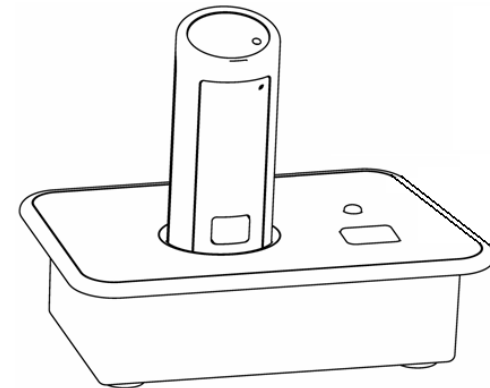


Installation and Operation Guide

xTag™ Wireless Microphone System Models 02-DSKSYS-D, 04-DSKSYSEU-D

Note: *Microphones must be fully charged
and paired to the Charger Base
prior to first use.*



Revolabs, Inc.

System Specifications

Dimensions, (L, W, H) and Weight

Desktop Charger Base

3.9" (10 cm) x 2.4" (6 cm) x 1.0" (2.56 cm), 0.5 lb (0.23 kg)

Wireless Microphone

0.9" (2.4 cm) x 0.8" (1.95 cm) x 2.6" (6.68 cm), 0.05 lb (0.02 kg)

Shipping Weight 1.5 lbs (0.68 kg)

Radio Frequency

02-DSKSYS-D 1.92 to 1.93 GHz (UPCS North America)

04-DSKSYSEU-D 1.88 to 1.90 GHz (DECT EU)

Connectors

Desktop Charger Base

Mini USB – 5 pin connector, USB 2.0

Wireless Microphone

Power – proprietary 4 pin connector

Audio – 2.5mm mono audio

Microphone patterns Unidirectional – cardioid.

Battery Lithium Polymer, up to 8 hours talk time

Charge Time 2.0 hours approx.

Range 65' (20 meters) approx. (no obstructions)

Audio Bandwidth 100-8000 Hz

Encryption 128-bit DSAA authentication (DECT Standard Authentication Algorithm)

Environmental Requirements

Temperature 40° to 105° F (5° to 40° C) operating

Humidity 20% to 85%

Warranty

Revolabs, Inc. warrants this product to be free of manufacturing defects. Repair or replacement of any defective part or unit (at the discretion of the Seller) will be free of charge for the period of 90 days.

Any attempt by the user to alter the equipment, or equipment damaged by negligence, accident, or Acts of God voids this warranty.

The Seller shall not be liable for any consequential damage resulting from the malfunction of this product. Should the user experience unsatisfactory performance from this equipment, contact the Seller to obtain instructions for return, or replacement, as deemed necessary.

This warranty is not transferable by the original end user.

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xTag™ Manual 02-DSKMAN-DPP-11
Mfg Part #91-8601-50N00 July 2007 (Rev 1.3)

LED Status Indications

The following LED patterns are shown on either the Microphone or the Charger Base.

LED pattern	Meaning
Solid GREEN (Microphone only)	Confirmation of power-up or battery reaching full charge.
Solid RED	Pairing mode, or confirmation of powering-down, or battery charging.
GREEN flash every 1.5 seconds	Microphone connected and un-muted.
Two RED flashes every 1.5 seconds	Microphone connected and muted.
YELLOW flash alternating with either GREEN or two RED flashes	Microphone connected, battery low.
Alternating RED, YELLOW, GREEN, YELLOW (Microphone only)	Searching for a connection, or out of radio range. The Microphone will try to re-establish the link for about 15 minutes, and then turn off automatically. The Microphone will beep five times every 30 seconds as a reminder to bring the Microphone closer to the Charger Base.
Alternating RED, YELLOW, GREEN, YELLOW	May also indicate that microphone is not paired.
Rapid RED flashes continuing for more than a few seconds	Radio congestion – it is not possible to make a radio connection because there are already too many nearby users of the UPCS band, or there is heavy radio interference. Other UPCS users will include some types of digital cordless phones, and other installations.
Groups of five rapid RED flashes	Unit is faulty. Please contact your place of purchase for advice on return.

