



SCAN VISION VHX IITM (VHX480)

User's Manual

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SAFETY INSTRUCTIONS

All of the safety and operating instructions should be read before the product is operated and should be retained for further reference. Please follow all of the warnings on this product and its operating instructions.

CAUTION :

WARNING: To prevent the risk of electric shock and fire, do not expose this device to rain, humidity or intense heat sources (such as heaters or direct sunlight). Slots and openings in the device are provided for ventilation and to avoid overheating. Make sure the device is never placed on or near a textile surface that could block the openings. Also keep away from excessive dust, vibrations and shocks.

POWER: Only use the power supply indicated on the device or on the power source. Devices equipped with a grounding plug should only be used with a grounding type outlet. In no way should this grounding be modified, avoided or suppressed.

POWER CORD: Use the On (I) / Off (O) switch to power On or Off devices equipped with that switch. All other devices should be plugged and unplugged from wall outlet. In both cases, please follow these instructions:

- The power cord of the device should be unplugged from the outlet when left unused for several days.
- To unplug the device, do not pull on the power cord but always on the plug itself.
- The outlet should always be near the device and easily accessible.
- Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them.

If the power supply cord is damaged, unplug the device. Using the device with a damaged power supply cord may expose you to electric shocks or other hazards. Verify the condition of the power supply cords once in a while. Contact your dealer or service center for replacement if damaged.

CONNECTIONS: All inputs and outputs (except for the power input) are TBTS defined under EN60950.

SERVICING: Do not attempt to service this product yourself by opening or removing covers and screws since it may expose you to electric shocks or other hazards. Refer all problems to qualified service personnel.

OPENINGS: Never push objects of any kind into this product through the openings. If liquids have been spilled or objects have fallen into the device, unplug it immediately and have it checked by a qualified technician.

INSTRUCTIONS DE SÉCURITÉ

Afin de mieux comprendre le fonctionnement de cet appareil nous vous conseillons de bien lire toutes les consignes de sécurité et de fonctionnement de l'appareil avant utilisation. Conserver les instructions de sécurité et de fonctionnement afin de pouvoir les consulter ultérieurement. Respecter toutes les consignes marquées dans la documentation, sur le produit et sur ce document.

ATTENTION : Afin de prévenir tout risque de choc électrique et d'incendie, ne pas exposer cet appareil à la pluie, à l'humidité et aux sources de chaleur intense.

INSTALLATION : Veillez à assurer une circulation d'air suffisante pour éviter toute surchauffe à l'intérieur de l'appareil. Ne placez pas l'appareil sur ou proximité de surface textile susceptible d'obstruer les orifices de ventilation. N'installez pas l'appareil à proximité de sources de chaleur comme un radiateur ou une bouche d'air chaud, ni dans un endroit exposé au rayonnement solaire direct, à des poussières excessives, à des vibrations ou à des chocs mécaniques. Ceci pourrait provoquer un mauvais fonctionnement et un accident.

ALIMENTATION : Ne faire fonctionner l'appareil qu'avec la source d'alimentation indiquée sur l'appareil ou sur son bloc alimentation. Pour les appareils équipés d'une alimentation principale avec fil de terre, ils doivent être obligatoirement connectés sur une source équipée d'une mise à la terre efficace. En aucun cas cette liaison de terre ne devra être modifiée, contournée ou supprimée.

CORDON D'ALIMENTATION : Pour les appareils équipés d'un interrupteur général (Marche I / Arrêt O), la mise sous tension et la mise hors tension se fait en actionnant cet interrupteur général. Pour les appareils sans interrupteur général, la mise sous tension et la mise hors tension se fait directement en connectant et déconnectant le cordon d'alimentation de la prise murale.

Dans les 2 cas ci-dessus appliquer les consignes suivantes :

- Débrancher le cordon d'alimentation de la prise murale si vous prévoyez de ne pas utiliser l'appareil pendant quelques jours ou plus.
- Pour débrancher le cordon, tirez le par la fiche. Ne tirez jamais sur le cordon proprement dit.
- La prise d'alimentation doit se trouver à proximité de l'appareil et être aisément accessible.
- Ne laissez pas tomber le cordon d'alimentation et ne posez pas d'objets lourds dessus.

Si le cordon d'alimentation est endommagé, débranchez le immédiatement de la prise murale. Il est dangereux de faire fonctionner cet appareil avec un cordon endommagé, un câble abîmé peut provoquer un risque d'incendie ou un choc électrique. Vérifier le câble d'alimentation de temps en temps. Contacter votre revendeur ou le service après vente pour un remplacement.

CONNEXIONS : Toutes les entrées et sorties (exceptée l'entrée secteur) sont de type TBTS (Très Basse Tension de Sécurité) définies selon EN 60950.

RÉPARATION ET MAINTENANCE : L'utilisateur ne doit en aucun cas essayer de procéder aux opérations de dépannage, car l'ouverture des appareils par retrait des capots ou de toutes autres pièces constituant les boîtiers ainsi que le dévissage des vis apparentes à l'extérieur, risque d'exposer l'utilisateur à des chocs électriques ou autres dangers. Contacter le service après vente ou votre revendeur ou s'adresser à un personnel qualifié uniquement.

OUVERTURES ET ORIFICES : Les appareils peuvent comporter des ouvertures (aération, fentes, etc...), veuillez ne jamais y introduire d'objets et ne jamais obstruer ses ouvertures. Si un liquide ou un objet pénètre à l'intérieur de l'appareil, débranchez immédiatement l'appareil et faites le contrôler par un personnel qualifié avant de le remettre en service.

ISTRUZIONI DI SICUREZZA

Allo scopo di capire meglio il funzionamento di questa apparecchiatura vi consigliamo di leggere bene tutti i consigli di sicurezza e di funzionamento prima dell'utilizzo. Conservare le istruzioni di sicurezza e di funzionamento al fine di poterle consultare ulteriormente. Seguire tutti i consigli indicati su questo manuale e sull'apparecchiatura.

