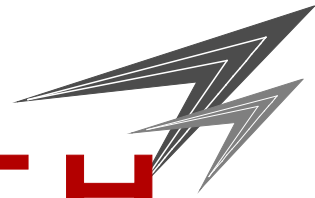# THE STEALTH
A XVX

RF Detector with Real Time remote Monitoring Capability

Protect from RF Audio/Video Transmitters and Laser Monitoring System

USER MANUAL
rev.2

Global TSCM Group, Inc.
2 Devine Avenue, Syosset 11791, USA
http://globaltscmgroup-usa.com
info@globaltscmgroup-usa.com
Tel.: +1 212 967 4030   +1 646 233 0383

CONTENTS

FEATURES

The Stealth AXVX

The Stealth AXVX is a wide-band RF scanning surveillance device built to detect illegal RF Audio/Video eavesdropping activities in the security area in 24/7. It can be operated stand-alone or remotely controlled and monitored by a central monitoring station via LAN/WAN.

The Stealth AX (Low Band) unit analyzes the RF environment of the installed area and then detects any suspicious RF signal. It transmits a warning signal with the demodulated sound of detected suspicious RF signal via LAN/WAM to the central monitoring station to analyze whether it is a illegal eavesdropping signal or not. - It can output the detected Audio signal directly as audio sound through a speaker or an earphone.

The Stealth VX (High Band) unit displays the same image of the illegal RF receiver receives from the RF camera when it detects any RF video signal. It also transmits the video signal of detected suspect RF signal to the central monitoring station via LAN/WAN to analyze whether it is a illegal camera signal or not.

The Stealth AXVX automatically demodulates the suspected RF signal itself and output the actual Audio Sound/Video Signal on the installed LCD screen and the connected speaker (earphone) or it transmits the signal to the central monitoring station via Network. Therefore, the security person can respond to the illegal activity in the secured area and can find the installed illegal RF device immediately. The permitted security person can receive a SMS or E-mail warning when it detects any suspected RF activities. The central monitoring center can report the suspected activity to the client or the security department immediately. They can send a real time SMS to the client's mobile phone when the Stealth AXVX detects any suspected RF signal.

Main Feature
- Detects RF audio signal and outputs as actual audio like a radio / Transmits audio signal and data via LAN/WAN
- Detects RF video signal and outputs as actual images like a TV / Transmits video signal and data via LAN/WAN
- Generates 2 channel acoustic white noise to prevent laser eavesdropping
- Stand alone operation or control and monitor by a remote control station via LAN/WAN

Specifications

Low Band
Monitoring RF Audio Signal

- Sweeping Time: Less than 5 seconds
- Frequency Range: 25MHz ~ 1300MHz
- Receiving Mode: WFM, FM, AM
- Option Port: Provided for additional sensors
- Remote Function: Remote setting & Monitoring
- On-site confirmation –
- Listening the demodulated sound
- Preventing Laser Eavesdropping
- Noise Generator - 2 Ch Random White Noise
- Transducer line breaking alarm & transmission

High Band

Monitoring RF Audio/Video Signal

- Sweeping Time: Less than 30 seconds- Receiving Mode: WFM, FM, AM, NTSC, PAL-Standard
- Remote Function: Remote setting & Monitoring
- On-site confirmation - Watching the demodulated images
- Transmission Data
    - ID, Frequency, Date/Time
    - Sound, Video signal (MPEG4, JPEG)

❖ **The Stealth AXVX** can be operated by Standalone or Remote monitoring via network for group monitoring up to 5,000 units.

Contents

The Stealth AXVX

AX Antenna

VX Antenna

Option Accessory

TRN600S

RJ11 Cable

RS232 Cable

AC`-DC Power Adapter

The Stealth AX - Low Band

General
The Stealth AX unit analyzes the RF environment of the installed area and then detects any suspicious RF signal. It transmits a warning signal with the demodulated sound of detected suspicious RF signal via LAN/WAM to the central monitoring station to analyze whether it is a illegal eavesdropping signal or not. - It can output the detected Audio signal directly as audio sound through a speaker or an earphone

Main Functions
1) Detects RF audio signal in real time
   a) Demodulates the detected signal for on-site checking or forwards to the Remote Monitoring Station (RMS)
2) Protects against from laser monitoring system
   a) Noise Generator - 2 Ch Random White Noise
   b) Transducer line breaking alarm & transmission (the patent of Global TSCM Group)
   c) Laser beam detecting alarm
3) Remote setting capability – Change and update the necessary setting via LAN/Internet
4) SMS alarm notification capability
5) Extra ports for upgrading or additional sensors – Detecting digital signals or door sensors, etc.

