

LAPLINK CONTROLLER FOR PALM

Installation,
Configuration,
User Guide



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Overview

Introducing LAPLINK CONTROLLER FOR PALM

What Is LAPLINK CONTROLLER FOR PALM?

LAPLINK CONTROLLER FOR PALM is a “remote control” solution for your handheld. LAPLINK CONTROLLER FOR PALM allows an individual or an enterprise to remotely control their handheld devices across a TCP/IP network using the keyboard and mouse from their desktop or other personal computing device. Using LAPLINK CONTROLLER FOR PALM, critical management functions like device diagnostics, device data management, software distribution, and software reconfiguration can all be performed remotely. LAPLINK CONTROLLER FOR PALM can be used in a variety of situations to make using your handheld device easier and more efficient.

LAPLINK CONTROLLER FOR PALM Capabilities Overview

Remote Control

The basis for all LAPLINK CONTROLLER FOR PALM functionality is the fundamental remote control capabilities that the product provides. From a desktop workstation or other personal computing device, you can control the functions of your handheld. Once a connection is established between the LAPLINK CONTROLLER FOR PALM Handheld component and the LAPLINK CONTROLLER FOR PALM Remote Control component, mouse clicks and keyboard input initiated from the remote control computing device are performed on the handheld, and screen updates from the handheld are displayed on the remote control device. This allows both the handheld operator and the remote control operator to provide input to the handheld device and see the resulting displays at the same time.

The following sections briefly describe some of the uses for the LAPLINK CONTROLLER FOR PALM remote control capability:

Remote Support

LAPLINK CONTROLLER FOR PALM can be used in a support function to provide helpdesk assistance to remotely located handheld device users. If remote handheld users have trouble with configuration or operation of the device, or with one of its applications, LAPLINK CONTROLLER FOR PALM can be employed by a helpdesk agent to effect immediate changes directly to the device.

Configuration Management and Diagnostics

In the case where data or configuration settings may have been changed or corrupted, the helpdesk agent can correct the problems in real-time instead of requiring that the device is physically returned for reprogramming or reconfiguration.

End-User Guidance

If the remote handheld user encounters problems operating the device or an application, using LAPLINK CONTROLLER FOR PALM, the end-user can visually demonstrate the problem to helpdesk personnel as opposed to both helpdesk personnel and end-user laboring through a verbal diagnosis of the problem. Likewise, once the problem is understood, helpdesk personnel can take control of the device and visually demonstrate to the user the proper operational steps as opposed to requiring the user to try to follow the helpdesk's verbal instructions.

Presentations and Training

Due to the bi-directional operation capabilities that LAPLINK CONTROLLER FOR PALM provides, the product can be used to facilitate a real-time presentation or training session. Using LAPLINK CONTROLLER FOR PALM, the user can drive the presentation directly through either the handheld device using screen taps, or the remote control device using the mouse and keyboard. The resultant display of the handheld device screen can be viewed on the larger remote control device monitor. Viewing can be further enhanced by using a projector to increase the size of the display. Finally, with the use of built-in drawing capabilities, elements of the handheld device display can be highlighted and annotated.

Screen Shot Capture

Because all screen updates get delivered to the remote control device through LAPLINK CONTROLLER FOR PALM, all activity on the handheld device can be captured as screen shots through the remote control device. Screen shots can be captured one at-a-time, or as part of a series of screens in a "recording session".

LAPLINK CONTROLLER FOR PALM Component Overview

The LAPLINK CONTROLLER FOR PALM Components

LAPLINK CONTROLLER FOR PALM is comprised of the following three main components:

- The Handheld component
- The Remote Control component
- The SkinManager
- USBLink

LAPLINK CONTROLLER FOR PALM Handheld Component

The Handheld component is installed and runs on the handheld device. This component is responsible for establishing a connection with the Remote Control component over a network. The Handheld component runs in the background on your handheld device and intercepts and communicates all screen taps and display updates on the device to the Remote Control component.

The LAPLINK CONTROLLER FOR PALM Remote Control Component

The Remote Control component runs on a personal computer. This component accepts a connection from the LAPLINK CONTROLLER FOR PALM Handheld component and through it provides remote control of the handheld

device from the personal computer. The function of the Remote Control is to receive screen display updates from the handheld as well as transmit mouse clicks and keyboard input from the personal computer back to the handheld.

LAPLINK CONTROLLER FOR PALM SkinManager

The LAPLINK CONTROLLER FOR PALM Remote Control component supports a variety of application “skins” to match the look of the connected handheld device. The files that provide the application skins are not packaged as part of the product installation files. Application skins for the Remote Control component are available to be downloaded from Laplink using the LAPLINK CONTROLLER FOR PALM SkinManager.

LAPLINK CONTROLLER FOR PALM USBLink

USBLink acts as a bridge between the Universal Serial Bus (USB) connector on a personal computer and a TCP/IP network. USBLink can be used in a “remote” configuration where USBLink and the handheld device reside on one personal computer, and the LAPLINK CONTROLLER FOR PALM Remote Control component is running on another personal computer elsewhere across a TCP/IP network. In a “local” configuration where the handheld device and the LAPLINK CONTROLLER FOR PALM Remote Control component are resident on the same personal computer, the Remote Control component contains an inbuilt capability to communicate with the USB, so USBLink is not required.

About this Manual

The LAPLINK CONTROLLER FOR PALM Installation, Configuration, User Guide provides the information necessary for the installation, configuration, and operation of the remote device management product. This document includes information describing installation procedures for LAPLINK CONTROLLER FOR PALM, as well as information describing the configuration and use of the many options and features in LAPLINK CONTROLLER FOR PALM.

Overview of Sections

Listed below are the major sections of this document and an overview of the material covered.

Installation

This section describes the process for installing both the Handheld component and the Remote Control component of the LAPLINK CONTROLLER FOR PALM software.

Getting Started

This section is intended to provide a quick “how to” guide for getting the LAPLINK CONTROLLER FOR PALM software configured and running. Read this section from start to finish getting a step-by-step explanation of configuring and using the LAPLINK CONTROLLER FOR PALM product.

Using LAPLINK CONTROLLER FOR PALM

This section describes in more detail uses for the LAPLINK CONTROLLER FOR PALM product.

