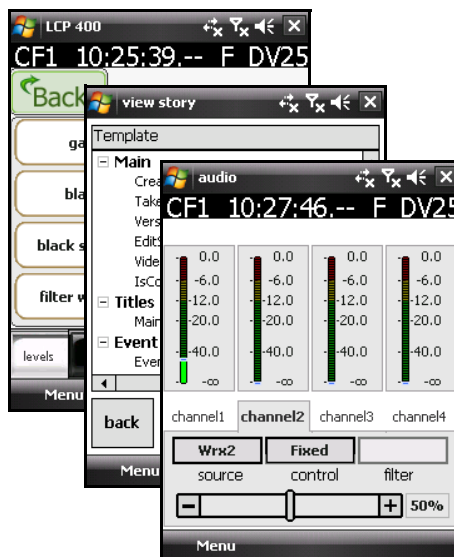


User's Guide

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LCP 400

Infinity Wireless Local Control Panel Application



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Chapter 1

Introduction

1.1 Application

The LCP 400 is a control application for Electronic News Gathering (ENG) and Electronic Field Production (EFP) workflows. It runs on a mobile device such as a PDA or TouchPhone using Windows Mobile. The LCP 400 application supports the Infinity™ Series Digital Media Camcorder.

When installed on a mobile device, the LCP 400 application allows you to adjust camera settings and access menus. It also provides facilities for handling production metadata.

1.2 Wireless camera control

Using the wireless Bluetooth connection of the mobile device, the LCP 400 application communicates with the Infinity camcorder equipped with a USB Bluetooth adapter. The application is paired with a specific camera to give you complete control over its settings.

The LCP 400 application provides access to all camera menus and lets you adjust settings while shooting. It displays audio levels visually and, thanks to its low latency, lets you make critical adjustments to audio and video parameters.

The application also makes it easy to enter and read metadata associated with your video clips before, during and after the shoot. You can prepare metadata on a PDA or TouchPhone with the camera switched off; as soon as the camera is switched on, the devices synchronize automatically.

1.3 Metadata support

The role of standard IT technologies has already significantly increased productivity in ENG and EFP, particularly in the adoption of file-based workflows that provide earlier and more in-depth access to content throughout the production chain.

Within these workflows, the ability to create, add, and distribute metadata is a significant time saver. Whether from a newsroom computer system, an assignment desk, or an editing room, the ability to tag assets electronically ensures that the members of the production team have all the information they need.

The LCP 400 application is a logical extension of the metadata workflow. Instead of using a laptop or USB memory stick to relay a shot list from a newsroom to a camera operator, or to bring back camera metadata from the field, you can carry the information with you in a handheld device as well as update and share it wirelessly.

1.4 ENG workflow support

For ENG workflows, you can synchronize the LCP 400 application with a newsroom computer system and update it via a mobile connection, including GPRS and UMTS.

The implications of this integration are significant. An assignment editor can hand out stories in advance. A field crew can pick up assignments remotely via e-mail, then drag and drop them into the LCP 400 application. They can then capture interview details and shot lists in the application, wrapped as metadata, and transmit the information to a newsroom so editors and directors have full details concerning the content and start planning on-air time, even before that content arrives.

This streamlined workflow lets journalists and editors use metadata to get straight to the key content they need to prepare the story. It also eliminates a stumbling block to a fully integrated newsroom, letting you create a unified production that starts at the moment of assignment and continues through acquisition, editing, and delivery.

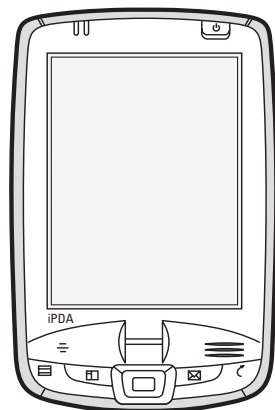
The LCP 400 application works seamlessly with our Aurora™ fast-turn production suite, which fits into workflows that span acquisition, production, and playout. For instance, if the Aurora Ingest™ solution is part of your workflow it can be used to reconcile any metadata changes that may have been made in the field with the LCP 400 application and your newsroom.

Chapter 2

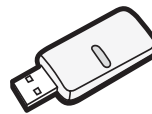
Setup

2.1 Requirements

To use the LCP 400 application with an Infinity camcorder you need the following equipment:



Mobile device



Bluetooth USB adapter

- To install and run the LCP 400 application a mobile device using Windows Mobile 5.0 or higher is required.
- To allow the camcorder to communicate with mobile device, plug the Bluetooth USB adapter into the USB connector at the rear of the handgrip or into the USB (A) connector at the bottom-right side of the Infinity camcorder.

