



**METROLOGIC INSTRUMENTS, INC.**  
**Quick Start Guide**

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# Introduction

Thank you for purchasing the Optimus Portable Data Terminal from Metrologic. This guide lists the contents of the software CD that ships with each unit (this software is meant to run on Windows 98/ME, 2000, and XP machines only). It is also meant to serve as a reference for quickly setting up sample programs to run on the Optimus. For additional information, please consult the manuals included on the CD.

## CD Contents

The software CD should run automatically when inserted into the CD drive. If it does not, please click on your “My Computer” icon, click on your CD drive, and click on the “setup.exe” file. After the install is completed, a folder called “Optimus Software” will be setup in your “Programs” list containing links to the following:

Shortcut Name	Description
Optimizer	Links to Optimizer.exe, a graphical programming tool used for rapid development of applications for your Optimus.
Program Loader	Links to Prog_Load.exe, a tool for downloading system files, BASIC runtime files, BASIC programs, and ‘C’ programs to your Optimus.
DataOptimizer	Links to DataOptimizer.exe, a program used for real-time communication with the Optimus (only applies to certain models of the Optimus). This program can be used to quickly get setup for real-time communication and update to an existing database. A sample is included on the CD to illustrate the usage of this program (see <i>Sample Programs</i> section of this guide).
Readme	This file.

The following files are also included on your CD and are installed by default to “C:\Program Files\Metrologic Instruments\Optimus” in several different subfolders:

File Name	Description
Data_Read.exe	This program enables the user to upload collected data from the Optimus and save it to a file. It supports direct connect, IR, and Bluetooth communication.
Dlookup.exe	This program enables the user to download a lookup file to the Optimus if their Optimizer file has been setup to accept lookup files. It supports direct connect, IR, and Bluetooth communication.
OP_Load.exe	This program enables the user to download an Optimizer program to the Optimus. It supports direct connect, IR, and Bluetooth communication.
WLAN_Read.exe	This program performs the same functionality as Data_Read, but for units that communicate via WiFi (802.11b) or BNEP (Bluetooth) protocols.
Font_OP_JP12.shx	This is the file that can be loaded to the Optimus, via the Program Loader, to display 12pt Japanese fonts.
Font_OP_JP.shx	This is the file that can be loaded to the Optimus, via the Program Loader, to display 16pt Japanese fonts.
Font_OP_KR.shx	This is the file that can be loaded to the Optimus, via the Program Loader, to display Korean fonts.
Font_OP_Multi_Language.shx	This is the file that can be loaded to the Optimus, via the Program Loader, to display a number of different standard fonts. This file supports fonts for Cyrillic, English, French, German, Greek, Hebrew, Italian, Latin, Nordic, Portuguese, Spanish, and Turkish.
Font_OP_SC12.shx	This is the file that can be loaded to the Optimus, via the Program Loader, to display 12pt Simplified Chinese fonts.
Font_OP_SC.shx	This is the file that can be loaded to the Optimus, via the Program Loader, to display 16pt Simplified Chinese fonts.
Font_OP_TC12.shx	This is the file that can be loaded to the Optimus, via the Program Loader, to display 12pt Traditional Chinese fonts.
Font_OP_TC.shx	This is the file that can be loaded to the Optimus, via the Program Loader, to display 16pt Traditional Chinese fonts.

