



Bluetooth® FAQ

This document is an FAQ (Frequently Asked Questions) about Bluetooth® in general and Logitech® products using Bluetooth technology.

**Logitech®
Cordless Desktop®
MX 5000™ Laser**



**Logitech®
diNovo™ Media
Desktop™ Laser**

Contents

1	What you should know about Bluetooth	1
1.1	What is Bluetooth?	1
1.2	What is the "Bluetooth SIG"?	1
1.3	What is the range of Bluetooth?	1
1.4	What is Bluetooth 2.0 with Enhanced Data Rate (EDR)?	1
1.5	What is the data transmission rate of Bluetooth 2.0 with EDR?	2
1.6	What are the main differences between Bluetooth 1.2 and Bluetooth 2.0 EDR?	2
1.7	Which Bluetooth specification are Logitech products compatible with?	3
1.8	What is the range of Logitech Bluetooth products?	3
1.9	What are the differences between Wi-Fi (802.11b) and the Bluetooth wireless technology?	3
1.10	Will using Wi-Fi and Bluetooth technologies together cause interference?	3
1.11	What does "Pairing" mean, and what is a Passkey?	3
1.12	What is "discoverable mode" (or "visible mode")?	4
1.13	What is a Bluetooth "profile" (or "service")?	4
1.14	What are the Bluetooth profiles supported by Logitech products?	5
1.15	What is a Bluetooth "stack"?	5
1.16	Which Bluetooth stack (software) is used in Logitech products?	5
1.17	Is Bluetooth harmful?	5
1.18	Can I access the BIOS settings of my system with my Bluetooth keyboard?	6
1.19	Can I use my Logitech product even if I have not installed the Bluetooth stack (software) yet?	6
1.20	What makes Bluetooth desktops from Logitech the most advanced keyboard and mouse combos with this technology?	6
2	Connecting with Bluetooth - Interoperability of Logitech products... 7	
2.1	What Bluetooth devices can I connect to the Bluetooth wireless hub from Logitech?	7
2.2	I have a system with Bluetooth built-in. Can I use Logitech products without limitation?	7
2.3	I have a system with Bluetooth built-in (e.g. a laptop). Can I use the Logitech Bluetooth keyboard or mouse without using the Logitech Bluetooth wireless hub?	7
2.4	I have a laptop with Bluetooth built-in. What should I do?	7
2.5	Will my Logitech devices work with the Microsoft Bluetooth stack?	8
2.6	I have a Bluetooth PDA (or Smartphone). Can I use my Logitech keyboard or mouse with it?	8

3	Learn what you can do with the Bluetooth wireless hub	9
3.1	What can I do with the wireless hub?	9
3.2	Do I have to be in sight of the Bluetooth wireless hub?	9
3.3	What should I do to synchronize my mobile phone?	9
3.4	How do I easily transfer pictures and files between my computer and my mobile phone?	10
3.5	How do I do voice over Instant Messaging with my Bluetooth headset?	10
3.6	How do I listen to music wirelessly with a Bluetooth headphone?	10
3.7	How do I enable wireless printing?	10
3.8	I am using the Serial Port Profile and I have been asked to set up a virtual COM port. What is it?	10
4	Learn about Logitech Cordless Desktop MX 5000 Laser	11
4.1	What are the key features of this product?	11
4.2	What information do I get on the Keyboard LCD display?	11
4.3	How can I set up time and date?	12
4.4	I understand that I can launch my favorite music playlist from the LCD. Which media players are supported?	12
4.5	How can I change the playlist order that appears on the keyboard LCD?	12
4.6	I understand that I can launch online radio from the LCD. Which media players are supported?	12
4.7	How can I change the order of online radio stations that appear on the keyboard LCD?	13
4.8	I understand that I can paste calculator results into any computer application. How do I do this?	13
4.9	I understand that I can receive email and instant messaging notifications on the keyboard LCD. What applications are supported?	13
4.10	How can I assign an application, document, folder or website to a Smart Key (F9 to F12)?	13
4.11	What is the Touch Sensitive Media Center located on the left side of the keyboard?	13
4.12	The MX 5000 features "SecureConnect" technology. What is this?	13
4.13	What is the "SYNC" hot key for?	14
4.14	What is the "Media" button?	14
4.15	What can I do with the Bluetooth wireless hub?	15
4.16	What is the battery life of this product?	15
4.17	Which Logitech mouse is supplied with the Cordless Desktop MX 5000 Laser desktop?	15
5	Learn about Logitech diNovo Media Desktop Laser	16
5.1	Why "diNovo"?	16
5.2	What is the MediaPad?	16
5.3	What can I do with the Bluetooth wireless hub?	16
5.4	Which Logitech mouse is supplied with the diNovo Media Desktop Laser?	16
5.5	What is the battery life?	16

5.6	Is it possible to use rechargeable batteries in the keyboard or MediaPad?.....	16
5.7	What is the "123" button on the MediaPad?	16
5.8	What is the "NAV" button on the MediaPad?	17
5.9	What is the "+ / =" button on the MediaPad?	17
5.10	What is the "Clear Screen" button on the MediaPad?	17
5.11	What is the "Media" button?	17
5.12	I understand that I can receive email or Instant Messaging notifications on the display of the MediaPad. Which email clients are supported?	17
5.13	I understand that I can receive Media information on the display of the MediaPad. What media players are supported?	17
5.14	I'm running XP Media Center Edition 2005. Can I use the MediaPad with it?	18
6	Learn about Logitech MX 1000 for Bluetooth Mouse	19
6.1	What is the benefit of the MX Laser tracking engine?.....	19
6.2	Could the Laser Engine harm me?.....	20
6.3	How long does it take to recharge the mouse?	20
6.4	How long can I use the mouse once it's fully charged?.....	20
6.5	Does it harm the mouse to leave it on the cradle?	20
6.6	Can I interrupt a charging session before the end of charge?	21
6.7	Is it true that if I never complete a full charge of the batteries, I might damage them or shorten their total life?.....	21
6.8	Should I put the mouse on the cradle immediately each time I stop using it? Is there an optimal period for recharge?.....	21
6.9	Can I use another power brick or do I need to use the Logitech power brick?	21

This document is published by Logitech. Logitech assumes no responsibility for any errors that may appear in this manual. Information contained herein is subject to change without notice. © 2005 Logitech. All rights reserved. Logitech, the Logitech logo, and other Logitech marks are owned by Logitech and may be registered. All other trademarks are the property of their respective owners.