2.2 Installation

Using ActiveSync

Follow these steps to install the LCP 400 application on a mobile device using ActiveSync:

1. Ensure that compatible versions of ActiveSync are installed on your PC and on your mobile device.
2. On your PC, double-click the **LCP400_install.exe** file.
3. The application manager opens and guides you through the installation process.

The LCP 400 application is installed and a shortcut is added to the Windows Start menu on the mobile device.

Manual installation

Follow these steps to manually install the LCP 400 application on a mobile device:

1. Connect the mobile device to your PC.
2. Copy the files **LCP400.cab** to the mobile device.
3. Double tap the **LCP400.cab** file on the mobile device.

The LCP 400 application is installed and a shortcut is added to the Windows Start menu on the mobile device.

2.3 Licensing

A license must be installed on the camcorder to allow it to communicate with the LCP 400 application via a Bluetooth connection. Contact your Grass Valley representative to obtain a license key.

The license key is provided in the form of a **license.xml** file. This file must be loaded into the camcorder using a USB-stick. Copy the license file to the root of the USB-stick. Follow the standard update procedure as outlined in the User's Guide of the camcorder to install the license.

2.4 Setting up a connection

The following examples are typical connection setup procedures. Depending on the mobile device and the version of the operation system, your situation may be different. Refer to the documentation of your mobile device or operating system for more details.

2.4.1 Typical setup procedure for a PDA

Pairing with the Bluetooth USB adapter

1. Tap the wireless icon.
2. Enable Bluetooth connections by tapping the Bluetooth button.
3. Tap **Manager**.
4. Go to **Menu > Paired Devices**.
5. Select **Add**.
6. Tap on the search icon. After a few seconds all available Bluetooth devices are shown.
7. Select **DMC 1000**.
8. Enter "BlueZ" as the passkey and tap **Next**. The paired devices list appears.
9. Tap **OK**.

Setting up a dial-up connection

1. Open the **Manager** - the shortcut screen opens.
2. Tap **New**.
3. Select **Explore a Bluetooth device**.
4. Tap the **DMC 1000** icon. The Connection Wizard retrieves services (this may take a few seconds).
5. Select **Dial-Up Networking**, tap **Next** and then **Finish**. A shortcut icon for the connection is created.
6. Double tap the shortcut icon.
7. From the list, select **New Connection**.
8. Fill in the following parameters:
 - Connection name: **Infinity DMC**;
 - Phone number: **1**;
 - All other field must be left blank.
9. Select **OK**.
10. The dial-up connection is established and the network log on screen appears.
11. Fill in the following parameters:
 - Save password: **checked**;
 - All other field must be left blank.
12. Tap **OK** - the device dials in and a network connection is established.

Setting up the application

1. Start the LCP 400 application.
2. Go to the **PDA Options** menu.
3. Select the **Infinity DMC** connection.

2.4.2 Typical setup procedure for a TouchPhone

Setting up a dial-up connection

1. Go to **Start > Settings** and select the **Connections** tab.
2. Select **Connections**.
3. Select **Add a new modem connection** under **My ISP**.
4. Enter a name (e.g. **Infinity DMC**) for the connection.
5. From the drop down list select **Bluetooth** as the modem.
6. Tap **Next**.
7. Tap **New Partnership** and select **Infinity DMC** and tap **Next**.
8. Enter "BlueZ" as the passkey and tap **Next**.
9. Select **Dialup Networking** and tap **Finish**.
10. Select **Infinity DMC** and tap **Next**.
11. Enter the number to be dialed: 1
12. Tap **Next**.
13. Leave all fields blank and tap **Finish**.

Setting up the application

1. Start the LCP 400 application.
2. Go to **Menu > PDA Options** and select the new connection.
3. Go to **Menu > Quit** and restart the application.



Note

If GPRS is active, tap its icon to disconnect it.

4. Go to **Start > Settings > Connections** and tap the **Connections** icon.
5. Select **Manage Existing Connections** under **My ISP**.
6. Select your profile and tap **Connect**.
7. Restart the LCP 400 application.

