

Northern Airborne Technology Ltd.

Information Release

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GENERAL:

To assist in troubleshooting the installation of Northern Airborne AA9X and AMS4X Series audio controllers, a LINE FAULT ANALYSIS has been published. It should be used to help identify possible wiring faults, as defined by the impaired operation of the audio controller.

INSTRUCTIONS:

Insert this information in the appropriate section of the service manual.

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AA9X/AMS4X AUDIO CONTROLLER
SHORT/OPEN LINE ANALYSIS

In the following analysis, the SHORT is considered to be to ground.

<u>Connection</u>	<u>Fault</u>	<u>Result</u>
ANY AUDIO INPUT (RX IN)	SHORT	NO DAMAGE; LOSS OF SPECIFIC SIGNAL ONLY
	OPEN	NO DAMAGE; LOSS OF SPECIFIC SIGNAL ONLY
ANY HEADSET OUTPUT	SHORT	NO DAMAGE; STAGE CAN WITHSTAND INDEFINITE SHORT. LOSS OF SPECIFIC HEADSET AUDIO ONLY. OTHERS UNAFFECTED.
	OPEN	NO DAMAGE; LOSS OF SPECIFIC HEADSET AUDIO ONLY. OTHERS UNAFFECTED.
ANY MIC OUTPUT (TO XCVR)	SHORT	NO DAMAGE; TRANSMITTER CAN BE KEYED BUT NOT MODULATED.
	OPEN	SAME AS SHORT.
ANY KEY OUTPUT (TO XCVR)	SHORT	NO DAMAGE; TRANSMITTER WILL BE KEYED.
	OPEN	NO DAMAGE; TRANSMITTER CANNOT BE KEYED.
PILOT'S MIC INPUT	SHORT	NO DAMAGE; NO MIC FUNCTIONS FROM PILOT. OTHERS UNAFFECTED.
	OPEN	SAME AS SHORT.

COPILOT'S MIC INPUT	SHORT	NO DAMAGE; NO MIC FUNCTIONS FROM COPILOT. OTHERS UN-AFFECTED.
	OPEN	SAME AS SHORT.
PILOT/COPILOT KEY INPUTS (TX)	SHORT	NO DAMAGE; TRANSMITTER SELECTED BY USER WILL BE KEYED.
	OPEN	NO TRANSMITTER CAN BE KEYED BY USER.
ICS TIE LINE (IF USED EXTERNALLY)	SHORT	NO DAMAGE; LOSS OF ICS FUNCTIONS.
	OPEN	NO INTERNAL AFFECT.
PILOT/COPILOT ICS KEY	SHORT	NO DAMAGE; ICS WILL BE TURNED ON FOR THAT USER. TRANSMIT UN-AFFECTED.
	OPEN	NO DAMAGE; ICS KEY FUNCTION LOST FOR THAT USER ONLY. LIVE/VOX REMAIN FUNCTIONAL.
LAMP DIM +V	SHORT	UNKNOWN EFFECT ON SHIP'S SYSTEM; NO LIGHTS ON AUDIO CONTROLLER.
	OPEN	NO DAMAGE; NO LIGHTS ON AUDIO CONTROLLER.
POWER +V	SHORT	POP EXTERNAL BREAKER OR FUSE. EMERGENCY FUNCTIONS ONLY IN AUDIO CONTROLLER. NO ICS.
	OPEN	NO DAMAGE; EMERGENCY FUNCTIONS ONLY IN AUDIO CONTROLLER. NO ICS.

POWER GND

SHORT

NO EFFECT.

OPEN

UNLIKELY TO HAVE ANY
EFFECT, DUE TO NUMER-
OUS OTHER GROUND CON-
NECTIONS. WORST CASE;
EMERGENCY FUNCTIONS
ONLY, NO ICS.