System Functions

The following table shows the functions supported by the *xTag*™ System:

System Functions		
Charger Base LED Status	Wireless Microphone LED Status	Action
To Pair the Microphone and Base		
Off	Off	Press the Microphone MUTE button for about 8 seconds (LED solid RED), and then press the MUTE button on the Charger Base for about 8 seconds (LED solid RED).
To Mute / Un-mute the <i>xTag</i>™ Microphone		
On	On	A short press of the Microphone MUTE button or Charger Base MUTE button causes flashing RED LED on each unit indicating that the Microphone has audio muted. Pressing either MUTE button again will un-mute Microphone (flashing GREEN LED on each unit).
To Turn Off Microphone		
On	On	Press and hold the Microphone MUTE button for about 10 seconds, until the LED stays solid RED, and then release. Or Dock the Microphone into the Charge Base for less than 2 seconds.
To Turn On Microphone		
Off	Off	Press and hold the Microphone MUTE button for about 3 seconds, until the LED shows solid GREEN. Or Dock the Microphone into the Charge Base for at least 4 seconds.

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Safety and General Information

This section contains important information regarding safe and efficient *xTag*™ operation, and declarations of required certification / regulation compliance. Please read this information prior to using your *xTag*™.

FCC User Information

FCC Registration Number: 0014898290

FCC ID Number: T5V02DSKSYS Revolabs Charger

FCC ID Number: T5V01EXEMIC Revolabs Microphone

FCC Notice to Users

Users are not permitted to make changes or modify the equipment in any way. Changes or modifications not expressly approved by Revolabs, Inc. could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission (FCC) Radiation Exposure Statement

Important: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Industry Canada Notice to Users

Operation is subject to the following two conditions: (1) This device may not cause interference and (2) This device must accept any interference, including interference that may cause undesired operation of the device Ref IC: RSS 210 Sec. 5.11. The term "IC:" before the certification/registration number only signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment. See Ref IC Self-Marking 6(f) and RSP-100 Sec. 4.

IC ID Number: 6455A-02DSKSYS Revolabs Charger

IC ID Number: 6455A-01EXEMIC Revolabs Microphone

Note: *The LED will be solid RED until pairing is confirmed, as indicated by a short green LED flash, followed by flashing RED on both the Microphone and the Charger Base. If pairing fails on either unit, the LED will flash alternately GREEN and RED for a few seconds. If this happens, repeat these steps.*

Pairing the Microphone to the Charger Base

“Pairing” creates an encrypted association between the Wireless Microphone and the Charger Base with a unique electronic serial number. Once the Microphone and Charger Base have been paired, the Microphone will automatically try to connect to the Charger Base whenever it is lifted from the Charger Base.

Remember, the Microphone is always muted (flashing RED LED) when it is first removed from the Charger Base and the *Mute* button needs to be pressed to activate the Microphone, as indicated by a flashing green LED.

Note: *The Microphone in new systems will need to be manually “paired” prior to first use.*

If a Microphone is lifted from the Charger Base and the Microphone LED slowly flashes alternating RED and GREEN for 10 seconds, it means that the Microphone needs to be paired to the system.

To pair the Microphone to the Charger Base:

1. Make sure the Microphone is turned OFF (no LED activity). If the unit is ON, press and hold the **MUTE** button for 10 seconds until the LED turns solid RED. Alternately, place the Microphone in the Charger Base for less than 2 seconds.
2. Enable the pairing mode by holding the Microphone’s *Mute* button down for eight seconds.

The LED will turn solid GREEN and then solid RED. Release the *Mute* button. The Microphone unit is now in *pairing* mode.

3. Within 5 seconds of releasing the Microphone’s *Mute* button, push and hold the Charger Base’s *Mute* button for eight seconds to enter into pairing mode.

Restricted use with certain medical devices

Hearing Aids

Some devices may interfere with some hearing aids. In the event of such interference, you may want to consult with your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

Export Law Assurances

This product is controlled under the export regulations of the United States of America and Canada. The Governments of the United States of America and Canada may restrict the exportation or re-exportation of this product to certain destinations.

For further information contact the U.S. Department of Commerce or the Canadian Department of Foreign Affairs and International Trade. The use of wireless devices and their accessories may be prohibited or restricted in certain areas. Always obey the laws and regulations on the use of these products.

02-DSKSYS North America UPCS Usage Restriction

Due to the UPCS frequencies used, this product is licensed for operation only in the United States of America and Canada.

04-DSKSYSEU European Union Usage Restriction

Due to the frequencies used, this product is licensed for operation only in the European Union countries.

European Compliance

This equipment has been approved in accordance with Council Directive 1999/5/EC "Radio Equipment and telecommunications Equipment."



Conformity of the Equipment with the guidelines below is attested by the CE mark.