Chapter 3

Operation

3.1 Main menu

When you start the LCP 400 application the following screen is shown:



All functions are grouped into menus and these are accessed through the pop-up window Menu. The LCP 400 main menu supports several different functions:

- Metadata (for managing metadata functions)
- Operate (remote operational controls)
- Paint (remote paint controls)
- Audio (remote audio controls)
- Setup Cam (remote Infinity touch screen menu)
- PDA options (PDA communication setup)
- Cam. Config (to view the camera configuration files)
- About (shows version information)
- Quit (quit the LCP 400 application)

Note

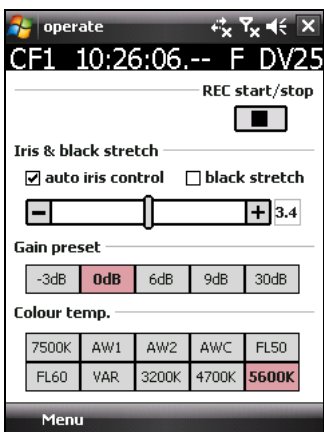
Some functions are greyed out if the connection is lost. The Infinity status bar is grey in this case. When there is a connection, the bar is black (default) or red (when the camera is recording)

3.2 Metadata menu

This menu is described in the chapter “Metadata” on page 17.

3.3 Operate menu

The operate menu provides some important operational controls of the Infinity camcorder. It replaces physical controls on the camera with virtual controls that can be operated remotely.

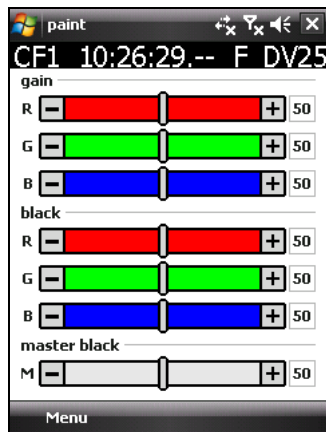


Control	Function
REC start/stop	<ul style="list-style-type: none"> Use the REC START/STOP button to start recording on the camcorder. Tap the button again to stop recording. The Infinity status bar becomes red when the camera is recording.
Auto iris control	<ul style="list-style-type: none"> Select to activate the auto iris control or unselect to control the iris manually. Use the slider to control the iris.

Control	Function
Iris value slider	<ul style="list-style-type: none"> The position of the slider control represents the value. Left is closed iris, right is open iris. Right to the slider the current iris value (F - number) is shown. When the area left or right of the slider control is clicked the slider moves to the indicated direction in large steps. The slider control can be grabbed and moved to a desired position. After release the value is set immediately. The [+] and [-] buttons adjust the value with small steps.
Black stretch	<ul style="list-style-type: none"> Turns the black stretch function on or off.
Gain preset	<ul style="list-style-type: none"> Selects the gain preset. The presets are defined in the camcorder touch screen menu.
Colour temp.	<ul style="list-style-type: none"> Selects the color temperature.

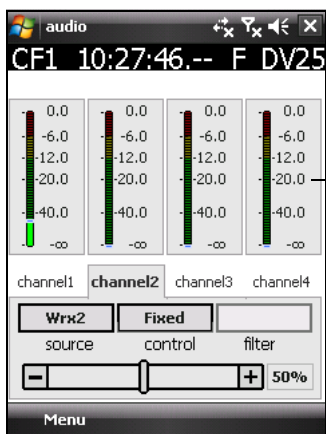
3.4 Paint menu

The paint menu shows groups of RGB sliders that control the paint or other video settings.



3.5 Audio menu

The audio menu provides a compact overview of the audio controls and indicators of the camcorder. The upper part of the screen shows the levels for audio channels 1 to 4.



Audio headroom can be - 18 dB or -20 dB depending on the camcorder headroom setting.

- Tap one of the four channel tabs to open the detailed settings for that channel on the lower part of the screen. The following settings are available:
 - **source:** select the recording source for the selected channel (pop-up box);
 - **control:** select the control to use for recording level (pop-up box);
 - **filter:** select an input source filter (pop-up box);
 - **fixed level control bar:** move the control to set the fixed recording level.

3.6 Setup Cam menu

This menu allows remote control of the camcorder using the same interface as the touch screen menu. (Because of bandwidth limitations, the **clips** section is not available in the LCP 400 application.)

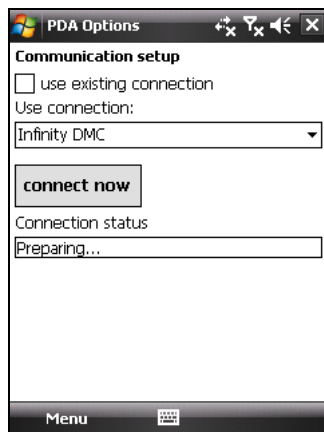
For an explanation of all the menu items refer to the user’s guide of the Infinity.



