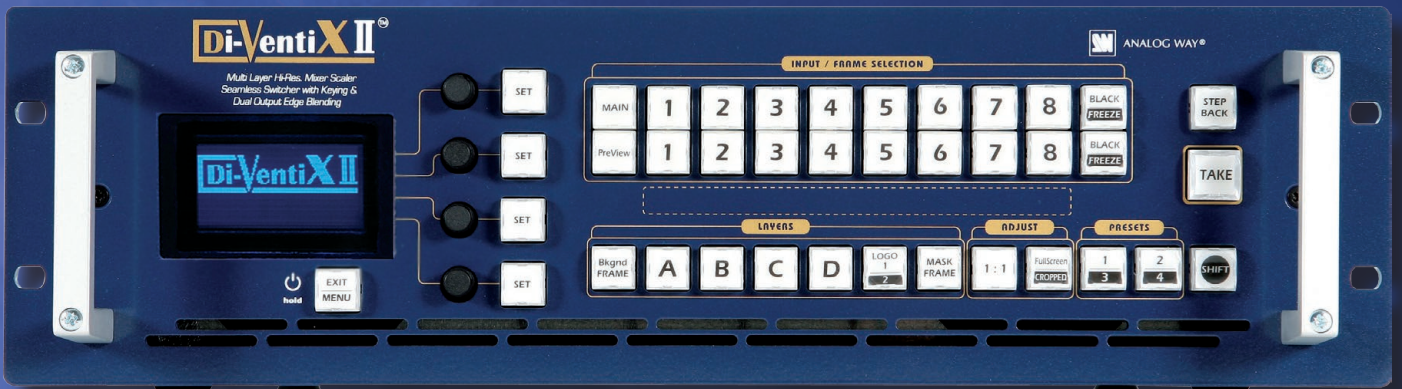


Di-Venti X II™



THANK YOU

By following these simple steps you will be able to obtain the most from your powerful **Di-VentiX II** and its many features.

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1-1. THE Di-VentiX II OPERATING MODES

Before you set up your **Di-VentiX II** for the first time, be sure you know exactly what you want to do with it. The **Di-VentiX II** offers a choice of three operating modes, which results in a versatile video production tool for live event staging and fixed installation applications.

*** NOTE * :** We recommend resetting the device to its default values every time you set up your shows or events (see the “*Operating The Di-VentiX II*” chapter, p26).

MIXER MODE

This mode allows for a single **Di-VentiX II** to seamlessly switch and blend any of its 8 analog/digital inputs with any other of the inputs, add PIPS, titling or logo insertion to the live frame, while previewing your every move before going live, to avoid embarrassing errors on your main screen. The Mixer mode is the **Di-VentiX II** native mode, and with no less than 7 layers (of which 4 live layers). The **Di-VentiX II** with the Video Option allows to have a full Main screen for recording or broadcasting.

EMBEDDED SOFT EDGE MODE

The Embedded Soft Edge Blending Mode allows for a single **Di-VentiX II** to blend any of its sources onto two projectors for elegant wide screen horizontal or vertical projections. In this configuration the **Di-VentiX II** offers the same functions as in Multi Layer Mixer Mode. Since both Main and Preview outputs are used for the audience display, we recommend the optional video output card, which can be used as a Preview Monitor, making the control of your shows as easy as in standard Mixer Mode. The **Di-VentiX II** with the Video Option allows for full main screen or a split screen between Main and Preview in embedded Soft Edge Blending Mode for Monitoring.

This mode is set with the RCS developed by **Analog Way** or Remote Controllers (see ‘*Soft Edge Blending*’ page, p70).

Multi Machine Soft Edge Blending Mode can be achieved by linking multiple **Di-VentiX II** together. Each **Di-VentiX II** used in Mixer Mode drives a single video projector to create extra large images, with up to 16 projectors horizontally or vertically.

For multi machine setups, we recommend the use of a remote console such as the **Axion2** or the **ORCHESTRA**.

SYNC MATRIX MODE

This mode turns your **Di-VentiX II** into a true 8x2 scaled matrix, while preserving seamless switching capabilities. Both Main and Preview outputs can only be set with the same resolution. Switching between any of the inputs can be done with various effects (Cut, Fade, Slides...) and synchronized on both outputs.

*** NOTE * :** This mode has the following restrictions: no PIPs, no logos and no frames.

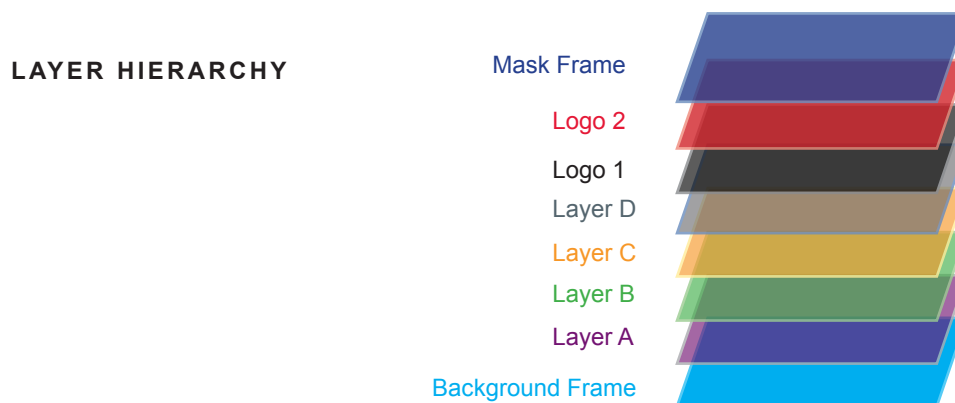
1-2. USEFUL TERMS AND DEFINITIONS

BACKGROUND: a Background is a source, typically originating from a computer. **Di-VentiX II** enables you to work with live or still (frame) background sources - visually behind all other sources.

LAYER: a Layer is an image display element (such as a PIP window, Key, Logo(s) or Background) that has an associated visual priority — either in front of or behind another layer.

The **Di-VentiX II** can simultaneously view no less than 8 layers (4 video or live layers, 1 frame layer or background, 2 logo layers and 1 Mask Frame).

Di-VentiX II can insert up to 3 PIPs on a live background or 4 PIPs on a still background (frame).



PIP: a PIP (Picture In Picture), is a picture, typically of reduced size, which is positioned over another background image or PIP. PIPs can be reduced, enlarged and bordered. PIPs can overlap, depending on their visual priority.

Di-VentiX II allows for Dynamic PIP on the opening and closing of the sequence, vertically or horizontally. A “flying” PIP is also possible over the screen with vertical, horizontal or diagonal animation. A PIP is considered as a live layer.

FRAME: a Frame is a full screen image which is selected from one of the eight still frames which you can capture with the **Di-VentiX II**. A Frame can be flash captured from any video or computer source plugged into the machine (8 max).

LOGO: a Logo is a partial screen image that can be flash captured from any Video or Computer source, by keying or image cut-out. **Di-VentiX II** can record up to 8 still logos. They can be positioned anywhere on the screen.

KEYING: a Key is an electronic process whereby an image is electronically superimposed over another source or background, by cutting out either a color (Chroma Key), or its brightness or luminance levels (Luma Key). Keys are typically used for titles, logos and special effects. **Di-VentiX II** allows to use a live source with green or blue background and to key it over any other live input.

2-1. SAFETY INSTRUCTIONS

CAUTION:

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

- **WARNING:** To prevent the risk of electric shock and fire, do not expose the device to rain, humidity, intense heat sources (such as heaters and direct sunlight). Slots and openings in the device are provided for ventilation and to avoid overheating. Make sure the device is never placed near a textile surface that could block the openings. Keep away from excessive dust and vibrations. Avoid shocks of any kind.
- **POWER:** Always use the power supply delivered with your device or a power supply that corresponds to the power requirements indicated on your device...
The device is equipped with a main switch (On (I) Off (O)) on the rear panel.
- **STANDBY MODE:** The machine has a standby mode that enables you to activate the power-saving mode. Simply press the [MENU/EXIT] button for several seconds, the menu will then display the progress of the standby setup. Once 100%, the machine will enter 'sleep' mode.

To wake the machine up simple press the [MENU/EXIT] button, a message will be displayed to inform you that the machine is exiting standby mode.

- **POWER CORD:** **Caution:** The power cord is the only way to totally disconnect the equipment from the main power.

Apply the following guidelines:

- The equipment connected to the network must have a release system easily accessible and located outside the unit.
- Unplug the power cord, 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 your device 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 your device 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 SECURITE

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. Conservez les instructions de sécurité et de fonctionnement afin de pouvoir les consulter ultérieurement. Respectez 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 à proximité d'une 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 poche 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. Les appareils 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:** Les appareils sont équipés d'un interrupteur général (Marche I / Arrêt O), la mise en tension et la mise hors tension se fait en actionnant cet interrupteur général.
- Attention: le cordon d'alimentation constitue le seul moyen de débrancher l'appareil totalement de l'alimentation secteur. Pour être certain que l'appareil n'est plus alimenté, ce cordon doit être débranché de la prise murale.

Appliquer les consignes suivantes:

- Le matériel relié à demeure au réseau, doit avoir un dispositif de sectionnement facilement accessible qui doit être incorporé à l'extérieur de l'appareil.
- 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 un appareil avec un cordon endommagé; un câble abîmé peut provoquer un risque d'incendie ou un choc électrique. Vérifiez le câble d'alimentation de temps en temps. Contactez 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, risquent d'exposer l'utilisateur à des chocs électriques ou autres dangers. Contactez le service après-vente, 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.

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 erroneo funzionamento e un incidente.
- **ALIMENTAZIONE:** Far funzionare l'apparecchiatura solo con la sorgente d'alimentazione indicata sull'apparecchiatura. Le apparecchiature 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:** Gli apparecchi con un interruttore (commutatore) generale (Accesso I : Speuto 0), accendere ou spagnere l'apparecchio si fa usando l'interruttore. **Attenzione:** il cavo di alimentazione è il solo modo di disconnettere l'apparecchio dell'alimentazione. Per assicurarsi che totalmente l'apparecchio non è più collegato, il cavo deve essere disconnesso della presa murale.
Seguire le istruzioni seguenti:
 - Il materiale collegato a residenza alla rete, deve avere un dispositivo di sezionamento facile da raggiungere e che deve essere inserito all'esterno del apparecchio.
 - 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 é 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.

- **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 bezeichnete Stromquelle betreiben. Gerät mit geerdeter Hauptstromversorgung muss an eine Stromquelle mit effizienter Erdung angeschlossen werden. Diese Erdung darf auf keinen Fall geändert, umgangen oder entfernt werden.
- **NETZKABEL:** Da die Geräte über einen Hauptschalter (An / Aus 0) verfügen, erfolgt die Stromversorgung und -unterbrechung über diesen Hauptschalter.
Achtung : Das Netzkabel stellt die einzige Möglichkeit dar, das Gerät vollständig vom Netzanschluss zu trennen. Um sicherzustellen, dass das Gerät nicht mehr versorgt wird, muss dieses Kabel aus der Netzsteckdose ausgesteckt werden.

Bitte beachten Sie die folgenden Hinweise:

- Wenn Geräte dauerhaft am Netz bleiben, müssen sie über eine leicht zugängliche Trennvorrichtung verfügen, die außen am Gerät angebracht sein muss.
- 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 le acudadosamente 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.

- **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. Los aparatos 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:** Los equipos incluyan interruptor general de alimentación (Encender I / Apagar 0), la puesta en marcha o desconexión se realiza por medio de este interruptor. El cable de alimentación constituye el único medio de desconectar el aparato totalmente de la red eléctrica. Para estar seguro de que el aparato no está más alimentado, este cable debe de ser desconectado de la toma de corriente.

Aplicar las siguientes consignas:

- El material conectado a residencia a la red informática, debe de tener un dispositivo de seccionamiento fácilmente accesible que debe de ser incorporado al exterior del aparato.
- 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 sufriera 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.

2-2. UNPACKING AND INSPECTION

Please ensure that the following items have been delivered with your **Di-VentiX II**.

- 1 x **Di-VentiX II (DVX8044)**
- 1 x Power supply cord
- 1 x MCO 8 Pin Connector
- 1 x RCS - Remote Control Software *
- 1 x User Manual (PDF Version) *
- 1 x Quick Start Guide *

* *Download from our website: www.analogway.com*

2-3. MOUNTING INFORMATION

Tabletop mounting: The **Di-VentiX II** can be used directly on a table, the unit is equipped with 4 handy anti-slip rubber feet.

Rack mounting: The **Di-VentiX II** is compatible with a 19" enclosure. Please follow the instructions below to install the device in a 19" rack.

Place the device in your rack. Attach the device to the rack by using 4 screws through the front panel holes (screws not included).

Rear fixing is also recommended, in particular for permanent installations. The **Di-VentiX II** is equipped with drill holes designed for compatibility with most rackmount braces.

Connect all of the cables of the device and attach them to the rack with the help of tie wraps.

IMPORTANT:

- The openings in the side and rear panels of the device are for cooling. Do not cover these openings and thus avoid correct air circulation.
- Do not place a weight in excess of 2 kg (4.4 Lbs.) on the device.
- The maximum ambient operating temperature should not exceed 40°C (104°F).
- The rack and all mounted equipment in it must be correctly grounded according to national and/or local electrical standards.



Dismantling front handles of the device will invalidate your **Di-VentiX II** warranty. It is strongly advised to avoid using front handles as rests for your **Di-VentiX II**, they are designed for manipulation purposes only.

If required, front handles of the device can be dismantled, but with caution. The original screws removed must not be reintroduced to their location without handles in place. Substantial damages can occur, including risk of electric shock from the main voltage. Only M4x12mm screws can be used. They are supplied with the unit.

2-4. CABLE AND ADAPTOR INFORMATION

A large choice of cables and adaptors are compatible with the **Di-VentiX II**. To find which are to be used in your setup, please refer to the Hardware Specifications chapter. Please contact your distributor for a list of available cables and connectors for your **Di-VentiX II**.

2-5. HARDWARE SPECIFICATIONS

Input specifications

• ANALOG COMPUTER:

Connectors: Inputs #1 to #8: Female HD15, DVI-I, and 4x BNC.
Line frequency: Up to 130 kHz (165 MHz Max pixel rate).
Resolution: Up to 1600x1200px @ 165MHz, 1920x1200px (RB, Max V size : 1200px, Max H size 2048px).
Sync. types: RGBHV, RGB/S, RGsB (Sync On Green).
Levels: R, G, B = 0.7 Vp/p.
H & V Sync = TTL
Composite Sync = TTL and 0.3 V (negative).
SOG (Sync On Green) = 0.3 V.
Impedance: R, G, B = 75 ohms.
H = 75 ohms or Hi-Z.
V = Hi-Z.



• RGB/S - RGsB VIDEO:

Connectors: Inputs #1 to #8: Female HD15, DVI-I, and 4x BNC.
Frequency: 15.625 kHz - 50 Hz (625 lines).
15.734 kHz - 60 Hz (525 lines).
Levels: R, G, B = 0.7 Vp/p.
SYNC. = 0.3 Vp/p or TTL (negative).
Impedance: RGB = 75 ohms.
SYNC. = 75 ohms or Hi-Z.



• COMPONENT:

Connectors: Inputs #1 to #8: Female HD15, DVI-I, and 3x BNC.
Frequency: 15.625 kHz - 50 Hz (625 lines).
15.734 kHz - 60 Hz (525 lines).
Levels: Y = 1 Vp/p (0.7 V Luma + 0.3 V Sync.).
Cr / Pr & Cb / Pb = 0.7 Vp/p.
Impedance: 75 ohms.



• HDTV - HD-YUV:

Connectors: Inputs #1 to #8: Female HD15, DVI-I, and 3x BNC.
Formats: 720p/576p (60Hz), 1080i (50/60Hz), EDTV.
Levels: Y = 1 Vp/p (0.7 V + sync.).
Cr / Pr & Cb / Pb = 1 Vp/p (0.7 V + sync.).
Sync: Tri-level: $\pm 0.3V$ (positive/negative).
Bi-level: 0.3V (negative).
Impedance: 75 ohms.



• S.VIDEO:

Connectors: Inputs #1 to #8: Female HD15, DVI-I, and 2x BNC.
Standard: PAL/SECAM: 15.625 kHz - 50Hz - 625 lines.
NTSC (3.58 - 4.43 MHz): 15.734 kHz/60Hz/525 lines.
Levels: Y = 1 Vp/p (0.7 V Luma + 0.3 V Sync.).
C = 0.3 Vp/p (Chroma Burst).
Impedance: 75 ohms.



• COMPOSITE VIDEO:

Connectors: Inputs #1 to #8: Female HD15, DVI-I, 1x BNC.
 Standard: PAL / SECAM: 15.625 kHz - 50 Hz - 625 lines.
 NTSC (3.58 - 4.43 MHz): 15.734 kHz/60 Hz/525 lines.
 Level: 1 Vp/p (0.7 V Luma + 0.3 V Sync.).
 Impedance: 75 ohms.



• DVI (Digital Video Interface):

Connector: Inputs #1 to #4: Female DVI-I.
 Line frequency: Up to 130 kHz (165 MHz Max pixel rate).
 Format: Digital Visual Interface (DVI)-TMDS single link.
 Resolution: Up to 1600x1200 @ 165Mhz, 1920x1200px
 (RB, Max V size: 1200px, Max H size 2048px).



• SD-SDI:

Connector: Inputs #1 to #4: Female BNC.
 Formats: SMPTE 259M
 Data rate: 270 Mbps serial digital.
 Impedance: 75 ohms.



• HD-SDI (3G-SDI):

Connector: Inputs #1 to #4: Female BNC.
 Formats: 720p @ 50, 59.94 & 60 Hz
 1035i @ 50, 59.94 & 60 Hz
 1080i @ 50, 59.94 & 60 Hz
 1080p @ 23.97, 24, 25, 29.97 & 30 Hz.
 1080sF @ 50, 59.94 & 60 Hz.
 Data rate: 1.54 Gbps serial digital - SMPTE 292M
 2.97 Gbps serial digital - SMPTE 424M
 Impedance: 75 ohms.



• OPTIONAL AUDIO INPUTS (OPT-iX-A):

8 Balanced or unbalanced stereo inputs + 1 Auxiliary input (on 5-pin MCO male connector) mixed on Main and Prelist outputs.
 $V_i = + 18 \text{ dBu (max)}$.
 $Z_i = 20 \text{ k}\Omega$ unbalanced.
 $Z_i = 40 \text{ k}\Omega$ balanced.



Output specifications

• HD-SDI OUTPUTS (3G-SDI):

Connector: Outputs #1 (Main) and #2 (Preview): Female BNC.
 Formats: 720p @ 50, 59.94 & 60 Hz
 1035i @ 50, 59.94 & 60 Hz
 1080i @ 50, 59.94 & 60 Hz
 1080p @ 23.97, 24, 25, 29.97 & 30 Hz.
 1080sF @ 50, 59.94 & 60 Hz.
 Data rate: 1.54 Gbps serial digital - SMPTE 292M (Level A)
 2.97 Gbps serial digital - SMPTE 424M (Level A)
 Impedance: 75 ohms.



• **ANALOG OUTPUTS:**

Connector: Output #1 (Main): Female HD15, 5 x BNC, Analog part of the DVI-I
 Output #2 (Preview): Female HD15, 5 x BNC, Analog part of the DVI-I.



Resolutions:

Format	Ratio	Refresh Rate
HDTV 720p	16 : 9	50Hz 59,94Hz 60Hz
HDTV 1035i	16 : 9	59,94Hz 60Hz
HDTV 1080i	16 : 9	50Hz 59,94Hz 60Hz
HDTV 1080p	16 : 9	23,97Hz 24Hz 25Hz 29,97Hz 30Hz
HDTV 1080sF	16 : 9	50Hz 59,94Hz 60Hz
640 x 480	4 : 3	50Hz 60Hz 72Hz 75Hz
800 x 600	4 : 3	50Hz 60Hz 72Hz 75Hz
848 x 480	16 : 9	50Hz 60Hz 72Hz 75Hz
1024 x 768	4 : 3	50Hz 60Hz 72Hz 75Hz
1280 x 720	16 : 9	50Hz 60Hz
1280 x 768	15 : 9	50Hz 60Hz 72Hz 75Hz
1280 x 800	16 : 10	50Hz 60Hz 72Hz 75Hz
1280 x 1024	5 : 4	50Hz 60Hz 72Hz 75Hz
1360 x 768	16 : 9	50Hz 60Hz 72Hz 75Hz
1366 x 800	15 : 9	50Hz 60Hz 72Hz 75Hz
1400 x 1050	4 : 3	50Hz 60Hz 72Hz 75Hz
1440 x 900	16 : 10	50Hz 60Hz 72Hz 75Hz
1600 x 1200	4 : 3	50Hz 60Hz
1680 x 1050	16 : 10	50Hz 60Hz
1920 x 1080	16 : 9	50Hz 60Hz
1920 x 1200	16 : 10	50Hz 60Hz
2048 x 1080	19 : 10	50Hz 60Hz

Signals: RGBHV, RGBS and RGsB.
 Levels: R, G, B = 0.7 Vp/p.
 Sync.: Separate H & V = TTL (negative).
 Composite = TTL (negative).
 SOG = 0.3 Vp/p (negative).
 Impedance: R, G, B = 75 ohms.

Signal: HD-YUV
 Frequency: 15.625 kHz - 50 Hz (625 lines).
 15.734 kHz - 60 Hz (525 lines).
 Levels: Y = 1 Vp/p (0.7 V Luma + 0.3 V Sync.)
 Cr / Pr & Cb / Pb = 0.7 Vp/p (tri-level sync on each component).
 Impedance: 75 ohms.

• DVI (Digital Video Interface) OUTPUTS:

Connector: Outputs #1 (Main) & #2 (Preview): Female DVI-I.
 Signal: Digital Visual Interface (DVI)-TMDS single link.



Resolutions:

Format	Ratio	Refresh Rate
HDTV 720p	16 : 9	50Hz 59,94Hz 60Hz
HDTV 1035i	16 : 9	59,94Hz 60Hz
HDTV 1080i	16 : 9	50Hz 59,94Hz 60Hz
HDTV 1080p	16 : 9	23,97Hz 24Hz 25Hz 29,97Hz 30Hz
HDTV 1080sF	16 : 9	50Hz 59,94Hz 60Hz
640 x 480	4 : 3	50Hz 60Hz 72Hz 75Hz
800 x 600	4 : 3	50Hz 60Hz 72Hz 75Hz
848 x 480	16 : 9	50Hz 60Hz 72Hz 75Hz
1024 x 768	4 : 3	50Hz 60Hz 72Hz 75Hz
1280 x 720	16 : 9	50Hz 60Hz
1280 x 768	15 : 9	50Hz 60Hz 72Hz 75Hz
1280 x 800	16 : 10	50Hz 60Hz 72Hz 75Hz
1280 x 1024	5 : 4	50Hz 60Hz 72Hz 75Hz
1360 x 768	16 : 9	50Hz 60Hz 72Hz 75Hz
1366 x 800	15 : 9	50Hz 60Hz 72Hz 75Hz
1400 x 1050	4 : 3	50Hz 60Hz 72Hz 75Hz
1440 x 900	16 : 10	50Hz 60Hz 72Hz 75Hz
1600 x 1200	4 : 3	50Hz 60Hz
1680 x 1050	16 : 10	50Hz 60Hz
1920 x 1080	16 : 9	50Hz 60Hz
1920 x 1200	16 : 10	50Hz 60Hz
2048 x 1080	19 : 10	50Hz 60Hz

Communication specifications

• COMMUNICATION PORTS:

REMOTE RS232

Connector: DB 9 female
 Level: RS232.
 Data Rate: 9600 Bauds, 8 data bits, 1 stop bit, no parity bit, no flow control for normal. DTR & RTS needed for upgrade.



• GP-I/O:

Connector: 8 pin MCO male connector
 Rating: 0.5A @ 125VAC - 2A @ 30VDC (contact closure).
 Functions: Tally



• LAN:

Connector: RJ45
 Protocol: TCP (Transmission Control Protocol) or UDP (User Datagram Protocol).
 Ethernet: Base 10/100



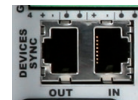
• **GENLOCK:**

Connectors: 2 x Female BNC (in & out).
Function: available only in framelock mode.
Analog SD or HD active loopthrough.



• **DEVICE SYNC:**

Connectors: RJ45
Protocol: Proprietary Protocol.
Function: Synchronisation of several machines
(multi machine Soft Edge Blending).



• **SEB LINK:**

Connectors: InfiniBand (The connector is removed from the serial number CV#831)
Protocol: N/A
Function: Non available

• **OPTIONAL AUDIO OUTPUT (OPT-iX-A):**

Connector: Outputs 1 (Main) and 2 (Prelist): 2 Balanced or unbalanced mono/stereo outputs (on 5-pin MCO male connector).
Vo max: Unbalanced = + 18 dBu (+12 dBu with 300Ω load).
Balanced = + 24 dBu (+18 dBu with 600Ω load).
Zo = 600 Ω balanced.
Zo = 300 Ω unbalanced.
G = 0 dB nominal.
G = + 6 dB / - ∞ adjustable with Master volume.

• **OPTIONAL VIDEO OUTPUT OPT-8044VO (3G-SDI):**

Connectors: 1 x Female DB9, 1 x Female BNC, 1 x Female DVI-D.
SD-SDI: Female BNC.
Formats: SMPTE 259M.
Data rate: 270 Mbps serial digital.
Impedance: 75 ohms.

HD-SDI: Female BNC.
Formats: 720p @ 50, 59.94 & 60 Hz.
1035i @ 59.94 & 60 Hz.
1080i @ 50, 59.94 & 60 Hz.
1080p @ 23.97, 24, 25, 29.97, 30 & 60 Hz.
1080sF @ 50, 59.94 & 60 Hz.



*** NOTE * :** Specific Analog Way DB9 cable (Ref: AW10120) shipped with every optional OPT-8044VO card.

Data rate: 1.54 Gbps serial digital - SMPTE 292M
2.97 Gbps serial digital - SMPTE 424M
Impedance: 75 ohms.

DVI-D: Female DVI-D.
Signal: Digital Visual Interface (DVI)-TMDS single link.