The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Logitech is under license. Other trademarks and trade names are those of their respective owners. Microsoft, Outlook and MSN and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. AOL is registered trademark or trademark of AOL Time Warner Corporation in the United States and/or other countries.

1 What you should know about Bluetooth

This section introduces you to Bluetooth technology.

1.1 What is Bluetooth?

Bluetooth is a standard wireless technology that lets users make effortless, fast connections between appropriate mobile devices and computers. Bluetooth ensures protection from interference, increases data security, and provides greater wireless range. It is a global standard and is backed by major industry leaders in the telecommunications, computer and consumer electronics (such as 3Com, Ericsson, IBM, Intel, Microsoft, Motorola, Nokia, Sony and Toshiba).

Bluetooth is based on a low-cost, low power, short-range radio link. Bluetooth cuts the cords that used to tie up digital devices. When two Bluetooth equipped devices come within 10 meters range of each other, they can establish a connection together. And because Bluetooth utilizes a radio-based link, it doesn't require a line-of-sight connection in order to communicate. Bluetooth uses the global available and unlicensed 2.4 GHz ISM band. As opposed to other 2.4 GHz technologies, Bluetooth is a universal standard.

In the future, Bluetooth is likely to be standard in tens of millions of mobile phones, PCs, laptops and a whole range of other electronic devices. As a result, the market is going to demand new innovative applications, value-added services, end-to-end solutions and much more. The possibilities opened up really are limitless, and because the radio frequency used is globally available, Bluetooth can offer fast and secure access to wireless connectivity all over the world. With potential like that, it's no wonder that Bluetooth is set to become the fastest adopted technology in history.

For more information on Bluetooth, please visit the official Bluetooth site: www.bluetooth.com

1.2 What is the "Bluetooth SIG"?

The Bluetooth Special Interest Group (SIG) is a trade association of leaders in the telecommunication, computing and networking industries who are driving the development of Bluetooth specifications.

Logitech is an associate member of the Bluetooth SIG and full member of the HID working group.

1.3 What is the range of Bluetooth?

Bluetooth wireless technology in its base implementation supports a range of 10 meters (33 feet). This is the maximum distance a connection can be guaranteed in all conditions. Some devices on the market have more powerful transceivers and as such, are likely to have greater range. This is the case for the Logitech Bluetooth hub, and is the reason why the range of Logitech's Bluetooth keyboards and mice is usually much higher than 10 meters (33 feet). It is also important to note that range is also impacted by building materials and interference.

1.4 What is Bluetooth 2.0 with Enhanced Data Rate (EDR)?

With the announcement of the 2.0 + EDR (Enhanced Data Rate) specification, Bluetooth wireless technology took a bold new step. Adopted for qualification by the Bluetooth SIG in November of 2004, this new specification is fully backwards compatible with previous Bluetooth specification versions. The key new features are:

- Faster data rates. Up to three times that of previous levels.
- Lower power consumption and longer battery life through a reduced duty cycle.

This new Bluetooth generation offers new possibilities for next-generation applications for consumers worldwide, including:

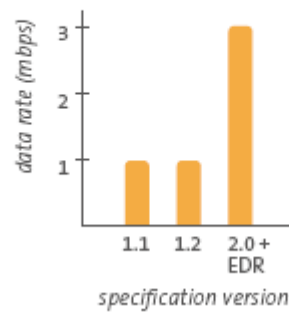
- Enhanced stereo audio applications.
- Internet quality video applications.
- Further power optimization.
- Multiple connections from a single device.

Logitech's diNovo Media Desktop Laser and Cordless Desktop MX 5000 Laser are both using Bluetooth 2.0 with EDR technology, making these products ready to communicate with the latest generation of Bluetooth devices.

1.5 What is the data transmission rate of Bluetooth 2.0 with EDR?

The data transmission rate for Bluetooth 2.0 EDR communication is theoretically at 3Mb/s (Megabits per second), making it 3 times faster than the previous generation.

THE 2.0 + EDR SPECIFICATION



Source: Bluetooth SIG

1.6 What are the main differences between Bluetooth 1.2 and Bluetooth 2.0 EDR?

The main motivation for the release of the new version was to improve existing usage scenarios that require increased data throughput. Scenarios requiring higher throughput may be image transfer, printing and synchronizing. In these cases the new release makes the Bluetooth wireless technology faster and better for the consumer to use.

The main features offered with these enhancements are:

- Backwards compatibility with earlier versions.
- 3 times the transmission speed makes existing usage scenarios better.
- Lower power consumption through reduced duty cycle.
- Simplification of multi-link scenarios due to more available bandwidth.
- Further improved BER (Bit Error Rate) performance.

1.7 Which Bluetooth specification are Logitech products compatible with?

Our products are compatible with the Bluetooth 2.0 with Enhanced Data Rate (EDR) specification, the latest released specification.

1.8 What is the range of Logitech Bluetooth products?

Our products support Bluetooth class II. This means they will work **at least** 10 meters (33 feet) away from the receiver.

