



QUATTRO D
MODEL: QTD402

QUATTRO TM
MODEL: QTA401

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.

ISTRUZIONI 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 fuoruscita 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 erraneo 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 esternamente, 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, Schlitz, 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 I / 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.



CONNECTIONS:

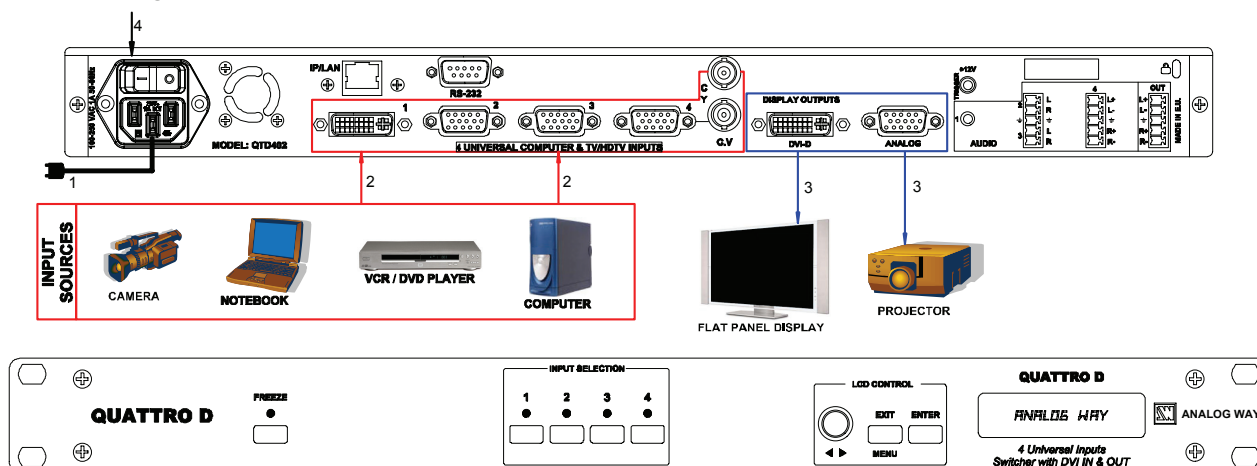
NOTE: Turn OFF all of your equipment before connecting.

- 1 Connect the AC power supply cord to the QTD402 and to an AC power outlet.
- 2 Connect your computer & video sources to the 4 universal inputs of the QTD402.
 - If you need to connect a digital computer source, use the input #1 (DVI-I IN connector).
 - Connect your others sources to the unused inputs.

IMPORTANT: Connect only one source by input.

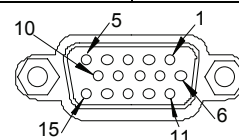
- 3 Connect your display device (projector, plasma screen...) to the HD15 or DVI-D connectors.
- 4 Turn ON the QTD402 (rear panel switch). Then turn ON all your input sources and then your display device.

• Connection diagram:



• HD15 connector pin assignment (inputs #2 to #4 - input #1 with a DVI/HD15 adaptor):

SIGNAL	COMPUTER (analog)	RGB/S VIDEO	YUV & HDTV (analog)	S.VIDEO (Y/C)	COMPOSITE VIDEO
PIN 1	RED.	RED.	Cr / Pr.	C (chrominance).	
PIN 2	GREEN.	GREEN.	Y.	Y (luminance).	VIDEO (NTSC, PAL...)
PIN 3	BLUE.	BLUE.	Cb / Pb.		
PIN 6	RED return.	RED return.	Cr / Pr return.	C return.	
PIN 7	GREEN return.	GREEN return.	Y return.	Y return.	return.
PIN 8	BLUE return.	BLUE return.	Cb / Pb return.		
PIN 10	GND.	GND.			
PIN 13	H sync or C sync (S).	C sync (S).			
PIN 14	V sync.				



SETTINGS:

- 1 We recommend resetting the QTD402 device to all of its **default values**, with the front panel LCD menu (**CONTROL > default value > yes**) before proceeding.
- 2 Select the **Auto settings** function with the LCD menu (**INPUT > Auto settings**). This function will detect automatically the source type connected to the inputs of the device. Sometimes, the auto setting may not detect the source type: in this case select manually the source type with the LCD menu (**INPUT > Input type**).
- 3 Select one of the **output formats** with the LCD menu (**OUTPUT > output format**). Then select the output rate with the LCD menu (**OUTPUT > output rate**).
- 4 Display the **centering pattern** with the LCD menu (**OUTPUT > test pattern > centering**). Display a black output. Adjust directly the display device itself, using its position and size controls, to fill the centering pattern in full screen.
- 5 For each input source connected to the device, make the following adjustments:
 - Select the source you want to adjust (with the front panel "INPUT SELECTION" buttons).
 - Select the aspect ratio of your input source with the LCD menu (**IMAGE > aspect ratio**).
 - Use the **Centering** function (**IMAGE > centering**) to automatically position the image in the **Centering pattern**.
 - As required, make the others adjustments, available in the LCD **IMAGE** menu (color, brightness...).

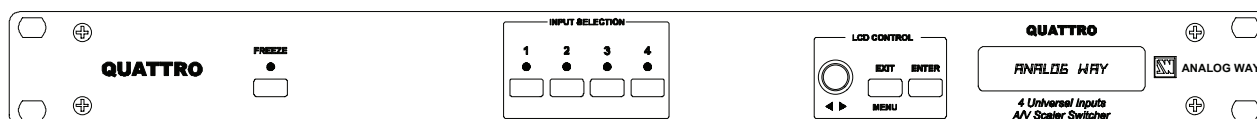
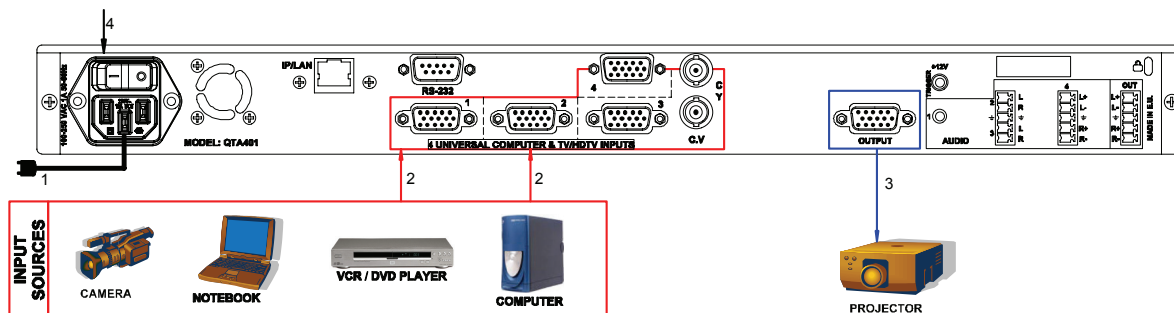


CONNECTIONS:

NOTE: Turn OFF all of your equipment before connecting.

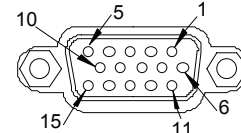
- ① Connect the AC power supply cord to the QTA401 and to an AC power outlet.
- ② Connect your computer & video sources to the 4 universal inputs of the QTA401.
IMPORTANT: Connect only one source by input.
- ③ Connect your display device (projector, plasma screen...) to the OUTPUT connector.
- ④ Turn ON the QTA401 (rear panel switch). Then turn ON all your input sources and then your display device.

• Connection diagram:



• HD15 connector pin assignment (inputs #1 to #4):

SIGNAL	COMPUTER (analog)	RGB/S VIDEO	YUV & HDTV (analog)	S.VIDEO (Y/C)	COMPOSITE VIDEO
PIN 1	RED.	RED.	Cr / Pr.	C (chrominance).	
PIN 2	GREEN.	GREEN.	Y.	Y (luminance).	VIDEO (NTSC, PAL...)
PIN 3	BLUE.	BLUE.	Cb / Pb.		
PIN 6	RED return.	RED return.	Cr / Pr return.	C return.	
PIN 7	GREEN return.	GREEN return.	Y return.	Y return.	return.
PIN 8	BLUE return.	BLUE return.	Cb / Pb return.		
PIN 10	GND.	GND.			
PIN 13	H sync or C sync (S).	C sync (S).			
PIN 14	V sync.				



SETTINGS:

- ① We recommend resetting the QTA401 device to all of its **default values**, with the front panel LCD menu (**CONTROL > default value > yes**) before proceeding.
- ② Select the **Auto settings** function with the LCD menu (**INPUT > Auto settings**). This function will detect automatically the source type connected to the inputs of the device. Sometimes, the auto setting may not detect the source type: in this case select manually the source type with the LCD menu (**INPUT > Input type**).
- ③ Select one of the **output formats** with the LCD menu (**OUTPUT > output format**). Then select the output rate with the LCD menu (**OUTPUT > output rate**).
- ④ Display the **centering pattern** with the LCD menu (**OUTPUT > test pattern > centering**). Display a black output. Adjust directly the display device itself, using its position and size controls, to fill the centering pattern in full screen.
- ⑤ For each input source connected to the device, make the following adjustments:
 - Select the source you want to adjust (with the front panel "INPUT SELECTION" buttons).
 - Select the aspect ratio of your input source with the LCD menu (**IMAGE > aspect ratio**).
 - Use the **Centering** function (**IMAGE > centering**) to automatically position the image in the **Centering pattern**.
 - As required, make the others adjustments, available in the LCD **IMAGE** menu (color, brightness...).

QUATTRO D / QUATTRO

CHAPTER 1 : INTRODUCTION

1-1. ACCESSORIES SUPPLIED WITH THE QUATTRO D

- 1 QUATTRO D (QTD402).
- 1 AC Power supply cord.
- 1 HD15 male / 5xBNC female cable adaptor.
- 1 HD15 female / DVI-I male adaptor.
- 1 Set of 3 MCO (5-pin) female connectors (for audio connection).
- 1 CD-ROM (Remote Control Software).
- 1 User's Manual.

1-2. ACCESSORIES SUPPLIED WITH THE QUATTRO

- 1 QUATTRO (QTA401).
- 1 AC Power supply cord.
- 1 HD15 male / 5xBNC female cable adaptor.
- 1 Set of 3 MCO (5-pin) female connectors (for audio connection).
- 1 CD-ROM (Remote Control Software).
- 1 User's Manual.

1-3. QUATTRO D GENERAL INFORMATION

QUATTRO D by Analog Way is High Resolution Digital and Analog Computer & Video Up/Down Scaler Switcher. It is fitted with 4 Universal A/V inputs including one DVI, and 2 outputs: 1 Analog and 1 DVI. It performs an ultra fast and smooth transition between any Video or Computer sources.

The device is a High Performance State of the Art Up/Down Video and Computer Scaler. Ready to fit the native resolution of the latest HD display devices, it provides a high quality image thanks to its high quality digital decoder, improved 3:2 and 2:2 pull down circuitry, auto-adaptative pixel by pixel 3D motion compensation, time base corrector, frame rate converter & follower.

Easy to use, the device offers Auto Setup function, Auto Clock and Phase for Computers. Each input image control - brightness, contrast, color, hue, processing, aspect ratio, zoom, etc ... - can be individually set and stored in nonvolatile memories. Each of the 4 Inputs is fitted with a stereo audio line. The audio can either follow or break away from the Video image. The device is fitted with a Dual RS232 Com port for Integral remote control and automatic control of other devices in the installation. Full Firmware upgrade maintains high value to your equipment through permanent additional possibility in the apparatus life time. Upgrades are available on Analog Way web site. An optional TCP/IP connection allows far away remote and/or upgrade.

This ultra compact and user friendly device is especially dedicated to high resolution A/V presentation displays, conference and boardrooms, and events.

1-4. QUATTRO GENERAL INFORMATION

QUATTRO by Analog Way is High Resolution Analog Computer & Video Up/Down Scaler Switcher. It is fitted with 4 Universal A/V inputs including and 1 analog output. It performs an ultra fast and smooth transition between any Video or Computer sources.

