V.RECHARGING SPYKEE

1. CHARGING BASE

- Connect the recharging station to an outlet. Ask an adult for help.
- Place the station against a wall. To avoid the base moving while Spykee tries to connect to it, we recommend that you fix it on the floor with double faced tape (be careful to choose a tape that doesn't damages your floor).
- Make sure that the space in front of the recharging station is sufficiently free of clutter so that Spykee can reach it easily.

2. AUTOMATIC SEARCH FOR THE BASE

- In order for Spykee to be able to recharge itself alone, bring it manually to within 1 to 2 meters of the recharging station (if it is too close, it will have a hard time positioning itself).
- There are two ways of triggering the search for the station:
  > Click on the battery icon of your console => A window will appear asking if you wish to recharge a robot.
  > When the battery is low, Spykee will automatically send you a message to your console: a window will appear asking you if you wish to recharge a robot.
- If you click "Yes", the robot will begin to search for its recharging station by itself. This operation may take several minutes while the robot finds its station using infrared.
- When it finds its station, the robot moves towards it and positions itself on it automatically.
- If the robot does not find its station, again place it manually within 1 or 2 meters of the station and repeat the operation.
- Recharge: please refer to the "Recharge" section bellow.

3. MANUALLY PLACE SPYKEE ON THE BASE

- If you do not want to/cannot perform an automatic search for the station, you can also manually place Spykee on its recharging station.
  E.g.: You are using it for the first time (the battery is not charged at time of purchase), or the automatic search for the station did not work.
- To do this, turn the robot on (the robot will charge only if the button under the chassis is ON).
- Place it manually on its recharging station (Spykee will be with its back to the base).
  It will begin to recharge automatically.
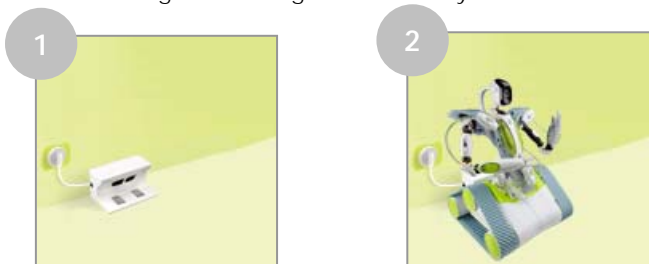
4. RECHARGE

- The battery will take 2 1/2 hours to recharge.
- Warning! While recharging, all Spykee functions are deactivated.
  Instead of the video image, an image will indicate to you that the robot is recharging ("Recharging...").

- When the battery is charged, the charge indicator on the Spykee console will be completely green. Additionally, the image on the screen will show "Battery Full."
- To reactivate your robot at any time, click on the green button on the right of the screen.

VI. LIGHTS AND SOUNDS OF THE ROBOT

To better understand how your robot works, it is important that you learn to recognize its lights and sounds:

Robot Status/Action	Light Effect	Sound Effect
Robot off	-	-
Movement of the robot switch to on	Simultaneous rapid flashing of 4 lights	-
Low battery	Lights twinkling quickly every 10 seconds	-
Search for WiFi network	Fast scrolling over the 4 lights	-
Robot available in local adhoc mode	Slow scrolling over the 4 lights	Beep Beep
Robot connected to a WiFi access point	Slow scrolling over the 4 lights	Beep Beep Beep
Console connected to robot	Green and red lights flash slowly in alternation	Gling Gling Gling
Manual switch of WiFi access point (via quick pressing the button under the chassis)	While robot search new WiFi access point : Red lights flash quickly and successively from left to right	Beep
Video recording	Quick scrolling throughout the recording	Beep at the start of video recording Beep at the end of video recording
Snapshot	No effect	Click-Clack sound
Sound effect	Light effect associated with the selected sound effect	Selected sound effect
Lights turned on	When turning on the lights via the console, the connected scrolling status is interrupted	-
Reset of the robot	All 4 lights blink very fast all together	Beep Beep Beep Beep

VII. FIRMWARE UPDATE

- Firmware is the robot's internal software.
- In order to improve your robot's operation, updates to its internal software (or "firmware") may be offered. It is highly recommended that these updates be installed.
- When you are connected to Internet and to your Spykee robot with the administrator account at the same time, a message might inform you of the availability of firmware update (if there has been a new firmware release).
- By clicking on "Yes" you will be able to download a file containing firmware update.
- To install this update, click on the "Configuration" icon of your Spykee console, then select the "Firmware" tab in the configuration part of the robot.
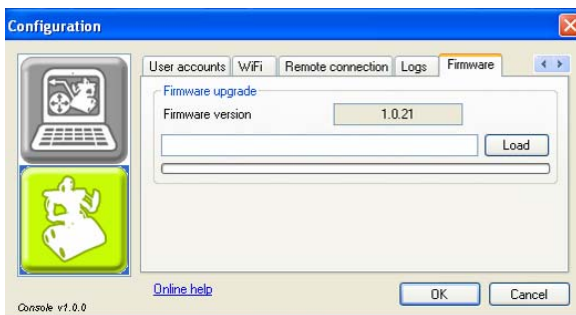
- If you ever need to update the firmware, click on "Load" and select the new firmware file.
- Click on OK and wait for the loading to complete.

