Video Microwave Downlinks and Telenav Technology

Overview

Telenav is a patented and innovative system for **combining GPS data with a standard video signal**. The method of encoding is invisible, so that no degradation of the video image occurs. The advantage of this technique is that it eliminates the need for a separate communication link to pass the GPS information of the helicopter to the ground receive station. A further advantage is that the data is carried at full power by the microwave link, yielding a robust and inexpensive communication route.

With the addition of a simple **Telenav** encoder in the video line from the camera to the transmitter, the ground receiving capabilities are significantly enhanced by way of intelligent tracking antenna systems, moving map displays all from simply knowing the positional coordinates of the helicopter.

The inclusion of a **Telenav** encoder is fully compatible with the existing systems on the helicopter and will not degrade the performance of the video down link system already installed. On the contrary, **Telenav can significantly enhance the existing system**.

Navtech produces a range of ground receiver systems covering short, medium and long-range capabilities from the simple omni antenna receivers to high gain tracking antennas.

The **Telenav MicroTracker** and **MicroSector** are the smallest, low cost auto-tracking antenna systems available, which can be configured for **Fixed Site**, **Portable** and **Mobile Command Post** applications.

For secure applications, the **Viewlock II video-scrambling** system can deny to all but the authorised viewer, intelligible images from the helicopter camera. The addition of the video encryptor and reciprocal video decryptor in the transmission and receiving video lines respectively enables secure video links to be achieved.

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Applications

To complement the above, Navtech also produces the microwave transmission system for helicopter fitment. For applications where more general coverage is required rather than to single point transmission links, the “Transtenna” omni-direction antenna transmission system is a lower cost alternative to the steerable antenna currently fitted to a helicopter.

A typical Telenav screenshot, with time, date and geographical information displayed.

An RTGIS screenshot, with map, aircraft trail and position displayed on the left and a live video feed and grabbed frame on the right.

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