head scans back and forth periodically.
 - Roboquad will occasionally turn to face a different direction.

The sonic sensor is turned on in guard mode whenever Roboquad is not moving.

Reactions

Roboquad will react to any sound or the presence of any object within his scanning range. If there is a program in Roboquad's memory then he will perform the program when disturbed.

If no program is in Roboquad's memory, then he uses the default reactions of the aggression level he is in.

If the Aggression or Awareness level is changed while Roboquad is in guard mode then the scanning routine or default reactions are updated without exiting guard mode.

Exiting guard mode

Roboquad can exit from guard mode in four ways:

1. Pressing the stop button during guard mode will end guard mode.
2. Roboquad will exit guard mode if he is disturbed 10 consecutive times.
3. Guard mode will time out after 20 minutes and Roboquad will go into sleep mode.
4. When inputting demo in program mode, there is a slight chance that Roboquad will exit guard mode after playing the demo.

Demos

Demo button

Unshifted	Dance demo
Shift-Green	Movement demo

Dance demo

Roboquad will perform his dance demo.

Movement demo

Roboquad will perform a series of movement demonstrations.

Volume

	<i>Program button</i>	<i>Program play button</i>
<i>Shift-Red</i>	Volume down	Volume up

Roboquad's volume can be adjusted using the program buttons in shift-red. There are 4 volume level settings: mute, low, medium and high.

When he is powered on, Roboquad's default volume setting is high.

Scanning

	<i>Activity button</i>	<i>Awareness button</i>	<i>Autonomy button</i>
<i>Shift-Green</i>	Smart-scan	Scan left for nearest object	
<i>Shift-Orange</i>		Scan right for nearest object	Approach nearest object
<i>Shift-Red</i>			Escape walk

Introduction

Roboquad's 'deep IR scanner' vision system enables him to see across 6 different scanning ranges, from right in front of his face to about several feet (1 meter approx.) away. Roboquad has several different sequences he performs that help him to assess distances, obstacles and threats. This section will cover how Roboquad uses these scanning sequences.

Note: Scanning times are not as long as normal when Roboquad is in Program mode.

Smart-scan

Roboquad will enter his active/high stance and perform a first pass scan. He will make more scan passes and if anything within his vision changes from the first pass scan (ie. appears or disappears), he will react according to his Aggression and Activity levels.

Since this is a personality-based scan (he often uses it in Autonomy Mode), he will sometimes choose to react to objects that do not appear or disappear, especially when the Awareness is set high.

Scan (left/right) for nearest object

Using this scan, Roboquad will look for the nearest object and turn to face it. He will start scanning from side to side using his medium range scan, with his head starting centrally. When he sees something, he will acknowledge it with a nod of his head and if he needs to, turn to face it. If the object is in front of him, he will remain stationary.

Approach nearest object

Roboquad will scan his surroundings, moving his head back and forth to find the nearest object. He will make a few scanning passes, scanning at an increased range with each pass. If he finds something he will turn and move towards it, stopping when he reaches it.

Escape walk

Roboquad scans all around him to find the easiest escape route. The sound you hear is feedback from the IR reflecting off anything he sees. He will choose the largest space and move towards it. If he sees no gaps he will turn and repeat the scan behind him.

When his Awareness is medium or high, he will often use this scan to find an exit when he encounters obstacles.

Flinch

Roboquad will flinch if an object approaches his face very quickly. He can be flinched in normal mode and when moving forward. If Roboquad is flinched, he will perform a flinch reaction. After each flinch he will reset and start again. After 3 flinches in a row Roboquad will turn his sound and vision sensors off.

Programming

	<i>Program button</i>	<i>Program play button</i>
<i>Unshifted</i>	Program	Program play
<i>Shift-Green</i>	Program back*	
<i>Shift-Orange</i>	Program erase	

* *Deletes the last command from the program*

Program

Entering program mode

To enter program mode, press the program button. Roboquad is ready to remember your command inputs.

Programming Roboquad

Roboquad can be programmed up to 40 commands. For each command you enter, Roboquad will perform the move and confirm it with an “affirmative” sound. Roboquad will add each new command you enter to the end of the programming sequence. To delete the last command, press the program button in shift-green.

Clearing a program

The entire program can be cleared by pressing the program button in shift-orange.

The following functions will alter from their original function when included in a program:

- Stop will become a pause when entered into a program
- Walks will reduce to 8 steps in program mode
- Scan functions will perform fewer scan passes

The following functions cannot be included in a program:

- Autonomy
- Guard mode
- Smart-scan
- Volume control
- Sleep mode
- Sensors on/off
- Personality state level buttons
(the levels on the remote controller will not alter when in program mode)
- any of the programming functions

Playing the program

The user can play back a program at any time by pressing program play. If a program is not present, Roboquad will sound a “negative” to the request.

Exiting program mode

Pressing the program play button will exit Roboquad from program mode, playing a program if one is stored.

Roboquad will exit program mode automatically approximately 20 seconds after the last program command is given. If no command has been entered, Roboquad will exit into normal mode. If a command has been entered, Roboquad will perform the routine.

Note: The program memory is cleared when Roboquad powers down after approximately 24 hours in sleep mode or when turned off.

Support

If you have questions about Roboquad that are not answered here, refer to the official Roboquad website for more information and frequently asked questions: www.roboquadonline.com



CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or experienced radio/TV technician for help



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Wowwee (Asia Office)
Unit 301A-C, 92 Granville Road
T.S.T. East, Hong Kong

Wowwee (North America Office)
Wowwee Group Company
6600 Decarie, Suite 200
Montreal, Quebec
H3X 2K4, Canada

Consumer Hotline: 1-800-310-3033
Customer Service Email: support@wowwee.com
www.wowwee.com

We recommend that you retain our
address for future reference.
Product and colors may vary.
Packaging printed in China.
This product is not suitable for children
under 3 years because of small parts -
choking hazard.

MADE IN CHINA.

8039US02FLA