Formats:

Format	Ratio	Refresh Rate
SDTV PAL	4 : 3	50Hz
SDTV NTSC	4 : 3	59,94Hz
EDTV 480p	4 : 3	59,94Hz
EDTV 576p	4 : 3	50Hz
HDTV 720p	16 : 9	50Hz 59,94Hz 60Hz
HDTV 1035i	16 : 9	59,94Hz 60Hz
HDTV 1080i	16 : 9	50Hz 59,94Hz 60Hz
HDTV 1080p	16 : 9	23,97Hz 24Hz 25Hz 29,97Hz 30Hz
HDTV 1080sF	16 : 9	50Hz 59,94Hz 60Hz
640 x 480	4 : 3	50Hz 60Hz 72Hz 75Hz
800 x 600	4 : 3	50Hz 60Hz 72Hz 75Hz
848 x 480	16 : 9	50Hz 60Hz 72Hz 75Hz
1024 x 768	4 : 3	50Hz 60Hz 72Hz 75Hz
1280 x 720	16 : 9	50Hz 60Hz
1280 x 768	15 : 9	50Hz 60Hz 72Hz 75Hz
1280 x 800	16 : 10	50Hz 60Hz 72Hz 75Hz
1280 x 1024	5 : 4	50Hz 60Hz 72Hz 75Hz
1360 x 768	16 : 9	50Hz 60Hz 72Hz 75Hz
1366 x 800	15 : 9	50Hz 60Hz 72Hz 75Hz
1400 x 1050	4 : 3	50Hz 60Hz 72Hz 75Hz
1440 x 900	16 : 10	50Hz 60Hz 72Hz 75Hz
1600 x 1200	4 : 3	50Hz 60Hz
1680 x 1050	16 : 10	50Hz 60Hz
1920 x 1080	16 : 9	50Hz 60Hz
1920 x 1200	16 : 10	50Hz 60Hz
2048 x 1080	19 : 10	50Hz 60Hz

Environmental specifications

Power supply: Internal CE/UL60950-7/CSAC22.2 N°950 EN60950-1/CE Mark LUD.

Input voltage range: 90-132 VAC 180-24 auto ranging 50-60 Hz, 250W, internal, auto-switchable.

Storage temperature: -40°C to +70°C (-40°F to +158 °F).

Operating temperature: 0°C to 40°C (32°F to 104°F).

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

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

Dimensions: W 480 x D 420 x H 133 mm
19"W x 16.5"D x 5.25"H.
(Compatible with a Standard 19" rack, Height = 3 U).

Weight: DVX8044: 7 kg / 15.4 lbs.
OPT-8044A: + 0.5 kg / 1.1 lbs.



Pinouts

• VGA

STANDARD VGA

1- Red	6- Red Return	11- ID Bit 0
2- Green	7- Green Return	12- ID Bit 1
3- Blue	8- Blue Return	13- H Sync
4- ID Bit 2	9- No Pin	14- V Sync
5- Test (Gnd)	10- Sync Return	15- ID Bit 3



• DIGITAL VISUAL INTERFACE DVI

Pin

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

C1- Analog Red Video (or Cr/Pr or C)
 C2- Analog Green Video (or Y or Composite Video)
 C3- Analog Blue 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



• RS-232 CONNECTOR

Pin

1- NC	6- NC
2- Transmit data to PC (Tx1)	7- NC
3- Transmit data from PC (Rx1)	8- NC (or +12V. dc)
4- Receive data from display unit (Rx2)	9- Transmit data to display unit (Tx2)
5- Ground	



• VESA DDC (Inputs #1 to #4)

Pin

1- Red	6- Red Return	11- ID Bit
2- Green	7- Green Return	12- Bi-directional data (SDA)
3- Blue	8- Blue Return	13- H Sync
4- ID Bit 2 0	9- DDC+5 Volt supply	14- V Sync
5- Test	10- Sync Return	15- Data Clock (SCL)



• Video Out (SD/HDTV) (Specific Wiring)

Pin	
1	Ground (red, green, blue, composite)
2	
3	Red (R-Y)
4	Green (Y)
5	Blue (B-Y)
6	Y (S.VIDEO)
7	COMPOSITE VIDEO
8	Ground (Y+C)
9	C (S.VIDEO)



HDCP compliance

If you want to use HDCP content (High-bandwidth Digital Content Protection) from your sources, make sure that you use HDCP compliant screens or projectors. If not, your image could be disabled.

When displaying HDCP protected sources on non HDCP compliant equipment, the following message will be displayed on the device VFD screen:

“Due to HDCP content, non HDCP screens cannot display protected sources”

Your screen will go to black without displaying the HDCP input image, or partially layer out non HDCP content.

Concerning the DVI inputs, a specific feature allows you to enable/disable the HDCP receiver for the input chosen.

It can be very useful especially when using a Mac:

Input Menu > DVI# > HDCP detection

The output status can provides you with all the information about the output in real time.

This feature is particularly needed when HDCP is used with a long cable to be sure that the communication is well handled.

For further information see HDCP management Appendix A.

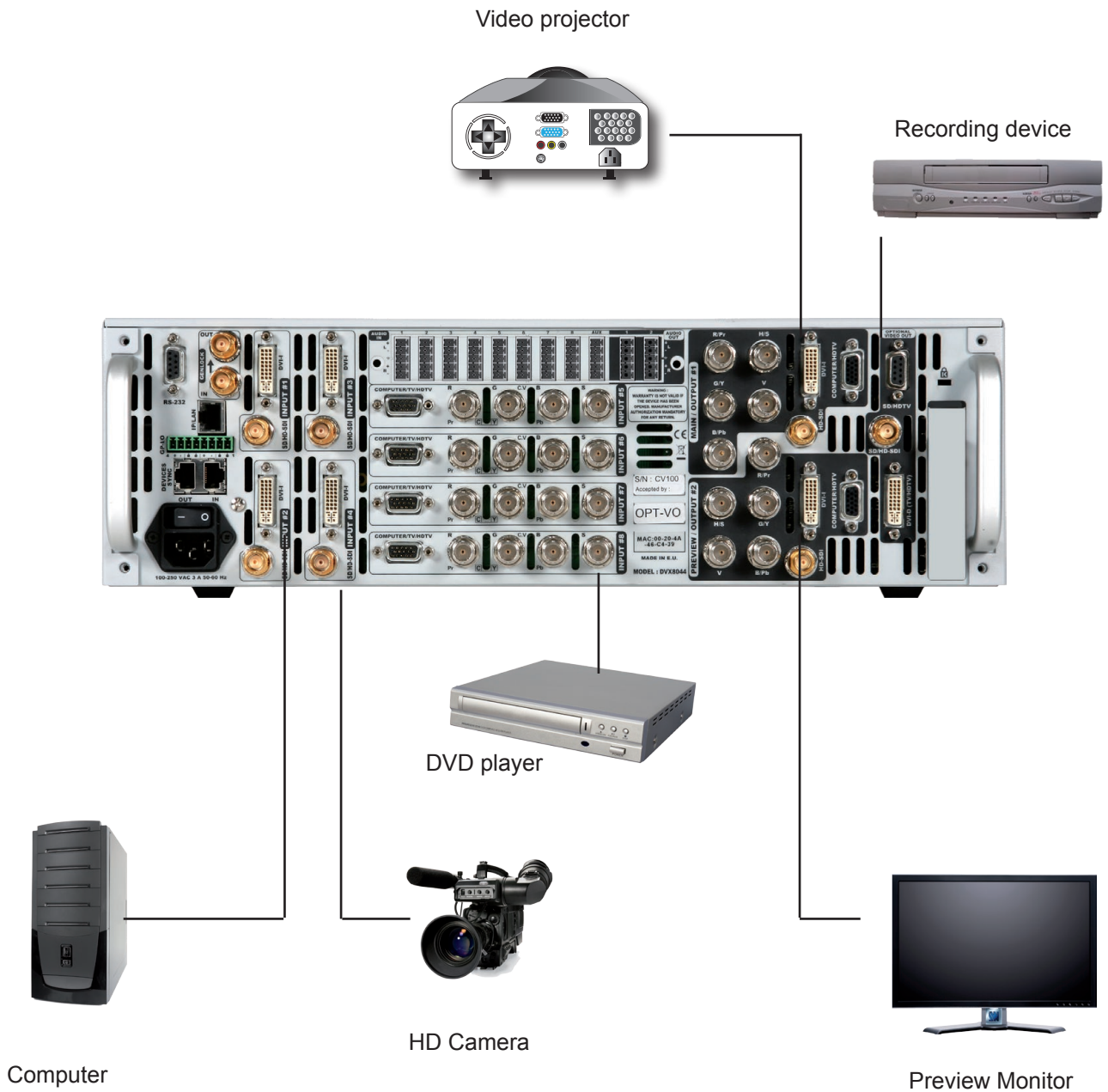


NOTE: as part of our policy of continuous improvement, Analog Way reserves the right to make design and specification changes for product improvements without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviation from these values in individual units.

3-1. CONNECTING THE Di-Ventix II

The **Di-Ventix II** can be set up with up to 8 different sources, and will drive up to 4 digital DVI-HD/SD-SDI sources and 4 analog computer/video sources simultaneously. The versatility of the **Di-Ventix II** will allow for almost any event configuration and cater for all your projection needs.

The intuitive rear panel of the **Di-Ventix II** will let you set up for the first time quickly and easily. Here is an example of a typical **Di-Ventix II** setup.



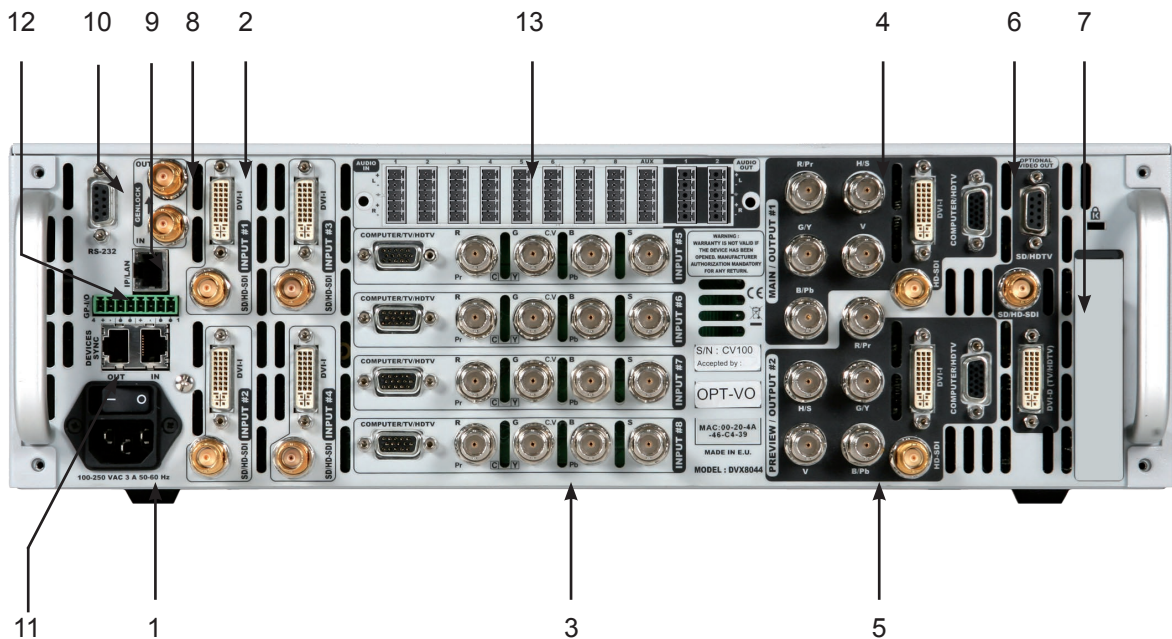
3-2. THE DI-VENTIX II REAR PANEL

Overview

The **Di-VentiX II** rear panel is equipped with 8 universal digital and analog inputs. Inputs #1 through #4 (2) are universal digital and analog inputs. Inputs #5 through #8 (3) are universal analog inputs (see also Input Specifications in this chapter).

The Main (4) and Preview (5) outputs will allow for the **Di-VentiX II** high resolution digital and analog signals to be viewed on screen and/or on a preview monitor (see also “Output Specifications” in this chapter).

- 1 : AC outlet
- 2 : Universal Digital and Analog inputs
- 3 : Universal Analog inputs
- 4 : Main output section (Output #1)
- 5 : Preview output section (Output #2)
- 6 : Optional video out card (OPT-VO-8044)
- 7 : SEB Link connectors (for units up to serial CV#831)
- 8 : Genlock in/out connectors
- 9 : IP-LAN connector
- 10 : RS232 remote control connector
- 11 : Device Sync connectors (see Appendix F)
- 12 : GP-I/O connector
- 13 : Optional audio in/out card (OPT-8044A)



Inputs #1 to #4

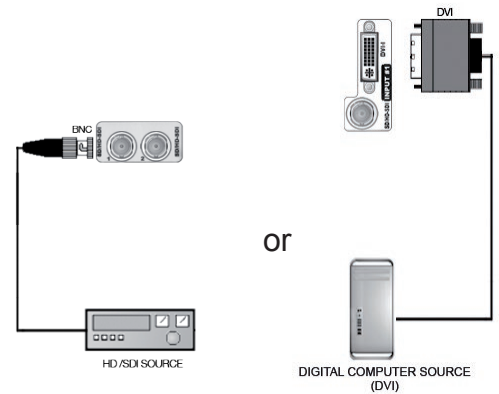
SD/HD-SDI, DVI AND ANALOG SOURCES:

Inputs #1 to #4 on the **Di-VentiX II** accept up to 4 live sources in Digital and analog formats.

SD/HD-SDI: 1 x digital input on female BNC connector.
 DVI-I: 1 x digital (DVI) and 1 x analog input on female DVI-I universal connector.

*** NOTE * :** SDI and DVI entries cannot be used simultaneously on a single input.

*** NOTE * :** If you wish to use the analog signal on a DVI-I entry, you can use Analog Way's 11009 cable (supplied separately) to connect your computer source.



Inputs #5 to #8

UNIVERSAL COMPUTER & VIDEO INPUTS:

Universal Inputs accept computer sources (RGBHV, RGBS, and RGsB (SOG) signals), standard TV/VIDEO sources (Composite video, S.VIDEO), Component video (YUV, RGBS & RGsB (SOG)), and HDTV sources (480p, 720p & 1080i).

Connections:

Universal Analog input (Device connection) --> 1 x Female HD15 connector.
 Universal Analog input (Device connection) --> 4 x Female BNC connectors .

COMPUTER SOURCES:

The device accepts the following computer signals: RGBHV, RGB/S, and RGsB on inputs #5 to #8.

Connections:

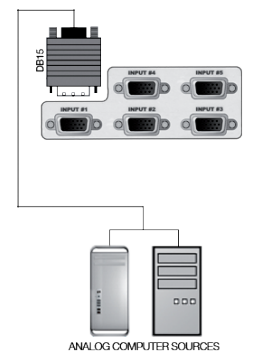
Device connection --> 1 x Female HD15
 Device connection --> 4 x Female BNC.

COMPOSITE VIDEO SOURCES:

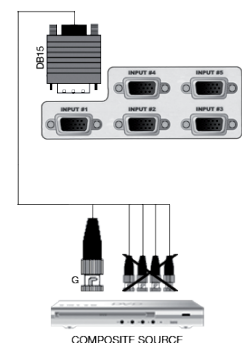
The Composite Video signal, usually called COMPOSITE or VIDEO, is available on most video equipment (VCR, DVD, CAMCORDER...), but is also the lowest in picture quality. The video standard of this signal can be NTSC, PAL or SECAM. The signal is transmitted on a single coaxial cable.

Connections:

1 x BNC (G) --> 1 x Female DB15
 1 x BNC (C) (or RCA, Device connection) --> 1 x Female BNC (C).



DB15 or 4xBNC



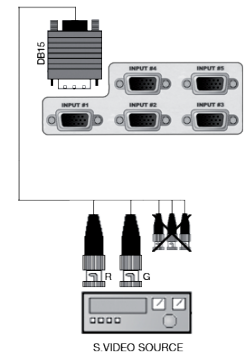
DB15 or 1xBNC

S.VIDEO SOURCES:

The S.VIDEO signal, also called Y/C, HI-8™, or S.VHS™, is available on DVD players and high quality VCRs (S.VHS). The S.VIDEO signal in which the Luminance (Y) and Chrominance (C) information are separately transmitted, gives a higher quality picture than the Composite video signal.

Connections:

1 x 4pin mini-Din → 2 x Female BNC (C & Y)
2 x BNC (R & G) → 1 x Female HD15.



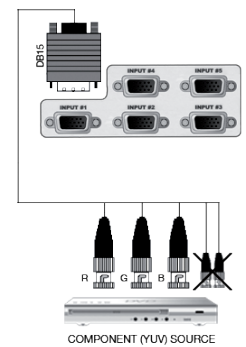
DB15 or 2xBNC

COMPONENT VIDEO SOURCES:

The Component Video signal, also called YUV (Y, Pr, Pb) or BETACAM™ is widely used in broadcasting and is available on high-quality DVD players. The COMPONENT signal is transmitted with 3 coaxial cables, and also has a better quality picture than COMPOSITE and S.VIDEO signals.

Connections:

3 x BNC (RGB) → 1 x Female HD15
Device connection → 3 x Female BNC (YUV).



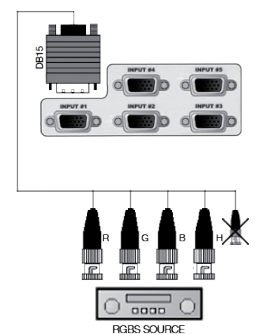
DB15 or 3xBNC

RGBS VIDEO SOURCES:

This signal is widely used in broadcasting and is available on European DVD players. The RGB/S signal is transmitted with 4 coaxial cables, and also has a better picture quality than COMPOSITE and S.VIDEO signals.

Connections:

4x BNC (RGBH) → 1 x Female HD15
Device connection → 4 x Female BNC (RGBS).



DB15 or 4xBNC

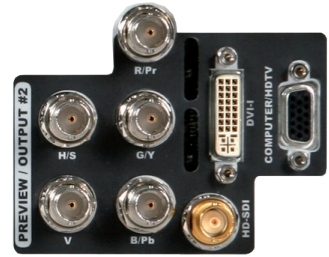
HDTV SOURCES:

The device accepts the 480p, 720p & 1080i HDTV formats. Connect your HDTV signal as a Component source.

Preview Outputs

PREVIEW OUTPUT:

- DIGITAL:** 1 x digital (HD-SDI) output for the main display device on female BNC connector. This output is compatible in 3G-SDI.
- ANALOG:** 1 x analog output for the main display device on female HD15 connector.
- UNIVERSAL:** 1 x analog output for the main display device on 5 x female BNC connectors.
- DIGITAL/ANALOG:** 2 x main output on female DVI-I connector (simultaneous analog and digital).



Main Outputs

MAIN OUTPUT:

- DIGITAL:** 1 x digital (HD-SDI) output for the main display device on female BNC connector. This output is compatible in 3G-SDI.
- ANALOG:** 1 x analog output for the main display device on female HD15 connector.
- UNIVERSAL:** 1 x analog output for the main display device on 5 x female BNC connectors.
- DIGITAL/ANALOG:** 2 x main output on female DVI-I connector (simultaneous analog and digital).



Hardware Options

VIDEO OUTPUT OPTION – OPT-8044VO:

Video Output card provides SD or HD TV formats in various signals and connectors from Composite Video to HD SDI. This output can be used to record the show by outputting the same content as the Main output or to dispatch the Preview image on video monitors. In addition, it can be used as real Preview output when using Native Matrix Mode or Embedded Edge Blending Mode.

This option may be installed after the initial unit purchase in our regional maintenance center.



AUDIO SWITCHER OPTION – OPT-8044A:

Audio Stereo Switcher card features 8 inputs and 2 outputs. An auxiliary input can be mixed with any other input. Master Volume and individual input level can be adjusted. Each input and output offers balanced or unbalanced connections. It should be noted that the management of the audio output follows the position of video layers.

Two modes are available: Follow or Breakaway. In Follow Mode the audio follows the last active video layer (after having pressed **[TAKE]**). In Breakaway Mode it is the selected audio layer input that is permanently diffused.

This option may be installed after the initial unit purchase in our regional maintenance center.



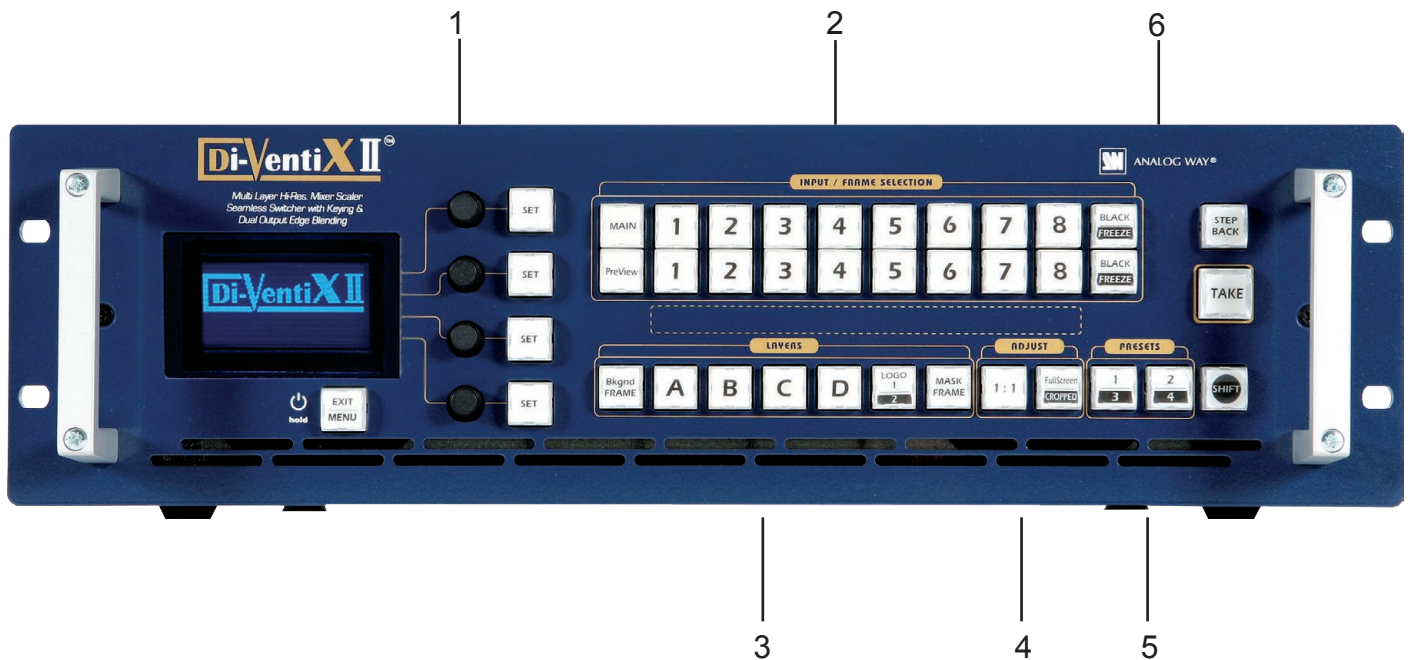
4-1. THE Di-VentiX II FRONT PANEL

Overview

The highly intuitive front panel of the **Di-VentiX II** was designed by Analog Way engineers to simply and quickly meet all of your event needs. Within minutes, you will be able to enjoy its full potential and easily parameter most of its functions, without having to be an expert audio-visual engineer, leaving room for what is most important to our users: concentrating on their event.

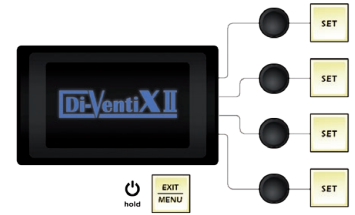
The **Di-VentiX II** front panel is comprised of several sections, each carefully labeled and self explanatory, corresponding to all the machine's versatile functions.

The «Menu» section (1), the «Input/Frame» section (2), the «Layer» section (3), the layer «Adjust» section (4), the user «Preset» section (5), and the «Transition» section (6).



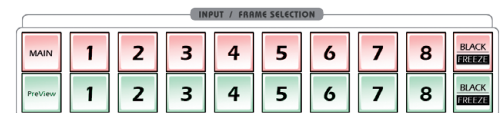
Menu section

The «Menu» section of the **Di-VentiX II** gives you access to all the machine's setup functions, parameters and tweaks, and is the starting point to any of the machine's endless setup capabilities. Here, you will easily find and select functions and parameters, quickly scroll through the extensive choices with the four practical selection knobs, and set values with the four corresponding [SET] buttons. The large VFD screen will clearly indicate your every move, guiding you through your setup process, and indicate the status of any given input, output, layer, or preset as soon as one of them is selected, so you always know where you are and what you are doing.



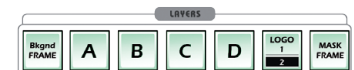
Input/Frame section

The «Input/Frame» section allows to individually select from all the sources plugged into the **Di-VentiX II**, and set all of the desired parameters, effects and tweaks to that source or frame. It is made up of two distinct rows, the «Main» row, which indicates which input (#1 to #8) is viewed on the main output, and the «Preview» row, which determines which input (#1 to #8) is viewed on the preview output. You can also, at the press of a single button, choose to black out your preview screen, or freeze the current image via the [BLACK]/[FREEZE] buttons at the end of both the «Preview» and the «Main» rows.



Layer section

The «Layer» section is the biggest step forward in the **Di-VentiX II** range evolution, and allows to easily select and manipulate up to four live sources individually and independently, much like you would manipulate transparent film on a glass plate. Superimpose, set transparency, borders, mask, transitions and effects to your sources, logos and frames and unleash your creativity.



Layer adjust section

The layer «Adjust» section allows for quick and easy adjustments and toggle of the selected layer for increased control on size, image crop and aspect ratio. The [SHIFT] button will allow toggling from the «Cropped» image state to the «Full Screen» image state.



