

WinMarkpro® v6 for the FH Marking Head Quick Start Guide

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Important

Note:

See the FH Flyer Marking Head (MH) Operators Manual for complete installation details and instructions. A PDF version is available online at: http://www.synrad.com/Manuals/manuals_laser.htm. Reference your laser's specific Quick Start Guide also located on our website: <http://www.synrad.com/synrad/docroot/resources/libraries/quickstart>.

Read all ⚠️ Danger, ⚠️ Warning, ⚠️ Caution terms, symbols, and instructions located in the (Laser Safety Hazard information) sections in the Operation Manual.

Note: Reference your specific [laser QSG](#) & our [Mounting 101](#) located on our website.

Marking Head Unpacking:

1. Set the marking head components box aside and carefully lift the FH Marking Head out of the box; **do not use any fittings, on the sides to lift and/or carry the marking head.**

Lift both the both the marking head and the foam packaging out of the box.



FH FlyerMarking Head hardware kit.

2. Upon arrival, inspect all shipping containers for signs of damage. If you discover shipping damage, document the damage (photographically if possible), then immediately notify the shipping carrier (responsible party for any transportation damage) and SYNRAD®. See the inventory section within the Introduction chapter of the Operation Manual for additional information.

Important

Note:



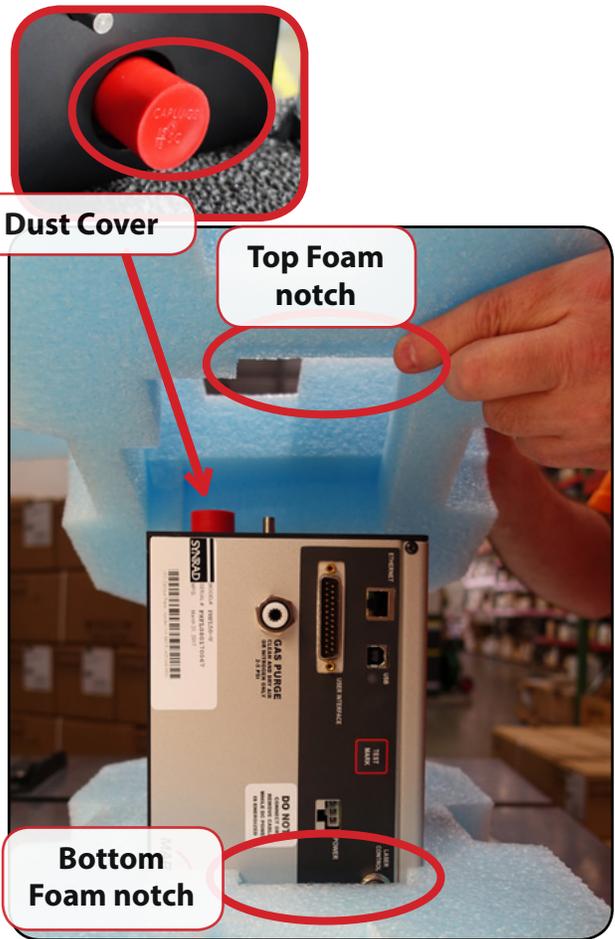
Keep All Foam and Packaging, you will need to re-use it when moving your marking head to prevent damage that could void your warranty. Refer to this guide and the Technical Reference chapters in the Operation Manual when re-packaging for shipping and/or relocation. Remove all accessory items not originally attached to the laser prior to re-packaging for shipping.

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Unpacking (Continued):

Don't forget to remove the three (3) cap screws on the lens aperture cover if a focusing lens is ordered.



Important Note:



Keep All Foam and Packaging, you will need to re-use it when moving your laser to prevent damage that could void your warranty. Refer to this guide and the Technical Reference chapters in the laser's Operation Manual when re-packaging for shipping and/or relocation. Remove all accessory items not originally attached to the laser prior to re-packaging for shipping.

Please refer to the examples above and the laser's Operation Manual drawings located at the end of the Technical Reference Chapter.