Model Numbers:

04-DSKCHGEU-D Revolabs xTag™ Charger

04-DSKMIEU-D Revolabs xTag Microphone

Standards to which Conformity is declared:

RF ETSI EN 301 406 V 1.4.1 03/2001

EMC ETSI EN 301 489-6 v1.2.1 (2002-04)

WEEE Notification:

The Waste Electrical and Electronic Equipment (WEEE) directive (2002/96/EC) is intended to promote recycling of electrical and electronic equipment and their components at end of life.



Setting the Broadcast Power Level

In confined settings where for multiple system installations are required, or where audio interference is likely, it may be necessary to reduce the broadcast power levels.

The broadcast power level between the *xTag*™ Microphone and Charger Base can be set to the following three levels.

- Highest power level – 60 feet (25M) maximum operating distance between Microphone and Base (default setting).
- Medium power level – 20 feet (7M) maximum operating distance between Microphone and Base.
- Lowest power level – 6 feet (2M) maximum operating distance between Microphone and Base.

To set the broadcast power level:

Press and hold the *Mute* button while plugging the USB cable into the Charger Base.

The status LED on the charger will display a sequence of flashes, during which it will flash once, then twice, then three times, where:

1 flash = full power

2 flashes = medium power

3 flashes = low power.

This cycle will repeat 10 times. During any of the cycles, simply release the *Mute* button immediately after the desired power indication, to set the *xTag*™ broadcast/receive power.

regarding battery replacement and proper disposal procedures. **Warning: Exposing the batteries to fire may result in an explosion.**

Introduction

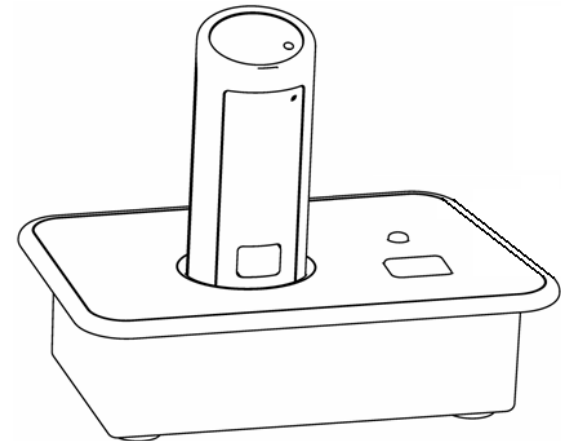
Congratulations on the purchase of your Revolabs *xTag*™ USB wireless communication system! This wireless system provides high band-width audio from a compact wireless microphone enabling reliable, secure, and un-tethered personal communication.

The *xTag*™ Wireless Microphone System is a unique marriage of innovative technology and ergonomic stylish design, featuring 1.9 GHz DECT technology. This product enhances audio communication in both personal and enterprise applications, using Multi-Carrier, Time Division Multiple Access and Time Division Duplex (MC/TDMA/TDD) radio transmissions both to and from the microphone.

This means that the system:

- Can co-exist with other wireless products such as wireless LANs (802.11 B&G) and cellular phones,
- Eliminates the unwanted noise that these devices can cause.

Note: *It is recommended that no more than 3 xTag™ Systems be used in the same room.*



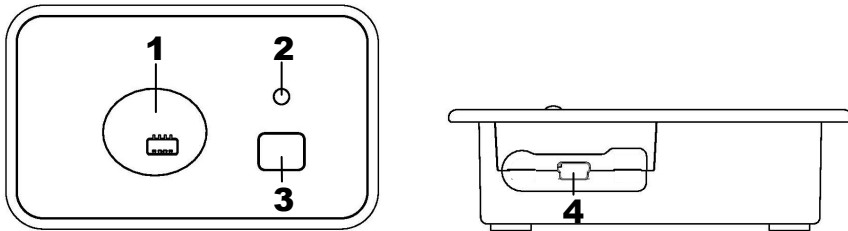
System Components

Your Revolabs *xTag*™ System package contains:

- Compact Charger Base
- Wearable *xTag*™ wireless microphone
- Earpiece with volume control
- Quick release lanyard and a USB cable
- Installation and Operation Guide
- *xTag*™ Quick Start Guides

Revolabs *xTag*™ Charger Base

Use the Charger Base to store and charge the Microphone when not in use. The Microphone must be properly inserted into the base and seated flush for charging to occur.