1.9 What are the differences between Wi-Fi (802.11b) and the Bluetooth wireless technology?

Bluetooth wireless technology and Wi-Fi are complementary technologies that do different things:

- Bluetooth wireless technology is designed to replace USB cables between cell phones, laptops, and other computing and communication devices within a 10-meter range.
- Wi-Fi is wireless Ethernet. It provides an extension or replacement of wired networks for dozens of computing devices.

Wireless		Wired
Bluetooth	↔	USB
Wi-Fi	↔	Ethernet

1.10 Will using Wi-Fi and Bluetooth technologies together cause interference?

Studies by a number of companies indicate that if the separation is more than two meters, in most cases there is no perceptible degradation in transmitting data in either device. From two meters to about a half-meter, there is a graceful degradation. As the devices are brought into very close proximity, the degradation can be quite noticeable. Fortunately, this scenario only happens when the two systems are in the same device, and in those cases, Bluetooth hardware and Wi-Fi hardware can collaborate to dramatically improve performance. In addition, all Bluetooth desktops from Logitech include Adaptive Frequency Hopping (AFH) technology, making them an ideal solution for the growing number of customers who work on a wireless network, because it minimizes interference between Bluetooth wireless technology and Wi-Fi wireless technology.

1.11 What does "Pairing" mean, and what is a Passkey?

Normally, for security reasons, two Bluetooth devices need to be initially paired before they can exchange data. The term pairing (or bonding as it is sometimes referred to) means that two devices are exchanging protected passkeys, enabling a higher level of security. Once the devices have been paired, the information is stored so that you don't have to re-pair these devices a second time. Even though devices are paired, this does not mean that they can necessarily transfer data. To do that, they must also be connected. Once devices are paired and connected, data can be transferred and two-way communication is enabled.

In certain instances, it makes sense to override the pairing procedure; for example when exchanging business cards between two mobile phones it may be too cumbersome to pair using a password. For these situations, most devices have advanced settings that allow you to pair using a lower level of security.

An industry first, Logitech's SecureConnect™ Technology – featured in products such as the Cordless Desktop MX5000 Laser – means that the wireless keyboard and mouse have been pre-connected to the receiver. This not only provides an instant secure link with the computer right from the start but also means that a passkey is no longer required, the main benefit of which is a faster, hassle-free installation.

1.12 What is "discoverable mode" (or "visible mode")?

For one device to initially "find" another Bluetooth device, one product must be in discoverable mode (be "visible"), while the other performs a device discovery (or "device search"). The way you put your product in a discoverable mode varies by device and by manufacturer. Most devices allow a user to configure the default state. Please consult the documentation that came with your Bluetooth device to find specific instructions on device discovery.

For security reasons it is recommended that you do not usually leave your devices in a discoverable state. However, there are usage cases where this does make sense – for example, a Bluetooth printer in a shared area would be a good example of a device that should always be in discoverable state.

Logitech keyboards and mice are in discoverable mode when you press the 'Connect' button located on the bottom.

1.13 What is a Bluetooth "profile" (or "service")?

A profile or service is a list of options, features or functionality available for a specific Bluetooth device. Since Bluetooth wireless technology is used for many different types of applications, it is necessary to describe how the different devices and their applications should operate together. For example, profiles or services available for a Bluetooth-enabled mobile phone may include Dial-up Networking, PIM Item Transfer, PIM Synchronization, Network Access, and so on.

For devices to work together, it is important that each device shares the same profile. For example:

- If you want to connect a headset to a mobile phone you need the 'headset' profile in both devices.
- If you want to establish a dial-up session to reach the Internet from a PDA connected to a mobile phone, you need the 'dial-up networking' profile in both devices.

An example that is not likely to work together:

- A mouse, which typically supports the HID (Human Interface Device) profile, and a mobile phone are unlikely to work due to the fact that, presently, there are no phones that support the HID profile or service.

These are just some examples. When purchasing your Bluetooth device, please keep this concept in mind to ensure that the devices you purchase will work together as expected. Usually the supported profiles or services are listed in the user documentation for the device.

1.14 What are the Bluetooth profiles supported by Logitech products?

Logitech products support the following profiles:

Profile	Allows you to...
Human Interface Device	Connect your Bluetooth HID with the system.
Object Exchange	Send and receive business cards/files between the device and the computer.
Synchronize	Synchronize your address book on the device with the computer.
Headset	Listen to music on your Bluetooth headset.
Basic Imaging	Send pictures to the computer from the device.
Dial-up Network	Connect to the internet via GPRS.
Hard Cable Replacement	Print documents on your Bluetooth printer.
Serial Port	Connect to the device's serial port.
Audio Gateway	Use the computer's speakers and mic for the device.
AV	Listen to music on your stereo headset.
Local Area Network	Connect computers wirelessly.
File Transfer	Browse the content of the device.

1.15 What is a Bluetooth "stack"?

A stack is a piece of software that is installed on your computer. It allows Bluetooth devices to be recognized and used. Currently, a Bluetooth stack is required due to the fact that Windows XP and Windows 2000 do not natively support Bluetooth. A Bluetooth stack is provided with all Logitech Bluetooth desktop.

1.16 Which Bluetooth stack (software) is used in Logitech products?

The Bluetooth stack we are using is provided by Broadcom (also known as "BTW"); it allows Bluetooth devices to be recognized and used. Logitech Desktops also support the Microsoft XP SP2 Bluetooth stack. However, for optimal performance, we recommend you use the Bluetooth stack provided with your product. For instance, Microsoft is not currently offering Audio support with its stack, and therefore you are not able to connect a Bluetooth headset to your Bluetooth hub anymore.