Power Connections:

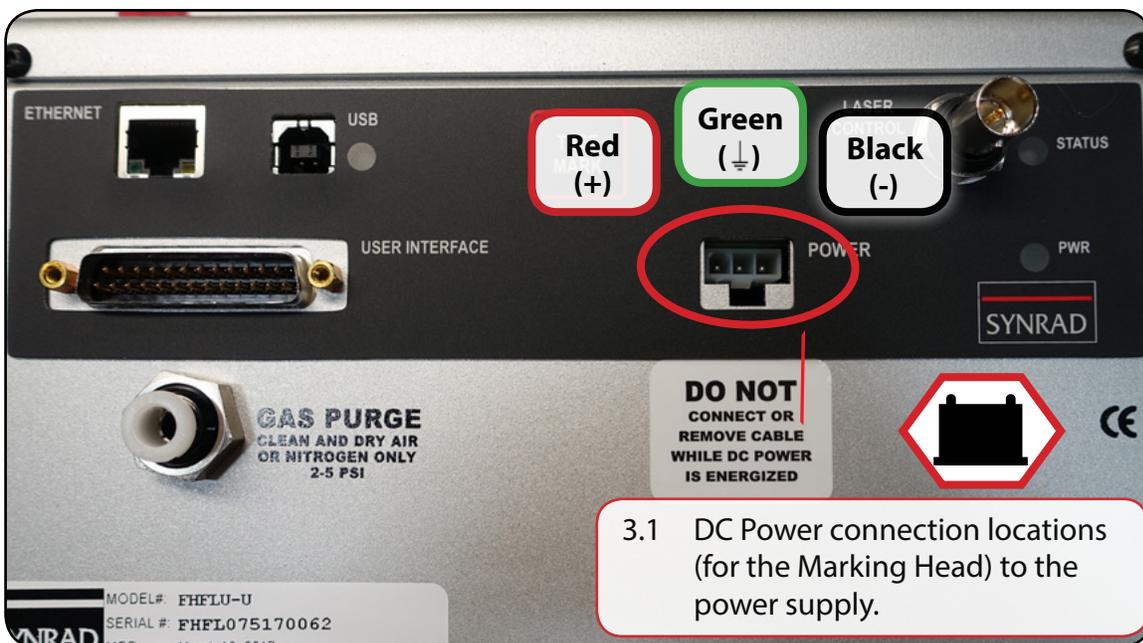
Warning
Serious
personal
injury

Always use shielded cable when connecting your PWM Command signal source to PWM Positive/PWM Negative inputs.

In electrically-noisy environments, long lengths of unshielded wire act like an antenna and may generate enough voltage to trigger un-commanded lasing.



3. Connect the Marking Head **DC power VDC** cable into the **Marking Head's** power supply.



Important Note:



The Marking Head requires a DC power supply capable of providing 30 VDC at 7 A minimum;

If substituting power supplies, use a well-regulated DC power supply in the range of 30 V to 32 V with no more than 3 V overshoot under a 10–90% modulation load. The use of short leads and terminations rated for the appropriate output current is recommended.

Do not reverse polarity when connecting the DC Power cable between the DC power supply and the Series 48 laser.

Attach the red (+) wire(s) from the DC Power cable to the positive (+) 48 VDC output terminal and attach the black (-) wire(s) from the DC Power cable to the negative (-) 48 VDC output terminal.

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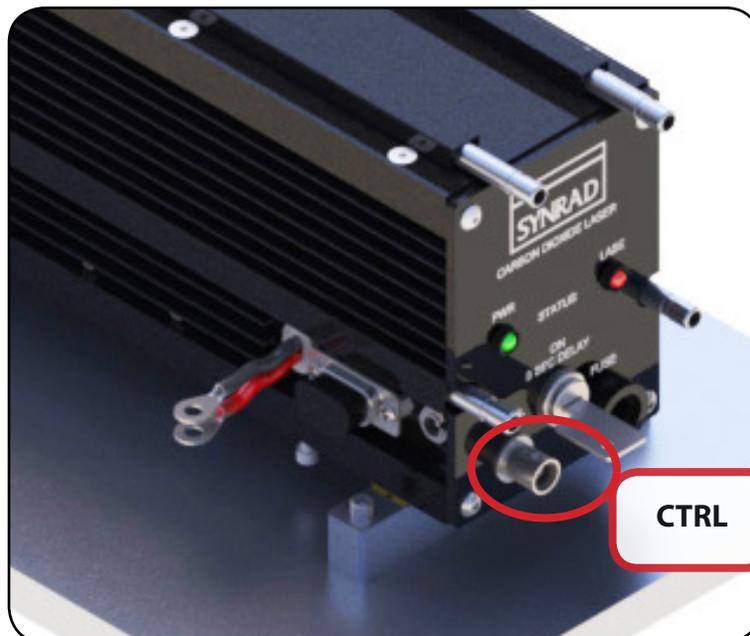
Control Connections (Continued):