1. **Charger Bay** — charges Microphone
2. **LED indicator** — mute and pairing status indicator
3. **MUTE button** — duplicates the Microphone mute function
4. **Mini USB connector** — computer audio and power connection

Mute Button

Pressing the **MUTE** button toggles between muting (flashing RED LED status) and un-muting (flashing GREEN LED status) on the Wireless Microphone.

Charging the Batteries

To charge the batteries:

Place the Microphone into the *xTag*™ Charger Base.

Note: *The unit will only work on a powered USB port that can supply 500mA (found on most computers and laptops). It will not work with un-powered hubs (no AC adapter to power the hub).*

During charging, the Microphone status LED indicator changes from solid RED to solid GREEN as charging completes. The Charger Base status indicator remains off during charging. The Microphone is always muted while in the Charger Base. The battery charges from fully depleted to fully charged in approximately two hours, however, it can be “quick-charged” to 80% capacity in 45 minutes.

Note: *A fully charged battery provides approximately 8 hours of talk time.*

When to Charge

Before using the Microphone for the first time, charge for 8 hours or overnight in the Charger Base (until microphone LED turns solid GREEN).

Recharging

When the Microphone LED begins flashing alternating YELLOW and RED or YELLOW and GREEN, the battery needs recharging. Over time (years), batteries gradually wear down and require charging after a shorter period of use. This is normal.

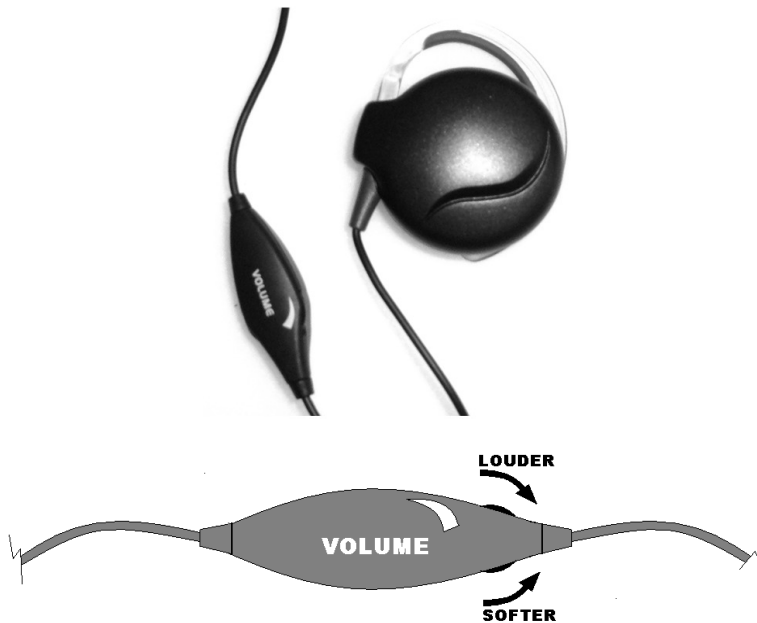
Important: The Lithium Polymer rechargeable battery that powers the *xTag*™ Microphone is not user serviceable. Please see the Revolabs Knowledge Base website area (www.revolabs.com) for information

Adjusting the Volume

The volume of the Microphone is set at the factory and cannot be adjusted on the Wireless Microphone. It may be possible to change the volume on computer or IP calls by adjusting the software control parameters (see Computer Software Settings, below).

Note: *Moving the Microphone closer to the mouth will increase the volume.*

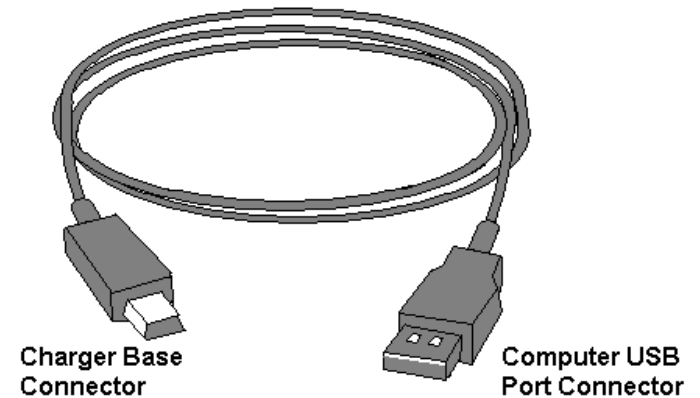
To change the volume on the earpiece, use the dial on the earpiece wire. Turning the dial towards the earpiece will increase the volume, and turning the dial towards the Microphone will decrease the volume.



