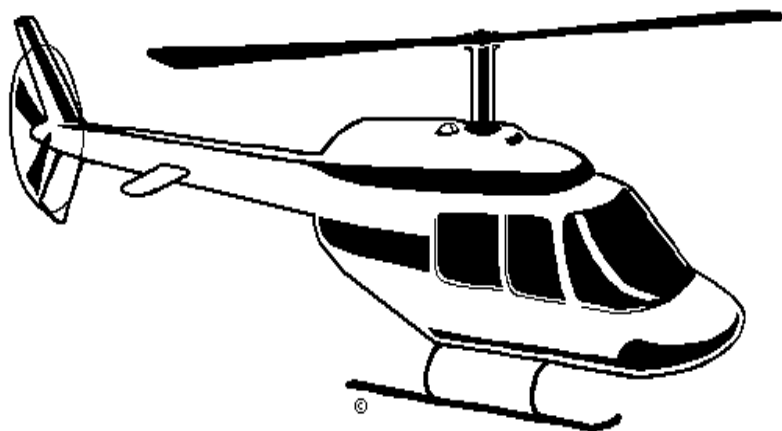


# **Airborne Video Microwave Down Link Systems**

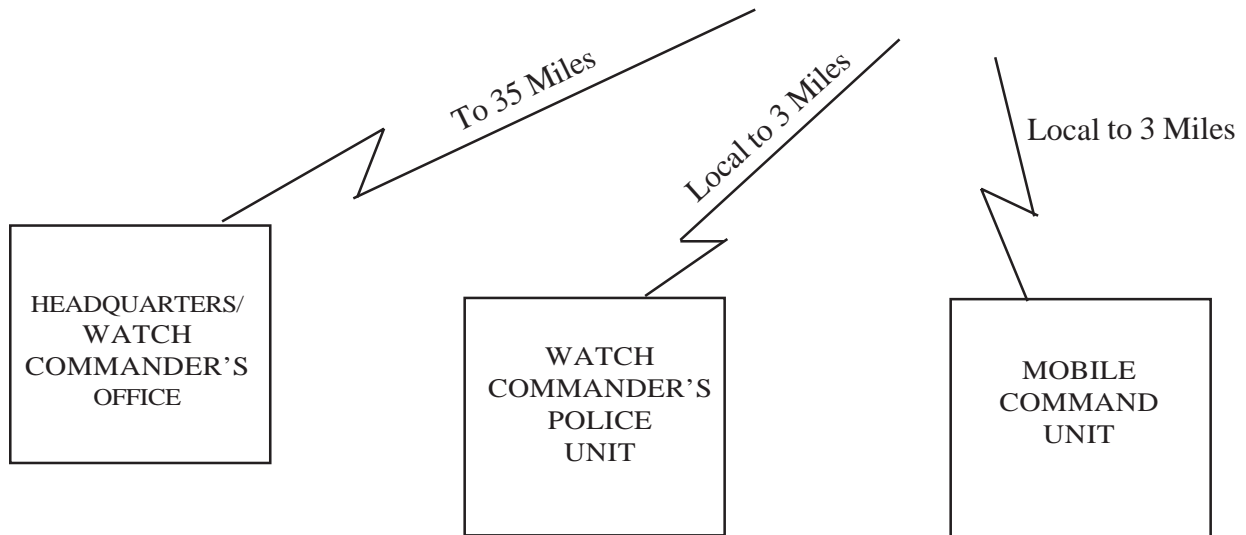
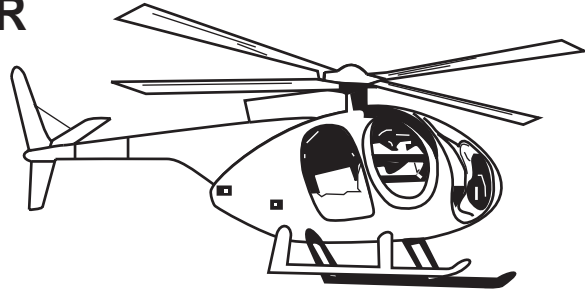


**Receivers  
Transmitters  
Antennas  
Tracking Systems  
Cameras  
Stablizing Systems  
Encription**

**Designed for Law Enforcement Operations  
by  
Covert Systems, LLC**

# HELICOPTER OBSERVER

## VIDEO MICROWAVE SYSTEM



### Features:

- Complete Integrated Systems
- 12Vdc Operation
- FCC Approved Equipment
- Auto Tracking Systems
- Color or B/W Cameras
- Excellent Range

### Applications:

- Surveillance
- Fire Tracking Operations
- High Speed Chases
- Drug Enforcement

### Specifications:

- Refer to individual data sheets

### Description:

Our helicopter video down link systems come in many configurations and can be custom-made to fit your application.