4. Connect the *laser's control BNC* interface to the **Marking Head's laser control port**.



5. Connect the *other end of the BNC cable to the control input, labeled CTRL*, located on the rear end of the laser.

5.1 Control connection locations (for the Marking Head).



Control Connections (Continued):

Note: If controlling your laser by a UC-2000 is desired, go to the [UC-2000](#) guide located on our website.

- The Ethernet connector is ready to be plugged into the PC's Ethernet port and the USB cable is ready to be plugged from the FH Flyer Marking Head to the PC.

6.1 To PC Ethernet port



Note: To finish setup, go to the [FH Flyer WMP 6 Quick Start Guide](#) located on our

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Laser Marking Software (WinMark®):

Important Note:



Prior to installation of the WinMark laser marking software on your computer, review the requirements in the WinMark Operation Manual, remove power or unplug the USB cable from the FH Flyer head to prevent windows from arbitrarily assigning a USB driver that is not compatible with Flyer's USB port protocols.

(WinMark®) v6 Software Installation:



Note: Find the [WinMark v6 Software release notes](#) on our website. Refer to the [WinMark Operation Manual](#).

7. Before upgrading to a newer version of WinMark pro, backup all existing .mkh mark files and uninstall prior version(s) of WinMark software. http://www.synrad.com/synrad/docroot/products/marketing_heads_software/winmark-sw.
8. Download the latest version 6 WinMark pro driver from our website. Exit all programs prior to Installation.
9. To install WinMark pro v6, and associated device drivers on a Windows® 7 or Windows® Vista™ operating system, right-click the 'setup.exe' file and choose 'Run as Administrator...'

Important Note:



When upgrading from a v4 build to version v6, the WinMark installer automatically performs a "clean install" because v6 uses a different subset of registry keys. The "Perform Clean Installation" and "Keep Current Program Settings" options are grayed out to indicate this installation is a "clean installation".

Upgrading from one v6 build to another does allow the option of preserving existing WinMark settings in the computer's System Registry. Choose Yes to preserve current WinMark Pro v6 registry settings including custom date code formats, object defaults, shift codes, auto startup info, and saved serial numbers. Choose No to erase all previous WinMark v6 Registry entries and perform a clean installation.



Note: Due to Microsoft's implementation of registry virtualization, Windows Vista may require you to log on as an Administrator to perform certain functions like file importation or to save custom date code formats.