  Caution! IT IS IMPERATIVE THAT YOU NOT DISCONNECT OR TURN OFF THE ROBOT WHEN LOADING FIRMWARE!

  The loaded software could be incomplete and make your robot unusable.
  If this ever should occur, please send the robot in its box, complete with CD and manual to After Sales Service (address at the end of the manual).

- During the update, all of Spykee's lights will flash quickly.

VIII. RESET

- The Reset button is found under the chassis of your Spykee (Chapter I Section 1 "INTRODUCTION").

- This allows you to:
  > Change the local connection mode by quickly pressing it with a pen[1].
  > Restart your robot and return it to its initial configuration (as it was when you purchased your robot) by pressing it with a pen for more than 10 seconds. In this case, all SPYKEE lights will flash quickly all at the same time.

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[1] Chapter IV Section 4 "CHANGING LOCAL CONNECTION"

IX. TECHNICAL DATA SHEET

. PC/ Mac Compatible
. 200 MHz ARM9
. 32Mb SDRAM
. Neither 4Mb NOR Flash
. WiFi client 802.11b/g
. USB host
. 8-bits µC to control the dual DC motor and control the charge
. 4 LEDs and 1LED flash
. Camera QVGA CMOS with 15 images per second in local mode (optimal conditions) / 4 to 15 images per second in remote mode (optimal conditions)
. Infrared receiver
. Charge control for the 9.6V NiMH battery
. JTAG / Serial / port i2c port available
. Controller compatible
. Electret microphone
. Loudspeaker 8 Ohm 2W
. Audio sampler microphone 16bits / 16 kHz
. Sampler speaker 16bits / 8 to 48 kHz
. Open source software

X.HELP

1. FREQUENTLY ASKED QUESTIONS (FAQ)

We have tried to list bellow the frequently asked questions about Spykee installation.

Spykee cannot connect to the local WiFi access point

- Check the battery status. If it is too weak, Spykee will have a hard time connecting.

- Make sure that your WiFi access point is turned on and operating correctly (e.g. connect to the Internet through your WiFi access point: if it works, then your WiFi access point works correctly).

- Check the settings of your WiFi access point :
  > If you don't know how to change the settings of your WiFi access point, please refer to the instructions of your WiFi access point (normally you can change the settings on a web page given by your Internet provider)
  > Check your WiFi access point is in router mode.
  If your WiFi connection was provided to you by your Internet service provider at the same time as your ADSL or cable modem (NeufBox WiFi, Freebox WiFi, LiveBox Wanadoo etc.), it probably won't be in router mode. In effect, most Internet service providers limit the ability to connect multiple devices via WiFi.
  You must then switch your WiFi access point to the "router" mode.
  To do this, please refer to the WiFi access point user guide.
  If you are unable to switch your WiFi access point to router mode by yourself, please contact your Internet service provider to find out how the WiFi connection that was provided to you has been configured.
  > Check that a Mac filter is not active. If it is, then you need either to authorize the Mac number of your robot (written under its chassis or in the tab "My Spykee" of the console) or either disable the Mac filter.
  > If you have a secured WiFi network, please check you have entered the correct WEP or WPA on the Spykee console.
  You can also disable the security WEP or WAP key in the settings of your WiFi access point.

- If you have just entered a new WiFi access point on your Spykee console and can't connect to it, please wait 30 minutes and try again.

- You are using a company WiFi network. It is possible that the network administrator has created special configurations (assignment of IP addresses, proxy server, etc.). If you can't connect your Spykee by yourself, you should probably ask for assistance from your network administrator. In certain networks, this connection will not be possible.

- In a busy environment (many WiFi networks or a poor network), it is possible that it will be difficult or even impossible to establish a connection.

I can't connect to Spykee in remote mode.

- It is strongly recommended to « simulate » a distant connection (Chapter VI Section 2.3 "CONNECT IN REMOTE MODE") before really trying to connect from a remote place. This way you will be able to deal with possible configuration problems on the robot or on your WiFi access point.

- If you have simulated a remote connection from home and even though you can't control remotely your robot, the problem is probably on the remote computer's side.