1.17 Is Bluetooth harmful?

Wireless phones and Bluetooth devices both emit non-ionizing radiation, typically at frequencies from 1 to 2.5 GHz. The data results on health hazards from wireless phone radiation are not clear-cut, with some studies showing a measure of risk and some showing no problems.

But because it's a good idea to err on the side of caution in such matters, regulatory bodies have set exposure standards. These are expressed in terms of the "specific absorption rate" (SAR), which attempts to measure the radiation actually reaching body tissue. The U.S. and Canadian governments have set a maximum SAR of 1.6 watts per kilogram, while the European Union permits a slightly higher level. In the real world, emissions generally stay well below the maximum allowed. According to data from BlackBerry-maker Research in Motion (RIMM), SARs for GSM BlackBerry devices fall in the range of 0.25 watts per kilogram when used at your ear.

Bluetooth radios operate at much lower power levels than phones so, not surprisingly, the radiation added by a Bluetooth device is insignificant by comparison. A study by William G. Scanlon of Queen's University in Belfast found that a typical Ericsson (ERICY) Bluetooth radio module generates an SAR of just 0.001 watts per kilogram.

1.18 Can I access the BIOS settings of my system with my Bluetooth keyboard?

Yes. During boot, your Bluetooth keyboard acts as a standard USB keyboard. This means you can use it to manage your BIOS setting or enter a boot password without the need for a second keyboard as long as your BIOS does not require a PS/2 keyboard in order to boot. If that is the case, you may have to upgrade your BIOS (refer to your computer documentation for instructions).

1.19 Can I use my Logitech product even if I have not installed the Bluetooth stack (software) yet?

Yes. Logitech Bluetooth products are "Plug & Play". This means you can already use your keyboard even if you have not installed the software. Obviously, you need to install the software to get all the features of the product. It also means you don't need to have an existing keyboard and mouse to install Logitech desktops for Bluetooth. This is particularly useful if you bought a new system.

1.20 What makes Bluetooth desktops from Logitech the most advanced keyboard and mouse combos with this technology?

With diNovo Media Desktop Laser and Cordless Desktop MX 5000 Laser, Logitech is launching its third generation Bluetooth keyboard and mouse combo, each generation bringing its own set of innovation and industry firsts:

- In October 2003, Logitech launched the first Bluetooth desktops with plug and play support, meaning no other keyboard and mouse were required to install it. In addition, these products were the first to come with BIOS support, meaning users could access their BIOS or enter a password during boot.
- In September 2004, Logitech introduced the first Bluetooth desktop supporting Bluetooth 1.2 specification, offering better battery life and improved connectivity.
- In 2005, Logitech is now launching the first Bluetooth desktop with SecureConnect technology, making the out-of-the-box experience simpler and faster by skipping the pairing process (all devices being pre-connected and encrypted at the factory). Logitech is also introducing for the first time Bluetooth desktops featuring a rechargeable Laser mouse. In addition, these desktops are the only ones to offer audio support, meaning the user can connect a Bluetooth headset for voice over instant messaging or listen to audio wirelessly with a Bluetooth headphone.

2 Connecting with Bluetooth - Interoperability of Logitech products

This section describes the way Logitech products can work together.

2.1 What Bluetooth devices can I connect to the Bluetooth wireless hub from Logitech?

Any device compatible with the Bluetooth 2.0 with EDR specification and featuring one or more of our supported profiles will work with our Bluetooth wireless hub. In addition, Bluetooth 2.0 with EDR is backwards compatible with previous Bluetooth generations (1.0 or 1.2), meaning you can still connect your older Bluetooth devices.

Please refer to our currently supported devices (www.logitech.com/bluetooth/howto).

2.2 I have a system with Bluetooth built-in. Can I use Logitech products without limitation?

We assume that you are enjoying your Bluetooth experience on your PC or notebook and you wish to continue. For this reason we will NOT install our Bluetooth stack when another Bluetooth stack is detected. However, the keyboard and mouse will be fully functional, working in "embedded mode" (e.g. the Bluetooth software required for your keyboard and mouse is "embedded" in the Bluetooth wireless hub). If you want to connect additional Bluetooth devices to your computer, such as a mobile phone, you will have to use your existing Bluetooth solution.

2.3 I have a system with Bluetooth built-in (e.g. a laptop). Can I use the Logitech Bluetooth keyboard or mouse without using the Logitech Bluetooth wireless hub?

We have provided our keyboard and mouse with the Bluetooth wireless hub mini-receiver because very few computers are Bluetooth enabled and we want to provide the best Bluetooth experience to our customers. However, if you already have a system (typically a laptop/notebook) with built-in Bluetooth and the HID profile, you can directly connect the Bluetooth keyboard and mouse, without using our Bluetooth mini-receiver.

However:

- You need to first pair the keyboard and mouse with the laptop Bluetooth stack.
- If your system is using a different Bluetooth stack than the one supplied with Logitech products, you may not be able to enjoy the features of the Logitech Bluetooth wireless hub.

2.4 I have a laptop with Bluetooth built-in. What should I do?

The MX 5000 Laser and diNovo Laser have been optimized to work with any laptop with built-in radio using WIDCOMM stack v.1.4.2.21 or above and Windows XP SP2 stack. This means our software ("SetPoint") will recognize your configuration and offer a special installation, allowing you to enjoy the features offered by your Logitech Bluetooth product in conjunction with your laptop.

Note: You may need to upgrade your system to the latest Bluetooth stack available for your laptop. Please refer to your laptop manufacturer's support documentation for more information.

2.5 Will my Logitech devices work with the Microsoft Bluetooth stack?

Yes. However, our Bluetooth products have been optimized with the Bluetooth stack we provide. Therefore, for optimal performance, we recommend you use the Bluetooth stack provided with your Logitech product.

