Aegis Padlock SSD

User Guide

Remember to save your PIN in a safe place. If lost or forgotten, there is no way to access the drive.

If you are having difficulty please refer to the complete user's manual which is loaded on your Aegis Padlock drive and is also available at Apricorn's website at: **www.apricorn.com/support**

Table of Contents

(Rev 1.3) 9/17/2014

About the Aegis Padlock SSD

Looking for the highest level of security for your data while utilizing the fastest USB 3.0 speeds?

Sporting an easy-to-use keypad design that is impervious to dust and grit, with a software free setup and operation, the Aegis Padlock SSD Edition enables you to access the drive simply and easily with your own unique PIN. And with a super fast integrated USB 3.0 cable, you can access your data faster than ever before.

Package contents

- Aegis Padlock SSD with integrated USB 3.0 cable
- Travel pouch
- USB Y-cable
- Quick Start Guide
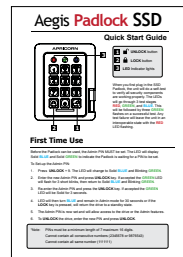
Aegis Padlock SSD - Connections

Before you begin

Be sure to review the following information before you begin to use the Aegis Padlock.

Attention: Use only the included cables with your Aegis Padlock. You might damage the drive if you use a cable not included with the Aegis Padlock.

The Aegis Padlock is designed for portable use without an AC power adapter and in most cases will be able to power on a single USB port. In the event that the Aegis Padlock is unable to power on a single USB connection, use the included USB Y-cable.

Connecting the Aegis Padlock

1. Attach the integrated USB cable of the Aegis Padlock drive to an available USB port on your computer, as shown below.

   NOTE: While the Aegis Padlock will work with any USB port, for the fastest speeds connect to a USB 3.0 port on your computer.

2. At least one of the Aegis Padlock LEDs should turn on, indicating that the Aegis Padlock is receiving power.
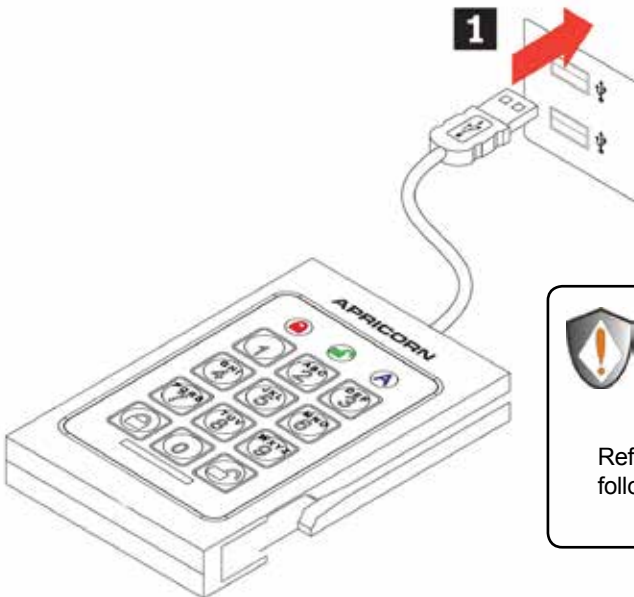
If none of the LEDs turn on or the drive locks when writing to the disk, use the included USB Y-cable.

Refer to directions on the following page

Connecting with the USB Y-Cable

If none of the Aegis Padlock LEDs power on a single USB connection, use the included USB Y-cable.