ATTENZIONE : Al fine di prevenire qualsiasi rischio di shock elettrico e d'incendio, non esporre l'apparecchiatura a pioggia, umidità e a sorgenti di eccessivo calore.

INSTALLAZIONE : Assicuratevi che vi sia una sufficiente circolazione d'aria per evitare qualsiasi surriscaldamento all'interno dell'apparecchiatura. Non collocare l'apparecchiatura in prossimità o su superfici tessili suscettibili di ostruire il funzionamento della ventilazione. Non installate l'apparecchiatura in prossimità di sorgenti di calore come un radiatore o una fuoriscia d'aria calda, né in un posto esposto direttamente ai raggi del sole, a polvere eccessiva, a vibrazioni o a shock meccanici. Ciò potrebbe provocare un erroneo funzionamento e un incidente.

ALIMENTAZIONE : Far funzionare l'apparecchiatura solo con la sorgente d'alimentazione indicata sull'apparecchiatura o sul suo alimentatore. Per le apparecchiature fornite di un'alimentazione principale con cavo di terra, queste devono essere obbligatoriamente collegate su una sorgente fornita di una efficiente messa a terra. In nessun caso questo collegamento potrà essere modificato, sostituito o eliminato.

CAVO DI ALIMENTAZIONE : Per le apparecchiature fornite di interruttore generale (Acceso I / Spento O), l'accensione e lo spegnimento dell'apparecchiatura si effettuano attraverso l'interruttore. Per le apparecchiature senza interruttore generale, l'accensione e lo spegnimento si effettuano direttamente inserendo o disinserendo la spina del cavo nella presa murale.

In entrambe i casi applicare i seguenti consigli :

- Disconnettere l'apparecchiatura dalla presa murale se si prevede di non utilizzarla per qualche giorno.
- Per disconnettere il cavo tirare facendo forza sul connettore.
- La presa d'alimentazione deve trovarsi in prossimità dell'apparecchiatura ed essere facilmente accessibile.
- Non far cadere il cavo di alimentazione né appoggiarci sopra degli oggetti pesanti.

Se il cavo di alimentazione è danneggiato, spegnere immediatamente l'apparecchiatura. E' pericoloso far funzionare questa apparecchiatura con un cavo di alimentazione danneggiato, un cavo graffiato può provocare un rischio di incendio o uno shock elettrico. Verificare il cavo di alimentazione spesso. Contattare il vostro rivenditore o il servizio assistenza per una sostituzione.

CONNESSIONE : Tutti gli ingressi e le uscite (eccetto l'alimentazione) sono di tipo TBTS definite secondo EN 60950.

RIPARAZIONI E ASSISTENZA : L'utilizzatore non deve in nessun caso cercare di riparare l'apparecchiatura, poiché con l'apertura del coperchio metallico o di qualsiasi altro pezzo costituente la scatola metallica, nonché svitare le viti che appaiono esteriormente, poiché ciò può provocare all'utilizzatore un rischio di shock elettrico o altri rischi.

APERTURE DI VENTILAZIONE : Le apparecchiature possono comportare delle aperture di ventilazione, si prega di non introdurre mai oggetti o ostruire le sue fessure. Se un liquido o un oggetto penetra all'interno dell'apparecchiatura, disconnetterla e farla controllare da personale qualificato prima di rimetterla in servizio.

SICHERHEITSHINWEISE

Um den Betrieb dieses Geräts zu verstehen, raten wir Ihnen vor der Inbetriebnahme alle Sicherheits- und Betriebsanweisungen genau zu lesen. Diese Sicherheits- und Betriebsanweisungen für einen späteren Gebrauch sicher aufbewahren. Alle in den Unterlagen, an dem Gerät und hier angegebenen Sicherheitsanweisungen einhalten.

VORSICHT & WARNUNG

ACHTUNG: um jegliches Risiko eines Stromschlags oder Feuers zu vermeiden, das Gerät nicht Regen, Feuchtigkeit oder intensiven Wärmequellen aussetzen.

EINBAU : Eine ausreichende Luftzufuhr sicherstellen, um jegliche Überhitzung im Gerät zu vermeiden. Das Gerät nicht auf und in Nähe von Textiloberflächen, die Belüftungsöffnungen verschließen können, aufstellen. Das Gerät nicht in Nähe von Wärmequellen, wie z.B. Heizkörper oder Warmluftkappe, aufstellen und es nicht dem direkten Sonnenlicht, übermäßigem Staub, Vibrationen oder mechanischen Stößen aussetzen. Dies kann zu Betriebsstörungen und Unfällen führen.

STROMVERSORGUNG : Das Gerät nur mit der auf dem Gerät oder dem Netzteil angegebenen Netzspannung betreiben. Geräte mit geerdeter Hauptstromversorgung müssen an eine Stromquelle mit effizienter Erdung angeschlossen werden. Diese Erdung darf auf keinen Fall geändert, umgangen oder entfernt werden.

STROMKABEL : Für Geräte mit einem Hauptschalter (Ein/Aus) erfolgt die Stromversorgung und unterbrechung mittels dieses Hauptschalters. Geräte ohne Hauptschalter werden durch das Einstecken oder Herausziehen des Steckers in den Wandanschluß ein- oder ausgeschaltet. Für beide Fälle gelten folgende Richtlinien :

- Den Stecker aus dem Wandanschluß herausziehen wenn Sie das Gerät mehrere Tage oder länger nicht benutzen.
- Das Kabel mittels dem Stecker herausziehen. Niemals am Stromkabel selbst ziehen.
- Die Steckdose muß sich in der Nähe des Geräts befinden und leicht zugänglich sein.
- Das Stromkabel nicht fallen lassen und keine schweren Gegenstände auf es stellen.

Wenn das Stromkabel beschädigt ist, das Gerät sofort abschalten. Es ist gefährlich das Gerät mit einem beschädigten Stromkabel zu betreiben; ein abgenutztes Kabel kann zu einem Feuer oder Stromschlag führen. Das Stromkabel regelmäßig untersuchen. Für den Ersatz, wenden Sie sich an Ihren Verkäufer oder Kundendienststelle.