File Name	Description
SP5500 User's Guide.pdf	This is the manual for the OptimusS and the OptimusSBT. This manual requires Adobe Acrobat Reader ( <a href="http://www.adobe.com">www.adobe.com</a> ) to view.
Optimizer User's Guide.pdf	This is the manual for the Optimizer software development program. This manual requires Adobe Acrobat Reader ( <a href="http://www.adobe.com">www.adobe.com</a> ) to view.
Knl_ops.shx	This is the kernel file for the OptimusS and OptimusSBT. This file can be loaded to the Optimus via the Program Loader. <b>Kernels should not be loaded to a unit unless you are instructed to do so by a Metrologic Representative.</b>
Knl_opr.shx	This is the kernel file for the OptimusR and OptimusRW. This file can be loaded to the Optimus via the Program Loader. <b>Kernels should not be loaded to a unit unless you are instructed to do so by a Metrologic Representative.</b>
OptR-XXXX.shx	This is the system file for the OptimusR. The XXXX represents the version number of the system file. This file can be loaded to the Optimus via the Program Loader. This file can be loaded to an OptimusRW to make that unit function as a batch unit. <b>System Files should not be loaded to a unit unless you are instructed to do so by a Metrologic Representative.</b>
OptRW-XXXX.shx	This is the system file for the OptimusRW. The XXXX represents the version number of the system file. This file can be loaded to the Optimus via the Program Loader. <b>System Files should not be loaded to a unit unless you are instructed to do so by a Metrologic Representative.</b>
OptS-XXXX.shx	This is the system file for the OptimusS. The XXXX represents the version number of the system file. This file can be loaded to the Optimus via the Program Loader. This file can be loaded to an OptimusSBT to make that unit function as a batch unit. <b>System Files should not be loaded to a unit unless you are instructed to do so by a Metrologic Representative.</b>
OptSBT-XXXX.shx	This is the system file for the OptimusSBT. The XXXX represents the version number of the system file. This file can be loaded to the Optimus via the Program Loader. <b>System Files should not be loaded to a unit unless you are instructed to do so by a Metrologic Representative.</b>
Bar Codes for Batch with Lookup Example.pdf	Refer to the "Sample Applications" section of this document.
Lookup for Extended Example.txt	
OptimusR Default Example.opt	
OptimusR Batch with Lookup Example.opt	
OptimusS Default Example.opt	
OptimusS Batch with Lookup Example.opt	
Buzzer.bas	This is an example, written in BASIC, which illustrates how to activate the buzzer (beeper). This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Cursor.bas	This is an example, written in BASIC, which illustrates how to activate the cursor. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
File_DAT.bas	This is an example, written in BASIC, which illustrates how to read/write data to files. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
File_EX.bas	This is an example, written in BASIC, which illustrates how to read/write data to files. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.

File Name	Description
Image.bas	This is an example, written in BASIC, which illustrates how to display a graphic on the screen of the Optimus. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Inventory OptimusR.bas	This is an advanced example, written in BASIC, of an inventory program for the OptimusR. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Inventory OptimusS.bas	This is an advanced example, written in BASIC, of an inventory program for the OptimusS. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
LCD.bas	This is an example, written in BASIC, which illustrates how to display text on the screen of the Optimus. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
LED.bas	This is an example, written in BASIC, which illustrates how to control the LED's. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Reader.bas	This is an example, written in BASIC, which illustrates how to control the bar code reader. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Time.bas	This is an example, written in BASIC, which illustrates how to set and control the date and time of the Optimus. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
WiFi.bas	This is an example, written in BASIC, which illustrates how to communicate via WiFi. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Backlite.c	This is an example, written in C, which illustrates how to control the LCD backlight. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Battery.c	This is an example, written in C, which illustrates how to check the battery power of the Optimus. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Bluetooth.c	This is an example, written in C, which illustrates how to communicate via Bluetooth. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Buzzer.c	This is an example, written in C, which illustrates how to activate the buzzer (beeper). This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Comm232.c	This is an example, written in C, which illustrates how to communicate via RS232. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Contrast.c	This is an example, written in C, which illustrates how to control the contrast of the LCD screen. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Cursor.c	This is an example, written in C, which illustrates how to activate the cursor. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.

