Goodrich Stormscope® WX-500

Cirrus Transition Course

11/20/04

UND AEROSPACE
Global Excellence through Innovative People

The system information, procedures and guidelines found in this presentation are for Reference Only.

The information & procedures in this presentation have been taken from the FAA Approved Airplane Flight Manual and Pilot's Operating Handbook (POH). The Information & Procedures in this presentation DO NOT SUPERSEDE the Information & Procedures in the POH. In the event of conflict, the POH shall take precedence.

UND AEROSPACE
Global Excellence through Innovative People

General Information

- The BF Goodrich Aerospace WX-500 Weather Mapping Sensor (Stormscope) detects electrical discharges associated with thunderstorms and displays the activity on the Avidyne Multi-Function Display.
- The system consists of an antenna located on top of the fuselage just forward of the rear window and a processor unit mounted under the aft baggage floor.
- The antenna detects the electrical and magnetic fields generated by intra-cloud, inter-cloud, or cloud to ground electrical discharges occurring within 200 nm of the airplane and sends the “discharge” data to the processor.

General Information

- The processor digitizes, analyzes, and converts the “discharge” signals into range and bearing data and communicates the data to the MFD every two seconds.
- The stormscope processor is powered 28 VDC through the 3-amp STORMSCOPE circuit breaker on the Avionics Non-essential Bus.

System Components

Antenna

Processor

Multi-Function Display

UND AEROSPACE
Global Excellence through Innovative People

Initialization

- **Self-Test**
  - **Automatic at power up**
  - **Requires 25 seconds to complete**
  - **Error messages will be displayed on MFD**

UND AEROSPACE
Global Excellence through Innovative People

Display Modes

- **Strike Display Mode: Plots strike discharge points in relation to where the discharges are actually detected instead of plotting them close to an associated group of discharge points as is done in cell display mode. Individual strikes are plotted using the ‘X’ symbol**

- **Cell Display Mode: A clustering algorithm is used to identify the location of storm cells. Cell data is most useful during periods of heavy electrical discharge activity. In the cell display mode a ‘+’ symbol is plotted for associated strikes.**

- **Off**

Abnormal Indications

- **Random Discharge Patterns**
  - **The antenna may receive electrical discharge from fair weather cumulus clouds.**
- **Line of Discharge Points while Taxiing**
  - **Result of electrical equipment (power lines, lights, etc.) operation.**

Operational Considerations

CAUTION

- **Cell display is a function of processor logic, it is not a radar display.**
- **There are several atmospheric phenomena other than nearby thunderstorms which can cause isolated discharge points. If after clearing the screen the strikes reappear the display is indicating a thunderstorm. Even a single discharge point may represent thunderstorms and should be avoided.**

Operational Considerations

WARNING

- **Operators should maintain a minimum of 20 NM from thunderstorms.**
- **Do not attempt to penetrate thunderstorms or an area of thunderstorm activity using the Stormscope.**

Limitations

- **Stormscope information displayed on the Avidyne MFD and Garmin GPS displays are FOR REFERENCE ONLY and must not be used for navigation.**