



**FRESENIUS
MEDICAL CARE**

Crit-Line Printer User's Guide

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1 Scope

1.1 Identification

The CLM Printer program provides a means by which data generated by Crit-Line units can be printed and/or saved to a file.

1.2 System Requirements

1. The CLM Printer program is compatible with Microsoft Windows 7.

1.3 Document Review

The purpose of this document is to provide a means by which the user of the CLM Printer program can successfully load and process critline unit patient data.

2 Installation



Note: This installation is for CLM Printer versions 1.6 and later. If the host system has an existing installation of a previous version of the CLM Printer application perform the following steps prior to installation of the updated application:

1. Close the CLM Printer application.
 2. Use the Device Manager to uninstall the application.
-

Note: This may require administrative privileges.

Note: The instruction ‘click’ refers to pressing the left mouse button.

1. Insert CLM Printer installation media into the Host PC.
2. Run the installer program setup.exe, in the root directory of the installation media.
3. Follow the installation wizard instructions.



Figure 2-1 Click “Next”

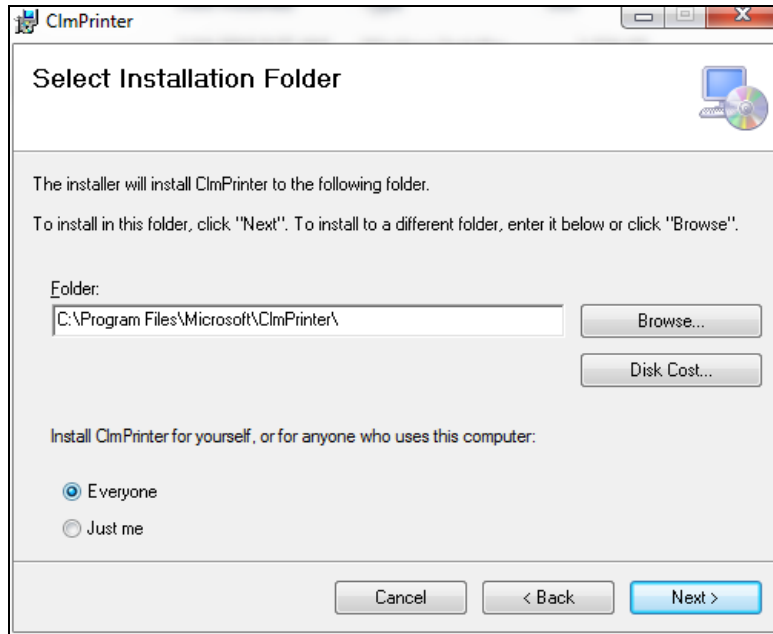


Figure 2-2 Click "Everyone" then click "Next"

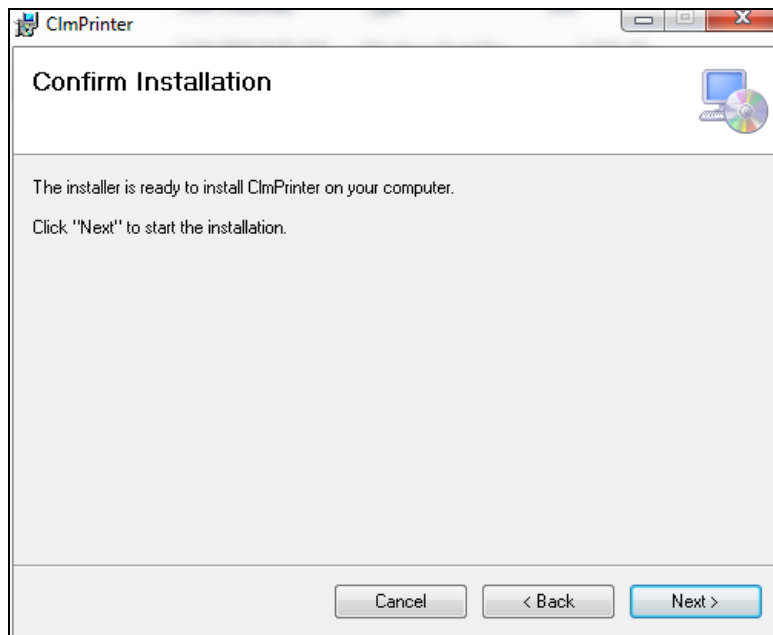


Figure 2-3 Click "Next"

