REVISION	CHANGE	APPROVED	DATE				
0	Provisional release	JTS	02/12/2024	Airmas	ste	r	
1	Initial release	JTS	19/12/2024	/			
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APL-SI-0032

UPDATING DSD HUB FIRMWARE VERSION

PROCEDURE

🔡 Hub_Programmer 1.5	- 🗆 X
Airmaster	
Loader Control	ted to Hub
Binary file AC200hubBI 1 26	file Start
	Exit
General Information Upgrading AC200 Hub to version 1.26 from	version
Current Status	
Writing to target flash	Time (seconds)
Progress	
Diagnostics	
SendFlashCommand:Reboot requested id = 33874 Chip to bootload: LPC845 Opening file: A:\3 Production\3.1 Product & Parts\3.1.3 (\AC200hubBL_1_26.bin Filesize is: 51256 Ready to write to chip Writing to chip	Controllers\Brushless\software



1. TOPIC

1.1 Introduction

This instruction covers the procedure for updating the firmware version for an Airmaster DSD (Digital servo-drive) propeller hub. This task is completed using Airmaster flash software running on a Microsoft Windows PC and connecting to the AC300 controller. A laptop is recommended so that it may be taken to the controller inside the cockpit.

Hub firmware should only be updated when directed to by Airmaster.

1.2 Prerequisites

Complete the following tasks before proceeding:

 Ensure that PC is updated to include .NET Framework 3.5 <u>https://www.microsoft.com/en-us/download/details.aspx?id=21</u>

2. MATERIAL REQUIREMENTS

2.1 Parts

ITEM	QTY	PART NO.	DESCRIPTION	IMAGE
1.	1	A0117	USB-Serial Cable	90
2.	2	A0170 <i>x</i>	AC300 'SmartPitch' Controller	

2.2 Tooling

ITEM	QTY	DESCRIPTION	IMAGE
1.	1	MS Windows Laptop	Ĩ
2.	-	Hub Firmware Programmer (. <i>exe</i>)	
3.	-	Hub Firmware File (. <i>bin</i>)	BR

2.3 Paperwork

ITEM	QTY	CODE	DESCRIPTION
1.	1	AD-UNIVERSAL	DSD Hub Firmware & Parameters Sheet
2.	1	AD-UNIVERSAL	Airmaster Propeller Logbook

3. PROCEDURE

R0

3.1 Download Hub Firmware Programmer

Procedure: Downloading Hub Firmware Programmer

Step 1 Download Hub Firmware File

• Download the latest DSD hub firmware file (*.bin*) from the Airmaster website:

https://propellor.com/ac300-hub-firmware



Airmaster

AC300 Hub Firmware

Hub Firmware Update Utility (Winde

Update Utility

Step 2 Download Hub Firmware Programmer

 Download the latest version of the DSD hub firmware programmer from the Airmaster website:

<u>https://propellor.com/hub-firmware-update-</u> <u>utility</u>

Note

This application is only compatible with Microsoft Windows operating systems.

Step 3 Install USB Driver (As Required)

 When the USB-serial cable (A0117) is connected to a PC for the first time, the required USB driver must be downloaded:

Note

Generally, this task is completed automatically on Windows 10 operating systems.

- Visit link below and download the "Setup Executable" for your operating system. <u>https://www.ftdichip.com/Drivers/VCP.htm</u>
- Open the setup .zip file and choose a convenient folder to unzip the executable.
- o Confirm, accept, and finish the extraction.

Note

Check the COM port assigned to the USB-serial cable: Control Panel >Device Manager > USB Serial Port > Driver.



3.2 Update Hub Firmware

R0

🔺 Caution

Only update hub firmware when directed to by Airmaster.

Procedure: Updating Hub Firmware

💀 Hub_Programmer 1.5

Binary file

General Information

Current Status

Progress

Diagnostics

Trying serial port:COM Trying serial port:COM Trying serial port:COM

Upgrading AC200 Hub to version

Airmaster

from version

Step 1 Connect Controller to PC

- Plug USB-Serial cable (A0117) into USB port on PC.
- Plug USB-serial cable (4-way connector) into rear of controller [CN4].
- Turn on power supply to the controller by turning on the aircraft power.

Step 2 Run Application

• Run the hub firmware programmer.

Note

A warning window may appear before opening the programmer. This is normal, select More Info > Run Anyway.

Note

The program can't be run if another Airmaster application is open which is accessing the same COM port for the USB-serial cable.

• Press 'Connect'.

i Note

Port status should show "Connected to Hub".

Step 3 Load Firmware File

• Press 'Open File' and select the hub firmware file (.*bin*) downloaded.

Hub_Programmer 1.5	-		×
Airmaster			
Loader Control Connect Port Status Connected to Hub Binay file AC200hub BL_1_26 Open file		Start Exit	
General Information Upgrading AC200 Hub to version 1.26 from version			
Current Status		Time (secor	ıds)
Progress			
Diagnostics			
Trying serial port.COM1 Trying serial port.COM3 Trying serial port.COM7 Connected to Hub AC200Hub version:1.26		/	~
			,

×

Exit

Step 4 Start Firmware Update

R0

Press 'Start' to commence the automatic flash update.

👍 Caution

Do not interrupt the flash update as this may corrupt the hub PCB. Wait for the progress bar to complete to 100% before exiting the programmer.

Note

If the flash update does not start automatically, reset the controller by pressing the circuit breaker (FS1) located at the rear, then (promptly) start the flash update again.

Step 5 Close Programmer

• Exit the programmer once the flash update progress is 100% completed.

🔡 Hub_Programmer 1.5	-		\times		
Airmaster					
Loader Control					
Connect Port Status Connected to Hub					
Binary file AC200hubBL_1_26 open file		Start Exit			
General Information					
Upgrading AC200 Hub to version 1.26 from version					
Current Status	Tim		(a)		
Writing to target flash		17	10)		
Progress					
Diagnostics SendRashCommand:Reboot requested		^	1		
id = 33874 Chip to bootload. LPC845 Opening file: A\3 Production\3.1 Product & Parts\3.1.3 Controllers\Brushless\software \AC200hubBL_1_26.bin Filesize is: 51256 Ready to write to chip					
Vvinting to chip		¥			
🖳 Hub Programmer 1.5	_		×		
			~		
Airmaster					
Loader Control					
Connect Port Status Connected to Hub					
Binary file AC200hubBL_1_26 open file		Start Exit			
General Information					
Upgrading AC200 Hub to version 1.26 from version					
Current Status					

3.3 Subsequent Action

Perform the following tasks once this procedure is complete:

- Record firmware update in the propeller logbook.
- Check with Airmaster if any parameters must be adjusted for the new firmware version.
- Record, sign and date the updated "Hub Firmware Version" under a new column of the "DSD Hub Firmware & Parameters Sheet" (found in the propeller's assembly drawings booklet).

Finished

eady to write to chip /riting to chip... LASH COMPLETED! lapsed secs:76.082 sking Target to reboo

Progress

• Send an email to <u>support@propellor.com</u> stating the serial number of the propeller hub, as well as the previous and new hub firmware versions.

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