REVISION	CHANGE	APPROVED	DATE
1	Published release	JTS	29/05/2025
1a	Formatted for website PDF	JTS	25/11/2025

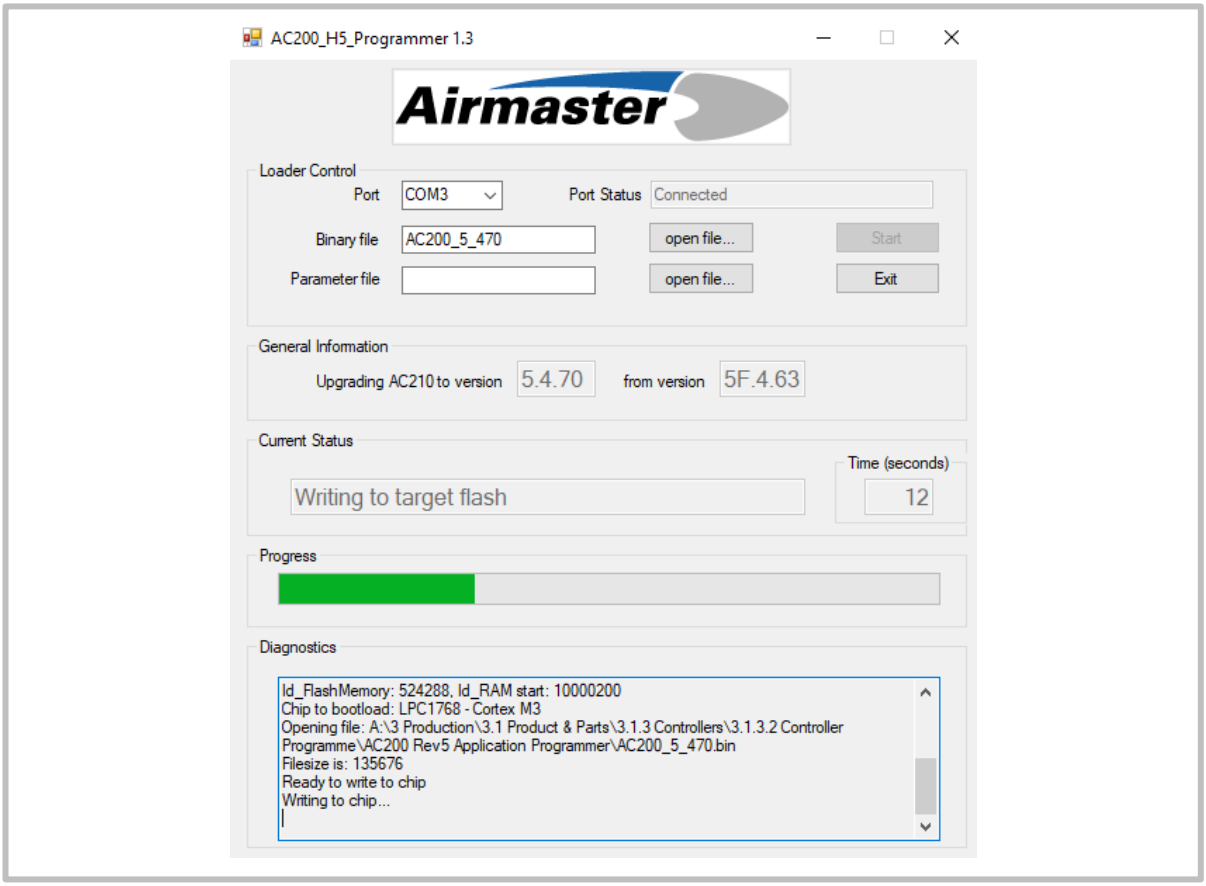
Airmaster Propellers Ltd
20 Haszard Rd, Massey,
Auckland 0614, NZ

Phone: (+64) 9 833 1794
E-mail: support@propellor.com
Web: www.propellor.com

ASI-7-2-2

UPDATING CONTROLLER FIRMWARE

PROCEDURE



SUBJECT:	
Service & Maintenance	
ASSEMBLY NO:	**APPLICABILITY:**
A0110x or A0170x	AC200 controller hardware versions 5 and up only. All AC300 controller versions.

1. TOPIC

1.1 Introduction

This document covers the procedure for updating the firmware version for an Airmaster controller. Controller firmware should only be updated when directed to by Airmaster.