Troubleshooting

In this section information is given on how to troubleshoot some problems that may occur when using LAPLINK CONTROLLER FOR PALM.

Installation

Handheld Component Requirements

Palm Powered Handheld Device Requirements

The LAPLINK CONTROLLER FOR PALM handheld device component runs on most Palm OS based devices running Palm OS 4 or Palm OS 5.

To establish connectivity between the LAPLINK CONTROLLER FOR PALM Handheld component and the LAPLINK CONTROLLER FOR PALM Remote Control component, some type of physical network access to a TCP/IP network (e.g., Bluetooth, Wi-Fi, cellular data service, etc.) or a USB cradle/cable is required.

Remote Control Component Requirements

Windows Compatible Personal Computer Requirements

The LAPLINK CONTROLLER FOR PALM Remote Control component requires a personal computing device running Windows 98 or later.

The LAPLINK CONTROLLER FOR PALM Remote Control component also requires the installation of the Microsoft .NET Framework version 1.1 or later. You can determine if you have the correct version of software installed by going to Add/Remove Programs in Windows and looking for “Microsoft .NET Framework”. If you need to install or update Microsoft .NET Framework, perform a Windows Update by going to the start menu and selecting “Windows Update”. If you wish to download the Microsoft .NET Framework directly, go to Microsoft .NET Framework Version 1.1 Redistributable Package at www.microsoft.com.

To establish connectivity between the LAPLINK CONTROLLER FOR PALM Handheld component and the LAPLINK CONTROLLER FOR PALM Remote Control component, USB connectivity or TCP/IP network connectivity is required.

USBLink Component Requirements

Windows Compatible Personal Computer Requirements

The USBLink component of LAPLINK CONTROLLER FOR PALM requires a personal computing device running Windows 98 or later.

To establish connectivity between the USBLINK component and the LAPLINK CONTROLLER FOR PALM Handheld component, a USB cradle/cable is required.

To establish connectivity between the USBLINK component and the LAPLINK CONTROLLER FOR PALM Remote Control component, TCP/IP network connectivity is required.

Installation Instructions

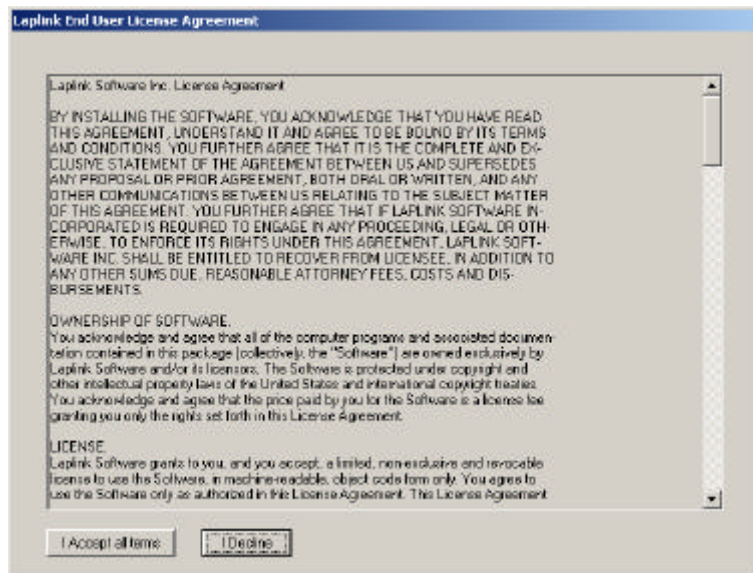
Installing LAPLINK CONTROLLER FOR PALM

To install LAPLINK CONTROLLER FOR PALM downloaded from the Web, double-click ControllerForPalm.exe in the folder where you downloaded the product.

To install LAPLINK CONTROLLER FOR PALM on CD-ROM, double-click ControllerForPalm.exe located in the root directory of the CD.

Then follow the directions and supply the information prompted for by the Setup program:

1. After starting ControllerForPalm.exe, a Welcome screen will appear. Click Next.
2. Review the Laplink Software License Agreement. To proceed with the installation, accept the agreement.



3. Next, enter the directory where you want to install the LAPLINK CONTROLLER FOR PALM software. The default is C:\Program Files\Laplink\Laplink Controller for Palm:



4. When prompted, select the name of the Palm Powered handheld device on which the LAPLINK CONTROLLER FOR PALM Handheld component will be installed:



5. The installation of the LAPLINK CONTROLLER FOR PALM Remote Control component is complete. Click the “Finish” button.



6. To complete the installation of the Handheld component to your handheld device, perform a HotSync operation. To perform a HotSync operation, tap the HotSync icon on the main display of your handheld device:



When Installation is Complete

Once the installation of all software is complete, the LAPLINK CONTROLLER FOR PALM product components must be configured before use. Use the information in the section “Getting Started” for a brief introduction to running and configuring the various the LAPLINK CONTROLLER FOR PALM components. For more detailed information on using the LAPLINK CONTROLLER FOR PALM product, refer to the section “Using LAPLINK CONTROLLER FOR PALM”.

Getting Started

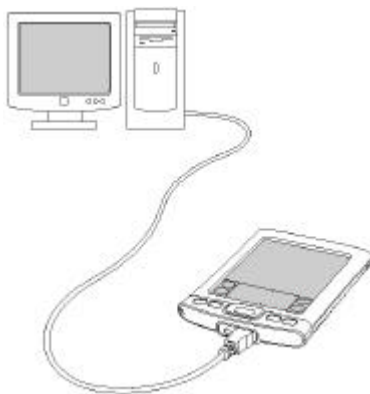
Overview

This section is intended to provide a quick “how to” guide for getting the LAPLINK CONTROLLER FOR PALM software configured and running. Read this section from start to finish getting a step-by-step explanation of configuring and using the LAPLINK CONTROLLER FOR PALM product. Follow the steps outlined in this section to get started using LAPLINK CONTROLLER FOR PALM. More detailed information on configuring options and running the LAPLINK CONTROLLER FOR PALM software can be found in the other sections that follow this one.

