USER MANUAL

Midra™ 4K unit (V3.0)

References:
EKS-4K, PLS-4K, QMX-4K, QVU-4K
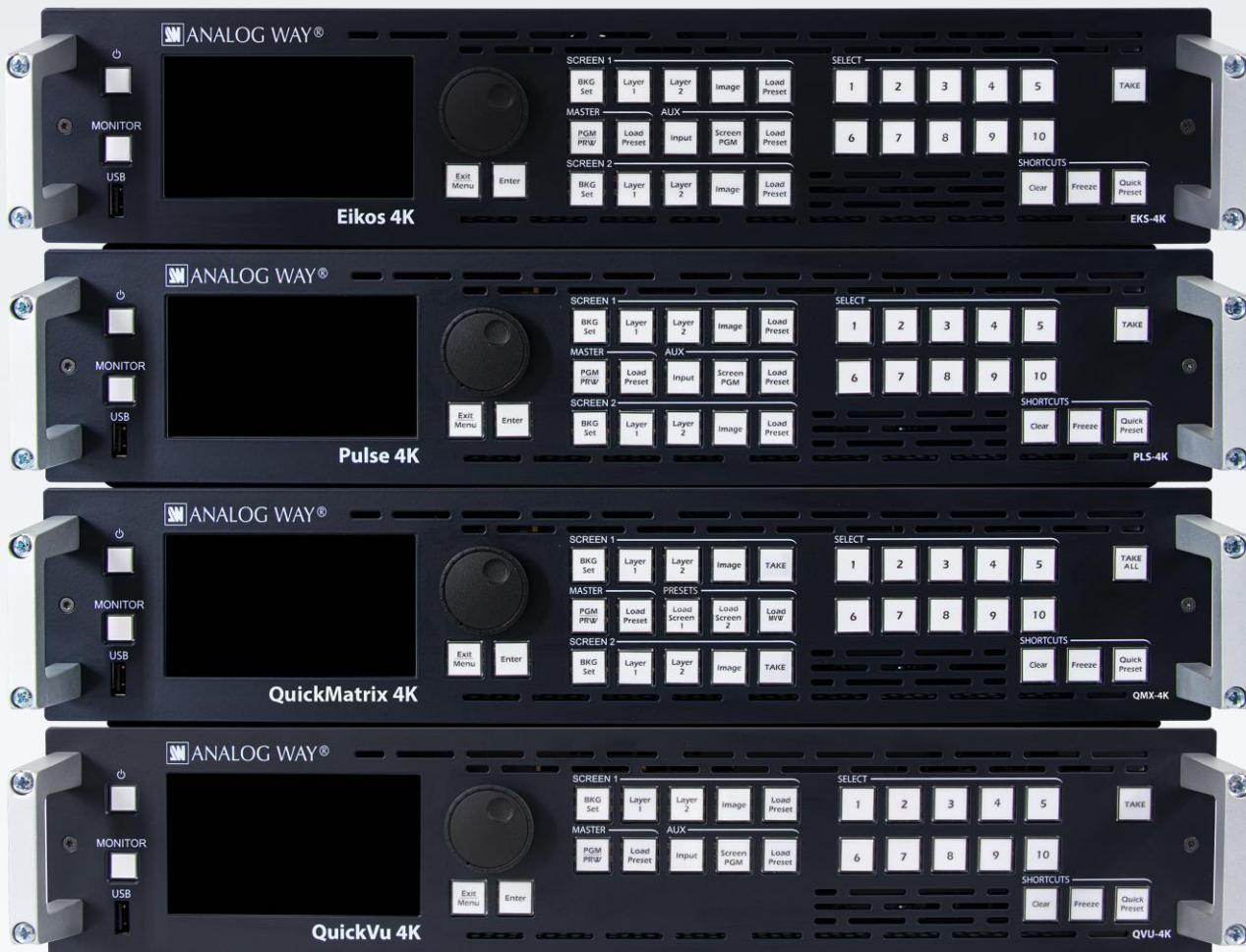
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Contents

1 Disclaimer

The information in this document is subject to change without notice, while every effort is made to be accurate. Analog Way cannot be held liable for any kind of loss whatsoever that may be caused by the use of or reliance in this manual.

1.1 Copyrights

The software installed in the Midra 4K remains the sole property of Analog Way unless stated otherwise in a separate licensing agreement. Any attempt to copy or alter the software is prohibited and will render any warranties void.

1.2 Warranty

The Midra 4K has been tested in various applications and is deemed to be suitable for uses described in this manual. This product is provided "as is", including all or any 'perceived' or possible faults. The Licensor grants no warranty regarding the utility or contents of the software. Analog Way will warrant the hardware for three years from the date of purchase on parts and labor, excluding I/O connector cards which are warranted for one year. The method of warranty is Return to Base (transport costs from and to us are the owner's responsibility). In case of hardware fault please contact your local distributor or us (www.analogway.com). While not an exhaustive list, the following are provided for guidance. Warranty claims will be invalidated in these circumstances:

- A hardware failure is caused by inappropriate handling of hardware such as dropping the image processor, using the image processor without proper ventilation, exposing the unit to water, other liquids or dust.
- The software has been loaded or there has been an attempt to load software onto the unit in any way other than described in the manual or recommended by Analog Way.
- The hardware has been modified by someone other than a certified Analog Way dealer.

1.3 Liability

Analog Way shall not be liable for any loss or damage, be it direct or indirect in regards to the utility or contents of the software or hardware, except to the extent provided by law. Notwithstanding the above, liability for indirect, special, incidental or consequential loss or damage that may arise in respect of the software or hardware, is expressly excluded.

1.4 Force Majeure

Liability of Analog Way is excluded in all cases that constitute Force Majeure circumstances, namely, circumstances beyond the control of Analog Way.

2 Terms and Definition

Auxiliary Screen or Aux: A specific Screen composed of a single output with a format up to 1920x1080@60. The content displayed can be an input or Screen's Program.

Background Image: Image source ready to be used in a Background Set. Each Screen has four Background Image slots.

Background Layer: Screen layer with lowest priority that can display a Background Set.

Background Set: A source content created for a Screen background layer. A Background Set is made by assigning a Background Image or live input in every output of a Screen.

Foreground Image: Image source ready to be used in a Foreground layer. Each Screen has four Foreground Image slots.

Foreground Layer: Resizable Screen layer with highest priority that can display a Foreground Image.

Image: Englobes all non-animated images. Images are imported through the Web RCS and used as content in layers.

Keying: Electronic process where a video image is electronically superimposed over another source by dynamically removing a portion of the first image. For example, removing all content of a certain color (such as green or blue) is called **Chroma Key** and removing content based on its luminance levels is called **Luma Key**. Keying is typically used for titles, logos and special effects.

Layer: Item displaying one live input. Layers can overlap, depending on their visual priority. Layers can be repositioned, resized, displayed with borders, etc.

Lookup Table (LUT): Table used to transform the color and tone of an input data according to preset values.

Multiviewer: Dedicated output used to monitor content in widgets. Midra 4K units have one Multiviewer output able to display up to 16 widgets.

Preview (PRW): The content in Preview is not displayed on output Screens. All Preview screens replace their corresponding Program screens during transition (or Take). Preview Screens are meant to load layers and content before transitioning to Program.

Program (PGM): The content in Program shows what is currently displayed on Screens. It is possible to make changes directly in the Program screens (drag and drop content in layers, layer size and position, etc.). It is also possible to lock the Program screens to only edit the Preview screens.

Screen: Destination where the picture will be displayed. For example, a single display or a projection surface which can be composed of one or multiple outputs. Each screen is composed of one or multiple layers.

Soft edge blending: Technology used to compensate for the covering area when two (or more) video projectors are combined to display a continuous content across one screen. The resulting image will appear as a single unified picture.

Web RCS: User interface to setup and operate the Midra 4K. It is a web browser based Remote Control Software designed by Analog Way.

Widget: Multiviewer item displaying one content (Input, Timer, Preview or Program Screen). Similar to a Layer but without visual priority, widgets are displayed on same level and cannot overlap.

3 Hardware Specifications

3.1 General safety instructions

3.1.1 English

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 of the warnings on this product and its operating instructions.

• **WARNING**: Not suitable for children. To prevent the risk of electric shock and fire, do not expose this device to rain, humidity or intense heat sources (such as heaters and direct sunlight). This equipment is not suitable for use in locations where children are likely to be present.

• **INSTALLATION**: 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. Also keep away from excessive dust, vibrations and shocks.

• **POWER**: Only use the power supply indicated on the device of the power source. Devices equipped with a grounding plug should only be used with a grounding type outlet. In no way should this grounding be modified, avoided or suppressed. Connection of equipment to main supply must be after branch circuit breaker of the building installation.

For equipment identified with the symbols above, grounding is mandatory before plug connection.
Use a grounding cable to connect a screw on the unit chassis to ground.

• **POWER CORD**: The device is equipped with one or multiple detachable power cords.

A device identified with the symbol above indicates that the equipment has multiple power cords. To remove mains, disconnect all power cords at appliance coupler.

Caution: The power cords constitute the only mean to completely disconnect the equipment from the main power.

Use the following guidelines:
- The equipment connected to the network must have a release system easily accessible and located outside the unit.
- Unplug the power from mains if the device will not be used for a few days or more.
- To unplug the power cords; do not pull on the power cords 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 one of the power supply cords 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 periodically. Contact your dealer or service center for replacement if damaged.