User Preset section

The user «Preset» section allows users to quickly create, select and use presets for complex show animations and stunning transitions. Simply select the desired preset to use it immediately in your show, or preview it to tweak any of its parameters. The [SHIFT] button will allow for the «Preset» buttons to toggle between presets #1 and #3, or #2 and #4.



Take & Stepback section

The [STEP BACK] button, designed by our engineers very much along the undo principles of most software applications, will let the user go back a step on any **Di-VentiX II** manipulation, becoming a quick rescue function in case of an undesired manipulation. Finally, the [TAKE] button is simply the [GO] button of the **Di-VentiX II**. It will tell the **Di-VentiX II** to execute whatever it is the user has parametered for it to do next, whether toggling from «Main» to «Preview», or using a user preset or logo, or simply using your next predetermined scene. The **Di-VentiX II** will not change any on-screen parameters until the [TAKE] button has been pressed.

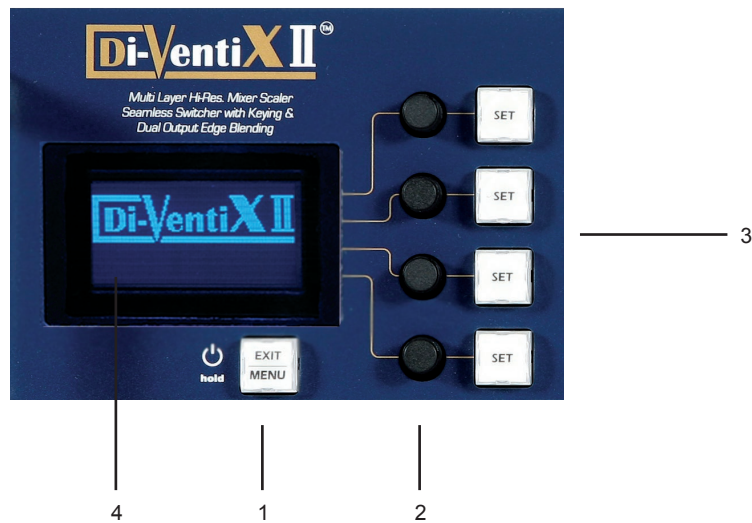


4-2. THE DI-VENTIX II MENU

Menu navigation

To access the **Di-VentiX II** menu, in the menu section, simply press the **[EXIT/MENU]** button (1). To highlight items in the menu which will appear on the VFD screen (4), turn the corresponding knob (2) left or right to the desired menu item. When you have reached the desired menu item, press the corresponding **[SET]** button (3) to access that menu function. Pressing the **[SET]** button when a selection has been made sets the value to that selection in the **Di-VentiX II** memory. When all settings have been made, press the **[EXIT/MENU]** button to exit sub-menus and return to the main menu.

*** IMPORTANT * : simply selecting a menu item will not set it to that value. Be sure to press the [SET] button when parametering the menu items.**



The menu will loop through the following screens once turned on.

Home menu

Pressing the **[MENU]** button in the menu section of the **Di-VentiX II**, will display and give you access to the following items on the menu VFD screen:

- **MODE:** choose which mode the **Di-VentiX II** will work in, Mixer Mode, Embedded SEB Mode: or Sync Matrix Mode (see **Di-VentiX II** modes p.6).
- **INPUT:** configure the 8 individual input types and resolutions.
- **OUTPUT:** set the output types and resolutions of the «Main» and «Preview» outputs.
- **VIDEO OUT:** (optional with OPT-8044VO) configure optional video output settings.
- **PRESET:** select to access User Preset configuration.
- **IMAGE:** access image adjustments and optimization.
- **LAYER:** access layer functions.
- **KEYING / TITLING:** access the Keying/Titling configuration
- **LOGO/FRAME:** memorize logos/frames and access logo/frame settings.
- **AUDIO** (optional with OPT-iX-A): access audio output configuration.
- **SOFT EDGE:** access Soft Edge Blending controls and adjustments (Soft Edge Mode only).
- **CONTROL:** setup remote controls, RCS software, LAN setup and hardware updates.
- **CONSOLE** (optional with RKD8044-T): access optional RKD8044-T setup.

4-3. WORKING WITH THE DI-VENTIX II

Operating Modes

The **Di-VentiX II** offers three modes to work from:

- the Mixer mode, which is the **Di-VentiX II** default mode,
- the Embedded Soft Edge Blending mode, which will allow you to blend two video projection sources together to obtain one smooth image on screen, and
- the Sync Matrix mode, which turns your **Di-VentiX II** into a true 8 x 2 scaled matrix.

* **NOTE** * : in Mixer mode, the **Di-VentiX II** will only let you work on your preview screen (access to main screen is locked). The Embedded Soft Edge Blending mode lets you access all of the same functions as in Mixer mode, without the preview capabilities. We recommend installing the optional video card (OPT-8044VO) for monitoring purposes if you intend to use the Embedded Soft Edge Blending mode often. In Sync Matrix mode, the **Di-VentiX II** loses the use of layers, PIPs and effects.

To choose which mode the **Di-VentiX II** will work in, press the **[EXIT/MENU]** button and select *Mode* in the menu by rotating the corresponding knob. Then press the **[SET]** button to enter the *Mode* sub-menu. Select which mode by rotating the corresponding knob, and press the **[SET]** button to enter your choice. Press the **[EXIT/MENU]** button to return to the main menu.

Resetting default values

It is strongly recommended resetting all of the default values of your **Di-VentiX II** unit before setting up your shows and events. To do so, press the **[EXIT/MENU]** button and select *Control* in the menu by rotating the corresponding knob. Then press the **[SET]** button to enter the *Control* sub-menu. Select *Default Values* by rotating the corresponding knob, and press the **[SET]** button to enter your choice. The **Di-VentiX II** will revert to its factory defaults. Press the **[EXIT/MENU]** button to return to the main menu. This operation will take approximately 30 seconds.

Your machine will reboot after the reset has taken place.

Di-VentiX II color codes

Analog Way engineers have developed a handy, user friendly way of identifying machine status on the front panel, via the use of color codes on the buttons of the machine. All new **Analog Way** machines use the same codes, for quick recognition of the status of any device of the range, at any given time.

For the **Di-VentiX II**, button color codes are as follows:

- Main sources section are indicated in **red**.
- Preview sources section are indicated in **green**.
- Layer section **red** or **green**, depending on whether the selected layer is active in respectively the Main or Preview window.
- Menu buttons are indicated in **yellow**.
- Unplugged or unrecognized inputs will appear in pale **yellow** (with autolock OFF).
- Selectable inputs will appear in pale **green**.
- Selecting a button with an available source or function will cause that button to blink.
- **[TAKE]** button reacts as follows:
 - If the take function is not available, the button will no light up.
 - If the Take function is available on non sequenced mode, button will appear pale **red**.
 - In sequenced mode, Take button blinks from pale **red** to pale **yellow**.
 - When take is active, it will blink rapid **red**.
- When a button is pressed and starts blinking rapidly, this means the **Di-VentiX II** is remapping the signal.

*** NOTE * : buttons will blink only if the Preview button is engaged on the front panel of the Di-VentiX II.**

- When pressing the **[SHIFT]** button then a shift enabled button (Black/Freeze, Presets 1/3...), the selected button will blink **green** or **red** and pale **yellow** to indicate it is both selected (green/red blinking), and that the shift function is active (yellow blinking).

*** NOTE * : if the auto-lock function is off, sources with no input will appear pale yellow, sources with available input will appear pale green. If auto-lock is turned on, buttons for any unavailable source will not light up or function.**

Input selection settings

1/ In the «Menu» section, press the **[EXIT/MENU]** button and select Input in the menu by rotating the corresponding knob. Then press the **[SET]** button to enter the Input sub-menu.

2/ In the Input menu, select your input number then select the “Type” of input you have plugged into the **Di-VentiX II** by rotating the corresponding knob (see “The **Di-VentiX II** Rear Panel”). Then press the **[SET]** button to enter the type of input connected to the **Di-VentiX II**.

3/ Press the **[EXIT/MENU]** button to return to the main menu.

4/ Repeat steps #1 to #3 for every source connected to your **Di-VentiX II**.

Source output selection

Once your inputs have all been configured, the output settings of the **Di-VentiX II** must be set according to the machines plugged into your **Di-VentiX II** main and preview outputs (video projector, preview monitor...).

*** IMPORTANT * :** it is strongly recommended to set the output format of the **Di-VentiX II** to match the native resolution of the display devices connected to the **Di-VentiX II**. Please use some test pattern and especially the 'burst' test pattern to be sure to select the right native resolution.

Output selection settings

1/ In the «Menu» section, press the [EXIT/MENU] button and select *Output* in the menu by rotating the corresponding knob. Then press the [SET] button to enter the *Output* sub-menu.

2/ In the *Output* menu, select the format, frequency etc, to match the viewing hardware plugged into the **Di-VentiX II**, by rotating the corresponding knob (see “The **Di-VentiX II** Rear Panel”). Then press the [SET] button to enter each of the output parameters.

*** IMPORTANT * :** be sure to press the [SET] button to confirm every selected setting, the **Di-VentiX II**, will revert to its original settings if new choices are not confirmed.

3/ Press the [EXIT/MENU] button to return to the main menu.

*** NOTE * :** the 3 operating modes of the **Di-VentiX II** do not allow for different settings of the Preview and Main outputs. Both outputs can only be set to the same resolution.

The *Output* menu also allows you to generate test patterns. This is particularly handy when using of the **Di-VentiX II** in Embedded SEB (Soft Edge Blending) mode. The test patterns are available through the *Output* menu and let you quickly and reliably setup your projectors for use in Soft Edge configurations.

1/ In the «Menu» section, press the [EXIT/MENU] button and select *Output* in the menu by rotating the corresponding knob. Then press the [SET] button to enter the *Output* sub-menu.

2/ In the *Output* sub-menu, select the *Test Pattern* menu, then select the output (Main or Preview) on which you want the test pattern to appear by rotating the corresponding knob. Press the [SET] button to enter the *Test Pattern* menu. Choose the test pattern you wish to use in the *Test Pattern* menu by rotating the corresponding knob, and press [SET]. The chosen test pattern will immediately appear on the selected screen(s).

3/ Press the [EXIT/MENU] button twice to return to the main menu.

*** NOTE * :** be sure to turn the test pattern off to display your sources again.

The use of layers on the **Di-VentiX II** will help you to create stunning shows by fine tuning all the parameters of any of your sources to achieve what it is you want to do with your **Di-VentiX II**. Once your inputs have all been configured, you can affect them to any of the four available layers to position them on the screen, size them, adjust color and transparency, use or create presets to animate them (see also “*Working With Layer Functions*”, p34).

- 1/ In the «Layer» section, press the layer button of the layer you wish to work with (A-D). The button will start blinking. On the preview screen, the layer will appear as a blinking color rectangle, and the selected layer letter will be indicated in the layer rectangle. Layer parameters will appear on your menu screen once a source has been selected.
- 2/ In the «Input/Frame» section, press the [SOURCE] button (#1 to #8) of the source you wish to affect to the selected layer. The [SOURCE] button will start blinking. On the preview screen, the source will appear in the layer rectangle, and A01 will be indicated in the layer rectangle (where A is the layer, and 01 is the source affected to that layer).
- 3/ Press the layer button, then rotate the corresponding knob to access desired layer attributes (size, position, zoom, border, transparency...) and press the corresponding [SET] button in the *Layer* sub-menu to enter and parameter layer attributes.
- 4/ By pressing the [INPUT/FRAME] button you have affected to the current layer a second time, the *Image* sub-menu appears on your menu VFD screen. Rotate the corresponding knob to access the desired source attributes (aspect in/out, color, centering, blanking adjust...) and press the corresponding [SET] button in the *Image* sub-menu to enter and parameter source attributes. If you have any aspect ratio problem, please refer to the chapter ‘D - Di-VentiX II aspect ratio’ in the appendix section.
- 5/ Press the [TAKE] button to view the results on the main screen.

Working with Layer functions

Once source and layer attributes have been set, you can start working with layer functions. Layer functions allow you to fine tune and stylize individual layers by adding effects and programming movement, transitions, opening and closing effects. In the following example, we shall see how to create a layer opening effect.

- 1/ In the «Layer» section, press the layer button of the layer you wish to work with (A-D). The layer button will start blinking. Layer parameters will appear on your VFD menu screen, and the color layer rectangle will blink on your preview screen. Select the *Opening effect* function by rotating the corresponding knob, then press the corresponding [SET] button.
- 2/ In the *Opening* sub-menu, select *Type* by rotating the corresponding knob, then pressing the corresponding [SET] button. Select *Slide From L* for example (the layer will slide in from the left of your screen to it's set position), and press the [SET] button. Then, select *Duration* and press the [SET] button again. By rotating the corresponding knob, choose an opening effect time, and press the [SET] button again.
- 3/ Press the [EXIT/MENU] button twice to exit the *Layer* menu, then press the [TAKE] button to watch your effect on the main screen.

Working with PIPs

PIPs (Picture In Picture) on the **Di-VentiX II** are in fact layers, and therefore work just like layers do. Typically, the first available layer (Layer A), will be used as your background in most event setups, and by default, matches your main output resolution. The next available layer (layer B) can then be used as a PIP, with sources such as a computer presentation or a camera preview for example.

PIP configuration

- 1/ In the «Layer» section, press the layer button of the layer you wish to turn into a PIP (A-D). The button will start blinking. On the preview screen, the layer will appear as a blinking color rectangle, and the selected layer letter will be indicated in the layer rectangle. Layer parameters will appear on your menu screen once a source has been affected to that layer.
- 2/ In the «Input/Frame» section, press the [SOURCE] button (#1 to #8) of the source you wish to affect to the selected layer. The [SOURCE] button will start blinking. On your preview screen, the source will appear in the layer rectangle, and B02 will be indicated in the layer rectangle (where B is the layer, and 02 is the source affected to that layer).
- 3/ Press the [LAYER] button, then rotate the corresponding knob to access desired layer attributes (size, position, zoom, border, transparency...) and press the corresponding [SET] button in the «Layer» sub-menu to enter and parameter layer attributes.
- 4/ By pressing the [INPUT/FRAME] button you have affected to the current layer a second time, the «Image» sub-menu appears on your menu VFD screen. Rotate the corresponding knob to access the desired source attributes (aspect in/out, color, centering, blanking adjust...) and press the corresponding [SET] button in the «Image» sub-menu to enter and parameter source attributes.
- 5/ Press the [TAKE] button to view the results on your main screen.

Working with Frames

It is possible to store up to 8 frames in the **Di-VentiX II** non volatile memory. Frames are mainly used as backgrounds in a typical show or event setup, and can be recorded from any of the 8 **Di-VentiX II** sources and called back at the press of a single button.

*** NOTE * : Frames may be used only one at a time and cannot be placed in a layer.**

Memorizing Frames

- 1/ In the Layer section, select the layer you wish to use.
- 2/ In the [INPUT/FRAME] section, press the [SOURCE] button (#1 to #8) of the source you wish to record as a frame. The [SOURCE] button will start blinking. Then press the [TAKE] button to display that source on the main display.
- 3/ Select «Logo/Frame» from the menu by rotating the corresponding knob, then pressing the corresponding [SET] button.

4/ Select *Record Frames* from the *Logo/Frames* menu by rotating the corresponding knob, then pressing the corresponding [SET] button. A white rectangle will appear on your main display, indicating the frame which will be captured. Select an empty frame memory (empty frames are indicated in the sub-menu) to store the frame into. Press the corresponding [SET] button.

5/ Select Yes with the corresponding knob when the LCD screen asks for frame record confirmation, then press the corresponding [SET] button. The **Di-VentiX II** will display a progress status bar on the VFD screen. Your frame is stored when the menu reappears on the VFD screen.

6/ Press the [BKGND/FRAME] button, select a frame number (#1 to #8), your frame will appear on your Preview screen, then press the [TAKE] button. Your background frame will appear on your Main screen.

*** NOTE * : Make sure layer A is off (black), cropped or resized, as it will otherwise hide your frame.**

Masking Frame

The Mask Frame layer will add a 'masking' effect to your picture as the shutter function on old cinema projectors. You can setup any shape for your mask. First capture your frame then proceed as follows:

CAPTURING A MASK FRAME:

- 1/ Select the Record Masks option from the Logo / Frame menu.
- 2/ Set the Luma Key and Cut Out Color values as required.
- 3/ Select the Store / Erase option to record your mask frame.
- 4/ Press the [MASK/FRAME] button, select the mask frame number '1', then press the [TAKE] button to apply your mask to your main screen.

ADDING A MASK FRAME TO YOUR PRESET:

Once a mask is stored, you can add it to your preset by hitting the button [MASK/FRAME] then button '1' on the preset. When you press the button [MASK/FRAME], if the buttons '1' on Preview and Main presets stays dark, it means that your Mask/Frame has not been stored correctly.

Mask Frame Layer

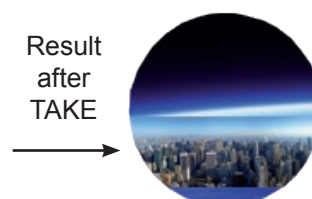


Raw Output Layer A



Layer B

Result after TAKE



Working with Logos

It is possible to store up to 8 logos in the **Di-VentiX II** non volatile memory. Logos work in much the same way as frames, and can be recorded from any of the 8 **Di-VentiX II** sources. Logos have many more attributes than frames. They can be sized, positioned, but also keyed via a variety of keying tools such as luma or chroma key.

Memorizing logos

- 1/ In the “Layer” section, select the layer you wish to use.
- 2/ In the «Input/Frame» section, press the [SOURCE] button (#1 to #8) of the source you wish to record as a logo. The [SOURCE] button will start blinking.
- 3/ Select the «Logo/Frame» menu by scrolling through the menu with the selection knob, then pressing the corresponding [SET] button.
- 4/ Select «Record logos» in the «Logo/Frame» menu by rotating the corresponding knob, then pressing the corresponding [SET] button. A small white rectangle will appear on your main display, indicating the logo that will be captured.
- 5/ Adjust logo size, position, and fine tune key attributes by rotating the corresponding knob and pressing the corresponding [SET] button to memorize logo settings.
- 6/ Select an empty logo memory (empty logos are indicated in the sub-menu) to store the logo into. Press the corresponding [SET] button, select «Yes» with the corresponding knob when the VFD screen asks for logo record confirmation, then press the corresponding [SET] button. The **Di-VentiX II** will display a progress status bar on the LCD screen.
- 7/ In the «Layer» section, press the [LOGO] button, and select logo number (#1 to #8) you wish to use. Your logo will appear on your preview screen above any existing layer on screen.
- 8/ Press the [TAKE] button. Your logo will appear on the main screen.

Mixer Functions

The **Di-VentiX II** offers, in Multi Layer Mixer mode, and in Embedded Soft Edge mode, a variety of mixer type transitions, including slides, fades, and cuts. The transitions, transition times and fading/sliding effects should all be setup through the **Di-VentiX II** menu.

Layer transitions & effects

The **Di-VentiX II** offers a wide variety of transitions between the scenes you create for your shows and events. It allows for live recall of 4 user presets, each of which you can edit at any given time, as well as a large number of layout templates to help you set up quickly and easily.

Whether catering for complex event setups, or putting together intricate shows, your **Di-VentiX II** will deliver everything you could expect from a dedicated mixer along with its switcher and scaler capabilities and performances.

- 1/ In the «Layer» section, press the [LAYER A] button. The button will start blinking. On your Preview screen, layer A will appear as a blinking color rectangle. The parameters of the layer will automatically appear on your **Di-VentiX II** VFD menu screen.
- 2/ In the «Layer» menu, select the position, size, zoom, border and transparency required.
- 3/ Select Opening Effect to create various transitions, for example: Select Type from the sub-menu then Slide from L, press the [SET] button to save your effect. Next select Duration from the sub-menu and enter the time required for your effect. Press the [SET] button to confirm the duration.
- 4/ Repeat the above for your closing effect from the Closing effect menu option.

Using Presets

The **Di-VentiX II** offers a large collection of presets designed to cater for most typical event setups. Stored in the **Di-VentiX II** memory, these presets may be called at any time by following the intuitive Presets menu indications.

- 1/ To use a factory preset, go to the *Preset* menu by pressing the [EXIT/MENU] button, and select *Preset* by rotating the corresponding knob. Then press the [SET] button to enter the *Preset* sub-menu. Choose the *Preset Layout* menu by scrolling with the corresponding knob, and press the [SET] button to access the sub-menu.
- 2/ Choose one of the many available layouts by scrolling with the corresponding knob, and press «Set» to select it. Confirm your choice, and exit by pressing the [EXIT/MENU] button. Press the [TAKE] button. Your preset configuration will be displayed on the main screen.

Creating Presets

The **Di-VentiX II** allows the creation of user defined presets very easily. Any setup you have configured on screen, can be stored into one of the 4 available user presets.

1/ After having configured layers, layer transitions, PIPs... on your screen (see “Working With the **Di-VentiX II**”), go to the *Preset* menu by pressing the [EXIT/MENU] button, and select *Preset* by rotating the corresponding knob. Then press the [SET] button to enter the *Preset* sub-menu. Choose *Preset Copy* by scrolling with the corresponding knob, and press the [SET] button to access the sub-menu.

2/ In the sub-menu, choose *Save From Main* or *Save From Preview* to determine which screen you want to memorize the preset from, then set the preset memory (#1 to #4) you wish to use as your “User Preset” (by default, the **Di-VentiX III** will choose the next available preset in the **Di-VentiX II** memory. By pressing the [SET] button, the **Di-VentiX II** will ask you to confirm. Select Yes, your screen is memorized as a preset.

Preset Configuration

The **Di-VentiX II** presets, whether user defined or factory set, are all to be configured according to the steps shown in the “Working with the **Di-VentiX II**” chapter of this manual.

When choosing to memorize a user preset from your screen, sources, layers, layer sizes and transitions, PIPs and so forth, are configured by the user, then memorized into the non volatile **Di-VentiX II** memory.

When using factory presets (Preset Layouts), you must configure inputs to your preset after having chosen the appropriate preset layout from the list.

Working with Presets

The four **Di-VentiX II** user presets can be called back at any stage during your show or event.

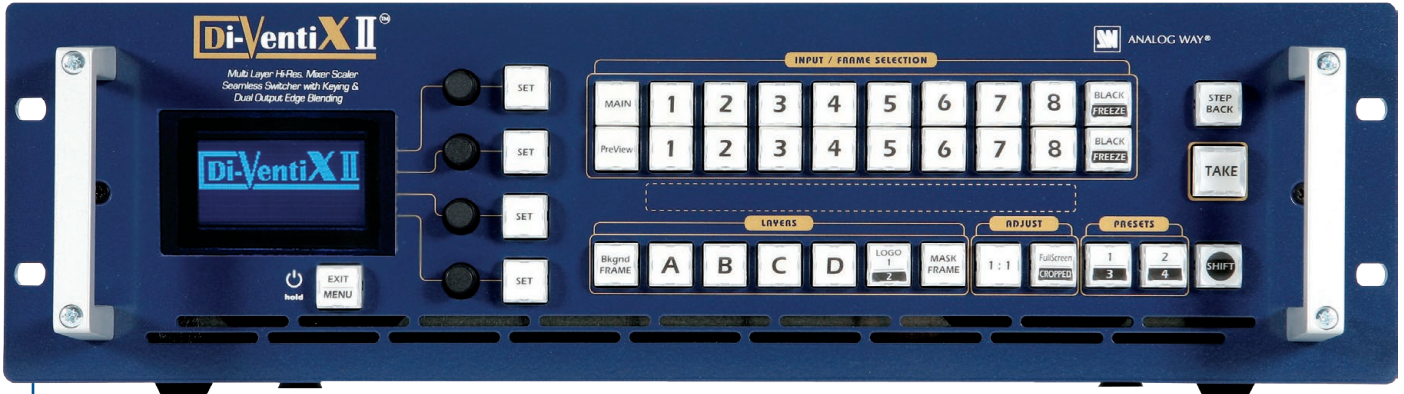
1/ Press the [USER PRESET] button you wish to use. To use memories #3 and #4, press the [SHIFT] button to activate them. The preset will be displayed on your preview screen.

2/ Once you have selected your preset, simply press the [TAKE] button to view the result on your main screen.

Using the Control Menu

In the Control Menu, you will find all setup which cannot be classified in the image, layer, input or output menu.

- Version:** it indicates the actual software version of the Di-Ventix II.
it can help if you need to contact our technical support team.
- RS232/LAN:** choose your connection type when controlling by a R.C.S or an external program.
- LAN SETUP:** in this menu, you can adjust every settings related in the network
- Auto Take:** allow the unit to take by itself as soon as it detects a change (source, layer, position...)
- Preset Toggle:** enable this feature to put you last program on your preview after a Take
- Auto Lock:** enable/disable the source selection when no-synch are detected
- Zoom Finder:** enable a powerful help when using the input zoom. A white square will help you to find the exact zoom area
- Key Locking:** enable to lock a part or all your front panel
- LPIO/Tally:** use this feature if you want to send a signal to other device as cameras
- LCD Brightness:** adjust the LCD Brightness
- Key Brightness:** adjust the Key Brightness
- Erase Memories:** erase all image settings: blankings, colors...
- Erase Logos/Frames:** select your logos/frames to erase
- Default values:** put every internal values to factory default (except Ethernet values).