- Please find bellow a check-list of the operations you need to realize to make the remote connection works :

On robot side :
☐ Spykee is **turned On**.
☐ Spykee is **charged** and placed **on its recharging bas**e.
☐ Spykee is correctly **connected to a WiFi access point** that has been successfully added to the WiFi tab on your console. > The robot has made a "Beep Beep Beep" sound when you started it (if he has made a "Beep beep" sound then it means he is in local adhoc mode and then not connected to your WiFi access point). > You have tested everything worked correctly in local mode with this WiFi access point. > For any problem about Spykee getting connected to a WiFi access point, please check the FAQ about the local mode with WiFi access point.
☐ We have successfully **registered your robot on http://atsui.pair.com/spykee/devsw/UK** and r**eported this information** on your Spykee console in the tag "**My Spykee**". > If you are connected to the Internet and to Spykee at the same time, in the tag "My Spykee", click on "Verify" to validate the information you have reported are the same as the one registered on http://atsui.pair.com/spykee/devsw/UK > Warning! When you register on http://atsui.pair.com/spykee/devsw/UK, it can take up to 10 minutes to really save the information in our database. This can explain the fact that a distant connexion doesn't work right after registering or that you have a mistake message while clicking on "Verify" whereas you have entered the correct information. Please try again after 10 minutes. > If you have forgotten the information you entered on http://atsui.pair.com/spykee/devsw/UK, check the confirmation email you had received when you registered. If you don't have this email anymore, it can be sent again by clicking on "Forgot your password?" in the "To Register" page of http://atsui.pair.com/spykee/devsw/UK
☐ In the tag "User accounts" of the console, you have **customized the administrator password** (the password "admin" doesn't allow remote connection) **or created a new user accoun**t.
☐ In the tag "Remote connection" of your console, you have clicked on "**Allow remote connectio**n".
☐ If you still can't connect remotely to your robot, you might be in a network configuration that blocks remote connections. In this case please realize a **port-forwarding** operation (see Chapter IV Section 2.3 CONNECT IN REMOTE MODE).

On remote computer side :
☐ The **Spykee console** has been installed successfully.
☐ The remote computer is **connected to the Internet** (via an Ethernet wire or via WiFi). To be sure of it, try to connect to any web page (e.g. type http://atsui.pair.com/spykee/devsw/UK in the adress bar of your Internet explorer). If the web page appears correctly, it means your computer is connected to the Internet.
☐ If a window has opened and asked the authorization for spykee.exe to connect to the Internet, please say Yes.
☐ If distant connection doesn't work, please **unable your firewalls**.
☐ If you are trying a remote connection from a **professional network**, firewalls light block your connection and you will not be able to unable it. In this case please contact the network administrator of your company. Sometimes though it will be impossible to connect to Spykee through a professional network (in this case please try from a residential network).
☐ If you are trying a remote connection from a **public network** (or "Hot spot"), the access might be blocked and you won't be able to get connected. This is not of Meccano's resort, but linked to the WiFi network confuiguration.

The screen has gone black.

- Check the battery status. If it is too weak, Spykee will have a hard time connecting.

- In a busy environment (many connections or a poor network), it is possible that it will be difficult or even impossible to establish a connection.

When I press on a button, it takes a long time for the action to occur or it does not occur at all.

- Check the battery status.
- Close any programs on your computer that you are not using.
- Place your Spykee within WiFi range.

The video surveillance alarm doesn't work.

- Make sure that the volume is turned on (on the console and on your computer).
- Make sure that you have configured this function[1].

I can't play digital music.

- This function is only available in local mode.
- Make sure that these selections are actually in the Playlist.
- Make sure that the volume on the console and on your computer are sufficiently high and are not on "mute."
- Spykee can only read mp3 files under 8Mo.

The lights don't turn on.

- Check the battery status.
- One or more diodes may be damaged.
- Make sure that the light tubes are correctly inserted.

How do I find the SMTP server?

The SMTP server is provided by your e-mail address provider (Hotmail, Yahoo, etc.).
For example, for an address @yahoo.fr, this is **smtp.mail.yahoo.fr.**
(In your e-mail account, click on Options / Transfers and POP Access / Display POP Settings)

2. AFTER SALES SERVICE

If you have any questions, please contact our After Sales Service:
Meccano S.A.
363 avenue de Saint Exupéry
62100 Calais
France

3. PROGRAMMING

- The Spykee program is open source.
- You will find the SDK documentation in September on our website www.spykeeworld.com (NOT AVAILABLE YET).

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[1] Chapter II Section 10.2 "Console Configuration / Video Surveillance Tab"