Specification
1) Monitoring RF Audio Signal
   a) Sweeping Time: Less than 5 seconds
   b) Frequency Range: Receiver 25MHz ~ 1300MHz
      i) Demodulation Mode: WFM, FM, AM
      ii) Detector 1200MHz ~ 6000MHz (Option)
2) Optional Device Ports (5 Ports): The Stealth CDMA/GSM Catcher, Door Sensor, Magnet Switch, etc.
3) Remote Function: Remote setting & Monitoring
4) On-site confirmation - Listening the demodulated sound
5) Preventing Laser Eavesdropping
   a) Noise Generator - 2 Ch Random White Noise
   b) Monitoring Transducer line break alarm & Status and Remote Sound Level Control
6) Stand alone operation capability
7) Data Transmission
   a) Data network – LAN or Internet
   b) Transmission data – ID, Detected Frequency, Time and alarm.

Panel Diagram

Front Panel

1. SQ :   Set receiver's sensitivity
2. VOL/PWR :   Volume/Power
3. MENU: Select mode
4. PHONE :   Monitoring demodulated signal
5. Serial Connector: for maintenance setting (Option)

Back Panel

1)   LASER CH1, CH2 – Transducer connectors
2)   EXT - Ports for additional sensors
3)   ANT – Antenna connector
4)   REMOTE – for maintenance setting (Option)
5)   RST – System reset hole
6)   LED CH1, CH2 – Alarm for transducer line break
7)   RF – RF audio signal detection indicator
8)   LED – P: Power   S: LAN status
9)   LAN – RJ45 port
10)   DC12V – DC12 V input

CONNECTION DIAGRAM
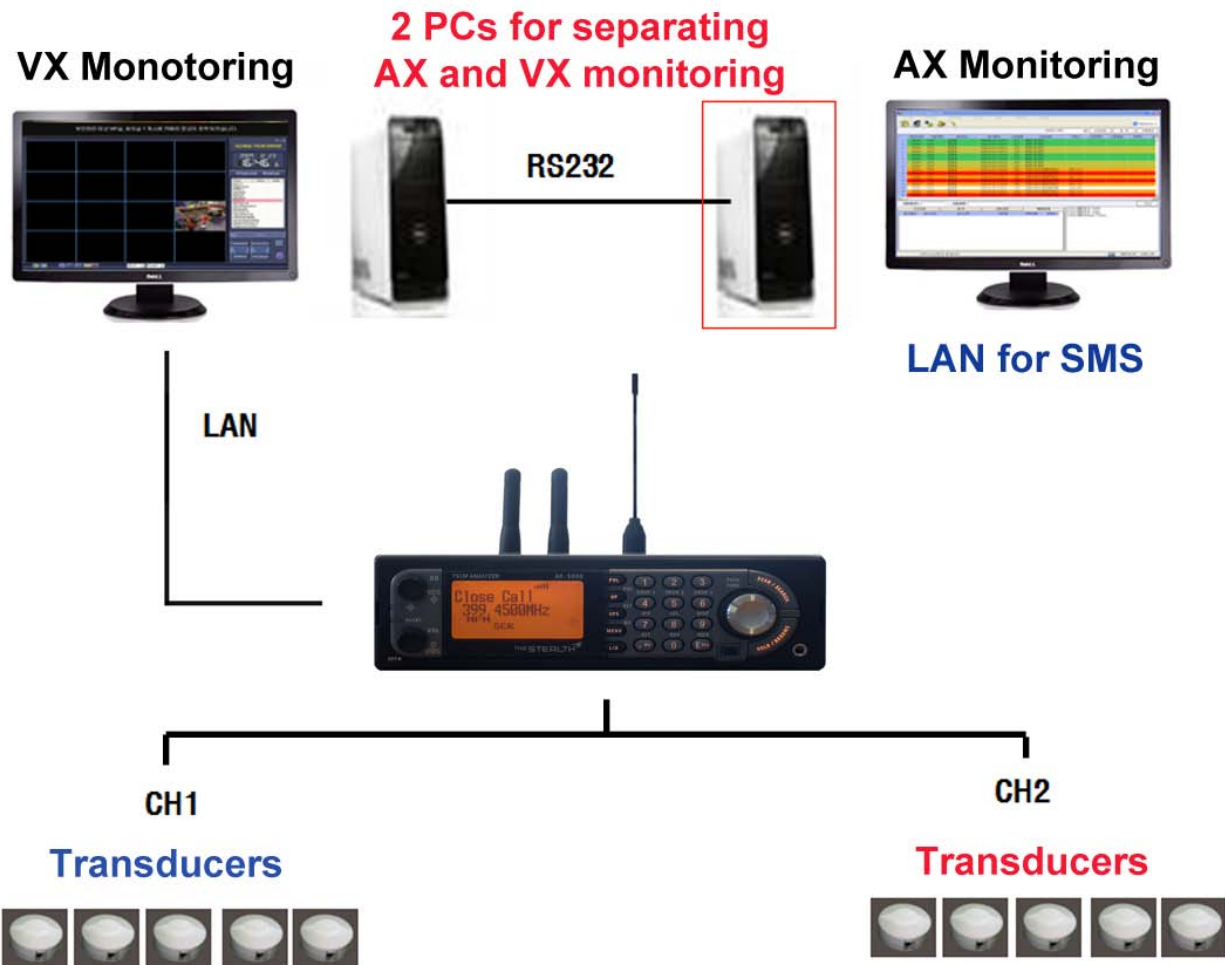
Preparing The Stealth AXVX