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1-5. DEVICES & OPTIONS REFERENCES

REFERENCE	DESIGNATION
QTD402	QUATTRO D.
QTA401	QUATTRO
OPT-LAN	LAN communication port (optional).

1-6. INSTALLATION

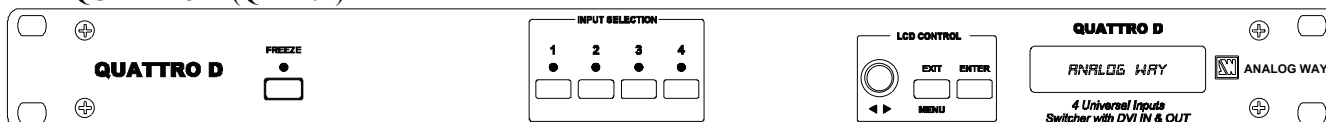
IMPORTANT: Please read all the safety instructions (pages 3 to 5) before starting.

- Table Top Mounting: The device can be used directly on a table: the unit is equipped with 4 plastic feet.
- Rack Mounting: The device is compatible with a 19" enclosure. To install the device into a 19" rack: Attach the device to the rack by using 4 screws in the front panel holes (screws are not included).

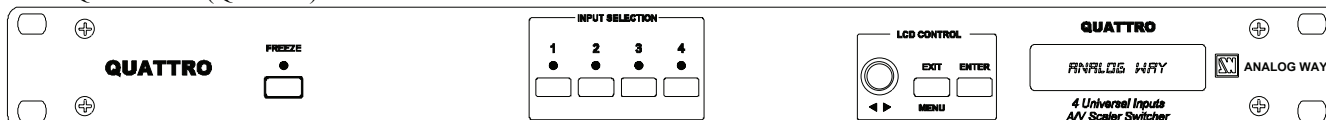
- IMPORTANT:**
- The openings in the rear and side panels are for cooling. Do not cover these openings.
 - Be sure that no weight is added to the device in excess of 2 kg (4.4 lbs.).
 - The maximum ambient operating temperature must not exceed 40°C (104°F).
 - The rack and all mounted equipment in it must be reliably grounded to national and local electrical codes.

1-7. QUATTRO / QUATTRO D FRONT PANEL DESCRIPTION

• QUATTRO D (QTD402)



• QUATTRO (QTA401)

**FREEZE :**

Freeze the output (the blinking LED indicates the FREEZE is active).

INPUT SELECTION:

- Selection of the 4 input sources: 1 to 4.
- A long push (1 second) on the selected input button allows to activate the **BLACK** function. A black screen is displayed onto the corresponding output. A short push on the same button allows to inactive this function.

CONTROL

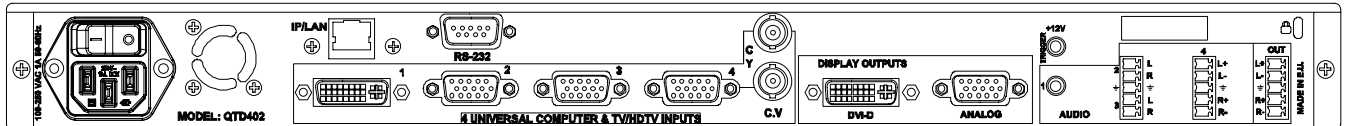
Allows to scroll thru the different menus (in Control mode).

EXIT - MENU:

Switches between Status and Control mode.

ENTER:

Validates a selected item.

1-8. QUATTRO D REAR PANEL DESCRIPTION

100-250 VAC, 1A, 50-60 Hz: AC power inlet.

O / I: AC power switch (O = OFF, I = ON).

IP/LAN: LAN communication port on a RJ45 connector (optional).

RS-232: RS-232 communication port on a DB9 female connector.

4 UNIVERSAL COMPUTER & TV/HDTV INPUTS:

1: Universal (computer and video) input on a DVI-I female connector.

NOTE: This input accept analog & digital Computer source.

2 to 3: Universal (computer and video) inputs on a HD15 female connector.

4: Universal (computer and video) input on HD15 and 2xBNC female connectors.

NOTE: All the universal inputs accept the following video source: Composite Video, S-Video, SD-YUV, RGBHV, RGBS, RGsB & HD-YUV (HDTV)

DISPLAY OUTPUTS:

DVI-D: Digital output on a DVI-I female connector.

ANALOG: Analog output on a HD15 female connector.

AUDIO:

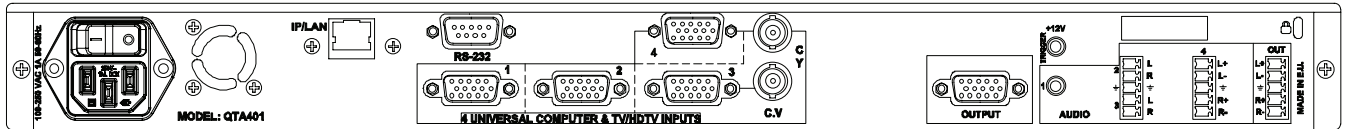
1: Unbalanced stereo audio input #1 on jack 3.5 female connectors.

2 & 3: Unbalanced stereo audio input #2 & #3 on MCO male connectors.

4: Balanced stereo audio input #4 on a MCO male connector.

OUT: Stereo audio output (balanced & unbalanced) on a MCO male connector.

Trigger +12 V: A room (+ 12 Vdc trigger) command (3.5 mm jack female), allows to control external functions such as up/down screen, lighting...

1-9. QUATTRO REAR PANEL DESCRIPTION

100-250 VAC, 1A, 50-60 Hz: AC power inlet.

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OUTPUT: Analog output on a HD15 female connector.

AUDIO:

1: Unbalanced stereo audio input #1 on jack 3.5 female connectors.

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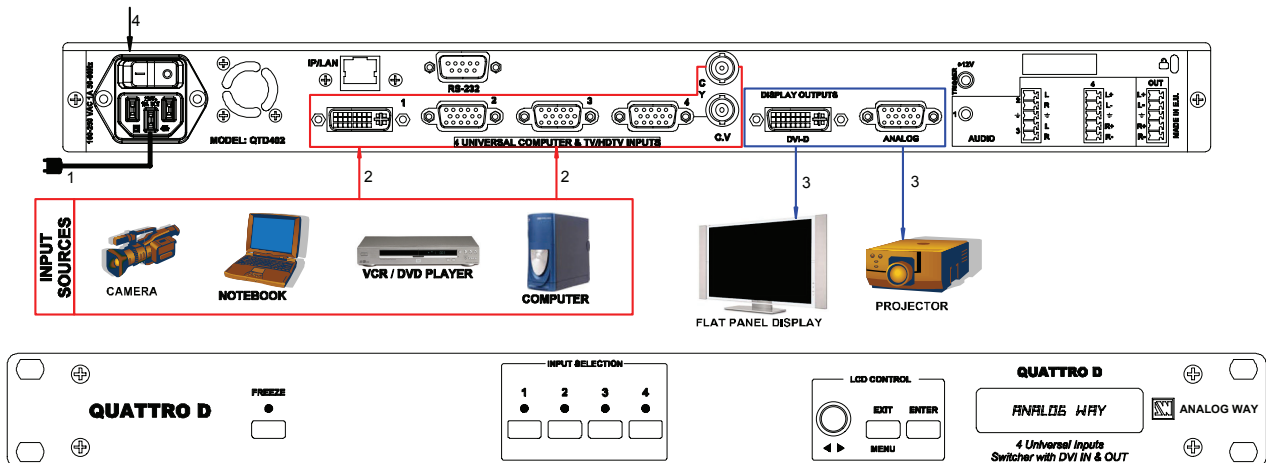
CHAPTER 2 : STARTING

2-1. QUATTRO D CONNECTIONS

NOTE: Turn OFF all of your equipment before connecting.

- ① Connect the AC power supply cord to the QTD402 and to an AC power outlet.
- ② Connect your computer & video sources to the 4 universal inputs of the QTD402.
 - If you need to connect a digital computer source, use the input #1 (DVI-I IN connector).
 - Connect your others sources to the unused inputs.
- IMPORTANT:** Connect only one source by input.
- ③ Connect your display device (projector, plasma screen...) to the HD15 or DVI-D connectors.
- ④ Turn ON the QTD402 (rear panel switch). Then turn ON all your input sources and then your display device.

• **Connection diagram:**

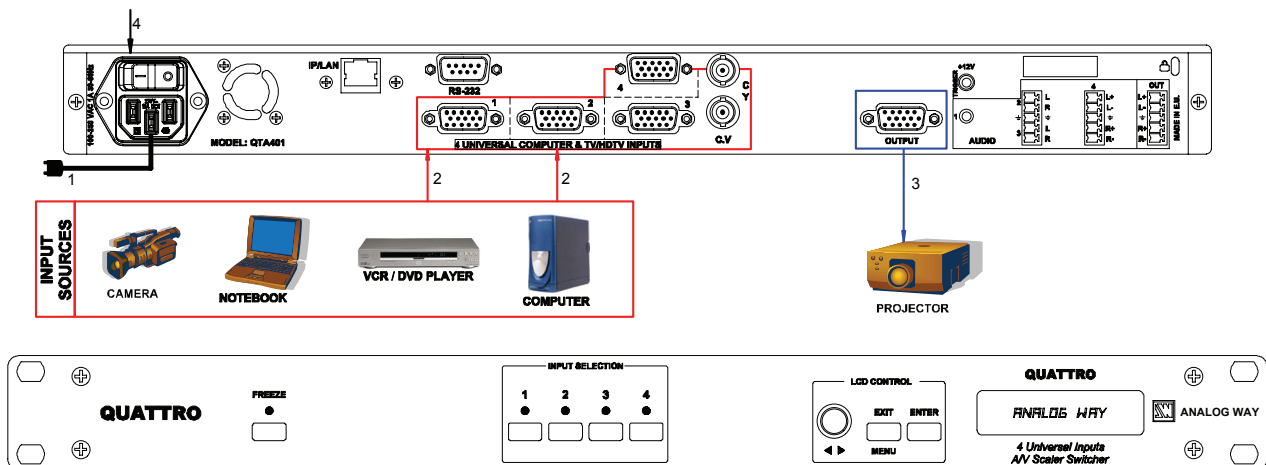


2-2. QUATTRO CONNECTIONS

NOTE: Turn OFF all of your equipment before connecting.

- ① Connect the AC power supply cord to the QTA401 and to an AC power outlet.
- ② Connect your computer & video sources to the 4 universal inputs of the QTA401.
- IMPORTANT:** Connect only one source by input.
- ③ Connect your display device (projector, plasma screen...) to the OUTPUT connector.
- ④ Turn ON the QTA401 (rear panel switch). Then turn ON all your input sources and then your display device.

• **Connection diagram:**



2-3. INPUT #1 OF THE QUATTRO D DESCRIPTION

① CONNECTION:

You can connect to this input one of the following source:

- A composite video source.
- A S.VIDEO source.
- A Component video source (YUV).
- A HD-YUV source.
- A RGBS video source.
- An analog (RGBHV, RGsB, RGBS) computer source.

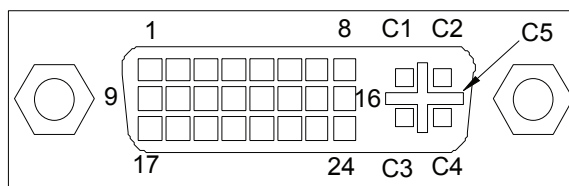
NOTE: You can use the DVI / HD15 adaptor provided with the device to connect analog sources on the DVI-I (IN) connector.

- A digital computer source.

② DVI-I PIN ASSIGNMENT:

The DVI-I female connector of the device can be used with digital signals as well as analog signals. The table hereafter explain the pin assignment of this connectors.