ANSCHLÜSSE : Bei allen Ein- und Ausgängen (außer der Stromversorgung) handelt es sich, gemäß EN 60950, um Sicherheits Kleinspannungsanschlüsse.

REPARATUR UND WARTUNG : Der Benutzer darf keinesfalls versuchen das Gerät selbst zu reparieren, die Öffnung des Geräts durch Abnahme der Abdeckhaube oder jeglichen anderen Teils des Gehäuses sowie die Entfernung von außen sichtbaren Schrauben zu Stromschlägen oder anderen Gefahren für den Benutzer führen kann. Wenden Sie sich an Ihren Verkäufer, Ihre Kundendienststelle oder an qualifizierte Fachkräfte.

ÖFFNUNGEN UND MUNDUNGEN : Die Geräte können über Öffnungen verfügen (Belüftung, Schlitze, usw.). Niemals Gegenstände in die Öffnungen einführen oder die Öffnungen verschließen. Wenn eine Flüssigkeit oder ein Gegenstand in das Gerät gelangt, den Stecker herausziehen und es vor einer neuen Inbetriebnahme von qualifiziertem Fachpersonal überprüfen lassen.

INSTRUCCIONES DE SEGURIDAD

Para comprender mejor el funcionamiento de este aparato, le recomendamos que lea cuidadosamente todas las consignas de seguridad y de funcionamiento del aparato antes de usarlo. Conserve las instrucciones de seguridad y de funcionamiento para que pueda consultarlas posteriormente. Respete todas las consignas indicadas en la documentación, relacionadas con el producto y este documento.

PRECAUCIONES Y OBSERVACIONES

CUIDADO : Para prevenir cualquier riesgo de choque eléctrico y de incendio, no exponga este aparato a la lluvia, a la humedad ni a fuentes de calor intensas.

INSTALACIÓN : Cerciórese de que haya una circulación de aire suficiente para evitar cualquier sobrecalentamiento al interior del aparato. No coloque el aparato cerca ni sobre una superficie textil que pudiera obstruir los orificios de ventilación. No instale el aparato cerca de fuentes de calor como radiador o boca de aire caliente, ni en un lugar expuesto a los rayos solares directos o al polvo excesivo, a las vibraciones o a los choques mecánicos. Esto podría provocar su mal funcionamiento o un accidente.

ALIMENTACIÓN : Ponga a funcionar el aparato únicamente con la fuente de alimentación que se indica en el aparato o en su bloque de alimentación. Los aparatos equipados con una alimentación principal con hilo de tierra deben estar conectados obligatoriamente a una fuente equipada con una puesta a tierra eficaz. Por ningún motivo este enlace de tierra deberá ser modificado, cambiado o suprimido.

CABLE DE ALIMENTACIÓN : Para los aparatos equipados con un interruptor general (Marcha / Paro O), la puesta bajo tensión y la puesta fuera de tensión se hace accionando este interruptor general.. En los aparatos que no tienen interruptor general, la puesta bajo tensión y la puesta fuera de tensión se hace directamente conectando y desconectando el enchufe mural.

En ambos casos, se deberá respetar las siguientes consignas:

- Desconectar el aparato del enchufe mural si no piensa utilizarlo durante varios días.
- Para desconectar el cable, tire de la clavija. No tire nunca del cable propiamente dicho.
- El enchufe de alimentación debe estar cerca del aparato y ser de fácil acceso.
- No deje caer el cable de alimentación ni coloque objetos pesados encima de él.

Si el cable de alimentación sufre algún daño, ponga el aparato inmediatamente fuera de tensión. Es peligroso hacer funcionar este aparato con un cable averiado, ya que un cable dañado puede provocar un incendio o un choque eléctrico. Verifique el estado del cable de alimentación de vez en cuando. Póngase en contacto con su distribuidor o con el servicio de posventa si necesita cambiarlo.

CONEXIONES : Todas las entradas y salidas (excepto la entrada del sector) son de tipo TBTS (Muy Baja Tensión de Seguridad) definidas según EN 60950.

REPARACIÓN Y MANTENIMIENTO : Por ningún motivo, el usuario deberá tratar de efectuar operaciones de reparación, ya que si abre los aparatos retirando el capó o cualquier otra pieza que forma parte de las cajas o si destornilla los tornillos aparentes exteriores, existe el riesgo de producirse una explosión, choques eléctricos o cualquier otro incidente. Contacte el servicio de posventa, a su distribuidor o diríjase con personal cualificado únicamente.

ABERTURAS Y ORIFICIOS : Los aparatos pueden contener aberturas (aireación, ranuras, etc.). No introduzca allí ningún objeto ni obstruya nunca estas aberturas. Si un líquido o un objeto penetra al interior del aparato, desconéctelo y hágalo revisar por personal cualificado antes de ponerlo nuevamente en servicio.

SCAN VISION VHX II™ (VHX480)

Chapter 1 : INTRODUCTION

1-1. SUPPLIED EQUIPMENT

- 1 SCAN VISION VHX II™ (VHX480).
- 1 AC power supply cord.
- 1 RCA male / RCA male cable.
- 1 RCA female / BNC male adapter.
- 1 S.VIDEO (Y/C) cable (4-pin mini DIN Male/ Male).
- 1 VGA cable (HD 15 Male / HD 15 Male).
- 1 MCO (5 pins) female connector (for RS-232 connection).
- 1 User's manual.
- 1 Control software (3.5" disk).

Supplied equipment with the OPT-VHXII-R option:

- 1 Set of 19" brackets.
- 1 Tray (19").

1-2. GENERAL INFORMATION

The SCAN VISION VHX II™ is a Scan converter which enables WORKSTATION, PC, or MACINTOSH® graphic images (up to 1280 x 1024 at 60 Hz) to be converted into Video. It is totally Auto-Scan and converts in REAL TIME, FULL SCREEN, with OVERSCAN/UNDERSCAN and Frame FREEZE capabilities.