1. Setting system
   a. Place The Stealth AXVX in safety place.
   b. Connect 3 antennas to their own connector as marked.
   c. Install transducers and connect with RJ11 cables, if necessary.
   d. Insert power jack
2. Power
   a. If when you connect the AC adapter the **[VOL] /Power Switch** is **ON**, the scanner may not power on. Should this occur, simply turn the control **OFF**, then **ON** again.
   b. If the scanner loses power (as when you turn off the main power with the AXVX's power switch on), it can lose some system settings such as display color and backlight. To ensure that such settings persist, either change the setting using the AXVX's menu or power the AXVX off then back on using the power switch after making such setting changes.

c.

How to use The Stealth AXVX

1. Stand Alone (without Remote Monitoring) Operation

1) Connect the antenna and DC 12V adaptor included
2) Connect transducers (TRN600 or TRN600S), if necessary.
3) Turn the power switch on and turn the volume knob about ¾ position – It will begin self-test, then automatically sweep the RF signal in the installed area (Close Call will be displayed)
4) Squelch [SQ] control: Connect an earphone or a speaker, then turn the SQ knob to adjust the sensitivity – Place the knob just before hearing noise
5) It will display "Close-Call" for assigned time (default 14 seconds), when a suspicious RF audio signal is detected and then scan again.
❖ The Stealth AXVX is preset for auto sweeping. If "Close Call" is disappeared by pressing wrong button, change to Close Call mode again as followings;
   o Turn power off then on again with power knob.
   o Press Menu, then turn the dial to display "Close Call", the push the dial, the push again on "Close Call only option.
6) The detected signal will be demodulated to audible sound and can be checked by attaching a speaker or a headphone in phone jack.
7) It will display a image on the TFT display, when a suspicious RF video signal is detected and then scan again.
8) Transducer – Connect transducer(Option) to The Stealth AX unit with RJ11 (4pins) cable

2. Using Remote Program

Remote Program is provided to change the values of The Stealth AXVX unit to set the functions as desire for various environment