VIDEO OUT CARD (*CONF)
BOOTING FAILURE

BOOT FAILURE -4
INPUT2 Card
did NOT boot

MIXER MODE

[DEVICE SYNCHRO]

Pos: 2 Count: 3
Slave
Communication OK

[MAIN]

Format : 1920 x 1080
Rate : 60.00Hz
Lock : internal

--[HDCP]--

Due to HDCP content
non-HDCP screens
cannot display
protected sources

--[MAIN]----[PREVIEW]--

D: input1 black
C: black input3
B: black input5
A: input2 black
BF: input1

MATRIX MODE

[OUTPUT1]

Format : 1920 x 1080
Rate : 60.00Hz
Lock : internal

--[MAIN]----[PREVIEW]--

D: input1 black
C: black input3
B: black input5
A: input2 black
BF: input1

NOTES:

Displayed in menu

[-- | --] Paragraphe

(*MOD1) displayed in Mixer Mode
(*MOD2) displayed in Embedded Mode
(*MOD3) displayed in Matrix Mode
(*MOD4) displayed in multi-machines Mixer Mode

(*INP1) displayed when Plug is not SDI
(*INP2) displayed when video type is: Video Analog
(*INP3) displayed when Plug is: Analog
(*INP4) displayed when type is: DVI-D
(*INP5) displayed when type is: SDI
(*INP6) displayed for 1-4 inputs
(*INP7) display list of formats compatible with detected input
(*INP8) displayed if Input Card is HDCP
 Enable/Disable compliant (devices 8XX+)

(*FMT1) depending on output format
(*FMT2) interlaced output format only
(*FMT3) framelock mode only

(*OPT1) depending on output format
(*OPT2) interlaced output format only

(*MISC1) displayed when an input is selected
(*MISC2) displayed on HDCP output capable

(*IMA1) Analog Computer Input
(*IMA2) Analog Input
(*IMA3) Video Input
(*IMA4) EDTV/HDTV input
(*IMA5) RGB or YUV or YC or CV
(*IMA6) NTSC input
(*IMA7) Interlaced 50Hz
(*IMA8) Interlaced 60Hz
(*IMA9) SDTV input
(*IMA10) Interlaced

(*TALL1) in Trigger on INPUTS mode
(*TALL2) in Trigger on PLUGS mode
(*TALL3) in Trigger on SOURCES mode
(*TALL4) only in multi-machines mode

(*LC1) selected Preset: Main or Preview
(*LC2) Layer A... Layer D
(*LC3) copy direction

(*RKD1) displayed on RKD8044

(*LE1) displayed on DVX LE
(*LE2) not available on DVX LE

(*KEY1) not displayed on Keying Layer
(*KEY2) displayed on Keying Layer
(*KEY3) depending on chroma or luma Keying Type

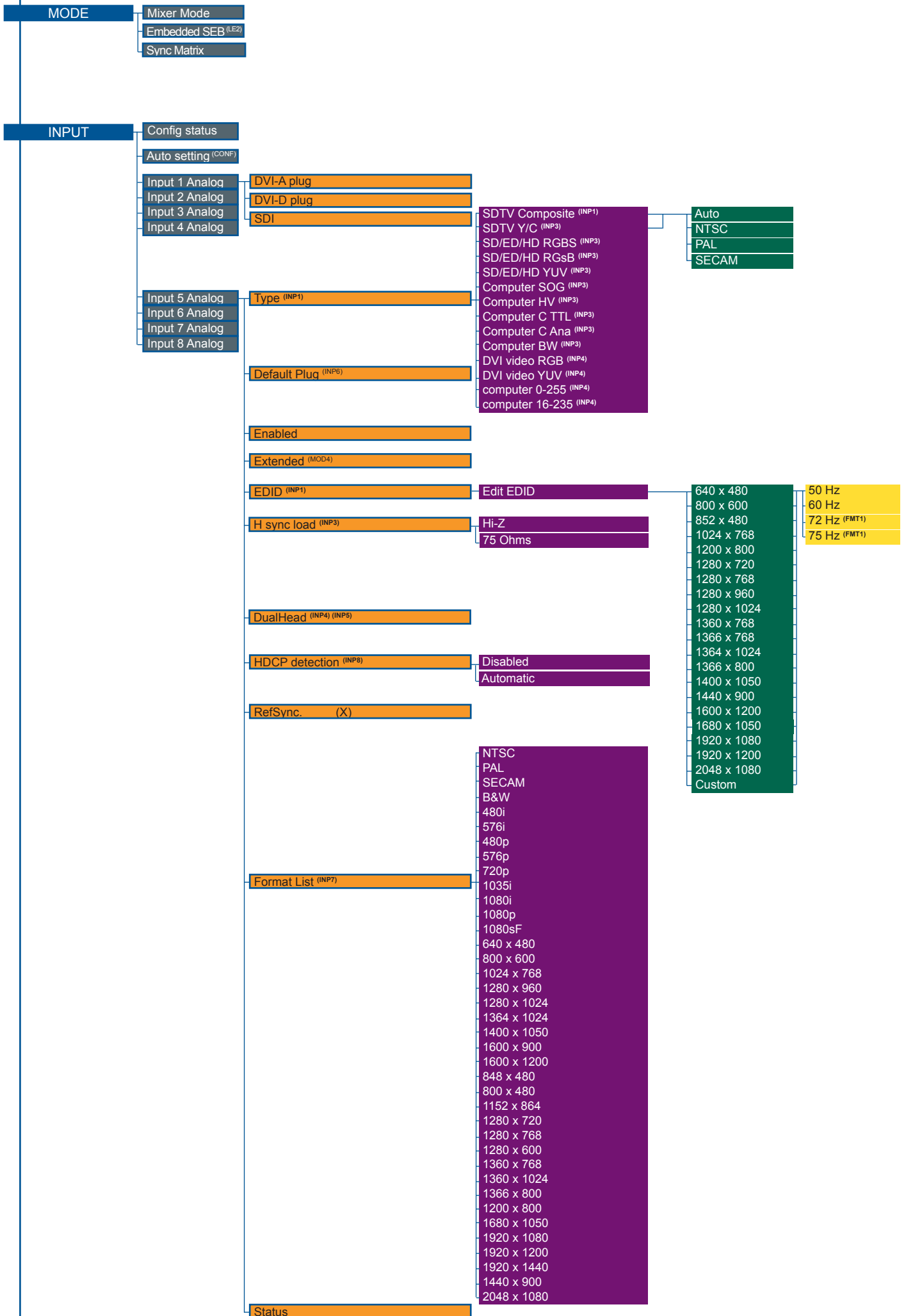
(*FRM1) if mask/logo/frame not empty

(*SE1) displayed in Horizontal SoftEdge
(*SE2) displayed in Vertical SoftEdge

(*CONF1) confirmation requested

(*LAY1) not in Edge
(*LAY2) not in Smooth
(*LAY3) not in Shadow
(*LAY4) not in SmoothShadow
(*LAY5) displayed if Style is different from None
(*LAY6) Displayed if Type is different from Cut

(*LAN1) displayed in UDP



OUTPUT (MOD1) (MOD2)
(MOD4)

OUTPUT 1 (MOD3)

OUTPUT 2 (MOD3)

Output status

Output format

HDTV 720p
HDTV 1035i
HDTV 1080i
HDTV 1080p
HDTV 1080sF
640x480 4/3
800x600 4/3
848x480 16/9
1024x768 4/3
1280x720 16/9
1280x720 HD
1280x768 15/9
1280x800 16/10
1280x1024 5/4
1360x768 16/9
1366x768 16/9
1366x800 15/9
1400x1050 4/3
1440x900 16/10
1600x1200 4/3
1680x1050 16/10
1920x1080 16/9
1920x1080 HD
1920x1080 B
1920x1080 C
1920x1200 16/10
2048x1080 19/10

Output rate

23.97 Hz (FMT1)
24 Hz (FMT1)
25 Hz (FMT1)
29.97 Hz (FMT1)
30 Hz (FMT1)
50 Hz (FMT1)
59.94 Hz (FMT1)
60 Hz (FMT1)
72 Hz (FMT1)
75 Hz (FMT1)
Frame lock from

Internal

DVI 1
Analog 1
SDI 1 (LE2)
DVI 2 (LE2)
Analog 2 (LE2)
SDI 2
DVI 3
Analog 3
SDI 3 (LE2)
DVI 4 (LE2)
Analog 4 (LE2)
SDI 4
GLK SD (LE2)
GLK HD (LE2)

Ref rate factor (FMT3)

Ref rate factor / 2
Ref rate factor x 1
Ref rate factor x 2
Ref rate factor x 3

Gamma

(FMT2) (MOD1) (MOD3)

Main (MOD1) (MOD2)
Preview (MOD1) (MOD2)
Output 1 (MOD3)
Output 2 (MOD3)

0.5 to 4.0

Gamma (MOD2)

Flicker filter

(FMT2) (MOD1) (MOD3)

Main (MOD1) (MOD2)
Preview (MOD1) (MOD2)
Output 1 (MOD3)
Output 2 (MOD3)

0 1 2 3 4 5 6 7

Flicker filter (FMT2)

Analog Type

(MOD1) (MOD3)

Main (MOD1) (MOD2)
Preview (MOD1) (MOD2)
Output 1 (MOD3)
Output 2 (MOD3)

RGBs

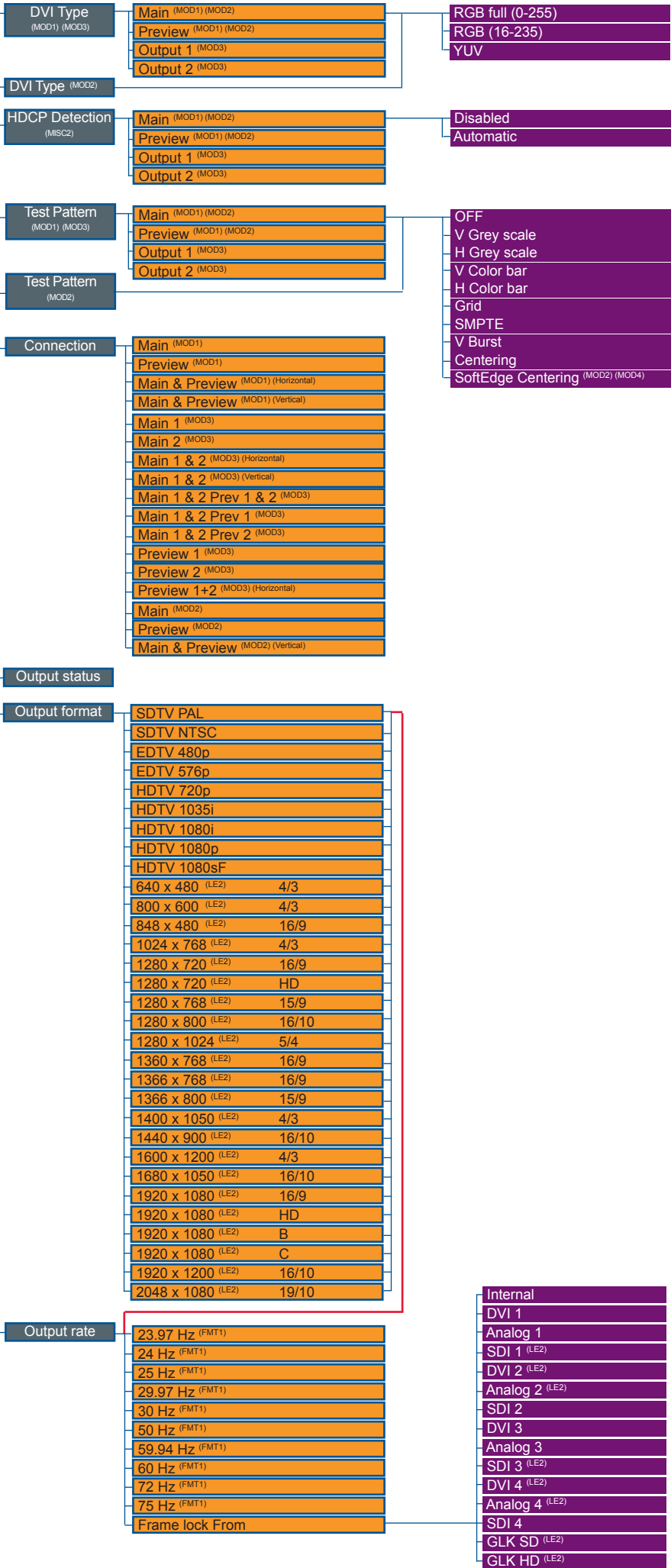
RGB (SOG)

RGB H&V

YUV

Analog Type (MOD2)

VIDEO OUT (OPT1)



Ref rate factor (FMT3)	Ref rate factor / 2	
	Ref rate factor x 1	
	Ref rate factor x 2	
	Ref rate factor x 3	
Gamma (FMT2)	0.5 to 4.0	
Flicker Filter (FMT2)	0 1 2 3 4 5 6 7	
Analog Type	RGBs	
	RGsB (SOG)	
	RGB H&V	
	YUV	
DVI Type	RGB full (0-255)	
	RGB lim (16-235)	
	YUV	
HDCP Detection (MISC2)	Disabled	
	Automatic	
BKG Color	One window	BKG COLOR
	Multi windows	
	R	[--]
	G	[--]
	B	[--]
Test Pattern	OFF	
	V Grey scale	
	H Grey scale	
	V Color bar	
	H Color bar	
	Grid	
	SMPTE	
	V Burst	
	Centering	
	SE Centering (MOD2) (MOD4)	

PRESET

Preset Copy	Save from (CONF)	Main
	Save to (CONF)	Preview
Preset Layout	4 PIP Inside (LE2)	Memory 1
	4 PIP Outside (LE2)	Memory 2
	A Full + BCD (LE2)	Memory 3 (LE2)
	3 PIP 1L + 2R (LE2)	Memory 4 (LE2)
	3 PIP 1R + 2L (LE2)	
	3 PIP 1B + 2T (LE2)	
	3 PIP 1B + 2T Sp. (LE2)	
	3 PIP 1T + 2B (LE2)	
	2 PIP 1R + 1L	
	2 PIP 1R + 1L Sp.	
	2 PIP 1B + 1T	
	2 PIP 1B + 1T Sp.	
	2 PIP Title Top (LE2)	
	2 PIP Title Bot (LE2)	
Layer Copy (LE2)	Preset [Main / Preview] (LC1)	
	[Layer A / B / C / D] (LC2)	
	^ / v (LC3)	
	[Layer A / B / C / D] (LC2)	

IMAGE (MISC1)

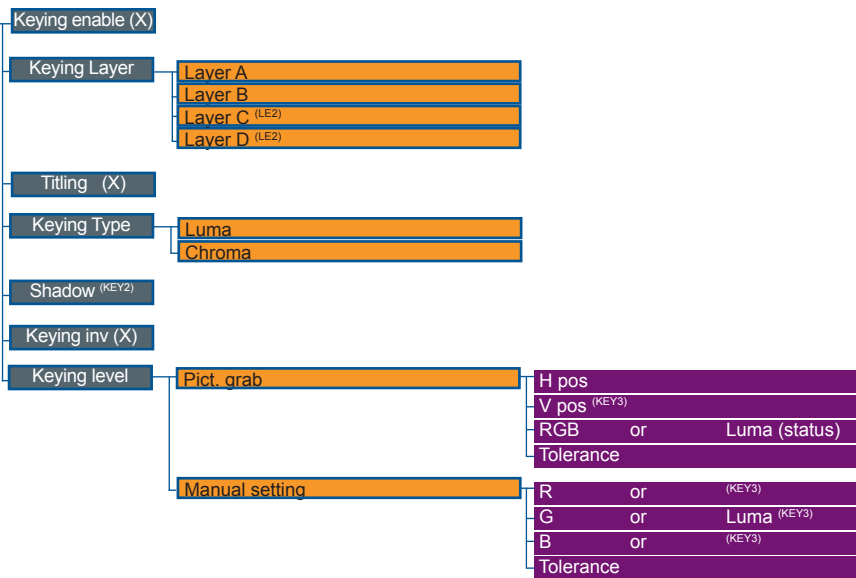
Auto Centering (IMA1) (CONF)	
Blanking Adjust (IMA2)	H position [-- --]
	V position [-- --]
	H size [-- --]
	V size... [-- --]
Input Zoom	H Start [-- --]
	H End [-- --]
	V Start [-- --]
	V End [-- --]
Optimize (IMA1)	Phase [-- --]
	H Total [-- --]
Under/Over (IMA3)	Underscan
	Overscan
Aspect IN	Native
	LetterBox 1_78
	LetterBox 2_35
	Pillar Box
	Anamorphic

Aspect OUT	1-1 Centered Full screen Cropped	
Force 4:3 (IMA9) (X)		
Colorimetry	Brightness [-- --] Contrast [-- --] Color [-- --] Hue (IMA6) [-- --]	
Advanced (R2)	Component Level (R2) Motion Correct (R11)	Red Level (R5) Green Level (R5) Blue Level (R5)
2:2 Pulldown (IMA10)	Detection OFF Detection AUTO	
3:2 Pulldown (IMA10)	Detection OFF Detection AUTO	
Reset Default	Erase Blankings Erase Colors Erase Advanced Erase All...	

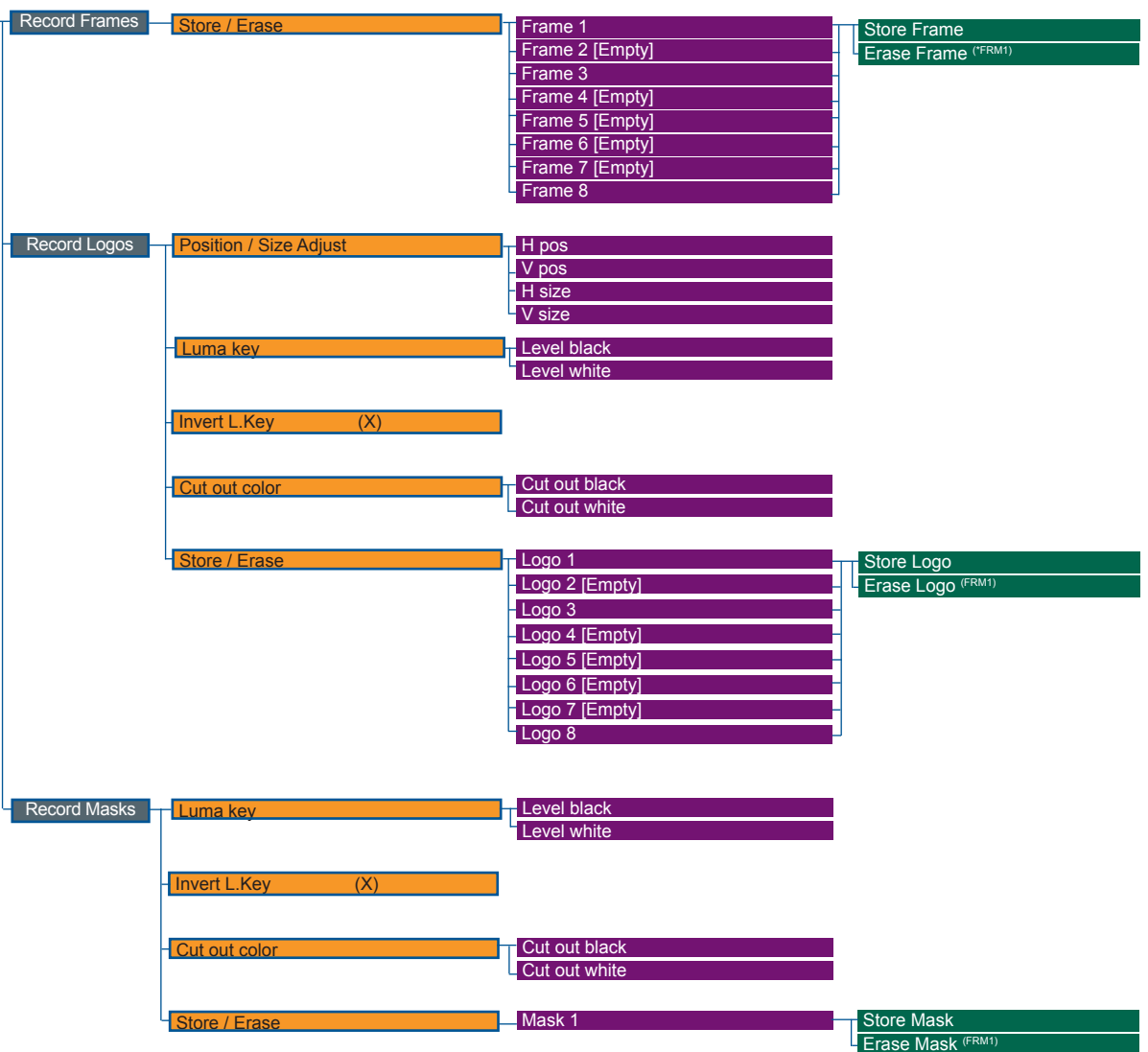
LAYER (MISC1)

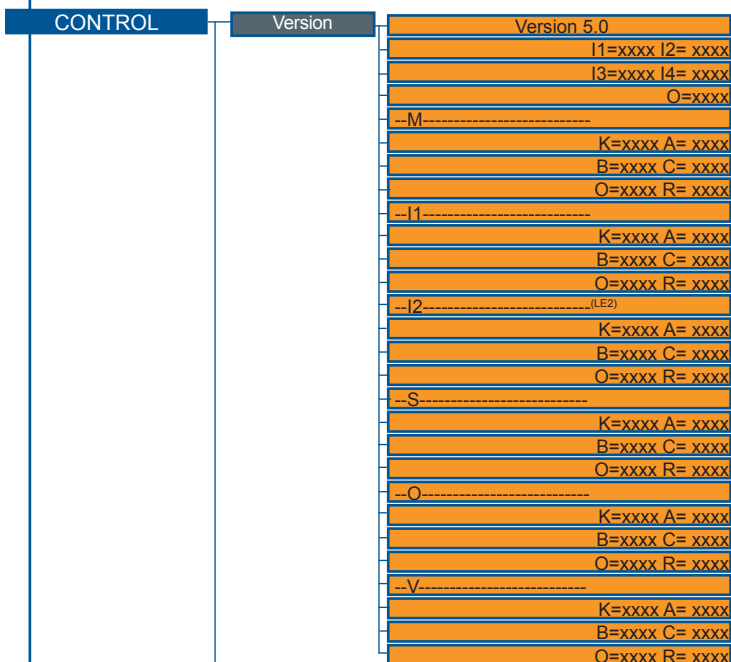
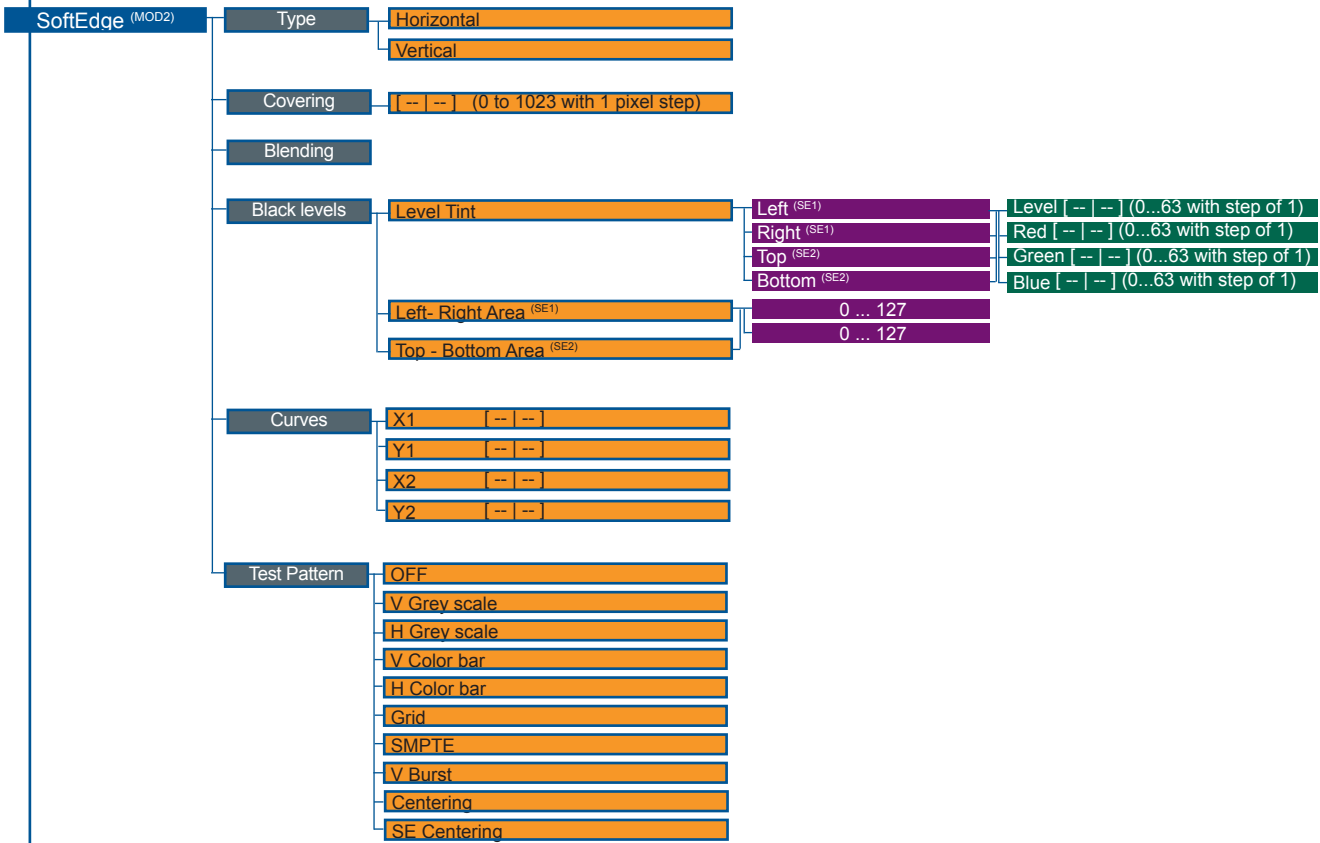
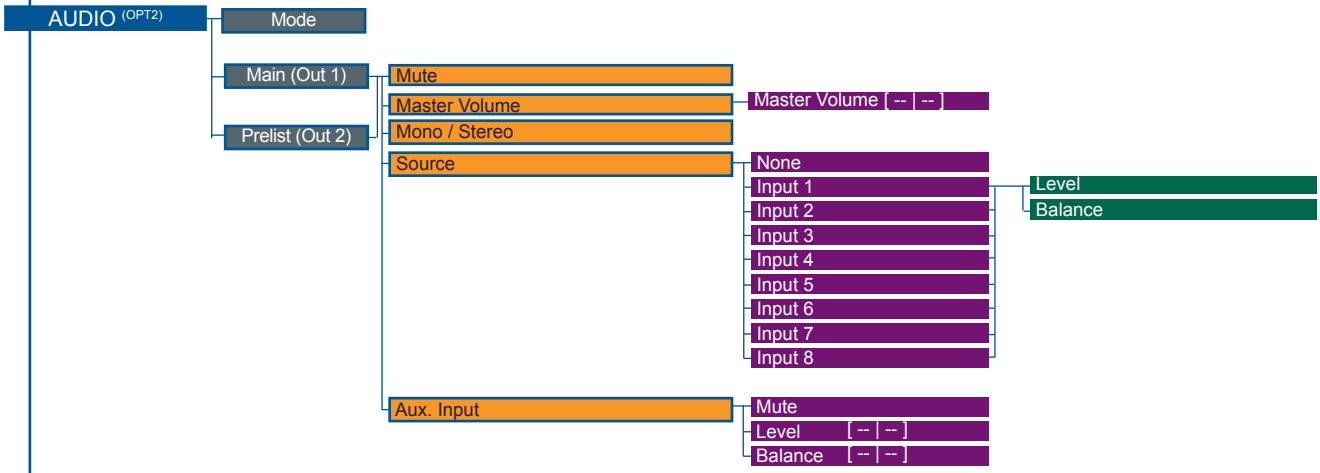
Layer adjust	H Pos [-- --] V Pos [-- --] HV Pos [-- --] HV Size [-- --] H Size [-- --] V Size [-- --]	
Layer zoom	H Pos [-- --] V Pos [-- --] H Size [-- --] V Size [-- --]	
Transparency (KEY1)	Transparency [-- --]	
Border	Style Adjust (LAY5)	None Edge Smooth Shadow Smooth Edge H Size V Size Transparency Color (LAY2)
Opening effect	Type Duration (LAY6)	Cut Fade Slide From L Slide From R Slide From B Slide From T Duration [-- --]
Closing effect	Type Duration (LAY6)	Cut Fade Slide From L Slide From R Slide From B Slide From T Duration [-- --]
Keying/Titling		
Layer Layout	Keep Size (X) FullScreen Top Left In Top Left Out Top Right In Top Right Out Bott. Left In Bott. Left Out Bott. Right In Bott. Right Out	
Layer Copy (LE2)	Preset [Main / Preview] (LC1) [Layer A / B / C / D] (LC2) ^ / v (LC3) [Layer A / B / C / D] (LC2)	