Pin	Function	Pin	Function	Pin	Function
1	TMDS Data 2-	9	TMDS Data 1-	17	TMDS Data 0-
2	TMDS Data 2+	10	TMDS Data 1+	18	TMDS Data 0+
3	TMDS Data 2 Shield	11	TMDS Data 1 Shield	19	TMDS Data 0 Shield
4	Not used.	12	Not used.	20	Not used.
5	Not used.	13	Not used.	21	Not used.
6	DDC Clock	14	+ 5V (Power)	22	TMDS Clock Shield
7	DDC Data	15	Ground for (+5V)	23	TMDS Clock+
8	Analog Vertical Sync.	16	Hot plug detect.	24	TMDS Clock-
C1	Analog Red video (or Cr / Pr or C)				
C2	Analog Green Video (or Y or composite video)				
C3	Analog Bleu Video (or Cb / Pb)				
C4	Analog Horizontal Sync (or composite sync)				
C5	Analog Common Ground Return				



DDC = Display Data Channel.

TMDS = Transition Minimized Differential Signal.

③ AUDIO SOURCE:

You can also connect an AUDIO stereo source on jack 3.5 connectors.

2-4. INPUTS #1*, 2 to 4 DESCRIPTION**① CONNECTION:**

You can connect to these inputs one of the following source:

- A composite video source.

NOTE: The input #4 (input #3 on the QTA401) can accept a composite video source on its BNC connector.

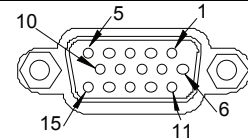
- A S.VIDEO source.

NOTE: The input #4 (input #3 on the QTA401) can accept a S.VIDEO source on its BNC connectors.

- A Component video source.
- A HD-YUV source.
- A RGBS video source.
- An analog computer source (RGBHV, RGsB, RGBS).

② HD15 PIN ASSIGNMENT:

SIGNAL	COMPUTER (analog)	VIDEO RGB/S	YUV & HD-YUV	S.VIDEO (Y/C)	COMPOSITE VIDEO
PIN 1	RED.	RED.	Cr / Pr.	C (chrominance).	
PIN 2	GREEN.	GREEN.	Y.	Y (luminance).	VIDEO (NTSC, PAL....)
PIN 3	BLUE.	BLUE.	Cb / Pb.		
PIN 6	RED return.	RED return.	Cr / Pr return.	C return.	
PIN 7	GREEN return.	GREEN return.	Y return.	Y return.	return.
PIN 8	BLUE return.	BLUE return.	Cb / Pb return.		
PIN 10	GND.	GND.			
PIN 13	H sync or C sync (S).	C sync (S).			
PIN 14	V sync.				



HD15 female connector of the device.

③ AUDIO SOURCE:

- You can connect an unbalanced stereo audio source on a jack 3.5 connector (input #1).
- You can connect an unbalanced stereo audio source on a MCO connector (input # 2 & 3).
- You can connect an unbalanced or balanced stereo audio source on a MCO connector (input #4).

2-5. OUTPUTS DESCRIPTION**① ANALOG OUTPUT:**

You can connect to this output an analog display device.

② DVI OUTPUT:**

You can connect to this output a digital display device only.

③ DVI-I PIN ASSIGNMENT:

Pin	Function	Pin	Function	Pin	Function
1	TMDS Data 2-	9	TMDS Data 1-	17	TMDS Data 0-
2	TMDS Data 2+	10	TMDS Data 1+	18	TMDS Data 0+
3	TMDS Data 2 Shield	11	TMDS Data 1 Shield	19	TMDS Data 0 Shield
4	Not used.	12	Not used.	20	Not used.
5	Not used.	13	Not used.	21	Not used.
6	DDC Clock	14	+ 5V (Power)	22	TMDS Clock Shield
7	DDC Data	15	Ground for (+5V)	23	TMDS Clock+
8	Analog Vertical Sync.	16	Hot plug detect.	24	TMDS Clock-
C1	Not used				
C2	Not used				
C3	Not used				
C4	Not used				
C5	Not used				

DDC = Display Data Channel.

TMDS = Transition Minimized Differential Signal.

* QTA401 only.

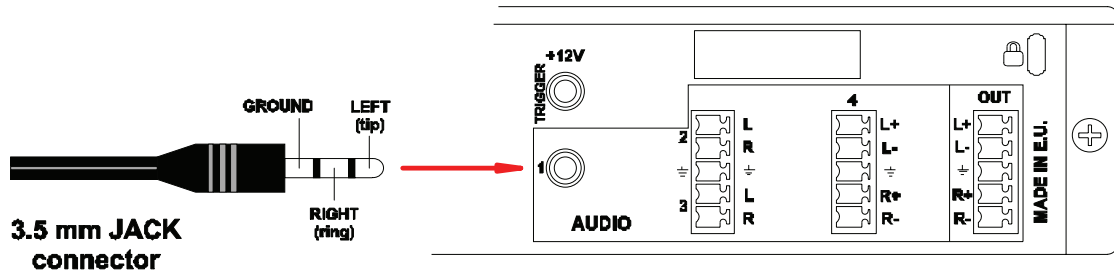
** QTD402 only

2-6. AUDIO INPUTS

Each audio input has a 3.5 mm jack female connector or a 5-pin MCO male connector.

• 3.5 mm jack female connector

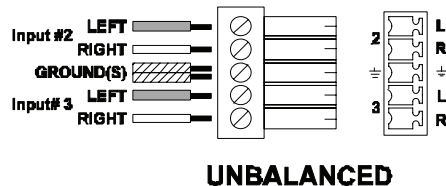
The input # 1 is equipped with this audio connector. This connector allows connecting UNBALANCED audio source. Connect your UNBALANCED audio sources as follow:



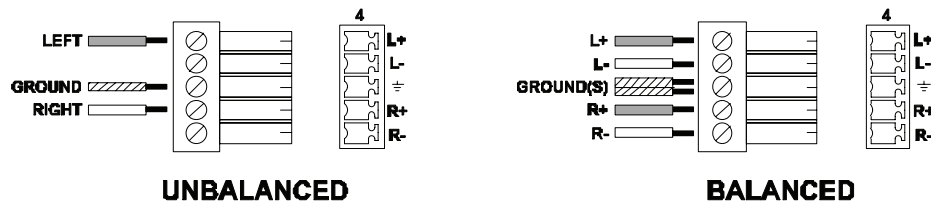
• MCO male connector

The INPUTS # 2 to 4 are equipped with this connector. Connect your audio sources as follow:

-Inputs # 2 & 3: Unbalanced connection only.

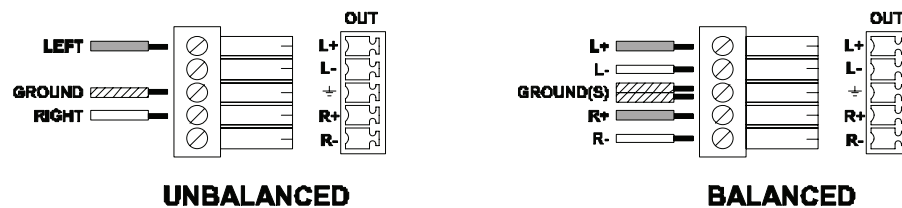


-Inputs # 4: Balanced & unbalanced connection.



2-7. AUDIO OUTPUT

The audio output is equipped with a 5-pin MCO male connector. This connector allows connecting BALANCED or UNBALANCED audio systems.



CHAPTER 3 : OPERATING MODE

3-1. SETTINGS

- ① We recommend resetting the device to all of its **default values**, with the LCD menu (**CONTROL > Default value > yes**) before proceeding.
 - ② Select a **switching** mode with the LCD menu (**SWITCHING > internal rate** or **follow**).
 - ③ Select the **Auto settings** function with the LCD menu (**INPUT > Auto settings**). This function will detect automatically the source type connected to the inputs of the device. Sometimes, the auto setting may not detect the source type: in this case select manually the source type with the LCD menu (**INPUT > Input type**).
 - ④ Select one of the **output formats** with the LCD menu (**OUTPUT > output format**).
- NOTE:** For fixed pixels display device (DMD, LCD, PLASMA...), always select the output format corresponding to the native resolution of your display device. Thus, the display device will not have to scale the image and the result will be better.

3-2. SWITCHING OPERATIONS

The device allows switching between its inputs with 2 different effects: FADE COLOR and CLEAN CUT.

• FADE COLOR:

The FADE COLOR allows switching between 2 sources with a fading to a color of your choice. You can select the color of the fading with the LCD menu (**CONTROLS > Transition > Fade color**).

• CLEAN CUT:

The CLEAN CUT allows a clean switching thanks to a fast freeze of the displayed source. Activate the CLEAN CUT with the LCD menu (**CONTROLS > Transition > Clean cut**).

3-3. DISPLAY DEVICE ADJUSTMENTS

- ① Display the **Centering** pattern with the LCD menu (**OUTPUT > Test pattern > Centering**).
- ② Display a black output.
- ③ Adjust directly the display device itself, using its position and size controls, to fill the centering pattern in full screen.

3-4. IMAGE ADJUSTMENTS

For each input source connected to the device, make the following adjustments:

- ① Select the source you want to adjust (with the front panel "INPUT SELECTION" buttons).
 - ② Select the aspect ratio of your input source with the LCD menu (**IMAGE > Aspect ratio**).
 - ③ Use the **Centering** function (**IMAGE > Centering**) to automatically position the image in the **Centering pattern**.
IMPORTANT: For best results, display a full size bright image (no black border) to perform a centering. If necessary, correct the adjustment with the position & size functions (**IMAGE > Pos settings**).
- NOTE:** The centering function is only available for computer sources.
- NOTE:** In case of same Input/Output resolution, the centering also achieves automatic pixel clock adjustments. It may be useful, to improve manually the pixel **clock** and **phase** using the LCD menu (**IMAGE > Optimize > Clock or Phase**).
- ④ As required, make the others adjustments, available in the LCD **IMAGE** menu (color, brightness...).
- NOTE:** To set the image adjustments to the factory settings, use the **Preset** function (**IMAGE > Preset > Yes**).
- NOTE:** The adjustments are automatically stored in NON-volatile memories. The device is provided with 40 NON-volatile image memories. Each of these memories contains the input channel number, the input and output format parameters and all of the image adjustments (position, size, brightness...). When the 40 memories are used, each new memorization erases the oldest record.

3-5. AUDIO ADJUSTMENTS

- ① Adjust the master volume (**AUDIO > Master volume**).
- ② Set the **auto follow** or **breakaway** audio mode (**AUDIO > Audio source > Auto follow** or **Input # x**):
 - **auto follow** = the audio switching follows automatically the video switching.
 - **breakaway** = the selected audio input is permanently diffused.
- ③ For each audio input, adjust the level (**AUDIO > Audio level**) and the balance (**AUDIO > Audio balance**).
- ④ Adjust your microphone (**AUDIO > Mic-control**).

CHAPTER 4 : FRONT PANEL DISPLAY MENUS DESCRIPTION

4-1. INTRODUCTION

The front panel display menu presents 2 modes: the STATUS MODE and the CONTROL MODE.

- The STATUS MODE indicates the input and output status of the device.
- The CONTROL MODE allows selecting and adjusting the parameters of the device.