• **CONNECTIONS**: All inputs and outputs (except for the power input) are Electrical energy source class 1 (ES1) as defined in IEC/UL 62368-1 edition 2.
ES1 limits: 60Vdc or 30V rms/ 42.4V peak.

• **SERVICING**: Disconnect all power supply cords from main before servicing.
According to IEC 62368-1 standard, an ordinary person is authorized to:
- Open the front panel cabinet and clean the air filter (depending on the model)
- Change a removable power supply (depending on the model)

The fuse(s) present in the unit have not been designed to be replaceable.

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. The internal Lithium cell battery is not replaceable. In case of problem, contact your supplier or Analog Way.

• **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.

3.1.2 French

Afin de mieux comprendre le fonctionnement de cet appareil nous vous conseillons de bien lire toutes les consignes de sécurité et de fonctionnement 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** : Ne convient pas aux enfants. Afin de prévenir tout risque de choc électrique et d'incendie, ne pas exposer cet appareil à la pluie, à l'humidité ou à des sources de chaleur intense. Cet équipement ne convient pas pour une utilisation dans des endroits où des enfants sont susceptibles d'être présents.

• **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. Raccordement des équipements à l'alimentation principale doit être postérieur au disjoncteur de branchement de l'installation électrique du bâtiment.

Pour les équipements identifiés avec les symboles ci-dessus, une mise à la terre est obligatoire avant branchement. Utiliser un câble de terre pour relier une vis du châssis de l'appareil à la terre.

• **CORDON D'ALIMENTATION** : L'appareil est équipé d'un ou plusieurs cordons d'alimentation détachables.

Un appareil identifié avec le symbole ci-dessus indique que l'équipement possède plusieurs cordons secteurs. La mise hors tension se fait en débranchant tous les cordons de l'appareil.

Attention : Les cordons d'alimentation constituent le seul moyen de débrancher l'appareil totalement de l'alimentation secteur.

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 les cordons d'alimentation de la prise murale si vous prévoyez de ne pas utiliser l'appareil pendant quelques jours ou plus.

- Pour débrancher les cordons, tirez-les par la fiche. Ne tirez jamais sur les cordons 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 un des cordons 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 les câbles 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 d'alimentation) sont des sources d'énergie électrique de classe 1 (ES1) tel que défini dans IEC/UL 62368-1 édition 2.

ES1: Electrical energy source class 1 (limites : 60Vdc ou 30V rms/ 42.4V peak).

• **RÉPARATION ET MAINTENANCE** : Débrancher les cordons d'alimentation avant toute maintenance.

Selon la norme IEC 62368-1, une personne ordinaire est autorisée à :

- Ouvrir la face avant pour nettoyer le filtre à air (dépend du modèle)

- Changer un bloc d'alimentation accessible de l'extérieur (dépend du modèle)

Le ou les fusibles présents dans l'appareil n'ont pas été conçus pour être remplaçables.

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.

La pile bouton au Lithium présente à l'intérieur de la machine n'est pas remplaçable. En cas de problème, contactez le service après-vente, votre revendeur ou adressez-vous 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.

3.1.3 Italian

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**: Questo apparecchio non e' adatto all'utilizzo da parte di bambini. 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. Questo apparato non e' adatto all'utilizzo in luoghi dove ci siano presenti bambini.

• **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. Ció 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. Connessione delle apparecchiature alla rete elettrica deve essere successiva interruttore di circuito dell'impianto dell'edificio.

Per apparecchiature identificate con i simboli sopra, collegare la terra prima di collegarla all'alimentazione. Utilizzare un cavo di terra per mettere a terra la vite del telaio dell'unità.

• **CAVO DI ALIMENTAZIONE**: Il dispositivo è dotato di uno o più cavi di alimentazione removibile.

Un dispositivo identificato con il simbolo sopra indica che l'apparecchiatura dispone di più cavi di alimentazione. Per rimuovere le alimentazioni scollegare i cavi dalla Presa.

Attenzione: i cavi di alimentazione sono l'unico di disconnettere l'apparecchio all'alimentazione.

Seguire le instruzioni 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.

- Scollegare l'apparecchiatura dalla presa a muro se si prevede di non utilizzarla per qualche giorno.

- Per disconnettere i cavi, tirare facendo forza sul connettore.

- La prese d'alimentazione deve trovarsi a prossimità dell'apparecchiatura ed essere facilmente accessibile.

- Non far cadere il cavo di alimentazione né appoggiarci sopra degli oggetti pesanti.

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

• **CONNESSIONE**: Tutti gli ingressi e le uscite (ad eccezione per l'ingresso di alimentazione) sono sorgenti di energia in classe 1 (ES1) come definito nelle normative IEC/UL 62368-1 edizione 2. Limiti ES1: 60Vdc or 30V rms/ 42.4V di picco.

• **RIPARAZIONI E ASSISTENZA**: Scollegare tutti i cavi di alimentazione dalle prese prima di fare manutenzione. In accordo alle normative IEC 62368-1, no addetti alla manutenzione possono effettuare le seguenti operazioni :

- Aprire il pannello frontale e effettuare la pulizia dei filtri (dipende dal modello)

- Sostituire un alimentatore rimuovibile (dipende dal modello)

I fusibili presenti nel dispositivo non sono stati progettati per essere sostituibili.

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 ció puó provocare all'utilizzatore un rischio di shock elettrico o altri rischi. La batteria al litio all'interno dell'apparato non e' sostituibile. In caso di problemi contattare il fornitore o Analog Way.

• **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.

3.1.4 German

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**: Nicht für Kinder geeignet. Um jegliches Risiko eines Stromschlags oder Feuers zu vermeiden, das Gerät nicht Regen, Feuchtigkeit oder intensiven Wärmequellen aussetzen. Dieses Gerät ist nicht geeignet, um in der Nähe von Kindern betrieben zu werden. Lassen Sie Kinder in der Nähe des Geräts nicht unbeaufsichtigt.

• **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. Anschluss von Geräten ans Stromnetz muss nach Abzweigschalter des Gebäudes Installation.

Für Geräte, die mit den obigen Symbolen gekennzeichnet sind, Zuerst das Gerät erden bevor die Spannungsversorgung hergestellt wird. Verwenden Sie Erdungskabel und eine Schraube auf der Rückseite des Gehäuses, um das Gerät zu erden.

NETZKABEL: Das Gerät ist mit ein oder mehrere lösbaren Netzkabel ausgestattet.

Ein mit dem obigen Symbol gekennzeichnetes Gerät weist darauf hin, dass das Gerät über mehrere Netzkabel verfügt. Um es völlig vom Netz zu trennen, ziehen Sie bitte die Netzkabel aus der Kaltgerätebuchse.

Achtung: Die Netzkabel stellt die einzige Möglichkeit dar, das Gerät vollständig vom Netzanschluss zu trennen.

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.
- Trennen Sie das Gerät vom Stromnetz, wenn es einige Tage oder länger nicht benutzt wird.
- Die Kabel mittels des Steckers 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 darauf stellen.

Wenn eines der Netzkabel 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. Die Stromkabel regelmäßig untersuchen. Für Ersatz wenden Sie sich an Ihren Verkäufer oder eine Kundendienststelle.

• **ANSCHLÜSSE**: Alle Eingänge und Ausgänge (ausgenommen der Stromversorgung) entsprechen der der ES1 Klassifizierung entsprechend der IEC/UL 62368-1 Edition 2. ES1 max. Auslegung: 60Vdc oder 20V rms / 42,4V Spitze.

• **REPARATUR UND WARTUNG**: Trennen sie alle Netzkabel vom Strom, bevor Sie eine Wartung oder andere Arbeiten am Gerät durchführen.

Gemäß der IEC 62368-1 Norm ist ein gewöhnlicher Nutzer autorisiert, gemäß der Betriebsanleitung folgendes am Gerät durchzuführen:

- Öffnen der vorderen Gehäuseabdeckung und Reinigung des Luftfilters (hängt vom Modell ab)
- Austauschen der herausnehmbaren Netzteile (hängt vom Modell ab)

Die im Gerät vorhandene(n) Sicherung(en) ist/sind nicht dafür ausgelegt, austauschbar zu sein.

Der Benutzer darf keinesfalls versuchen das Gerät selbst zu reparieren, die Öffnung des Geräts durch Abnahme der Abdeckhaube oder jeglichen anderen Teils des Gehäusessowie die Entfernung von außen sichtbaren Schrauben zu Stromschlägen oder anderen Gefahren für den Benutzer führen kann. Die im Gerät eingebaute Lithium Batterie ist nicht austauschbar. Im Falle eines Problems nehmen Sie Kontakt mit Ihrem Lieferanten auf oden au Analog Way.

• **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.

3.1.5 Spanish

Para comprender mejor el funcionamiento de este aparato, le recomendamos que le acuidadosamente 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**: No recomendado para niños. Para prevenir cualquier riesgo de choque eléctrico y de incendio, no exponga este aparato a la lluvia, a la humedad ni a fuentes de calorintensas. Este equipo no es adecuado para su utilización en lugares donde haya niños.

• **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. Conexión del equipo a la red eléctrica debe ser posterior del interruptor de circuitos derivados de la instalación del edificio.

Para equipos identificados con los símbolos anteriores, conecte la toma de tierra antes de conectar el equipo al suministro eléctrico. Utilice un cable para conecta cualquier tornillo del chasis, con la toma de tierra de la instalación.