2.6 I have a Bluetooth PDA (or Smartphone). Can I use my Logitech keyboard or mouse with it?

Yes, as long as your Bluetooth PDA or Smartphone comes with a Bluetooth stack that includes the HID profile, you can connect your keyboard or mouse to it. Refer to your device's documentation for further information.

3 Learn what you can do with the Bluetooth wireless hub

This section provides a useful overview of what features the Bluetooth wireless hub from Logitech offers.

3.1 What can I do with the wireless hub?

Your Bluetooth wireless hub makes your computer a Bluetooth control center. Once you've installed it, you can truly work differently, taking advantage of Bluetooth-enabled devices:



Print

Cordless Freedom:

- Use your mouse or keyboard wirelessly.
- Print to a Bluetooth printer.



Data Sync

Synchronize:

- Your mobile phone with your computer.
- Your Bluetooth PDA with your computer.



Image Transfer

Unleash your Media:

- Easily transfer pictures and files between your computer and your Bluetooth mobile devices.
- Listen to your digital music wirelessly with a Bluetooth headset.



Voice

Communicate:

- Use a Bluetooth headset to do voice over instant messaging.

3.2 Do I have to be in sight of the Bluetooth wireless hub?

No, this is not a requirement. You just need to be within range of the wireless hub. For example, it is possible for a PDA and a Bluetooth enabled computer to link to each other even if they are across the room from each other or if the PDA is inside a briefcase or pocket.

3.3 What should I do to synchronize my mobile phone?

To synchronize your mobile phone with your Personal Information Manager application (MS Outlook, Outlook Express or Lotus Notes), do the following:

1. Pair your phone with the Bluetooth wireless hub.
2. Install the PC Suite supplied with your device (e.g. Nokia PC Suite if you have a Nokia phone).
3. Press the Easy Synchronization hot key, , usually located in the top left-hand corner of your keyboard.
4. Following the on-screen instructions.

If you need more information, please refer to our online "How To" documents for step-by-step instructions related to your specific device (www.logitech.com/bluetooth/howto).

3.4 How do I easily transfer pictures and files between my computer and my mobile phone?

To transfer a picture over Bluetooth to the computer, simply use your phone option 'send picture over Bluetooth', then select your computer as the destination and agree on the computer that you want to receive the pictures. They are sent to your personal folder.

In addition, you can send pictures to your mobile phone.

Please refer to our online "How To" documents for step-by-step instructions related to your specific device (www.logitech.com/bluetooth/howto).

3.5 How do I do voice over Instant Messaging with my Bluetooth headset?

Voice over instant messaging using a Bluetooth headset is possible with MSN Messenger 7, Yahoo Messenger 6.0, AOL Instant Messenger (AIM) 5.9, and with Skype.

You must first pair your Bluetooth headset with the Logitech Bluetooth wireless hub and connect your headset. You can then enjoy voice over instant messaging. Some instant messaging applications need to be restarted after the connection of the Bluetooth headset in order to use the correct audio output channel.

Please refer to our online "How To" documents for step-by-step instructions related to your specific device (www.logitech.com/bluetooth/howto).

3.6 How do I listen to music wirelessly with a Bluetooth headphone?

All you need is a Bluetooth headphone and a media player such as iTunes or Windows Media Player 10. For optimal results, it is recommended you use a headphone with Bluetooth 2.0 Enhanced Data Rate, to benefit from the maximum bandwidth (up to 3Mb/s).

Please refer to our online "How To" documents for step-by-step instructions related to your specific device (www.logitech.com/bluetooth/howto).

3.7 How do I enable wireless printing?

To enjoy wireless printing with Bluetooth, you must first pair your printer with the Logitech Bluetooth wireless hub and then install the printer drivers. Please make sure the Bluetooth printer or Bluetooth dongle for the printer is using the HCRP profile. We do not recommend using the Serial Port profile.

Please refer to our online "How To" documents for step-by-step instructions related to your specific device (www.logitech.com/bluetooth/howto).

3.8 I am using the Serial Port Profile and I have been asked to set up a virtual COM port. What is it?

A virtual COM port emulates the behavior of a physical serial port. Every computer has two COM ports (also called Serial ports) and has the capability of adding virtual COM ports. Devices can communicate to each other via a virtual serial link as long as they both are using the same COM port (for example COM port 6). For a computer application, a virtual COM port behaves the same as a physical COM port, and therefore allows an application designed to deal with a physical serial communication (such as HotSync) to work wirelessly.

4 Learn about Logitech Cordless Desktop MX 5000 Laser

This section provides some FAQs for the Logitech® Cordless Desktop® MX™ 5000 Laser desktop.

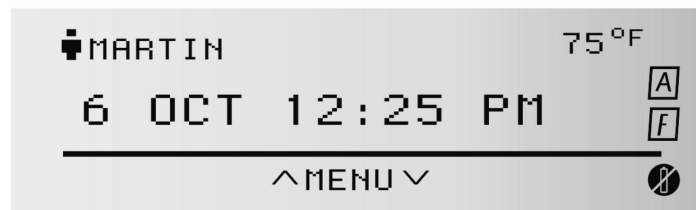
4.1 What are the key features of this product?

The Logitech Cordless Desktop MX 5000 Laser is the World's First Smart Desktop.

Ordinary keyboards and mice only send information to the computer. The Logitech Cordless Desktop MX 5000 Laser also sends information back to the user. It's the smart desktop that combines an LCD keyboard display, a high-speed Bluetooth wireless hub with SecureConnect™ technology, the precision of a MX Laser mouse, and innovative media controls.