A useful linear zoom function (up to 200%), adaptable to different settings, provides the freedom to choose the best picture size and position according to your application.

The SCAN VISION VHX II™ automatically memorizes up to 16 computer input formats. The exact configuration of your set up can be stored in order not to repeat the process at each application. This function is ideal for rental or multi-computer applications and is very user-friendly.

A new high performance 3 levels ANTI-FLICKER significantly decreases the flicker inherent in interlaced video output. A large ANTI-FLICKER operating range allows you to find the settings, which perfectly suit your application.

All NTSC/PAL, S.VIDEO, RGB/S video outputs are accessible at the same time (on 4-pin min DIN for the S.VIDEO, and on BNC connectors for the others video).

The SCAN VISION VHX II™ is very easy to use and provides a high video quality.

1-3. SCAN VISION VHX II™ REFERENCES

REFERENCES	DESIGNATIONS
VHX480	SCAN VISION VHX II™
OPT-VHXII-R	Optional kit for rack mounting

Chapter 2 : INSTALLATION

IMPORTANT : Please read all of the safety instructions (pages 2 to 4) before starting.

- **Table top mounting:** The SCAN VISION VHX II™ can be used directly on a table: the unit is equipped with 4 plastic feet.
- **Rack mounting:**
(optional) The SCAN VISION VHX II™ is compatible with a 19" enclosure. Please follow the instructions below to install the SCAN VISION VHX II™ in a 19" rack.
 - ① Remove the 4 front side screws of the SCAN VISION VHX II™ and fix the 19" optional brackets to the sides with the 4 screws.



- ② Place the SCAN VISION VHX II™ onto the optional 19" tray and place them in your rack.
- ③ Attach together the SCAN VISION VHX II™ with the 19" tray to the rack by using 4 screws in the front panel holes (screws are not included).
- ④ Connect all of the cables to the SCAN VISION VHX II™ and attach them to the rack with some tie wraps, to prevent the weight of the cables to pull down on the rear of the SCAN VISION VHX II™.

IMPORTANT:

- **Be sure that no weight is added onto the SCAN VISION VHX II™.**
- **The maximum ambient operating temperature must not exceed 40 °C (104 °F).**
- **The rack and all mounted equipment in it must be reliably grounded to national and local electrical codes.**

Chapter 3 : TECHNICAL DESCRIPTION

3-1. FRONT PANEL



- POWER:** LED indicating that the POWER is ON.
- FREEZE:** Allows to Freeze the displayed OUTPUT.
- PAL / NTSC:** Allows to select the video output standard (PAL or NTSC).
- ANTI-FLICKER:** Allows to select a level of anti-flicker (1, 2 or 3).
- STD. / OVER. / ZOOM:** Allows to select a ZOOM MODE.
 STD. = standard image (underscan).
 OVER. = the image is OVERSCAN (10 % bigger than in standard mode).
 ZOOM = the image can be enlarged up to 200 %.
- POS/SIZE:** Allows to select the POSITION or SIZE adjustment mode.
 ↔↕ :
- LOCKED:** Input format recognition LED.
 LED OFF: No source is detected onto the computer input.
 LED ON: A source is detected and is compatible with the input range frequency.