In order to use the LAPLINK CONTROLLER FOR PALM product, the following steps will need to be performed:

- Start the Remote Control component
- Start the Handheld component
- Configure the Handheld component
- Initiate a LAPLINK CONTROLLER FOR PALM connection from the Handheld component to the Remote Control component

A simple “local” configuration of a handheld device connected to a personal computer via a USB cable will be assumed for the purpose of providing the information in this section. The configuration assumed is depicted below:



Note: By using USBLINK on a remote personal computer across a network, or by using other communications technology on your handheld device such as Bluetooth or Wi-Fi, more sophisticated “remote” configurations are possible.

Starting the Remote Control Component

Start the LAPLINK CONTROLLER FOR PALM Remote Control component by double clicking the following icon:



The following display will appear:



Remote Control Component Screen

Once the Remote Control component has been started, it is ready to accept a connection from any handheld device running the LAPLINK CONTROLLER FOR PALM Handheld component.

Starting the Handheld Component

Start the LAPLINK CONTROLLER FOR PALM Handheld component on your handheld device by tapping the following icon:



When you start the LAPLINK CONTROLLER FOR PALM Handheld component its main display will appear on your handheld device:

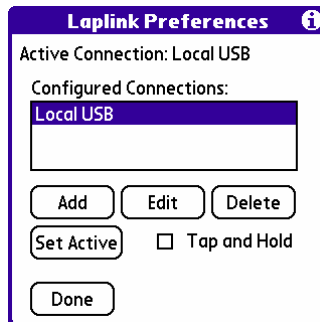


Handheld Component Main Display- Deactivated

Configuring the Handheld Component

Once the LAPLINK CONTROLLER FOR PALM Handheld component has been started, you can configure the options that will dictate where it will connect once a connection is activated. In the simple hardware configuration that we have assumed in the example in this section - a handheld connected to a personal computer via a USB cable - the default settings of these preferences should be sufficient to establish a connection.

If you find that you need to modify the connections preferences, tap **Preferences** on the main display of the Handheld component and the following display will appear:



Handheld Component Preferences Display

On the Preferences display you can add or edit the connection preferences as needed to establish a connection with the personal computer on which you installed and started the LAPLINK CONTROLLER FOR PALM Remote Control component. When you have completed entering your preferences, tap **Done**.

Activating the Handheld Component

Once the LAPLINK CONTROLLER FOR PALM Handheld component has been started and configured on the handheld device, and the Remote Control component and USBLink have been started on your personal computer, the LAPLINK CONTROLLER FOR PALM Handheld component is ready to be activated. To activate a connection between the Handheld component and the Remote Control component tap **Activate** on the main display of the LAPLINK CONTROLLER FOR PALM Handheld component. After a brief moment during which the

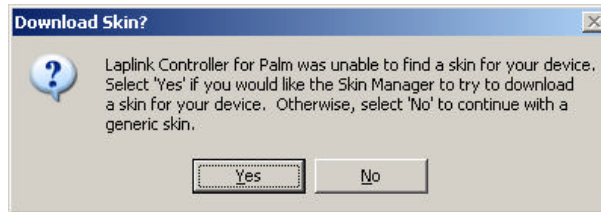
Handheld component is completing the connection to the Remote Control component, the **Status** indicator on the main display of the Handheld component will change to **Activated**.



Handheld Component Main Display- Activated

Normally, once a successful connection is activated between the LAPLINK CONTROLLER FOR PALM Handheld and Remote Control components, the display of the Remote Control component's "application skin" will change to match the look of the device that has been connected. The files that provide the application skins are not packaged as part of the product installation files. Application skins for the Remote Control component are available to be downloaded from Laplink using the LAPLINK CONTROLLER FOR PALM SkinManager.

If the skin for a handheld device is not available to the Remote Control component when the device first activates a connection, the Remote Control component will emit the following display and give you the opportunity to automatically download the skin:



Once the appropriate skin for your device is downloaded, the application display of the Remote Control component will change.

In our example using a Palm Tungsten E, once the LAPLINK CONTROLLER FOR PALM connection is established the Remote Control component display will change to the following:



Remote Control of Palm Tungsten E

From this point on, mouse clicks and keyboard input initiated from the remote control computing device are performed on the handheld, and screen updates from the handheld are displayed on the remote control device. This allows both the handheld operator and the remote control operator to provide input to the handheld device and see the resulting displays at the same time.

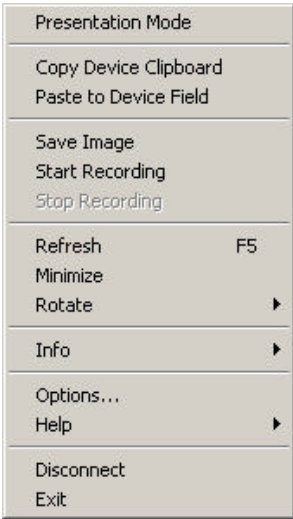
Using LAPLINK CONTROLLER FOR PALM

Overview

In this section, detail will be provided on operating the LAPLINK CONTROLLER FOR PALM product. This section will provide some detail on the various applications or uses of the LAPLINK CONTROLLER FOR PALM product as well as information on more complex connectivity scenarios in which LAPLINK CONTROLLER FOR PALM can be used.

Remote Control Component Menu

Apart from the mouse click and keyboard input that can be conducted through the LAPLINK CONTROLLER FOR PALM Remote Control component to the handheld device, other functions can also be performed. These functions can be accessed via the menu within the Remote Control component which can be displayed by performing a right mouse click anywhere within the application display area.



Remote Control Component Menu

From the Remote Control component menu other features and settings can be accessed. These features and settings will be discussed in the following sections.