3.7 PDA Options menu

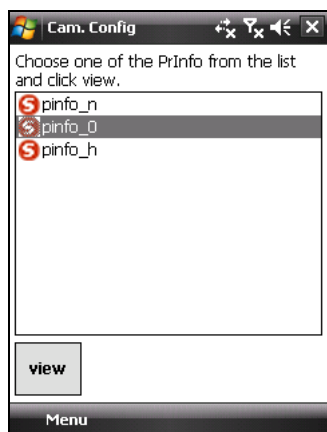
This menu contains the Bluetooth communication settings.

- If the option **use existing connection** is checked, the application uses the existing connection.
 - Make sure you already set up a connection in the operating system.
- If the option **use existing connection** is not checked, the drop down list with communication profiles is active. Select the profile you want to use.
 - Tap the **connect now** button to connect to the camcorder using the selected connection.

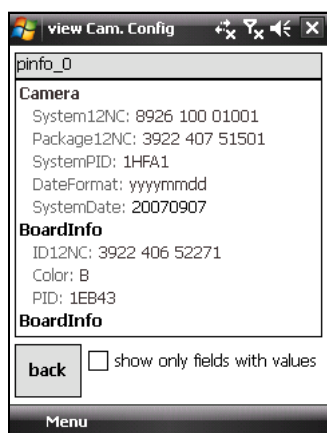


3.8 Camera configuration menu

The camera configuration menu shows the **pinfo** files of the camcorder. These files contain system version data in XML-format. The **pinfo** files are only updated after synchronization with the camera. A red icon indicates an unsynchronized file, yellow indicates that the file is being synchronized and a green icon indicates a synchronized, updated file. This process may take a few seconds for all files to be updated.



1. To view a **pinfo** file select a file and tap the **view** button. The contents of the file are shown:



2. To improve readability you can check the **show only field with values** option.
3. Tap the **back** button to close the view window.

Chapter 4

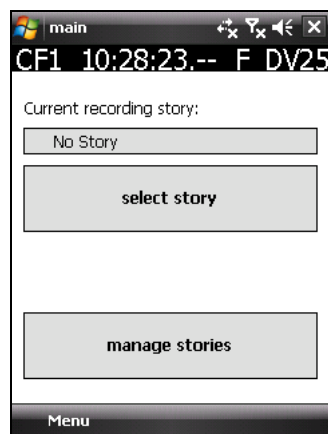
Metadata

4.1 Introduction

The LCP 400 application enables metadata, in the form of story files, to be edited and loaded into the camera and selected for use.

When the mobile device connects to a camera:

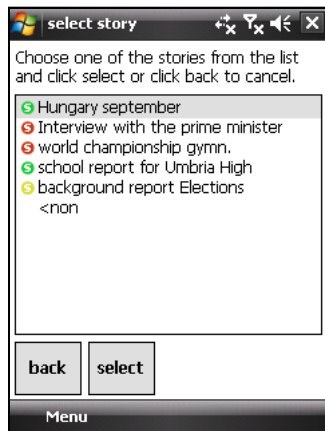
- all stories loaded in the LCP 400 application are sent to the camcorder,
- all stories loaded in the camcorder are sent to the LCP 400 application,
- the name of the current recording story in the camcorder is displayed,
- the select story button allows the current recording story to be changed.



4.2 Selecting stories

Tap the `SELECT STORY` button to open the recording story window. This button is dimmed if the camera is switched off or disconnected from the application. It shows a list of all available stories. The recording story window shows the list of available stories including the

synchronization status of each story file.



The option <no story> is shown at the bottom of the list. When this option is selected, no story metadata will be recorded.

File transfer and synchronization

The file transfer functionality will be done by automatic synchronization between the PDA and the Infinity camcorder. The transfer status of each story file is indicated by an icon in front of the story name

States when the camera is connected:

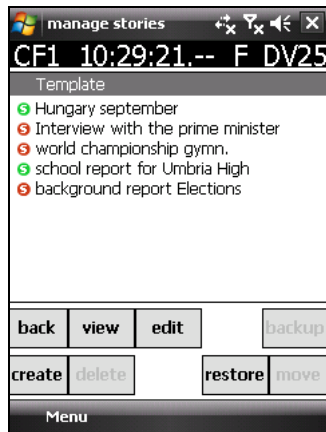
- Synchronized: a GREEN icon is shown in front of the story name;
- Synchronizing: a YELLOW icon is shown in front of the story name;
- Not synchronized: a RED icon is shown in front of the story name. When a story is changed on the mobile device, its icon is RED until it is synchronized again. This may take a few seconds.