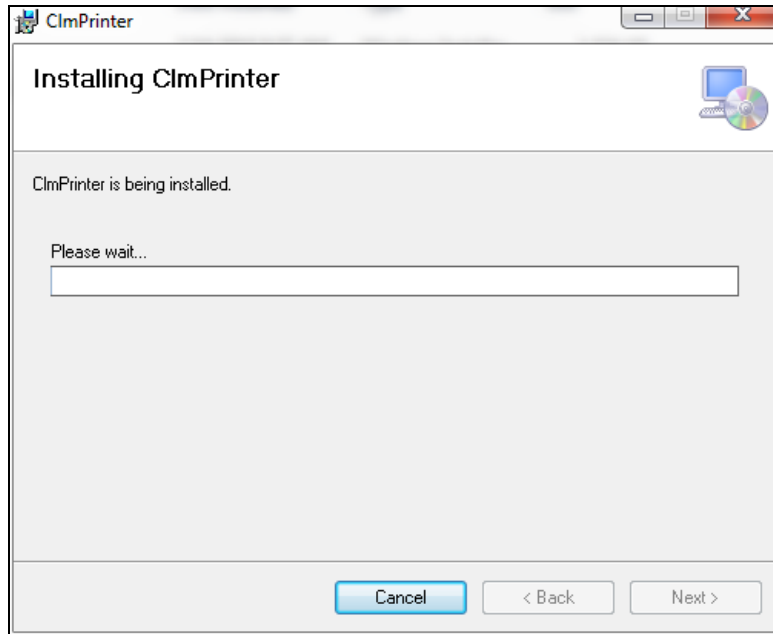


Figure 2-4 Wait for installation to be completed.

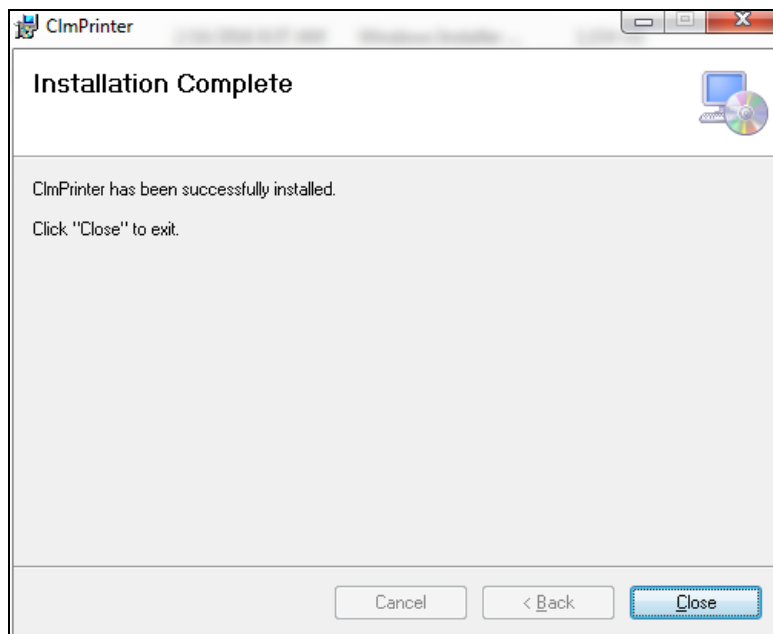


Figure 2-5 Click "Close"

- Restart the system to activate the application. The first time the program runs the following screen will be displayed:

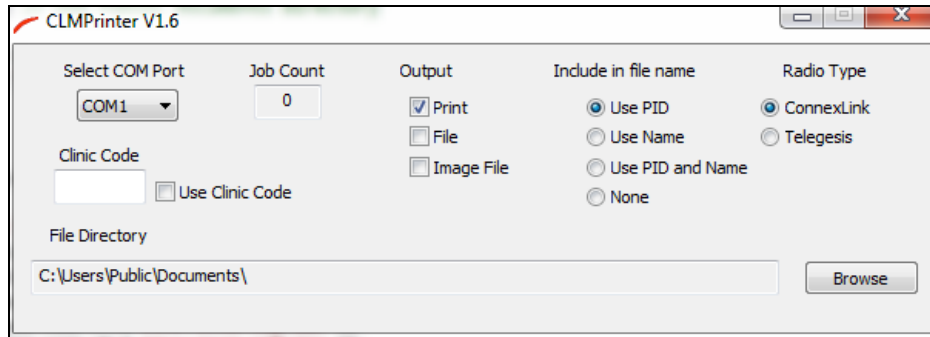


Figure 2-6 CLM Printer Dialog Window

- Proceed to Setup



Note: The installation application has generated a shortcut to the system Startup folder. The CLM Printer application will automatically load following a system start/restart.