4.2 What information do I get on the Keyboard LCD display?

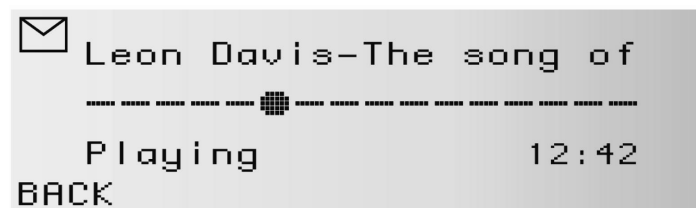
The Logitech Cordless Desktop MX 5000 Laser features an integrated keyboard display for instant feedback such as Caps Lock and F Lock status, low battery notification, and so on. It also shows the time and date, and automatically synchronizes with your computer's clock. Temperature (ambient temperature of the room, in Celsius or Fahrenheit) and active XP user account name are also displayed.



Hot keys and F keys: The Keyboard LCD display also indicates the destination of a hot key and lists the assignment of the smart keys (F9 to F12):



Media: The LCD display indicates media playback information (artist's name, song's name, total time, and so on) whenever a music track is played using the following media players: Musicmatch®, iTunes®, Windows® Media Player 9 and 10, Winamp 5:



Communication: The LCD displays email and instant messaging notifications from major applications such as MS Outlook, MSN Messenger, Yahoo! Messenger:



Smart Calculator: The MX 5000 Laser has a built-in calculator, eliminating the need for an external Windows calculator. Results are sent to the Windows clipboard and can be pasted into any active application that supports the clipboard feature:



4.3 How can I set up time and date?

Do nothing! The time and date are automatically synchronized with your computer's clock.

4.4 I understand that I can launch my favorite music playlist from the LCD. Which media players are supported?

The following media players currently support this feature:

- Windows Media Player 9 and 10.
- iTunes 4.9.
- Musicmatch 10.
- Logitech MediaLife.

4.5 How can I change the playlist order that appears on the keyboard LCD?

Using Logitech SetPoint software, you can add and remove playlists, and even change the order of playlists. Up to 9 playlists can be displayed by the LCD.

4.6 I understand that I can launch online radio from the LCD. Which media players are supported?

This feature is supported by Musicmatch, which is included with the MX 5000 software package. Musicmatch Radio is a free streaming music service available through the Musicmatch Jukebox. With 40,000 artists and thousands of genre, specialty and professionally programmed stations, the music you love is easy to find and fun to listen to. Each month, more than one million listeners make Musicmatch Radio one of the top radio networks on the Internet.

4.7 How can I change the order of online radio stations that appear on the keyboard LCD?

Using the Logitech SetPoint Software, you can add and remove radio stations, and even change their order. Up to 9 radio stations can be displayed by the LCD.

4.8 I understand that I can paste calculator results into any computer application. How do I do this?

Once you have completed your calculation and pressed Enter, simply go to the destination application, choose where you want to see the result appear and select paste from the application drop-down menu (or press Ctrl+V).

4.9 I understand that I can receive email and instant messaging notifications on the keyboard LCD. What applications are supported?

The Cordless Desktop MX 5000 Laser supports the following global email applications: MS Outlook Express, MS Outlook and any web based email client with POP3 support such as MSN Hotmail and Yahoo! Mail. Instant Messaging applications supported by this feature include Yahoo! Messenger 6.0 and above, MSN Messenger 6 and above, and Windows Messenger 4.7.

4.10 How can I assign an application, document, folder or website to a Smart Key (F9 to F12)?



Simply launch the application, folder or document you want to assign and long press on the Smart key (F9 to F12), just like you would do with your car stereo to memorize a new radio station.

4.11 What is the Touch Sensitive Media Center located on the left side of the keyboard?

The MX 5000 Keyboard features a Touch Sensitive Media Center for a more precise and comfortable experience. It includes two sliding strips for volume and zoom and media transport (Next, Previous, Play, Stop). Backlit touch sensitive media controls let you glide to exactly the desired volume or image size.

4.12 The MX 5000 features "SecureConnect" technology. What is this?

Setting up a Bluetooth desktop hasn't always been simple. It can be fastidious and for some users a technical challenge since they need to understand concepts inherent to Bluetooth: pairing, passkey, discovery mode, and so on. Until now.

Users spoke, saying they expected their new Bluetooth mouse and keyboard to work immediately, right out of the box. There shouldn't be any finicky setup needed, they said. Logitech's engineers listened and took up the challenge. The result, following two years of research and development, is SecureConnect™, the best possible cordless experience you'll ever have with a Bluetooth desktop.

With Logitech's new SecureConnect technology, the Bluetooth keyboard, mouse, and Bluetooth wireless hub are all pre-synchronized and pre-connected during manufacturing.

Stepping up to a Logitech Bluetooth cordless desktop and SecureConnect means there's no need to enter a passkey during installation or to match Bluetooth devices. It will install faster and easier than ever before with keyboard encryption already enabled.

4.13 What is the "SYNC" hot key for?

The  hot key called "Easy Synchronization", located at the top left-hand corner of the keyboard, enables one touch synchronization of a mobile phone with your Personal Information Manager, such as MS Outlook, over Bluetooth. To view the list of compatible Bluetooth phones and PDAs, please visit www.logitech.com/bluetooth

4.14 What is the "Media" button?

The "Media" button launches MediaLife, bringing together your digital pictures, video clips and music playlist in a single bold interface. MediaLife is easy to navigate with your MediaPad (make sure it is in Navigation mode).

This is the home page of MediaLife. ►

You can choose to work with your photos, music, or video collections. The fourth menu option, "settings", allows you to configure certain system parameters and personal style options.

Note the use of a camera image to reinforce the highlighted Pictures menu choice.