Presentation Mode

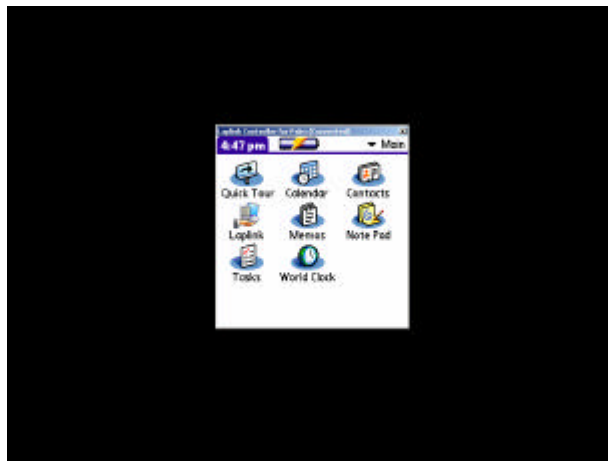
Presentation Mode allows the LAPLINK CONTROLLER FOR PALM product to facilitate a real-time presentation or training session demonstrating applications and functions on the handheld. Using Presentation Mode the user can drive the presentation directly through either the handheld device using screen taps, or the remote control device using the mouse and keyboard. The display of the handheld device screen can be viewed via the Remote Control component on the larger personal computer monitor. Viewing can be further enhanced by using a projector to increase the size of the display. Finally, with the use of built-in drawing capabilities, elements of the handheld device display can be highlighted and annotated.

To activate Presentation Mode, select Presentation Mode from the LAPLINK CONTROLLER FOR PALM Remote Control component menu:



Select Presentation Mode

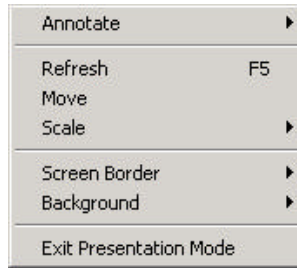
Once Presentation Mode is selected, the display of the LAPLINK CONTROLLER FOR PALM Remote Control component will be transformed. The default Presentation Mode display appears below:



LAPLINK CONTROLLER FOR PALM in Presentation Mode

Once Presentation Mode is selected, the display of the LAPLINK CONTROLLER FOR PALM Remote Control component can be tailored to fit the requirements of your presentation. Using the Presentation mode menu, options can be selected to affect the location, size, border, and background of the application space and its surrounding area. In addition, annotations of the display area can be made in real-time.

You can gain access to the functions within Presentation Mode by using the Presentation Mode menu. To access the Presentation Mode menu, right-click anywhere in the application display area of the Remote Control component and the following menu will appear:

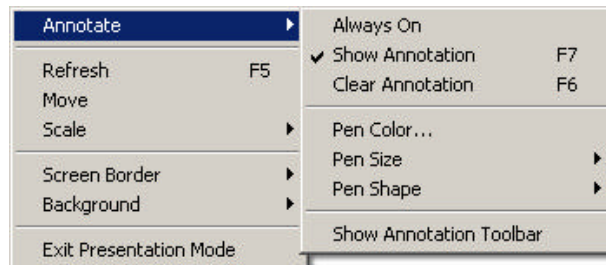


Presentation Mode Menu

The following sections will briefly describe some of the more important Presentation Mode menu functions.

Annotate

Annotation allows you to draw markings on the LAPLINK CONTROLLER FOR PALM Remote Control display to highlight information for your audience. The annotation capability can be enabled and controlled through the **Annotate** menu selections seen below:



Annotate Menu

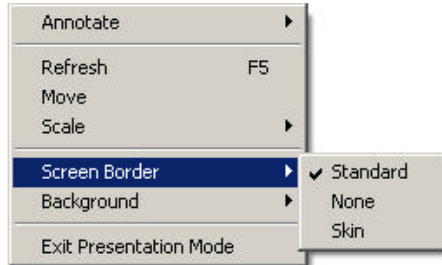
Annotation can be enabled by selecting the **Always On** menu selection from the Annotate menu. Annotations can be made by dragging the mouse cursor (move the mouse while holding down the left mouse button) over the area of the screen to be annotated. Annotation can also be enabled by holding down the Ctrl key while dragging the mouse cursor. Annotation mode is indicated by the presence of the pen cursor:



Using the functions within the Annotate menu you can affect the Size, Shape and Color of the annotation marks that are made. From the menu you can also Show, Hide and Clear annotations from the screen. Using the **Show Annotation Toolbar** you can make visible a tool bar that will provide easy access to many of the options from the Annotate menu.

Screen Border

When in Presentation Mode, the border area surrounding the LAPLINK CONTROLLER FOR PALM Remote Control component screen can be customized to achieve the desired presentation effect. The screen border options can be controlled by using the **Screen Border** menu seen below:

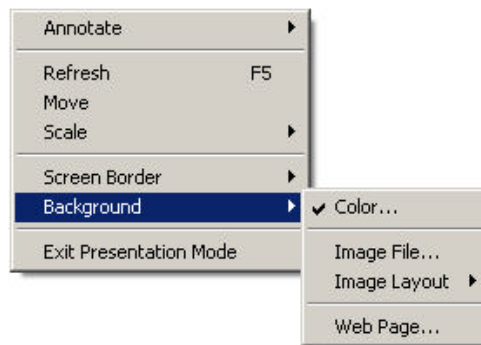


Screen Border Menu

Options for screen borders include the standard Windows border, the “device” skin border that is used in when the application is not in Presentation mode, and finally the application can be configured to have no border at all.

Background

The background upon which the LAPLINK CONTROLLER FOR PALM Remote Control component is displayed when in Presentation Mode can be customized as well. Use the **Background** menu to control the options available for backgrounds:



Background Menu

Choices for backgrounds in Presentation Mode include a choice of custom colors, a custom image, or a Web page.

Image Layout

If an **Image File** is configured as the Presentation Mode background, the **Image Layout** can be configured to be Standard, Tile, Center, or Full Screen.

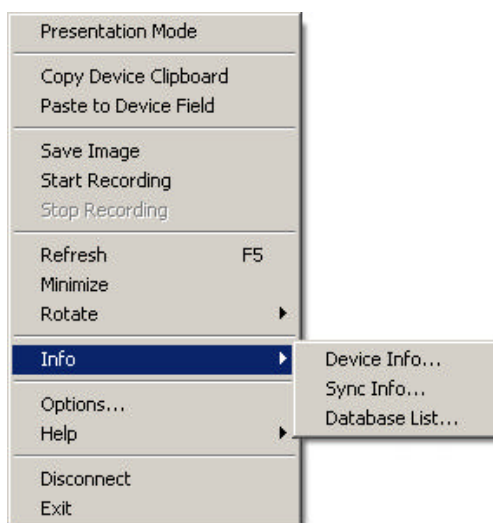
Remote Support

LAPLINK CONTROLLER FOR PALM can be used in a support function to provide helpdesk assistance to remotely located users of handheld devices. The following paragraphs describe some of the diagnostic capabilities within the product.