3 Setup

The first time the program runs a dialog window appears to allow the user to configure the program.



Note: If the system is using the Telegesis ZigBee radio network:

1. Assure that the Telegesis USB drivers have been installed.
2. Insert a Telegesis USB ZigBee radio into an available USB port on the host PC.
3. Use the Device Manager to identify the COM port assigned to the Telegesis ZigBee radio.

1. If not already active, activate the CLM Printer dialog window (See Figure 2-6) by clicking the CLM Printer minimized button located on the Windows program bar (See Figure 3-1).



Figure 3-1 CLM Printer minimized button.

2. Communications port selection. Click on the COM port list button. This will display a list of available communications ports. Select the communications port that will be used to communicate with the Crit-Line devices (See Figure 3-2).

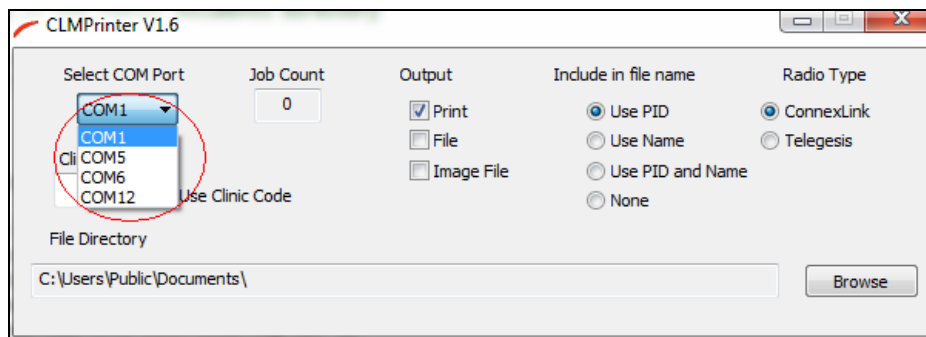


Figure 3-2 Communications port selection

3. Output Selection. The CLM Printer application allows the data from Crit-Line units to be printed on the system default printer and/or stored to files. JPEG (*.jpg) image files of the reports can also be generated by selecting the *Image File* check box (See Appendix B for sample files). To activate/deactivate an output mode click the corresponding check box (See Figure 3-3)

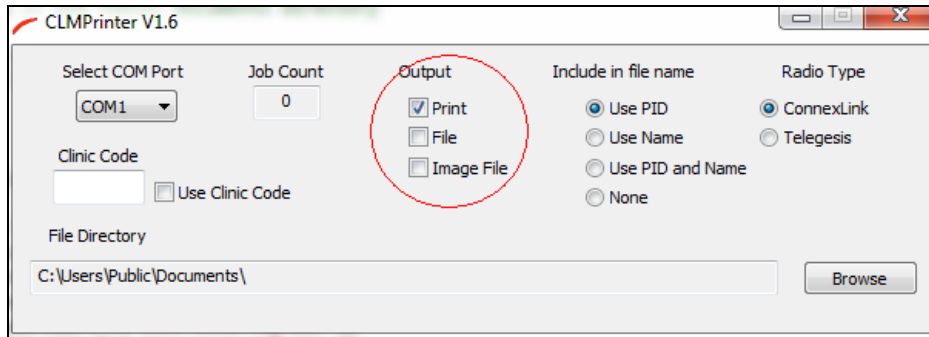


Figure 3-3 Output selection

4. File naming. The CLM Printer application allows the output and image file names to include the Patient ID and or Patient Name. To select the desired file naming convention click the corresponding radio button (See Figure 3-4)

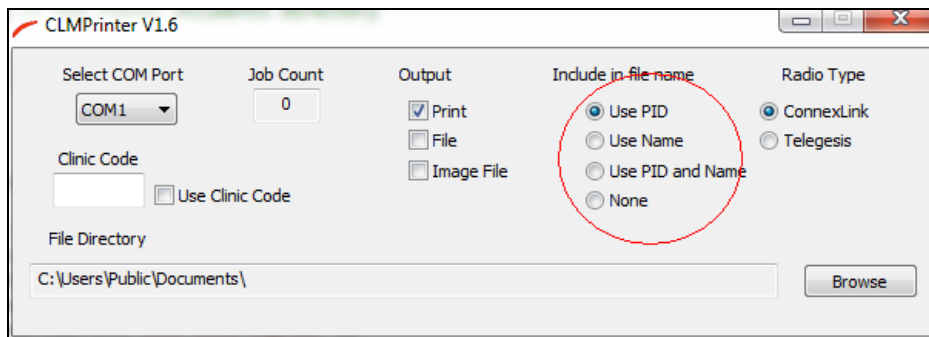


Figure 3-4 File name selection

- Radio Type. The Crit-Line III TQa devices typically communicate using an AeroComm ConnexLink radio network which interfaces with a standard DB9 RS232 port on the host PC and the RJ45 port (using a Crit-Line serial cable) on the Crit-Line III TQA unit. The Crit-Line IV devices have an additional option which uses a Telegesis ZigBee radio network. The ZigBee network interfaces with USB ports on the host PC and Crit-Line IV panel PC. To select the desired radio type select the corresponding radio button (See Figure 3-5)