◀ MediaLife supports the viewing of many file types (bmp, jpg, jpeg, tif, tiff, png). Images can be viewed individually or as a slide show. Pictures can even be edited.

To open a folder, you simply click on it once.

4.15 What can I do with the Bluetooth wireless hub?

Please refer to section [3 Learn what you can do with the Bluetooth wireless hub](#).

4.16 What is the battery life of this product?

The battery life for the keyboard is up to 6 months. The mouse is rechargeable and gives 15 days of autonomy.

4.17 Which Logitech mouse is supplied with the Cordless Desktop MX 5000 Laser desktop?

The Logitech MX 1000 Laser mouse for Bluetooth is supplied as part of the Cordless Desktop MX 5000 Laser desktop. For more information on the MX 1000 Laser mouse, please refer to section [6 Learn about Logitech MX 1000 for Bluetooth Mouse](#).

5 Learn about Logitech diNovo Media Desktop Laser

This section provides some FAQs for the Logitech diNovo Laser desktop.

5.1 Why "diNovo"?

From the Latin "novo", new, fresh, original. De novo = from the beginning. "de" becomes "di" to suggest digital – a new way to orchestrate digital media. The whole idea is fresh new beginning, from the ground up. "diNovo" also communicates the style, elegance and premium aspect of this product.

5.2 What is the MediaPad?

We have re-invented what a numberpad can do! The MediaPad is a Bluetooth remote control/commander for today's full-screen and intuitive digital media interface. The MediaPad enables you to work, play and communicate with one touch.

- Work – use the MediaPad as a calculator or numpad, allowing you to effortlessly paste numbers into an application such as Excel.
- Play – use the MediaPad to enjoy digital music with pictures or video to run a slide show from a distance; launch the Logitech Media Desktop or MediaLife software to view, select, and play favorite jukebox tunes, or video clips.
- Communicate – use the MediaPad to view the current song and artist you are listening to; be notified of email and instant messages.

5.3 What can I do with the Bluetooth wireless hub?

Please refer to section [3 Learn what you can do with the Bluetooth wireless hub](#).

5.4 Which Logitech mouse is supplied with the diNovo Media Desktop Laser?

The Logitech MX 1000 Laser mouse for Bluetooth is supplied as part of the diNovo Media Desktop Laser. For more information on the MX 1000 Laser mouse, please refer to section [6 Learn about Logitech MX 1000 for Bluetooth Mouse](#).

5.5 What is the battery life?

The battery life for the keyboard is up to 6 months, for the MediaPad is up to 3 months, and the mouse is rechargeable and gives 15 days of autonomy.

5.6 Is it possible to use rechargeable batteries in the keyboard or MediaPad?

Yes, however, we do not recommend using rechargeable batteries in these products.

5.7 What is the "123" button on the MediaPad?

The MediaPad has 3 different modes: Numeric Pad mode, PC Remote Control mode and Calculator mode. The **123** button switches the MediaPad to Numeric Pad mode. You can then use your MediaPad as a classic numeric pad.

5.8 What is the "NAV" button on the MediaPad?

The MediaPad has 3 different modes: Numeric Pad mode, PC Remote Control mode and Calculator mode. The  button switches the MediaPad to PC Remote Control mode and activates all the blue keypad functions. You can then use the MediaPad to remotely command your PC.

5.9 What is the "+ / =" button on the MediaPad?

The MediaPad has 3 different modes: Numeric Pad mode, PC Remote Control mode and Calculator mode. The  button switches the MediaPad to Calculator mode. You can then use the MediaPad as a smart calculator and paste the results into any open application.

5.10 What is the "Clear Screen" button on the MediaPad?

The "Clear Screen" button erases the content of the MediaPad display. For instance, once you have received an email notification, you can erase it by pressing "Clear Screen" – this erases the notification, not the email in your mailbox.

5.11 What is the "Media" button?

Please, refer to section [4.13 What is the "SYNC" hot key for?](#)

The  hot key called "Easy Synchronization", located at the top left-hand corner of the keyboard, enables one touch synchronization of a mobile phone with your Personal Information Manager, such as MS Outlook, over Bluetooth. To view the list of compatible Bluetooth phones and PDAs, please visit www.logitech.com/bluetooth

What is the "Media" button?

5.12 I understand that I can receive email or Instant Messaging notifications on the display of the MediaPad. Which email clients are supported?

diNovo Media Desktop Laser supports the following global email applications: MS Outlook Express, MS Outlook and any web based email client with POP3 support such as MSN Hotmail and Yahoo! Mail. Instant Messaging applications supported are Yahoo! Messenger 6.0 and above instant messenger service, MSN Messenger 6 and above network Internet services, and Windows Messenger 4.7. Using Logitech SetPoint software, users can specify from which of their contacts they wish to receive these notifications.

5.13 I understand that I can receive Media information on the display of the MediaPad. What media players are supported?

The diNovo MediaPad solution supports Musicmatch, iTunes, Windows Media Player 9 and 10, and Winamp 5. Musicmatch Internet radio is a free streaming-music service with more than two hundred professionally programmed channels. Users can make their Musicmatch Internet Radio selections and control the audio volume with the MediaPad solution from up to thirty feet away.

5.14 I'm running XP Media Center Edition 2005. Can I use the MediaPad with it?

Yes, the diNovo MediaPad solution supports XP Media Center 2005. This means that you can use the MediaPad to navigate the XP Media Center interface. In addition, you get media playback information on the MediaPad display.

6 Learn about Logitech MX 1000 for Bluetooth Mouse

This section provides some FAQs for the Logitech MX 1000 Bluetooth mouse.

6.1 What is the benefit of the MX Laser tracking engine?

Logitech's revolutionary laser-powered mice unite the precision of laser illumination with the proven technology of sensor-based motion tracking in a way never done before.

