



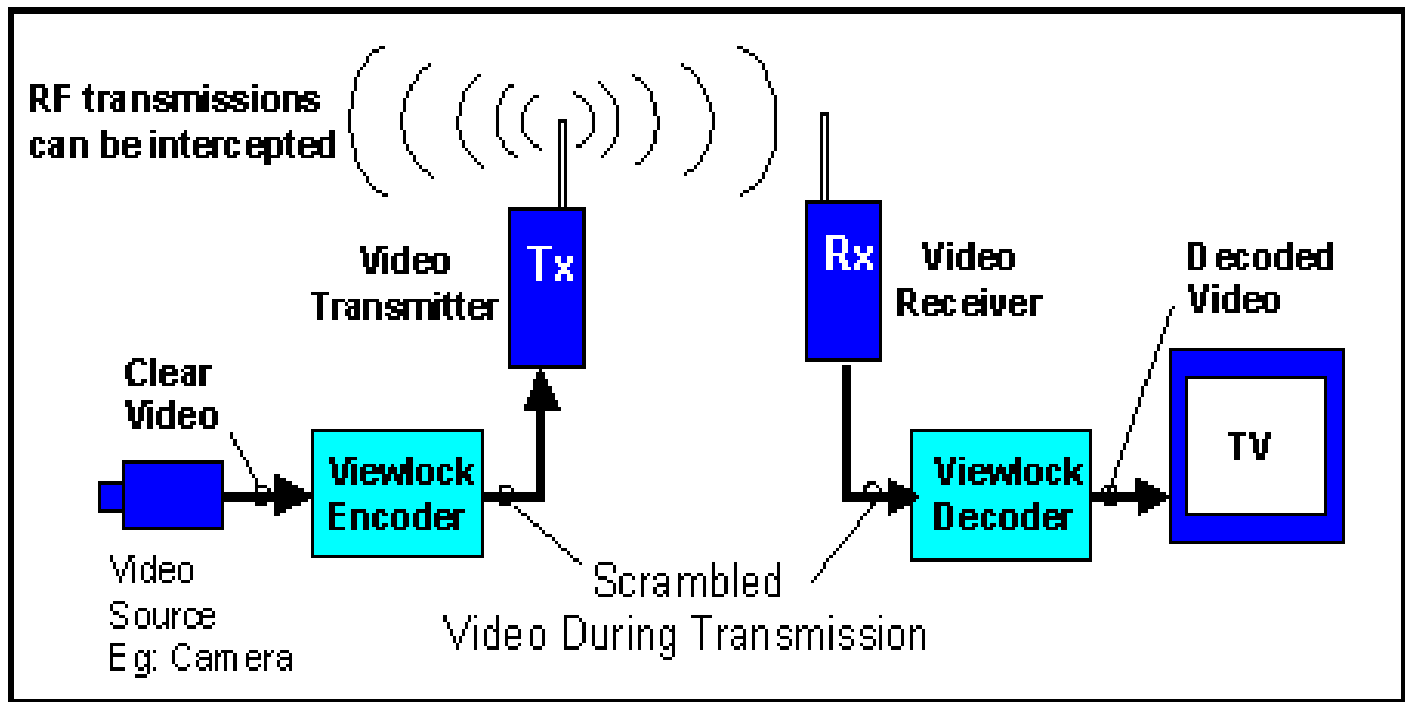
VIEWLOCK

VIDEO ENCRYPTION SYSTEM



VIDEO MICROWAVE ENCRYPTION SYSTEM

Ross Associates 2495 Vista Drive Upland, CA 91784 909-981-8855 Fax 909-981-7386
ROSS.ASC@GTE.NET WWW.COVERT-SYSTEMS.COM



SPECIFICATIONS:

Power:	6 to 35 Vdc
Size:	130 x 60 x 23 mm
Scrambling:	Line cut & rotate
# of cut points:	256
Video standard:	NTSC
Video input:	1 Vpp
Lock time:	<.5 sec
S/N Ratio:	60
Video Bandwidth:	to 5.5 Mhz
Sampling rate:	8 Bits

AUDIO

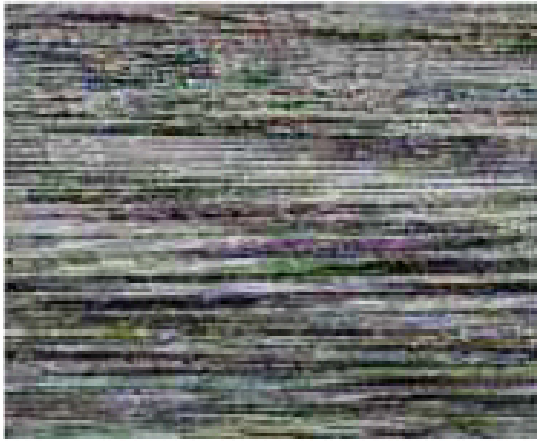
Input level:	10 mVpp
Outout level:	2 Vpp
Bandwidth:	100 Hz to 5 KHz

DESCRIPTION:

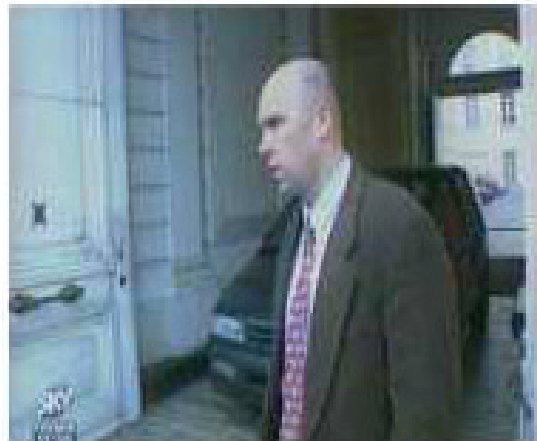
Microwave and cabled video surveillance links are insecure and are open to the threat of interception. Viewlock safeguards the operational integrity of such links, by scrambling the video during transmission, making it impossible to intercept and decrypt the surveyed scene. Viewlock II's advanced digital processing, coupled with the use of multiple encryption keys, offers the the very best in security. Viewlock II is now the worlds leading encryption system for the protection of video transmissions by the police, military and government security agencies.