3-2. REAR PANEL

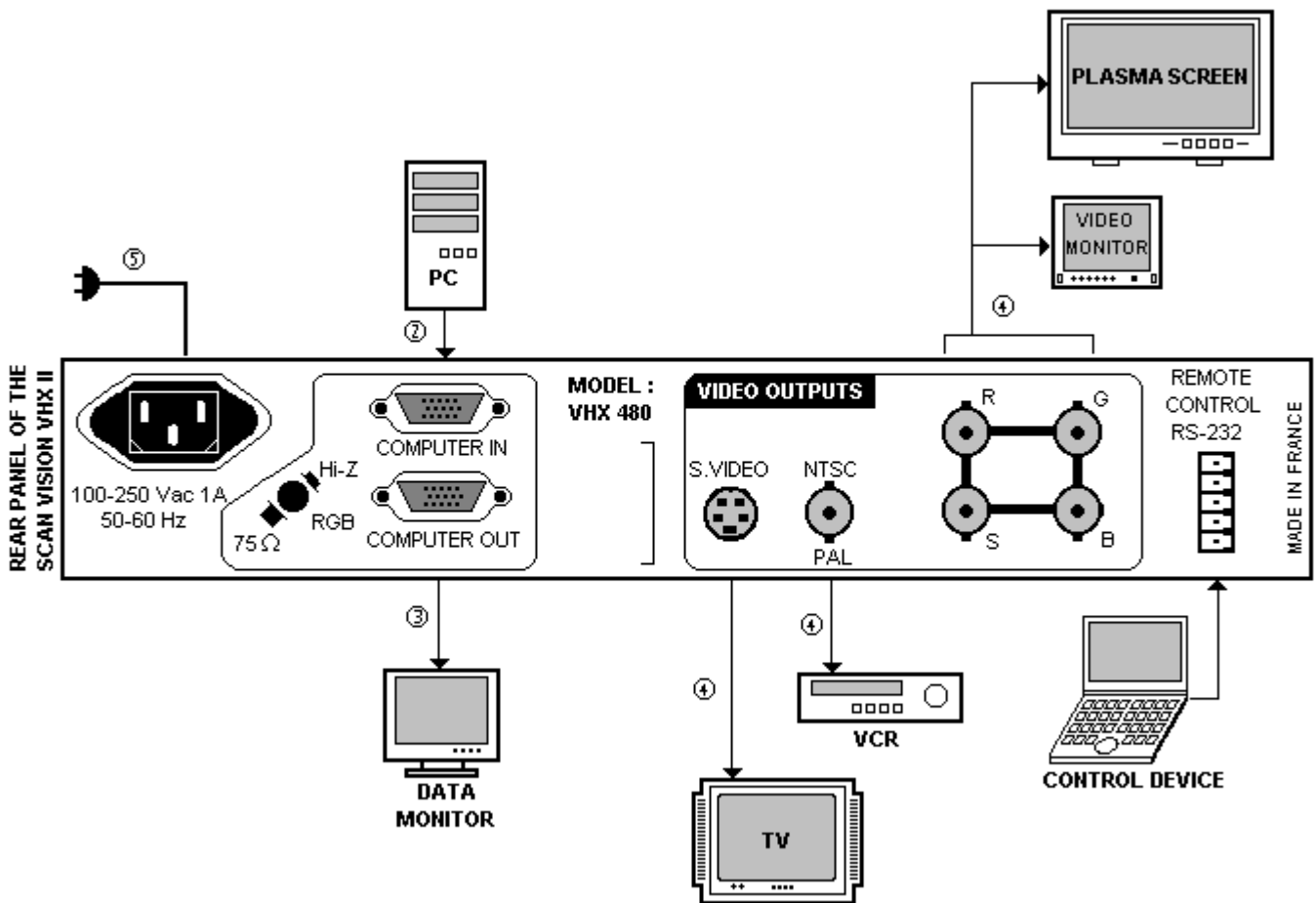


- POWER INPUT:** Standard IEC connector (100-250 VAC, 1 A, 50-60Hz).
- COMPUTER IN:** Computer (PC, MAC, WORKSTATION) input on HD15 female connector.
- COMPUTER OUT:** Computer output (data monitor...) on HD15 female connector.
- 75Ω/Hi-Z (RGB):** RGB input load. Set this button on Hi-Z if you connect a monitor on the **COMPUTER OUT** connector. If not set it on 75Ω.
- VIDEO OUTPUTS**
- S.VIDEO:** S.VIDEO (Y/C) output on a 4-pins mini DIN connector.
- NTSC / PAL:** COMPOSITE VIDEO output (PAL or NTSC) on a BNC connector.
- RGB/S:** RGB/S video output on 4 BNC connectors.
- REMOTE CONTROL RS-232:** Standard Remote Control on 5-pins MCO male connector.

Chapter 4 : STARTING

4-1. CONNECTIONS

- ① Turn OFF all of your equipment before connecting.
- ② Connect your computer source to the COMPUTER IN connector (HD 15 F) of the SCAN VISION VHX II™.
- ③ Connect if necessary, the computer monitor to the COMPUTER OUT connector (HD15 F), and set the RGB 75Ω / Hi-Z button on Hi-Z.
- NOTE:** If you don't connect a monitor set the RGB 75Ω / Hi-Z button on 75Ω.
- ④ Connect your display device (TV monitor, VCR,...) to the VIDEO OUTPUTS of the SCAN VISION VHX II™.
- ⑤ Connect the AC Power Supply Cord to the SCAN VISION VHX II™ and to an AC power outlet.
- ⑥ Turn ON your computer source and then your display device.



4-2. SETTINGS

- ① Select the output video standard with the front panel switch (PAL or NTSC).
- ② Select an anti-flicker level (1, 2 or 3) with the ANTI FLICKER front panel push button.
- ③ Select the Standard mode (STD) and adjust the position and the size (with the POS/SIZE button and the ↔ ↕ knobs) to display the image in full screen.
- ④ Then select if needed a zoom mode (OVER or ZOOM) with the front panel push button and adjust the position and the size of the image with the POS/SIZE button and the ↔ ↕ knobs.

Chapter 5 : TECHNICAL SPECIFICATION

5-1. COMPUTER INPUT (HD15 Female connector)

Hardware compatibility: Line frequency : From 31.5 kHz to 71 kHz.
Resolution: Up to 1024 x 768 at 75 Hz or up to 1280 x 1024 at 60 Hz.
Automatic recognition of all sync (RGsB, RGBS, RGBHV).

5-2. VIDEO OUTPUTS

• RGB.S (4 BNC connectors)

15.625 kHz / 50 Hz 15.735 kHz / 60 Hz (625L525L)

Levels: R, G, B = 3 x 0.7 Vp/p.
S = 0.3 Vp/p or TTL.

Impedance: R, G, B = 75 Ohms.
S = 75 Ohms or Hi-Z.

• S.VIDEO (Y/C) (4-pins mini DIN connector)

PAL / SECAM 15.625 kHz / 50 Hz (625L).....NTSC (3.58 MHz / 4.43 MHz) 15.735 kHz / 60 Hz (525L).

Levels: Y = 1 Vp/p (0.7 Vp/p Luma + 0.3 Vp/p Sync.).
C = 0.3 Vp/p.

Impedance: 75 Ohms.

• COMPOSITE VIDEO (BNC connector)

PAL / SECAM 15.625 kHz / 50 Hz (625L).....NTSC (3.58MHz / 4.43 MHz) 15.735 kHz / 60 Hz (525L).

Levels: 1 Vp/p (0.7 Vp/p Luma + 0.3 Vp/p Sync.).

Impedance: 75 Ohms.

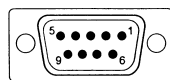
5-3. REMOTE CONTROL (5-pins MCO male connector)

Level: RS-232.

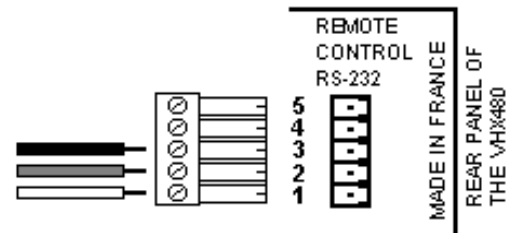
Data Rate: 9600 bauds, 8 data bits, 1 stop bit, no parity bit, no flow control.

Pin out:

PIN # (DB9)	FUNCTIONS	PIN # (5-pins MCO connector)
2	TRANSMIT DATA (Tx)	1
3	RECEIVE DATA (Rx)	3
5	GROUND (Gnd)	2



DB 9 male connector
(Serial port of your COMPUTER)



5-4. ENVIRONMENTAL

Power Supply: Internal CE / UL / CSA / IEC 950 (25W), Universal, Automatic.
Input : 100 VAC to 250 VAC ; 50-60Hz ; I = 1 A Max.