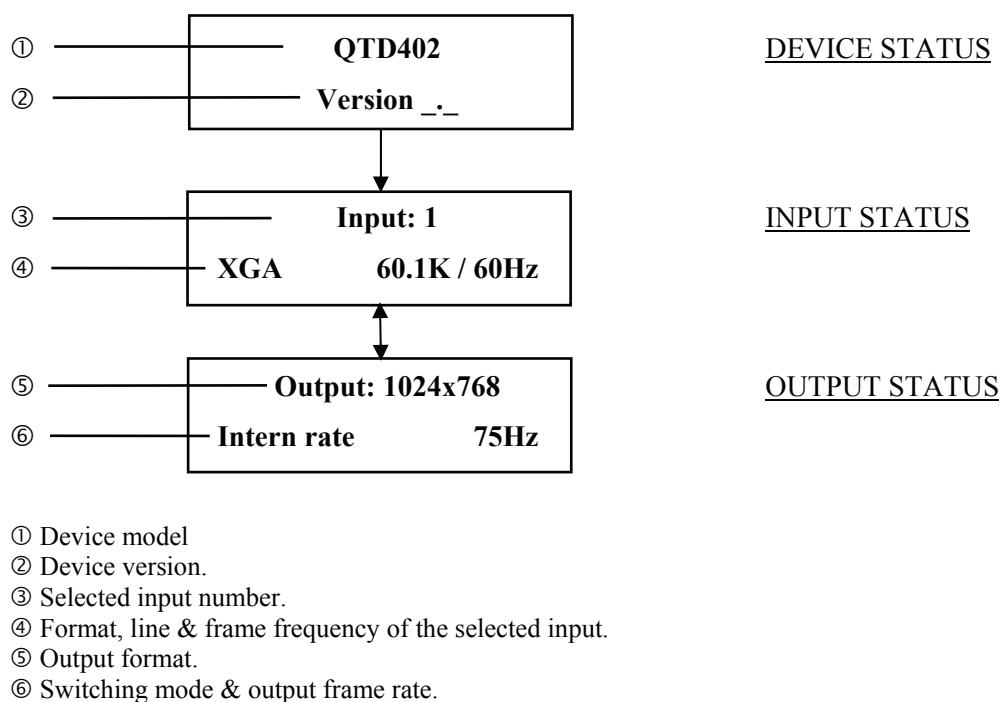
4-2. CONTROL BUTTONS

The front panel display is controlled by 2 buttons and 1 knob:

- ◀ ▶ knob:
 - In the CONTROL MODE, turn this knob to scroll thru the different menus.
- EXIT / MENU** button:
 - In the STATUS MODE, press this button to enter in the CONTROL MODE.
 - In the CONTROL MODE, press this button to:
 - return to the previous menu without safeguarding the selection.
 - return to the STATUS MODE (press several times).
- ENTER** button:
 - From the STATUS MODE, press this button to enter in the CONTROL MODE.
 - From the CONTROL MODE, press this button to confirm a selected item.

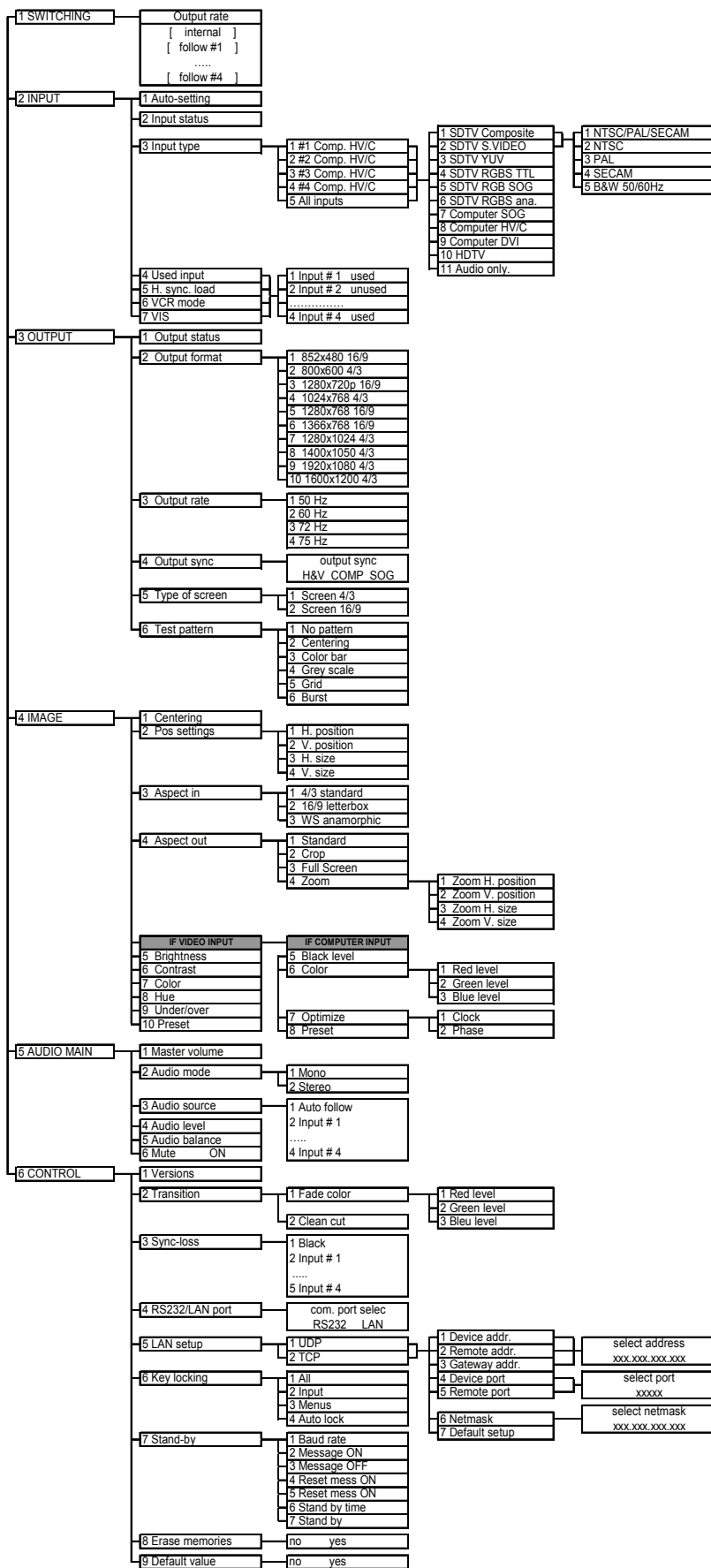
4-3. STATUS MODE

When switching ON, the front panel display shows the following information:



4-4. CONTROL MODE

The menus of the CONTROL MODE are configured as follow:



4-5. FUNCTIONS DESCRIPTION**1 ▶ [SWITCHING] + ENTER.****1-1 [Output rate]**

Select an item with ◀ ▶ + **ENTER**.

- **[Internal rate]**: The output frame rate can be 50 Hz to 75 Hz depending of the selected output format. A higher frame frequency gives a better visual aspect when displaying static pictures.
- **[Follow # x]**: The output frame rate is identical to the selected input Frame Rate: 50 Hz if the input video standard is PAL or SECAM and 59.94 Hz if the input video standard is NTSC. This function allows improving the motion pictures.

2 ▶ [INPUT] + ENTER.**2-1 [Auto settings] + ENTER.**

This function detects automatically the input type of each source connected to the inputs.

2-2 [Input status] + ENTER.

Indicates the status of the selected input.

2-3 [Input type] + ENTER.

① Select an input with ◀ ▶ + **ENTER**.

② Select the input signal type with ◀ ▶ + **ENTER** between:

- | | |
|--|---------------------------|
| • [SDTV Composite] | • [SDTV RGB SOG] |
| • [SDTV S.VIDEO] | • [SDTV RGBS ana.] |
| • [SDTV YUV] | • [Computer SOG] |
| • [SDTV RGBS TTL] | • [Computer HV/C] |
| • [Computer DVI] | |
| • [HDTV] : HDTV input format (720p, 1035i and 1080i). | |
| • [Audio only] : Select this function if you only want to connect an audio source (no video signal needed). | |

③ Then for **[SDTV Composite]**, and **[SDTV S.VIDEO]**, select the video standard with ◀ ▶ + **ENTER** between:

- | | |
|--|--|
| • [NTSC / PAL / SECAM] : automatic NTSC, PAL, and SECAM standard detection. | |
| • [NTSC] : NTSC standard detection only. | • [PAL] : PAL standard detection only. |
| • [NTSC 4.43 60 Hz] : NTSC 4.43 60Hz detection. | • [PAL 4.43 60Hz] : PAL 4.43 60Hz detection. |
| • [SECAM] : SECAM standard detection only. | • [B & W 50/60 Hz] : Black and White detection. |

2-4 [Used input] + ENTER.

Select an input and then select an item ◀ ▶ + **ENTER** between:

- **[Used]**: A signal is connected to the input.
- **[Unused]**: No signal is connected to the input. The input is unused.

2-5 [H sync load] + ENTER.

Select for each input the load of the H Sync. with ◀ ▶ + **ENTER**.

2-6 [VCR mode] + ENTER.

This function allows improving the image contour of low quality VHS tapes. Select **[on]** with **ENTER**.

2-7 [VIS] + ENTER.

This function allows defining the sources which are synchronized together (external genlock). The synchronized sources can be seamless switched between themselves. This switching mode is called VIS (Vertical Interval Switching).

3 ► [OUTPUT] + ENTER.**3-1 [Output status] + ENTER.**

Indicates the status of the output.

3-2 [Output format] + ENTER.

Select one of the available output formats with ◀ ▶ + ENTER.

- [852x480 16/9]
- [800x600 4/3]
- [1280x720 16/9]
- [1024x768 4/3]
- [1280x768 16/9]
- [1366x768 16/9]
- [1280x1024 4/3]
- [1400x1050 4/3]
- [1920x1080 4/3]
- [1600x1200 4/3]

NOTE: For fixed pixels display devices (DMD, LCD, PLASMA...), always select the output format corresponding to the native resolution of the display device. Thus, the display device will not have to scale the image and the result will be better.

3-3 [Output rate] + ENTER.

- [50 Hz]: 50 Hz output frame rate
- [60 Hz]: 60 Hz output frame rate
- [72 Hz]: 72 Hz output frame rate
- [75 Hz]: 75 Hz output frame rate.

3-4 [Output sync] + ENTER.

Select the Output Sync. type with ◀ ▶ + ENTER.

- [H&V]: H & V Separate Sync.
- [COMP]: Composite Sync.
- [SOG]: Sync On green.

3-5 [Type of screen] + ENTER.

Select an item with ◀ ▶ + ENTER.

- [screen 4/3]: If your image is displayed on a 4/3 wall mounted projection screen shape.
- [screen 16/9]: If your image is displayed on a 16/9 wall mounted projection screen shape.

NOTE: Available only in case of 4/3 output format.

3-6 [Test pattern] + ENTER.

Select an item with ◀ ▶ + ENTER.

- [No pattern]: No test pattern is displayed.
- [Centering]: Displays onto the output a centering pattern (for position and size adjustments).
- [Color bar]: Displays onto the output a color bar pattern.
- [Grey scale]: Displays onto the output a grey scale pattern.
- [Grid]: Displays onto the output a grid pattern.
- [Burst]: Displays onto the output a burst pattern.

4 ▶ [IMAGE] + ENTER.**• If the selected input type is a VIDEO signal the IMAGE MENU displays the following items:****4-1 [Pos. settings] + ENTER.**

Select one of the following functions with ◀ ▶ + ENTER.

4-1-1 [H position] + ENTER.

Adjust the Horizontal position with ◀ ▶ + ENTER.

4-1-2 [V position] + ENTER.

Adjust the Vertical position with ◀ ▶ + ENTER.

4-1-3 [H size] + ENTER.

Adjust the Horizontal size with ◀ ▶ + ENTER.

4-1-4 [V size] + ENTER.

Adjust the Vertical size with ◀ ▶ + ENTER.

4-2 [Aspect in] + ENTER.

Select the Aspect Ratio of your input source with ◀ ▶ + ENTER.

- **[4/3 standard]:** 4/3 input format.
- **[16/9 letterbox]:** Letterbox input format.
- **[WS anamorphic]:** Widescreen Anamorphic input format (video) or 16/9 input format (computer).

4-3 [Aspect out] + ENTER.

Select one of the following output aspect ratio with ◀ ▶ + ENTER.

- **[Standard]:** The entire image and the aspect ratio are preserved.
- **[Crop]:** The image is zoomed without deformation to fill the screen, but some borders of the image will be cropped. The aspect ratio is preserved.
- **[Full Screen]:** The image is stretched to fill the screen. The aspect ratio is not preserved.
- **[Zoom]:** The image can be zoomed, cropped and stretched at your convenience.

4-4 [Brightness] + ENTER.

Adjust the Brightness with ◀ ▶ + ENTER.

4-5 [Contrast] + ENTER.

Adjust the Contrast with ◀ ▶ + ENTER.

4-6 [Color] + ENTER.

Adjust the Color with ◀ ▶ + ENTER.

4-7 [Hue] + ENTER.

Adjust the Tint of the picture (NTSC only) with ◀ ▶ + ENTER.