Note: *Pressing the MUTE button on a Microphone will similarly toggle between mute and un-mute and display on both status LEDs.*

USB Connection

Use the supplied cable to connect the mini USB connector to the Charger Base and the standard end to your computer USB port.



Your computer will alert you that it has found new hardware, and the *Revolabs xTag™* operating software will automatically load. See the user settings specified below for adjusting the audio connections to your liking.

Installing the *xTag™* USB System

The *xTag™* USB system is easily installed in the home or office. Simply follow the instructions below to attach the unit to your equipment.

Computer Software Set-up

Use the supplied USB cable to connect the mini USB connector to the Charger Base and the standard end to your computer USB port. Your computer will alert

you that it has found new hardware, and the *Revolabs xTag™* operating software will automatically load.

It is possible to configure your computer settings to playback audio through the earpiece attached to the Wearable microphone (default settings) or through the computer speakers (internal or desktop).

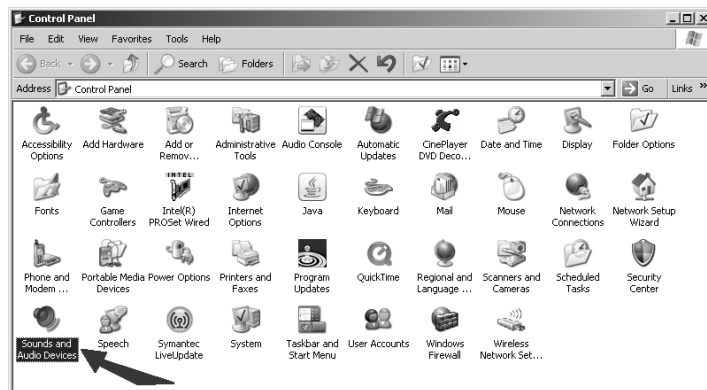
The following examples use the Windows XP Operating System Classic settings. You may notice slight differences in appearance when using other Windows operating systems.

To modify the default microphone earpiece audio output settings:

1. At the lower-right of your screen, click the Start button.



2. Select *Settings* and *Control Panel*.
3. Click the *Sounds and Audio Devices* icon.



2. Attach the Microphone to your person, as close to the mouth as possible (within 6 - 12 inches is optimal).
3. With the Microphone positioned, un-mute the Microphone by pressing and releasing the *Mute* button.

The flashing green LEDs on the Microphone and Charger Base confirm that the Microphone is now active.

To Turn off the Microphone:

Return the Microphone to the *Charger Base*. The Microphone LED will show a 5 second self-test pattern.

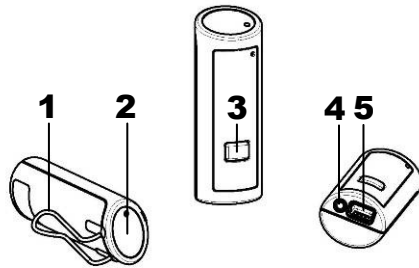
Alternately, turn off the Microphone manually by pressing and holding the *Mute* button for approximately 10 seconds, until the LED turns solid RED, then release the mute button.

Note: *If the Microphone is moved out of range of the Charger Base (~65 feet, 20M) the connection between the Charger Base and Microphone will be dropped and the Microphone will mute (LED flashes alternating RED, YELLOW and GREEN). If the microphone is moved back into range within 15 minutes the connection will automatically be re-established to its original state. If not, the microphone will turn off after 5 minutes.*

Note: *The xTag™ microphone is designed to be used with the xTag™ system only. This microphone is not compatible with other Revolabs Solo™ Desktop or Executive systems, nor are Solo-Desktop microphones compatible with the xTag™ Charger Base.*

xTag™ Wireless Microphone

The xTag™ wireless personal microphone uses encrypted communication to synchronize with the Charger Base. The xTag™ Microphone can be worn on the user's shirt pocket, lapel, or on a lanyard, and provides high quality full duplex audio between the user and the computer and/or internet phone system.