The new low cost mobile receiver is ideal for police car applications along with our new police car antenna.

Helicopter video down link tracking is also available in two versions, one only has a very long range and the lower cost unit is great for working in 25 to 30 mile radius's.

A variety of receivers maybe designed into our standard portable kits with recorders and antenna configurations.

We can provide a wide range of portable antennas in several sizes and gain ranges.

## Video Microwave Receiver Options



**\$995**

### High Sensitivity Mobile Video Receiver

The new KSR-357 is a 8 channel video microwave receiver designed for fleet operations. The KSR-357 has a -82 dbm sensitivity with 2 audio channels. The unit can easily mounted under the dash or in the center console. The unit has a built in field strength meter for ease of operation and a 8 channel selector switch for frequency. A single frequency, no FSM is available for inside trunk mounting. **Model: KSR-357**



**\$2795**

### Compact Mobile Video Receiver

This is one of our smallest 16 channel video receivers. This receiver is easily mounted in a vehicle or brief case. LCD field strength readout. Sensitivity is -78 dBm with 2 video and 2 audio outputs.

**Model: KSR-XR**



### Portable Video Microwave Receiver Kits

We offer a number of Portable Receiver Kits using the above receivers. See our web site for photos and costs of each kit. [www.covert-systems.com](http://www.covert-systems.com) -- wireless section.



**\$2,395**

### Mobile Video Receiver, Dual Diversity

This new receiver is a fully tunable over the entire frequency range in one Mhz steps. The dual receivers require two antennas. The 502 receiver covers 900 to 2150 Mhz and the 602 receiver covers 2150 to 2500 Mhz. One audio channel is available as well as remote control of frequency.

**Model: KSR-DX-502 & 602**



**\$3,995**

### Mobile Video Receiver, Digital Readout

The MR series of receivers are advanced technology microwave receivers capable of operation at 1.7-6.0 GHz standard. The MR Series demodulates one video and two audio signals from a composite analog RF source. The receiver is controlled by a microprocessor with an easy to use menu.

Channel of operation, video, and audio output levels can be selected via the front panel membrane switch. Operational parameters are shown on the easy-to-read liquid crystal display including channel, signal strength, output level, and lock status. Both digital and analog representations of signal strength are incorporated to facilitate path alignment. **Model: KSR-MR**

## Video Microwave Tracking Transmitters



New color video transmitter has 10 watts of RF power with 2 audio or telemetry channels is ideal when maximum performance is desired. The power is switchable between power levels of 3 and 10 watts. Other transmitters are available up to 40 Watts. L and S bands are standard.

**KST-3/10-2450 or -1850 \$6,500.00**

## Video Microwave Antenna Systems



### Base or Command Post Antenna

This new antenna was originally designed as a helicopter tracking antenna. When used with our new diversity receivers, (3ea.) the system can track a helicopter up to a distance of 35 miles. Small cities with a central dispatch or office can follow their helicopter or some ground operations in direct view of the transmitter. Now with enclosed dome

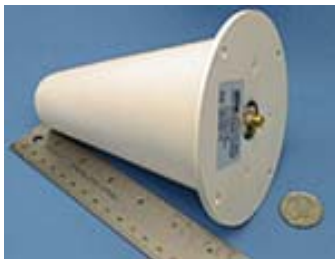
**Model SOD-14-2400 RHCP \$1,950.00**



### Police Car Special KSA-4-RHCP Antenna

This antenna was designed for police car applications. It matches the right hand pattern used by most police helicopter units. Having a pattern that looks in an upward direction and has a right hand circular polarized pattern reduces interference from local security devices that use linear antennas. Comes with 12' of cable. Gain is 4 dBi.

