

Technisonic

Air Attack Kit Information

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The NFES 4499 Air Attack kit is a compact slip-in kit providing multiple VHF-FM radios for missions ranging from simple reconnaissance to complex Air Attack. The kit has two VHF-FM radios, two AUX-FM connections, and supports up to four operators. The kit operates on either 14 VDC or 28 VDC. A storage compartment in the kit holds no equipment.

1. Kit Security: The NFES 4499 Air Attack kit must be secured for safe flight using the kit's two silver "D" handles and the supplied adjustable straps. Secure the kit to any ridged structure in the cockpit (using common sense and keeping safety in mind).

2. Voltage Selection: The NFES 4499 Air Attack kit has automatic voltage selection for 14 VDC or 28 VDC. Automatic voltage selection is dependent upon the aircraft's power connector supplying the correct voltage to the Air Attack kit.

3. Aircraft Power & Audio Connections: Aircraft must have an MS3112E12-3S (female) power connector in the aircraft (ground on pin B, and 14 volts on pin C or 28 volts on pin A). Only 14 or 28 VDC need be wired in the aircraft, **never wire both**. Attach power jumper cable from kit to MS3112E12-3S power connector in aircraft. Attach audio/mic jumper cable from kit to pilot's audio and mike jacks. Aircraft mic jack must have PTT capability.

4. Antenna Connections: Aircraft must have a minimum of two broadband VHF-FM aviation antennas installed (Comant type CI-177 or equal) using RG-58 A/U or better coax cable terminated with male BNC connectors. Connect the first two aircraft VHF-FM antenna cables to the kit's RADIO 1 ANT and RADIO 2 ANT connectors. A third or fourth aircraft VHF-FM antenna(s) are for the AUX-1 and AUX-2 connections.

5. TFDM-136 Radio Use: Operation and programming instructions are provided with the kit. Visit NIICD's website for up to date radio instructions at:
<http://www.fs.fed.us/fire/niicd/documents.html>

FM 1 main/guard (upper radio) and FM 2 main (lower radio) may be reprogrammed to suit user needs. FM 2 guard preset is locked out and must never be re-programmed. FM 2 guard is dedicated to Air Guard operation (168.6250), the emergency frequency.

6. AUX-FM Connections: Two AUX-FM connectors are located at the rear of the kit. These connectors allow handheld radios to be operated through the kit's audio selector panels as AUX1 and AUX2. The user must supply a handheld radio and matching AUX-FM adapter cable. Use the supplied female BNC barrel connectors to mate the AUX-FM radio adapter to aircraft antenna cable for AUX-FM operation. Any type handheld radio using any frequency band may be used (dependent upon the installed aircraft antenna's frequency band capability).

7. Audio Selector Panel: The TAC-250 is a dual audio selector panel for the pilot (left) and ATGS (right). Two observer positions operate off the ATGS's audio selector panel. Attach observer headset adapter cord assemblies at the rear of the kit. Observer positions have the same radio receive, transmit, and VOX capability as selected by the ATGS's audio selector panel.

Transmitter Radio Selections:

1. COM is for the aircrafts' audio system via the kits' audio/mic jumper cable.
2. FM1 is for the upper VHF-FM radio (beside the TAC-250).
3. FM2 is for the lower VHF-FM radio.
4. AUX1 is for the AUX-FM 1 connector.
5. AUX2 is for the AUX-FM 2 connector.
6. SC is for simulcast transmissions using COM and FM1 radios. SC transmits on both radios simultaneously.

The pilot's audio selector panel has transmit priority over the ATGS's audio selector panel when they both have the same radio selected on their respective transmitter selector switches.

Keep in mind there are three transmitter selector switches: (1) TAC-250 transmitter selector knob; (2) TDFM-136 radio MAIN & GUARD switch; and the (3) aircrafts' audio selector panel switch.

Receiver Audio Selections:

1. COM is for the aircrafts' audio system via the kits' audio/mic jumper cable.
2. FM1 is for the upper VHF-FM radio (beside the TAC-250).
3. FM2 is for the lower VHF-FM radio.
4. AUX1 is for the AUX-FM 1 connector.
5. AUX-FM 2 has no receiver selector (transmitter selector must be set on AUX2 to hear AUX2 audio).
6. SC "simulcast" uses COM and FM1 receive toggle switches.

Audio Level: A receiver is automatically selected when its companion transmitter is selected on the audio selector panel. Receive (RX) volume level is the inner knob with VOX volume level being the outer knob.

VOX (Voice Activated Intercom): For no intercom, rotate the VOX knob fully CCW. Rotating VOX knob CW adjusts VOX activation level accordingly. VOX volume level is the outer knob with RX volume level being the inner knob.

NORMAL/EM/ISOL Switch: (1) NORMAL provides normal operation of VOX and amplified radio audio to all headset positions. (2) EM is emergency. The EM position operates in the same manner as the NORMAL position. (3) ISOL isolates the pilot's audio from the ATGS and both observers. The pilot will not be able to hear the ATGS or observers; however, the ATGS and observers will be able to hear the pilot and have normal intercom among themselves.

8. Other Information: Radio programming "D" connectors are located in the front of the kit. Both pilot and ATGS MIC jacks' have PTT capability using supplied PT-300 adapters. 28 VDC power input uses the 7.5 amp circuit breaker and normally draws 3 amps while transmitting. 14 VDC power input uses the 15 amp circuit breaker and normally draws 8 amps while transmitting.