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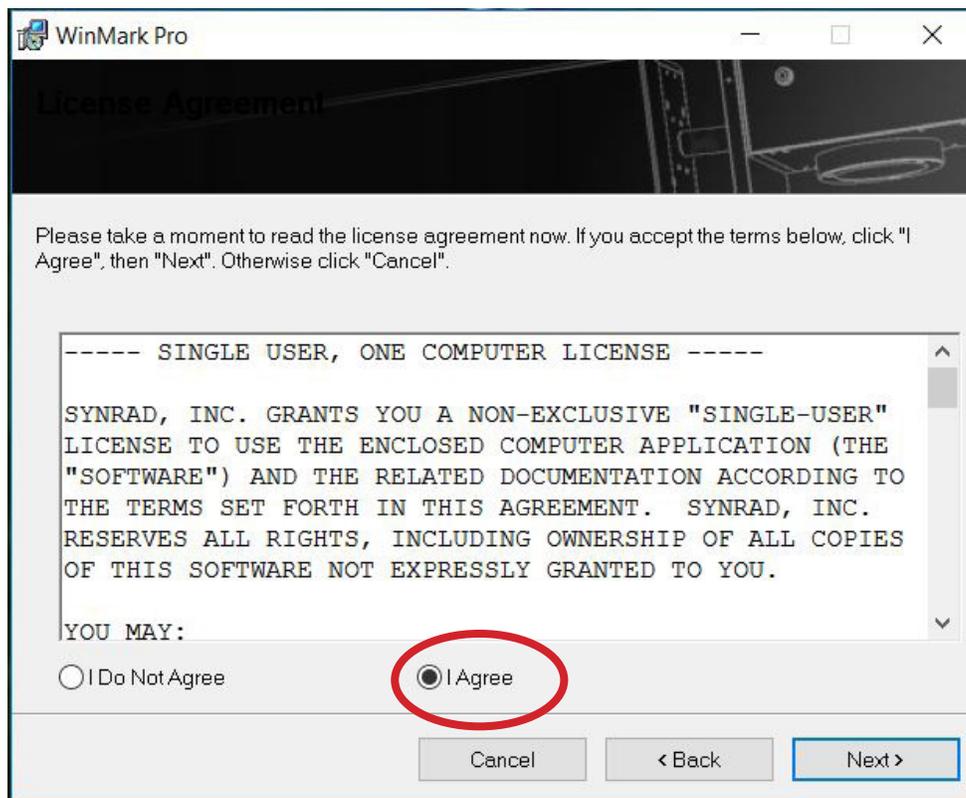
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WinMarkpro v6 Installation (continued):

6. To install WinMark Pro v6, and associated device drivers, on a Windows® operating system, double-click the '**setup.exe**' file.
7. WinMark Pro v6 is a Microsoft .NET™ Framework-based application. If Microsoft .NET Framework Service Pack 1, or higher, is not installed on the computer, the installer will prompt you to click '**Accept**' to install the .NET Framework. You must have the .NET Framework runtime and associated files installed to run WinMark Pro.

Note:  If WinMark Pro is un-installed, the .NET package is not removed, because these files may be used by other applications installed after the original WinMark installation.

8. When the .NET Framework installation is complete, reboot if prompted to do so. Otherwise the WinMark installer will continue.
9. If Microsoft C++ Redistributable x86 file runtime components are not installed on the computer, the installer will prompt you to click '**Install**' to install C++ Redistributable files. You must have these files installed to run WinMark Pro.
10. Follow instructions in the installer dialog boxes to complete the WinMark Pro installation. You must click '**I Agree**' to accept the WinMark Pro license agreement and continue the installation.



11. After installation is complete, remember to turn on any anti-virus software.

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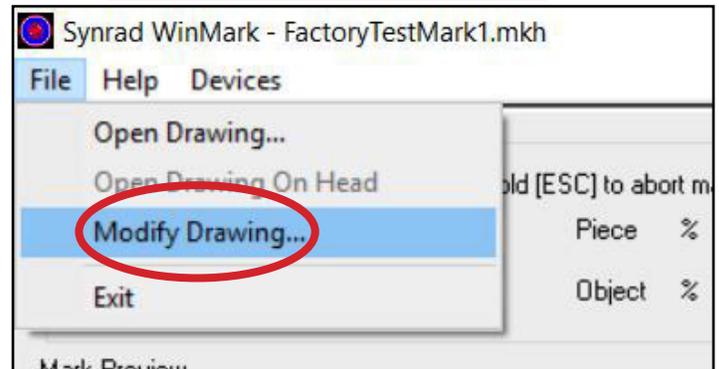
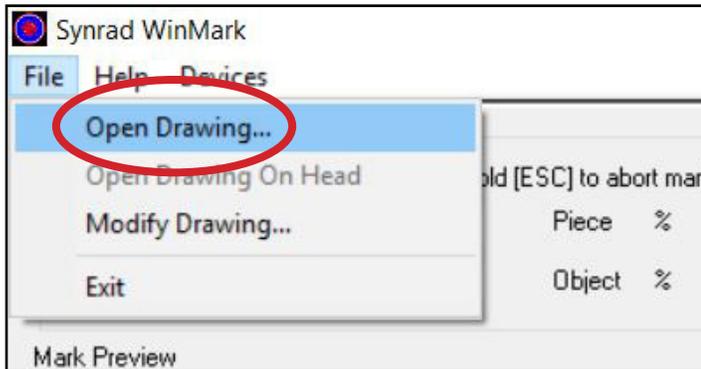
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WinMark Launcher:

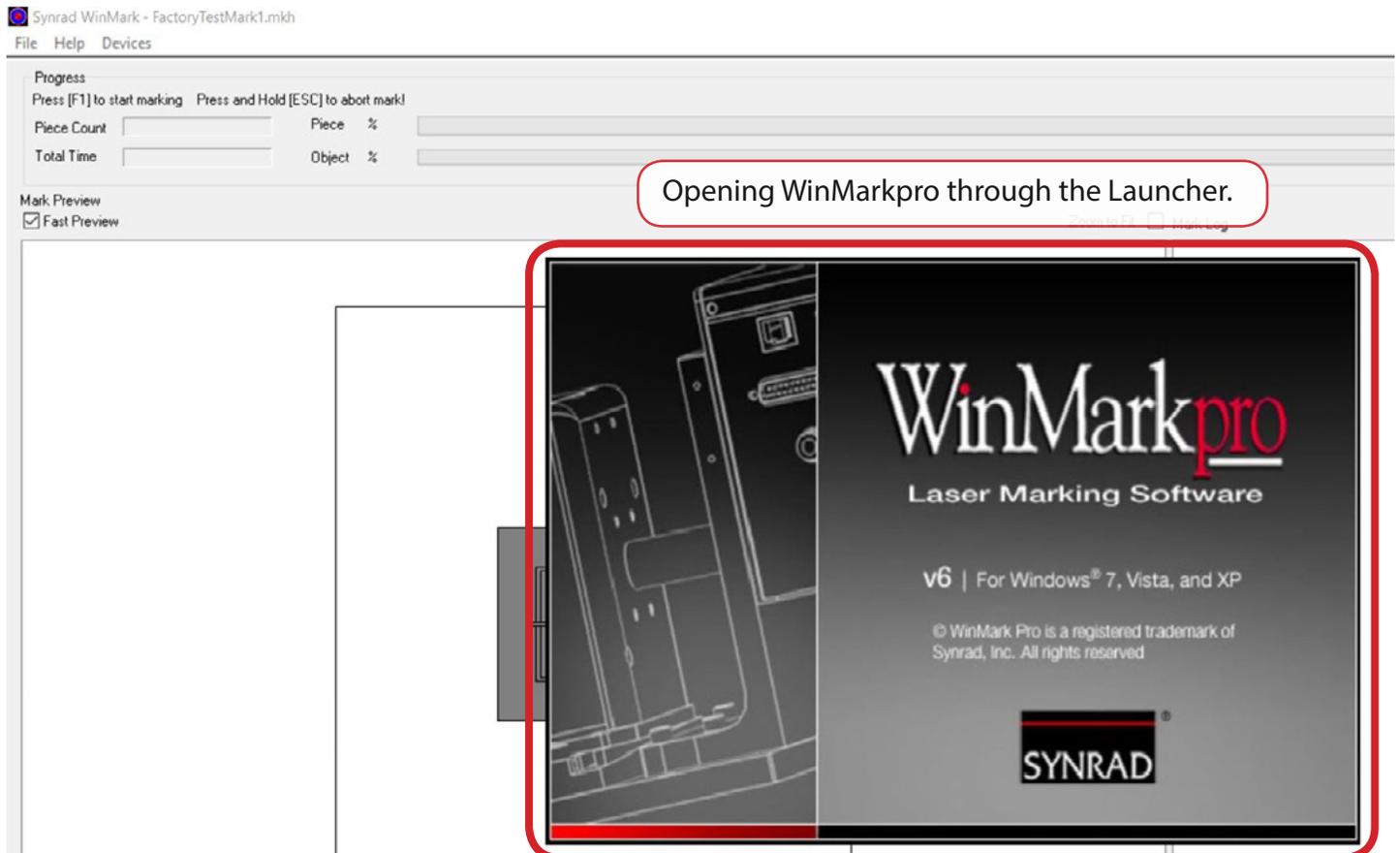
12. As part of the software installation, WinMark Launcher (Launcher.exe) is placed in the Program Files/ WinMark folder and a shortcut is placed on the desktop. Launcher allows non-administrative operators to load existing .mkh files for marking without opening WinMark's Drawing Editor by selecting the '**Open Drawing**'... from the file menu.