**KSA-4-RHCP \$149.00**



### Helicopter Antenna

The Best medium range Omni available. This 4 dB gain wide band (1.7 Ghz to 2.7 Ghz) RHCP log spiral antenna is ideal for airborne and mobile vehicle reception/transmission. It has a hemispherical radiation pattern allowing it to look out as well as directly up or down. RHCP dramatically limits multipath interference.

**KSA-4-HELO \$995.00**

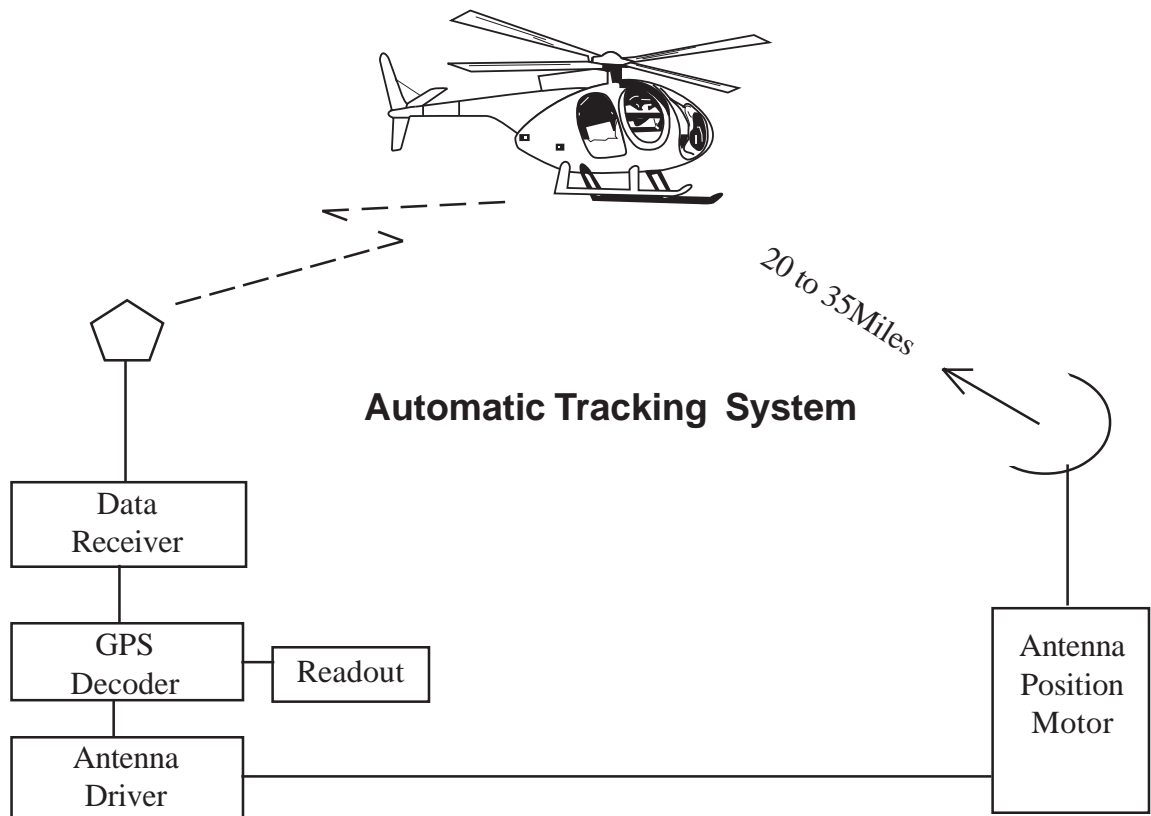
Photo  
not  
available

### Omni Directional Type Antennas

We have a 6, 9, and 12 dBi omni directional antenna that can be used on command posts and aircraft. Normally, the 6 dBi antenna is used on the aircraft and the 9 & 12 dBi antenna are used on the ground units. These are linear antennas and used in areas where interference is not a problem.