This instruction is applicable for all AC300 controllers (i.e. all DSD propeller systems), as well as AC200 controllers that are hardware version 5 or higher. For older versions of AC200 hardware, an alternative method must be followed, this is covered separately.

This task is performed using Airmaster software running on a Microsoft Windows PC; a laptop is recommended so that it may be taken to the controller inside the cockpit. The controller is connected to the PC using the dedicated USB-serial cable (*A0117*) supplied with the propeller.

1.2 Prerequisites

Complete the following tasks before proceeding:

- Ensure that PC is updated to include .NET Framework 3.5
  https://www.microsoft.com/en-us/download/details.aspx?id=21
- For AC200 controllers, ensure that controller hardware is version 5 or higher.

> ⓘ *Note*
> *The controller hardware version is recorded in the 'ACx00 Firmware & Parameters sheet' (found in the propeller assembly drawings booklet). It is the first number shown under "Hardware Build State".*

2. MATERIAL REQUIREMENTS

2.1 Parts

ITEM	QTY	PART NO.	DESCRIPTION	IMAGE
1.	1	A0117	USB-Serial Cable	
2.	1	A0110x or A0170x	AC200 or AC300 'SmartPitch' Controller	

2.2 Tooling

ITEM	QTY	DESCRIPTION	IMAGE
1.	1	MS Windows Laptop	
2.	-	Airmaster Controller Firmware Programmer (*.exe*)	
3.	-	Airmaster Controller Firmware File (*.bin*)	

2.3 Paperwork

ITEM	QTY	CODE	DESCRIPTION
1.	1	AD-UNIVERSAL	ACx00 Controller Firmware & Parameters Sheet
2.	1	AD-UNIVERSAL	Airmaster Propeller Logbook

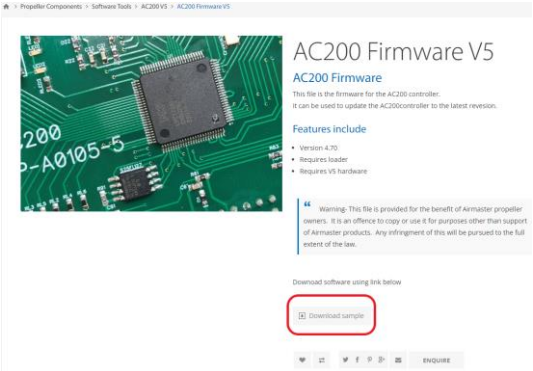
3. PROCEDURE

3.1 Download Controller Firmware Programmer

PROCEDURE

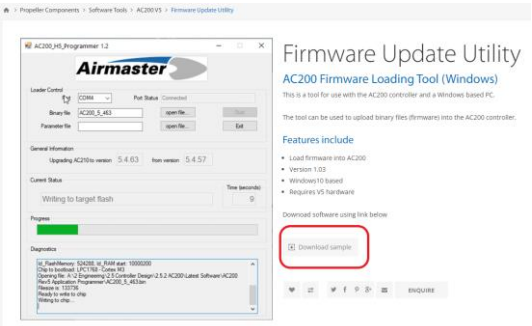
Step 1 Download Controller Firmware File

- Download the latest applicable controller firmware file (*.bin*) from the Airmaster website:
  - AC200 controller (v5): https://www.propellor.com/ac200-firmware-v5
  - AC300 controller https://www.propellor.com/ac300-firmware



Step 2 Download Firmware Programmer

- Download the latest applicable version of the controller firmware programmer from the Airmaster website:
  - AC200 (v5): *https://propellor.com/firmware-update-utility*
  - AC300: *https://propellor.com/ac300-firmware-update-utility*



Note
This application is only compatible with Microsoft Windows operating systems.

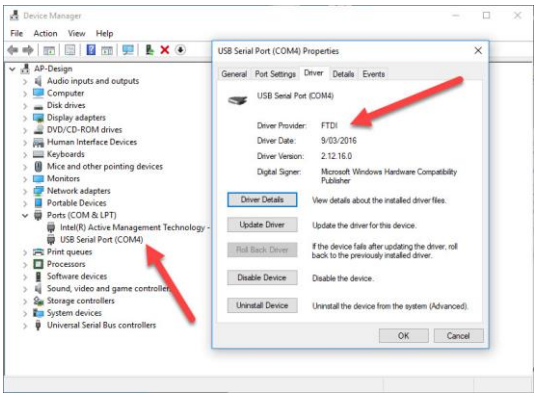
Note
For v3 or v4 hardware versions of AC200 controllers, an alternative "FlashLoad" programmer must be used instead. This procedure is covered separately.