File Name	Description
FileDAT.c	This is an example, written in C, which illustrates how to read/write data to files. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
FileDBF.c	This is an example, written in C, which illustrates how to read/write data to files. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Image.c	This is an example, written in C, which illustrates how to display a graphic on the screen of the Optimus. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Keypad.c	This is an example, written in C, which illustrates how to intercept keypad data and process it. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
LED.c	This is an example, written in C, which illustrates how to control the LED's. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Memory.c	This is an example, written in C, which illustrates how to manipulate data in SRAM and flash. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
OptimusR Stock Control Example.c	This is an advanced example, written in C, of a stock control program for the OptimusR. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
OptimusR Stock Control Header.h	This is the header file for the OptimusR Stock Control Example.
OptimusS Stock Control Example.c	This is an advanced example, written in C, of a stock control program for the OptimusS. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
OptimusS Stock Control Header.h	This is the header file for the OptimusS Stock Control Example.
Reader.c	This is an example, written in C, which illustrates how to control the bar code reader. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
RealTime.c	This is an example, written in C, of a real-time operating system for the Optimus. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Screen.c	This is an example, written in C, which illustrates how to display text on the screen of the Optimus. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Time.c	This is an example, written in C, which illustrates how to set and control the date and time of the Optimus. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
Wifi.c	This is an example, written in C, which illustrates how to communicate via WiFi. This program requires a special compiler to be loaded onto the Optimus units. For information on this compiler, please contact your local support representative.
EmulationOptimizer-5250.exe	This program enables the user to configure their Optimus for IBM 5250 terminal emulation. This allows the Optimus to be used with legacy network systems.

File Name	Description
EmulationOptimizer-VT.exe	This program enables the user to configure their Optimus for VT100 and VT220 terminal emulation. This allows the Optimus to be used with legacy network systems.
OPRW-5250.shx	This is the system file for the Optimus <i>RW</i> that enables the 5250 terminal emulation program, created via EmulationOptimizer-5250.exe, to run. This file can be loaded to the Optimus via the Program Loader.
OPRW-VT.shx	This is the system file for the Optimus <i>RW</i> that enables the VT terminal emulation program, created via EmulationOptimizer-VT.exe, to run. This file can be loaded to the Optimus via the Program Loader.
OPSBT-5250.shx	This is the system file for the Optimus <i>SBT</i> that enables the 5250 terminal emulation program, created via EmulationOptimizer-5250.exe, to run. This file can be loaded to the Optimus via the Program Loader.
OPSBT-VT.shx	This is the system file for the Optimus <i>SBT</i> that enables the VT terminal emulation program, created via EmulationOptimizer-VT.exe, to run. This file can be loaded to the Optimus via the Program Loader.
English.lng	This is the language file the Optimizer uses for displaying prompts. This file can be translated to make the Optimizer display different languages.
USB Driver Installation Guide.pdf	This is the installation guide for the driver that supports the use of the RS232 to USB converter for the cradle that ships with each USB kit.
PreInstaller.exe	This program enables users to install the USB driver. Please refer to the USB Driver Installation Guide.
308.exe	These are the support files for the USB Driver.
308.u2k	
308.u98	
308bus.inf	
308me.exe	
308w2k.inf	
308wdm.inf	
3082k.exe	
Setup.ini	
Slabbus.sys	
Slabcm95.sys	
Slabcmnt.sys	
Slabcomm.vxd	
Slabcr.sys	
Slabser.sys	
Slabvcd.vxd	
Slabvcr.vxd	
Slabvxd.inf	
Slabwh95.sys	
Slabwhnt.sys	

## Sample Applications

There are several sample applications included with the installation CD to illustrate some of the basic and extended functionality that the Optimus units contain. There are several examples of batch applications, where the data is stored on the unit and then transmitted back to the host. All samples are included in the "Sample Optimizer Applications" folder installed by default at "C:\Program Files\Metrologic Instruments\Optimus".

## Default Batch Example

This program illustrates how to collect bar code data and assign a quantity to it, which is useful for creating an inventory file. This is the sample program that ships by default on the Optimus batch units. Below are the steps to open the program, load it to the Optimus, collect data, and upload the data back to the host system.

1. Click on the “Start” menu on the bottom left of your screen.
2. Click on “Programs”, then “Optimus Software”, and finally “Optimizer”. The Optimizer program should open up (see **Figure 1**).