Configuration Management and Diagnostics

In the case where data or configuration settings may have been changed or corrupted, the helpdesk agent can correct the problems in real-time instead of requiring that the device is physically returned for reprogramming or reconfiguration.

By using the **Info...** selection from the Remote Control component menu, information about the handheld device can be seen such as general device information, HotSync information, and information about the databases on the device:

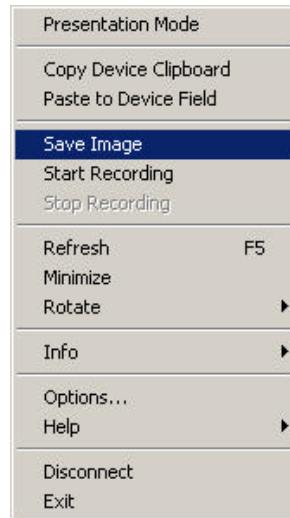


Info Menu

Screen Shot Capture

Because all screen updates get delivered to the remote control device through LAPLINK CONTROLLER FOR PALM, all activity on the handheld device can be captured as screen shots using the LAPLINK CONTROLLER FOR PALM Remote Control component. Screen shots can be captured one at-a-time, or as part of a series of screens in a “recording session”.

To capture a single screen shot from the handheld device, select **Save Image** from the Remote Control component menu:



Record Image

To capture a series of screen shots, select **Start Recording** to start capturing the series, and **Stop Recording** to end the capture. When recording, each screen update will be captured as a separate image.

By default, screen shot images and recording images are captured within the Screenshots and Record subdirectories under the directory where the LAPLINK CONTROLLER FOR PALM Remote Control component was installed (by default, C:\Program Files\Laplink\Laplink Controller for Palm\).

Application (Device) Skin

When a successful connection is activated between the LAPLINK CONTROLLER FOR PALM Handheld and Remote Control components, the display of the Remote Control component’s application “skin” will change to match the look of the device that has been connected, if that skin is available to the application.

Button and Keyboard Use

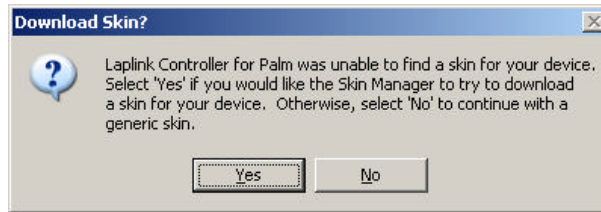
During the time that the LAPLINK CONTROLLER FOR PALM Remote Control component is connected to the Handheld component, the buttons and keys on the device skin of the Remote Control component are available for use remotely as they would be from the handheld device itself. To activate a device button or keyboard key, simply click on the image of the button or key in the device skin as you would on the actual device. The action that corresponds with the button or key will be activated on the handheld device.

SkinManager

The files that provide the Remote Control application “skins” are not packaged as part the LAPLINK CONTROLLER FOR PALM product installation files. Application skins for the Remote Control component are available to be downloaded from Laplink by using the LAPLINK CONTROLLER FOR PALM SkinManager.

If the application skin for a handheld device is not available to the Remote Control component when the device first activates a connection, the Remote Control component displays the following message and provides you the opportunity to automatically download the skin for the device from Laplink using the

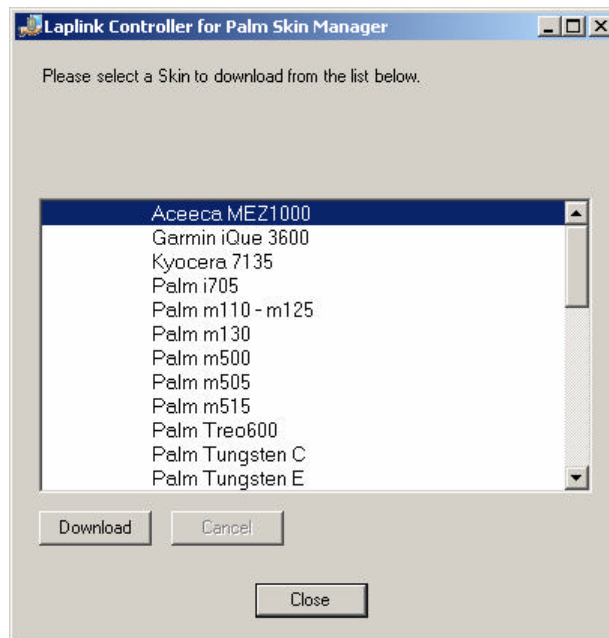
LAPLINK CONTROLLER FOR PALM SkinManager:



Under circumstances where you wish to manually download the application skin for a device, you can start the LAPLINK CONTROLLER FOR PALM SkinManager by clicking on the following desktop icon:



The following display will appear:



LAPLINK CONTROLLER FOR PALM Skin Manager

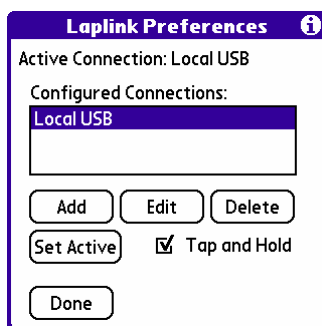
A connection to the Internet is required to download application skins. To download a skin, select the name of the skin and click the **Download** button.

Note: Not all handheld devices will have an application skin that can be used with LAPLINK CONTROLLER FOR PALM. For those devices that do not have a skin available, the default skin will be used. When the default skin is used, all functions for that device may not be available.

Tap and Hold

The Tap and Hold feature allows the mouse on your personal computer to be used within a LAPLINK CONTROLLER FOR PALM connection to completely simulate using the handheld stylus. Holding the left mouse button down within the LAPLINK CONTROLLER FOR PALM device display causes the same action as holding the stylus down on the actual screen of the handheld device. Moving the mouse while holding down the left mouse button causes the same action as holding the stylus down while moving it on the actual handheld device screen.