1. Attach the Aegis Padlock's integrated USB cable to the female connector of the USB Y-cable.

2. Connect the two male USB connectors to two available USB ports on your computer.

3. At least one of the Aegis Padlock LEDs should turn on, indicating that the Aegis Padlock is powered.

Aegis Padlock Keypad Panel

1	🔓	**UNLOCK** button
2	🔒	**LOCK** button
3		**LED** Indicator lights

When you first plug in the SSD Padlock, the unit will do a self-test to verify all security components are working properly. The LEDs will go through 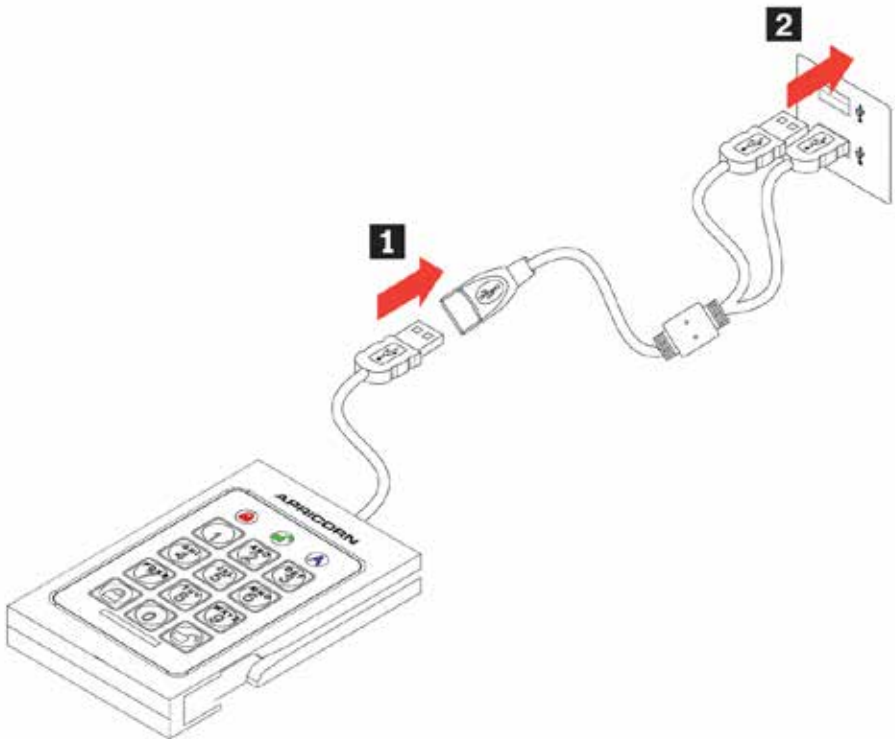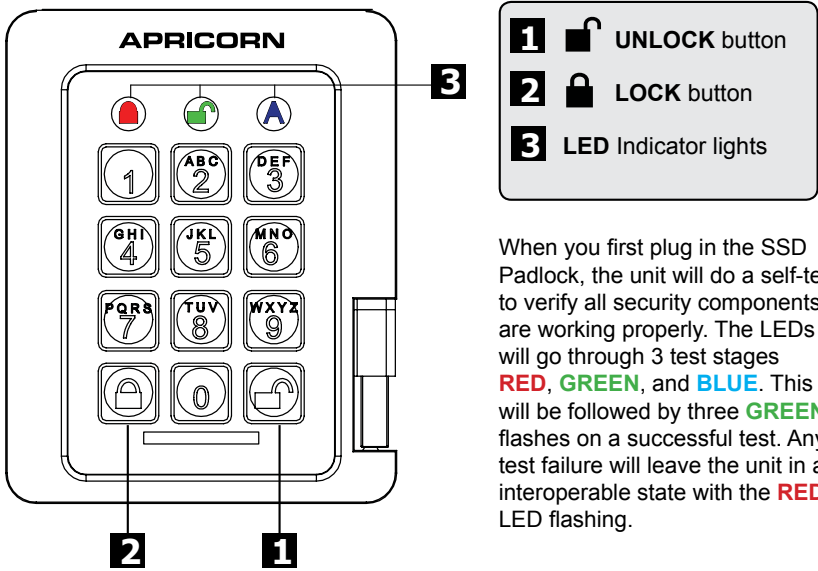3 test stages **RED**, **GREEN**, and **BLUE**. This will be followed by three **GREEN** flashes on a successful test. Any test failure will leave the unit in an interoperable state with the **RED** LED flashing.

First Time Use

Before the Padlock can be used, the Admin PIN MUST be set. The LED will display Solid **BLUE** and Solid **GREEN** to indicate the Padlock is waiting for a PIN to be set.

To Set-up the Admin PIN:

1. Press **UNLOCK + 9**. The LED will change to Solid **BLUE** and Blinking **GREEN**.

2. Enter the new Admin PIN and press **UNLOCK** key. If accepted the **GREEN** LED will flash for 3 short blinks, then return to Solid **BLUE** and Blinking **GREEN**.

3. Re-enter the Admin PIN and press the **UNLOCK** key. If accepted the **GREEN** LED will be Solid for 3 seconds.

4. LED will then turn **BLUE** and remain in Admin mode for 30 seconds or if the **LOCK** key is pressed, will return the drive to a standby state.