This program can be used to connect a PC and the AX unit directly with the Serial cable between Serial ports on both sides (and Serial to USB converter), or via network (Internet). If AXVX is connected into network, Quit AX Remote Monitoring Program and run Remote program.
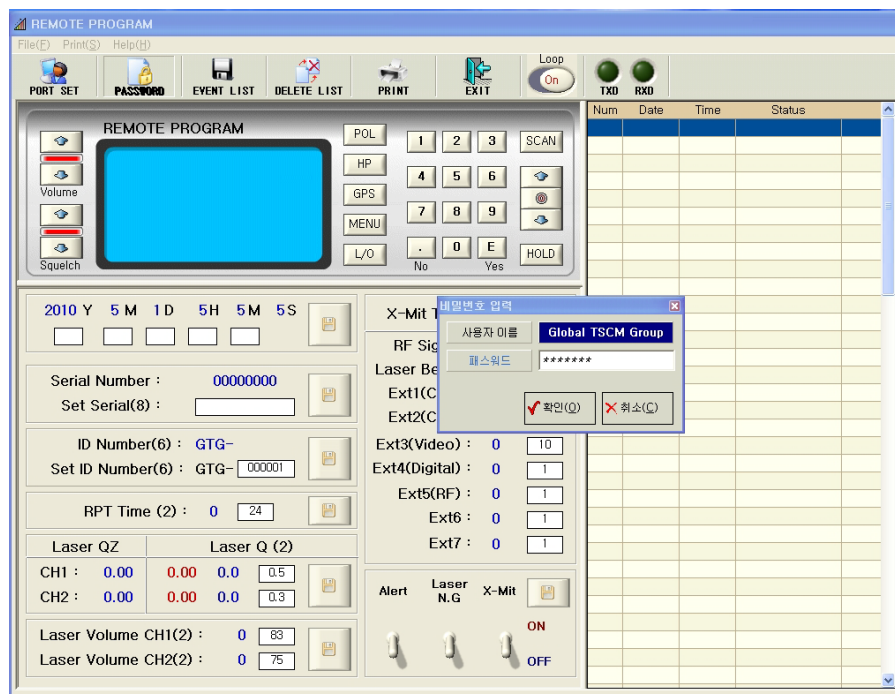
- ❖ Connect PC (RS232) to The Stealth AXVX (REMOTE Port on rear panel with included RS232 cable.
- ❖ If PC does not have RS232 terminal, use Serial to USB converter.

1) Start Remote Program
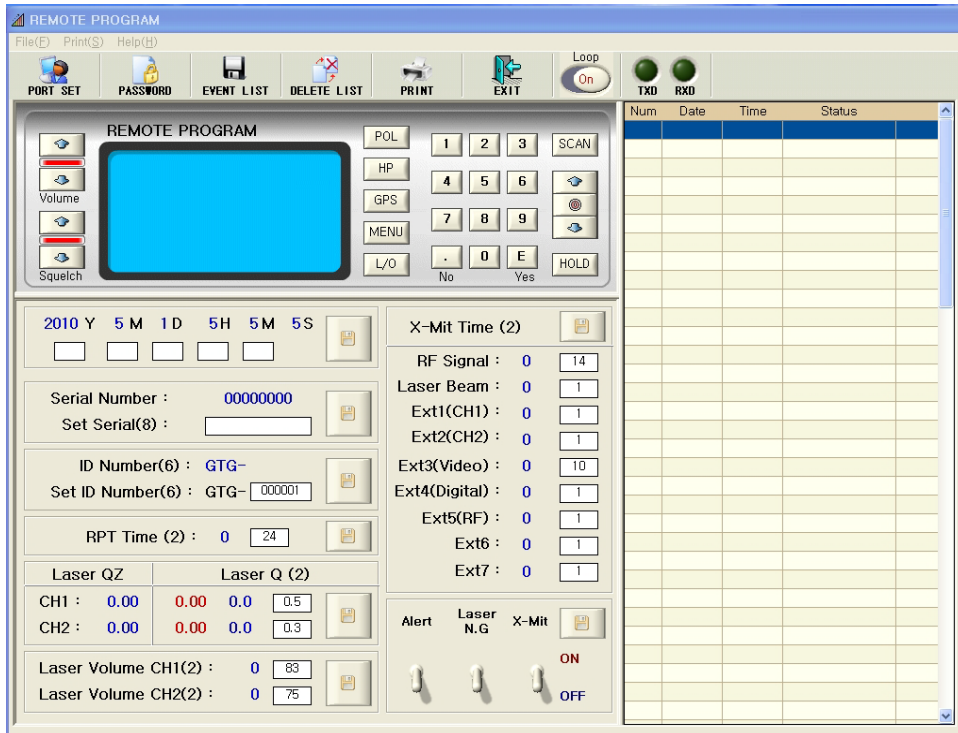
2) Click "PASSWORD" on top menu bar and type [ny10001] in the password window. If password is not entered, user can see the saved value of functions, but can't change them.