To enable the Tap and Hold capability, check the **Tap and Hold** check box on **Preferences** screen of the LAPLINK CONTROLLER FOR PALM Handheld component, then disconnect and reconnect the LAPLINK CONTROLLER FOR PALM connection. The LAPLINK CONTROLLER FOR PALM preferences display is illustrated below:



Handheld Component Preferences Display

The Tap and Hold feature is disabled by default as it may not work correctly with all devices or programs. Tap and Hold is currently only supported when using a USB connection. Tap and Hold is not supported on handhelds running Palm OS 4 and the Tap and Hold option will not be visible on these devices. Tap and Hold is also not currently supported on any Sony Clie that has a 320x480 or 480x320 displays. Tap and Hold is also not supported on the original Tungsten T. Tap and Hold may interfere with some audio player programs.

Keyboard and Mouse Function Mappings

The following list of items describes the special functions that are mapped to certain keyboard and mouse actions that may be performed through the LAPLINK CONTROLLER FOR PALM Remote Control component.

This first set of functions will affect the behavior within the Remote Control component:

Key / Function	Action
F5	Get latest screen from device and refresh the PC window.
F6	Clear annotations (in Presentation Mode).
F7	Toggle show/hide annotations in Presentation Mode.
Ctrl + Left Mouse	Activate annotation mode. Draw annotations by dragging the mouse with the left button pressed while holding down the Ctrl key. (in Presentation Mode when drawing not "Always On")

This set of functions applies to behaviors that affect the handheld device:

Key / Function	Action
F1 – F4	Device hard keys 1 through 4, respectively.
F9	Toggle the menu display
F10	Display Find dialog
Home	Display Home screen
Up/Down/Left/Right Arrow	Up/Down/Left/Right movement
Ctrl + Up/Down/Left/Right Arrow	Navigation (4-way navigation is device-dependent)
Shift + Right/Left Arrow	Text selection
+ (Num Pad)	Center navigation (5-way navigation is device-dependent)
- (Num Pad)	Jog Dial back
Mouse Wheel Up	Jog Dial up
Mouse Wheel Down	Jog Dial down
Mouse Wheel Push	Jog Dial push
Mouse Wheel Release	Jog Dial release
Backspace	Sends Backspace action to device
Enter	Sends Enter action to device
Any letter/digit	Sends that case sensitive key stroke to the device

Notes:

- 1) If the device does not have the equivalent key (e.g. Center navigation key), it does nothing.
- 2) Text input through the personal computer keyboard typically will not result in any action on the handheld device unless the device has a text field in focus. This is a handheld device feature.

LAPLINK CONTROLLER FOR PALM Connectivity

LAPLINK CONTROLLER FOR PALM operates over a connection between the LAPLINK CONTROLLER FOR PALM Handheld component and the LAPLINK CONTROLLER FOR PALM Remote Control component. That connection can be provided by a local USB connection, a TCP/IP connection such as Bluetooth, Wi-Fi, or cellular data service, or a combination of USB and a TCP/IP connection using the LAPLINK CONTROLLER FOR PALM USBLink component.

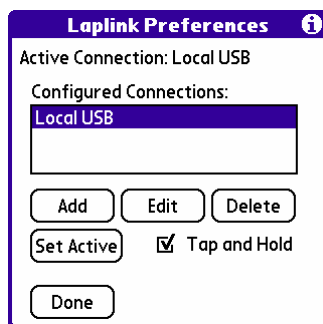
A connection between the LAPLINK CONTROLLER FOR PALM Handheld component and the Remote Control component is initiated from the Handheld component. A connection is initiated by tapping on the **Activate** button on the main Handheld component display.



Handheld Component Main Display

Handheld Component

By default, the LAPLINK CONTROLLER FOR PALM Handheld component is configured to initiate a connection to the Remote Control component using a local USB connection. Alternatively, if a TCP/IP connection is configured, the default port and IP Address configured are port 6868 and IP Address 127.0.0.1. These settings can be controlled by accessing the **Preferences** display within the Handheld component. If you find that you need to modify the connection preferences, tap **Preferences** on the main display of the Handheld component and the Preferences display will appear:

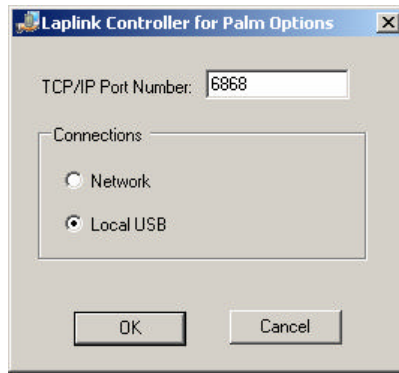


Handheld Component Preferences Display

On the Preferences display you can add or edit the connection preferences as needed to establish a connection with the personal computer on which you installed and started the LAPLINK CONTROLLER FOR PALM Remote Control component. When you have completed entering your preferences, tap **Done**.

Remote Control Component

Likewise, the LAPLINK CONTROLLER FOR PALM Remote Control component is configured by default to “listen” for a connection from the Handheld component using a local USB connection. When TCP/IP is used instead, port 6868 is the default port that is used. This setting can be controlled by right-clicking anywhere on the Remote Control component display and selecting **Options...** from the menu:



LAPLINK CONTROLLER FOR PALM Remote Control Options

In the preceding sections of this document, the basic remote control capabilities of LAPLINK CONTROLLER FOR PALM were configured and demonstrated over a simple hardware configuration of a handheld connected to a personal computer via a USB cable with the LAPLINK CONTROLLER FOR PALM Remote Control component running on the same personal computer. By using USBLink and attaching the handheld device to a remote personal computer across a network, or by using other communications technology on your handheld device such as Bluetooth, Wi-Fi, or cellular data service, more sophisticated scenarios are possible.

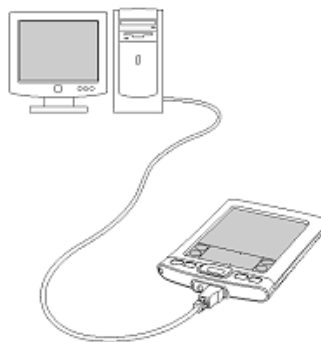
USB Connectivity

The Universal Serial Bus (USB) on your personal computer can provide a means for establishing a LAPLINK CONTROLLER FOR PALM connection from your handheld device to a personal computer. There are two methods of providing a LAPLINK CONTROLLER FOR PALM connection using USB, local and remote.