• **CABLE DE ALIMENTACION**: El equipo se suministra con uno o más cables de alimentación.

Un dispositivo identificado con el símbolo anterior indica que el equipo tiene más de un cable de alimentación. Si desconectamos el cable dejamos al equipo sin alimentación.

Atención: Los cables de alimentación constituyen el único medio de desconectar el aparato totalmente de la red eléctrica.

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 los cables, tire de la clavija. No tire nunca de los cables propiamente dichos.
- El enchufes 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 ellos.

Si uno de cables 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 los cables 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 de corriente) son de nivel eléctrico clase 1 (ES1) tal como se define en la norma IEC / UL 62368-1 2. Límites de ES1 60 VCC ó 30 V rms / 42,4 V de pico.

• **REPARACIÓN Y MANTENIMIENTO**: Desconecte todos los cables de alimentación de la red eléctrica antes de realizar el mantenimiento.

De acuerdo con la norma IEC 62368-1, solo una persona autorizada puede realizar esta operación:

- Abra el frente del equipo y limpie el filtro del aire (depende del modelo)
- Cambie la fuente de alimentación extraíble (depende del modelo)

Los fusibles presentes en el dispositivo no han sido diseñados para ser reemplazables.

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. La batería interna de litio no es reemplazable. En caso de problema, contacte con su proveedor o Analog Way.

• **ABERTURAS Y ORIFICIOS**: Los aparatos pueden contener aberturas (aireación, ranuras, etc.). Nointroduzca 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.

3.1.6 Symbols on product identification and warning labels

⚡	Caution, risk of electric shock	All power sources shall be disconnected before servicing to avoid shock hazard.
PE	Connect protective earth before connection to mains	The protective conductor (PE) should be connected first to main protective earthing terminal before connecting the line and neutral.
⏚	Protective earth	Connect an earth terminal to the ground.

	Disconnection, all power plugs	All power sources shall be disconnected before servicing to avoid shock hazard.
∿	Alternating current	The equipment is suitable for alternating current only.
⚠	Caution	The current situation needs operator awareness or operator action in order to avoid undesirable consequences.
	Caution, moving fan blades	Keep away from moving fan blades.

Waste Electrical and Electronic Equipment (WEEE) Directive

In the European Union, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

Richtlinie über Elektro- und Elektronik-Altgeräte (WEEE)

In der Europäischen Union wird mit diesem Etikett darauf hingewiesen, dass dieses Produkt nicht mit dem Hausmüll entsorgt werden darf. Es muss bei einer entsprechenden Einrichtung zum Recycling abgegeben werden.

Waste Electrical and Electronic Equipment Directive (Directiva sobre Residuos de aparatos eléctricos y electrónicos - WEEE)

En la Unión Europea, esta etiqueta indica que la eliminación de este producto no se puede hacer junto con el desecho doméstico. Debe depositarse en instalaciones adecuadas para permitir la recuperación y el reciclaje.

Directive sur la mise au rebut des appareils électriques et électroniques (Waste Electrical and Electronic Equipment - WEEE)

Dans l'Union européenne, cette étiquette indique que ce produit ne doit pas être jeté avec les déchets ménagers. Il doit être déposé à un site de récupération et de recyclage.

Direttiva Rifiuti di apparecchiature elettriche ed elettroniche (RAEE)

Nell'Unione Europea, questa etichetta indica che il presente prodotto non deve essere smaltito insieme ai rifiuti domestici. Deve essere depositato in un impianto adeguato per consentirne il recupero e il riciclaggio.

3.1.7 Environmental specifications for all Midra 4K models

• Product Weight: **all models**: 7,6kg

General:
• Dimensions without rack mount and handles: W 440 x H 88 x D 434 mm
• Dimensions with rack mount and handles: W 482,5 x H 88 x D 474 mm
• Product Weight: 7,6kg
• Cooling air flows from front side to rear.
• Max ambient operating temperature: < 40°C (< 104°F).
• Operating temperature: 0 to +40°C / +32°F to +104°F
• Storage temperature: -10 to +60°C / +14°F to +140°F
• Operating humidity: 10 to 80% (non-condensing)
• Input voltage range: 100-240 VAC autosensing, 50/60 Hz 3A
• Max consumption: 95W

Safety standard:
• IEC/EN/UL 62368-1
• CSA C22.2#62368-1

Electromagnetic compatibility:
• EN55032
• EN55024
• EN61000-3-2
• EN61000-3-3
• CFR47 Part 15
• ICES-003

Environment:
• RoHS
• WEEE

Caution: Should the unit lose power unexpectedly; unsaved settings may be lost.

3.2 Package Contents

The Midra 4K sales package includes:

- One Midra 4K unit
- One power supply cord
- One Rackmount kit
- One Ethernet cross cable
- One Quick start guide*

*The latest versions of the User manual and Quick start guide are also available on **www.analogway.com**

3.3 Rack mount information

All Midra 4K units are equipped with 4 handy anti-slip rubber feet and can be used directly on a table.
For rack mount installation, see document *Midra 4K – Rack mount.pdf* attached to this manual.

4 Introducing Midra 4K™

Before setting up the Midra 4K for the first time, please read through all of the documentation to become familiar with its powerful features. The Midra 4K is an ideally tailored video production tool for small and mid-size live event staging and fixed installation applications.

4.1 Midra 4K product range

The Midra 4K product range includes four models:

- **QuickVu 4K**
- **QuickMatrix 4K**
- **Pulse 4K**
- **Eikos 4K**

All models have similar front panels and rear panels, they offer the same capabilities in terms of inputs and outputs plugs. The models have different operating modes and capabilities.

Note: The **Pulse 4K** and the **Eikos 4K** can use Images or **Live Inputs as Background content**.
Other models can only use Images as Background content.

Midra 4K Models	Operating modes	Output 1	Output 2	Can use Live Inputs in Screen Background
QuickVu 4K	Mixer mode only (S-Aux)	1 ML or 2 SL	AUX	No
QuickMatrix 4K	Matrix mode only (S-S)	1 ML or 2 SL	1 ML or 2 SL	No
Pulse 4K	Mixer mode (S-Aux)	2 ML or 4 SL	AUX	Yes
	Matrix mode (S-S)	1 ML or 2 SL	1 ML or 2 SL	
Eikos 4K	Mixer mode (S-Aux)	2 ML or 4 SL	AUX	Yes
	Matrix mode (S-S)	1 ML or 2 SL	1 ML or 2 SL	
	Blend mode	2 ML or 4 SL		

Note: ML = Mixing Layer and SL = Split Layer

Table 1 - Midra 4K family

For more information, see *6.3 Operating modes* page 39.

All Midra 4K units can be fully operated from their front panel.

4.2 Front and rear panel

- All models share common keys on the front panel but some keys differ to match the functions of the device.

- All models have the same rear panel with the Analog and Dante audio card being an option.
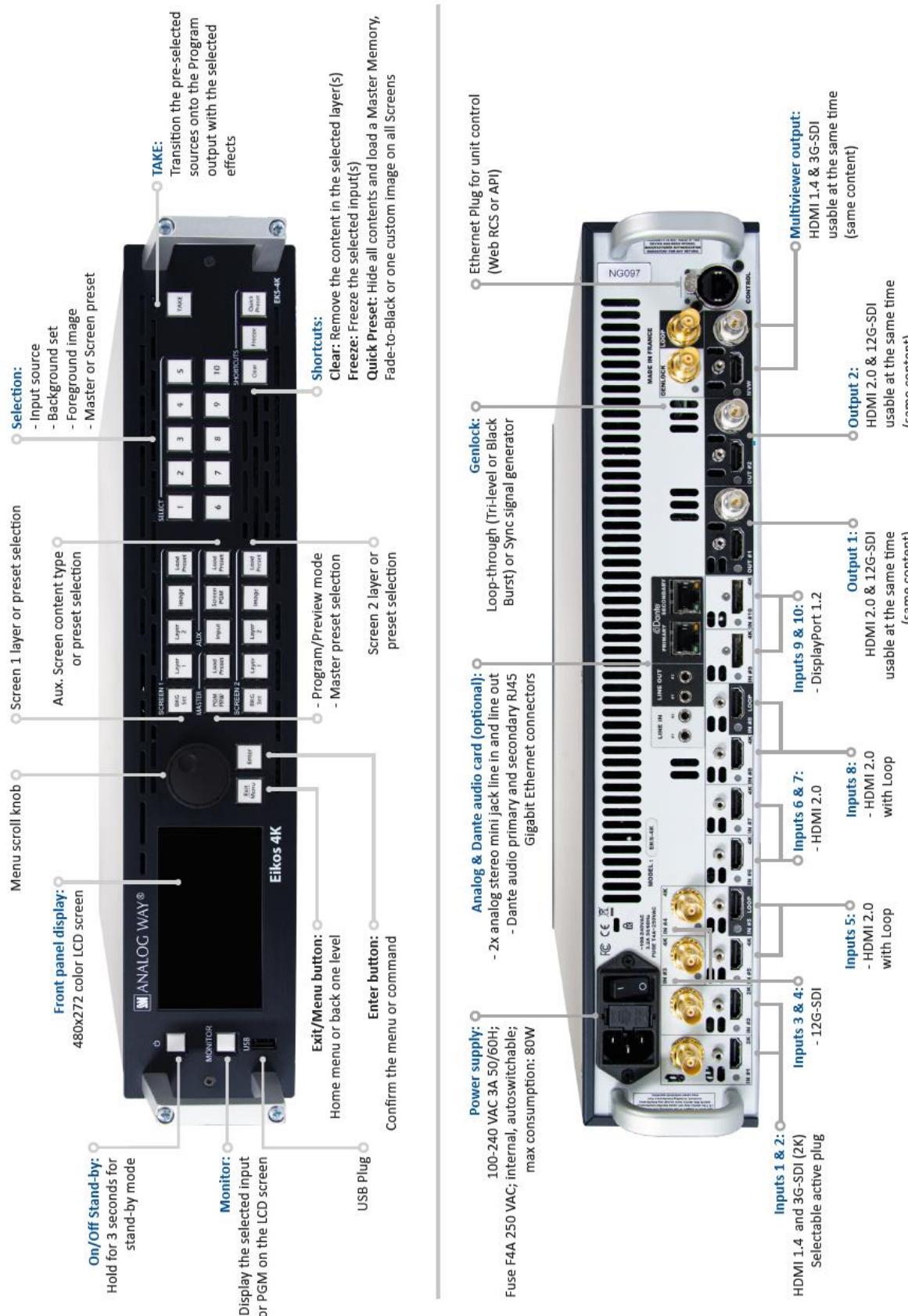
Fig. 1 -   Midra 4K front and rear panels (ex: Eikos 4K)

