



**Product Support Program FAQ
EFIS-D6, EFIS-D10A, EFIS-D60, EFIS-D100,
EMS-D10, EMS-D120, FlightDEK-D180, HS34
Revision D - December, 2015**

Scope

This document is a supplement to the following Dynon Avionics Installation Manuals regarding the Dynon Avionics Product Support Program (PSP):

- EFIS-D6, Revision A
- EFIS-D10A, Revision J
- EFIS-D60, Revision A
- EFIS-D100, Revision H
- EMS-D10, Revision I
- EMS-D120, Revision H
- FlightDEK-D180, Revision H
- (HS34 Installation is incorporated into EFIS-D10A, EFIS-D100, and FlightDEK-D180 Installation Manuals)

To download the most recent firmware update for your Dynon Avionics unit, go to <http://downloads.dynonavionics.com>.

To download the most recent Installation Manual and Pilot User Guide for your Dynon Avionics unit, go to <http://docs.dynonavionics.com>.

Revision History:

- Revision A – Initial version, unofficial
- Revision B – Revised version, unofficial
- Revision C – Minor inconsistencies and formatting updated, unofficial
- Revision D – (This version)
 - Extensively rewritten incorporating a large number of Frequently Asked Questions (FAQs) and scenarios
 - Extensively reviewed by Dynon Avionics Technical Support
 - Supplement to Dynon Avionics Installation Manuals
 - Current firmware version – v5.6

Dynon Avionics Product Support Program FAQ

1. What is the Dynon Avionics Product Support Program?

The Dynon Avionics Product Support Program (PSP) is a Windows application program, typically installed on a laptop computer, which provides the following functions:

- Detect Firmware Version – electronically queries, and displays, the version and Serial Number (S/N) of each Dynon Avionics unit that communicates over the DSAB (Dynon Smart Avionics Bus) network¹.
- Update Firmware
- Create Firmware Backup – also backs up the unit’s configuration (user) settings
- Upload Firmware Backup
- Configure Checklists / Data Panels
- Retrieve Logged Data

Note that the Dynon Avionics Product Support Program is not used for the Dynon Avionics SkyView system.

2. Why should I, why do I need to, update firmware on my Dynon units?

Dynon Avionics has added new features to their products solely by updating the firmware. For example, when our EFIS units were originally released, there was no AP capability. By updating the firmware, you could then have an AP by just adding Dynon Avionics servos to your Dynon Avionics EFIS-D10A, EFIS-D100, or FlightDEK-D180. Every new firmware version also includes bug fixes.

To see what new features and bug fixes might be available by upgrading the firmware on your Dynon Avionics unit, go to http://www.dynonavionics.com/docs/support_software.html and click on Release Notes for your unit. For example, if your Dynon Avionics EFIS unit has v5.5.0 firmware, v5.6.0 is available which fixes a bug about compass calibration in tail dragger aircraft.

¹ The Product Support Program can query and update the EDC-D10A Remote Magnetometer, which communicates over a dedicated communications line; it does not communicate via the DSAB network.

3. I use a Mac; I don't *have* a Windows laptop. What are my options?

I'm not a "Windows person" – I use an Apple Mac computer and don't really know how to use Windows. I don't want to buy an expensive new Windows laptop just to update the firmware on my Dynon Avionics units. Do I have any options besides pulling it out of the panel and shipping it back to Dynon Avionics?

We'll get this out of the way up front ☺. Technically... if you have a Mac laptop made in the last five years or so, it *can* run Windows as an option using the Apple Bootcamp program to install Windows in a separate "partition" on the laptop's disk drive. If you do so, every time you boot up your laptop, you'll have a choice of booting up Mac OS or Windows. If you want to install Bootcamp and Windows, contact Apple Support, or talk to someone at the "Genius Bar" at an Apple Store. Note that you'll have to buy a "retail" version of Windows. But, most Mac users don't bother to do so (just for running the Product Support Program).

For very occasional use of Windows such as updating firmware on your Dynon Avionics units, buying a very inexpensive Windows laptop is probably a better (and cheaper) option than installing Bootcamp and Windows on your Mac laptop. Amazon.com usually has inexpensive, sometimes used or remanufactured, Windows laptops available for < \$100. Go to Amazon.com and search for "Windows Netbook".

4. *How do I update / connect to my Dynon Avionics unit (with the PSP)?*

Your Dynon Avionics unit includes provisions for an RS-232 serial port. If you purchased a wiring harness for your EFIS unit or EMS unit from Dynon Avionics², it includes a 3-wire cable terminating in a female 9-pin connector, which is often "tucked up" behind the panel or installed on the panel (or in the glovebox), etc. If you do not have such a cable as part of your Dynon Avionics system, to communicate with the Product Support Program in the aircraft, this cable must be *added* to your unit's wiring harness.

² Dynon Avionics does not supply a harness for the HS34 or the AP74.