1. **Pocket Clip** — attaches microphone to the user
2. **LED Indicator** — visual status for mute, un-mute, and pairing
3. **Mute Button** — press to mute, un-mute and pair microphone
4. **Earpiece Jack** — accepts the 2.5mm plug for the earpiece
5. **Charging Port** — docks to all battery charger units

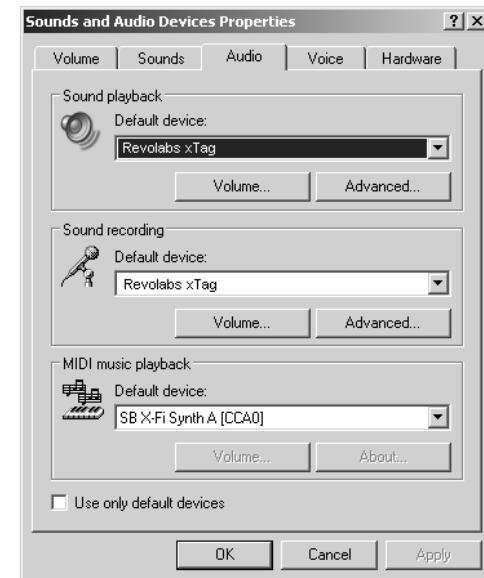
Using the xTag™ Microphone

To operate the xTag™ microphone:

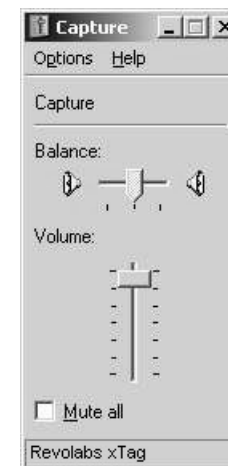
1. Remove the Microphone from the Charger Base. The Microphone automatically turns on and mutes, displaying a flashing red LED when removed from Charger Base.

The Wireless Microphone has a clip on the back which allows the Microphone to be easily clipped onto a shirt pocket, blouse or lapel. The Microphone can also be clipped on to a lanyard and be worn around the neck.

The Sounds and Audio Devices Properties dialog will display, as shown. The xTag™ audio codec software will be selected.

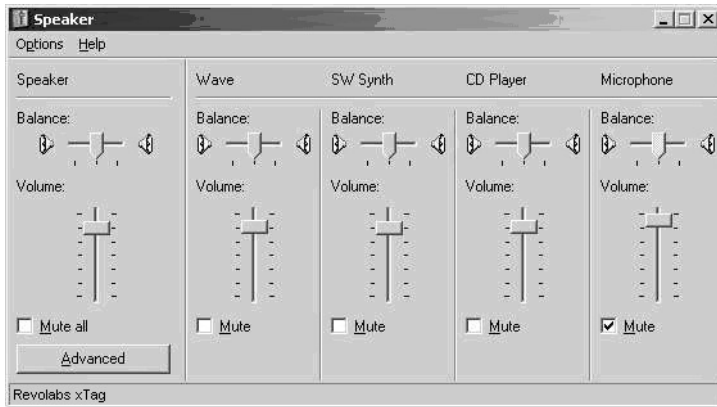


4. Open the *Volume* settings for *Sound recording* to view the volume levels selected for the microphone input (*Capture*) on the computer.



5. Make sure that the level for the Microphone is close to the top (maximum) and that the Mute box is not checked.
6. In the *Sound playback* section, open the Volume settings for to control the volume you hear in the Microphone's earpiece.

Adjust the *Speaker* level at the master Volume control if necessary.



7. At the bottom of the Microphone section, click the *Mute* box in the *Microphone* section to prevent the Microphone directly feeding back its own audio to the earpiece (i.e. "sidetone").

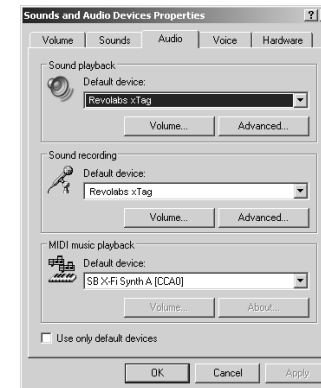
It may be necessary to use the Options-Properties menu to display the *Microphone* volume control.

IP telephony and computer telephony applications (e.g., Skype) may also offer options for controlling the audio levels and playback capabilities. Please consult the application guide for the software package for additional instructions.

8. Change the Sound playback Default device to your regular audio codec (SigmaTelAudio in this

example) to playback audio through the internal or external speakers of the computer instead of the earpiece.

9. At the bottom of the dialog, click *Apply*, and then click *OK*.



Note: Laptop computers with built-in microphones may continue to operate even when the xTag software is running. To prevent the built-in microphone audio feeding through to the speakers, check the Mute box on the laptop audio program Input Monitor, as shown below.