Storage temperature: -25 °C to +85 °C (-13 °F to +185 °F).

Operating temperature: 0 °C to 50 °C (32 °F to 122 °F).

Maximum ambient operating temperature: < 40 °C (<104 °F).

Hygrometry: 10% to 80% (without condensation).

Dimension: D 295 x W 246 x H 43 mm. D 11.6" x W 9.7" x H 1.7".

Weight: 2 kg / 4.4 lbs.

Chapter 6 : CONTROL SOFTWARE

6-1. CONNECTION

• CONNECTING THE RS-232:

Connect the serial port of your controlling device to the REMOTE RS-232 connector of the SCAN VISION VHX II™ with a RS-232 cable (5-pins MCO female connector / DB 9 male connector).

• **PIN-OUT:** See section 5-3.

• **SPEED TRANSMISSION :** 9600 bauds, 8 data bits, 1 stop bit, no parity bit, no flow control.

6-2. "SCAN VISION VHX II™ CONTROL PANEL" SOFTWARE

Your SCAN VISION VHX II™ is shipped with a WINDOWS 95/98/2000 compatible "SCAN VISION VHX II™ REMOTE CONTROL" software (3.5" disk). This software allows you to control and make adjustments by a simple mouse click (output format, image adjustments, etc...).

• SOFTWARE INSTALLATION:

- ① Turn your computer ON and wait for WINDOWS to completely start.
- ② Insert the disk into the floppy drive.
- ③ In the WINDOWS START menu, click on RUN.
- ④ Choose the disk drive and click on **setup.exe** (ex : A:\setup.exe if disk 3.5" is drive A).
- ⑤ Follow the WINDOWS installation instructions. WINDOWS will install the software in the following directory:
C:\Programfiles\ANALOGWAY\ SCAN VISION VHX II remote control.

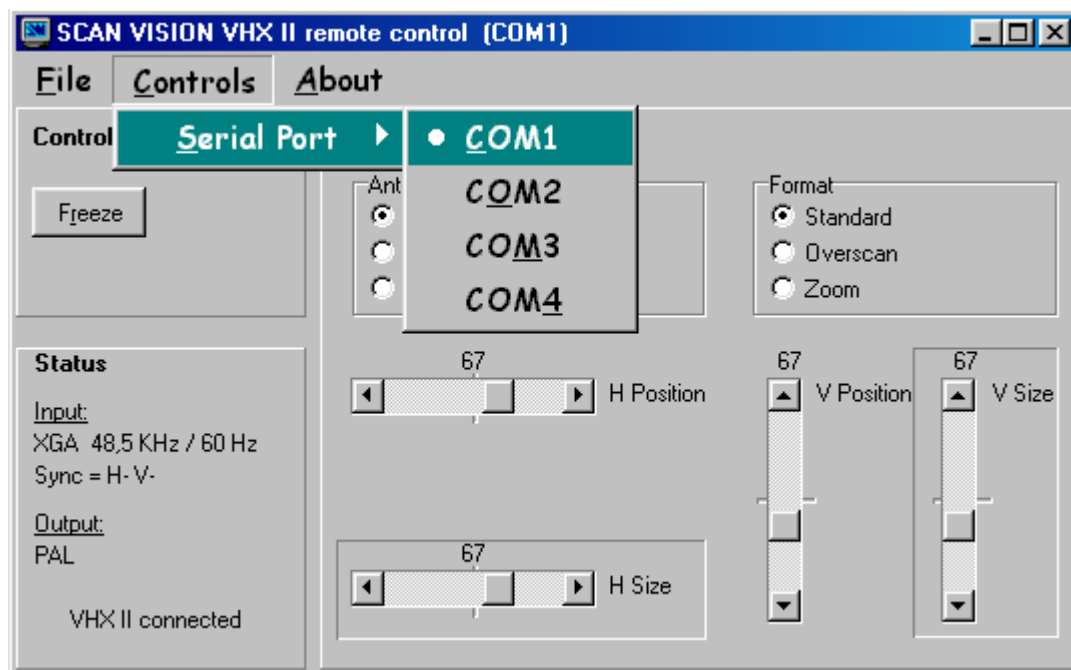
• STARTING UP:

- ① Connect the RS-232 cables between the controlling device and the SCAN VISION VHX II™ as indicated in section 6-1.
- ② Then only power ON all of the devices.
- ③ Click on the program files **VHX480** in **Start \ program \ ANALOG WAY\ SCAN VISION VHX II** to run the software.
- ④ Click on **Control** menu and select the **Serial port**.

The SCAN VISION VHX II™ is now controllable by the computer.