Dynon Avionics Product Support Program FAQ

Most modern Windows laptop computers do not have a built-in RS-232 serial port. The solution is to plug in a “USB to Serial Converter” – a short cable that has a USB connector on one end, and a male 9-pin connector on the other end. Dynon Avionics sells one – P/N 100512-000, \$20 (shown at right). You can purchase one by calling Dynon Avionics Sales at 425-402-0433 or visiting <http://store.dynonavionics.com>. Please note that the USB to Serial Converter you use with your Dynon Avionics unit does not have to be purchased from Dynon Avionics – any USB to Serial Converter *that can be installed properly on your Windows computer* (including the driver software included with that unit) is acceptable.



Dynon Avionics P/N 100512-000

5. How do I get help for using the Product Support Program?

The Dynon Support Program has a built-in Help feature, accessed by clicking on the on-screen **Help Button**, which brings up a screen with a great deal of useful information on using the Product Support Program. Please refer to the built-in Help feature whenever your questions cannot be found in this FAQ.

6. Equipment / Software Required:

- Internet access to download the Dynon Product Support Program to the Windows laptop computer. Internet access may also be required to assist in loading the “driver software” for the USB to Serial Converter. After that is completed, Internet access is not required.
- Windows laptop computer with Windows XP, Vista, 7.0, 8.0, 8.1, or 10, 32-bit or 64-bit.
- USB to Serial Converter.
- USB to Serial Converter driver software, installed and working on the Windows laptop.
- Dynon Avionics Product Support Program, downloaded from http://dynonavionics.com/docs/support_software_110713.html and installed on the Windows laptop computer (can be done prior to updating the unit).
- 3-wire female 9-pin from the Dynon Avionics unit (the “update cable”)
- External power for avionics bus and laptop computer; updates can take some time; do not rely solely on the aircraft and laptop battery to perform updates.

7. Getting Started:

Dynon Avionics units that require individual connection and updating are:

- EFIS-D6
- EFIS-D10A
- EFIS-D60
- EFIS-D100
- EMS-D10
- EMS-D120
- FlightDEK-D180
- HS34

Dynon Avionics units that are updated through the EFIS unit (do not require individual connection, individual update) are:

- EDC-D10A (remote magnetometer / compass)
- AP74 (autopilot control head)
- Servos (all)

1. The USB to Serial Converter will not function without “driver software” loaded “into” Windows and operating correctly. “Driver software” allows your computer to communicate with new hardware or devices. Without driver software, the hardware you connect to your computer — for example, a video card or a printer, will not function – Windows cannot “talk to” the newly installed hardware.

In ideal circumstances (typically, with newer versions of Windows), Windows performs this step automatically when you plug in the USB to Serial Converter. To do so, Windows may require Internet access to retrieve suitable driver software. If, after you plug in your USB to Serial Converter, Windows displays a message such as “new software installed”, try the following steps – Windows may well have installed the driver software correctly.

However, you may have to install the driver software manually. If you bought your USB to Serial Converter from a computer store, install the driver software that came in the package. If you bought your USB to Serial Converter from Dynon Avionics, install the

Dynon Avionics Product Support Program FAQ

driver software from our website –

http://dynonavionics.com/docs/support_software.html.

2. Download and install Dynon Avionics Product Support Program from the Dynon website: http://www.dynonavionics.com/docs/support_software_110713.html. Please read the directions carefully during the installation process. After the Product Support Program has been installed on your Windows laptop, an icon will appear on your “Desktop” and and/or your “Task Bar” (depending on the options you selected during installation) that is labelled “Dynon Support Program”.
3. Locate the “update cable” on your Dynon Avionics unit(s) to be updated. On harnesses manufactured and sold by Dynon Avionics, and most panel builders and aircraft manufacturers, there is a ~ 3 foot, three-wire cable (Black, Orange, Red wires) ending in a Female 9-pin “DSUB” connector. This cable is usually tucked up behind the panel, out of the way. In some aircraft the 9-pin connector is actually installed on the panel, or in the glovebox. If you cannot find it, start from:
 - a. On EFIS units and the FlightDEK-D180, the male 25-pin connector
 - b. On EMS-D10 and EMS-D120 units, the 37-pin connectorand try to locate this cable. Once you locate this cable, connect it to the USB to Serial Converter.
4. The FlightDEK-D180, because it is both an EFIS and an EMS, has 2 “update cables” – one connected to the 37-pin connector, and one connected to the male 25-pin connector. *On the FlightDEK-D180, only the “update cable” connected to the male 25-pin connector can be used to update the unit.*
5. On the HS34, the “update cable” (if included) will be connected to the male 25-pin connector on the HS34. Because Dynon Avionics does not offer a premade harness for installing the HS34, it’s (unfortunately) not uncommon that the aircraft builder or panel builder does not include (build in) the 3-wire cable for updating the HS34; in such cases, the HS34 harness must be modified to add the 3-wire update cable – see the HS34 section in your EFIS manual for details.
6. If you cannot locate the update cable for your Dynon Avionics unit, consult with the aircraft manufacturer, aircraft dealer (if professionally manufactured), or the original aircraft builder to determine if, and if so, where the cable is located. If the update cable does not exist (was never installed) as part of the harness for your Dynon Avionics unit, it will have to be added to update the unit in the aircraft. (There is no alternative method to update your Dynon Avionics unit in the aircraft.) The required technical information for adding the “update cable” is included in your unit’s Installation Manual.
7. Plug in the USB to Serial Converter into your laptop and turn on the laptop. Start up the Dynon Avionics Product Support Program.
8. Power on your Dynon Avionics system – selectively:

Dynon Avionics Product Support Program FAQ

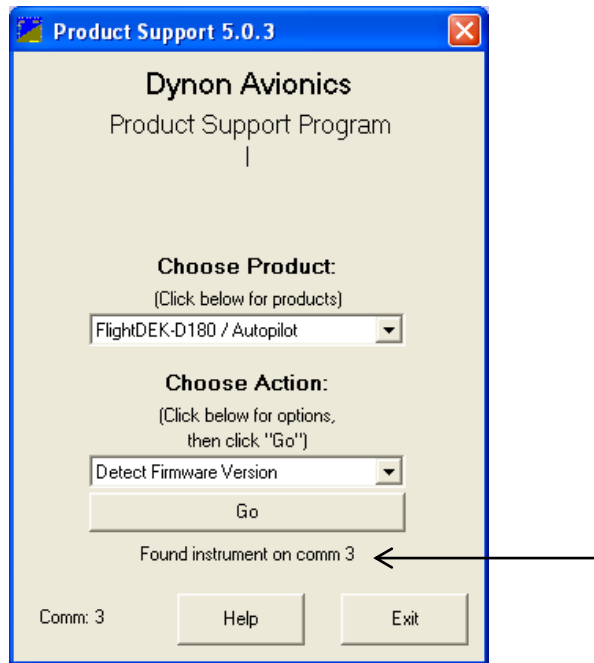
- a. If you have a Dynon Avionics AP (AP74 and servos), and you are updating the EFIS unit (EFIS-D10A, EFIS-D100, FlightDEK-D180) make sure those units are also powered on. Typically you turn on the AP breaker or power switch. The AP74 (if installed) and the servos cannot be updated if they are not receiving power during the update process.
 - b. If you are updating an EFIS unit and also have an EMS unit (EMS-D10, EMS-D120), power off the EMS unit by pushing and holding Button #1.
 - c. If you are updating an EMS unit and also have an EFIS unit (EFIS-D10A, EFIS-D100), power off the EFIS unit by pushing and holding Button #1.
 - d. If you are updating an HS34 unit, power off the EFIS unit (and the EMS unit, if installed) by pushing and holding Button #1 on the EFIS unit and Button #1 on the EMS unit.
9. If you have a GPS or SL30 connected to your Dynon Avionics system, we have observed that GPS or SL30 units remaining connected can interfere with the update process... sometimes to the point that firmware updates can become corrupted, requiring the unit to be returned to Dynon Avionics for repair.
- a. If you have an HS34 in your system...
 - i. The GPS and/or SL30 are connected to serial ports on that unit; the GPS and/or SL30 are not connected directly to the EFIS unit.
 - ii. To update the HS34, whatever device (SL30 or GPS) is connected to Serial 1 (Pin 1 of Male 25-pin connector) must be temporarily disconnected as this is the serial port used for firmware updates.
 - b. If you don't have an HS34 in your system...
 - i. And you have an EFIS-D6, EFIS-D60, EFIS-D10A, or EFIS-D100, the GPS or SL30 must be disconnected because the EFIS units share the serial IN connection for GPS data / SL30 data AND the cable used for firmware updates.
 - ii. And you have a FlightDEK-D180 and have *both* a GPS and an SL30 connected, the unit (GPS or SL30) connected to the **EFIS serial port** (the 25-pin connector) must be disconnected because the "EFIS serial port" (the 25-pin connector) shares the serial IN connection for GPS data / SL30 data AND the cable used for firmware updates.
10. At this point you are ready to connect your computer to your Dynon Avionics unit using the USB to Serial Converter.

Dynon Avionics Product Support Program FAQ

Once everything is powered up:

11. Once everything is connected and powered up, in the Product Support Program, under the GO button, the words “Found instrument on comm (x)”. This means the Dynon Avionics unit is communicating with the Product Support Program.

Do not proceed if you do not see this message! Refer to Troubleshooting Tips.



12. Under **Choose Product:** click on the dropdown menu to select the Dynon Avionics unit that you are connected to.
 - a. Note that the EFIS-D10A, EFIS-D100, and FlightDEK-D180 are listed as
EFIS-D10A / Autopilot
EFIS-D100 / Autopilot
FlightDEK-D180 / Autopilot
If you have an EFIS-D10A, EFIS-D100, or FlightDEK-D180 *without a Dynon Avionics Autopilot (no AP74 and/or no servos)*, it is acceptable to select these options.
13. Under **Choose Action:** click on the dropdown menu. Note that the default “action” is “Detect Firmware Version”, and we recommend that you do this action *first*.
 - a. Detect Firmware Version is a “read-only” operation, thus “non-destructive”. It serves to test the entire communication path – Windows PC, the USB to Serial Converter, the driver software, and the Dynon Avionics unit.