**KSA-6-2450 \$195 - KSA-9-2450 \$225 - KSA-12-2450 \$285**

## Helicopter Tracking Systems



### Features Include:

- Rotating platform suitable for many existing microwave receiving antennas or Navtech can recommend and / or supply suitable antenna if required.
- Platform auto calibrates to north and auto searches for signals.
- Platform freely rotates through 360° (no need for it to reverse direction).
- Can even be used in a vehicle or mobile command station.
- Equally effective close-in. Optimum choice of hi-gain circular polarized antennas for azimuth tracking and up-looking minimizes multi-path interference and provides good overhead coverage.
- Optional extras include moving map display, TFT "Flat Screen" displays, full GIS interface, etc.

Full compatibility with any manufacturer's microwave transmission equipment was a priority in the system's design together with simplicity and reliability of operation. The Microtracker or Micro Sector can be used for fixed rooftop installations, command vehicle installations, marine installations or be provided fully-portable for rapid deployment.

### With the Telenav Microtracker you can:

- Considerably increase the range of your video microwave air-ground link.
- Provide live video images at any location.
- Track airborne video transmissions to ranges exceeding 40 Km
- Use on mobile or static locations.
- Use the down linked video data to automatically and invisibly (reveal at will) show GPS position, time, date, course-over-ground, speed and other relevant data on every second of video.
- Tag any desired event with customized, invisible (reveal at will) idents', in a split-second, as it happens using the RTGIS mapping software developed for Telenav.
- Provide ground control with real-time position & track, auto-plotted on moving map display at same time as they view the video live - all on the same PC.



**Antennas used in Navtech Trackers**



**Navtech Portable system**



**Navtech Installed in Command Post**

## **Automatic Helicopter Tracking System**



**Antenna shown without dome**

**Model KSS-ATS-2**

**New Tracking System  
- No Moving Parts  
\$21,995**



**Complete System shown in Dome**

### **System Features:**

- No Moving Parts
- Low Cost
- 12Vdc Operation
- Portable

### **Applications:**

- Surveillance
- Fire Tracking Operations
- High Speed Chases
- Command Post Operations

This is our latest design in helicopter tracking. Using our new 14 dBi 8 sectored antenna and our new 8 channel diversity receiver, tracking can be achieved with no moving parts. Typical ranges are out to about 30 miles depending upon transmitter power, antenna and altitude of the aircraft. The new tracking system has been field tested with excellent results comparing it to available units on the market place today.

The unit is self contained with all electronics, powered by a single 12 Vdc source. The radome is made of Royalite 84 material to withstand the rain and snow. Tower mounting hardware is available.

**See Seperate Data Sheet**

## Airborne Support Equipment



### **Actuator-1**

When airborne, the antenna arm on this actuator pivots down 90 degrees to position the antenna well below obstructions on the aircraft such as search light, camera ball and landing gear to ensure the best possible RF video link. This is the same equipment used by most broadcasters to ensure broadcast quality video.

It is transportable and can be installed in less than 10 minutes.  
**\$6900.00**



### **Bracket**

Custom fabricated to FAA standards for fixed wing and helicopter applications, these brackets do not have FAA STCs. They can be signed off by local aircraft mechanics upon installation.

Transportable, requiring no modification to the airframe, typical installation time is less than 5 minutes.  
**\$1500.00**



**Viewlock II** is an advanced video encryption system designed to protect law enforcement video surveillance links from interception. The system offers an excellent level of video security by employing dynamic line cut and rotate scrambling combined with multiple encryption keys. Highly secure digital audio scrambling is also an option via the system's Audiolock upgrade.

**Viewlock II** is compatible with any analogue video link and, with its fast lock-in time and robust performance, is ideal for use with RF links - even in marginal reception conditions. Furthermore, with its small dimensions, rugged construction and ultra-low DC power requirement Viewlock II is perfect for covert installations. **Model: Viewlock II \$3,995.00**



**StableEyes** uses the very latest image processing technology to reduce camera shake leaving operators with clear, stable and steady video. Installing StableEyes increases the effective operational range of high-zoom cameras in windy conditions ensuring best performance from surveillance systems, whatever the weather.