States when the camera is not connected:

- Was synchronized: a GREEN icon is shown in front of the story name;
- Was not synchronized: a RED icon is shown in front of the story name.

4.3 Managing stories

The button **MANAGE STORIES** opens the story management window. In the story management window a list of available stories is shown. Select a story by tapping its name in the list.



The following operations can be carried out:

Button	Function
BACK	Return to the main metadata window.
VIEW	View the selected story.
EDIT	Edit the selected story.
CREATE	Create a new story based on a template.
DELETE	Delete the selected story.
BACKUP	Make a backup of the selected story to a archive.
RESTORE	Restore a story from the archive to the story list
MOVE	Move a story to the backup archive.



Note

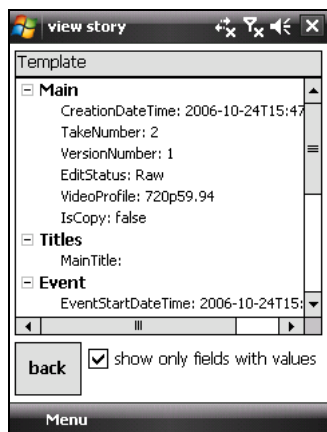
If you do not want a story to be loaded into the camcorder, move it to the archive.

The **Template** story is used to create new story files. It only resides on the mobile device so it doesn't have synchronization status. This story file can only be viewed or edited.

4.3.1 View story

In the view story window the selected story file is shown. All groups are expanded by default. Use the scroll bar to see more items. Tap the **BACK** button to close the window.

- Uncheck the **show only field with values** option to see all fields.

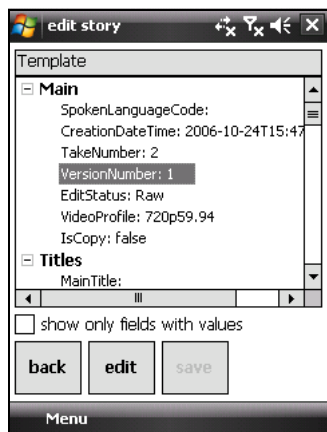


Note

Only fields that are defined in the LCP 400 template are shown for story files from other sources.

4.3.2 Edit story

In the edit story window the selected story file is shown. The first group of items is expanded. Tap the minus sign to expand or a group.



Note

Check the **show only fields with values** option to hide empty fields.

Edit a value

Select a field from the list and tap **EDIT** to change its value. The following pop-up dialog is shown:

Enter a value using the pop-up keyboard. Tap **OK** to apply the changes to the file and close the window or **CANCEL** to discard your entry and close the window.

- You can scroll through all fields in the story using the **PREVIOUS** and **NEXT** buttons.

Tap the **SAVE** button to write the changes to the file.

4.3.3 Create a new story

With the help of this window an operator can create a new story file. The new story is created using either an empty story or the template that can be edited. These two story files are stored internally by the application.

The name of the new story must be typed in into the edit box using a standard Windows method (using the virtual popup keyboard from the menu bar).

4.3.4 Delete a story

Tap the **DELETE** button to delete the selected story.

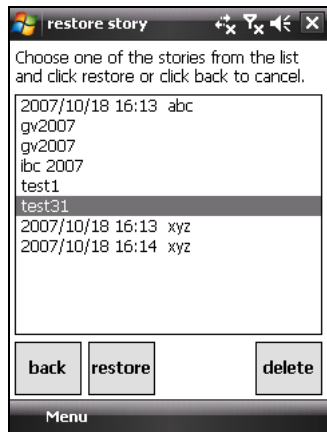
4.3.5 Backup a story

A backup of the currently selected story is made and stored in the backup storage area. If a story with the same name already exists, the file is overwritten. A message is shown when the backup is completed.

The current date and time are added to the filename to allow different versions of the story in the backup area.

4.3.6 Restore a story

A story can be restored by selecting a story from the Backup Storage and pressing **RESTORE STORY**. A process popup window is shown ("Story is restored. Press OK"). After confirmation the manage stories window appears.



A story can be deleted from the backup storage area by selecting its name and pressing **DELETE**. A confirmation is shown ("Are you sure to delete story?") and after confirmation the story is deleted.

4.3.7 Move a story

This is a similar function to the backup function but the file is copied to the storage and the original story file is deleted from the working space. A confirmation popup window is shown.