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 the link below and download the "Setup Executable" for your OS: *https://www.ftdichip.com/Drivers/VCP.htm*
- Open the setup .zip file and choose a convenient folder to unzip the executable.
- Confirm, accept, and finish the extraction.
- Check the COM port assigned to the USB-serial cable on PC: Control Panel > Device Manager > USB Serial Port > Driver.



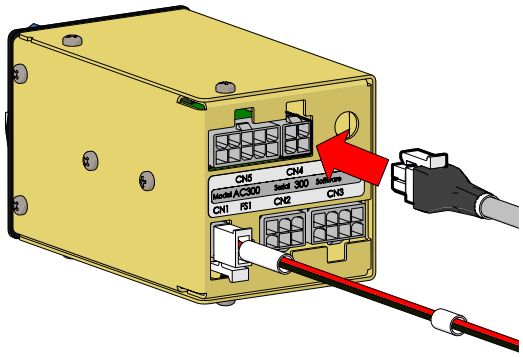
3.2 Update Controller Firmware Version

> ⚠ ***Caution*** *Only update the controller firmware when directed to by Airmaster.*

PROCEDURE

Step 1 Connect Controller to PC

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

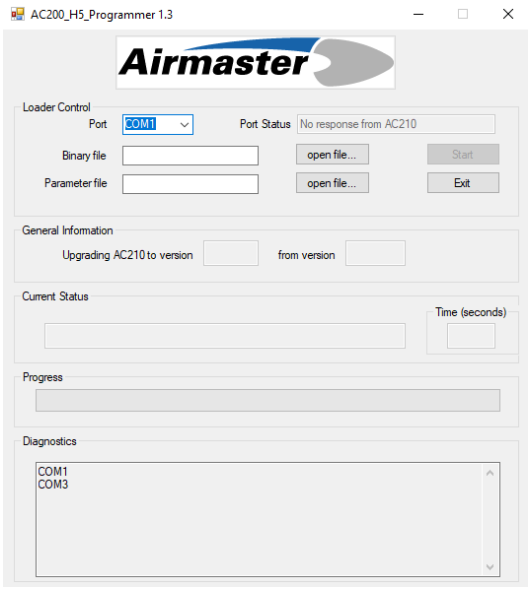


Step 2 Run Application

- Run the controller 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 running and accessing the same COM port assigned to the USB-serial cable.*

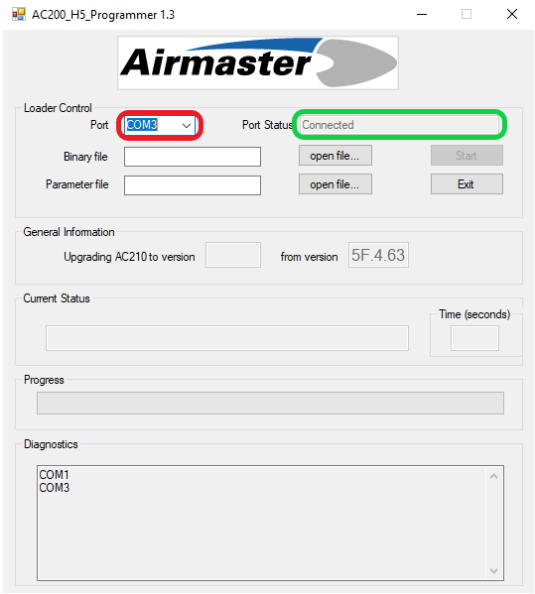


Step 3 Select COM Port

- Select the COM port assigned to the USB-serial cable from the drop-down menu.