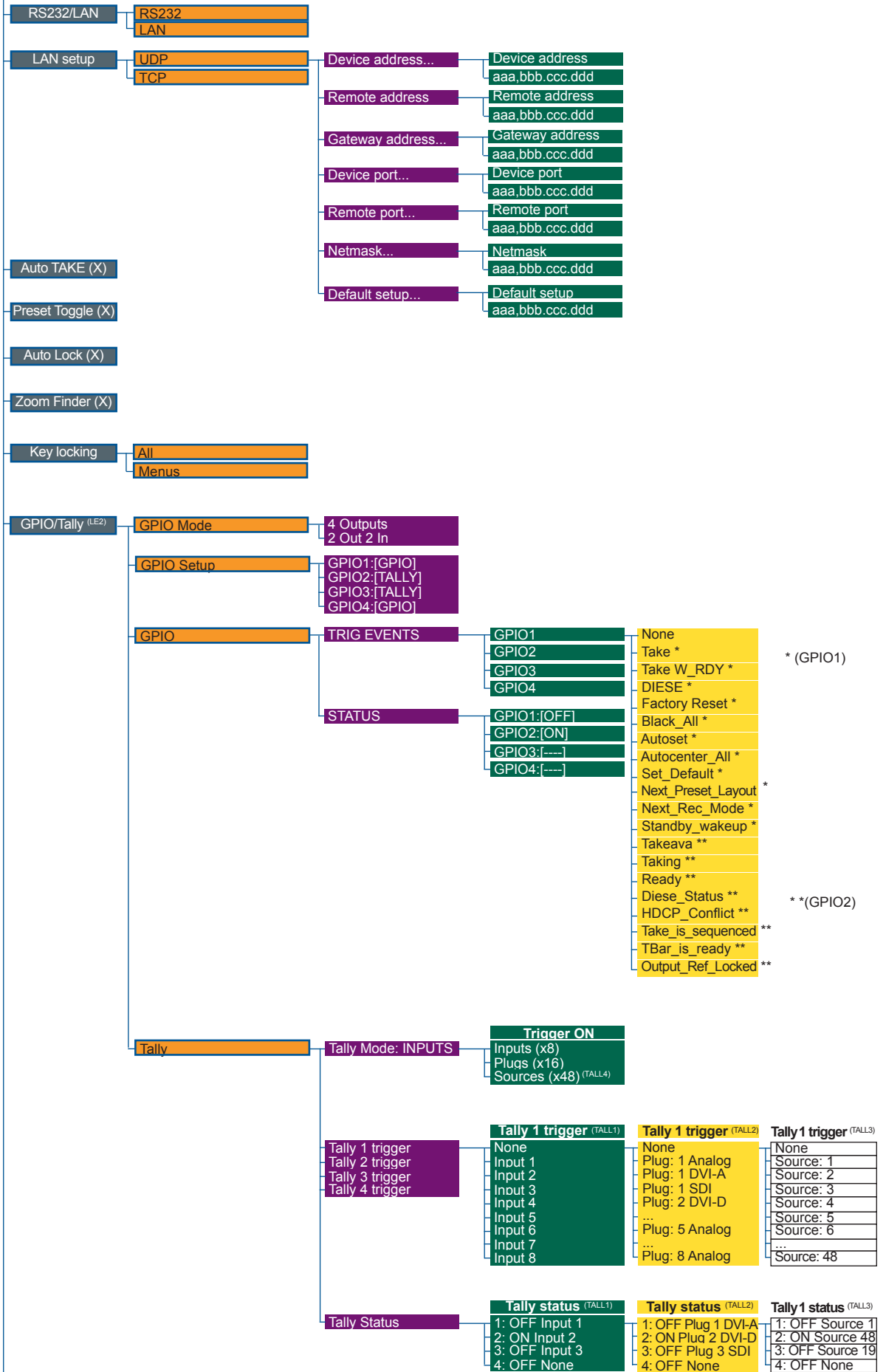
KEYING/TITLING

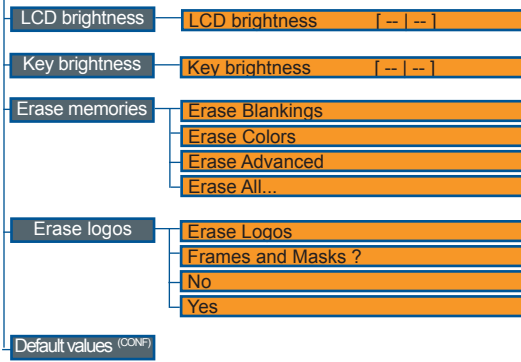


LOGOS/FRAMES

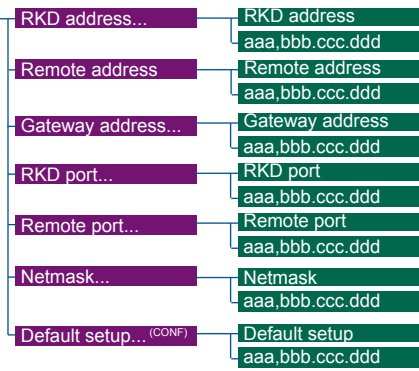
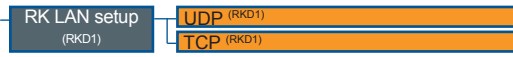
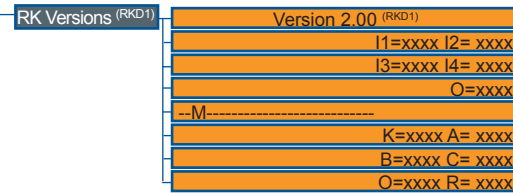








CONSOLE (RKD1)



Default values (RKD1)

5-1. THE DI-VENTIX II RCS

RCS presentation

The RCS is a powerful tool to exploit all the features of your **Di-VentiX II** at a distance. By LAN or RS-232, you will be able to do exactly the same manipulations as is possible from the front panel. User-Friendly and easy-to-use, you will very quickly be able to manipulate the RCS tool.

How to use the RCS ?

Firstly make sure that your computer has a lan or RS232 connection. You can then download the application from our website, install it on your computer and follow the instructions below.

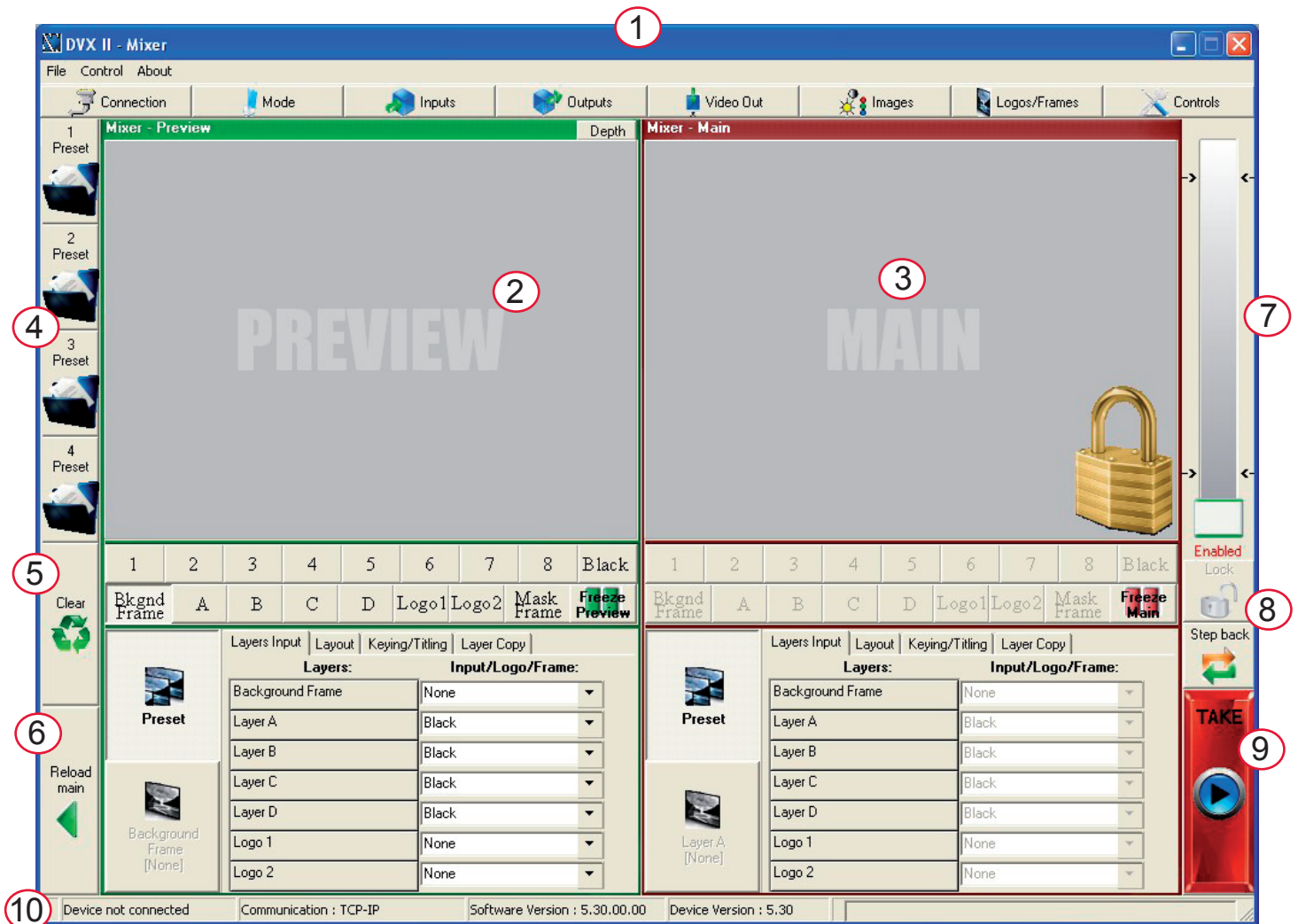
Software installation

1. Connect yourself to our www.analogway.com.
2. In the menu, select "Technical Support" menu, then click on Remote Control Software, select the name of your device and click on Download.
3. Click on Open with or Register the file, select the .exe file.
4. Follow the Windows installation instructions.

Software overview

Before you can use the RCS application you must first configure the type of connection you are going to use.

The RCS software for your **Di-VentiX II** is composed of several easily identified sections. The tabs menu (1) allows you to navigate through the equivalent of the **Di-VentiX II** front panel menu items (see also “*The Di-VentiX II menu*”). The green window of the RCS (2) represents your Preview window, and can be used to parameter sources, frames, layers and logos directly by clicking on the corresponding button, then navigating through the different available tabs. The red window of the RCS (3) represents your Main window, and can also be used much like the front panel of the **Di-VentiX II**. Create user presets directly in the RCS main window, by clicking on one of the four available Preset icons (4) and setting up your preset in the Preview window. Clear unwanted steps with the **[CLEAR]** button (5), reload a fresh copy of your screen via the **[RELOAD MAIN]** button (6), make smooth takes directly with your mouse or trackpad with the virtual T-bar (7). The **[TAKE]** button (9) will allow you to view any changes made to your preview screen on your main screen, Analog Way engineers have even implemented a **[STEPBACK]** button (8) to quickly return to your previous setup in case of a manipulation error. The status section (10) allows for easy monitoring of the connection status.

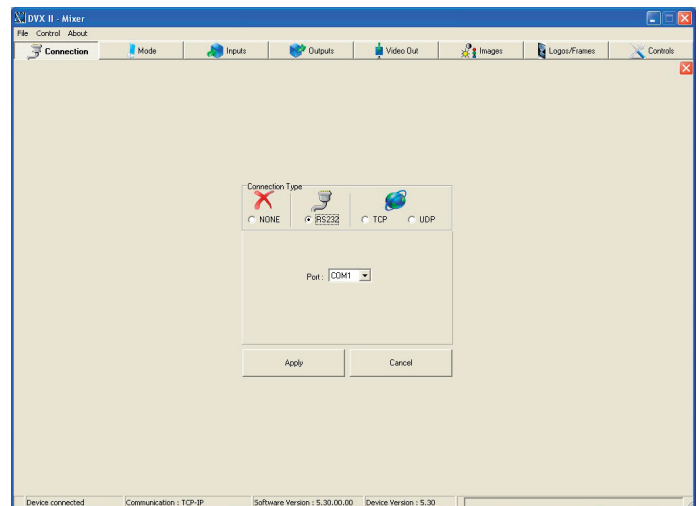


The RCS software for your **Di-VentiX II** can be viewed as the software version of the **Di-VentiX II** front panel menu section. It allows you to quickly access all of the **Di-VentiX II** functions via a single page interface, and easily edit your settings directly from your laptop or PC.

Before starting with the RCS software, you must establish a connection from your laptop to the **Di-VentiX II** you wish to run.

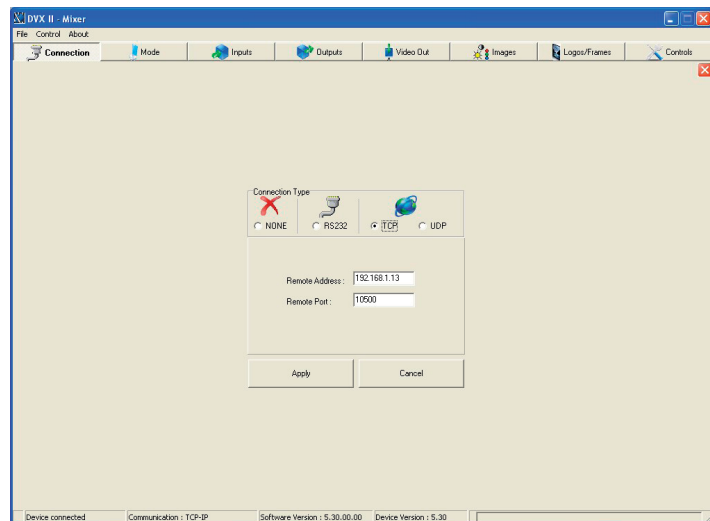
Serial connection

- 1/ Connect an RS232 cable between the **Di-VentiX II** and your PC, then power on your devices.
- 2/ Click on the RCS program file on your PC to run the software.
- 3/ Click on the “Connections” tab and select RS232 as the connexion type. In the drop-down menu, select the COM port number corresponding to the connected device (default is Port 1).
- 4/ Click apply, and wait for devices to synchronize. The RCS will display the following connexion message: “Device Connected”
- 5/ Click on the “Connections” tab to return to the main screen.



Ethernet connection

- 1/ Connect a crossed RJ45 cable between the **Di-VentiX II** and your PC, then power on your devices. Use a straight RJ45 cable if connecting through a network switcher.
- 2/ Click on the RCS program file on your PC to run the software.
- 3/ Click on the “Connections” tab and select LAN as the connexion type.
- 4/ In the “Remote Address” field, enter the IP address of the **Di-VentiX II** you wish to control (see also “*Working with the Di-VentiX II*”).
- 5/ In the “Remote Port” field, enter the remote port number of the **Di-VentiX II** you wish to control (see also “*Working with the Di-VentiX II*”).
- 6/ Click Apply, and wait for devices to synchronize. The RCS will display a connexion message.
- 7/ Click on the “Connections” tab to return to the main screen.

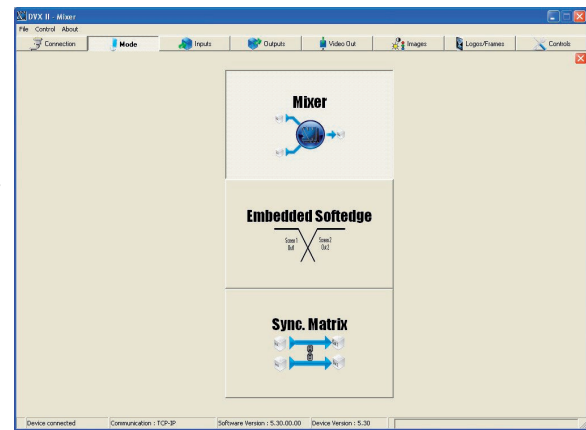


5-2. WORKING WITH THE RCS

Operating Mode

To choose the operating mode you want your **Di-VentiX II** to work in, simply click the “Mode” tab, then select the desired mode by clicking on one of the three mode buttons (Mixer, Embedded Softedge or Sync Matrix).

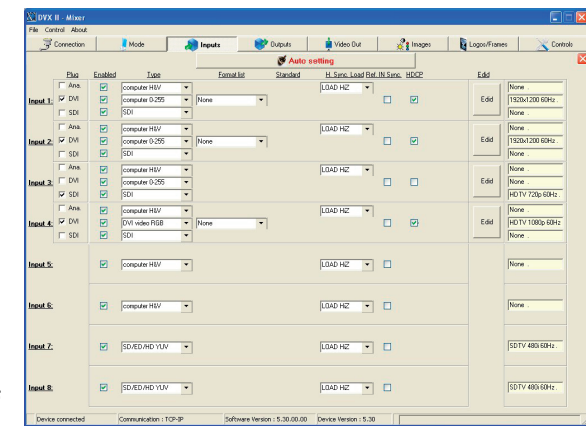
***NOTE *:** for further details on different modes, restrictions and settings, please refer to the “Working with the Di-VentiX II” section, the “Home Menu” section, and the “Soft Edge Blending” section.



Source input configuration

Once your **Di-VentiX II** is connected to your PC, the first step in properly configuring your machine is to individually select and parameter your inputs.

- 1/ Click on the “Inputs” tab of the RCS.
- 2/ In the Plug column, select the plug type by clicking the appropriate field.
- 3/ Activate the input in the Enabled column if it is not already.
- 4/ In the scroll-down menu of the Type column, select the signal type connected to that plug.
- 5/ Repeat steps 2 to 4 for all sources connected to the rear panel of your **Di-VentiX II**.
- 6/ Click on the “Inputs” tab to return to the main screen.

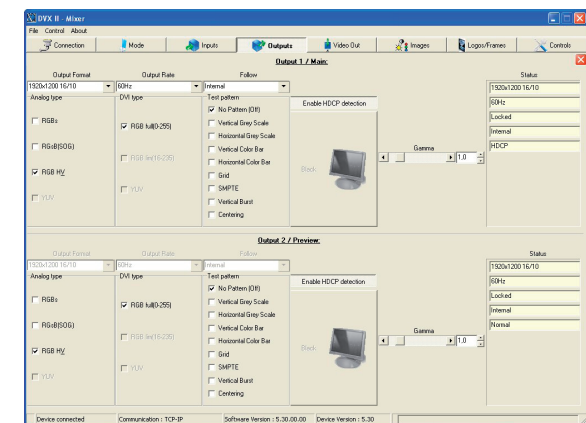


Source output configuration

- 1/ Click on the “Outputs” tab of the RCS.
- 2/ Select the type of plug which is connected to outputs 1 & 2 of your **Di-VentiX II** by clicking in the appropriate field in the Analog Type or DVI Type section for both Main and Preview outputs.
- 3/ Select the appropriate output format and output rate.
- 4/ Click on the “Outputs” tab to return to the main screen.

The «Output» menu also allows you to generate test patterns. This is particularly handy in the case of use of the **Di-VentiX II** in Embedded SEB (Soft Edge Blending) mode. The test patterns available through the «Output» menu let you quickly and reliably setup your projectors for use in soft edge configurations.

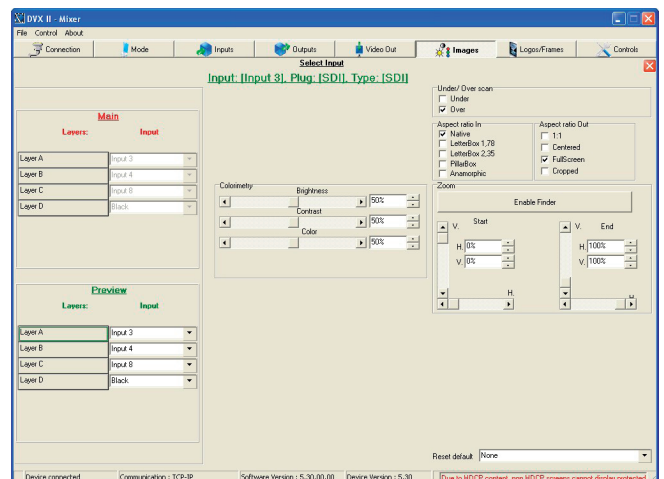
*** NOTE *:** be sure to turn the test pattern off to display your sources again.



Working with Layers

The use of layers on the **Di-VentiX II** will help you create stunning shows by fine tuning all the parameters of any of your sources to achieve what it is you want to do with your **Di-VentiX II**. Once your inputs have all been configured, you can affect them to any of the four available layers to position them on the screen, size them, adjust color and transparency, use or create presets to animate them (see also *Layer Functions...*).

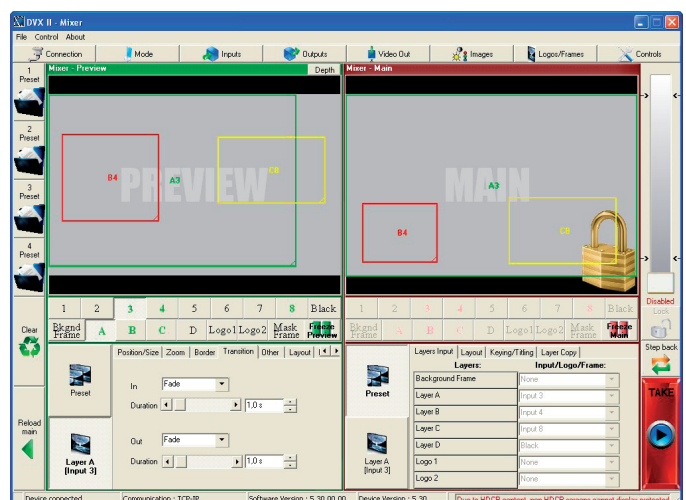
- 1/ Click on the “Image” tab of the RCS interface. The empty “Image” screen will appear on screen.
- 2/ By clicking on the drop-down menu in the Preview section, situated next to the layer you wish to use (in this case, layer A), you will access the image parameters of the source you select (#1 to #8). The input button lights up green. On the preview screen, the source will appear in the layer rectangle, and A01 will be indicated in the layer rectangle (where A is the layer, and 01 is the input affected to that layer).
- 3/ Click the “Images” tab to return to the main screen.
- 4/ In the main window edit the desired layer attributes (size, position, zoom, border, transparency...).



Working with layer functions

Once source and layer attributes have been set, you can start working with layer functions. Layer functions allow you to fine tune and stylize individual layers by adding effects and programming movement, transitions, opening and closing effects.

- 1/ In the “Preview” section of the RCS, click on the layer button of the layer you wish to work with (A-D). The color layer rectangle will blink on your preview screen. Click on the Preset button to navigate through layer attribute tabs (Layout, Keying/Titling, Opening...) to set the layer according to your wishes.
- 2/ Enter appropriate settings in each tab, then simply click the **[TAKE]** button to view results on screen.

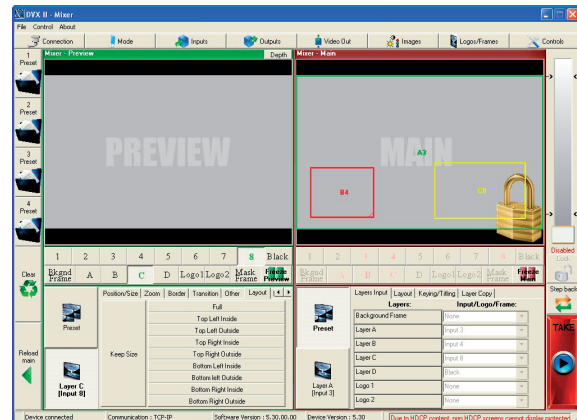
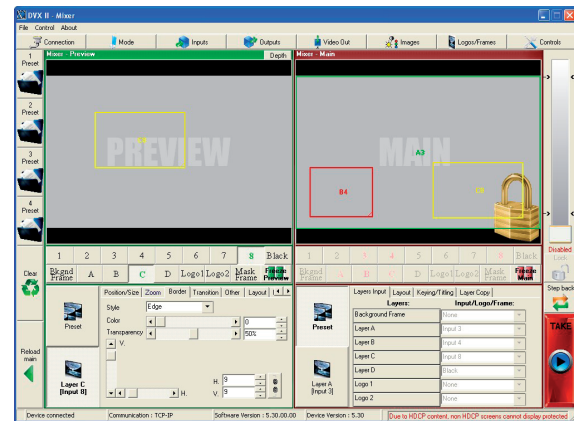


Working with PIPs

PIPs (Picture In Picture) on the **Di-VentiX II** are in fact layers, and therefore work just like layers do. Typically, the first available layer (Layer A), will be used as your background in most event setups, and by default, will match your main output resolution. The next available layer (Layer B) can then be used as a PIP, with sources such as a computer presentation or a camera preview for example.