StableEyes is simply installed in-line with the viewing monitor and is compatible with either live or prerecorded video. The system operates by employing ultra-fast real-time video analyzing techniques to keep surveillance images clear and jitter free. StableEyes can also improve the performance of digital compression systems, such as Internet or ISDN video links, as stable images compress more efficiently.

**Model: StableEyes \$3,350.00**

## Airborne Support Equipment



This is a **high resolution color camera** with a built-in motorized zoom lens and auto focus feature. This camera offers the user outstanding color fidelity and full broadband response for high resolution color for surveillance. Light sensitivity of only 2 lux makes this camera very usable in low light conditions. The 12 to 1 zoom and auto focus features lend themselves for easy operation in an aircraft or surveillance van. Mounting one of these cameras on an aircraft searchlight will give good results. Includes: Camera, housing and cable. Now includes hardware to Night Sun. See our stabilized systems to improve the zoom performance.

**Model: KSC-1200 \$3,200.00**



**The Acadia I PCI** Generation 3 VFE 2000 board is plug-and-play and will transform your PC/workstation into a video processing powerhouse. The Acadia I PCI board delivers state-of-the-art vision processing in a form ideal for immediate integration into products, or for prototyping and testing for consumer electronics, professional broadcast equipment, law enforcement tools, surveillance operations, and monitoring systems. From medical applications to industrial uses, the Acadia I PCI board **solves vision problems**

**Model: KSS-PCI-ACC \$15,000**



**The Ranger 350i** is a wide-area digital wireless video transmitter that's also a digital video recorder as well as a powerful multipurpose computing system. It's by far the smallest, lightest, and most robust system of its kind in the world – built rugged to be at home in harsh environments – small enough, cigar box size, to fit almost anywhere. This patent pending system delivers digital television quality video, audio and data files from anywhere using existing satellite or wireless/wired network. Unlike other systems, video can be transmitted over cellular networks at up to 15 frames per second and a single unit is capable of recording thousands of hours of video. Operating on AC, DC, including automotive and aircraft power, the system can be readily installed anywhere as a stand-alone system or interfaced with existing video surveillance systems.

**Model: KSR-350i-ASU-01 \$6950**

### **Video Voter (2 & 4 Inputs)**

This new video video system is a first in the industry. The purpose of a video voter is to evaluate the quality of 2 or 4 video signal coming in from 2 or 4 video receivers and to display the best quality signal.

**KSVV-002 \$2500 KSVV-004 \$4500 (4 channel)**



## Airborne Support Equipment

### Receiver Kits



This new Video microwave receiver/recorder was designed to offer a small video receiver/recorder package with all the power of the large units.

The new digital/Hi-8 recorder has a built-in date time generator for accurate recording. The high resolution of the recording exceeds 450 lines with digital zoom. The microwave receiver is fully tunable over the entire Police band. Federal frequencies are also available including the 5.7Ghz band.

**KSR-3550 \$6,500.00**



This kit contains an eight channel video microwave receiver with a sensitivity of -80 db and two audio sub-carrier channels. The three police frequencies are standard with 6.0 and 6.5 MHz audio sub-carriers. Direct video and audio input jacks are provided for video camera testing and viewing. The unit provides video and audio outputs for recording the video signal.

The unit maybe ordered on your eight frequencies with a maximum of two audio channels.

**KSR-3525 \$3,495**



This kit contains an 8 channel video microwave receiver with a sensitivity of a -80dbm and has two audio sub-carrier channels of 6.0 & 6.5 Mhz. The 3 police frequencies are standard a long with DOJ and LASO and LAPD helicopter video down link channels

**KSR-3575 \$3,995**



### New! Diversity Receiving System

The new digital/Hi-8 recorder has a built-in date time generator for accurate recording. The high resolution of the recording exceeds 450 lines with digital zoom. The microwave receiver is fully tunable over the entire Police band plus more. The new dual diversity receiver minimizes multipath signals. The built-in audio amplifier and speaker allows easy monitoring of the one audio subcarrier.

**KSR-3650E1 \$6,995.00**

## Airborne Support Equipment



The new XL-1 digital format camera from Canon is loaded with features for surveillance and police work. Its a professional camcorder at a law enforcement price. The lens has a 16X zoom and most important , it is optically stabilized. This make it great for airborne use when a Flir system is not installed on the aircraft.