4.2.1 QuickVu 4K front panel

Fig. 2 -   QuickVu 4K front panel

The **QuickVu 4K** always has One Screen and One Aux. Screen, so there is no *SCREEN 2 area* and no keys associated. The other keys work as on other Midra 4K devices.

4.2.2 QuickMatrix 4K exclusive front panel keys

Fig. 3 -   QuickMatrix 4K front panel

The **QuickMatrix 4K** always has Two Screens and no Aux. Screen.

- The *AUX area* is replaced by a *PRESETS area* with three keys to load Memories on Screen 1, Screen 2 or the Multiviewer.
- Each *SCREEN area* has a corresponding **TAKE** key.
- The common **TAKE** key is replaced by a **TAKE ALL** key that triggers transition on both Screens.

The other keys work as on other Midra 4K devices.

4.2.3 Front panel USB port

The front panel USB port is used to update the device, transfer images or export/import configurations, etc.

4.2.4 Inputs and Outputs

All models have the same input and output plugs and capabilities. See *Fig. 1 - Midra 4K front and rear panels (ex: Eikos 4K)*, page 24 for the location of each plug.

- **Input 1 & 2** are multi-plug (HDMI1.4 and 3G-SDI) with one plug being active.
- **Input 3 & 4** (12G-SDI)
- **Input 5** (HDMI 2.0 with Loop)
- **Input 6 & 7** (HDMI 2.0)
- **Input 8** (HDMI 2.0 with Loop)
- **Input 9 & 10** (DisplayPort 1.2)
- **Output 1 & 2** are multi-plug (HDMI 2.0 and 12G-SDI). The two plugs of the same output can be used the same time, the signal will be identical (same content, same resolution, same rate).
- **Multiviewer** is multi-plug (HDMI 1.4 and 3G-SDI). The two plugs can be used the same time.

Note: Some output formats will only work on one plug if the other one does not support the format.

4.2.5 Genlock and Loop

Genlock is used to synchronize the frame rate of multiple devices with a physical connection.

- The Genlock input is used to synchronize the Midra 4K unit with an external reference.
- The Genlock Loop is then used to send the sync signal to other devices.
- The Genlock Loop can also be used alone (as a sync signal generator).

Note: Both Black burst and Tri-level sync signals are supported for Genlock.

4.2.6 Optional Analog and Dante audio card

All Midra 4K units can de-embed audio channels from all inputs and re-embed on all outputs.
In addition, they can be equipped with an optional Analog and Dante audio card.

Fig. 4 -   Analog and Dante audio card

The Analog audio is composed of two analog stereo mini jack line in and two line out 1/8" (3,5 mm).
The Dante audio is composed of two Ethernet ports (dual redundancy) and support AES67.

It is possible to de-embed audio channels from all inputs, Analog inputs or Dante network. Then re-embed audio on all outputs, Analog outputs or Dante network.

Dante audio can only be controlled from the Dante ports used as primary & secondary connections.
The Dante network is a network dedicated to audio and separated from the Midra 4K network.

Note: For more information on Audio settings, see *20 Advanced audio* settings page 127.

4.3 Power on and off

4.3.1 Start the Midra 4K

To start the Midra 4K unit safely and correctly:

1. Connect all inputs and outputs.
2. Connect the power cable to the unit and then plug it into a mains socket.
3. Press the power button on the front panel.

4.3.2 Power off

Tip: - The following procedure is the recommended method to safely turn off the Midra 4K unit.
- Saving the configuration before powering off is not necessary. The unit saves the current configuration in real time.

4.3.2.1   Power off from the Front panel

To turn off the Midra 4K unit, press the Power button then press the Enter button to confirm.

4.3.2.2   Power off from the Web RCS

Click   in the Web RCS top bar, then click **Standby** and confirm.

4.3.3 **Forced shutdown**

Caution: Use forced shutdown only if the unit has crashed. Using forced shutdown regularly is not recommended.

If the Midra 4K unit crashed, turn off the power by Forced shutdown.

- Press and hold the Power button on the front panel until shutdown.

4.4 **Precautions when mounting a Midra 4K unit**

Warning: - Follow these precautions to avoid risks for products and users.

- Do not put a magnetic plate in contact with the upper part of the unit as it may block the fans of the unit.

When mounting the Midra 4K unit, ensure proper air flow and consider the following points on safe use.

- Always use the two front handles of the chassis for easy mounting into any standard rack or flight case.
- Place the unit preferably in a cool and dry environment.
- The fans inside the unit expel the heat through the front and rear panels. Therefore, it is crucial that both the front and the rear are always unobstructed. A minimum of 50 cm (20 in.) of clear space at the front and rear of the unit is recommended.
- Do not block the ventilation.
- Do not place any fluid above or near the unit.
- Do not place any magnetic equipment on or near the unit.
- Do not apply any pressure against the chassis or the connectors.

5   Using the Web RCS
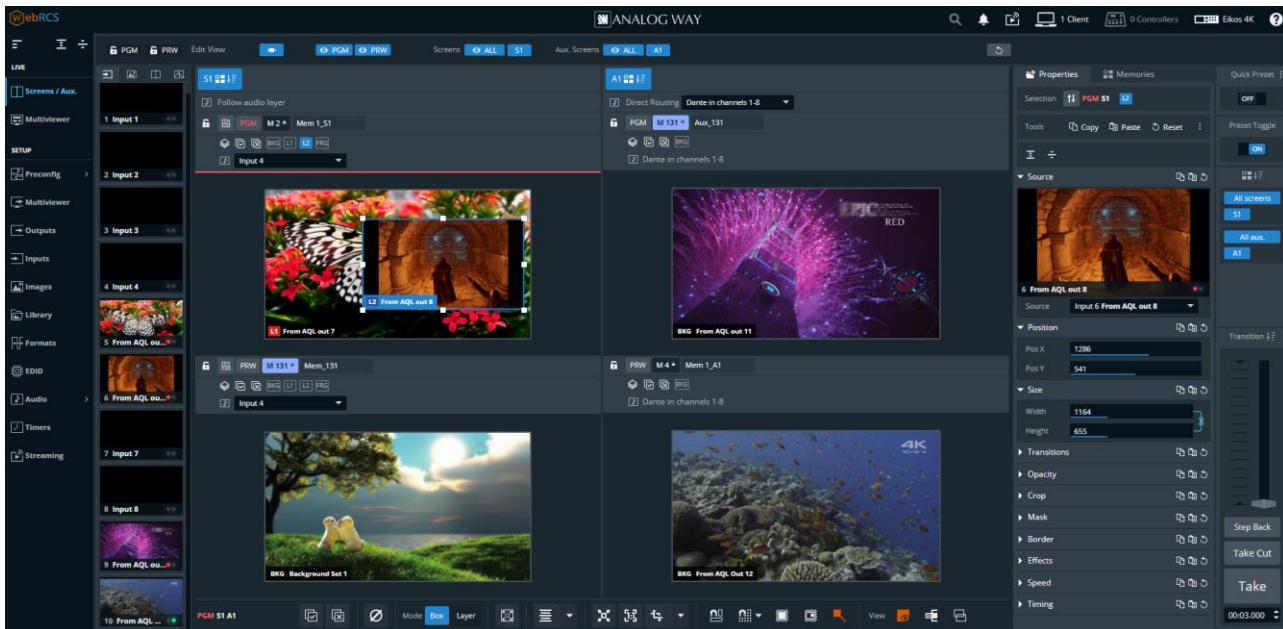
*Fig. 5 -   Web RCS Interface – **To do* recapture in 3.0***

The **Web RCS** is the main controller for the Midra 4K. It is embedded in all units and compatible with all operating systems. Midra 4K can be operated from any computer via wired network connection without installing any software.

Midra 4K units can also be controlled from their dedicated controller: the **RC400T**.

Note: - For more information, see *Appendix A RC400T* page 132.

- Control can also be integrated into automation and control systems, for more information, contact your local technical support.