Dynon Avionics Product Support Program FAQ

- b. If everything is working, after a brief pause, a pop-up window will appear listing the unit, S/N, and firmware version and also any devices that are connected to it.
 - c. If “Detect Firmware Version” does fail (something *is* wrong with the communication path) the Dynon Avionics unit will recover gracefully by powering off / powering on the unit – see Troubleshooting Tips (next section).
14. Click on the **Go** button. After **Go** is clicked, the display on the Dynon Avionics unit will turn Yellow and the “action” will be processed – firmware update, datalog downloaded, etc.

If you have the following connected:	You should see S/Ns and firmware version for:
EFIS-D6 or EFIS-D60	The EFIS unit and the EDC-D10A
EFIS-D10A, EFIS-D100, FlightDEK-D180 with no AP74, no servos	The EFIS unit and the EDC-D10A
EFIS-D10A, EFIS-D100, FlightDEK-D180 with servos and/or AP74	The EFIS unit, EDC-D10A, servos, and AP74 (if installed)
EMS-D10 or EMS-D120	The EMS unit
HS34	The HS34

15. If you are performing a firmware update, we recommend that you **DO** perform the firmware backup, as prompted, prior to proceeding with the firmware backup. Put the firmware backup in a safe place. Copying the firmware backup to a USB flash drive is a good place to save it to be filed away with the aircraft’s records.

8. Troubleshooting Tips

I was loading my firmware and my Dynon Avionics unit is now stuck on a yellow screen, and says to call Dynon Avionics!

If the operation you were performing was a “read only” operation such as:

- Detect Firmware Version
- Create Firmware Backup
- Retrieve Logged Data

Dynon Avionics Product Support Program FAQ

... turn off power to the unit. If your EFIS unit has an internal backup battery installed (the unit stays on after you turn off power), unfortunately, you'll have to disconnect the battery. To do so, the unit must be removed from the panel to access the battery compartment. Disconnect the battery for a few seconds, the unit will power off, resetting the unit.

Alternatively, you can wait an hour or so for the battery to run down. Normally the backup battery will recharge with approximately 3-4 hours of flying.

Turn on power and the unit should boot up normally. If the problem persists contact Dynon Avionics Technical Support (see below).

If the operation you were performing was a "write" operation, such as:

- Update to Firmware ver. x.x.x
- Upload Firmware Backup
- Configure Checklists/Data Panels

... There is significant risk from an interruption in the "write" operation that the unit's firmware can be corrupted and would need to be returned to Dynon Avionics for repair. Try the following steps:

- If a GPS unit is still connected, but just powered off, disconnect the GPS (applicable only to a GPS unit connected to an EFIS-D10A or EFIS-D100)
- Close the Product Support Program
- Shut down the Windows laptop (not sleep – shut it down completely).
- Power on the Windows laptop
- Restart the Product Support Program
- Restart the operation you were previously attempting when the Yellow screen appeared.

If these steps do not help, if the problem persists, contact Dynon Avionics Technical Support (see below).

I am not seeing my Dynon Avionics unit connected to the Product Support Program.

(Product Support Program says "Please connect power on your instrument, and connect it to a serial port on this computer" or "Attempting Connection on Comm x" or [popup] Error connecting to (Dynon Avionics unit). Can't find instrument on any serial port. Please close any programs which may be using a comm or serial port.)

- Does your computer recognize the USB to Serial Converter? Verify the USB to Serial Converter drivers have been loaded and that you selected the correct driver for your computer's operating system (32-bit vs 64-bit). See the next item for how to access the Windows' Device Manger.

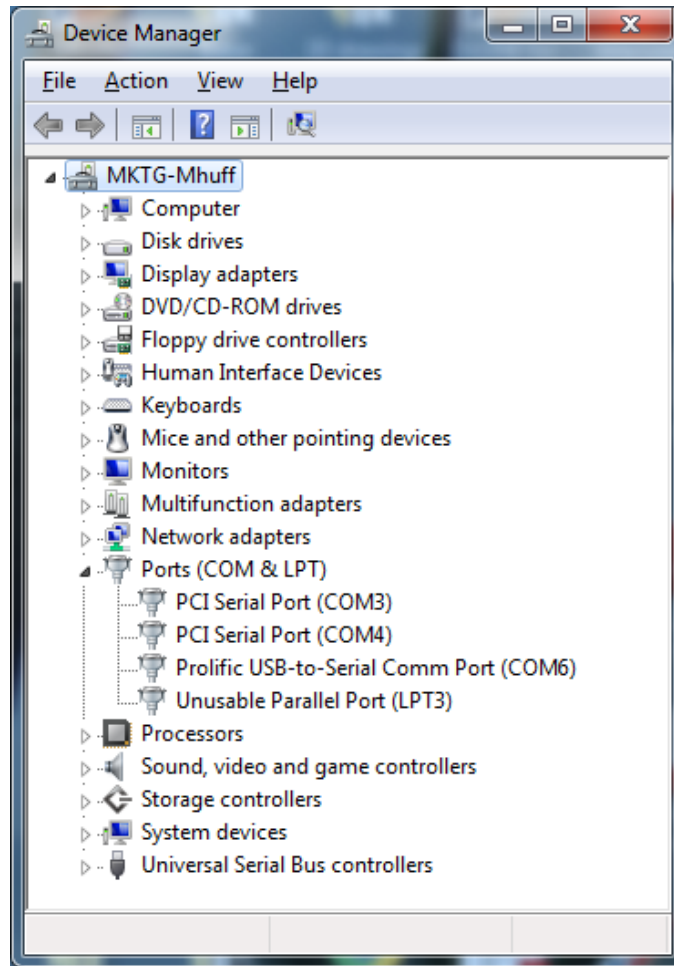
Dynon Avionics Product Support Program FAQ