**KSC-XL1S \$3,900.00**



The AstroScope 9350 is designed to offer the greatest choice of camera selections for the user. If your application calls for video surveillance, you can order the adapter pairs you need. If you also require the capability to record using a 35mm camera (Canon, Nikon, or Minolta), just order the adapters for the camera and switch back and fourth.

**KSC-9350-XL1S \$10,892.00**



### Hand held 20X to 700X Camcorder

This is a small hand held unit that performs quite good in the 20X mode. Digital zoom is available but would be unusable while flying. The unit uses a Memory stick to take snap shot photo's and work very well for gathering evidence. Complete with Pelican Case and software. Electronically stabilized.

**KSC-350i \$850.00**



These US Government high performance night vision goggles represent more than 90% of the goggles now in use by US troops. Combat tested system utilizes a 3rd generation image tube in a light weight face mask with delayed action high light shut-off and infrared LED map reading illuminator. Comes complete with adjustable head mount, full focusing controls, carrying case and de-mist shields. Exceeds Mill Spec. Powered by 2 "AA" batteries.

**PVS-7D \$3,975.00 Mil spec. \$4,395**

**Lasers  
for Airborne  
Units**

## Airborne Support Equipment



This unique instrument uses state-of-the-art digital image stabilization to steady hand tremors and platform motions, giving the user steady, calm images that are bright and crisp. 14X40

Great for long surveillances and following cars and boats. A must for all surveillance teams

**KS-Techno-Stabi \$1,200.00**

### Command Post Display



This plasma also features an industry-leading contrast ratio of 3000:1 and peak panel brightness of 780 cd/m<sup>2</sup> for realistic images in vibrant, natural color. And there is more image to view because the TH-42PWD4UY features a thinner surround area, effectively increasing the overall screen area. Compact yet sturdy, the plasma weighs only 65 lbs. With an ultra-thin 3.5-inch deep body. Removable handles make for easy transport and setup.

Call for pricing



**Actuator Arm Complete System with Antenna**  
**\$6,900 with antenna add \$995**



**Detail Image:**  
**Control head for Actuator Arm**

## **AIRBORNE VIDEO MICROWAVE PRICELIST-03/05**

### **Aircraft or Helicopter Equipment (Model KSL-15)**

Airborne Video Transmitter, Color, Audio, 3-10 watt -- (BEST)	\$6500
Airborne video transmitter, 5 watt, color, no Audio, Model KST-2470	\$4300
Airborne Actuator Arm (For Antenna) -- (BEST)	\$6500
Low loss antenna cable - 8'	85
Antenna, 9db, Omni, Maximum range (Approx. 15 miles)	225
Antenna, 6db, Omni, (Approx. 6 mile range)	225
Antenna, 4 Dbi, RHCP, Best local coverage -- (BEST)	995

### **Mobile - Police car system (5 mile range) (Model KSL-25)**

Receiver, antenna, & 6.4" TFT color, LCD, monitor	\$1695
---	--------

### **Portable Command Unit**

Receiver, antenna, Digital recorder, color monitor, KSR-3575	\$3995
--	--------

### **Mobile Command Post (5 mile range) (KSL-28)**

Receiver, antenna, cable & color monitor w/recorder	3895
---	------

### **Basestation, Dispatch, Headquarters (15 mile range) (KSL-30)**

Digital Transmitter	\$14,000
Digital Receiver	11,000
Receiver in weather proof housing R2470	3790
Receiver, controller & antennas	7895
42" Plazma color monitor	4500
Video cable	.25/foot
Power cable	.25/foot

### **Additional Equipment**

5 watt video microwave repeater Model KSRP-2450	Call
Antenna Phasing Harness (adds 2 antennas to one port)	Call
Video Link, 1 watt. (Receiver, Transmitter, cables, antennas)KSL-50	4895
Camera, handheld, color, KSC-P7, 10:1 Zoom, Stablized	2600
Camera, color, Searchlight mounted, includes mounting hardware, KSC-1200	3200
Video distribution amplifier (Feeds more than one monitor 4 to 6)	450
Recorder, airborne, VHS, 12Vdc, Time & date, Shock mounts	750