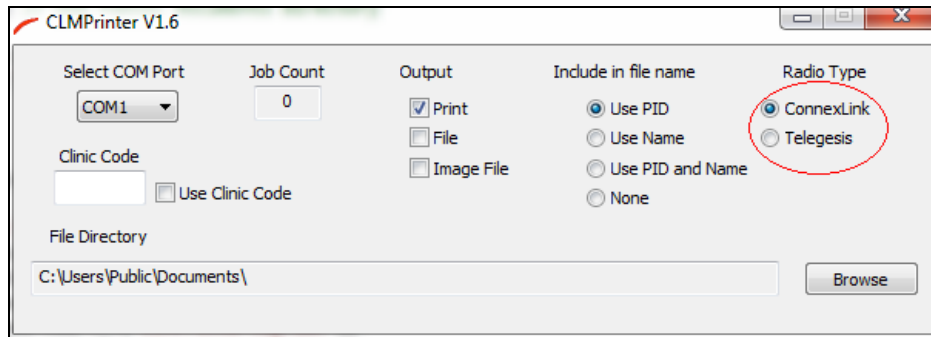


Figure 3-5 Radio type selection

- File directory selection. To select the destination file directory click the Browse button (See Figure 3-6) and follow the directory path to the target directory. Note: The target directory must exist prior to being selected.



Note: The target directory must exist prior to being selected.

The default directory is “C:\Users\Public\Documents\”

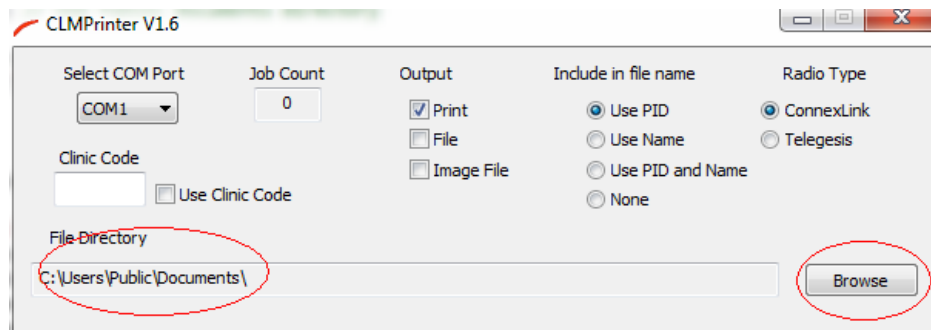


Figure 3-6 File directory selection

7. Clinic Codes. To allow flexibility with multiple installations a clinic code may be assigned to individual clinics. When selected, the clinic codes are included in the output file name. To include the clinic code in output file names:
 - a. Enter the clinic code in the Clinic Code edit box.
 - b. Check the “Use Clinic Code” check box (See Figure 3-7).

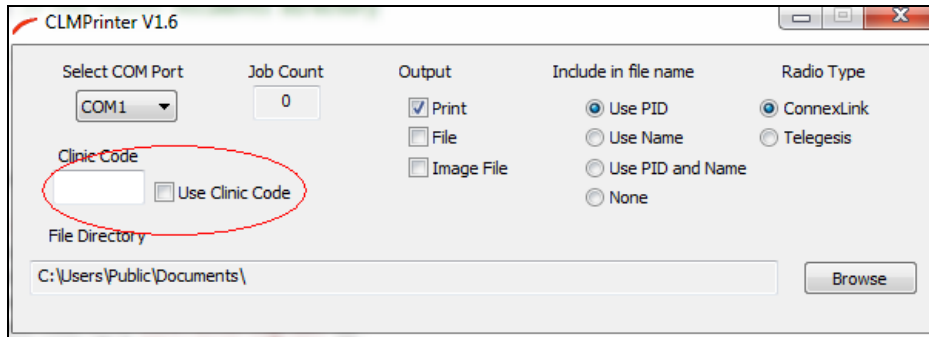


Figure 3-7 Clinic codes

8. Job Count. The Job Count display box maintains a counter indicating how many patient runs have been processed by the CLM Printer application since the last application start.