FEATURES:

- Highly secure - line cut and rotate video scrambling with user programmable encryption keys
- Very low DC power consumption - less than < 55 mA at 12 Volts DC.
- Optimised for use with video surveillance links - very fast "lock-in" time, tolerant to noise & interference.
- Ideal for covert installations - rugged & weather-proof miniature housings.
- Advanced features and options - on screen display of status, optional digital audio scrambling.



LINE CUT & ROTATE VIDEO
SCRAMBLING



DECODED PICTURE

VIDEO SCRAMBLING

Viewlock II randomly cuts and rotates each active picture line, offering a very high level of picture concealment and security whilst maintaining link compatibility. Viewlock II even automatically configures itself for 525 line NTSC or 625 line PAL operation and is therefore compatible with almost any transmission system used throughout the world.

SECURITY

Secure algorithms, seeded by an unreadable primary key, are used to generate the cut and rotate sequences. Only if the primary keys match will the decoder be able to decrypt the received video. Security may be further enhanced by the addition of a user down-loadable 32 byte secondary key set which is used to randomise the cut sequences even more, to an incredible $10^{1,850}$ possibilities.

INSTALLATION & OPERATION

Viewlock II's rugged construction, small dimensions and low DC power requirement make the system ideal for covert installations. Furthermore, its wide operating temperature range and weatherproofing to IP65 specifications, means that permanent outdoor operation is not a problem.

ON SCREEN DISPLAY

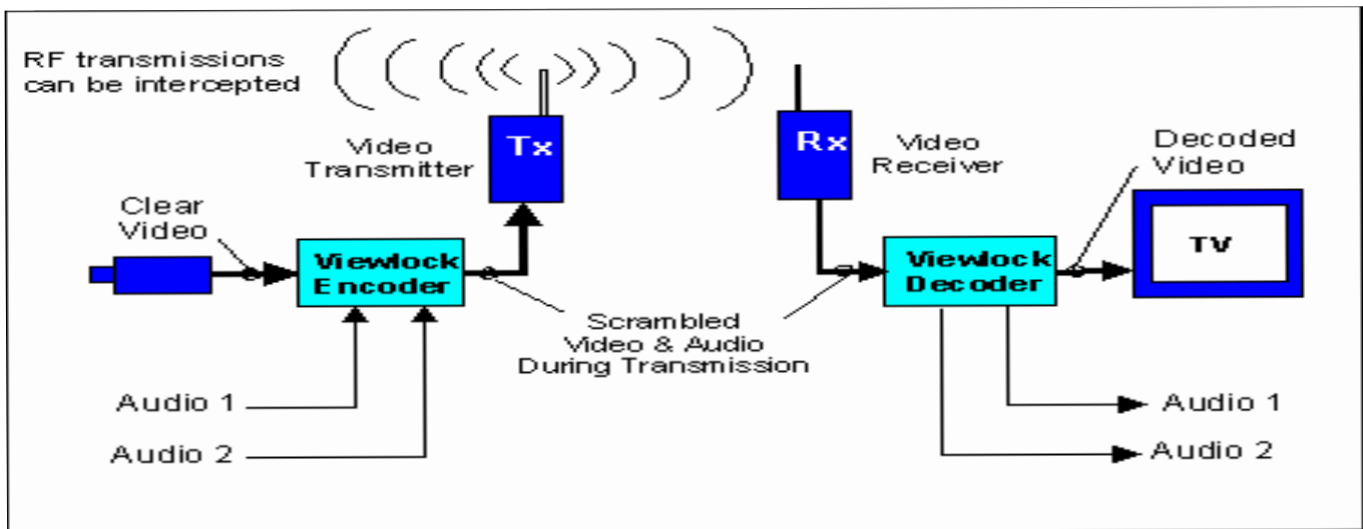
Viewlock II includes an on-screen-display as standard showing information about the status of the link. The OSD shows "Secure" when the link has been successfully encoded and decoded, and "Insecure" when the video has not been scrambled. To aid fault finding and installation Viewlock II also displays additional messages such as "No Link", when there is no video at the input of the decoder, and "No Video" when the encoder's input is absent.



Audiolock II upgrade for Viewlock II allows up to two audio channels to be encrypted together with the video. With no size increase over the standard video only unit, Audiolock II is highly compact and offers complete protection for video and audio surveillance links.

Audiolock II converts the incoming audio to an encrypted digital bit stream and adds this audio data to unused video lines. This technique is a robust and highly secure method of transmitting the audio over the link.

Audiolock II uses advanced digital audio compression, resulting in excellent signal to noise performance. Indeed, Audiolock II provides near broadcast quality audio, vastly superior to the traditional sub-carrier audio channels used by video microwave links.



With the Audiolock II upgrade, the video is connected in the normal way to the Viewlock II, however, audio is presented to the encoder rather than the transmitter. The Audiolock encoder then combines the audio within the scrambled video feed ready for secure transmission. At the receive site, the decoder extracts the audio to provide a clear output. Audiolock is configurable for one channel of 14 kHz bandwidth or two channels of 7 kHz bandwidth.

