

REVISION	CHANGE	APPROVED	DATE
1	Published release	JTS	09/06/2025

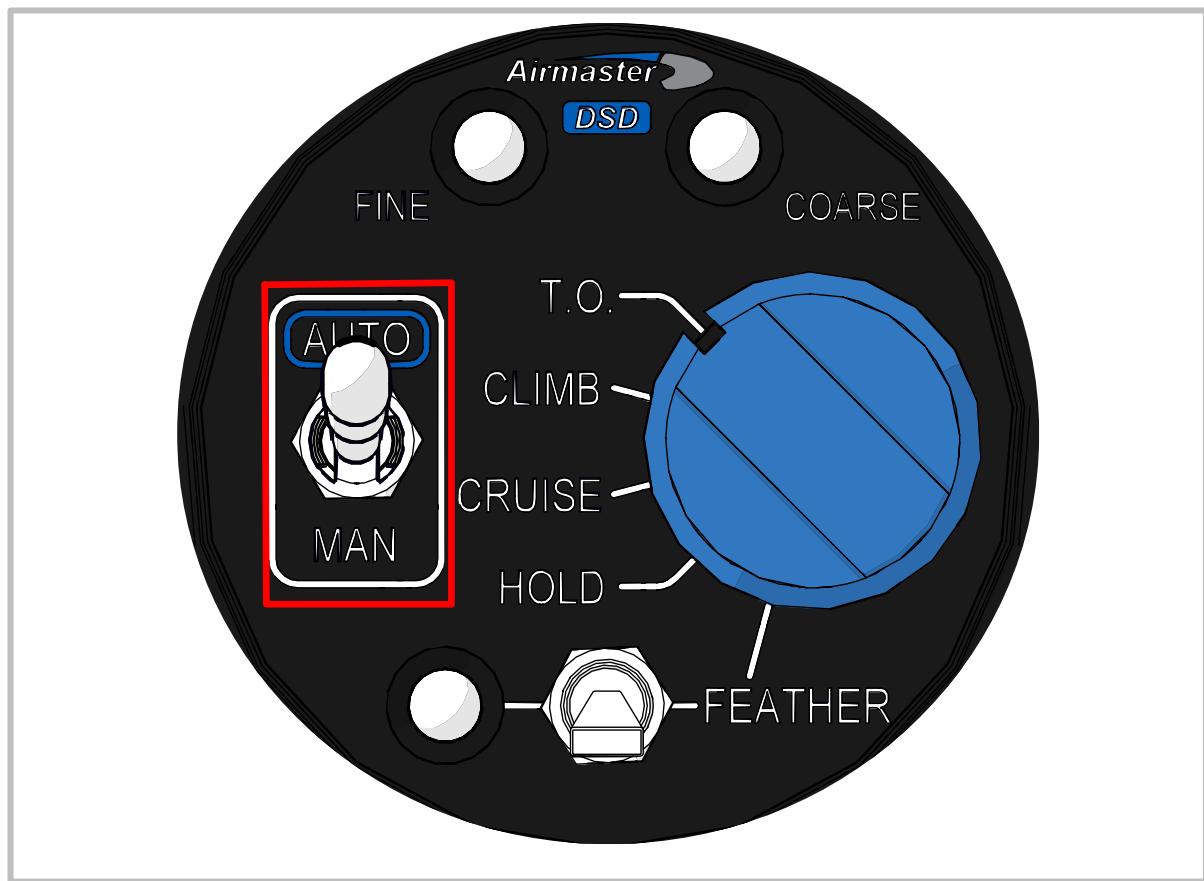


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**ASI-7-4-4**

# MODE SELECTOR SWITCH (CONTROLLER) FUNCTIONAL TEST

## PROCEDURE



### **SUBJECT:**

Service & Maintenance

**ASSEMBLY NO:**

A0110x or A0170x

**APPLICABILITY:**

All propeller models

## 1. TOPIC

### 1.1 Introduction

This document covers the procedure for testing the function of the mode selector switch (i.e. AUTO/MAN switch) for an Airmaster controller. The front panel must be removed from the controller.

Symptoms of a failed mode selector switch may include open circuit alarms (all lamps flashing red on the controller), improper operation of the adjustable pitch limit stops, loss of operation of the propeller in manual override or automatic mode, or anomalous indications displayed by the controller. If the switch is defective, the controller front panel must be replaced.

### 1.2 Function

The mode selector switch is a quadruple-pole double-throw (4PDT) switch incorporated within the Airmaster controller.

This switch is used to toggle between automatic and manual pitch control modes for the propeller.

## 2. MATERIAL REQUIREMENTS

### 2.1 Parts

ITEM	QTY	PART NO.	DESCRIPTION	IMAGE
1.	As required	A0110x or A0170x	AC200 or AC300 Controller	

### 2.2 Tooling

ITEM	QTY	DESCRIPTION	IMAGE
1.	1	Digital Multimeter ( <i>with probes</i> )	
2.	1	PH1 Screwdriver	

### 3. PROCEDURE

### 3.1 Preparation

- Remove front panel from controller by following the procedure outlined in **ASI-7-5-3**.
- To perform the following test, multimeter probes are brought in contact with specified pins of the mode selector switch (soldered connections behind front panel), and measurements are taken at each switch position to assess the electrical functionality of the switch.

### 3.2 Inspect Switch

Inspect the switch as follows:

- Check mode selector switch and front panel circuit board for signs of damage or loose connection.
- Check soldered pin connections are secure and solder joints do not contact.
- Actuate the switch and check it functions (and latches) smoothly.

### 3.3 Test Switch Function

Perform this test as follows:

- Set multimeter to continuity or resistance-meter setting (0 - 1kΩ).
- Measure continuity (or resistance) across soldered pin connections of mode selector switch (rear of controller front panel) as shown below, in both AUTO and MAN switch positions.

 **Note** *Polarity of multimeter probes does not affect readings.*

TEST	MULTIMETER SETTING	SWITCH POSITION	TEST SETUP (PIN MAP)	EXPECTED READING
1.	$\Omega$			No Continuity  ( $1k\Omega+$ or “OL” displayed)
2.	$\Omega$			Continuity  ( $0 - 0.2\Omega$ )
3.	$\Omega$			Continuity  ( $0 - 0.2\Omega$ )
4.	$\Omega$			No Continuity  ( $1k\Omega+$ or “OL” displayed)