Local USB Connection

The simplest configuration using USB is one in which the LAPLINK CONTROLLER FOR PALM Remote Control component is running on the same personal computer that the handheld device is connected to using either the cradle for the device or a USB cable. In this configuration, the USB communication capabilities built into the LAPLINK CONTROLLER FOR PALM Remote Control component manage a connection so that the handheld device can be controlled from the personal computer to which it is directly attached.

A “local” USB configuration is illustrated below:



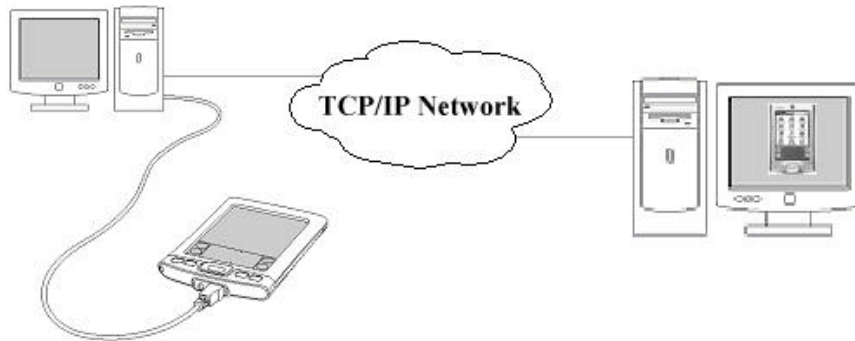
“Local” USB Configuration

Remote USB Connection

A “remote” configuration can be achieved by attaching the handheld device to one personal computer using a USB connection and the LAPLINK CONTROLLER FOR PALM USBLink component, and running the LAPLINK CONTROLLER FOR PALM Remote Control component on another personal computer connected to the first

personal computer by a TCP/IP network. In such a configuration, the connection between USBLink and the Remote Control component is a TCP/IP socket over the TCP/IP network.

A configuration for a “remote” USB connection is illustrated below:



“Remote” USB Configuration

Using USBLink

A “remote” configuration is one where the handheld device is NOT physically attached to the personal computer where the LAPLINK CONTROLLER FOR PALM Remote Control component is running. In such a configuration, USBLink can act as a “bridge” between the Universal Serial Bus (USB) connector on a personal computer to which the handheld device is attached and another personal computer elsewhere across a TCP/IP network where the LAPLINK CONTROLLER FOR PALM Remote Control component is running. Running USBLink is only required in a remote configuration where some other form of TCP/IP networking is not available to the handheld device (e.g., Bluetooth, Wi-Fi, or cellular data service).

Note:	The LAPLINK CONTROLLER FOR PALM Remote Control component on the handheld device will initiate a connection using whatever medium has been configured for connectivity (e.g. Bluetooth, Wi-Fi, or cellular data service, etc.) regardless of whether or not the handheld device is connected to a personal computer using the cradle or a USB cable.
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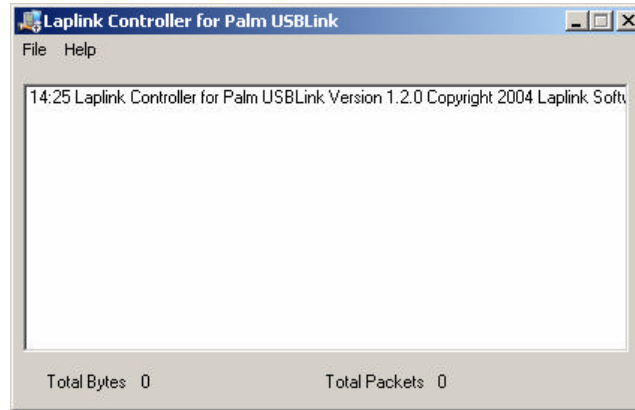
Installing USBLink

The components that comprise the USBLink functionality are installed during the standard LAPLINK CONTROLLER FOR PALM installation process. To install USBLink components on a remote personal computer, copy the files **USBLink.exe** and **LaplinkControllerUSB.DLL** from the LAPLINK CONTROLLER FOR PALM installation directory (“C:\Program Files\Laplink\Laplink Controller for Palm”), by default) to a directory on the remote personal computer.

Starting USBLink

To start USBLink, select **Start | Run** from the Windows Start menu and enter “USBLink.exe” along with the correct directory information indicating where the USBLink files have been copied.

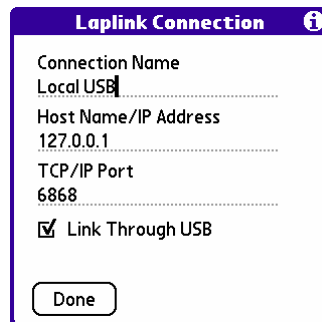
When you start USBLink the following display will appear:



LAPLINK CONTROLLER FOR PALM USBLink

The USBLink screen can now be minimized.

The use of a USB connection is enabled in the Handheld component **Preferences** by selecting the **Link Through USB** option within the connection parameters of the **Active Connection**.



LAPLINK CONTROLLER FOR PALM Connection Parameters

When using USB to facilitate a LAPLINK CONTROLLER FOR PALM connection, the **Host Name / IP Address** and **TCP/IP Port** options configured in the Preferences settings on the Handheld component are used to complete the LAPLINK CONTROLLER FOR PALM connection to the Remote Control component.

By default, the LAPLINK CONTROLLER FOR PALM Handheld component is configured to use a “local” USB connecting to the Remote Control component. For more information on establishing a LAPLINK CONTROLLER FOR PALM connection using USB, refer to the section “Getting Started” on page 9.

Using Other Network Connectivity

Other types of network connectivity that may be available on your handheld device such as Bluetooth, Wi-Fi, or cellular data service may be employed to provide a connection between the LAPLINK CONTROLLER FOR PALM Handheld and Remote Control components. For information on configuring and using other types of network connectivity, refer to the information provided with the handheld device.

Special Uses

Using LAPLINK CONTROLLER FOR PALM on the Palm 5 OS Simulator

To use LAPLINK CONTROLLER FOR PALM on the Palm OS Simulator you must make the following changes to the Palm OS Simulator options:

1. Under the Settings | Display menu selection enable Allow Direct Screen Access.
2. Under Communication menu selection enable Redirect NetLib Calls to Host TCP/IP.