5. The Admin PIN is now set and will allow access to the drive or the Admin features.

6. To **UNLOCK** the drive, exit Admin by pressing the **LOCK** button. Then enter the new PIN and press **UNLOCK**.

*Note: PINs must be a minimum length of 7 maximum 16 digits.

Cannot contain all consecutive numbers (2345678 or 9876543)

Cannot contain all same number (1111111)

LED states and their meaning

○ ○ ○	No LEDs	Drive locked and asleep
🔴 ○ ○	Blinking **RED**	Error / incorrect key entry. Also used for Mode Not Available / User PIN Change
🔴 ○ ○	Solid **RED**	Stand-by state, waiting for key entry
○ 🟢 ○	Blinking **GREEN**	Key entry accepted
○ 🟢 🔵	Solid **BLUE** / Blinking **GREEN**	Waiting to enter new User / Admin PIN
○ ○ 🔵	Solid **BLUE**	In Admin Mode
○ 🟢 ○	Solid **GREEN**	Drive unlocked
🔴 ○ ○ ○ ○ 🔵	Alternating **RED** / **BLUE**	Indicates a mode has been entered that can result in the deletion of a User or the Data on the drive (depending on the mode chosen). Also used when setting Auto-lock feature
🔴 ○ ○ ○ 🟢 ○ ○ ○ 🔵	One second **RED** followed by one second **GREEN** followed by one second **BLUE**	Self-test mode to ensure all components are ready and working properly
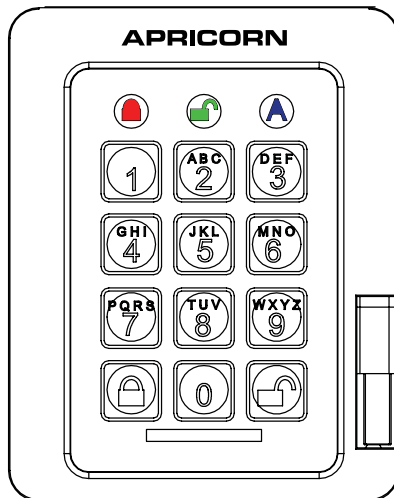
Locking the Drive

To lock the drive, press the **LOCK** button.

If data is still being written to the drive, the Padlock will wait until all data has been written to the drive and then it will lock automatically.

Note: The Aegis Padlock will not be recognized by the operating system in the standby state.

Unlocking the Drive

To unlock the drive:

Enter either a User PIN or Admin PIN and press the **UNLOCK** button.

Note: The Aegis Padlock cannot be recognized by the operating system in the standby state.

Admin Mode

To enter the Admin Mode, do the following:

1.   Attach the USB cable to an available USB port on your computer. The Padlock goes into the Standby Mode after the self-check, and the LED turns **RED**.

2.   Press and hold **UNLOCK + 0** for five seconds until the LED flashes **RED**.

     This indicates that you can enter the Admin PIN.

3.   Enter the Admin PIN and press the **UNLOCK** button.

4.   The drive is in Admin Mode when the LED has changed to **BLUE**.

Changing the Admin PIN

You can change the Admin PIN by doing the following:

1.   Enter Admin Mode (**UNLOCK + 0** for five seconds. Enter Admin PIN and press **UNLOCK**).

2.   Press and hold **UNLOCK + 9** until the LED turns to Solid **BLUE** and Blinking **GREEN**.

3.   Enter the new PIN and press **UNLOCK** (The PIN must be a minimum of 7 digits and a maximum of 16 digits). The LED flashes **GREEN** three times, then returns to Solid **BLUE** and Blinking **GREEN**.

4.   Re-enter the new Admin PIN and press **UNLOCK**. The LED stays solid **GREEN** for two seconds and then solid **BLUE** indicating that the Admin PIN has been changed successfully.

Adding a new User PIN

1. Enter the Admin Mode (**UNLOCK + 0** for five seconds. Enter Admin PIN and press **UNLOCK**).

2. Press and hold **UNLOCK + 1** until the LED turns to Solid **BLUE** and Blinking **GREEN**.

3. Enter a User PIN and press **UNLOCK** (a minimum of 7 digits and a maximum of 16 digits). The LED flashes **GREEN** three times, then returns to Solid **BLUE** and Blinking **GREEN**.