- The Web RCS supports both HTTP and HTTPS protocols.

5.1   Run the Web RCS

5.1.1   Web RCS requirements

- 1Gb Ram
- 200Mb of free space
- 100Mb Network adaptor or above
- 1920x1080 is the minimum and optimized screen resolution

Operating system:
- Windows 7 or above
- Mac OS v10.7 or above
- Ubuntu v10 or above
- Linux OS 11 or above

Web browser:
- Chrome (Recommended)
- Firefox
- Edge
- Opera
- Safari

Recommendation: Use the latest version of the web browser and keep it up to date.

The **Web RCS** is based on HTML5 and does not require Flash. It is optimized for Chrome web browser in full screen mode.

5.1.2 Default network settings

Connect a computer to the Midra 4K unit via LAN connection. Use a crossover cable if connecting directly to the unit or use straight cables if connecting through a switch or hub.

Tip: All connections should be done before starting the Midra 4K unit.

Default network settings:

IP Address: 192.168.2.140
Subnet Mask: 255.255.255.0
Port: 80

Note: Make sure that ports 80, 443, 10591, 10606 and 10691 are available on your network and/or not blocked by firewall.

To connect to this address, a computer needs to be configured to use a unique IP address on the same network. If this setup is part of a larger network with other devices, please check with your network administrator before plugging these devices into the network to avoid any IP address conflicts.

Example of static IP address on one computer:

Computer IP address: 192.168.2.50
Computer Subnet Mask: 255.255.255.0

5.1.3 Connection

To access the **Web RCS**, launch a web browser and enter the Midra 4K IP address in the address bar. It is possible to connect multiple computers to the same Midra 4K unit for real-time collaboration.
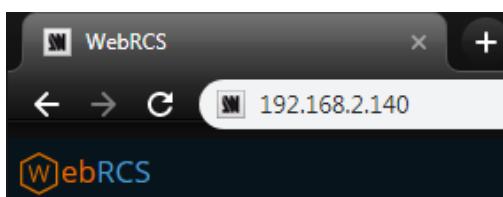
Fig. 6 -   Web RCS connection

All devices default IP addresses are **192.168.2.140**.

Tip: Computers using energy saving mode may turn off the network adaptor during periods of inactivity. Disable the energy saving mode to ensure the connection remains active.

5.1.4 Login page

If conditional access is needed, the Web RCS can be protected by a password.

Note: For more information, see *5.3.6 Dashboard – Remote Control* page 33.

5.1.5 Midra 4K Simulator

The Midra 4K Simulator is available on **www.analogway.com**.
Using the simulator, it is possible to simulate any Midra 4K series multi-screen live presentation system on PC or Mac, and then launch the integrated Web RCS. It is the perfect tool to practice or rehearse when using a real unit is not possible. It is also a free opportunity to discover the Web RCS for the first time and learn the Midra 4K concepts.

Tip: Configurations created in the simulator can be exported/imported to a real unit, including the image library.

Note: For more information about using Midra 4K Simulator, see the Quick Start Guide available on **www.analogway.com**

5.2 General tips

5.2.1 Web browser features

The Web RCS is fully browser integrated and behaves like any web site.
It manages browser features such as:

- Previous page / Next Page
- Multi-selection of items using the Ctrl or Shift keys
- Open in new tab / Open in new page
- Enter direct URL
- Bookmark any page
- Supports browser-based language translators

5.2.2 Section buttons (copy, paste and reset)

On multiple pages of the Web RCS, the following buttons appear:

: Copy the settings   : Paste copied settings   : Reset the settings
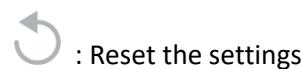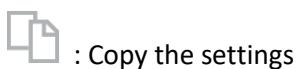
These buttons are associated to a specific section. Use these buttons to quickly copy, paste or reset the settings of one section. Paste works when similar settings are currently copied (i.e. layer position copied to a different layer in a different screen).

5.2.3 Set a number value

In the Web RCS, the fields for number values can be set and adjusted in different ways:
- Click and enter a number value
- Click the field and hold then move the mouse left or right
- Click and use the scroll wheel for small adjustments (mouse must remain in the field)
- Click the *Up* and *Down* arrows at the end of the field for single unit adjustment

5.2.4 Search bar

In the top bar, use the search bar to simply access a feature or setting.

1. Click the search bar.
2. Enter a keyword to search (ex: Input, Pattern, Keying).

The search results are displayed.

3. Click a result to open the corresponding page.

5.2.5 Alarms and notifications

In the top bar, alarms and notifications display when the following events occur:

- A component is missing or not detected
- A component is not compatible with the current firmware version
- A high temperature has been measured (card, fan, or device alarm)
- Pending changes are waiting to be applied

Open the history log to check history of alarms and notifications.
It is possible to mark notifications as read or clear them all.

Tip: On the device front panel, the buttons **Enter** and **Exit** blink when an alarm is triggered. The blinking stops when the alarm stops (ex: temperature becomes normal again).

5.3 Back panel shortcuts

In the top bar, click [icon] to show the virtual Back panel.
Click the connectors to access their settings directly.

5.4 Standby / Restart

In the top bar, click [icon] then **Standby** or **Restart** and confirm.

5.5 Online stream status

The icon [icon] shows the status of the online stream. Click it to access quick settings.

Note: For more information, see *19 Streaming* page 102.

5.6 Device control synchronization

A Midra 4K device can be connected to multiple control instances (multiple Web RCS page, RC400T, etc.). From the Web RCS, it is possible to set if one control instance is synchronized or desynchronized with the server.
When a control instance is synchronized with the server, the layer selection and the selection of Screens affected by transitions are applied to all other synchronized control instances (Web RCS page, RC400T, etc.).

Tip: By default, synchronization to server is disabled on all instances to work without other instances changing the layer selection or the selection of Screens affected by transitions.

5.6.1 Web RCS synchronization

1. In the top bar, click [icon].

    The sync status of the current Web RCS page is displayed as well as the number of currently opened Web RCS pages.
2. Toggle **Selection Synced to Server** to enable / disable synchronization to other control instances.
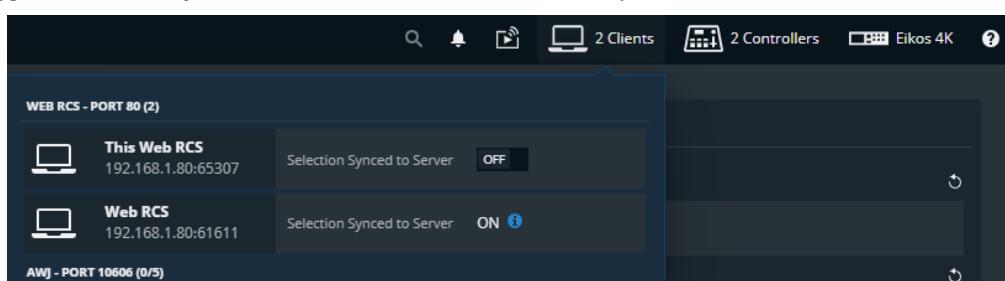
Fig. 7 - Web RCS synchronization

5.6.2 **RC400T synchronization**

1. In the top bar, click ⌨.

   The sync statuses of the connected RC400T controllers are displayed.
2. Toggle **Selection Synced to Server** to enable / disable their synchronization to other control instances.
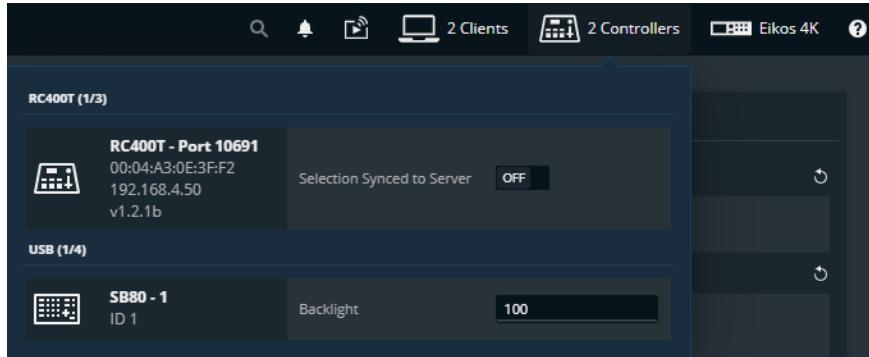
Fig. 8 -   RC400T synchronization

Tip: Program and Preview Screens that are protected by lock in the Web RCS cannot be modified by the RC400T when synchronized to server. Layers cannot be modified; Memories cannot be loaded but transition can be triggered. For more information on Screen lock, see *15.1.1 Program and Preview* page 74.