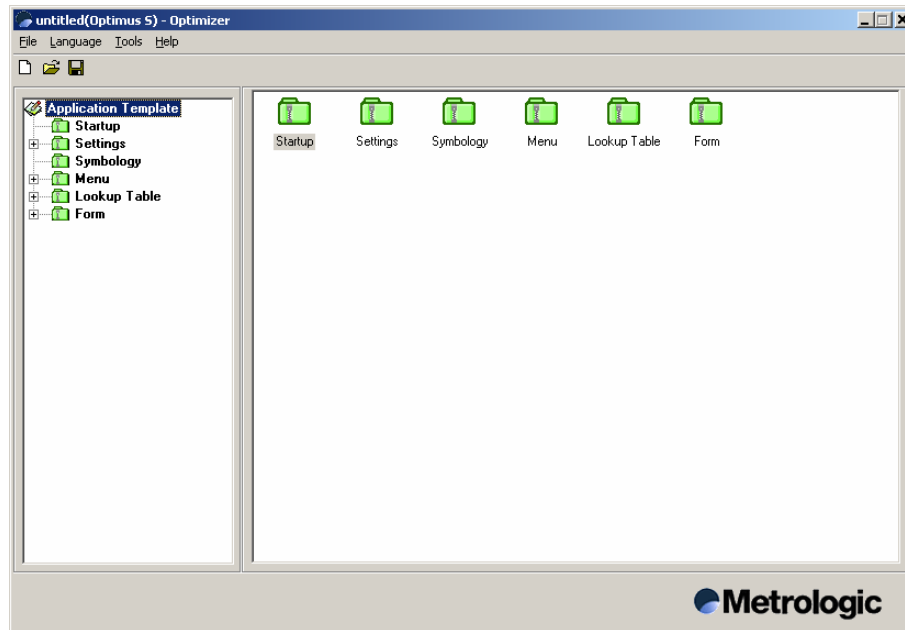


Figure 1: Optimizer at Startup

3. Click on the “File” menu and then “Open”.
4. Browse to the “Sample Optimizer Applications” folder (by default located in “C:\Program Files\Metrologic Instruments\Optimus”).
5. Click on the “Batch Examples” folder and open either “OptimusS Default Example.opt” or “OptimusR Default Example.opt” depending on your terminal type.
6. On your Optimus unit, press “ESC” until you are at the main menu. Choose the “Utilities” option, then the “Transfer Files” option, and finally the “Get Program” option. Confirm the unit’s baud rate and method of communication. Place the unit in its cradle, or if the unit has the ability for direct connection, connect the communication cable to the unit.
7. From the Optimizer program, choose the “Tools” menu item, then “Communication”, and finally “Download Program”. The Optimizer window will minimize and the download window will open (see **Figure 2**).



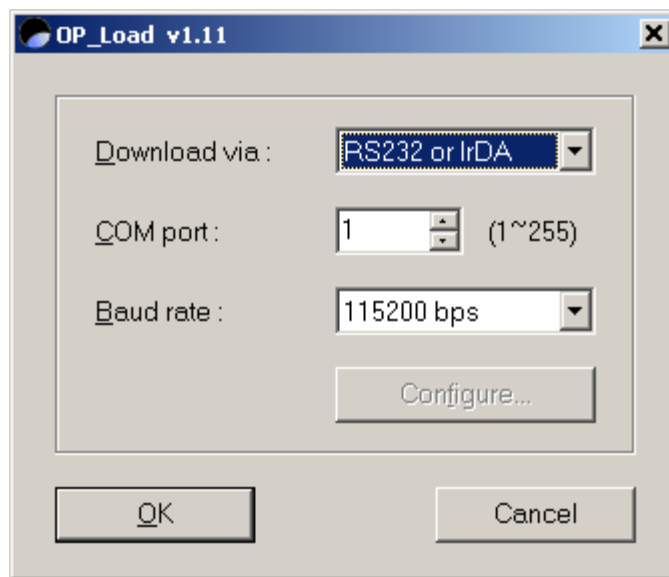


Figure 2: Download Window

8. Choose the correct option for your download type:
  - a. If you are going through a cradle, you should download via "Cradle-IR".
  - b. If you are directly connected, you should download via "RS232 or IrDA".
9. Make sure the COM port number matches the port number into which your cradle or unit is plugged.
10. Make sure the Baud rate matches the baud rate of the unit. Press OK and downloading will commence.
11. After download is complete, choose the "Run Program" option on your Optimus. A screen will come up with "Item:" and "Qty:" displayed. You can now begin collecting data.
12. Scan a bar code for the "Item" field and enter a quantity to associate with this bar code.
13. After you are finished, press "ESC" on the Optimus until you get to the main menu. Choose the "Utilities" option, then "Transfer Files", and finally "Send Data". Confirm the unit's baud rate and method of communication. Place the unit in its cradle, or if the unit has the ability for direct connection, connect the communication cable to the unit.
14. From the Optimizer program, choose the "Tools" menu item, then "Communication", and finally "Receive Data". The upload window will open (see **Figure 3**).