4. Re-enter the new User PIN and press **UNLOCK**. If the LED stays solid **GREEN** for two seconds and then solid **BLUE**, the User PIN was successfully added.

Deleting the User PINs

You can delete ALL User PINs by doing the following:

1. Enter the Admin Mode (**UNLOCK + 0** for five seconds. Enter Admin PIN and press **UNLOCK**).

2. Press and hold **7 + 8 + UNLOCK** for five seconds until the LED flashes **GREEN** three times and then changes to **BLUE** / **RED** alternating.

3. Press and hold **7 + 8 + UNLOCK** a second time for five seconds until the LED goes on solid **GREEN** for two seconds and then back to solid **BLUE**, this indicates that the User PINs were deleted successfully.

Changing the User PIN

You can change the User PIN by doing the following:

1. Unlock the drive by inputting your User PIN and pressing the **UNLOCK** button.

2. Press and hold **UNLOCK + 1** until the LED flashes **RED**.

3. Enter your current PIN and press **UNLOCK**.
    The LED will be Solid **BLUE** and Solid **GREEN**.

4. Enter the new PIN and press **UNLOCK** (The PIN must be a minimum of 7 digits and a maximum of 16 digits). The LED will flash **GREEN** three times, then returns to Solid **BLUE** and Blinking **GREEN**.

5. Re-enter the new User PIN and press **UNLOCK**. The LED stays solid **GREEN** indicating that the User PIN has been changed successfully.

Setting the Unattended Auto Lock Feature

To protect against unauthorized access if the drive is unlocked and unattended, the Aegis Padlock can be set to automatically lock after a pre-set amount of time. In its default state, the Aegis Padlock Unattended Auto Lock feature is turned off. The Unattended Auto Lock can be set to activate after 5, 10 or 20 minutes.

To set the Unattended Auto Lock please uses the following steps:

1. Enter the Admin mode by pressing and holding **UNLOCK + 0** for five seconds until the LED flashes **RED**. This indicates that you can enter the Admin PIN.

2. Enter the Admin PIN and press **UNLOCK**. The drive is in Admin Mode when the LED has changed to solid **BLUE**.

3. Once in Admin mode, press **UNLOCK + 6**. The LED should start flashing **RED** and **BLUE** intermittently.

4. Press one of the numbers below that corresponds to amount of time you would like the drive to lock after no activity:

    1=5 minutes

    2=10 minutes

    3=20 minutes

    0=OFF

    The Default is OFF for this feature.

5. After you have input the number, the LED should flash **GREEN** 3 times to indicate that you have successfully set the Unattended Auto Lock feature.

Aegis Padlock Brute Force Protection

What is Brute Force Attack?

A brute force attack is a method of defeating a cryptographic scheme by systematically trying a large number of possibilities; for example, a large number of the possible keys in a key space in order to decrypt a message. In most schemes, the theoretical possibility of a brute force attack is recognized, but it is set up in such a way that it would be computationally infeasible to carry out.

Accordingly, one definition of "breaking" a cryptographic scheme is to find a method faster than a brute force attack.

Brute Force Feature

After FIVE tries entering the incorrect user or admin PIN attempts, the keypad will not respond and LED will turn off. The drive will need to be unplugged from the USB port and re-plugged.

If the user, unsuccessfully tries to **UNLOCK** the drive on the 10th try the keypad will lock and the LED will begin blinking **RED** quickly. Even after unplugging and re-plugging in the unit, the drive will remain locked and the LED will continue to blink rapidly.

Here are the steps to allow the user to unlock the keypad for 10 more attempts to unlock this drive.

1. Unplug the device from the computer

2. Push and hold the number five key and plug-in the drive

3. The LED will be blinking alternating **RED** and **GREEN** rapidly

4. Enter the PIN 5278879 and press **UNLOCK**.

5. The keypad will unlock and will be in the standby state with the LED solid **RED**, this will allow only 10 more attempts

6. After a total of 20 Attempts the drive will remain locked with the LED flashing **RED** quickly. You must now go through the reset process and reformat the drive to be able to use the drive again.

Setting a Self-Destruct PIN

The Aegis Padlock has the ability to set a unique 7 - 16-digit PIN that will reset the encryption key if needed. By resetting the encryption key, all data on the drive will be lost and cannot be recovered.

> After initiating the Self Destruct sequence, the PIN used to initiate the self destruct sequence will become the default Admin password. The drive will need to be initialized and reformatted. For directions see page 15.