5.7 **Dashboard - System settings**

In the **Dashboard**, check device status and modify general system settings.
In the top bar, click ⌨ then any sub item of the Dashboard to enter the Dashboard menu.
Click on Dashboard items on the left panel to open the corresponding settings on the right panel.
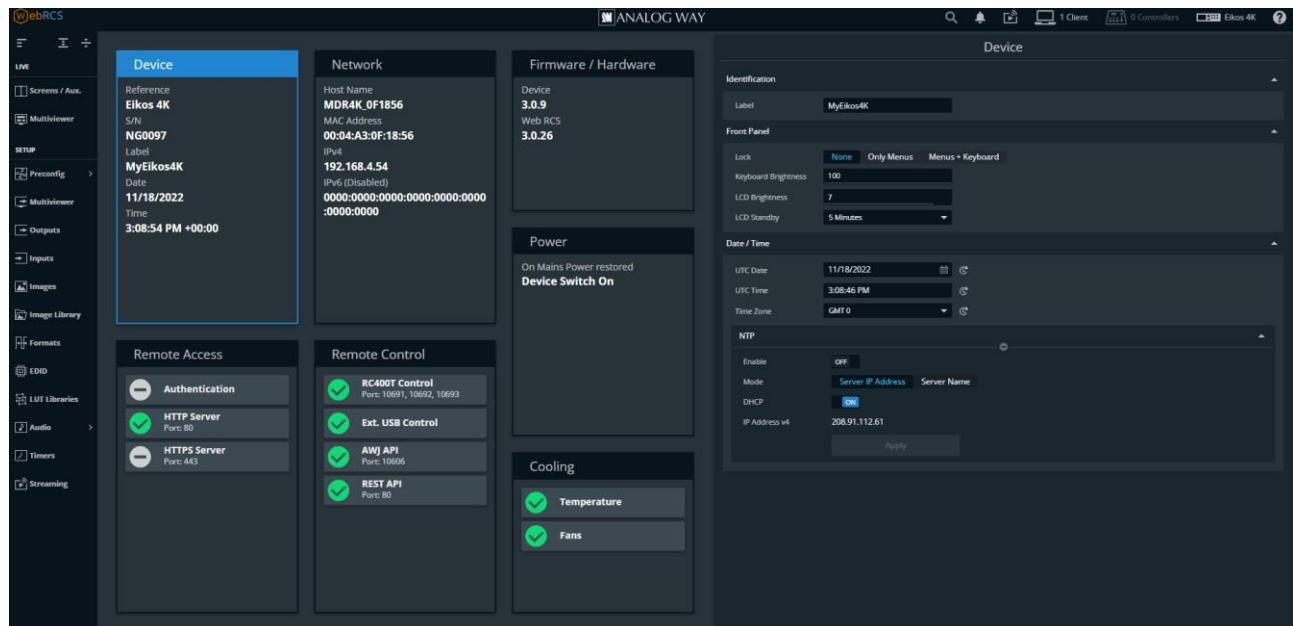
Fig. 9 -   Dashboard

5.7.1 Dashboard – Device

1. In **Identification**, enter a name for the device.
2. In **Front Panel**,
   a. Set a **Lock** on all Front panel keys or only the configuration menu.
   b. Set the Keys buttons Brightness.
   c. Set LCD screen Brightness.
   d. Set the LCD screen timeout before standby.

Caution: Disabling the LCD Standby may shorten the LCD backlight lifespan.

3. In **Date / Time**,

   a. Set the device UTC Date and UTC Time. Click 🕐 to use local computer date or time.
   b. If needed, set the Time Zone.
   c. If using Network Time Protocol (**NTP**), toggle the Enable button.
   d. Select **Server IP Address** and enter an IPv4 address or use DHCP, then apply.
      Or select **Server Name** and enter a name, then apply.

Note: When using NTP, the first connection can last a few minutes. If the connection fails, the settings are not applied.

5.7.2 Dashboard – Network

1. Go to the **Dashboard** > **Network**.
2. In **Adapter**, set Host name.
3. In **IPv4**, manage DHCP, set IP address, Netmask, Gateway and DNS.
4. Click **Apply**.
5. If needed, enable and set **IPv6** and click **Apply**.

5.7.3 Dashboard – Remote Access

In **Dashboard** > **Remote Access**, enable / disable password protection for the Web RCS and enable HTTPS Server.

5.7.3.1 Default Web RCS password

By default, the password to access the Web RCS is the Midra 4K unit MAC address.
The MAC address is displayed on the front panel of the unit and in the Web RCS in **Dashboard** > **Network**.

Note: The default password is *11:22:33:44:55:66* when using the Midra 4K Simulator.

5.7.3.2 Enable Web RCS password protection

Note: Enabling password protection will disconnect all Web RCS pages currently opened.

1. Go to the **Dashboard** > **Remote Access**.
2. In **Basic Authentication**, toggle the Enable button.
3. Click **Apply**.

All opened Web RCS sessions are locked and return to a login page.

5.7.3.3 Lock an opened Web RCS session

To lock a session after logging in, close all instances of the web browser.

Tip: Reopen the web browser and try to access the Web RCS to make sure the session is locked.

5.7.3.4 Change Web RCS password

1. Go to the **Dashboard** > **Remote Access**.
2. In **Change password**, enter the new password.
3. Enter the same password to confirm.
4. Click **Apply**.

5.7.3.5 Reset Web RCS password from the front panel

If the password is lost or forgotten, it can be reset from the front panel of the Midra 4K unit.

Note: The password can only be reset from the front panel.

1. On the Front panel, go to **Control**.
2. Go to **Reset/Erase**.
3. Go to **Reset Authentication Password**.
4. Select **YES** to confirm.

The Web RCS password is reset to default value (device MAC address).

5.7.3.1 Enable/Disable HTTP and HTTPS on the Web RCS

The Midra 4K supports HTTPS protocol. It is possible to enable/disable HTTP and HTTPS.

Caution: Make sure port 443 is available on your network and/or not blocked by firewall to use HTTPS.

Tip: If the Web RCS is not accessible, use the front panel to re-enable the HTTP Server, see *5.7.3.3 Reset HTTP and HTTPS settings.*

1. Go to the **Dashboard** > **Remote Access**.
2. In **HTTP Server**, toggle the enable button for HTTP.
3. In **HTTPS Server**, toggle the enable button for HTTPS.
4. Click **Apply**.

If HTTP has been disabled. The current page will be disconnected from the Web RCS.
Use **https://** before the device IP address to access the Web RCS in HTTPS (**https://192.168.2.140** by default).

5.7.3.2 Import custom HTTPS certificate

It is possible to import a private certificate and key to secure the connection to the device.

Note: Make sure port 443 is available on your network and/or not blocked by firewall.

1. Go to the **Dashboard** > **Remote Access**.
2. In **Current Certificate & Key**, load the certificate and private key files in the Web RCS using the file explorer or drag and drop.
3. Click **Upload**.
4. Click **Apply**.

5.7.3.3 Reset HTTP and HTTPS settings

Note: The HTTP and HTTPS settings can only be reset from the front panel.

1. On the Front panel, go to **Control**.
2. Go to **Reset Settings**.
3. Go to **Reset HTTP/HTTPS Servers**.
4. **Apply**.

The Web RCS HTTP and HTTPS settings are reset to default value (HTTP On and HTTPS Off).

5.7.4 Dashboard – Remote Control

In **Dashboard** > **Remote Control**, enable/disable Web RCS control via RC400T, external USB controllers or APIs.

5.7.4.1 Enable RC400T, external USB controllers and APIs

1. Go to the **Dashboard** > **Remote Control**.
2. In **RC400T Controllers**, enable/disable RC400T connection to the Midra 4K unit.
3. In **External USB Controllers**, enable/disable Controllers connected to the Midra 4K unit USB ports.
4. In **Application Programming Interfaces**, enable/disable Midra 4K control via AWJ Protocol or REST API.

Note: The network ports used for RC400T and AWJ are displayed on the Remote Control card.

- For more information about RC400T, see *Appendix A RC400T* page 132.

- AWJ is a JSON based protocol developed by Analog Way for Midra 4K. AWJ is a bidirectional TCP API, it grants full control on a Midra 4K device and receives real-time status updates from the Midra 4K device. For more information, visit **www.analogway.com**.

5.7.5 Dashboard – Firmware / Hardware (Firmware Update)

Prerequisite: Go to **www.analogway.com** and download the latest Midra 4K updater.

Note: In some cases, updating the Midra 4K unit may reset the Configuration (check the Release notes).

Tip: Export a configuration to recover it after the update (see *5.4 Save / Load Configuration* page 35).

5.7.5.1 Hardware status

The Hardware status is available if needed for System check or Technical support.

5.7.5.2 Update Firmware from Web RCS

1. Go to **Dashboard** > **Firmware / Hardware**.
2. Load the updater file in the Web RCS using the file explorer or drag and drop.
3. Click **Extract selected file**.

The updater files are extracted and verified.

4. Click **Install**.

After the installation, the Midra 4K unit reboots.

5. If needed, import saved Configuration.

Recommendation: Perform a default reset after a firmware update.

5.7.5.3 Update Firmware from the front panel

It is possible to update the firmware from the front panel using a USB drive. For more information, see *19.10.2 Firmware Update* page 120.

5.7.6 Dashboard – Power

1. Go to the **Dashboard** > **Power**.
2. In **Mode**, set **Device switch ON** or **Device standby** when connected to power or after a power failure.

5.7.7 Dashboard – Cooling

Caution: If the device temperatures are too high, the device will automatically shutdown to prevent damages.

Check the intake and internal device temperature. Two levels of alarms can appear if any temperature is too high: "abnormally high" and "dangerous".

Recommendation: In case of alarms, check that nothing is covering the unit and that the air flow is not blocked.

5.8 Save / Load Configuration

Tip: Saving the configuration before powering off is not necessary. The unit saves the current configuration in real time.