To detect movement, all sensor-based mice, regardless of light source, use sensors to 'read' the light beam as it is reflected back into the mouse from the tracking surface (Figure 2).

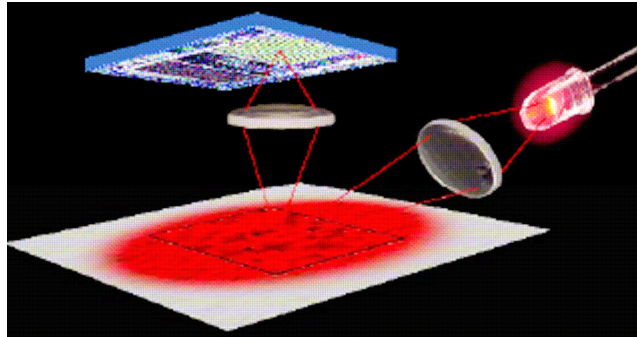


Figure 2: An optical mouse works by reading a reflected light beam on the surface

Each second, Agilent's optical sensor inside Logitech's mouse takes more than 6000 snapshot 'fingerprints', converts the information to digital format and uses the changes in fingerprints to calculate the mouse's precise location, speed and direction of movement (Figure 3). Armed with that knowledge, Logitech's driver software then communicates with the computer's operating system, which moves the cursor image on the screen.

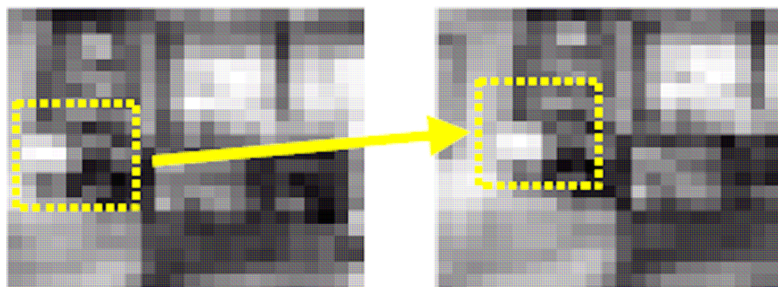


Figure 3: Interpreting differences in image fingerprints can be translated to movement of the mouse

Laser illumination reveals structure that an LED simply cannot express. The coherent nature of laser light creates patterns of high contrast when its light is reflected from a surface. The pattern appearing on the sensor reveals details on any surface, even glossy surfaces that would look totally uniform when exposed to the LED incoherent illumination (Figure 4). The precision image sensors then have no difficulties in tracking on these patterns and calculating position and movement. This is how laser enables tracking on virtually any surface.

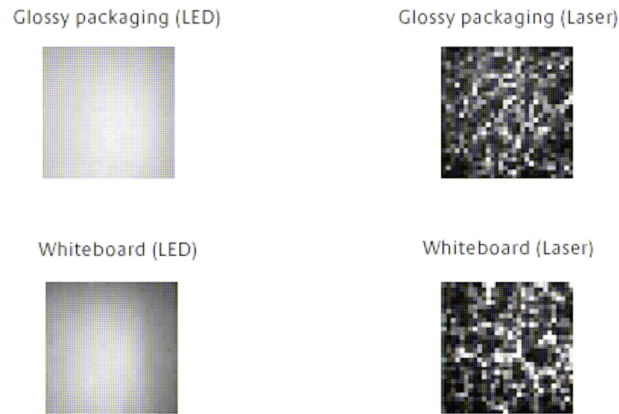


Figure 4: Laser uncovers surface features not detected by LED.

6.2 Could the Laser Engine harm me?

A quick look around any home reveals lasers improving our lives. From CD and DVD players to printers and handheld pointers, lasers designed for consumer use offer enormous benefits and a high degree of safety. But lasers also conjure up images of destructive ray guns, a staple of science-fiction movies. Fortunately, that's not the case with Logitech's laser mouse technology. Logitech's laser mice are perfectly safe for consumers, earning a Class I eye-safe designation. After all, transmitting a beam of light for the tiny distance required, less than an inch, requires only a minuscule amount of power.

6.3 How long does it take to recharge the mouse?

It takes only 10 minutes of charging to provide enough power for one full day of use. It takes approximately 4 hours to fully charge the MX 1000.

6.4 How long can I use the mouse once it's fully charged?

The mouse has an autonomy of approximately 15 days. This number may vary depending on the activity level. It takes only 10 minutes of charging to provide enough power for one full day of use. It takes approximately 4 hours to fully charge the MX 1000.

6.5 Does it harm the mouse to leave it on the cradle?

No, the charge algorithm will detect the end of charge and then conserve the full battery charge without over-charging. Just make sure the power-brick stays powered as long as the mouse remains on the cradle, otherwise the batteries will discharge again.

6.6 Can I interrupt a charging session before the end of charge?

Yes, you can interrupt a charging session; the mouse will just run for a shorter period of time before it needs a new recharge.

6.7 Is it true that if I never complete a full charge of the batteries, I might damage them or shorten their total life?

No, you won't damage the batteries or the mouse with partial recharge. Nevertheless, we recommend letting the charge complete fully until the end as often as possible.

6.8 Should I put the mouse on the cradle immediately each time I stop using it? Is there an optimal period for recharge?

Feel free to choose which rate is the most convenient for you. We suggest that you put your mouse on its cradle each time you leave your computer for a while, e.g. at lunchtime and at the end of the day, and so on.

6.9 Can I use another power brick or do I need to use the Logitech power brick?

You must use the Logitech power brick. Only the specific Logitech power brick can be used to charge the mouse. The power brick is not a standard power brick but has a specific characteristic to be used only with the mouse.