1. Enter the Admin mode by pressing and holding **UNLOCK + 0** for five seconds until the LED flashes **RED**. This indicates that you can enter the Admin PIN.

2. Enter the Admin PIN and press **UNLOCK**. The drive is in Admin Mode when the LED has changed to **BLUE**.

3. Once in Admin mode, press **UNLOCK + 3**. LED will be alternating **BLUE** / **RED**.

4. Input in the PIN that you would like to use as the Self Destruct PIN and press **UNLOCK**.

5. The Aegis Padlock will then check against known PINs to make sure that it is not already in use. If in use, the indicator light will flash **RED** 3 times and the drive will go into Standby mode. If this happens, please re-enter the Admin mode (step 1) and repeat the process with a new code.

6. If the Self Destruct PIN is accepted the LED flashes **GREEN**.

7. Immediately re-enter the new PIN and press **UNLOCK**. If the LED stays solid **GREEN** for two seconds and then goes to solid **BLUE**, the Self Destruct PIN was added successfully.

8. To delete the Self Destruct PIN, you will need to delete all of the User PINs. Disconnect and re-connect the drive, then refer to the instructions on page 10; Deleting User PINs.

Performing a Complete Re-Set

To perform a complete reset of the drive, do the following:

1. Press and hold the **LOCK** button while you attach the Aegis Padlock to an available USB port on your computer. The LED will flash **RED**, **GREEN** and **BLUE** alternately.

2. Release the **LOCK** button.

3. FIRMLY Press and hold **LOCK + UNLOCK + 2** for 10 seconds.

    •   If successful, the LED will turn Solid **GREEN** for two seconds, followed by Solid **BLUE** and Solid **GREEN**.

    •   If unsuccessful, the LED will continue to cycle from **RED** to **GREEN** to **BLUE** for 30 seconds and then return to Solid **RED**. To re-start the process. Remove the USB cable and then repeat step 1.

Initializing and formatting the Aegis Padlock after a complete reset

A complete reset of the Aegis Padlock will erase all information and partition settings. You will need to initialize and format the Aegis Padlock.

To initialize your Aegis Padlock, do the following:

1. After a complete reset, attach the Aegis Padlock to the computer.

2. Press **UNLOCK + 9**. The LED will change to Solid **BLUE** / Blinking **GREEN**.

3. Enter the new Admin PIN and press **UNLOCK** key. If accepted the LED will flash 3 short blinks of the **GREEN** LED, then return to Solid **BLUE** and Blinking **GREEN**.

4. Re-enter the Admin PIN and press the **UNLOCK** key. If accepted the **GREEN** LED will be Solid for 3 seconds.

5. LED will then turn **BLUE** and remain in Admin mode for 30 seconds or if the **LOCK** key is pressed, will return the drive to a standby state.

6. The Admin PIN is now set and will allow access to the drive or the Admin features.

7. To **UNLOCK** the drive, enter the new PIN and press **UNLOCK**.

8. Windows 7 and earlier: Right-click **My Computer**, and then click **Manage** from the Windows desktop.

   Windows 8: Right click left corner of desktop and select **Disk Management.**

9. In the Computer Manage window, click **Disk Management**. In the Disk Management window, the Aegis Padlock is recognized as an unknown device that is uninitialized and unallocated.

10. Do the following to make the drive recognized as a basic drive.

    • If the Initialize and Convert Disk Wizard window opens, click **Cancel**, then initialize the disk manually using the following steps.

        a. Right-click Unknown Disk, and then select Initialize Disk.

        b. In the Initialize Disk window, click **OK**.

11. Right-click in the blank area under the Unallocated section, and then select New Partition. The Welcome to the New Partition Wizard window opens.

12. Click **Next**.

13. Select Primary partition and click **Next**.

14. If you need only one partition, accept the default partition size and click **Next**.

15. Click **Next**.

16. Create a volume label, select Perform a quick format, and then click **Next**.

17. Click **Finish**.

18. Wait until the format process is complete. The Aegis Padlock will be recognized and it is available for use.

Hibernating, Suspending, or Logging off from the Operating System

Be sure to save and close all the files on your Aegis Padlock before hibernating, suspending, or logging off from the Windows operating system.

It is recommended that you lock the Aegis Padlock manually before hibernating, suspending, or logging off from your system.