3) Click [PORT SET] to assign the communication port – It may be assigned automatically.

❖ **Setting via Network:**
Click the desired AXVX **set (Channel) on VX monitoring screen to select and click Loop icon to set On state**

The display on Remote Program is as same as the front panel of AX-5000, so user can check the status of it at any remote location.

4) Each unit should be set up individually depend on the of its operation and installation environment. The time, device serial number and ID must be assigned for each unit.
   a) Time – Enter current time and date by the corresponding areas
   b) Serial Number – The serial number can be determined for practical maintenance.

c) ID – It can be determined by the installed location. It will be displayed with location information saved in remote monitoring unit, when the unit sends an event alarm.
d) The number in ( ) shows the digits of input, and the individual save icon must be clicked to save new information.

5) RPT Time
   a) AX unit sends a status report to the Remote Monitoring Station regularly by the assigned period. It can be set hourly up to 24 hours.
   b) If RPT Time is set with 12, AX unit sends a report signal every 12 hours unless there isn't any event.

6) Laser QZ
   a) It defines the output level of The White Noise from AX-5000 unit to transducer for protecting against from laser monitoring system.
   b) Install transducer(s) and connect to AX-5000 and adjust the volume as desired.
   c) Do not enter any number and click [SAVE] icon to remember current value as standard level.

7) Laser Q
   a) It defined the tolerance limit of [QZ] to decide when the AX-5000 issues an event.
   b) If Q is assigned 0.5, an event will be issued when the value is changed more than 0.5.
   c) The standard value is 0.5 with 4 of TRN600 are connected, but some experiments are recommended by disconnecting and connecting the connected devices various way to find the best value for each environment.
   d) This is useful to maintain AX-5000 and the attached devices including lines between AX-5000 and transducers(TRN-600) and Omni-speaker(OMS-600)

8) Laser Volume CH
   a) It defines the output level of White Noise from TRN-600 or OMS-600.

b) Adjust the suitable volume level by listening the sound from device after completely install it on window, wall and ceiling.
c) The higher volume protects against eavesdropping activity more officiously, and too much low volume may not protect from eavesdropping.
d) The value can be set from 00 to 99 by level of 1
e) Laser volume CH must be set before setting QZ

X-Mit Time (2)		🖫
RF Signal :	0	14
Laser Beam :	0	1
Ext1(CH1) :	0	1
Ext2(CH2) :	0	1
Ext3(Video) :	0	10
Ext4(Digital) :	0	1
Ext5(RF) :	0	1
Ext6 :	0	1
Ext7 :	0	1

9) X-Mit Time
   a) It defines the delayed time to transmit an event alarm to the Remote Monitoring Station after detecting signal.

RPT Time (2) :	0	24	🖫

Laser QZ		Laser Q (2)			
CH1 :	0.00	0.00	0.0	0.5	🖫
CH2 :	0.00	0.00	0.0	0.3	

Laser Volume CH1(2) :	0	83	🖫
Laser Volume CH2(2) :	0	75	

b) If its value is 20, AX-500 transmits an alarm when the event lasts longer than 20 seconds, otherwise skip and continue to search signal.
c) RF Signal : Minimum 14 seconds
d) Laser Beam: 60 Seconds
e) Ext 1: 1 second for digital signal detection option
f) Ext 2: Refer with the type of sensors