4-8 [U/overscan] + ENTER.

Select Underscan or Overscan with ◀ ▶ + ENTER.

- **[Underscan]:** Underscan mode. The entire image is visible on the screen. Computer mode is underscan.
- **[Overscan]:** Overscan mode. The image is displayed about 8 % bigger than in underscan mode, to avoid seeing the corners and the borders. Standard TV display mode is overscan.

4-9 [Preset] + ENTER.

This function allows setting all the image parameters to the factory settings. Select **[YES]** and validate with **ENTER**.

• **If the selected input type is a COMPUTER signal the IMAGE MENU displays:**

4-1 [Centering] + ENTER.

Adjust automatically the image in the centering pattern.

4-2 [Pos. settings] + ENTER.

Select one of the following functions with ◀ ▶ + ENTER.

4-2-1 [H position] + ENTER.

Adjust the Horizontal position with ◀ ▶ + ENTER.

4-2-2 [V position] + ENTER.

Adjust the Vertical position with ◀ ▶ + ENTER.

4-2-3 [H size] + ENTER.

Adjust the Horizontal size with ◀ ▶ + ENTER.

4-2-4 [V size] + ENTER.

Adjust the Vertical size with ◀ ▶ + ENTER.

4-3 [Aspect in] + ENTER.

Select the Aspect Ratio of your input source with ◀ ▶ + ENTER.

- **[4/3 standard]:** 4/3 input format.
- **[16/9 letterbox]:** Letterbox input format.
- **[WS anamorphic]:** Widescreen Anamorphic input format (video) or 16/9 input format (computer).

4-4 [Aspect out] + ENTER.

Select one of the following output aspect ratio with ◀ ▶ + ENTER.

- **[Standard]:** The entire image and the aspect ratio are preserved.
- **[Crop]:** The image is zoomed without deformation to fill the screen, but some borders of the image will be cropped. The aspect ratio is preserved.
- **[Full Screen]:** The image is stretched to fill the screen. The aspect ratio is not preserved.
- **[Zoom]:** The image can be zoomed, cropped and stretched at your convenience.

4-5 [Black level] + ENTER.

Adjust the black level with ◀ ▶ + ENTER.

4-6 [Color] + ENTER.

Select a color (Red, Green, or Bleu) with ◀ ▶ + ENTER and adjust the level with ◀ ▶ + ENTER.

4-7 [Optimize] + ENTER.

Select an item with ◀ ▶ + ENTER.

- **[Clock]:** Manual adjustment of the pixel clock.
- **[Phase]:** Manual adjustment of the pixel phase.

4-8 [Preset] + ENTER.

This function allows setting all the image parameters to the factory settings. Select **[YES]** and validate with **ENTER**.

NOTE: If the selected input is the reference computer input, the available adjustments are: Black level & Color.

5 ▶ [AUDIO] + ENTER.**5-1 [Master volume] + ENTER.**

Adjust the audio output level with ◀ ▶ + **ENTER**.

5-2 [Audio mode] + ENTER.

Select the output audio mode with ◀ ▶ + **ENTER**.

- **[Mono]**: Set the output in mono mode.
- **[Stereo]**: Set the output in stereo mode.

5-3 [Audio source] + ENTER.

Select an item with ◀ ▶ + **ENTER**:

- **[Auto follow]**: The audio follows the video image.
- **[Input --]**: The selected audio input is permanently diffused.

5-4 [Audio level] + ENTER.

This function allows to separately adjusting the level of each audio input. Adjust the level with ◀ ▶ + **ENTER**.

NOTE: This function acts on the selected (diffused) audio input.

5-5 [Audio balance] + ENTER.

This function allows adjusting for each input the audio balance. Adjust the level with ◀ ▶ + **ENTER**.

NOTE: This function acts on the selected (diffused) audio input.

5-6 [Mute off] + ENTER.

Switch ON or OFF the audio output. Validate with **ENTER**.

6 ▶ [CONTROL] + ENTER.**6-1 [Versions] + ENTER.**

Version __ = update version.

I1 to I4 = Identification number.

K, A, B, C, O = status of the internal firmware versions.

6-2 [Transition] + ENTER.

Select an item with ◀ ▶ + **ENTER**

6-2-1 [Fade color] + ENTER.

This function allows selecting the color of the fade during the transition. Select a color (red, green and bleu) with ◀ ▶ + **ENTER** and adjust the level with ◀ ▶ + **ENTER**. During the adjustment the color is displayed onto the output. To obtain the black color, set the 3 levels to the minimum. To obtain the white color, set the 3 levels to maximum. To obtain the grey color, set the 3 levels in the middle.

6-2-2 [Clean cut] + ENTER.

This function allows a clean switching thanks to a fast freeze of the displayed source. Select a function with ◀ ▶ + **ENTER**.

- **[From computer]**: The CLEAN CUT operates only when switching from a computer source. The others switching operates with a fade color.
- **[From video]**: The CLEAN CUT operates only when switching from a computer source. The others switching operates with a fade color.
- **[From all]**: The CLEAN CUT operates when switching from all sources.

6-3 [Sync loss] + ENTER.

Allows to display a frame or a source in case of sync-loss of the selected input. Select an items with ◀ ▶ + **ENTER**

6-4 [RS232/LAN port] + ENTER.

Select the needed communication port with ◀ ▶ + **ENTER**.

- **[RS232]**: Enables the RS-232 communication port. (Default setting).
- **[LAN]**: Enables the LAN communication port.

IMPORTANT: To avoid addresses conflict, configure the LAN communication port (with the **LAN setup** menu) before activates it.

NOTE: The RS-232 & the LAN communication ports can not be used simultaneously.

6-5 [LAN setup] + ENTER. (Available with the LAN option only)

Allows configuring the LAN communication port. Select the UDP or TCP protocol with ◀ ▶ + **ENTER** then select items with ◀ ▶ + **ENTER**.

- **[Device addr.]**: Every device connected to an IP network must have a unique IP address. This address is used to reference the specific unit. IP addresses are specified as x.x.x.x where each x is a number from 1 to 254. Assign the device to a unique IP address with ◀ ▶ + **ENTER**. (Default value: 192.168.0.2).
- **[Remote addr.]**: This is the destination IP address used with an outgoing connection. Select the destination IP address with ◀ ▶ + **ENTER**. (Default value: 192.168.0.1).
- **[Gateway addr.]**: The gateway address, or router, allows communication to other LAN segments. The gateway address should be the IP address of the router connected to the same LAN segment as the unit. Select the gateway address with ◀ ▶ + **ENTER**. (Default value: 192.168.0.1).
- **[Device port]**: Every TCP connection and every UDP datagram is defined by a destination IP address and a port number. Select a local port number with ◀ ▶ + **ENTER** between 10000 and 10999. (Default value: 10500).
- **[Remote port]**: You must set the remote TCP port number for the unit to make outgoing connections. This parameter defines the port number on the target host to which a connection is attempted. Select a remote port number with ◀ ▶ + **ENTER** between 00000 and 655000. (Default value: 10500).
- **[Netmask]**: A netmask defines the number of bits taken from the IP address that are assigned for the host section. The device prompts for the number of host bits to be entered, then calculates the netmask, which displays in standard decimal-dot notation when the saved parameters are displayed. Select the netmask with ◀ ▶ + **ENTER**. (Default value: 255.255.255.0).
- **[Default setup]**: Set all the LAN settings to the default value. Select **[YES]** and validate with **ENTER**.

MAC ADDRESS: The MAC address, also referred to hardware address, is a unique number assigned to each device. The MAC address is available on the bottom device label.

6-6 [Key locking] + ENTER.

Select an item with ◀ ▶ and change the mode with **ENTER**.

- **[All]**: Locks/unlocks all the front panel switches.
- **[Menus]**: Locks/unlocks the **LCD CONTROL** switches.
- **[Input]**: Locks/unlocks the **INPUT SELECTION** and **FREEZE** switches.

NOTE: To unlock presses simultaneously on **ENTER** and **EXIT**.

- **[Autolock]**: Allows selecting an input only if a signal is connected.

6-7 [Stand-by] + ENTER.**6-7-1 [Baud rate] + ENTER.**

Select the baud rate of the display device with ◀ ▶ + **ENTER** between 9600, 2400 & 1200.

6-7-2 [Message ON] + ENTER.

This function allows to store the ON message of your display device. Then your device coming out the **STANDBY** mode, this one send the stored message to your display device. The ON message can be composed up to 50 bytes. For each byte, select the needed ASCII code with ◀ ▶ and validate with **ENTER**.

NOTE: The 0 value allows to displays: no data.

6-7-3 [Message OFF] + ENTER.

This function allows to store the OFF message of your display device. Then your device going into the **STANDBY** mode, this one send the stored message to your display device. The OFF message can be composed up to 50 bytes. For each byte, select the needed ASCII code with ◀ ▶, then press **ENTER**.

NOTE: The 0 value allows to displays: no data.

6-7-4 [Reset mess ON] + ENTER.

Allows to reset the ON message.

6-7-5 [Reset mess OFF] + ENTER.

Allows to reset the OFF message.

6-7-6 [Stand by time] + ENTER.

When the device any more detect a signal on the selected input, this one is set in the **STANDBY** mode after the duration of your choice. Select a duration with ◀ ▶ + **ENTER**.

NOTE: Select OFF to inactive this function.

6-7-7 [Stand by] + ENTER.

Allows to set the device in **STANDBY** mode. To coming out the **STANDBY** mode , press one of the front panel buttons.

6-8 [Erase memories] + ENTER.

This function allows erasing all the NON-volatile image memories. Select **[YES]** and validate with **ENTER**.

6-9 [Default value] + ENTER.

This function allows setting the following functions to the factory settings. Select **[YES]** and validate with **ENTER**.

FUNCTION	POSITION
input type	Computer HV/C.
used input	All used.
H sync load	All Hi-Z.
VCR mode	All off
output format	SXGA 60Hz 4/3.
output sync	H&V.
type of screen	4/3
test pattern	no
switching	internal rate
pos. settings	0
aspect ratio in	4/3
aspect ratio out	1:1
brightness	128
black level	128
contrast	128
color	128
hue	128
under/overscan	overscan
sharpness	3
master volume	192
audio source	auto follow
audio level	48
audio balance	32
mute	OFF
key locking	all unlock
fade color	R, G, B = 0
RS232/LAN port	RS232

CHAPTER 5 : UPDATING THE DEVICE

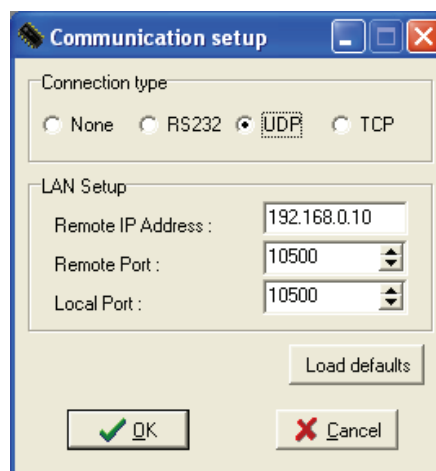
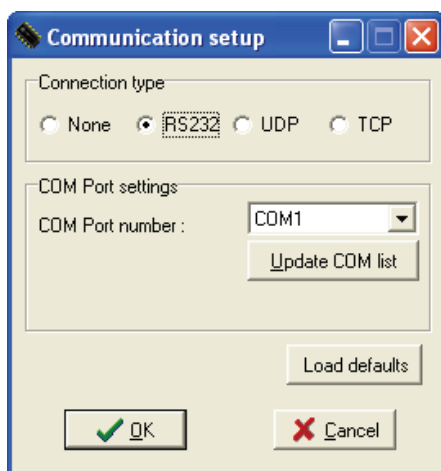
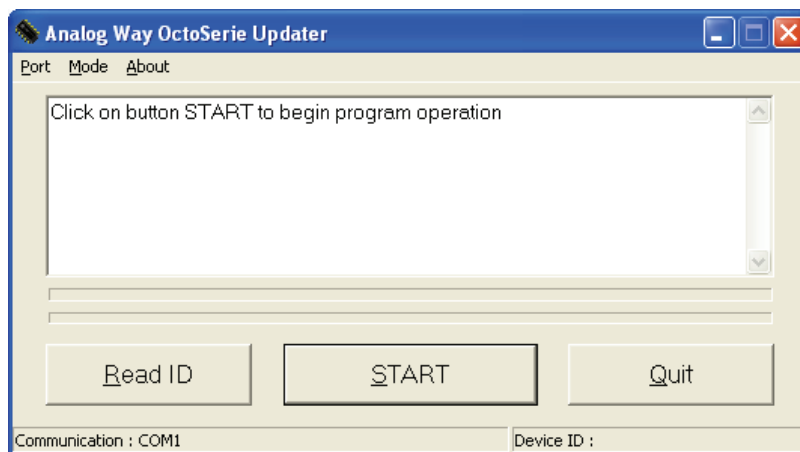
The device can be updated thanks a computer (PC) via its RS-232 communication port or via its LAN communication port.