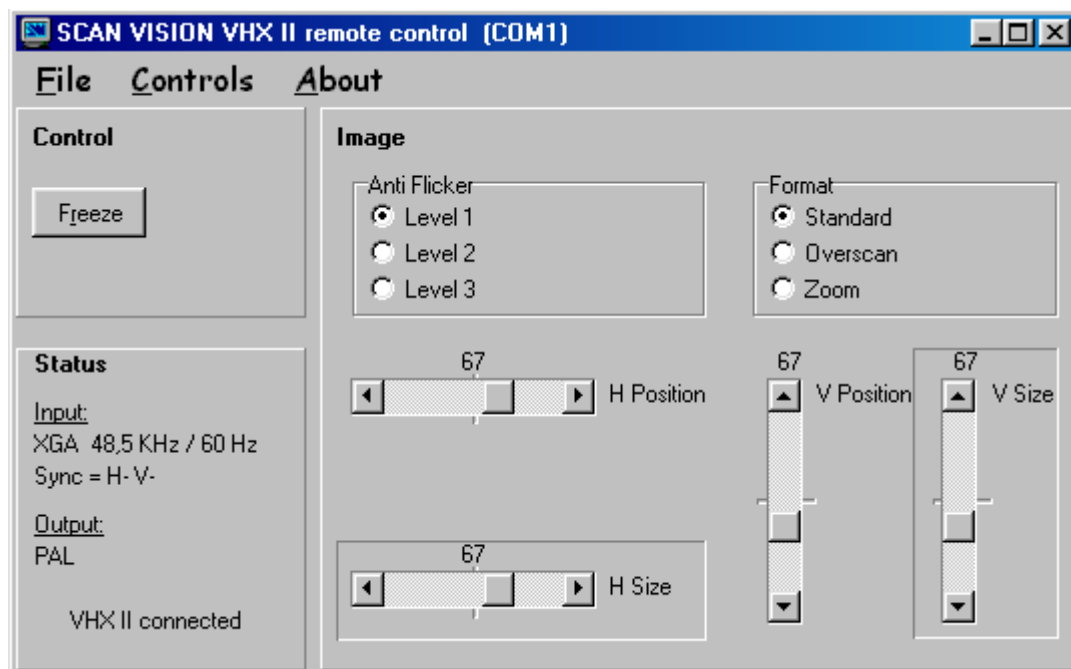
6-3. SOFTWARE SET UP

- ① Select the **Serial port** in the **Controls** menu.



The SCAN VISION VHX II™ is now connected to the computer.

- ② In the **Image** section, do all the needed settings:
- Select an anti-flicker level (1, 2 or 3).
 - Select the **Standard** format and adjust the position and the size to display the image in full screen.
 - Then select if needed a zoom mode (**Overscan** or **Zoom**) and adjust the position and the size.



Chapter 7 : RS-232 PROGRAMMER'S GUIDE

7-1. INTRODUCTION

If you need to use your own Software Control program from a PC, or WORKSTATION with an RS-232 port, the SCAN VISION VHX II™ allows communicating through an ASCII code protocol.

The SCAN VISION VHX II™ treats any character received on its RS-232 as a possible command but, it only accepts legal commands. There is no starting/ending in a command string.

A command is 1 character typed on a keyboard and does not require any special characters before or after it. (it is not necessary to press "ENTER" on the keyboard). A command can be preceded by a value (see chapter 7-2. COMMANDS STRUCTURE).

When the SCAN VISION VHX II™ receives a valid command, it will execute the command. Then it will send back the status of all the parameters that have changed due to this command from the control device.

If the command cannot be executed (value out of range,...), the SCAN VISION VHX II™ just send back the current status of the corresponding parameters.

If the command is invalid, an error response will be returned to the controlling device. All responses sent to the controlling device end with a carriage return <CR> and a line feed <LF> signaling the end of the response character string. (see chapter 7-3. ERROR RESPONSES).

7-2. COMMANDS STRUCTURE

Commands are usually composed of a numerical value followed by the command character. The characters used without any numerical value return the current setting of the command.

COMMANDS structure = VALUE (optional) + CHARACTER.

Examples:

COMMAND		RESPONSE	DESCRIPTION
VALUE	CHARACTER		
none	F	TSY3	Read the input format.
10	H	VPOS10	Set Vertical position to 10.

7-3. ERROR RESPONSES

When the SCAN VISION VHX II™ receives from the controlling device an invalid command or value, it returns an error response:

COMMAND		RESPONSE	DESCRIPTION
VALUE	CHARACTER		
none	Z	E10	Invalid command.
70260	H	E13	Invalid value.

7-4. COMMANDS AND RESPONSES TABLE

The following table resumes all of the commands which are recognized as valid and the responses that will be returned to the controlling device.

the controlling device.

ASCII COMMAND	RESPONSE	COMMAND DESCRIPTION	TYPE	VALUE		
				MIN	MAX	DESCRIPTION
FRONT PANEL COMMANDS						
C	CMD	FREEZE.	Rd/Wr	0	65535	0 = unfreeze 1 = freeze.
P	FLICK	Anti-flicker adjustment	Rd/Wr	0	2	0 = level 1 1 = level 2 2 = level 3
G	HPOS	Horizontal position.	Rd/Wr	0	255	
H	VPOS	Vertical position.	Rd/Wr	0	255	
I	HSIZE	Horizontal size.	Rd/Wr	0	255	
J	VSIZ	Vertical size.	Rd/Wr	0	255	
K	ZHPOS	Horizontal position (in zoom mode).	Rd/Wr	0	255	
L	ZVPOS	Vertical zoom position (in zoom mode)	Rd/Wr	0	255	
M	ZHSIZE	Horizontal size (in zoom mode).	Rd/Wr	0	255	
N	ZVSIZ	Vertical size (in zoom mode).	Rd/Wr	0	255	
O	TSO	Zoom mode selection.	Rd/Wr	0	255	Please see value description (next section).
STATUS COMMANDS						
?	DEV	Device type.	Rd		65535	18 = VHX480.
@	UNIT	Measures unity	Rd	0	65535	
D	DHI	Input line frequency.	Rd			Please see value description (next section).
E	GRT	Input frame frequency.	Rd			Please see value description (next section).
F	TSY	Input format.	Rd			Please see value description (next section).
A	VERM	Firmware version.	Rd	0	65535	
B	VERR	Firmware version.	Rd	0	65535	

7-5. VALUES DESCRIPTION

Values sent or received are in decimal. Depending on the command letter, the value can be used as a linear control (ex : 255I to set the horizontal size to the maximum) or as a set of bits (ex : F command with multiple controls). In this case, the value must be converted in binary base to understand every bit action.

EXAMPLE : The controlling device receives the message TSY71 (F command)

Decimal value 71 = Binary value 0100 0111

$71 = (128 \times 0) + (64 \times 1) + (32 \times 0) + (16 \times 0) + (8 \times 0) + (4 \times 1) + (2 \times 1) + (1 \times 1)$

bit 0 = 1 means input signal detected.

bit 1 = 1 means positive H sync detected.