- Verify the wiring of the “update cable” is correct. Perform a continuity test of the pins on the 9-pin connector to the 25-pin connector or 37-pin connector on the Dynon Avionics unit are correct – see your unit’s Installation Guide for the specific pins on each connector.
- If you have a GPS connected to your EFIS-D10A or EFIS-D100 (just powered off), completely disconnect the GPS unit.

How do I check that my USB to Serial Converter is being recognized by Windows (accessing Windows Device Manager)?

- All versions of Windows include a utility program called “Device Manager”. How to access Device Manager varies greatly in different versions of Windows.
 - In Windows 7, click on the icon in the lower left corner, click on Control Panel, click on “View by small icons”, then click on Device Manager.
 - In Windows 10, click on the icon in the lower left corner, click on Settings, click on Devices, scroll to the bottom of the page, click on Device manager.
 - If you have access to the Windows “command line”, type **devmgmt.msc** (which is the actual filename of the Device Manager utility).
- After the Device Manager is displayed, click on “Ports (COM & LPT)”. If there is no entry for “Ports (COM & LPT)”, the “driver software” for your USB to Serial Converter has not been correctly installed (or the USB to Serial Converter is not plugged in; also you can try a different USB port). Try reinstalling the USB to Serial Converter’s driver software.
- Under “Ports (COM & LPT) you should see “Prolific USB to Serial Comm Port”. If you see a Yellow ? to the left of this line, that means that there is a problem with the driver software, such as loading the incorrect software.
- Check that the “COMx) is not a number higher than 10 – the Product Support Program will not recognize a “COM port” with a value higher than 10. You can change the COM port” number by right-clicking on this line.
- In the example below, Windows has automatically assigned the USB to Serial Converter to COM6.

Dynon Avionics Product Support Program FAQ



I have a Dynon Avionics USB to Serial Converter and I’m trying to download the driver software from your website. You have a “32-bit” and “64-bit” version – how do I know which one to download and install?

In Windows 7 (and earlier versions), click the icon in the lower left corner, click Control Panel, click “View by small icons”, click System. The line “System type” will say either 32-bit operating system, or 32-bit operating system.

In Windows 10, click the icon in the lower left corner, click Settings, click System, then click About. The line “System type” will say either 32-bit operating system, or 32-bit operating system.

I have Windows 7 and it seems to automatically install its own driver for the USB to Serial Converter, but the USB to Serial Converter doesn’t work.

We have been told by several customers that Windows 7 does seem to automatically install a driver for a USB to Serial Converter as soon as it is plugged in, and sometimes the driver that

Dynon Avionics Product Support Program FAQ

Windows 7 loads is incorrect. When in doubt, load the driver from the media (CD-ROM, etc.) that came with the USB to Serial Converter (assuming that it's for the correct version of Windows; don't load a "Windows 95" driver onto a "Windows 7" PC). To correct this situation, delete the incorrect driver and load the correct driver. It may be necessary to do this several times.

I bought a USB to Serial Converter with my Dynon Avionics units years ago. I don't have the old laptop computer I used to update my system years ago. I just bought a new Windows laptop (or borrowed a buddy's Windows laptop), but my old USB to Serial Converter won't work on it.

If your USB to Serial Converter has a Blue plastic 9-pin connector, changes in Windows as of Windows 8 (and later versions) caused this type of USB to Serial Adapter to no longer function. USB to Serial Converters currently sold by Dynon Avionics (P/N 100512-000, \$20) do work with all versions of Windows. You can also buy a USB to Serial Adapter from any electronics retailer.

I can't find a USB to Serial Converter, but my computer store has a USB to Serial Adapter. Will that work?

Yes, USB to Serial Converter and USB to Serial Adapter are equivalent terms for the same device.

Do I have to update all my Dynon Avionics units? Mostly I wanted to update my EMS so I can use a newer type of oil pressure or fuel pressure sensor?

No, but... If you have connected your Dynon Avionics units to communicate over "DSAB", for example to display the EMS screen as a partial screen on your EFIS unit, then all the Dynon Avionics units must have the same version of firmware installed. If you do not have your units connected together, or don't care about "screen sharing" and other communication between the units, just update the units that absolutely require it.

I can't update my unit because my aircraft manufacturer "locked down" some settings.

Try contacting your aircraft manufacturer first – they probably developed a special version of the Product Support Version software / settings / special configuration, or special procedure to update your unit.

Dynon Avionics Product Support Program FAQ

My Windows laptop went to sleep and the firmware update froze. Suggestions?