5-1. CONNECTIONS

- ① Connect the device to an AC power outlet.
- ② Switch ON the device (REAR PANEL SWITCH = I).
- ③ Connect the device to the computer used for the update via the desired communication port.
 - For the RS232 communication port: Connect the RS232 connector of the device to the serial port of your computer with a DB9 M/F straight cable.
 - For the LAN communication port: Connect the RJ45 connector of the device to your network according to your installation. Then with the front panel display menu configure the LAN communication port (**CONTROL > LAN setup**) and activate the LAN communication port (**CONTROL > RS232/LAN port > LAN**).

5-2. UPDATE INSTRUCTIONS

- ① Switch ON the device.
- ② Open the file: OctoSerie Updater (in **Start > Program > ANALOGWAY > OctoSerie Updater**).
- ③ Click on the **Port** menu and select setup: the **Communication setup** window open.
 - If you use the RS232 port: Select RS232 and the **Com** port connected to the device.
 - If you use the LAN Port: Select UDP or TCP and select the communication parameters.
- ④ Click on **START** on the software. The update will start.
- ⑤ When the software displays: **Program operation completed**, click on the **Quit** button to close the update software. Your device is now ready to work.



NOTE: The updater files are available on our web site: <http://www.analogway.com>

CHAPTER 6 : REMOTE CONTROL SOFTWARE

Your device is shipped with a Windows compatible **Remote Control Software**. This software allows you to control and make all adjustments by a simple mouse click.

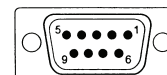
NOTE: Preferably use Windows NT, 2000 or XP for LAN operation.

6-1. CONNECTIONS

① CONNECTING TO THE RS-232 PORT:

- Connect the serial port of your control device to the **RS-232** port (DB9 Female connector) of the device with a **straight** cable (DB9 Female / DB9 Male).
- **Speed transmission:** 9600 bauds, 8 data bits, 1 stop bit, no parity bit, no flow control.
- **Pin-out:**

PIN #	FUNCTIONS
2	TRANSMIT DATA (Tx)
3	RECEIVE DATA (Rx)
5	GROUND (Gnd)



DB9 female (Rear panel of the device)

② CONNECTING TO THE LAN PORT (optional):

- Connect the LAN port (RJ45 connector) of the device to your network according to your installation.

6-2. SOFTWARE INSTALLATION:

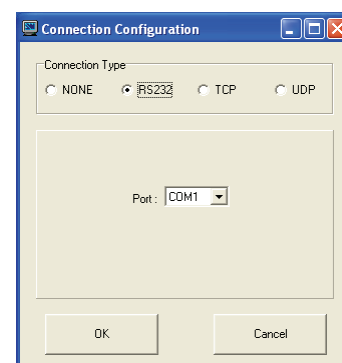
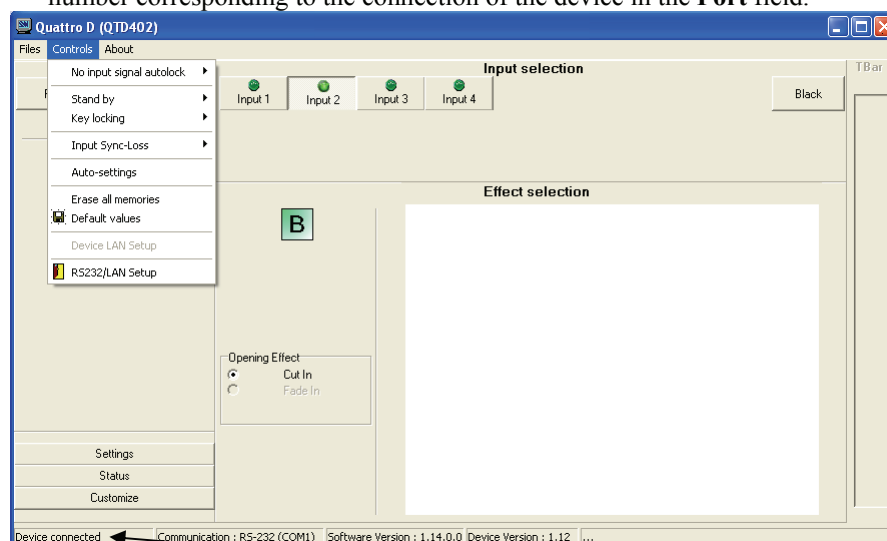
- ① Turn your computer ON and wait for Windows to completely start.
- ② Insert the CD-ROM into your drive: the ANALOG WAY home window will open automatically.
- ③ Select the language of the CD-ROM menus, then click on "Install a Remote Control Software" and select the name of your device.

IMPORTANT: If the Autorun is not enabled: From the Windows desktop, open My Computer and select the CD-ROM drive. Select the Autorun folder, and then select the autorun.exe file.

- ④ Follow the Windows installation instructions.

6-3. COMMUNICATION SETUP

- ① Connect the RS-232 or RJ45 cable between the device and the control device as indicated in the section 6-1.
- ② Then only power ON all of the devices.
- ③ Click on the program files **OctoSerie** in **Start>program>ANALOGWAY>OctoSerie** to run the software.
- ④ Click on **Controls** menu and select **RS232/LAN setup**, then:
 - **CASE OF RS-232 PORT:**
 - With the front panel display menu of the device, verify that the RS-232 port is activate (**Controls > RS232/LAN setup > RS232**).
 - With the **Controls** menu of the software, select **RS232/LAN setup**, then select RS232 and select the **COM** port number corresponding to the connection of the device in the **Port** field.

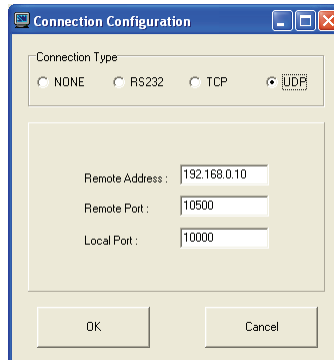


If the communication is OK, the message "**Device connected**" is displayed as well as the model in the windows title bar.

6-3. COMMUNICATION SETUP (continued)

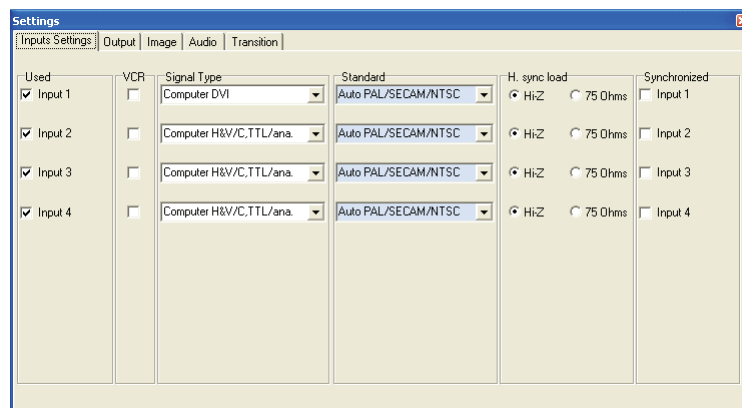
- **CASE OF LAN PORT:**

- With the front panel display menu of the device, verify the configuration of the LAN communication port (**CONTROL > LAN setup**), then activate the LAN communication port (**CONTROL > RS232/LAN port > LAN**).
- With the **Controls** menu of the software, select **RS232/LAN setup** and **LAN Setup**. Then configure the **Local port**, the **Remote IP address** and the **Remote port** and click on **Apply** to setup the new values. The software will also display **Device connected**.



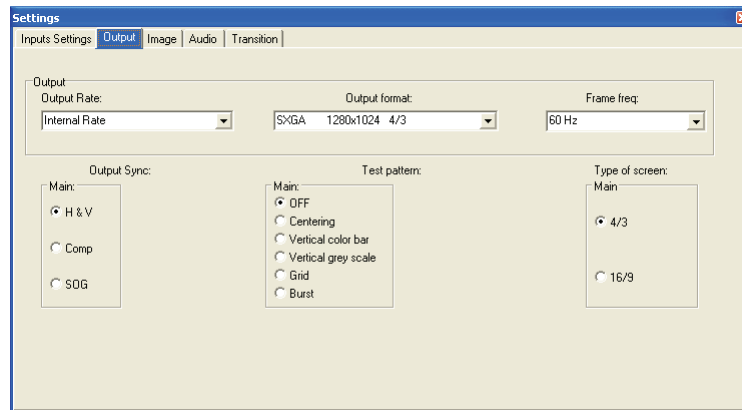
6-4. USING THE SOFTWARE

- ① Click on the **Settings** button (left bottom of the window) to display the **Settings** window.
- ② Click on the **Input Settings** tab and select the **Signal Type** for each input. Then make the others adjustments (video **Standard...**).

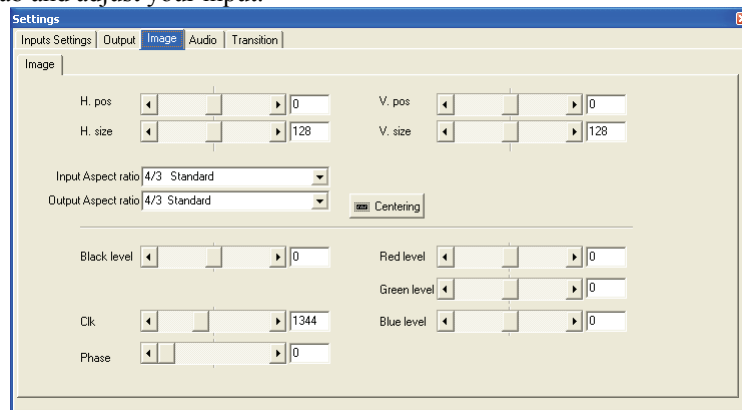


6-4. USING THE SOFTWARE (continued)

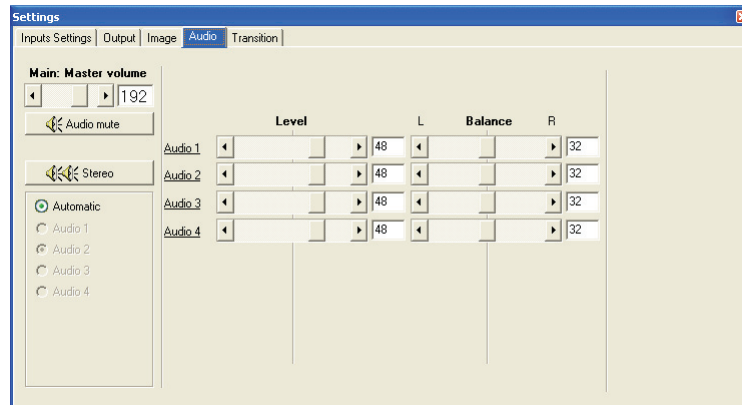
- ② Click on the **Output** tab, then select the Switching mode (internal rate, or follow #- rate), then selects the needed adjustment (output sync, output format, output rate...).



- ③ Click on the **Image** tab and adjust your input.



- ④ Click on the **Audio** tab and select **Automatic** (follow switching mode) or an Audio source (breakaway mode). Then adjust the **Level** and the **Balance** of each audio source.