The Midra 4K units can export and import device configurations.
In addition to these features, the Midra 4K units also have two embedded memory slots to save and load configurations internally.
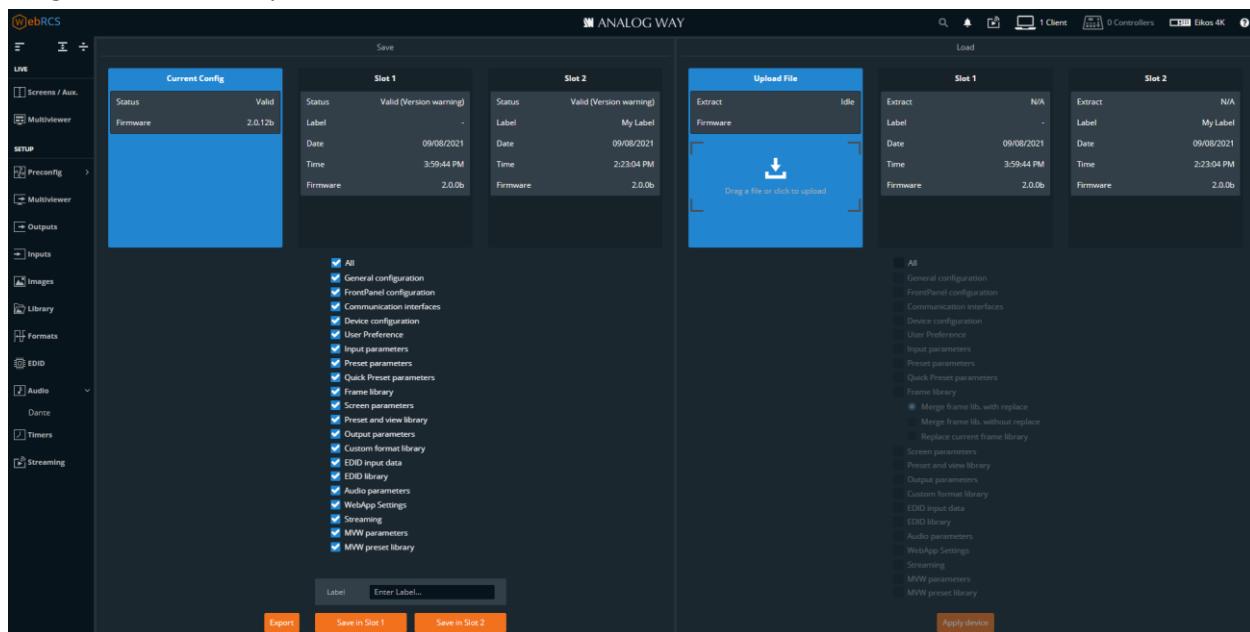
Fig. 10 -   Save / Load Configuration

5.8.1 Save the current Configuration in a Slot

1. In the top bar, click [icon], then **Save / Load**.
2. In the **Save** panel, click **Current Configuration**.
3. In the filters, select the settings to save.
4. Enter a label for the Configuration to save.
5. Click **Save to Slot 1** or **Save to Slot 2**.

The configuration is saved in the selected memory slot.

5.8.2 Load a Configuration from a Slot

1. In the top bar, click [icon], then **Save / Load**.
2. In the **Load** panel, select the slot to load.

The configuration is extracted and conflicting settings are grayed out in the filters (version incompatibility, obsolete information, device logs, etc.).

3. In the filters, select the settings to load.
4. Select how to merge the images in the Library.

Merge and replace	Merge and replace images in non-empty slots
Merge without replacing	Merge but keep images in non-empty slots
Replace current Image Library	Replace the entire device library with the import library
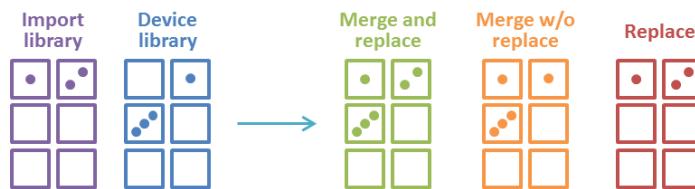
5. Click **Load**.

The configuration is loaded to the Web RCS and applied to the current configuration.

5.8.3 Export a Configuration to the computer

1. In the top bar, click [icon], then **Save / Load**.
2. In the **Save** panel, select the configuration to export (**Current Configuration, Slot 1** or **Slot 2**).
3. In the filters, select the settings to export.

> **Note:** Filtering is possible only if exporting the Current Configuration.

4. Click **Export**.

The configuration file is downloaded to the computer.

5.8.4 Import a Configuration

1. In the top bar, click [icon], then **Save / Load**.
2. In the **Load** panel, click **Upload file** and select the configuration file to import.
   Or drag and drop the configuration file from the computer file explorer to the **Upload file** area.

The configuration is extracted and conflicting settings are grayed out in the filters (version incompatibility, obsolete information, device logs, etc.).

3. In the filters, select the settings to import.
4. Select how to merge the images in the Library:

Merge and replace	Merge and replace images in non-empty slots
Merge without replacing	Merge but keep images in non-empty slots
Replace current Image Library	Replace the entire device library with the import library
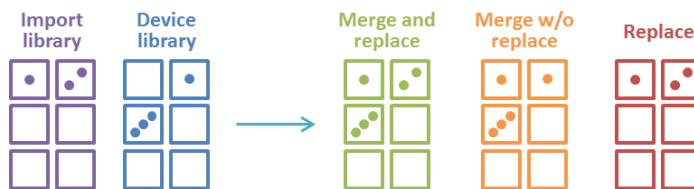
5. Click **Load**.

The configuration is loaded to the Web RCS and applied to the current configuration.

5.9 Reset configuration

1. In the top bar, click [icon], then **Reset**.
2. Select the reset mode:

Default Reset	Select the settings to be reset to default value.
Out of the box	Factory reset. All settings are reset to default value.

3. Click **Reset**.

The Midra 4K unit resets.

> **Recommendation:** Perform a default reset after a firmware update.

6 Midra 4K concepts

This chapter only describes the general concepts of the Midra 4K product line. Detailed procedures are available in the next chapters of the document.

6.1 Inputs capacity

As indicated on the rear panel, **Input 1** and **Input 2** have a particular design (see *Fig. 1 - Midra 4K front and rear panels* (ex: Eikos 4K), page 24). They both have Two plugs with lower bandwidth than other input plugs (up to 1920 x 1080 @120Hz and 4096 x 2160 @30Hz). Only one plug per input can be active, the status information of the other plug is available but the image preview is not possible.

All other inputs have one plug and support formats up to:

- **4096 x 2160 @60Hz**; **2560 x 1440 @144Hz** or **1920 x 1080 @240Hz**

Note: - Inputs support a rate up to 240Hz.

- Inputs 3 to 10 support resolutions with up to 4096 pixels in width or height (bandwidth must be within 4096x2160@60Hz).

6.2 Outputs and Multiviewer capacity

The two Outputs (4 plugs) support formats up to **4096 x 2160 @60Hz** or **2560 x 1440 @144Hz**.
The Multiviewer output (2 plugs) supports formats up to **2560 x 1600 @60Hz**.
All output plugs can be active at the same time, the same signal is sent on both plugs of the same output.

Note: - Outputs 1 and 2 support a rate up to 144Hz and the Multiviewer output supports a rate up to 60Hz.

- Outputs support resolutions with up to 4096 pixels in width or height (bandwidth must be within 4096x2160@60Hz).

- Custom formats line frequency [*frame rate x V total size*] is limited to 200kHz.

- Some output formats will only work on one plug if the other one does not support the format.

6.3 Operating modes

6.3.1 Mixer mode

Reminder: Mixer mode is available on QuickVu 4K, Pulse 4K and Eikos 4K.

Mixer mode features:

- One single output Program Screen with a format up to 4096 x 2160 @60Hz.
  This Screen has one Background layer, up to four Live layers* and one Foreground layer.
- And one single output Aux. Screen with a format up to 1920 x 1080 @60Hz. The Aux. Screen can display a live input or the Program output of the Screen.

*The Screen of the QuickVu 4K has only up to two Live layers.

6.3.2 Matrix mode

Reminder: Matrix mode is available on QuickMatrix 4K, Pulse 4K and Eikos 4K.

Matrix mode features:

- Two independent single output Program Screens with formats up to 4096 x 2160 @60Hz.
  Each Screen has one Background layer, up to two Live layers and one Foreground layer.

6.3.3 Blend mode

Reminder: Blend mode is only available on Eikos 4K.

Blend mode features:

- One Program Screen using two outputs with a total resolution up to 2x 4096 x 2160 @60Hz. This Screen has one Background layer, up to four Live layers and one Foreground layer.

Blend mode is separated in two templates with simplified configurations:

- **Horizontal blend** automatically places Output 1 on the left side of Output 2 in a 2x1 Screen.
- and **Vertical blend** automatically places Output 1 on top of Output 2 in a 1x2 Screen.

6.4 Images management in Midra 4K

Midra 4K is different from LivePremier in its Image management concept. Image sources displayed on Program Screens are separated in two different sections: Background Images and Foreground Images.

6.4.1 Image Library

The Image Library is used to store up to 50 images in the Midra 4K unit.

Note: Images in the Library are not directly accessible to be displayed on Screen.

6.4.2 Background and Foreground image slots

Images have to be assigned to **Image slots** before they can be displayed on Screen. These slots are used to load images and resized if needed.

One Screen has four Background image slots and four Foreground image slots.

- A Foreground image is a Screen source assigned to a Screen Foreground layer.
- A Background image is assigned to Background set.