As recommended above, whenever possible, connect your Windows laptop to AC power so it's not running on batteries (and trying to conserve battery power by going into sleep mode). You can also manually disable sleep mode – usually in the “Power” or “Battery” sections of the Windows Control Panel.

My firmware update is working, but it's running really, really slow, like taking more than 45 minutes. Suggestions?

We've heard this complaint from several customers and the problem seems to be that the antivirus program installed on the Windows laptop is interfering with the communications process, slowing it down. You can usually temporarily disable your antivirus program for situations such as this. If this Windows laptop is your primary computer, used for other things, remember to re-enable the antivirus program when you're done using the Product Support Program.

My Product Support Program is behaving oddly. None of the above suggestions have helped – everything seems to be OK (driver software installed correctly, etc.), I've checked my cable, I've replaced the USB to Serial Converter. I just cannot get my Windows laptop to connect to my Dynon Avionics unit.

It's possible that there was some problem with the installation of your Product Support Program (but this is rare). What follows is a somewhat complex procedure – you might want to get some help from someone with computer expertise. To completely reinstall the Dynon Support program and remove all traces of its past existence:

1. Close the Product Support Program.
2. Click on the icon in the lower left corner, click on “Control panel” or “Apps & features” click on “Uninstall a program” or the program name (Dynon Support x.x.x), click “Uninstall”.
3. To remove some of the configuration files, hold the Windows key (Windows logo) on your keyboard and press the "r" key. A dialog box should appear in the lower left hand corner of your computer. Type “%appdata%” (without the quotes), then press the Enter key. A window with a list of folders should appear. One of the folders should be labeled “Dynon Support”. Select that folder and delete it.
4. If you have antivirus software installed, temporarily disable it so that it won't interfere with the installation of the Product Support Program.
5. Reinstall the latest version of the Product Support Program.

Dynon Avionics Product Support Program FAQ

I tried installing the Product Support Program, but a message popped up that said “Do you want to allow this app from an unknown publisher to make changes to your PC? Dynon_Support_xxx.exe”. What should I do?

The Product Support Program was developed before it was common to “cryptographically sign” application software for assurance that downloaded software is from a reputable company. As long as you downloaded the Product Support Program file directly from the Dynon Avionics website (dynonavionics.com) or your aircraft manufacturer, or another *trusted* source, click **Yes**.

My EFIS unit got stuck on the Yellow screen, and you said *Alternatively, you can wait an hour or so for the battery to run down. Normally the backup battery will recharge with approximately 3-4 hours of flying.* I’ve been flying for more than 3-4 hours since then, and when I shut off my avionics power, my EFIS unit doesn’t stay on for 30 seconds like it used to. I don’t think my backup battery is working.

The typical lifetime for an EFIS unit backup batteries is 3-5 years, and they are warrantied for 3 years. If your EFIS unit backup battery is < 3 years old, contact Dynon Avionics Technical Support for a Return Material Authorization (RMA) – see below. If your EFIS unit backup battery is > 3 years old, buy a new battery – call Dynon Avionics Sales – 425-402-0433, or go to <http://store.dynonavionics.com>. EFIS unit backup battery is P/N 1000096-000, and the cost is \$130.

When doing a firmware update, I got impatient, or my wing is temporarily off the aircraft with the AP servo, and the servo didn’t get updated with the rest of my units. How do I do update the servo?

Ensure that the wiring is reconnected, and the servo is receiving power.

Then, re-do the EFIS unit firmware update. The Product Support Program will inform you that the EFIS unit has already been updated – do you want to proceed. Choose **YES**. The Product Support Program will skip the update to the EFIS unit and check the firmware versions of the AP74 (if installed) and the servos; any of those units that have an earlier version of firmware will be updated.

One of my Dynon Avionics units to repaired, and now my other units don’t communicate.

Ensure that the wiring is reconnected, and servo(s) are receiving power.

Then, re-do the EFIS unit firmware update. The Product Support Program will inform you that the EFIS unit has already been updated – do you want to proceed. Choose **YES**. The Product Support Program will skip the update to the EFIS unit and check the firmware versions of the

Dynon Avionics Product Support Program FAQ

AP74 (if installed) and the servos; any of those units that have an earlier version of firmware will be updated.

When trying to do a firmware update, a message appeared “Cannot communicate with Chip #4”. What do I do?

This is an internal error in the unit you are trying to update. The most common cause for this error message is that you did not power off the EMS unit (if updating an EFIS unit) or did not power off an EFIS unit (if updating an EMS unit) or didn't power off both EMS unit and EFIS unit when you're updating an HS34. To power off the EFIS unit or the EMS unit, push and hold Button 1.

Then, close (exit) the Product Support Program, power off the laptop (power off, don't just put it to sleep / close the lid). Power off the Dynon Avionics units (turn off avionics power). Then, start over.

None of your instructions / suggestions work. I give up! I just cannot get my Dynon Avionics unit to talk to the Product Support Program. Now what?

We're sorry that it wasn't possible to get the Product Support Program talking to your Dynon Avionics unit.