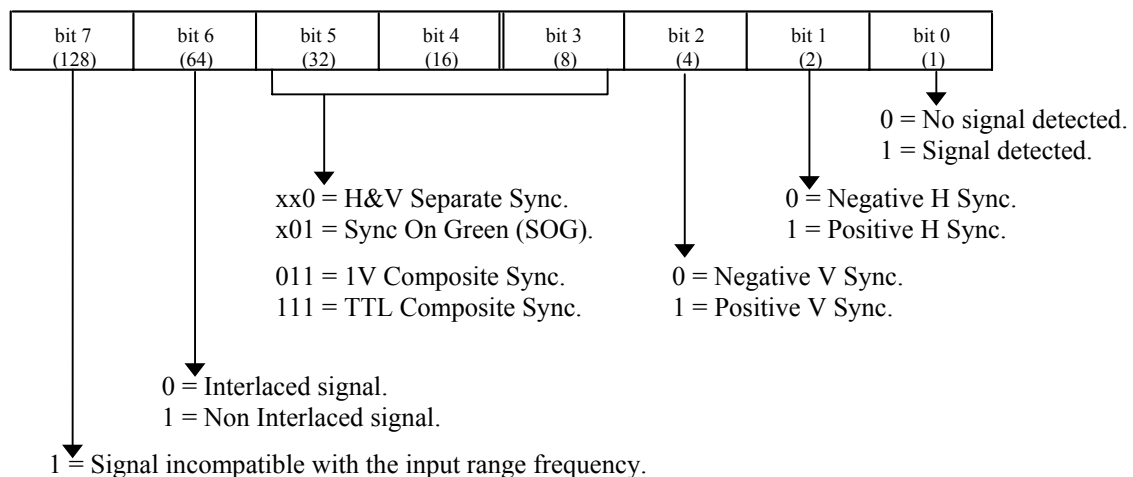
bit 2 = 1 means positive V sync detected.

bit 3, 4, 5 = 000 means H & V Separate sync detected.

bit 6 = 1 means non interlaced input signal detected.

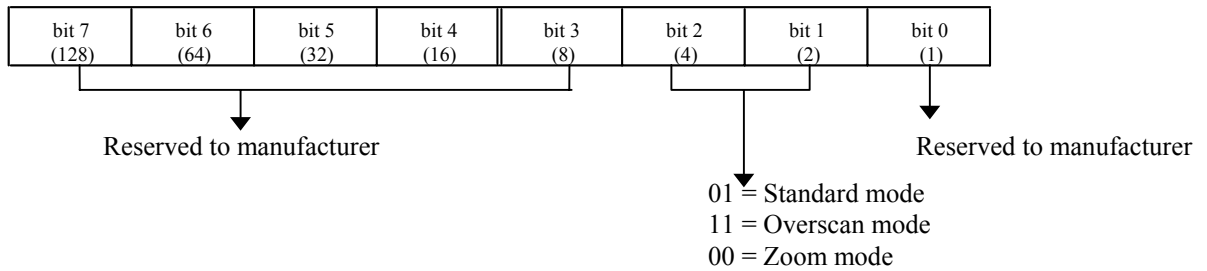
bit 7 = 0 means signal compatible with the input range frequency.

• **F command** returns the input signal status.



7-5. VALUES DESCRIPTION (continued)

- **O command** allows to choose the Size mode.



NOTE: To modify an adjustment you should first read the value of the command, then modify the value of the corresponding bit, without modify the value of the others bits and then return the new value.

- **D command** allows to calculate the line frequency:

Input line frequency (in kHz) = UNIT value ÷ DHI value.

- **E command** allows to calculate the frame frequency:

Input line frequency (in Hz) = ((UNIT value ÷ DHI value) x 1000) x GRT value.

7-6. ASCII / HEX / DEC TABLE

ASCII	HEX	DEC	ASCII	HEX	DEC	ASCII	HEX	DEC
space	20	32	@	40	64	`	60	96
!	21	33	A	41	65	a	61	97
"	22	34	B	42	66	b	62	98
#	23	35	C	43	67	c	63	99
\$	24	36	D	44	68	d	64	100
%	25	37	E	45	69	e	65	101
&	26	38	F	46	70	f	66	102
'	27	39	G	47	71	g	67	103
(	28	40	H	48	72	h	68	104
)	29	41	I	49	73	i	69	105
*	2A	42	J	4A	74	j	6A	106
+	2B	43	K	4B	75	k	6B	107
,	2C	44	L	4C	76	l	6C	108
-	2D	45	M	4D	77	m	6D	109
.	2E	46	N	4E	78	n	6E	110
/	2F	47	O	4F	79	o	6F	111
0	30	48	P	50	80	p	70	112
1	31	49	Q	51	81	q	71	113
2	32	50	R	52	82	r	72	114
3	33	51	S	53	83	s	73	115
4	34	52	T	54	84	t	74	116
5	35	53	U	55	85	u	75	117
6	36	54	V	56	86	v	76	118
7	37	55	W	57	87	w	77	119
8	38	56	X	58	88	x	78	120
9	39	57	Y	59	89	y	79	121
:	3A	58	Z	5A	90	z	7A	122
;	3B	59	[	5B	91	{	7B	123
<	3C	60	\	5C	92		7C	124
=	3D	61	]	5D	93	}	7D	125
>	3E	62	^	5E	94	~	7E	126
?	3F	63	_	5F	95	DEL	7F	127

WARRANTY

Analog Way warrants the product against any defects in materials and workmanship for a period of three years from the date of purchase (back to the factory).

In the event of any malfunction during the warranty period, Analog Way will, at its discretion, repair or replace the defective units, including free materials and labor.

This warranty does not apply if the product has been :

- improperly installed or abused,
- handled with improper care,
- used or stocked in abnormal conditions,
- modified, opened,
- damaged by fire, war, or Natural disasters (Acts of God).

In no way shall Analog Way be responsible for direct or indirect loss of profit or consequential damages resulting from any defect in this product.

In case of any problem, get the serial number of the unit, a description of the problem, and then call your authorized dealer.