Using LAPLINK CONTROLLER FOR PALM on the Palm OS Emulator

To use LAPLINK CONTROLLER FOR PALM on the Palm OS Emulator you must make the following changes to the Palm OS Emulator options:

1. Under the Settings | Properties menu selection check Redirect NetLib calls to host TCP/IP.
2. Under the Settings | Debugging menu selection make sure that the following options are NOT checked:

Hardware register access
Proscribed function call
Screen access

Limitations

Things to Avoid

The following is a list of things that could cause problems and should be avoided when LAPLINK CONTROLLER FOR PALM is operating:

- Do not perform a “local” HotSync operation while your device has an active LAPLINK CONTROLLER FOR PALM connection. On some devices HotSync will cause the remote connection to be lost.
- Do not manually power off the device while it is remotely connected. Powering the device off will cause the remote connection to be lost.
- Do not recalibrate the digitizer remotely; it will not be done correctly. The digitizer recalibration pen taps should only be performed on the actual device.
- When the HotSync program ends it terminates any network connections going through Bluetooth which includes any connections that we might have through Bluetooth. HotSync always seems to do this even though it is not configured to use Bluetooth.
- On a Sony Device, the NetFront web browser that comes with the device will terminate ALL network connections when the NetFront browser ends. If LAPLINK CONTROLLER FOR PALM is connecting through Wi-Fi on such a device when the NetFront browser terminates the LAPLINK CONTROLLER FOR PALM Wi-Fi connection will terminate as well.
- When editing the categories of applications through the App | Category... function from the main display of the standard Palm Launcher when a connection is active between the LAPLINK CONTROLLER FOR PALM Remote Control and Handheld components, you may get the following error message: “LauncherMain.c, Line:nmm, queue full err!”, and you will be forced to reset the device.

- Due to performance limitations related to screen updates, the LAPLINK CONTROLLER FOR PALM product may not be appropriate for certain types of applications. In particular, less than satisfactory performance may be experienced when using LAPLINK CONTROLLER FOR PALM with some games and streaming video applications.

What's not supported?

- **Graffiti**
"Drawing" with the mouse in the area of the display representing the graffiti area within the LAPLINK CONTROLLER FOR PALM Remote Control component will NOT work on all devices. For graffiti to work, the LAPLINK CONTROLLER FOR PALM Tap and Hold feature must be enabled, and the device must have a virtual graffiti area or allow on screen drawing.
- **Continuous stylus movement and holding the stylus down in some cases**
Simulating continuous stylus movement and holding down the stylus using the mouse cursor within the LAPLINK CONTROLLER FOR PALM Remote Control display is supported by enabling the Tap and Hold feature. The Tap and Hold feature may not work correctly with all devices or programs. Tap and Hold is currently only supported when using a USB connection. Tap and Hold is not supported on handhelds running Palm OS 4 and the Tap and Hold option will not be visible on these devices. Tap and Hold is also not currently supported on any Sony Clie that has a 320x480 or 480x320 display. Tap and Hold is also not supported on the original Tungsten T. Tap and Hold may interfere with some audio player programs.
- **Status bar on Sony devices**
On Sony Devices that have a status bar, screen taps from the Remote Control component on the status bar will not work.
- **Custom scroll bars**
Most custom application scroll bars cannot be controlled using the Remote Control component. The standard Palm OS scroll bar only works on OS 5 devices. Use of custom scroll bars may work better with the Tap and Hold feature enabled.
- **Display changes caused by device initiated actions not always detected in OS 4**
Device display changes NOT caused by action of the Remote Control (PC) component on a device running Palm OS 4 may not always be detected by the LAPLINK CONTROLLER FOR PALM Handheld component. This is a limitation of the Palm OS. As a result of this limitation, screen updates from the handheld device to the Remote Control component display may not always occur. In some cases it may be necessary to use the Refresh menu item or the Refresh function key – F5 – to refresh the Remote control display.
- **Scroll Bar on Palm OS 4 devices**
Clicking the handheld device scroll bar from the Remote Control component when using a Palm OS 4 device is not supported.

Troubleshooting

Potential Problem Areas

The following list contains situations that may cause problems when using LAPLINK CONTROLLER FOR PALM.

Sony Clie and USB

Not all Sony Clie devices can be automatically identified by the USB capabilities in the LAPLINK CONTROLLER FOR PALM Remote Control component and USBLink. This is a shortcoming in the Sony Clie device.

Solution:

If your Sony Clie does not work when a USB connection, try this workaround. Create or edit the file called USBLink.ini in the LAPLINK CONTROLLER FOR PALM installation directory. Make sure USBLink.ini contains a [USB] section as follows:

```
[USB]
Sony=1.
```

Error Messages

Below is a list of possible error messages that may appear during certain processes. These are listed to help identify the problem and suggest corrective actions. In the event an error message appears that is not listed here or you have questions, please contact Laplink Technical Support for further assistance.

SendUSB 1: USB Communication Error

This error message is caused by attempting to activate the LAPLINK CONTROLLER FOR PALM Handheld component when the USB port is hung.

Solution:

Restart the LAPLINK CONTROLLER FOR PALM Remote Control component and USBLink, and then tap **Activate** on the main display of the LAPLINK CONTROLLER FOR PALM Handheld component.

You must configure a host

This error message is caused by attempting to activate the LAPLINK CONTROLLER FOR PALM Handheld component when no Host Name or IP Address has been configured.

Solution:

Tap Preferences on the main Handheld component display and configure the Active Connection entity with an entry in the Host Name / IP Address field.

Skins are not available for the following Device IDs

This error message will be emitted by the SkinManager when a skin is not available for a device. Skins are not currently available for all devices. Each device has a device id associated with it; we use this device id to locate an available skin for your device. We add new skins when we get images of the device that can be turned into a skin.

Solution:

If a skin is not available for your specific device send an email to support@Laplink.com and let us know that you would like to see one.

c:\Windows\Microsoft.NET\Framework\v1.1.4322\mscorlib.dll could not be loaded

You have version 1.0 of the .NET Framework installed.

Solution:

You need to install version 1.1 of the Microsoft .NET Framework.