CHAPTER 7 : TECHNICAL SPECIFICATIONS

7-1. COMPUTER & VIDEO INPUTS

• ANALOG COMPUTER

<i>Connectors:</i>	HD15 (inputs #1 to 4) and DVI-I* (input #1).
<i>Line frequency:</i>	Up to 110 kHz.
<i>Frame frequency:</i>	Up to 130 Hz.
<i>Resolution:</i>	Up to 1600 x 1200/60Hz.
<i>Sync. types:</i>	RGBHV, RGB/S, RGsB (Sync On Green).
<i>Levels:</i>	R, G, B = 0.7 Vp/p. H & V Sync = TTL Composite Sync = TTL and 0.3 V. SOG (Sync On Green) = 0.3 V.
<i>Impedance:</i>	R, G, B = 75 ohms. H = 75 ohms or Hi-Z. V = Hi-Z.

• DIGITAL COMPUTER INPUT*

<i>Connectors:</i>	DVI-I (input #1).
<i>Format:</i>	Digital Visual Interface (DVI) TMDS single link.
<i>Resolution:</i>	Up to 1600 x 1200/60Hz RB (reduced blanking) and 1920x1080/60Hz.

• RGB/S VIDEO

<i>Connectors:</i>	HD15 (inputs #1 to 4) and DVI-I* (input #1).
<i>Frequency:</i>	15.625 kHz / 50 Hz (625 lines). 15.734 kHz / 60 Hz (525 lines).
<i>Levels:</i>	R, G, B = 0.7 Vp/p. SYNC. = 0.3 Vp/p or TTL.
<i>Impedance:</i>	RGB = 75 ohms. SYNC. = 75 ohms or Hi-Z.

• COMPONENT

<i>Connectors:</i>	HD15 (inputs #1 to 4) and DVI-I* (input #1).
<i>Frequency:</i>	15.625 kHz / 50 Hz (625 lines). 15.734 kHz / 60 Hz (525 lines).
<i>Levels:</i>	Y = 1 Vp/p (0.7 V Luma + 0.3 V Sync.). R-Y = 0.7 Vp/p. B-Y = 0.7 Vp/p.
<i>Impedance:</i>	Y, R-Y, B-Y = 75 ohms.

• HDTV

<i>Connectors:</i>	HD15 (inputs #1 to 4) and DVI-I* (input #1).
<i>Formats:</i>	HD-YUV (1080i/60-50Hz, 1080p, 720p/60-50Hz, 480p/60Hz).
<i>Levels:</i>	Y = 1 Vp/p (0.7 V + sync.). R-Y = 1 Vp/p (0.7 V + sync.). B-Y = 1 Vp/p (0.7 V + sync.).
<i>Sync.:</i>	Tri-level: $\pm 0.3V$ (positive/negative). Bi-level: 0.3V (negative).
<i>Impedance:</i>	75 ohms.

* QTD402 only.

7-1. COMPUTER & VIDEO INPUTS (continued)**• S.VIDEO**

<i>Connectors:</i>	BNC (input #4), HD15 (inputs #1 to 4) and DVI-I* (input #1).
<i>Standards:</i>	PAL (15.625 kHz / 50 Hz - 625 lines) or NTSC (15.734 kHz / 60 Hz - 525 lines).
<i>Levels:</i>	Y = 1 Vp/p. C = 0.3 Vp/p.
<i>Impedance:</i>	75 ohms.

• COMPOSITE VIDEO

<i>Connectors:</i>	BNC (input #4), HD15 (inputs #1 to 4) and DVI-I* (input #1).
<i>Standards:</i>	PAL / SECAM (15.625 kHz / 50 Hz - 625 lines) or NTSC (15.734 kHz / 60 Hz - 525 lines).
<i>Level:</i>	1 Vp/p.
<i>Impedance:</i>	75 ohms.

7-2. DISPLAY OUTPUTS**• ANALOG**

<i>Connector:</i>	HD15.
<i>Resolutions:</i>	4/3 & 5/4: 800x600, 1024x768, 1280x1024, 1400x1050, 1600x1200. 16/9 & 16/10: 852x480, 1280x720, 1280x768, 1366x768, 1920x1080.
<i>Frames frequency:</i>	50, 60, 72**, 75** Hz and follow (** = not available for all resolutions).
<i>Sync. types:</i>	RGBHV, RGB/S, RGSB (Sync On Green).
<i>Levels:</i>	R, G, B = 0.7 Vp/p. H & V Sync = TTL Composite Sync = TTL and 0.3 V. SOG (Sync On Green) = 0.3 V.
<i>Impedance:</i>	R, G, B = 75 ohms.

• DIGITAL*

<i>Connector:</i>	DVI-I.
<i>Format:</i>	Digital Visual Interface (DVI). TMDS Single link.
<i>Resolutions:</i>	Up to 1600 x 1200 @ 60 Hz.

7-3. AUDIO INPUTS

<i>Connectors:</i>	Jack 3.5 mm (input #1) and MCO (inputs #2, 3 & 4).
<i>Type:</i>	Stereo balanced (input 4) & unbalanced (all).
<i>Levels:</i>	Vi = + 18 dBu (max). Zi = 20 kΩ unbalanced. Zi = 40 kΩ balanced.
<i>Gain:</i>	Adjustable.

* QTD402 only.

7-4. AUDIO OUTPUT

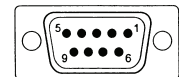
<i>Connectors:</i>	MCO.
<i>Types:</i>	Stereo balanced & unbalanced.
<i>Levels:</i>	Vo = + 18 dBu max (unbalanced). Zo = 300 Ω (unbalanced). Vo = + 24 dBu max (balanced). Zo = 600 Ω (balanced).
<i>Gain:</i>	0 dB nominal (adjustable with Master volume).

7-5. COMMUNICATION PORTS**• RS-232 (on DB9 female connector)**

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

Pin-out:

PIN #	FUNCTIONS
2	Tx1 (transmit data to the control device)
3	Rx1 (receive data from the control device)
4	Rx2 (receive data from the display device)
5	GROUND (Gnd)
8	Reserved for manufacturer.
9	Tx2 (transmit data to the display device)



DB9 connector

• LAN (Optional on RJ45 connector)

Protocol: TCP (Transmission Control Protocol) / UDP (User Datagram Protocol).

Data Rate: 10 / 100 Mbps.

LED functions (on RJ45 connector):

Top LED	Bottom LED	Meaning
OFF	OFF	No link
OFF	ON	100 BASE-T link.
ON	OFF	10 BASE-T link.

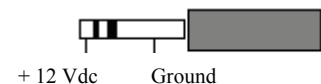
7-6. TRIGGER

Connector: Jack 3.5 mm female.

Command levels: ON = + 12 Vdc trigger. OFF = 0 Vdc.

Output Current: 0.1 A max at + 12 Vdc.

NOTE: This output is activate with the AC Power Switch (ON/OFF).

Jack 3.5 connection**7-7. ENVIRONMENTAL**

<i>Power Supply:</i>	Internal CE / UL / CSA / IEC 950 (50 W), universal, automatic. Input: 100 VAC to 250 VAC; 50-60 Hz; I = 1 A Max.
<i>Storage Temperature:</i>	- 25 °C to + 85 °C (- 13 °F to + 185 °F).
<i>Operating temperature:</i>	0 °C to + 50 °C (32 °F to 122 °F).
<i>Maximum ambient operating temperature:</i>	< 40 °C (< 104 °F).
<i>Hygrometry:</i>	10% to 80% (without condensation).
<i>Dimensions:</i>	D 265 x W 482 x H 44 mm / D 10.4" x W 19" x H 1.74". Compatible with the 19" rack (height = 1 unit).
<i>Weight:</i>	3.5 kg / 7.7 lbs.

* QTD402 only.

APPENDIX A: PROGRAMMER'S GUIDE

A-1: INTRODUCTION

If you need to use your own Software Control program from a PC or WORKSTATION with an RS-232 port, the device allows communication through an ASCII code protocol.

The device treats any character that it receives on the RS-232 as a possible command but only accepts legal commands. There is no starting/ending code needed in a command string.

A command can be a single character typed on a keyboard and does not require any special character before or after it. (It is not necessary to press "ENTER" on the keyboard). A command can be preceded by a value (See chapter A-2).

When the device receives a valid command, it will execute the command. Then it will send back the status of the parameters that have changed due to this command.

If the command cannot be executed (value out of range, no signal on the selected input), the device will just send back the current status of the corresponding parameters.

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

A-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.

Command = Value (optional) + Character.

Examples / Exemples:

Command / Commande		Response Réponse	Description
Value/ Valeur	Character / Caractère		
none aucune	OY	OY0	Read the output sync type. <i>Lit le type de synchro.</i>
10	V	VP10	Set Vertical position to 10. <i>Règle la position horizontale à 10.</i>

A-3: ERROR RESPONSES

When the device receives from the control device an invalid command or value, it returns an error response:

Command / Commande		Response Réponse	Description
Value/ Valeur	Character / Caractère		
none aucune	zz	E10	Invalid command. / Commande invalide.

ANNEXE A: GUIDE DE PROGRAMMATION

A-1: INTRODUCTION

Si vous souhaitez utiliser votre propre logiciel de contrôle avec votre PC, MAC ou Station de Travail par un port RS-232, l'appareil peut communiquer par simple émission / réception de caractères ASCII.

L'appareil traite tous les caractères reçus sur son port RS-232 comme des commandes possibles; seules certaines commandes sont reconnues et acceptées.

Une commande est constituée d'un ou deux caractères sans code de contrôle ni avant, ni après. Il n'est pas nécessaire d'appuyer sur "ENTER" du clavier. Une commande peut être précédée d'une valeur (voir chapitre A-2).

Lorsque l'appareil reçoit une commande valide, il exécute cette commande puis renvoie à l'appareil de contrôle l'état de tous les paramètres qui ont été modifiés suite à l'envoi de cette commande.

Si la commande n'est pas reconnue (valeur en dehors de la plage, pas de signal sur l'entrée sélectionnée), l'appareil renvoie uniquement les états des paramètres correspondants.

Si la commande est invalide, une réponse d'erreur sera retournée à l'appareil de contrôle. Toute réponse faite à l'unité de contrôle se termine par un retour à la ligne et par un saut de ligne (CR / LF) signalant la fin de la commande de réponse. (Voir chapitre: A-3).

A-2: STRUCTURE D'UNE COMMANDE

Les commandes sont généralement constituées d'une valeur numérique suivie par 1 ou 2 lettres de commande. Une lettre utilisée sans valeur numérique renvoie l'état de la commande.

Commande = Valeur (optionnelle) + Caractère

A-3: RÉPONSES D'ERREUR

Lorsque l'appareil reçoit de l'appareil de contrôle une valeur ou une commande invalide, il retourne les messages d'erreur suivants:

Command / Commande		Response Réponse	Description
Value/ Valeur	Character / Caractère		
none aucune	zz	E10	Invalid command. / Commande invalide.