PIP configuration

- 1/ By clicking on the drop-down menu in the Preview section, situated next to the layer you wish to use as a PIP, you will access the image parameters of the PIP source you select (#1 to #8). On the Preview screen, the source will appear in the layer rectangle, and A01 will be indicated in the layer rectangle (where A is the layer, and 01 is the source affected to that layer).
- 2/ Set the desired PIP attributes (size, position, zoom, border, transparency..).
- 3/ Click the “Images” tab to return to the main screen.

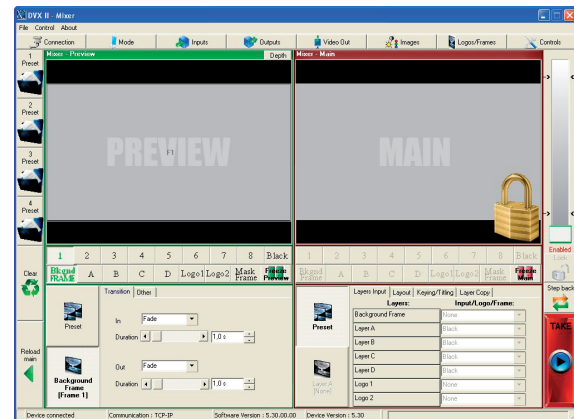


Working with Frames

*** NOTE *:** to memorize a frame, select an input, and take it to the Main screen. Once the frame is displayed on your Main output, it is then possible to store it to the **Di-VentiX II** non volatile memory.

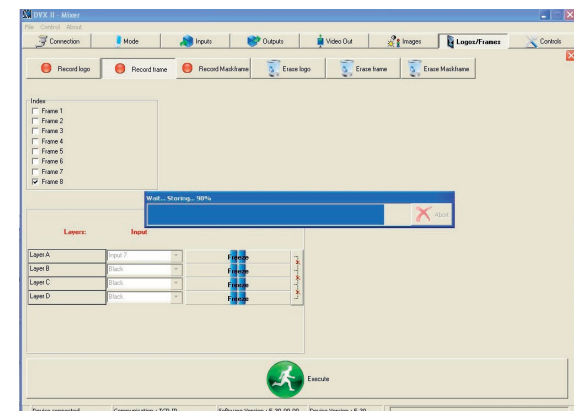
It is possible to store up to 8 frames in the **Di-VentiX II** non volatile memory. Frames are mainly used as backgrounds in a typical show or event setup, and can be recorded from any of the 8 **Di-VentiX II** sources and called back at the click of a single button.

*** NOTE *:** frames may be used only one at a time. A frame may not be affected to a layer.



Memorizing Frames

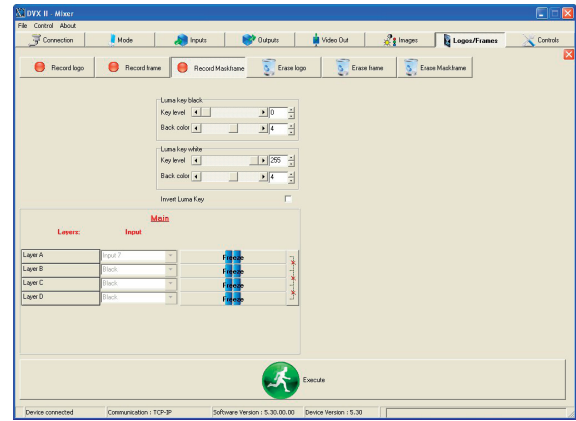
- 1/ Click on the “Logos/Frames” tab of the RCS interface. Then click the **[RECORD FRAME]** button.
- 2/ Click in the field next to the first free Frame to select it.
- 3/ Click on the **[EXECUTE]** button.



Memorizing MaskFrame

The Mask Frame layer will add a 'masking' effect to your picture as the shutter function on old cinema projectors. You can setup any shape for your mask. First capture your frame then proceed as follows:

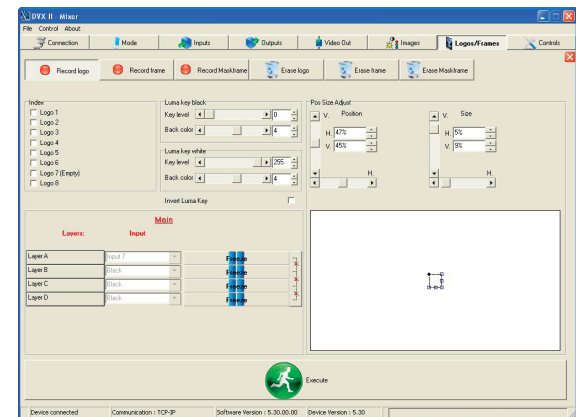
- 1/ Select the Record Mask Frame Tab in the Logo/Frame menu
- 2/ Adjust the black/white Luma Key according to which part you want to delete or not. Every pixels colored in Red will appear black once the mask frame will be stored.
- 3/ Click on Execute to store the Mask Frame to use the mask frames, please see the 'working with layer functions'.



Memorizing Logos

It is possible to store up to 8 logos in the **Di-VentiX II** non volatile memory. Logos work in much the same way as frames, and can be recorded from any of the 8 **Di-VentiX II** sources. Logos have many more attributes than frames. They can be sized, positioned, but also keyed via a variety of keying tools such as luma or chroma key.

- 1/ Select the Record Mask Logo Tab into the Logo/Frame menu
- 2/ Select the index # which determinates the memory slot.
- 3/ Adjust the size/position of your logo in Horizontal or vertical thank to the moving/resizing square or using the values directly
- 4/ If you want to use LumaKey, please adjust the black of white key level. To help you to set the lumakey, you can use the insert lumakey button
- 5/ Click on Execute to save your logo in the desired memory space.

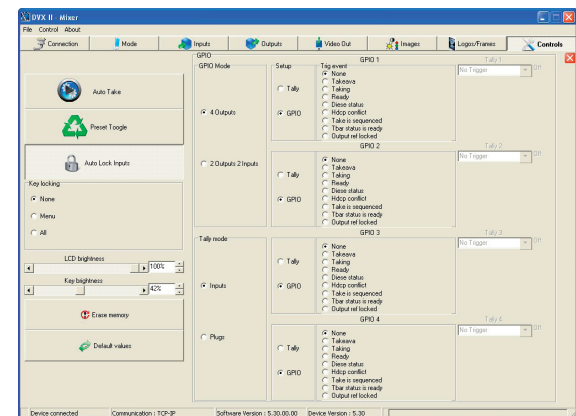


Control Menu

Here are every settings you can find in the control Menu from the Di-VentiX II front panel.

All the features will have the same effect than the Di-VentiX II front panel Control Menu

Please see the "Control Menu" .



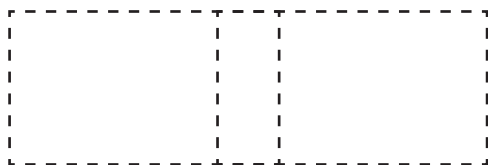
Embedded Edge Blending Mode with the RCS

In Edge Blending mode, **Di-VentiX II** can drive 2 video-projectors for horizontal or vertical Soft Edge. Used as an 8 input switcher.

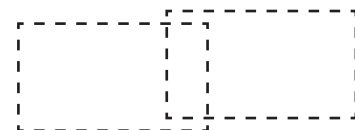
IMPORTANT: Before doing the following adjustments, make sure the 2 projectors are the same (mark, model, type) with same lenses. The projector matrices should be imperatively at the same resolution. The parameters of the 2 projectors should be homogenous (color, gamma, lamp life-time...). The screen projection should be vertical and perpendicular to the projectors to avoid geometric distortion like bow or keystone. Use only mechanical lens shifts, and avoid using them in their maximal values. Don't use wide-angle lenses.

- 1) Connect your Computer & Video sources to the inputs of the **Di-VentiX II** and connect the two projectors to the MAIN & PREVIEW outputs.
 - Output #1 = Left projector in horizontal SEB configuration & Top projector in vertical SEB configuration.
 - Output #2 = Right projector in horizontal SEB configuration & Bottom projector in vertical SEB configuration.
- 2) Select the input signal type.
- 3) Select the output format corresponding to the native matrix of the projectors.
- 4) Display the centering pattern (Output tab > test pattern > centering).
- 5) Adjust the test pattern in full screen (matrix) of each projector, with the Auto adjust, position or size adjustment of the projector. Then align mechanically the projectors to have a covering area between 10 and 20% (of each matrix) and to have the test pattern well aligned one on top of the other. As required, you can use the burst pattern available in the output tab to adjust your projector.

• **Example:** Test pattern in horizontal SE configuration.



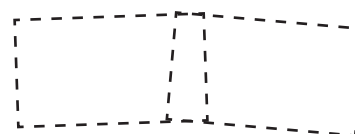
☺ Projectors well aligned.



☹ Top and bottom not aligned.



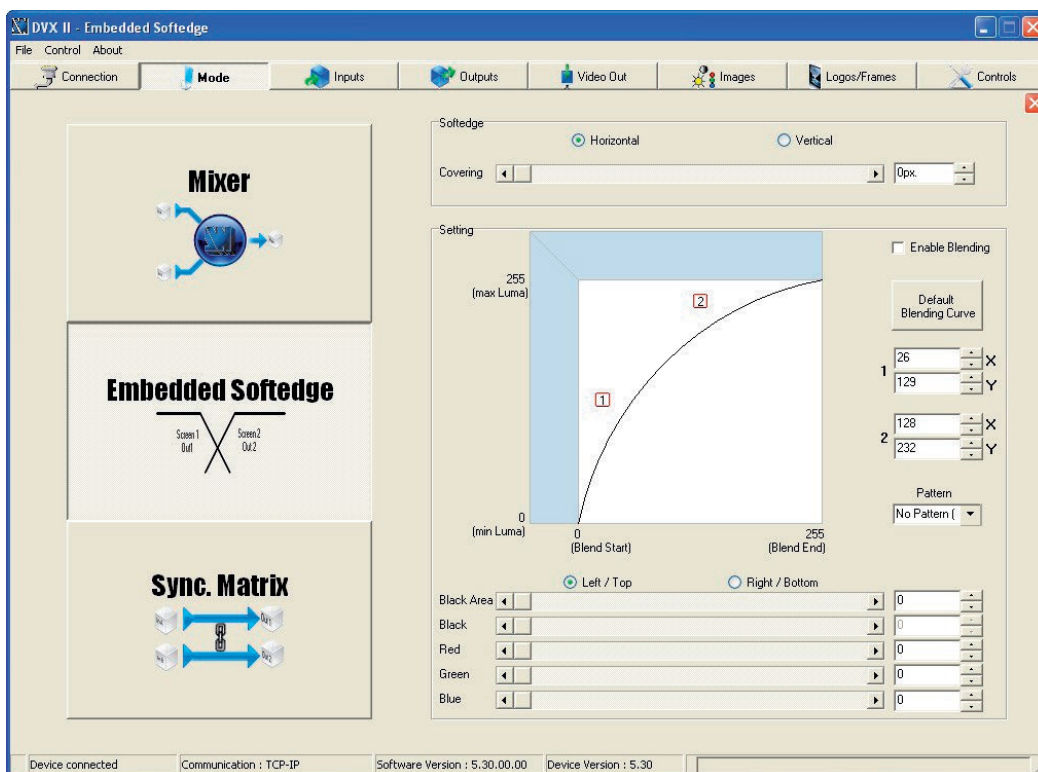
☹ Too small covering area.



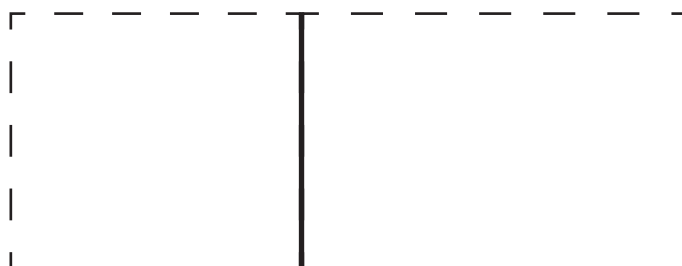
☹ Edges not paralleled

- 6) Then adjust and size each input so that they are full screen in the test pattern.
 - For computer sources: click on the Centering button in the Image main tab. As required, adjust the position with the H & V position adjustments.
 - For video sources: Select the Image main tab and adjust the position with the H & V position adjustments.
- 7) On the Mode tab, select the Horizontal or Vertical edge blending mode by clicking on the horizontal or vertical button.
- 8) Display a Black screen (click on the [BLACK] button in the input selection row) and choose the Covering Pattern in the Pattern list.

*** NOTE *:** Verify that the Softedge is not enable (Enable Softedge button not activates).

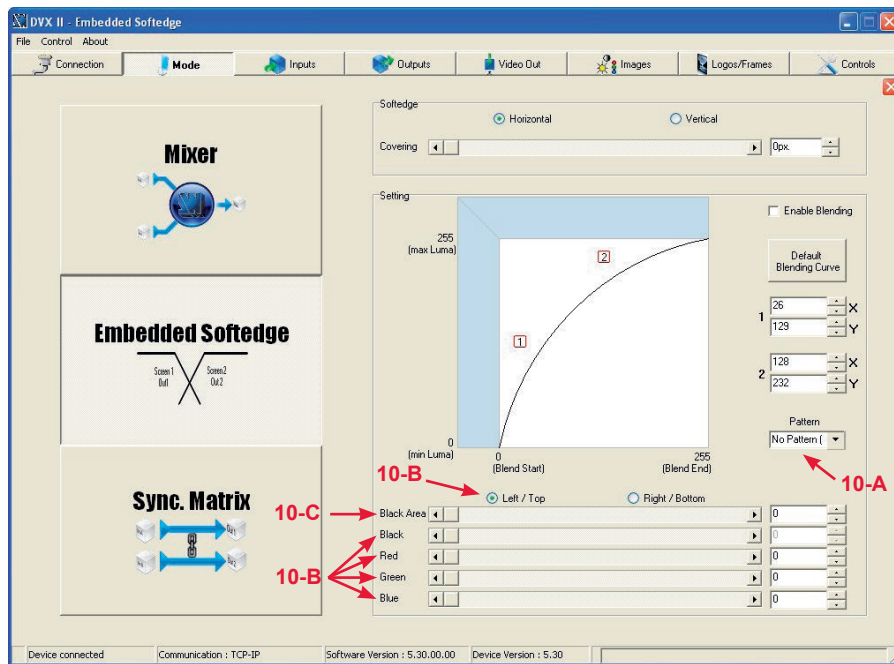


- 9) Adjust the Covering size so that the test pattern overlaps each other at the junctions of the projectors.
 - **Example:** Test pattern in horizontal SE configuration.



This operation is to match physical covering with software covering value used for calibration of the source covering image area.

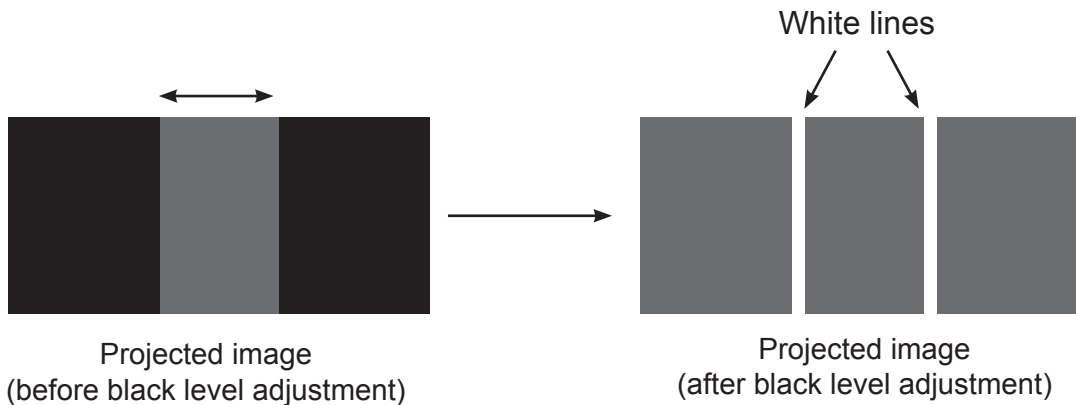
10) Select the Black tab to display the following windows:



10-A) Turn OFF the test pattern (Pattern > No Pattern).

10-B) The covering area will appear brighter than the non-covering areas. With the Black level function adjust the 2 non-covering areas (Left and right) to obtain a uniform dark grey on all the screen: Select the 3 colors and adjust the black level. As required, you can also separately adjust the colors of each projector with the Red, Green & Blue adjustments.

*** NOTE * :** Two white lines may appear at the junctions of the covering areas.



10-C) Use the Black Area function to remove the 2 white lines: adjust the Right & Left function (Top or Bottom in vertical SE) to remove the white lines. A uniform dark grey image is then displayed.

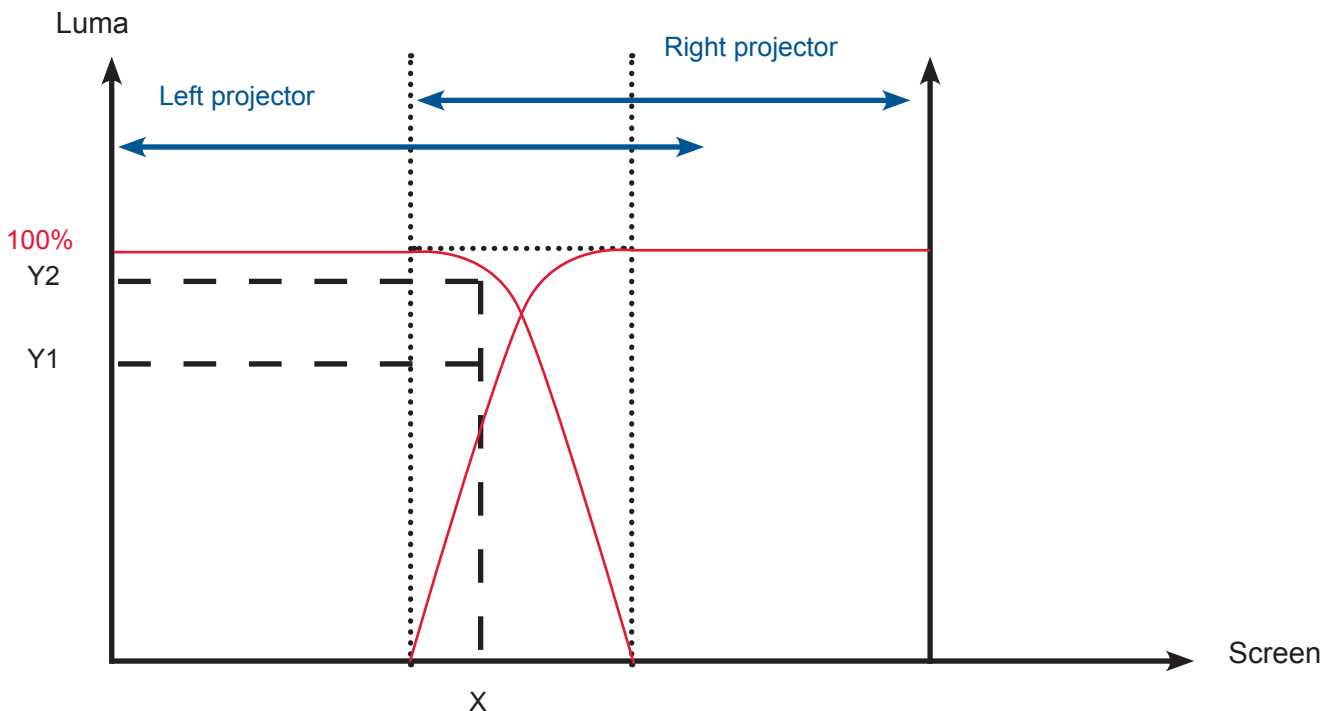


11) Softedge curve explanations & adjustments:

• EXPLANATIONS:

--> The operation consist of attenuate progressively the light diffused of one projector and in the same time increase symmetrically the light of the other one. Thus, at any point (X) of the covering area, the sum of light (Y1+Y2) provided by each projector must be equal to the light that would be provided by one projector alone.

The luminance curves of each projector are represented as follow:

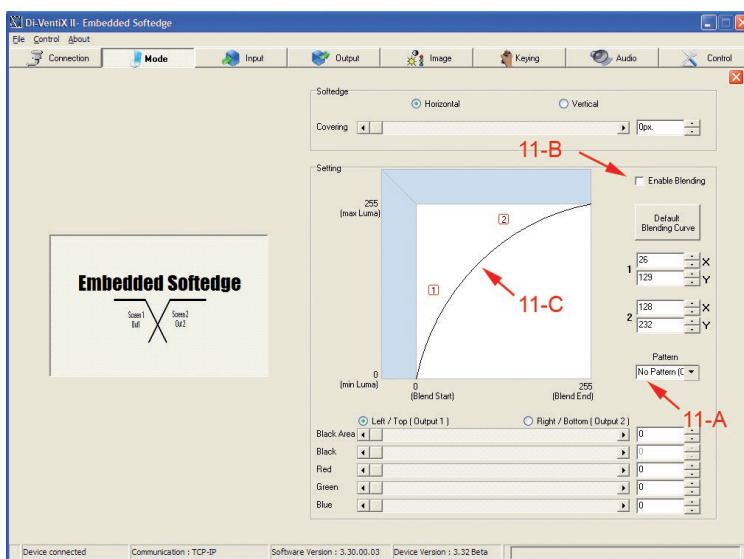


-->In the software we represent the curve of one projector only: the device automatically calculate the inverted curve for the other projector of the covering area.

• ADJUSTMENTS:

11-A) Display your background source or display the grey scale pattern (horizontal grey scale pattern for horizontal softedge and vertical grey scale pattern for vertical Soft Edge) available in the output tab.

11-B) Click on the SE Curves tab and click on the Enable Softedge button to activate the attenuation. The default value of the softedge curves is also applied. The covering area may appear brighter or darker than the other areas of the screen.



11-C) Adjust the Softedge Curve in order to have a uniform image: Move the 2 points of a curve by clicking on the arrows in the Bezier tab or directly by clicking-hold on a point and drag.

6-1. Axion2



Axion2: The Axion2 is an ergonomic and reliable remote controller for rental & staging/multi site at an optimal price/performance ratio. It controls simultaneously up to 6 screens in a single or multiple display configuration. The Axion2 features an offline mode that will enable you to setup devices that are not connected.

6-2. Orchestra

Orchestra: The Orchestra is an ergonomic and reliable remote controller for rental & staging/multi site at an optimal price/performance ratio. It controls simultaneously up to 6 screens in a single or multiple display configuration.



6-3. RKD8044-T

RKD8044-T: The RKD8044-T features softly illuminated push buttons, a smooth T-Bar, direct access to sources and layer selection. Fitted with an RS232 Com port and an Ethernet LAN RJ45 connector, the RKD8044-T is easy to connect and use.



TIP: for further information concerning our optional remote controllers, please connect to our website on: www.analogway.com

7-1. ABOUT EXAMPLES

Application notes are intended to make the use of the **Di-VentiX II** as easy as possible, by providing visual help in setting up your equipment. In an effort to make use of our machines the most pleasant experience possible, the **Analog Way** team is constantly aiming to create easy to follow examples, update information, and furnish our website with useful user information.

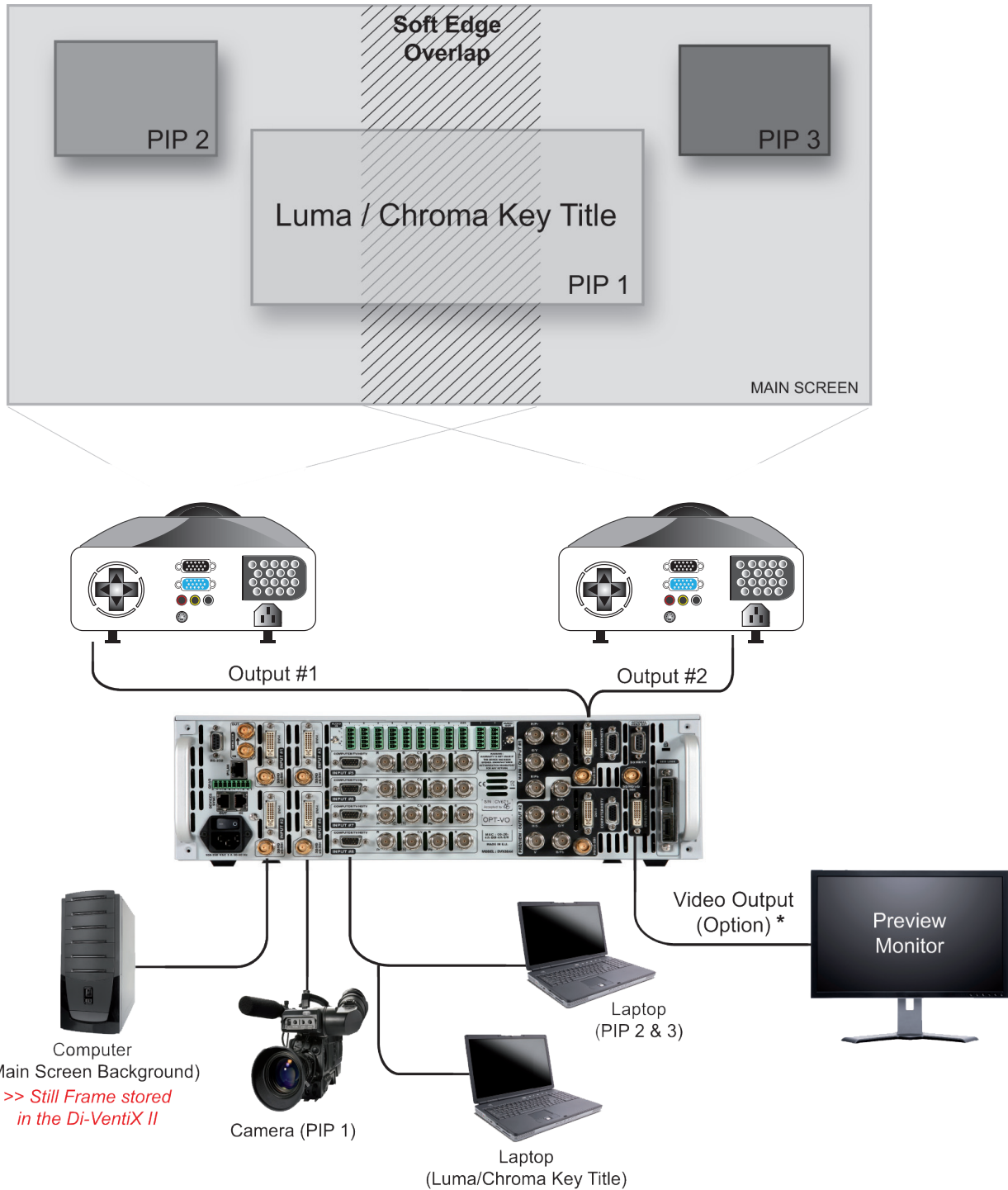
Please connect to our website on: www.analogway.com.