To log off the Aegis Padlock, double-click Safely Remove Hardware on the Windows desktop and remove the Aegis Padlock from your computer.

Attention: To ensure the data integrity of your Aegis Padlock, be sure to lock or log off your Aegis Padlock if you are:
- away from your computer
- using the switching user function by sharing a computer with others

Aegis Padlock Setup for Mac OS ®

Your Aegis Padlock is preformatted in NTFS for Windows. To reformat the drive to a Mac compatible format please read the below.

Once the drive is unlocked, open Disk Utility from Applications/Utilities/Disk Utilities.

To format the Aegis Padlock:

1. Select the Aegis Padlock from the list of drives and volumes. Each drive in the list will display its capacity, manufacturer, and product name, such as 232.9 Apricorn Padlock.

2. Click the 'Erase' tab.

3. Enter a name for the drive. The default name is Untitled. The drive's name will eventually appear on the desktop.

4. Select a volume format to use. The Volume Format dropdown menu lists the available drive formats that the Mac supports. The recommended format type is 'Mac OS Extended (Journaled).'

5. Click the 'Erase' button. Disk Utility will unmount the volume from the desktop, erase it, and then remount it on the desktop.

Diagnostic Mode

The keypad has a manual diagnostic mode built in to verify proper keypad function. This mode will not allow access to any data or admin function. It can only be used to identify the firmware level and to test button recognition.

The diagnostic mode is also useful for troubleshooting key issues.

To enter the diagnostic function:

1. During Power up hold 0 key until the Power-On-Self-Test (POST) completes.

2. The LED will flash **BLUE** for the major and minor revisions and **RED** LED to indicate (.) When complete, the LED will return to a solid **BLUE** LED

   (Example: Four BLUE flashes followed by one RED flash followed by one BLUE flash followed by one RED flash would indicate version 4.1.)

3. Key presses after the revision will coincide with the number pressed using the **BLUE** LED.

4. Example 1 = 1 flash, 2 = 2 flashes, 3 = 3 flashes,…. 0 = 10 flashes

5. Unlock = 11 flashes, Lock = 12 flashes.

6. To Exit the Diagnostic Mode, a power re-set is required. Unplug and re-plug the USB cable to return to normal operation.

Troubleshooting

This section contains troubleshooting information for the Aegis Padlock. If you encounter any of the following problems when using the Aegis Padlock, refer to the corresponding answers.

Q: What can I do if I forget the User PIN?

A: Use your Admin PIN to enter Admin Mode, and then create another User PIN in Admin Mode.

Q: What can I do if I forget the Admin PIN?

A: There is no other way to retrieve the Admin PIN except a complete reset of the Aegis Padlock. After a complete reset, all data will be lost and you will need to initialize, allocate and format the Aegis Padlock manually.

Q: Why did the operating system not recognize the Aegis Padlock after I enter the User Mode and completely reset the computer?

A: You need to initialize, allocate and format the Aegis Padlock manually. For more information, refer to **Initializing and formatting the Aegis Padlock after a complete reset** in this manual.

Q: How do I use the Aegis Padlock without a PIN?

A: As a full disk encryption product, the Aegis Padlock can never be used without a PIN.

Q: What encryption algorithm is used in this product?

A: The Aegis Padlock SSD uses AES 256-bit algorithm.

Q: Why could I not initialize, partition or format the Aegis Padlock?

A: Ensure that you have administrator privileges. You will need Admin privileges to use the Disk Management Utility.

Q: The LED is blinking RED and I can't enter a code. Why?

A: Somebody has tried to access the drive and the code has been entered 10 times incorrectly (see Brute Force section of this manual).

Q: The drive seems warm to the touch, is this normal?

A: Yes. The SSD in the case runs hotter than a standard drive. The cooling features use the case to dissipate the heat.

Q: What kind of speed can be expected out of this drive?

A: USB speed will be affected by a variety of factors (USB type – 1, 2 or 3, Host controller, Driver version, hard drive read/write speeds, Operating System). On average, if using a USB 3.0 port, speeds should be from 80+ MB/s for a newer rotating drive and 250+ MB/s for a newer SSD version. If you are experiencing lower than expected speeds, check to make sure you have the latest host controller driver available. If you are getting considerably less, make sure that you are plugged into a USB 3 port. USB 3 ports use a blue center contact.

Q: Is there any way to recover my data if I forget the PIN?