> *Note*
> *Check this setting on PC under Control Panel > Device Manager > Ports > USB Serial Port (COM_).*

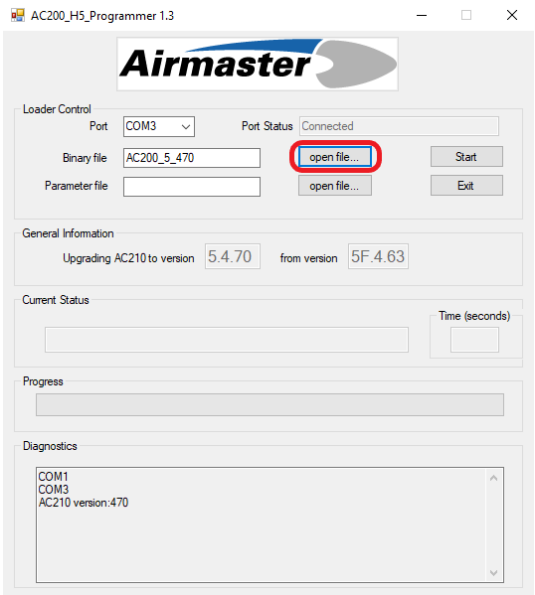
> *Note*
> *The port status should show "Connected".*



Step 4 Load Firmware File

- Next to 'Binary File', press 'Open File' and select the firmware file (*.bin*) downloaded.

> *Note*
> *Uploading a parameter file is optional.*

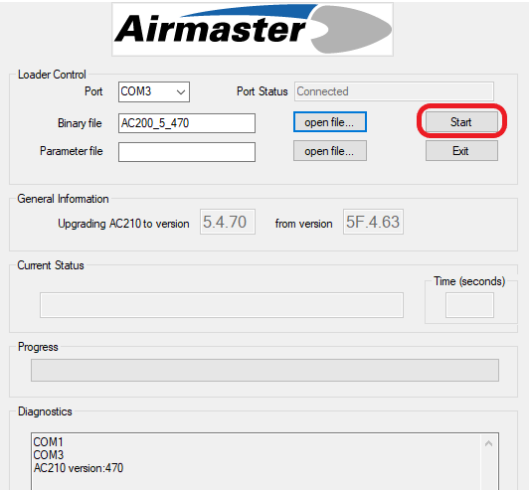


Step 5 Start Firmware Update

- Press ‘Start’ to commence the automatic flash firmware update.

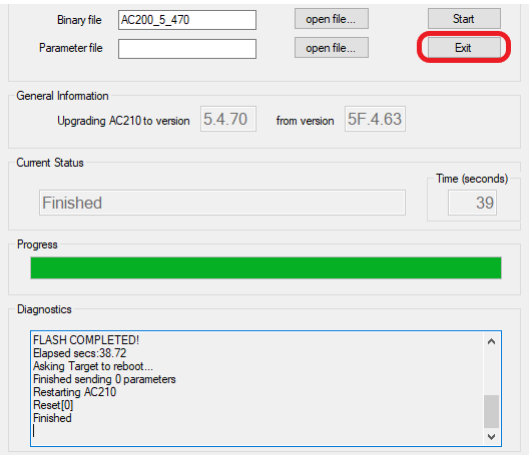
> ***Caution***
> *Do not interrupt the flash update as this may corrupt the controller. Wait for the progress bar to complete 100% before exiting the programmer.*

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



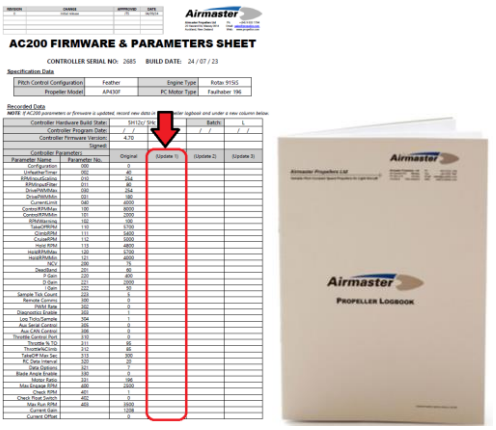
Step 6 Close Programmer

- Exit the programmer once the flash update progress is 100% complete.



Step 7 Record Parameter Update

- Record updated firmware version under a new column in the following locations:
  - Controller Firmware & Parameters Sheet.
  - ‘Leading Particulars’ section of propeller logbook.
- Create an entry in the propeller logbook to record the work carried out.



3.3 Subsequent Action

Perform the following tasks once this procedure is complete:

- Use a pencil and eraser to update the firmware version written on the rear label of the controller.
- Check with Airmaster if any parameters must be adjusted for the new firmware version.
- Send an email to *support@propellor.com* stating the serial number of the propeller hub and controller, as well as the previous and new controller firmware versions.