7-2. EXAMPLES

Please refer to the following pages for our Examples.

EXAMPLE #1

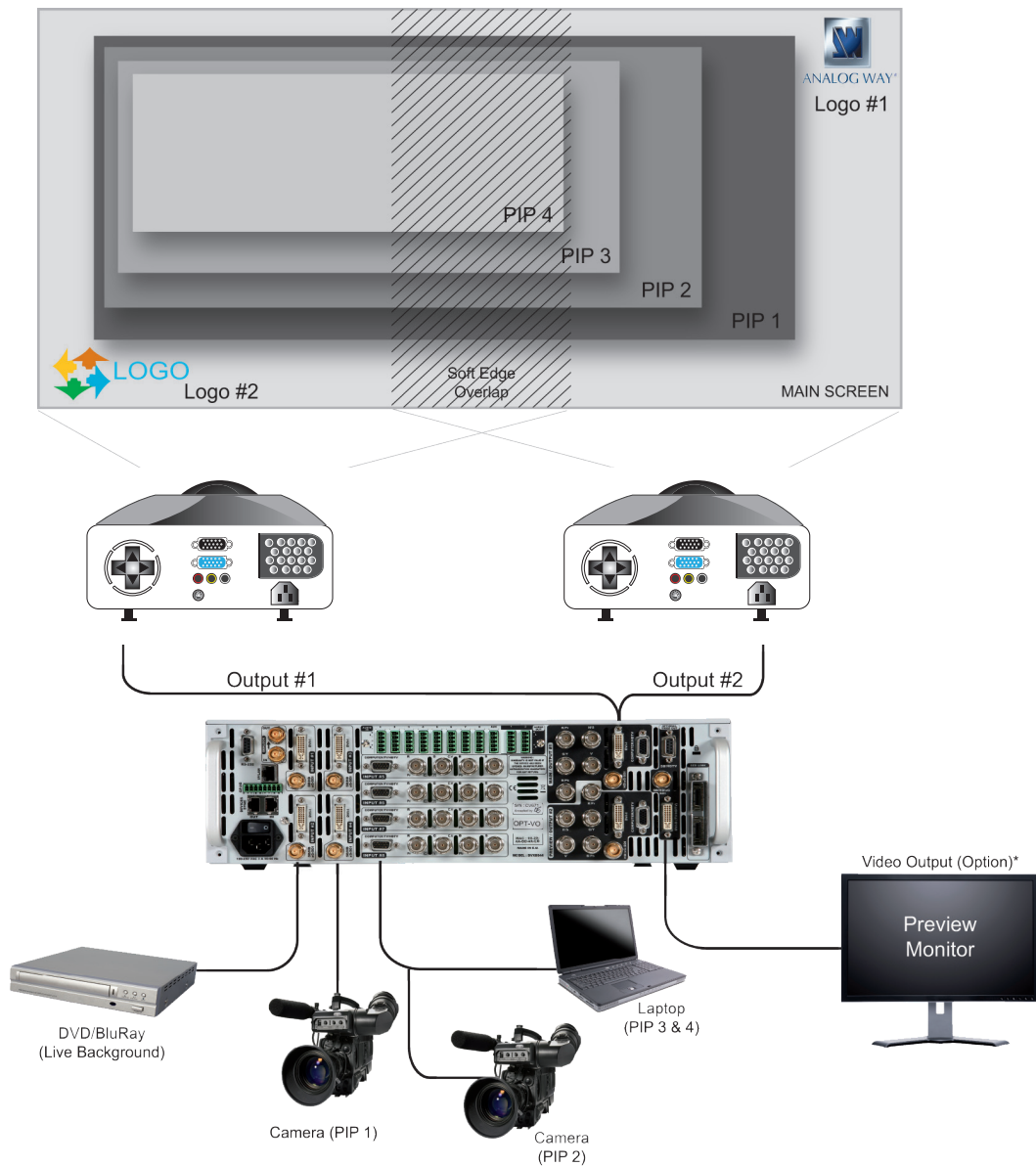
EMBEDDED SOFT EDGE PRESENTATION USING 1 Di-VentiX II
+ 3 PIP layers + 1 still frame + 1 luma/chroma key title



* Video Output card (optional) provides SD or HD TV formats in various signals and connectors from Composite Video to HD SDI. This Output can be used to record the show by outputting the same contents as the main output or to display the Preview image on video monitors. In addition, it can be used as a real preview output in case of Sync Matrix or Embedded Edge Blending Mode.

EXAMPLE #2

EMBEDDED SOFT EDGE PRESENTATION USING 1 Di-VentiX II
+ 4 live PIP layers + 1 still background + 2 logos



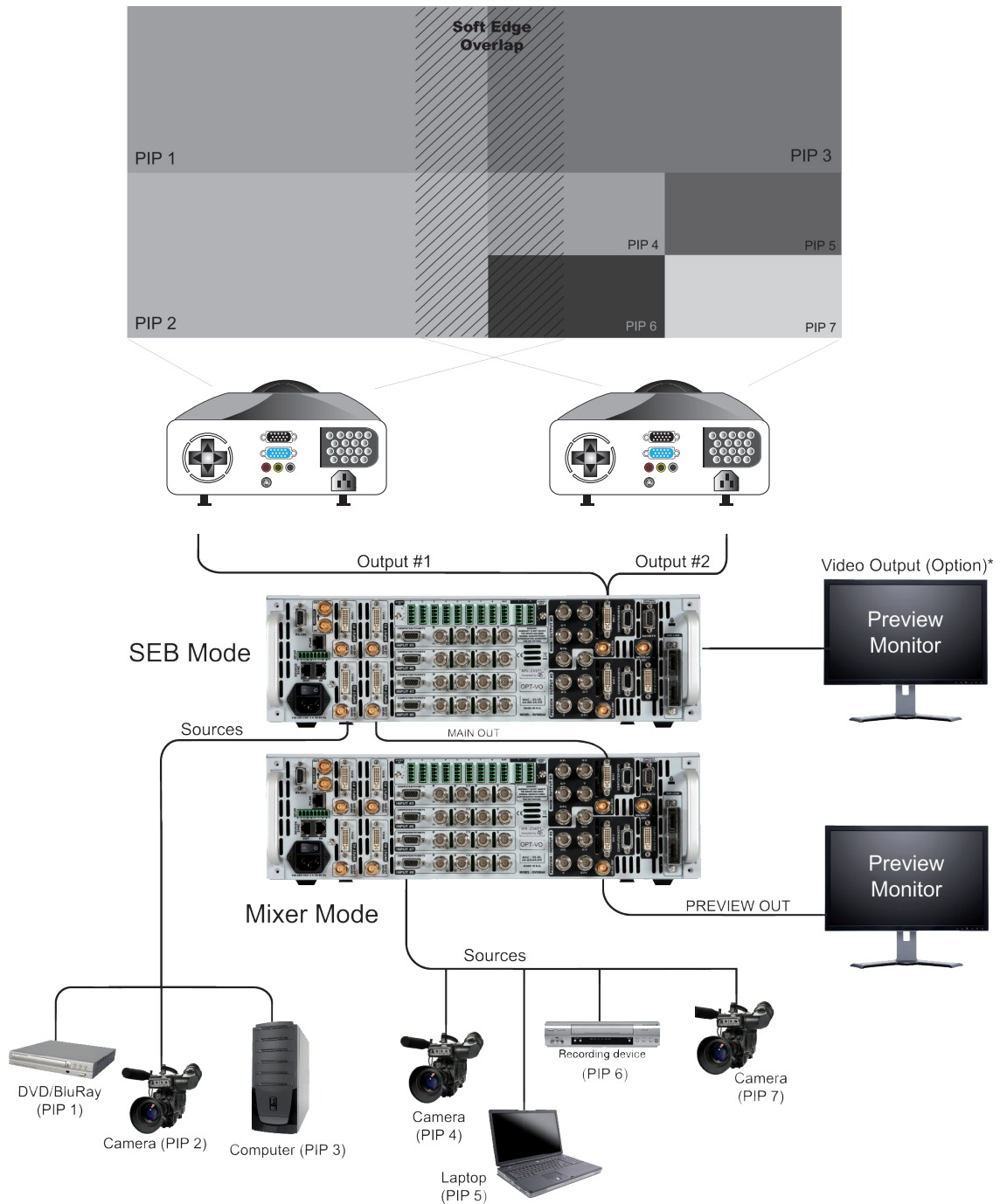
The **Di-VentiX II** in Embedded Soft Edge mode can seamlessly switch through any of the four available frames stored in its memory.

Di-VentiX II can display up to four live sources in Embedded Soft Edge Blending Mode, regardless of layer sizes and positions. When stored backgrounds or logos are used as well, **Di VentiX II** will handle up to seven simultaneous layers (1 Frame, 4 Lives, 2 Logos).

* *Video Output card (optional) provides SD or HD TV formats in various signals and connectors from Composite Video to HD SDI. This Output can be used to record the show by outputting the same contents as the main output or to display the Preview image on video monitors. In addition, it can be used as a real preview output in case of Sync Matrix or Embedded Edge Blending Mode.*

EXAMPLE #3

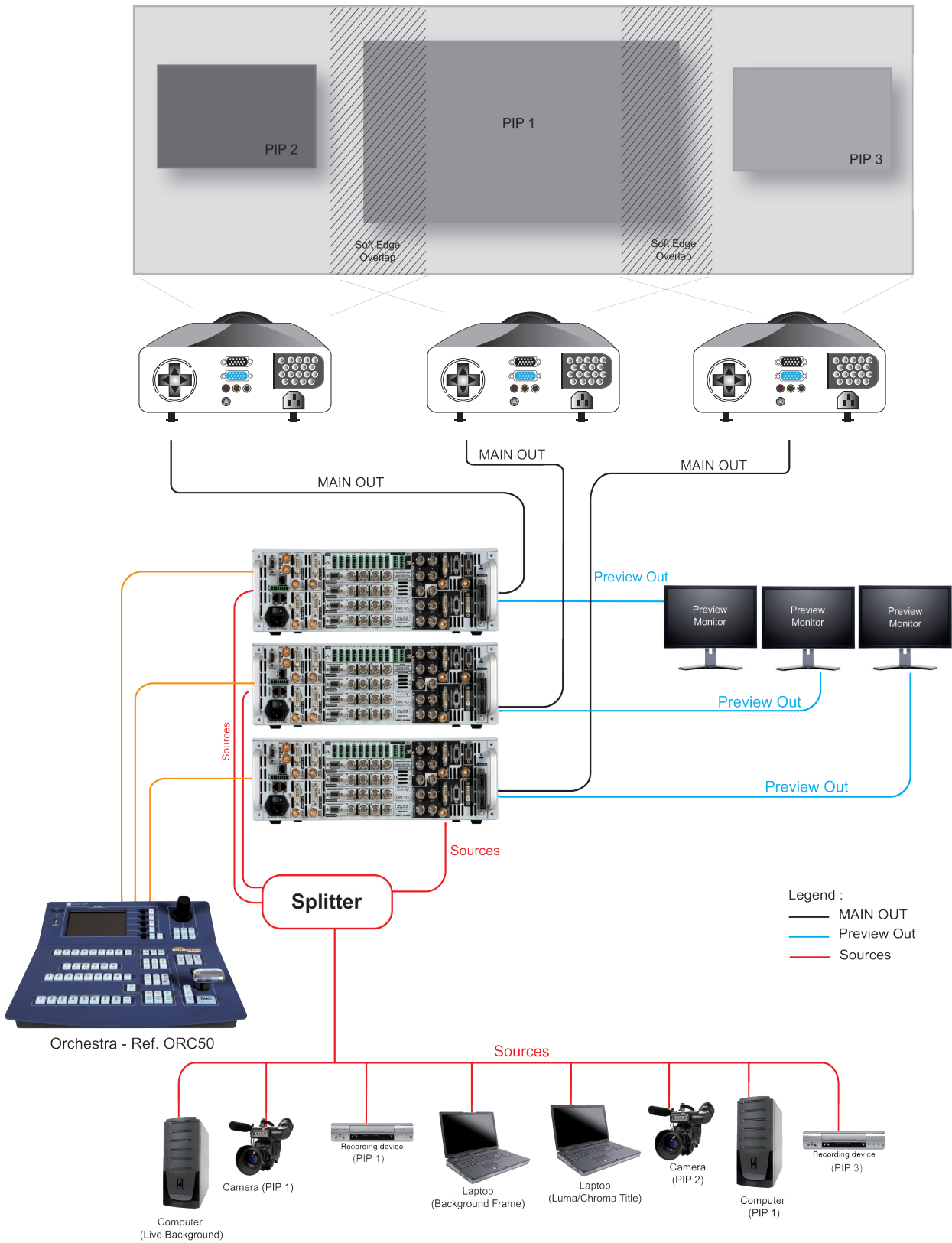
EMBEDDED SOFT EDGE PRESENTATION USING 2 Di-VentiX II + 7 live PIP layers



* Video Output card (optional) provides SD or HD TV formats in various signals and connectors from Composite Video to HD SDI. This Output can be used to record the show by outputting the same contents as the main output or to display the Preview image on video monitors. In addition, it can be used as a real preview output in case of Sync Matrix or Embedded Edge Blending Mode.

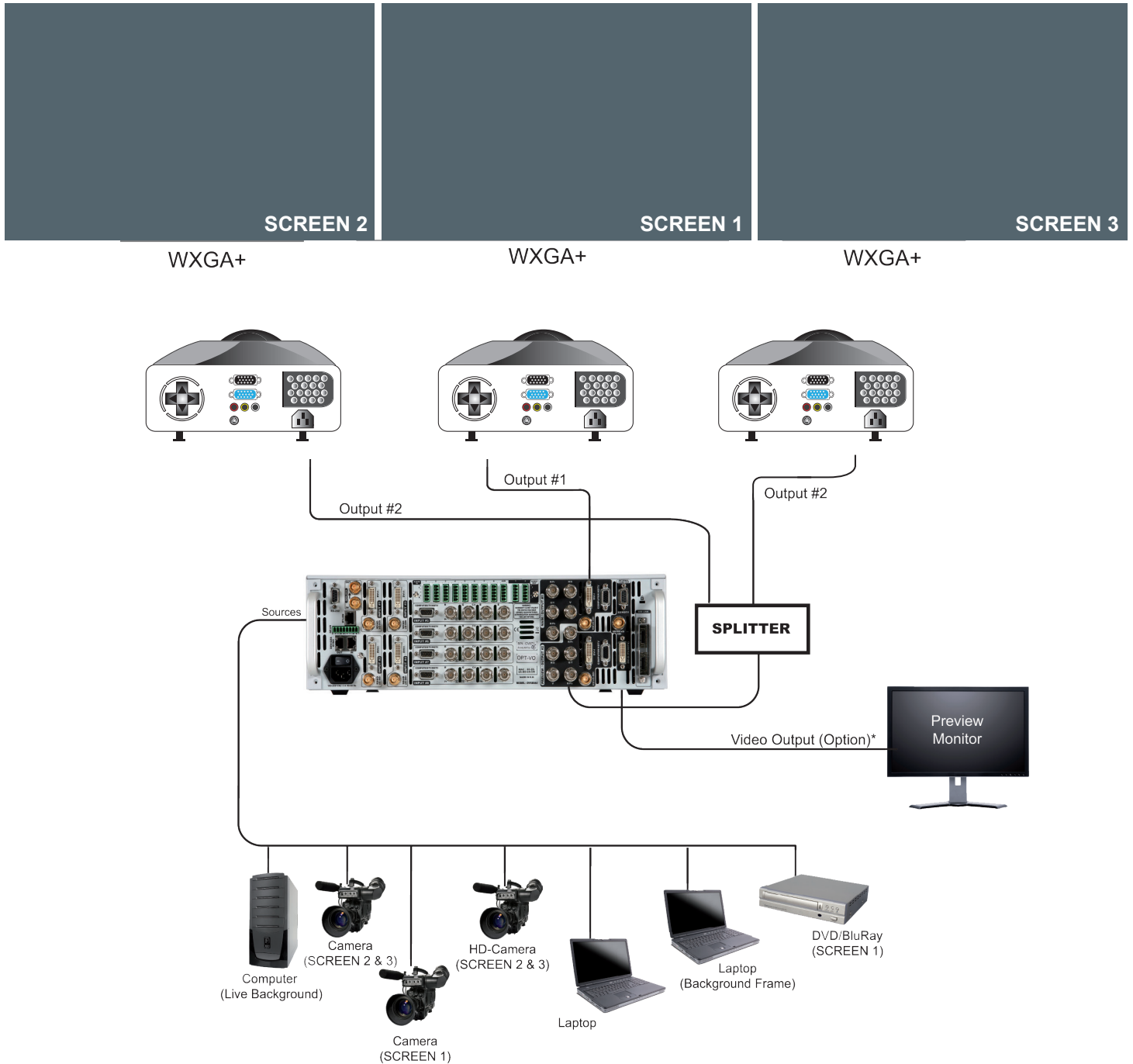
EXAMPLE #4

EMBEDDED SOFT EDGE PRESENTATION USING 3 Di-VentiX II 1 Orchestra (3 live PIP layers + 1 live background)



EXAMPLE #5

TRIPPLE SCREEN PRESENTATION USING 1 Di-VentiX II (Sync. Matrix Mode)



* Video Output card (optional) provides SD or HD TV formats in various signals and connectors from Composite Video to HD SDI. This Output can be used to record the show by outputting the same contents as the main output or to display the Preview image on video monitors. In addition, it can be used as a real preview output in case of Sync Matrix or Embedded Edge Blending Mode.

7-3. EXTERNAL PROGRAMMING

If you need to use your own Software Control program from a PC or automation, the device allows communication through an ASCII code protocol. All commands can be found on our website: www.analogway.com/

All **Analog Way** products equipped with an RS232 input are compatible with Crestron, AMX, Medialon, and most major control systems. TCP/IP control ports are also available on most Analog Way products, as standard or as options.

TIPS:

To control an **Di-VentiX II** product with an External Remote Controller (PC Software Control - Touch Pad Controller...) follow the indications below:

1. First establish a connection between the Remote Control Software and the **Di-VentiX II**. Select the RS232/LAN option from the "Control" menu, and the equivalent in your RCS.

If using RS232 no further setup is required.

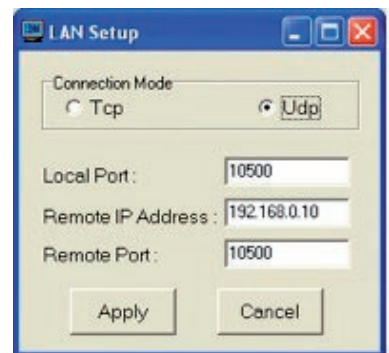
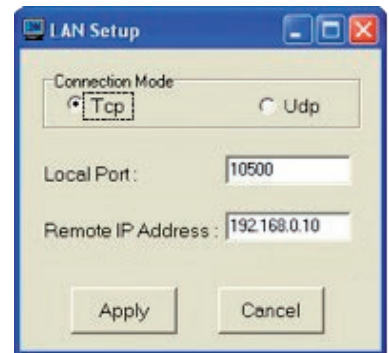
2. If using a LAN setup select the TCP / UDP option from the "LAN setup" menu.
3. Configure the LAN address in your RCS eg 192.168.000.001.
4. Configure the TCP option from the "LAN setup" menu.

Example:

Device address	192.168.0.2
Gateway	192.168.0.1
Device port	10500
Netmask	255.255.255.000

If using a UDP LAN connection you must set up the Remote address and Remote Port as well.

Once the connection has been setup, you can use your RCS to control your **Di-VentiX II**.



SOFT EDGE BLENDING (SEB)

To setup a soft edge blend using only one unit, you need to set the unit in Embedded SEB Mode, and connect the left projector to “Output #1” (Main) and the right projector to “Output #2” (Preview).

In this Embedded SEB Mode type of setup, your unit does not have a Preview anymore, unless the unit is equipped with an Optional Video Output Board. In this case, you can use the Optional Video Outputs for your preview purposes (adjust the “Video Out” to the format of the monitor connected to it).

If you want to do a soft edge setup using multiple units, you need to set all of the units to Mixer Mode and connect the projectors to “Output #1” (Main) of each unit.

Soft Edge Setup

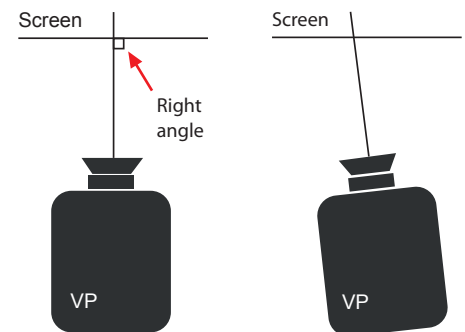
To achieve a correct soft edge, follow the simple steps below.

1. Switch on your unit(s).
2. In the “Control” menu, activate the “Erase Memories” option on all units.
3. In the “Control” menu, activate the “Default Values” option on all units.
4. If setting up a Soft edge with only one unit, in the “Mode” menu select the “Embedded SEB” mode.
If setting up a Softedge with multiple units, in the “Mode” menu select the “Mixer” mode.
5. In the “Output” menu, set the “Output Format” at the same resolution (native resolution) of the projectors that you use.
6. Physically align the projectors so that their internal test patterns are correctly displayed on the screen. To do a correct projection, the projectors must be positioned at 90° with the screen in the X and Y axes.

You can also use the “Grid” test pattern in the “Output” – “Test Pattern” menu to help you properly align the projectors together.

WARNING: It is absolutely forbidden to use the projectors’ Keystone function to correct some image parallelism problem. Using the Keystone will later render IMPOSSIBLE the Softedge Curves adjustment. In other words, using the Keystone on the projectors make it impossible to have a clean Softedge projection!!!

HORIZONTAL POSITION

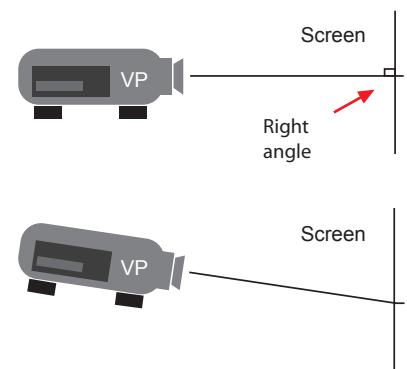


NOTE: If you must move image, latterly, always move VP.

NOTE: When moving image vertically, use the lens shift on your VP.

NEVER USE KEYSTONE

VERTICAL POSITION

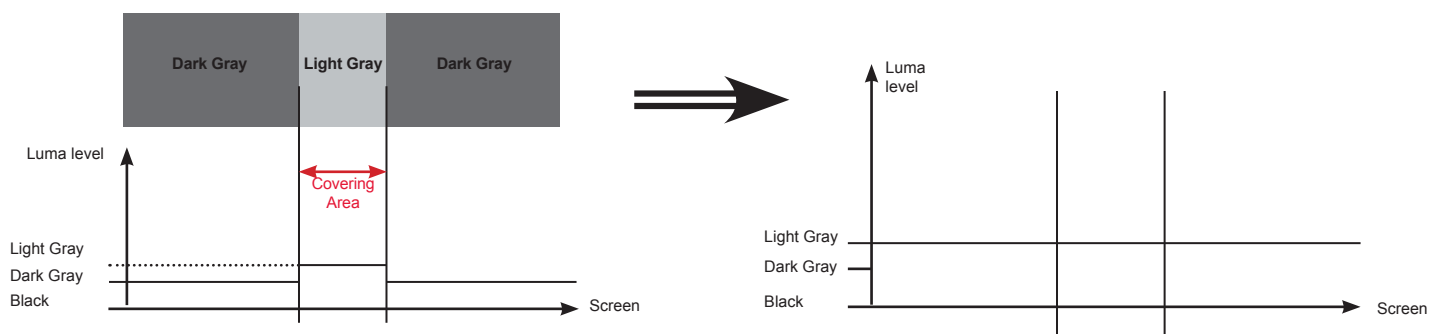


7. If you are using a multiple units Softedge, split all of your sources to input each one in the same input # on each unit (eg.: split your DVD player to input it on input #5 on each unit).
8. In the “Input” menu, set the corresponding “Input Type” for each input.
9. In the “Softedge” menu, select the appropriate Softedge “Type”: Horizontal or Vertical.
10. In the “Softedge” – “Test Pattern” menu, select the “SE Centering” pattern.
11. In the “Softedge – “Covering” menu, adjust the covering so that the 2 dashed lines of the test pattern line up to make one straight line in the middle of the Softedge.
If you can not get a perfectly straight line, set the covering to the best possible and then adjust the projectors with their Lens Shift to get a perfectly straight line.
12. In the “Softedge” – “Test Pattern” menu, select “OFF” to remove the test pattern.
13. In the “Softedge” – “Black Levels” – “Level Tint” menu, adjust the “Left” and “Right” menus to get the luminance in the left and right areas of the projection to match the luminance of the overlapping area.