A: If an Admin PIN has been previously set, the Admin PIN can be used to unlock the drive and recover the data. If you forget the PIN and do not have an Admin PIN, the drive can be re-set so it can be used again, but the data cannot be recovered.

Q: How does this Padlock drive differ from other Apricorn Padlocks?

A: The Padlock SSD is designed to meet a higher security that is approved for government and military use. Longer and more complex PINs, more ruggedized design and a built-in self-test are just some of the features that make this design unique.

Q: Why do the LEDs blink Blue, Red and Green after I plug the drive in?

A: When you first plug the drive in, it does a self-test on the encryption components of the drive. If any component fails the test, the LED will stop on RED and the drive will not function.

Q: What is FIPS 140-2?

A: This is a government standard to accredit cryptographic modules. The government regulates certain industries that collect, store and/or transfer sensitive data to use security that meets this standard. For a general explanation: http://en.wikipedia.org/wiki/FIPS_140-2

Q: Why does the LED indicate an error when I try to change the PIN?

A: PIN requirements for this drive are must meet a minimum security level. There are several combinations that are not allowed, such as, all repeating numbers, sequential number going up or down. The PIN must also be a minimum of 7 digits and cannot be longer than 16 digits.

Q: What are the ECCN and HST codes used for shipping this device outside the US?

A: ECCN: 5A992A and HTS code 8473.50.3000

Technical Support

Apricorn provides the following helpful resources for you:

1. Apricorn's Website (**http://www.apricorn.com**)

This gives you the ability to check for up-to-date information

2. E-mail us at **support@apricorn.com**

3. Or call the Technical Support Department at **1-800-458-5448**

Apricorn's Technical Support Specialists are available from 8:00

a.m. to 5:00 p.m., Pacific Standard Time Monday through Friday

Warranty and RMA information

Three Year Limited Warranty:
Apricorn offers a 3-year limited warranty on the Aegis Padlock against defects in materials and workmanship under normal use. The warranty period is effective from the date of purchase either directly from Apricorn or an authorized reseller.

Disclaimer and terms of the warranties:
THE WARRANTY BECOMES EFFECTIVE ON THE DATE OF PURCHASE AND MUST BE VERIFIED WITH YOUR SALES RECEIPT OR INVOICE DISPLAYING THE DATE OF PRODUCT PURCHASE.

APRICORN WILL, AT NO ADDITIONAL CHARGE, REPAIR OR REPLACE DEFECTIVE PARTS WITH NEW PARTS OR SERVICEABLE USED PARTS THAT ARE EQUIVALENT TO NEW IN PERFORMANCE. ALL EXCHANGED PARTS AND PRODUCTS REPLACED UNDER THIS WARRANTY WILL BECOME THE PROPERTY OF APRICORN.

THIS WARRANTY DOES NOT EXTEND TO ANY PRODUCT NOT PURCHASED DIRECTLY FROM APRICORN OR AN AUTHORIZED RESELLER OR TO ANY PRODUCT THAT HAS BEEN DAMAGED OR RENDERED DEFECTIVE: 1. AS A RESULT OF ACCIDENT, MISUSE, NEGLECT, ABUSE OR FAILURE AND/OR INABILITY TO FOLLOW THE WRITTEN INSTRUCTIONS PROVIDED IN THIS INSTRUCTION GUIDE: 2. BY THE USE OF PARTS NOT MANUFACTURED OR SOLD BY APRICORN; 3. BY MODIFICATION OF THE PRODUCT; OR 4. AS A RESULT OF SERVICE, ALTERNATION OR REPAIR BY ANYONE OTHER THAN APRICORN AND SHALL BE VOID. THIS WARRANTY DOES NOT COVER NORMAL WEAR AND TEAR.

NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, HAS BEEN OR WILL BE MADE BY OR ON BEHALF OF APRICORN OR BY OPERATION OF LAW WITH RESPECT TO THE PRODUCT OR ITS INSTALLATION, USE, OPERATION, REPLACEMENT OR REPAIR.

APRICORN SHALL NOT BE LIABLE BY VIRTUE OF THIS WARRANTY, OR OTHERWISE, FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGE INCLUDING ANY LOSS OF DATA RESULTING FROM THE USE OR OPERATION OF THE PRODUCT, WHETHER OR NOT APRICORN WAS APPRISED OF THE POSSIBILITY OF SUCH DAMAGES.