Opening an existing *.mkh file.

Modifying an existing *.mkh file.



13. To add an Admin password so operators cannot '**Modify Drawing**' ... Select '**Modify Drawing**'... which then opens the WinMarkpro application.



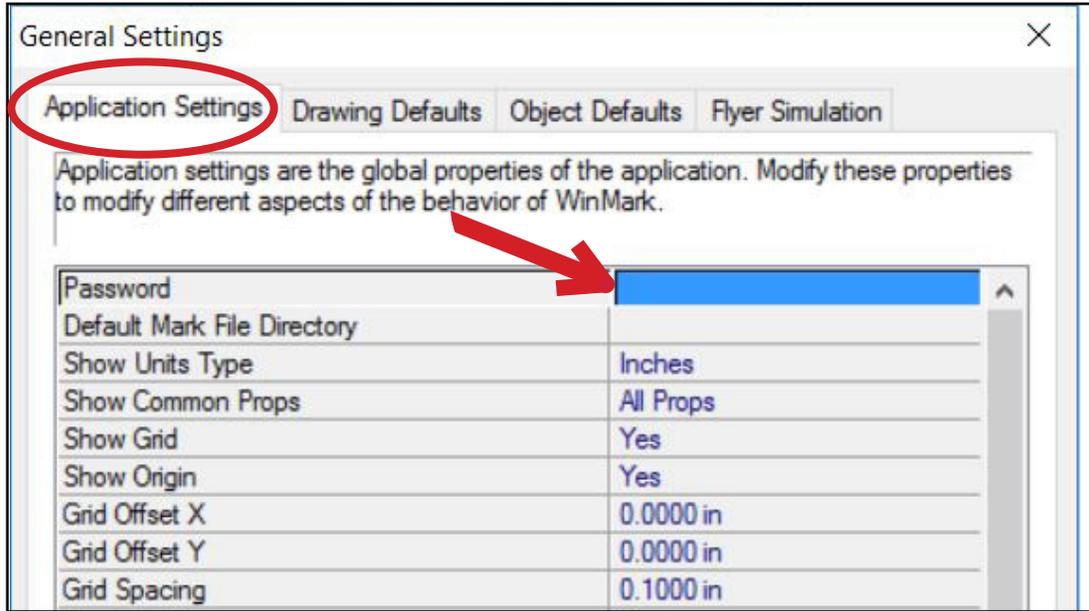
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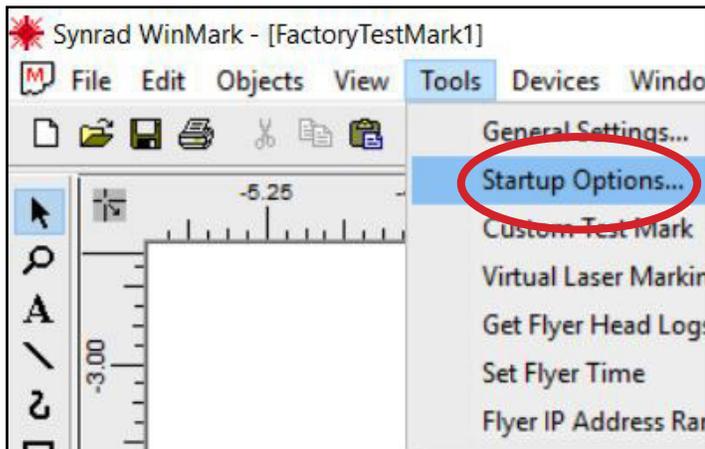
WinMark pro:

14. Once the WinMark Pro application opens, click the **Tools** menu and select '**General Settings**'...

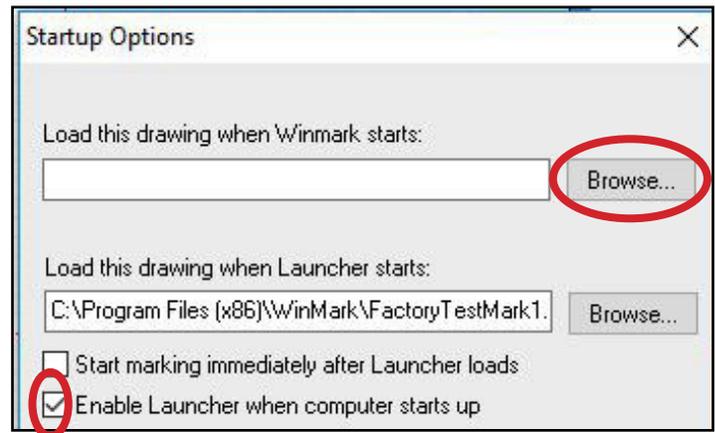
Password protecting *.mkh files.



15. Using WinMark Pro's '**Startup Options**'... within the Tools menu, Launcher can be configured to load a specific file and to start marking automatically when the computer is powered up.



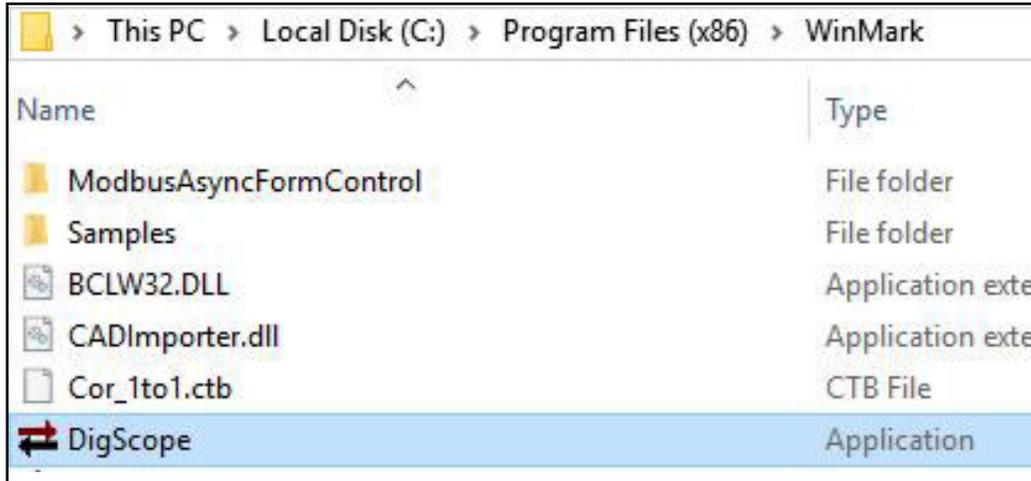
Modifying an existing *.mkh file.



Browsing to the desired startup-file, and **automatically launch** upon computer startup.

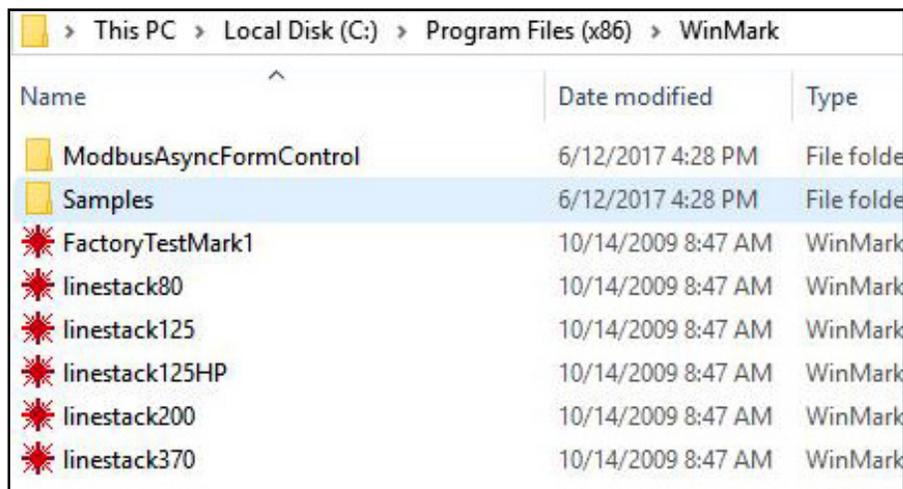
WinMark Digital Scope:

16. Digital Scope (DigScope.exe) is a stand-alone program included in the WinMark folder. Use Digital Scope to test individual inputs and outputs, turn the laser beam on or off, or adjust the laser's output power level. This "manual" control is especially useful when testing or troubleshooting I/O connections to/from the marking head.