A-4: COMMANDS AND RESPONSES TABLE**A-4: TABLE DES COMMANDES ET RÉPONSES**

COMMAND	RESPONSE	COMMAND DESCRIPTION	TYPE	VALUE / VALEUR		
COMMANDE	RÉPONSE	DESCRIPTION DE LA COMMANDE		MIN	MAX	DESCRIPTION
SELECTION COMMANDS / COMMANDES DE SÉLECTION						
CC	CC	Selected input (read only).	Rd	0	4	1 = input #1 2 = input #2
cn	cn	Input selection	Rd/Wr	0	4	3 = input #3 4 = input #4
OB	OB	Black screen output	Rd/Wr	0	1	1 = black output
TV	TV	Transition availability.	Rd	0	1	1 = New input ready to commute.
FZ	FZ	FREEZE.	Rd/Wr	0	1	0 = inactive 1 = active.
INPUT COMMANDS / COMMANDES D'ENTRÉE						
PC	PC	Input selection for adjustment.	Rd/Wr	0	4	0 = all inputs. 1 = input #1.... 4 = input #4
PE	PE	Input disabling (works with PC)	Rd/Wr	0	1	0 = disable 1 = enable.
PL	PL	H sync load selection (works with PC).	Rd/Wr	0	1	0 = Hi-Z load 1 = 75Ω load.
PR	PR	RGB input type selection (works with PC command).	Rd/Wr	0	10	0 = composite 1 = S.VIDEO 2 = YUV 3 = RGBS (TTL) 4 = RGsB (SOG) 5 = RGBS (ana) 6 = computer (SOG) 7 = comp (HV or C.) 8 = computer DVI 9 = HDTV YUV 10 = audio only
PI	PI	Input standard selection (works with PC command).	Rd/Wr	0	4	0 = NTSC/PAL/SECAM. 1 = NTSC. 2 = PAL. 3 = SECAM 4 = Black & White.
PP	PP	VCR mode	Rd/Wr	0	1	0 = OFF 1 = ON.
OUTPUT COMMANDS / COMMANDES DE SORTIE						
XR	XR	Switching mode selection.	Rd/Wr	0	4	0 = internal rate 1 = follow input #1 2 = follow input #2... 4 = follow input #4
OF	OF	Output formats selection.	Rd/Wr	0	9	0 = 800x600 4/3 1 = 1024x768 4/3 2 = 1280x1024 4/3 3 = 1400x1050 4/3 4 = 1600x1200 4/3 5 = 852x480 16/9 6 = 1280x720 16/9 7 = 1280x768 16/9 8 = 1366x768 16/9 9 = 1080p 16/9
OR	OR	Output rate selection.	Rd/Wr	0	3	0 = 50 Hz 1 = 60 Hz 2 = 72 Hz 3 = 75 Hz
OY	OY	Output sync selection.	Rd/Wr	0	2	0 = H & V sync. 1 = Composite sync. 2 = SOG
OS	OS	Type of screen selection	Rd/Wr	0	1	0 = 4/3 screen 1 = 16/9 screen
OP	OP	Test pattern selection.	Rd/Wr	0	5	0 = no pattern 1 = centering 2 = color 3 = grey scale 4 = grid. 5 = burst
NOTE: Rd/Wr = Read and write command / Commande de lecture et d'écriture. Rd = Read only command / Commande de lecture uniquement.						

COMMAND	RESPONSE	COMMAND DESCRIPTION	TYPE	VALUE /VALEUR		
COMMANDE	RÉPONSE	DESCRIPTION DE LA COMMANDE		MIN	MAX	DESCRIPTION
IMAGE COMMANDS / COMMANDES DU MENU IMAGE						
yC	yC	Automatic centering.	Rd/Wr	0	1	1 = centering action (automatic reset).
az	az	Auto-setting	Rd/Wr	0	1	1 = Auto-setting action (automatic reset).
HP	HP	Horizontal position.	Rd/Wr	0	255	
VP	VP	Vertical position.	Rd/Wr	0	255	
HW	HW	Horizontal size.	Rd/Wr	0	255	
VS	VS	Vertical size.	Rd/Wr	0	255	
BR	BR	Brightness adjustment.	Rd/Wr	0	255	
CT	CT	Contrast adjustment.	Rd/Wr	0	255	
CL	CL	Color adjustment.	Rd/Wr	0	255	
HU	HU	Hue adjustment.	Rd/Wr	0	255	
QP	QP	Sharpness adjustment.	Rd/Wr	0	7	0 = level 1..... 7 = level 8.
OV	OV	Underscan / overscan.	Rd/Wr	0	1	0 = underscan 1 = overscan
IA	IA	Input aspect ratio selection.	Rd/Wr	0	2	0 = 4/3 1 = 16/9 2 = 16/9 anamorphic
AO	AO	Output aspect ratio.	Rd/Wr	0	3	0 = 1:1 1 =crop 2 = Full screen 3 = zoom.
ZW	ZW	Zoom: horizontal size.	Rd/Wr	10	200	10 = 10 % 100 = 100 % (no zoom) 200 = 200 %
ZS	ZS	Zoom: vertical size.	Rd/Wr	10	200	10 = 10 % 100 = 100 % (no zoom) 200 = 200 %
ZH	ZH	Zoom: horizontal position.	Rd/Wr	0	255	
ZV	ZV	Zoom vertical position.	Rd/Wr	0	255	
QR	QR	Red level adjustment.	Rd/Wr	0	255	
QG	QG	Green level adjustment.	Rd/Wr	0	255	
QB	QB	Bleu level adjustment.	Rd/Wr	0	255	
MC	CLK	Number of pixels per line.	Rd/Wr	0	65535	
MP	PHA	Pixels phase adjustment.	Rd/Wr	0	31	
yP	yP	PRESET.	Rd/Wr	0	1	1 = PRESET action (automatic reset).
YS	YS	STORE.	Rd/Wr	0	1	1 = STORE action (automatic reset).
AUDIO COMMANDS / COMMANDES AUDIO						
AC	AC	Audio source selection.	Rd/Wr	1	4	1 = audio source #1.... 4 = audio source #4
AO	AO	Audio mode.	Rd/Wr	0	1	0 = auto follow 1 = breakaway
AV	AV	Mater volume.	Rd/Wr	0	255	
AT	AT	Mute.	Rd/Wr	0	1	0 = mute OFF 1 = mute ON
AS	AS	Mono/stereo mode.	Rd/Wr	0	1	0 = stereo 1 = mono
AL	AL	Audio level (works with PC command)	Rd/Wr	0	64	0 = minimum 1 = maximum
AB	AB	Audio balance (works with PC)	Rd/Wr	0	64	0 = left to maximum 64 = right to maximum
NOTE: Rd/Wr = Read and write command / Commande de lecture et d'écriture. Rd = Read only command / Commande de lecture uniquement.						

COMMAND	RESPONSE	COMMAND DESCRIPTION	TYPE	VALUE /VALEUR		
COMMANDE	RÉPONSE	DESCRIPTION DE LA COMMANDE		MIN	MAX	DESCRIPTION
CONTROLS COMMANDS / COMMANDES DU MENU CONTRÔLE						
YE	YE	Erase all memories.	Rd/Wr	0	1	1 = erase all memories (automatic reset).
YI	YI	Auto-lock	Rd/Wr	0	1	0 = off 1 = on.
SR	SR	Red adjustment of the FADE.	Rd/Wr	0	255	
SG	SG	Blue adjustment of the FADE.	Rd/Wr	0	255	
SB	SB	Green adjustment of the FADE.	Rd/Wr	0	255	
SW	SW	Transition.	Rd/Wr	0	1	0 = fade color 1 = clean cut
YL	YL	Sync loss	Rd/Wr	0	4	0 = black 1 = input 1 2 = input 2..... 4 = input 4
xi	xi	Identification number byte 0 & 1.	Rd	0	65535	
xj	xj	Identification number byte 2 & 3.	Rd	0	65535	
xk	xk	Identification number byte 4 & 5.	Rd	0	65535	
xl	xl	Identification number byte 6 & 7.	Rd	0	65535	
xU	VERU	Update version.	Rd	0	65535	Example: VERU104 = version 1.4
YR	YR	DEFAULT VALUE.	Rd/Wr	0	1	1 = Default value action (automatic reset).
COMMUNICATION COMMANDS / COMMANDES DE COMMUNICATION						
ne	ne	Communication port selection	Rd/Wr	0	1	0 = RS232 1 = LAN
nr	nr	Reset of the LAN parameters.	Rd/Wr	0	1	1 = reset.
ns	ns	Store the LAN parameters.	Rd/Wr	0	1	1 = store.
na	na	IP address and port selection (for modification)	Rd/Wr	0	3	0 = all IP address / ports 1 = IP local address / local port 2 = IP remote address / remote port 3 = IP gateway address.
nw	nw	First byte of the address selected by the na command.	Rd/Wr	0	255	
nx	nx	Second byte of the address selected by the na command.	Rd/Wr	0	255	
ny	ny	Third byte of the address selected by the na command.	Rd/Wr	0	255	
nz	nz	Forth byte of the address selected by the na command.	Rd/Wr	0	255	
np	np	Number of the port (local or remote) selected by the na command.	Rd/Wr	0	65500	local port: 10000 to 10999. remote port: 0 to 65500.
nk	nk	netmask.	Rd/Wr	0	24	Value = number of bit to 0 (from right). example: 2 ▶ 255.255.255.252 3 ▶ 255.255.255.248 8 ▶ 255.255.255.0..... 24 ▶ 255.0.0.0
nt	TCP	protocol selection.	Rd/Wr	0	1	0 = UDP 1 = TCP
NOTE: Rd/Wr = Read and write command / <i>Commande de lecture et d'écriture.</i> Rd = Read only command / <i>Commande de lecture uniquement.</i>						

COMMAND	RESPONSE	COMMAND DESCRIPTION	TYPE	VALUE / VALEUR		
COMMANDE	RÉPONSE	DESCRIPTION DE LA COMMANDE		MIN	MAX	DESCRIPTION
STATUS COMMANDS / COMMANDES D'ÉTAT						
UN	UN	Measures unity in tens of kHz.	Rd	0	65535	ex: 14500 = 145 MHz
IL	IL	Horizontal period of input signal.	Rd	0	65535	Line frequency (in kHz) = (UN VALUE)x10 ÷ (IL VALUE).
ID	ID	Vertical period of input signal.	Rd	0	65535	Frame frequency (in Hz) = (Line frequency in Hz) ÷ (ID VALUE).
IP	IP	Input Sync. detection.	Rd	0	1	0 = no Sync. detected 1 = Sync. detected.
IH	IH	Sign of the horizontal input Sync.	Rd	0	1	0 = negative 1 = positive.
IV	IV	Sign of the vertical input Sync.	Rd	0	1	0 = negative 1 = positive.
IK	IK	Input Sync type detection.	Rd	0	3	0 = Separate H & V sync. 1 = Composite sync. (TTL). 2 = SOG (Sync. On Green). 3 = Composite sync. (analog).
II	II	Interlaced signal detection.	Rd	0	1	0 = not interlaced 1 = interlaced.
IO	IO	"Out of range" signal detection.	Rd	0	1	0 = In range 1 = Out of range.
IF	IF	Standard input signal detection.	Rd	0	35	0 = no signal 1 = wrong signal 2 = NTSC std (3.58/60) 3 = PAL std (4.43/50) 4 = SECAM (50Hz) 5 = B&W (50Hz) 6 = B&W (60Hz) 7 = YUV 50Hz 8 = YUV 60Hz 9 = RGB 50Hz 10 = RGB 60Hz 11 = 640x480 12 = 800x600 13 = 1024x768 14 = 1280x1024 15 = 1400x1050 16 = 1600x1200 17 = 852x480 18 = 1280x720 19 = 1280x768 20 = 1366x768 21 = 1680x1050 22 = 1920x1080 23 = 1080i 50 24 = 1080i60 25 = 720p 50 26 = 720p 60 26 = 1080p 24 28 = 1080p 25 29 = 1080p 30 30 = 1080p 50 31 = 1080p 60 32 = 1080sf 24 33 = 480p 50 34 = 480p 60 35 = 480p 72
XA	XA	Synchronized input.	Rd	0	4	Identical as XR command.
XF	XF	Synchronized input standard.	Rd	0	35	Identical as IF command.
XT	REFT	Frame frequency of the synchronized input.	Rd	0	65535	Value in hundredth of Hz.
OTHERS COMMANDS / COMMANDES DIVERSES						
TP	TP	T-BAR position.	Rd/Wr	0	255	
TB	TB	Executed percentage of the effect.	Rd	0	65535	0 = 0% 65535 = 100%
?	DEV	Device type.	Rd	0	65535	49 = QTD402 50 = QTA401.
#	#1,...#0	Send all device parameters.	Rd			
NOTE: Rd/Wr = Read and write command / Commande de lecture et d'écriture. Rd = Read only command / Commande de lecture uniquement.						

A-5: ASCII / HEX / DEC TABLE**A-5: TABLE ASCII / HEX / DEC**

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
/	2 F	47	O	4 F	79	o	6 F	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.