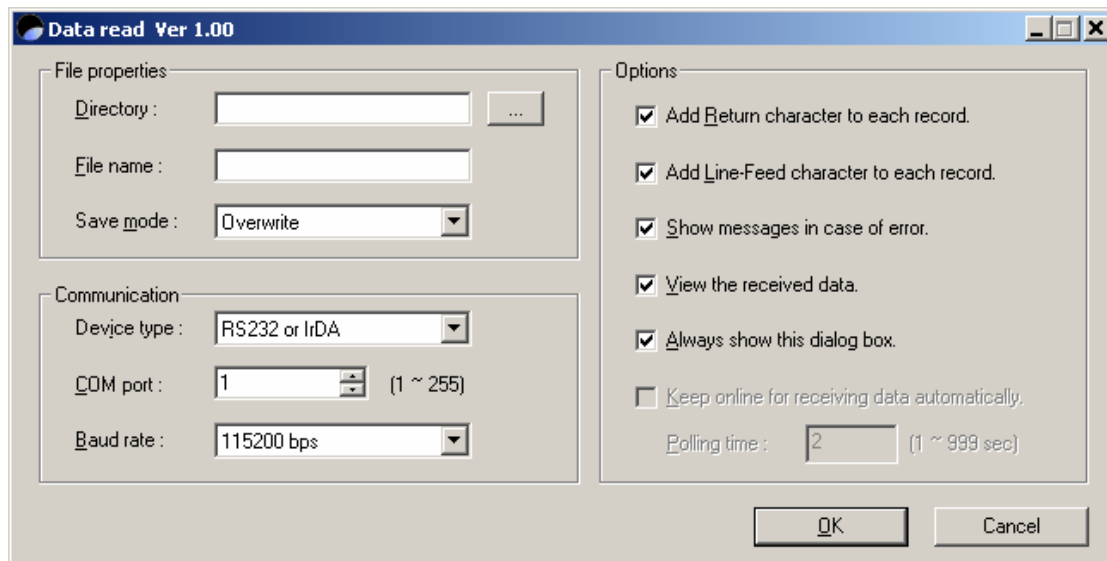


Figure 3: Upload Window

15. Select a directory and a file name to save your data into.
16. Choose the correct option for your download type:
  - a. If you are going through a cradle, you should download via "Cradle-IR".
  - b. If you are directly connected, you should download via "RS232 or IrDA".
17. Make sure the COM port number matches the port number into which your cradle or unit is plugged.
18. Make sure the Baud rate matches the baud rate of the unit. Press OK and uploading will commence.

19. After upload is complete, you will be asked if you would like to view your data. Select “Yes” and a text file will appear with the data you have collected in the following format: bar code, quantity.

### Batch with Lookup Example

This program expands upon the functionality of the default batch example and illustrates how a lookup file can be used to return specific information about data entered, like description of the item and existing quantity in stock. This is useful for updating inventory files. Below are the steps to open the program, load it to the Optimus, load a lookup file to the Optimus, collect data and update the lookup file, and upload the data back to the host system.