This adjustment must be done on a black projection (no sources).

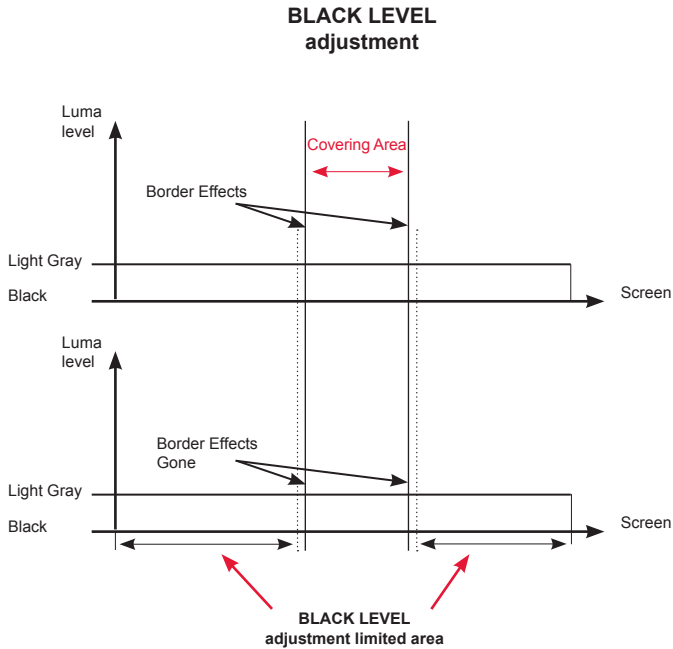
This adjustment will be made easier if you are in the darkest environment possible.

Result is:



14. If during the black level adjustments, thin white columns appear on the left and right edges of the overlapping area, you can correct them by adjusting the Left and Right areas in the “Softedge” – “Black Levels” – “Left-Right Area” menu.

Result is:



15. In the “Soft Edge” – “Test Pattern” menu, select the “H Grey Scale” pattern if you are in Horizontal Softedge or the “V Grey Scale” pattern if you are in Vertical Softedge.
16. In the “Softedge” menu, activate the “Blending” menu.
17. In the “Softedge” – “Curves” menu, adjust the Softedge Curve with the “X1, Y1, X2, Y2” adjustments, so that the luminance of the projection becomes uniform throughout the projection area (entire screen).
18. When the adjustment becomes quite good, switch off the test pattern and display your background source to do any fine tuning if needed.

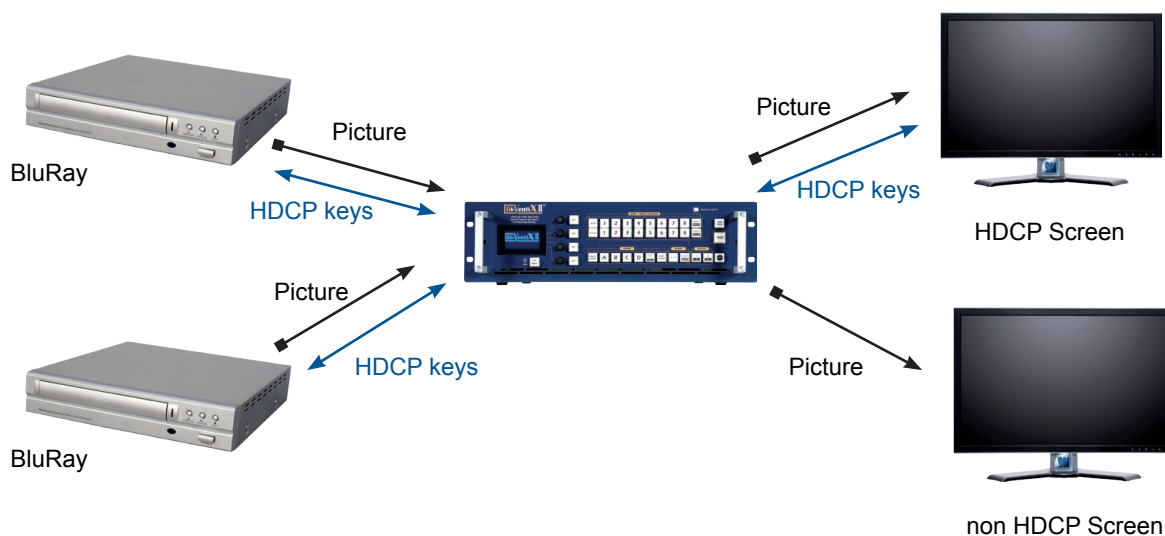
A. DI-VENTIX II HDCP Management

1- BASICS

The HDCP aim is to protect against unauthorized copy of movies. This is accomplished by encrypting pictures from the source up to the display device. As Di-Ventix II is inserted between the source and the display device, it manages both HDCP protected content (inputs) and HDCP compliant display devices (outputs).

It is mandatory to decrypt and display an HDCP protected input only when a valid HDCP screen has been detected on the output.

A **Di-Ventix II** HDCP input needs to continuously exchange information (keys) with the source in order to decrypt the input pictures. The Di-Ventix II HDCP outputs have the same needs with the screens. You may notice that it's a key exchange, so the communication in the DVI cable needs to be **bidirectional** (from the source to the **Di-Ventix II** input and from the **Di-Ventix II** input to the source).



2- USUAL PROBLEMS AND WORKAROUNDS

- **Display screen on analog output:**

As mentioned previously, it is forbidden to decrypt and display protected content on Non HDCP screens. Only DVI outputs have the bidirectional communication capability requested for HDCP. So it is not possible to display HDCP sources on analog outputs (RGBHV, YUV...).

- **Display screen on SDI digital output:**

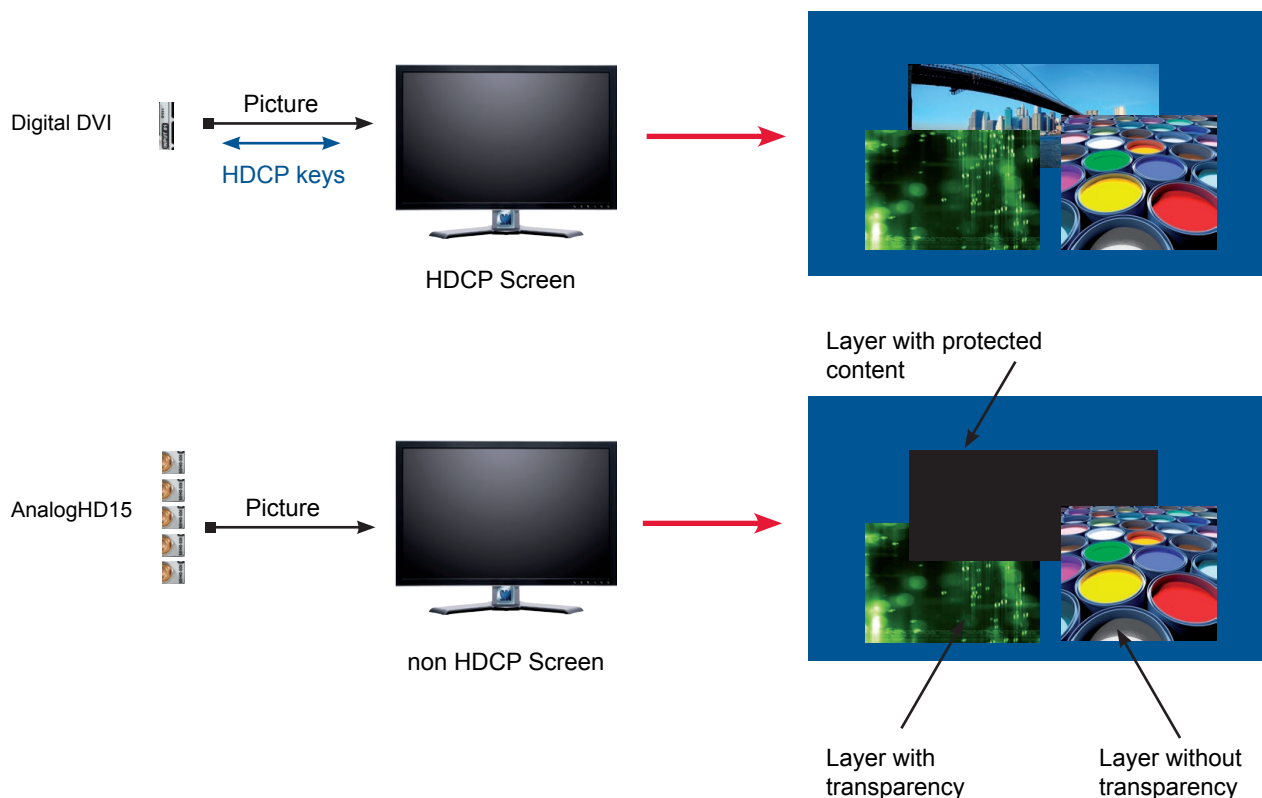
As SDI output is not bidirectional, it is not possible to display HDCP sources on it.

- **Non HDCP DVI display:**

It is not possible to display HDCP sources on a non HDCP DVI display.

- **Simultaneous HDCP and non HDCP displays on the same outputs:**

Di-VentiX II layers containing HDCP inputs are put to black only on non HDCP outputs like analog or SDI. At the same time these layers are displayed on DVI HDCP outputs. Some exceptions exist where more pixels are put to black (eg: pixels of protected content covered by another transparent layer are also put to black).



A topmost layer put to black will mask any lower layer. During the fade of an upper layer, due to its transparency, transparent pixels over a protected content layer put to black will be also put to black.

- **«MacBook Pro» on inputs:**

Some sources like the «MacBook Pro» will always try to detect an HDCP screen even without any protected picture content, like the computer desktop.

When connected on a **Di-VentiX II** HDCP input, in this case, input pictures are viewed by the **Di-VentiX II** as «protected content», and cannot be displayed on a non HDCP output, even if it's just the computer desktop. On the other hand, when it is connected on a non HDCP screen, as long as the picture is not a «protected content», the «MacBook Pro» still displays the picture.

A solution in this case is to connect such a source on a non HDCP **Di-VentiX II** input (input 3 and 4 on Di-VentiX II < CV600).

Another solution is to use an EDID dongle inserted between the source and the Di-VentiX II input.

Another solution is to use the input menu named «HDCP enable» or control command (**Di-VentiX II**>=CV800) (version 5.00 minimum).

- **Cables on HDCP DVI output:**

Cables must be able to carry the bidirectional signals needed for HDCP communication.

3- TIPS

- **Front panel Di-VentiX II status:**

«Due to HDCP content, non-HDCP screens cannot display protected sources»

This message is displayed on the menu when a input content (HDCP sources) is detected and when not all of the DVI output screens are HDCP.

For example, **a DVI output not connected to a screen, this is considered as a non HDCP screen.**

- **How to have a non HDCP Di-VentiX II:**

When it is known that non protected content will be displayed, the user can disable the output HDCP detection with the front panel menu or control command (version 5.00 minimum).

- **To avoidHDCP cabling problems, when quality allows it, prefer an analog YUV input signal.**

- **DVI plugs must be used to have a good electrical contact.**

WARNING: DVI cables are fragile and must not be bent or folded.

1- RS232 cable for Upgrade:

To be able to upgrade a Di-VentiX II, you must use a «complete straight extension cable» with minimum pinout as follow (OK if all pins connected):

- male DB9 to female DB9,
- pin 2 connected to pin 2 (TX),
- pin 3 connected to pin 3 (RX),
- pin 5 connected to pin 5 (GND),
- pin 7 connected to pin 7 (RTS).

TIP: Do not insert another cable without pin 7 transmission.

2- RS232 cable for Remote control:

To avoid Di-VentiX II boot failure at power on, you must use a simplified RS232 cable:

- male DB9 to female DB9,
- pin 2 connected to pin 2 (TX),
- pin 3 connected to pin 3 (RX),
- pin 5 connected to pin 5 (GND).

TIP: pin 7 must not be connected.

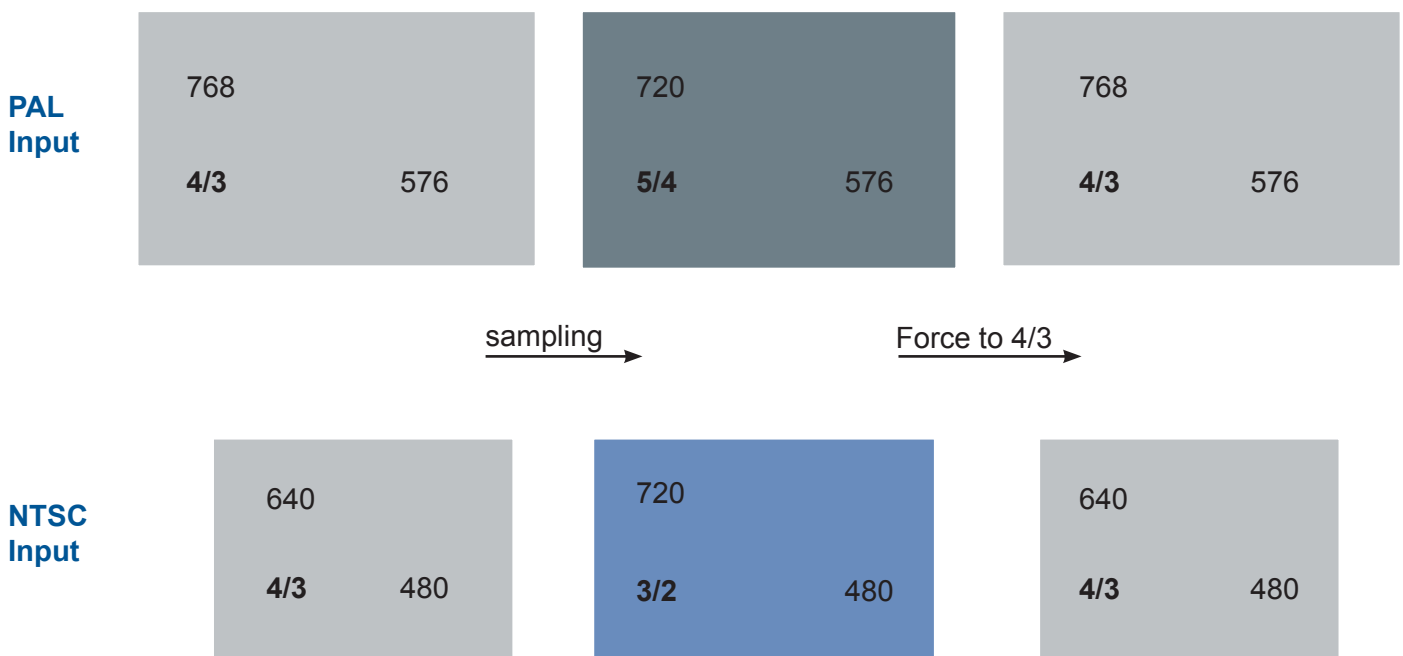
From the Image Menu

The Force to 4/3 capability allows you to give a 4/3 aspect Ratio to a SDTV Input, this allows you to keep the ratio of a PAL input (ie) shown on a SDTV PAL Output.

The image will be scaled to fit a 4/3 aspect Ratio.

The Force to 4/3 setting will not affect an image in a «Fullscreen» aspect Out.

The Force to 4/3 setting will react as an Image Setting (will be recalled each time the input is shown).



**From the Menu select the following Aspect options.
Select first the Aspect In then Adjust the Aspect Out.**

Aspect In

Provides aspect ratio adjustments for the content of the image. Affects the raster size of content provided to the signal processing chain.

NATIVE *

No adjustment.

LETTER BOX 1.78

Adds black bars to image to create a 1.78 image from a 4:3 signal. Useful when you have 16:9 content that appears correctly in the correct aspect ratio when viewed within a 4:3 format (ie. 1.78 letterboxed DVD).

LETTER BOX 2.35

Adds black bars to image to create a 2.35 image from a 4:3 signal. Useful when you have 2.35 content that appears correctly in the correct aspect ratio when viewed within a 4:3 format (ie. 2.35 letterboxed DVD).

PILLAR BOX

Adds black bars on sides to create a 4:3 image from a 16:9 signal. Useful when you have 4:3 content with black bars on the sides in a 16:9 signal.

ANAMORPHIC

Adds black bars to image to create a 1.78 image from a 4:3 signal, and stretches horizontally, while compressing image vertically to fit. Useful when you have 16:9 content that is horizontally squashed when viewed within a 4:3 signal (ie. anamorphic wide screen DVD).

Aspect Out

Provides aspect ratio adjustments for frame in which the image will be displayed.

1:1

No scaling or resizing of any kind is done. Aspect ratio preserved.

CENTERED

The image is scaled until it fits vertically or horizontally, whichever keeps the entire image visible. Aspect ratio preserved, but black bars will be added if necessary.

FULL SCREEN *

The image fits Horizontally and Vertically of the incoming raster of the output raster. This will compromised the aspect ratio.

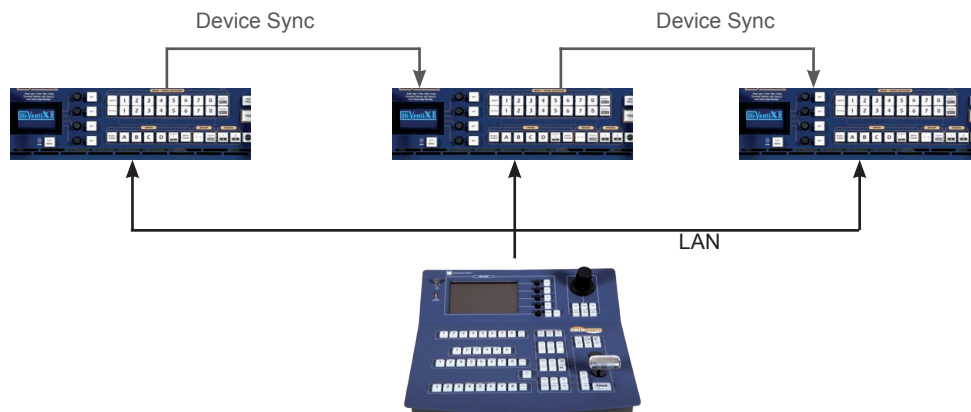
CROPPED

The image is scaled until it fits vertically or horizontally, whichever eliminates all black bars. Aspect ratio preserved, but some content will be cropped out of the raster (offscreen).

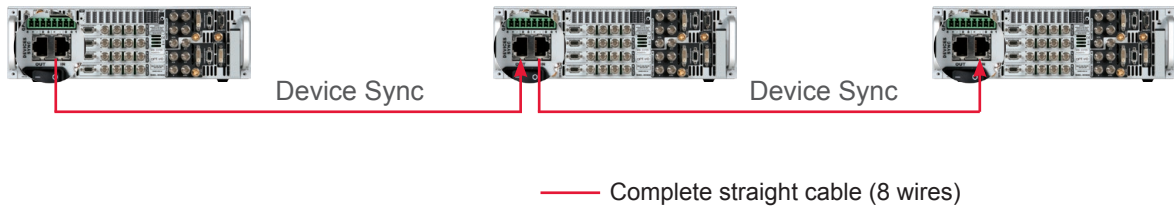
** default settings*

For a multi machine installation you need the following setup:

- Soft edge enabled
- Correctly installed cables and the DevSync chain detected by all machines
- All machines Frame loaded on the same reference
- S/W Version 5.00 (minimum).



- **SETUP DEVICE SYNC CABLE**



- **CHECK DEVICE SYNC OPERATION**

Once all the devices booted and connected to the remote controller, you should setup a show with 3 devices (for our example) on the same screen. If the device sync function is correctly operated, the 3 devices must show:

```
--[DEVICE SYNCHRO]--
Pos: 1      Count: 3
Master
Communication OK
```

```
--[DEVICE SYNCHRO]--
Pos: 2      Count: 3
Slave
Communication OK
```

```
--[DEVICE SYNCHRO]--
Pos: 3      Count: 3
Slave
Communication OK
```

NB: devices will activate device sync fonctionnality only in multi machine mixer mode (with screen count greater than 1).

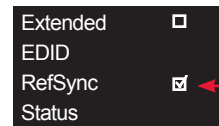
Devices will not sync if:

- The device sync cable is not connected as above.
- Two or more devices have the same «screen position».
- One of the «Count» devices is missing.
- Version of all devices is not at least v5.00.

- **FOLLOW SETUP**

For accurate synchronisation, output rate must be set to «framelock» on the same reference for all the devices. Use Genlock connector or common input as reference.

NB: make sure that other inputs that follows the reference are set «RefSync» on the input menu (ie. 3 genlocked cameras)



- **READY TO OPERATE**

F. DI-VENTIX II Motion Correction

This item gives information about the new “Motion correction” setting added in the DVXII device.

- Aim of the “Motion Correction” setting:

The aim of the “motion correction” setting is to correct a “comb effect” sometime visible on DVXII device. From the front panel, a new setting has been added in the Menu/Image/Advanced section.

- Typical case:

The “comb effect” appears only with moving interlaced input pictures, with vertical scaling, more with medium contrasted images and mainly with interlaced output format.



The default value of this setting is 0 for standard motion correction, and can be increased up to 100 for full-motion correction.

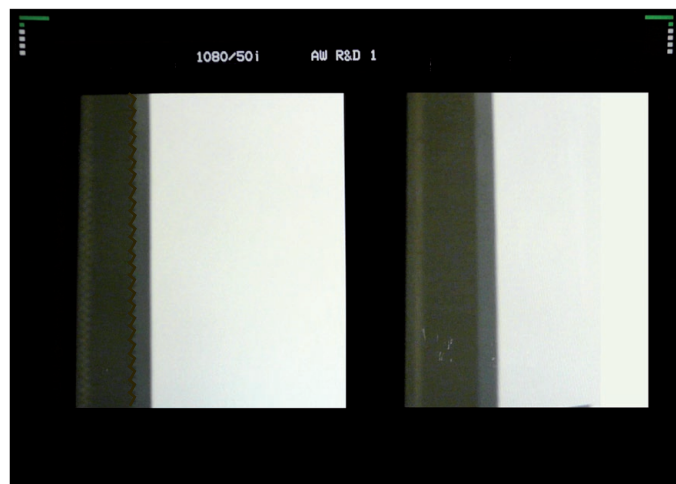
The correct level must be adjusted according to the image, preferably not at maximum, in the following examples around 80 or 90.

- Examples:

Here is an example of a worst case scenario, using an analog HD-YUV input signal from an HD camera running in 1080i 50Hz, split in two layers side by side (with and without correction), displayed in interlaced 1080i 50Hz frame locked on the input, with a few scaling.

The camera is panning over a medium contrasted scene as viewed here:

This panned scene is viewed here:



Another typical case is viewed here:



ANALOG WAY LIMITED WARRANTY

All **Analog Way** products have a 3 year warranty on parts and labor, return to factory This warranty does not include faults resulting from user negligence, special modifications, electrical surges, abuse (drop/crush), and/or any damage caused by misuse of the product.

SERVICES AND RMA

In the unlikely event that a product is required to return for repair, please call the regional Maintenance center / Customer Service, and ask to receive a Return Material Authorization number (RMA). Three regional maintenance centers are available depending on your location. See map below for information on which regional maintenance center you depend on.

RMA Conditions:

1. Prior to returning any item, you must receive a Return Material Authorization (RMA) number.
2. All RMA numbers must appear on the return-shipping label.
3. All shipping and insurance charges on all RMAs must be prepaid by the customer.



North & South America

Analog Way Inc.
299 Broadway, Suite1620
New York, NY 10007
United States of America

Europe, Middle East and Africa

Analog Way SAS
2/4 rue Georges Besse
92160 Antony - FRANCE

Asia - Pacific

Analog Way Pte Ltd.
No 10 Ubi Crescent
#03-05 Ubi Techpark Lobby A
Singapore 408564

HOW TO CONTACT US

Analog Way SAS

2/4 rue Georges Besse
92160 Antony
France
Tel.: +33 81 89 08 60
Fax: +33 1 57 19 04 54
saleseuro@analogway.com

Analog Way Inc.

299 Broadway, Suite 1620
New York, NY 10007
United States of America
Tel.: +1 212 269 1902
Fax: +1 212 269 1943
salesusa@analogway.com

Analog Way Pte Ltd.

No. 10 Ubi Crescent
#03-05 Ubi Techpark Lobby A
Singapore 408564
Tel.: +65 6292 5800
Fax: +65 6292 5205
sales@analogwayasia.com

For more documentation, general information, or simply to keep up to date with new releases and upcoming Analog Way products, please log on to www.analogway.com

Before calling your regional maintenance center, please gather the following information:

- Serial number of the unit
- Firmware version (look in: CONTROL MENU/VERSIONS)
- Model reference (**DVX8044** with options)
- Description of failure

INFORMATION ON UNIT DISPOSAL

In the European Union:

If the product is used for business purposes and you want to discard it:

Please contact your Analog Way dealer who will inform you about returning of the product. You might be charged for the costs arising from returning and recycling.

For Spain:

Please contact the established collection system or your local authority for take-back of your used product.

In other countries outside the EU:

If you wish to discard of this product, please contact your local authorities and ask for the correct method of disposal.



```
[MAIN] -- [PREVIEW]
black    black
black    black
black    black
input 1  input 1
black    black
```

```
0000  0000  0000  0000  0000  0000  0000  0000  0000  0000
0000  0000  0000  0000  0000  0000  0000  0000  0000  0000
0000  0000  0000  0000  0000  0000  0000  0000  0000  0000
0000  0000  0000  0000  0000  0000  0000  0000  0000  0000
0000  0000  0000  0000  0000  0000  0000  0000  0000  0000
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```

```
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0000  0000  0000  0000  0000  0000  0000  0000  0000  0000
0000  0000  0000  0000  0000  0000  0000  0000  0000  0000
```

Version: 5.30 - 09/01/2012
Code: 140103

Designs and specifications are subject to change without notice
The illustrations and screens described in this manual may be exaggerated or simplified for easy
recognition and may be slightly different from the actual unit.

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