Note: Following the initial configuration, future application starts will be in minimized mode.

4 Using the CLM Printer Application

The CLM Printer application is designed to run as a background process which normally runs in minimized mode. User intervention should be limited to configuration modifications.

Patient run file names are generated using the following format:

<fdir>CCCC_Hsn_YYYYMMDD_PPPP_NNNN where:

<fdir> = Destination file directory

CCCC = Clinic Code (Optional)

H = 'H'

sn = Station Number

YYYY = Year

MM = Month

DD = Day

PPPP = Patient ID (Optional)

NNNN = Patient Name (Optional)

Example : "C:\DSIData\H27_20070227_1234567.txt" refers to a file :

- Stored in the directory "C:\DSIData"
- Generated by the critline unit station 27
- File created on February 27, 2007
- Patient #1234567



Note: The Crit-Line IV uses a 19 character Patient ID which can be configured to be a combination of Patient ID and Patient Name. The Crit-Line III TQa uses a separate 4 character Patient ID and a 12 character Patient Name.

Note: See Appendix B for sample files.

5 Appendix A: Telegesis ZigBee Radio Driver Installation

Telegesis ZigBee drivers must be installed if the CLM Printer application is to be configured to interface with the Telegesis ZigBee radio network. Use the following steps to install the Telegesis ZigBee drivers:

1. Insert CLM Printer installation media into the Host PC.
2. Select the “TelegesisUSB_Driver(6.1) folder.
3. Run the installer program *TGvcpInstaller.exe*.
4. Follow the installation wizard instructions.

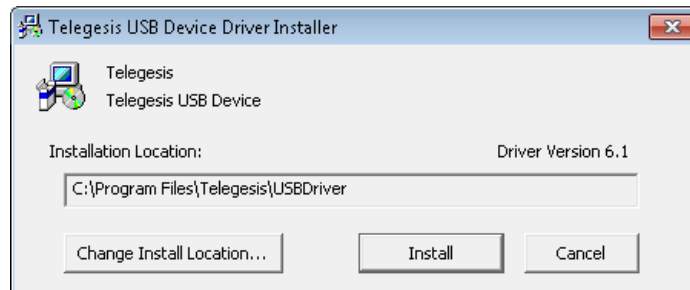


Figure 5-1 Telegesis Driver Installation. Click “Install”

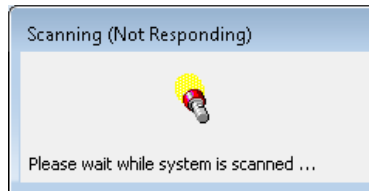


Figure 5-2 Wait

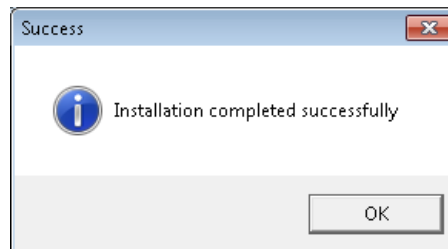


Figure 5-3 Telegesis Driver Installation Complete. Click “OK”



Note: It is recommended that the Telegesis ZigBee radio drivers be installed prior to the installation of the CLM Printer application.

The installation may require administrative privileges.

6 Appendix B

6.1 Standard Critline Output Data

0000,0002,CL0002,11/21/2015,00:14:46, 0,000,35.930, 0.000,93.670,00,0
0000,0002,CL0002,11/21/2015,00:14:46, 0,001,35.907, 0.065,93.607,00,0
0000,0002,CL0002,11/21/2015,00:14:46, 0,002,35.837, 0.260,93.533,00,0
0000,0002,CL0002,11/21/2015,00:14:46, 0,003,35.783, 0.410,93.520,00,0
0000,0002,CL0002,11/21/2015,00:14:46, 0,004,35.777, 0.429,93.097,00,0
0000,0002,CL0002,11/21/2015,00:14:46, 0,005,35.760, 0.475,93.163,00,0

Field 1 = Always 0

Field 2 = Patient ID

Field 3 = Patient Name

Field 4 = Date

Field 5 = Start Time

Field 6 = Minutes since "Start Time"

Field 7 = Hematocrit (Hct)

Field 8 = Percentage change in blood volume (% Δ BV)

Field 9 = Oxygen saturation (O₂ Sat)

Field 10 = Status

Field 11 = Event

6.2 JPEG Report Image File