1. Click on the “Start” menu on the bottom left of your screen.
2. Click on “Programs”, then “Optimus Software”, and finally “Optimizer”. The Optimizer program should open up (see **Figure 1**).
3. Click on the “File” menu and then “Open”.
4. Browse to the “Sample Optimizer Applications” folder (by default located in “C:\Program Files\Metrologic Instruments\Optimus”).
5. Click on the “Batch Examples” folder and open either “OptimusS Batch with Lookup Example.opt” or “OptimusR Batch with Lookup Example.opt” depending on your terminal type.
6. On your Optimus unit, press “ESC” until you are at the main menu. Choose the “Utilities” option, then the “Transfer Files” option, and finally the “Get Program” option. Confirm the unit’s baud rate and method of communication. Place the unit in its cradle, or if the unit has the ability for direct connection, connect the communication cable to the unit.
7. From the Optimizer program, choose the “Tools” menu item, then “Communication”, and finally “Download Program”. The Optimizer window will minimize and the download window will open (see **Figure 2**).
8. Choose the correct option for your download type:
  - a. If you are going through a cradle, you should download via “Cradle-IR”.
  - b. If you are directly connected, you should download via “RS232 or IrDA”.
9. Make sure the COM port number matches the port number into which your cradle or unit is plugged.
10. Make sure the Baud rate matches the baud rate of the unit. Press OK and downloading will commence.
11. After download is complete, the Optimizer window will come back up on the screen. The lookup file must now be downloaded to the unit. Choose the “Tools” menu item, then “Communication”, and finally “Download Lookup table”. The lookup download window will open (see **Figure 4**).

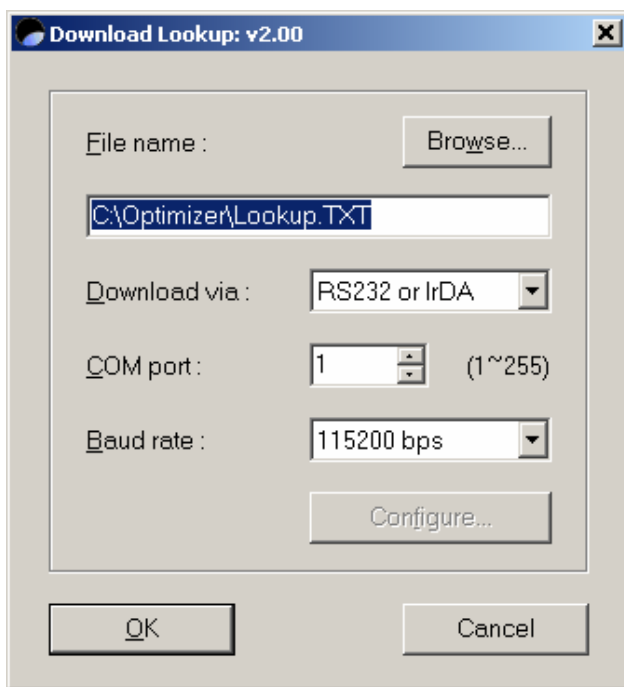


Figure 4: Lookup Download Window

12. Browse to the file “Lookup for Extended Example.txt” located in the same directory as the sample program.
13. Choose the correct option for your download type:
  - a. If you are going through a cradle, you should download via “Cradle-IR”.
  - b. If you are directly connected, you should download via “RS232 or IrDA”.

14. Make sure the COM port number matches the port number into which your cradle or unit is plugged.
15. Make sure the Baud rate matches the baud rate of the unit. Press OK and downloading will commence.
16. After download is complete, choose the "Run Program" option on your Optimus. A screen will come up with "Item:", "Desc:", and "Qty:" displayed. You can now begin collecting data.

*Note: Since this is a lookup example, the bar codes must match the lookup information in order to retrieve details of an item. Therefore, you must print out the "Bar Codes for Batch with Lookup Examples.pdf" file that is included in the same directory as the lookup file and scan the bar codes on this page to achieve proper functionality.*

17. After you are finished, press "ESC" on the Optimus until you get to the main menu. Choose the "Utilities" option, then "Transfer Files", and finally "Send Data". Confirm the unit's baud rate and method of communication. Place the unit in its cradle, or if the unit has the ability for direct connection, connect the communication cable to the unit.
18. From the Optimizer program, choose the "Tools" menu item, then "Communication", and finally "Receive Data". The upload window will open (see **Figure 3**).
19. Select a directory and a file name to save your data into.
20. Choose the correct option for your download type:
  - a. If you are going through a cradle, you should download via "Cradle-IR".
  - b. If you are directly connected, you should download via "RS232 or IrDA".
21. Make sure the COM port number matches the port number into which your cradle or unit is plugged.
22. Make sure the Baud rate matches the baud rate of the unit. Press OK and uploading will commence.
23. After upload is complete, you will be asked if you would like to view your data. Select "Yes" and a text file will appear with the data you have collected in the following format: bar code, description, quantity.