The next-to-last resort for updating your Dynon Avionics unit is to try a different Windows computer. Sometimes there is internal hardware, such as a “Bluetooth” adapter, or installed software, such as other driver software, that interferes with a serial port.

The *last* resort for updating your units is to send them back to Dynon Avionics (or, perhaps your dealer, especially if you're outside the US) to be updated. Although Dynon Avionics will perform a firmware update at no cost, we do ask that you pay for return shipping.

There are some limitations you need to be aware of:

- If you have other Dynon Avionics units in your aircraft that are networked (via DSAB) to the unit you'll be sending back for update, the unit with the updated firmware won't be able to communicate with the other units until the other units are updated to the same version of firmware.
- If the unit to be updated at the Dynon Avionics factory is an EFIS-D10A, EFIS-D100, or FlightDEK-D180, and you have a Dynon Avionics AP – AP 74 (optional), one, or two servos... the AP will no longer function because the AP74 (if installed) and the servos will still have the older firmware version, and thus will not be able to communicate with the EFIS unit. Once the EFIS unit is updated to the newer firmware, it's worth re-trying to perform an update to update the AP74 and the servos (with the newer firmware, the update may just work better).

9. Frequently Asked Questions (and Some Answers)

What is “firmware”?

Firmware is engineering terminology for “software that is embedded into a hardware product” such as used internally in Dynon Avionics products.

What is Detect Firmware Version?

As explained above, this action verifies the firmware version and S/N of the Dynon Avionics unit you are connected to. If there are “accessories” connected to the unit (such as an EDC-D10A remote magnetometer / compass), information for that unit will also be reported.

What is Upgrade to Firmware ver. x.x.x?

This action installs a newer version of firmware (updates firmware) onto your Dynon Avionics unit (and any connected accessories). The firmware version of the Product Support Program is shown on the “top bar” of the Product Support Program; example Product Support 5.6.0.

The Product Support Program will only allow you to update your Dynon Avionics unit to a newer version of firmware – it will not allow you to install an older version of firmware. The Product Support Program will allow you to install the same version of firmware... though that is rarely needed, or effective.

As of the release of this revision, the most recent version firmware and Dynon Avionics Product Support Program is v5.6.0, released in August, 2015.

If a new firmware version is released, you will find it at http://dynonavionics.com/docs/support_software.html.

What is Create Firmware Backup?

This action creates a backup your firmware, settings, and calibrations which were performed on the Dynon Avionics unit. When Upgrade to Firmware ver. x.x.x. is performed, you are prompted to perform a Firmware Backup as part of that action.

What is Upload Firmware Backup?

This action loads a (previously saved) Firmware Backup file onto a Dynon Avionics unit.

This action will not work if the Dynon Avionics unit has been updated to a newer version of firmware, such as the unit failed, was returned to Dynon Avionics for repair, and as part of the repair the unit’s firmware was updated. In that situation, contact Dynon Avionics Technical

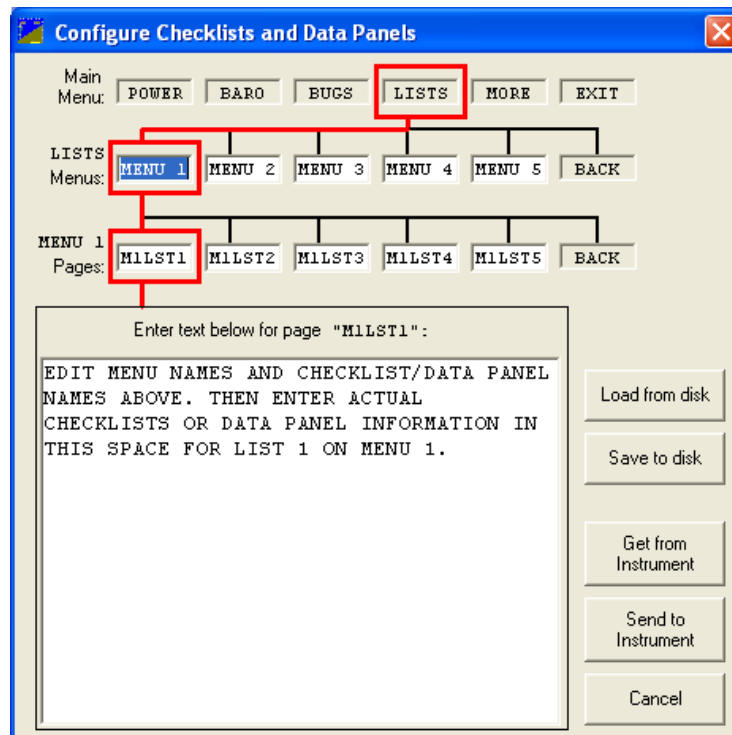
Dynon Avionics Product Support Program FAQ

Support (see below) to arrange to have your Firmware Backup file to be converted to a “Settings Backup” file which *can* be loaded onto a Dynon Avionics unit with a newer version of firmware.

What is Configure Checklists/Data Panel?

The Dynon Avionics EFIS-D10A, EFIS-D100, and FlightDEK-D180 can display customized checklists and data panels.