Digital Scope Application on the WinMark Pro folder.

17. The Samples folder is also placed in the WinMark folder during installation. This folder contains a sample communications DLL; Microsoft® Visual Basic®, Microsoft® Visual C++®, and Microsoft® C#® (in a .NET™ framework) sample code that demonstrates the use of WinMark's ActiveMark™ control methods; a folder of importable bitmap and vector graphics files; and sample mark files illustrating all of WinMark Pro's available stroke fonts.



Samples folder on the WinMark Pro folder.

WinMarkpro v6 Communication Configuration:

Laser Markers are pre-configured at the factory to a fixed address of 192.168.100.100. This allows you to make a peer-to-peer Ethernet connection. Your computer's Ethernet settings are determined by your facility's computer network. The FH Marking Head requires a connection to a computer with a static IP address if not connected to a local network (Peer to Peer). Reference the [FH Flyer Operation Manual](#) located on our website for more information.

Set your computer's static IP address

18. Disconnect the computer from your local network.
19. Turn off Dynamic Host Configuration Protocol (DHCP), if enabled, and create a static IP address for your computer.

Note: ! The exact steps may vary depending on your operating system.

- a From the Start menu, go to Settings and choose Network Connections.
- b Double-click on the appropriate Local Area Network (LAN).
- c Locate the LAN's Internet Protocol (TCP/IP) properties.
- d Select "Use the following IP address:" and enter the following information:
IP Address: 192.168.100.101
Subnet Mask: 255.255.255.0
- e Click OK to submit the changes.

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WinMarkpro v6 Configuration (continued) optional USB driver:

WinMark Pro (WMP) installs a specialized USB driver that communicates with the marking head and the Laser (not recommended for manufacturing environments). During computer boot-up, the Windows OS automatically starts the USB driver as a service. Once started, the driver can be accessed by WinMark Pro, WinMark Launcher, or Digital Scope.

Note: Before installing or upgrading WinMark Pro software, first disconnect power or unplug the USB cable from the Marking head, this ensures that the Windows OS will load and install the latest marking head USB driver; otherwise, Windows will arbitrarily assign a USB driver that is **not compatible** with the marking head USB port protocols. If this happens, see the Troubleshooting section of the Marking Head's Operator Manual or the WMP Operator's Manual for information on the re-installing the correct USB driver.

Marking head's USB driver:

WinMark Pro (WMP) installs a specialized USB driver that communicates with the marking head and the Laser. During computer boot-up, the Windows OS automatically starts the USB driver as a service. Once started, the driver can be accessed by WinMark Pro, WinMark Launcher, or Digital Scope.

If the Found New Hardware Wizard dialog appears when your marking head is first connected to the computer's USB port, perform the following steps:

20. Download USB driver from web site, run the USB install.exe. When asked, "Can Windows connect to Windows Update to search for software?" Click '**do not this time**' and click '**Next**'.
21. When prompted, "What do you want the wizard to do?" Click '**Install the software automatically (Recommended)**' and click '**Next**'.
22. Click, "**Finish**" to complete the USB driver installation for the Marking Head device.

WinMark File Import Filters:

WinMark Pro automatically loads the File Import Filters during installation. These filters allow you to import a wide variety of graphi file formats. See the WinMark pro Operation Manual for details.

After the un-install is complete, some WinMark components, like .MKH mark files, will remain. To completely remove all WinMark-related files, go to C:\Program Files and delete the WinMark folder.

Uninstalling WinMark Pro:

If you decide to remove WinMark pro software from your computer, perform the following steps:

22. Click the '**Start**' button on the taskbar.
23. Select '**Programs**' and then locate the SYNRAD WinMark pro folder.
24. Click the '**Uninstall**' SYNRAD WinMark icon.
25. Follow the on-screen instructions.