10) Function of Software Switches
a) Alert: When AX-5000 is on standalone, it does not transmits events to RMS and beep an alert sound
b) Laser N. G: Select whether White Noise generator works or not
c) X-Mit: Whether sending event alarms to RMs or not
d) If using Remote Monitoring program, select Alert (OFF) and X-Mit(ON)
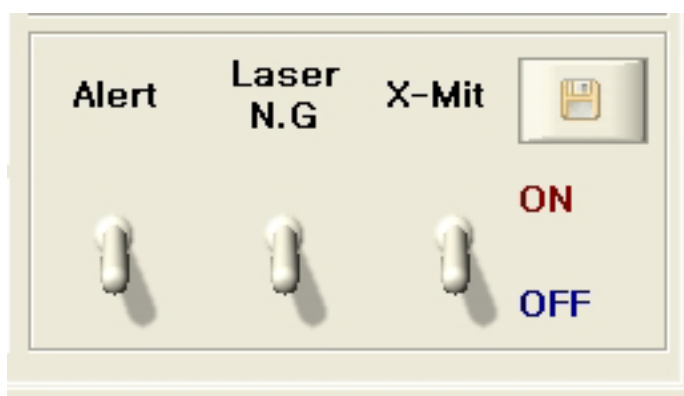
11) When AX-5000 is the standalone operation, the last 100 events can be searched and printed by connecting a PC via RS232 cable.
a) Click [EVENT LIST] to list the last 100 events
b) Click [DELETE LIST] to delete events on the list

12) Click [PRINT] to print the events on the list
13) Loop:
a) Using it for remote setting via Network or Internet
b) It must be off when AX-5000 is set via Network or Internet.

The Stealth VX - Hi Band

1. General

The Stealth VX displays the same image of the illegal RF receiver receives from the RF camera when it detects any RF video signal. It also transmits the video signal of detected suspect RF signal to the central monitoring station via LAN/WAN to analyze whether it is a illegal camera signal or not. It displays the suspicious RF video signal immediately, so its user or security person in the remote monitoring station can response any event without spectrum analyzing procedure. It helps to improve the security work more efficiently and cost effetely. It has the high sensitivity to receive the signal up to 6GHz, so it can detect the newest spy camera in 5.8GHz of frequency range.

The remote monitoring station can monitor the signals of The Stealth AXVX up to 5000 units and find the image of detected signal on the pop-up screen. E-mail notification function can be assigned to the related people for additional security and convenience.

This program provide recording detected video signal with the maximum 30 seconds of previous data to prevent missing important images.

2. Main Features

Monitoring RF Audio/Video Signal
   a)   Real time Pop-Up Screen
   b)   Sweep 700 ft² within 20 seconds (5.8GHz Range: 500 ft²)
   c)   Sound, Video signal: H.264 - Check the detected image on site
   d)   Event alarm E-mail notification
   e)   Record the event image for 30 sec automatically

3. Specifications

1)   Detect Method: VIDEO SIGNAL SWEEP
2)   Signal Transmit : H.264
3)   Detect Area: 700 ft² (5.8GHz Range: 500 ft²)
4)   Detect time: Less than 20 seconds
5)   Receive Mode: NTSC, PAL, AUDIO
6)   Display: 2.5 inch TFT LCD
7)   Transmission Method : Internet, LAN
8)   Transmission Data : Site ID, Video, Audio

4. The Stealth VX Panels

    1)   LASER CH1, CH2 – Transducer connectors
    2)   EXT - Ports for additional sensors
    3)   ANT – Antenna connector
    4)   REMOTE – for maintenance setting (Option)
    5)   RST – System reset hole
    6)   LED CH1, CH2 – Alarm for transducer line break
    7)   RF – RF audio signal detection indicator
    8)   LED – P: Power   S: LAN status
    9)   LAN – RJ45 port
  10)   DC12V – DC12 V input

5. Standalone Operation

1) Connect 3 antennas and AC -DC power adaptor.
2) Turn on The Stealth AXVX
3) When VX-5000 detects a suspicious RF video signal, it displays the video image on LCD
4) Search and remove the RF transmitter by referring the image on LCD or TSCM detector by Security person.
5) Check the TFT display to make sure no image is displayed

6. Remote Monitoring Operation
Please refer Stealth VX Remote Monitoring Program Manual