Checklists and data panels are composed, customized, and updated in the Product Support Program. You do not need to be connected to your Dynon Avionics unit, except to upload the completed checklists and data panels to your EFIS-D10A, EFIS-D100, or FlightDEK-D180. Checklists and data panels can be included under five user-defined categories and each category can contain up to five checklists or data panels. By default the EFIS-D10A, EFIS-D100, and FlightDEK-D180 is loaded with the following categories: CHKLST, RADIO, POH, EMGNCY and MISC (which can be changed and customized). Each checklist or data panel can contain up to 40 characters per line, and up to 14 lines. For more details, see the EFIS-D10A, EFIS-D100, or FlightDEK-D180 Pilot’s User Guide. The feature set of the EFIS-D6 and EFIS-D60 does not include checklists and data panels.



What is Retrieve Logged Data?

This action “downloads” a datalog from the internal memory of an EFIS-D10A, EFIS-D100, EMS-D10, EMS-D120, and FlightDEK-D180 can optionally include a datalog internally. The feature set of the EFIS-D6 and EFIS-D60 does not include datalogging.

Dynon Avionics Product Support Program FAQ

To record a datalog, it must be enabled – see the Pilot’s User Guide of your Dynon Avionics unit for details.

The datalog is a “circular buffer” – the oldest data in the datalog is overwritten by newer data, up to the limits of the datalog. The overwriting action occurs any time the unit is powered on, not just in flight. If the datalog in your unit is set to one hour, and your unit is powered on for an hour or more prior to attempting to download the datalog, the data from the actual flight will have been overwritten. Thus, if there is important data to be downloaded (such as data needed by Dynon Avionics Technical Support for troubleshooting an engine or AP issue), after landing, turn the unit off until just before you attempt to download the datalog.

The datalog downloaded from an EFIS-D10A and EFIS-D100 is only flight data (even if an EMS unit is connected via the DSAB network). The datalog from an EMS-D10 and EMS-D120 is only engine data. When downloading a datalog from a FlightDEK-D180, separate flight data and engine data datalogs are downloaded.

Information for interpreting a datalog is included in the Pilot’s User Guide for the unit.

What is Configure Program Options?

These settings change the configuration / operation of the Product Support Program. Under normal circumstances, they should not be changed. If you have questions on these options, use the Help feature or contact Dynon Avionics Technical Support (see below).

Does updating firmware delete my checklist, settings, and calibrations?

Normally, you will not lose any checklists, settings, or calibrations by updating your firmware. However, we have had a (very) few reports of this happening. This is one of the reasons we recommend above to do the firmware backup when you’re prompted to do so.

Does Dynon Avionics have a program that interprets flight data and engine data datalogs?

No. The format of the flight datalog and engine datalog are described in the Pilot’s User Guide for the unit. Typically you can display, and plot, this data with a spreadsheet program such as Microsoft Excel. For analysis of engine data, you can also upload your engine datalog to SavvyAnalysis.com - <http://www.savvyanalysis.com>, which is a free web-based tool that provides analysis of engine data from a variety of engine datalogs, including datalogs from Dynon Avionics EMS units. Instructions for creating an account and uploading datalogs are on the SavvyAnalysis.com website.

10. Contacting Dynon Avionics Technical Support

Dynon Avionics Technical Support is available Monday through Friday, 7:00 AM to 5:00 PM Pacific Time Zone.

Phone – 425-402-0433, Option 2. If calling from outside the US, use Country Code 1.

If you call Technical Support, especially on a Monday, or around a holiday, your call may get routed to Voice Mail when a Tech Support staffer isn't immediately available. Please DO leave a voice mail message – we will call you back, even if you're outside the US. Please speak your telephone number slowly. If you're calling from outside the US, please include your country code as part of your telephone number. Please repeat your telephone number, slowly, at least twice. We *will* call you back. Really! (But, it might take a little while if we're really busy, or short-staffed.)

Email – support@dynonavionics.com

Many Dynon Avionics customers outside the US are able to use email better than telephone calls, such as sending photographs, or files. Using Google Translate (<http://translate.google.com>) we can sometimes work with customers who aren't conversant in English.

Before contacting Technical Support, please have the following information available. If you email Technical Support, please answer these questions in advance:

- Have you ensured that power is on to the unit? That the power is adequate (well-charged aircraft battery, sufficient AMPS available to operate the unit)?
- What was the action that you were attempting to perform?
- Have you been able to use the Product Support Program successfully in the past?
- Are you able to use the Product Support Program successfully with other Dynon Avionics units, and just cannot use it with one specific Dynon Avionics unit?
- The firmware version of the Dynon Avionics unit(s) you are trying to connect to (prior to an update)?
- The firmware version of the Product Support Program you're using.
- If an error message is appearing, please record the *specific wording* of the error messages. Photos are preferred – please ensure they're in focus.
- Are there any non-Dynon Avionics units connected to the Dynon Avionics unit you're attempting to connect to?
- Is the unit you're attempting to connect to connected (via DSAB) to other Dynon Avionics units? If yes, please list the other units.
- Confirm that you've verified that the harnesses, etc. are good.