Note: - A Background image is not a Screen source and cannot be used directly in any Screen or Aux. Screen layer.

- A Foreground image cannot be used in a Background layer, Live layer or Aux. Screen layer.
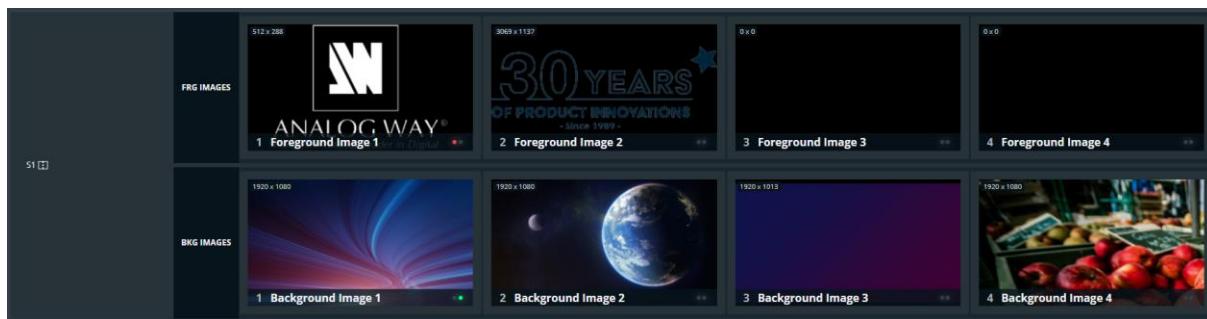
Fig. 11 - Image slots

6.4.3 Images in Background set

A Background set is a source assigned to a Screen Background layer.

- A background set is created for a Screen of one or two outputs.
- One Screen can have up to Eight Background sets.
- One Background image is assigned to the whole Screen to create a Background set, whether this Screen uses one or two outputs. This action scales the Background image to the size of the Screen.

Note: The **Pulse 4K** and the **Eikos 4K** can use Images or **Live Inputs as Background content**.

Other models can only use Images as Background content.

6.4.4 Image management - Quick recap

Library
Transfer and store up to 50 images in the Midra™ 4K unit

Background images

Foreground images

Images
Assign images to up to 4 Background image slots per Screen

Images
Assign images to up to 4 Foreground image slots per Screen

Background set
Assign Background images to create Background sets

Live Screen
Assign a Background set to the Screen BKG layer

Live Screen
Assign a Foreground image to the Screen FRG layer

Fig. 12 -   Image management quick recap

6.5   Screen and Aux. Screen layers

6.5.1   Background layer

The Background layer is an unscalable layer that matches the size of the Screen. It stays behind all other layers and can display a Background Set or a solid color.
A Background Set is created in the **Preconfig** menu. It is composed with sources from Background Images for the one or two outputs of a Screen. With the **Pulse 4K** and the **Eikos 4K**, and it is even possible to use Live Inputs in Background Sets.

Reminder: A Background layer can only display a Background set created in the **Preconfig** menu.

6.5.2   Live layers (Mixing and Split layers)

The Live layers can display Live Inputs. They have multiple parameters like size, opacity, borders, etc.
The Screen layer mode is selected with the Operating mode.

Reminder: A Live layer can only display a Live Input.

6.5.2.1   Mixing layers

This is the default layers mode for Midra 4K units as well as most Analog Way products. This offers the most spectacular transition effects which made the reputation of Analog Way.
Mixing layers allow cross transitions with both contents visible at the same time during the transition (seamless transition).

6.5.2.2   Split layers

Layer mode that consumes half the processing resources compared to mixing layers and doubles the number of layers available on Screen.
In Split layers mode, seamless transitions are not possible, one content will disappear before the new one is visible.

Tip: When using a Multiviewer to view the Preview of a Screen using split layers, the content is displayed normally and not only in wireframes.

6.5.3   Foreground layer

The Foreground layer is displayed on top of all other layers. It can display a Foreground Image set in the **Images** menu. It is scaled to the size of the image as set in the **Images** menu.

Reminder: A Foreground layer can only display a Foreground Image created in the **Images** menu.

6.5.4   Aux layer

An Aux. Screen has only one unscalable layer that can display:

-   a Live Input
-   the Program of Screen 1
-   or a solid color.

Note: The Aux layer does not support seamless transitions, one content will disappear before the new one is visible.

6.6 HDR conversion

Tip: HDR conversion adds no latency.

Midra 4K can manage inputs and outputs with different frame rates. In the same way, Midra 4K can also manage inputs and outputs with different dynamic range profiles, including Standard Dynamic Range (SDR) and High Dynamic Range (HDR). HDR Conversion uses predefined Lookup Tables (LUTs), but it is also possible to import custom LUTs to use for dynamic range conversion at the input or output level.

HDR conversion manages:

- SDR ⇔ HDR10
- SDR ⇔ HLG
- HDR10 ⇔ HLG

The Midra 4K processing engine supports HDR10 and HLG standards. SDR to HLG conversion is based on professional 3D lookup tables (LUTs) by BBC. The user can define an internal HDR profile for optimized processing and display. HDR conversion can also be manually set for input and output.

Note: - HDR conversion means all content can be converted to be mixed and displayed perfectly. This does not mean SDR content will look better when converted to HDR.

- For more information, see the White paper explaining HDR conversion available on **www.analogway.com**.

6.7 LUT resource allocation for inputs

LUT resources are necessary for dynamic range conversion and color correction using LUTs. Midra 4K has a LUT resource allocation system for inputs. Up to four inputs can support conversion and correction using LUTs.

Tip: The Outputs and the Multiviewer have their own LUT resources to support conversion and correction using LUTs.

Note: - An input without LUT resource is processed following the internal profile.

- An input without LUT resource can still support manual correction without using LUTs (brightness, contrast, etc.).

7 Preconfig Menu

The following chapters describe the Web RCS interface and the procedures via the Web RCS. For procedures via the unit front panel, see chapter *19 Control from the front panel* page 105.
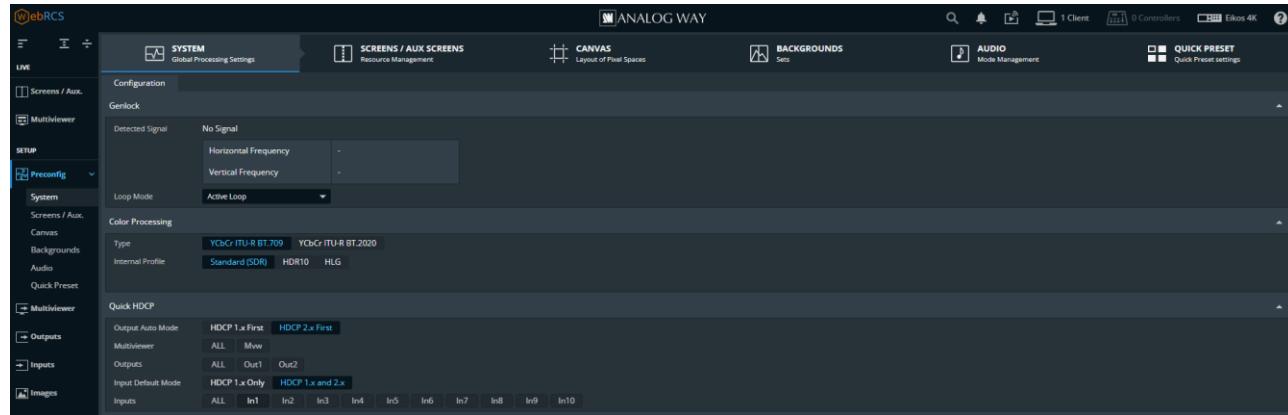
Click [icon] **Preconfig** to display the submenus.

7.1 Preconfig > System

In [icon] **Preconfig** > System, set genlock, internal color space and quick HDCP.

7.1.1 Genlock input settings

If a source is connected on the Genlock input, the signal status is displayed.

7.1.2 Genlock output settings

Set the Genlock output to loop the Genlock input or to output a custom rate.

7.1.3 Color processing

Set the color space and the dynamic range profile used for processing.

Tip: BT.709 is recommended for HD and **BT.2020** is recommended for UHD.

1. Go to [icon] **Preconfig** > System.

2. In **Color Processing**, select the general color space used for processing (**BT.709** or **BT.2020**).

Setting name	Description / Setting selection
Type	Select the general color space used for processing: • **YCbCr 4:4:4 ITU-R BT.709** • **YCbCr 4:4:4 ITU-R BT.2020**
Internal Profile	Select the Dynamic range used for processing.
Luminance	Select the nit level used for processing.

Note: The output color space is set per output in the Output menu. For more information, see *9 Outputs* page 56.

7.1.4 **Quick HDCP**

From **Preconfig** > System, quickly enable / disable HDCP for all inputs and outputs in the same page.

Note: Disabling HDCP reduces possible problems when the content is not fully HDCP compliant. When output HDCP is disabled, HDCP inputs will not be displayed anymore.

1. Go to [icon] **Preconfig** > System, in **Quick HDCP**.
2. In **Output Auto Mode**, set the mode for all outputs to **HDCP 1.x First** or **HDCP2.x First**.
3. In **Multiviewer**, **Outputs** and **Inputs**, select a connector to enable / disable HDCP.
   The connectors highlighted in **Blue** are currently enabled.
4. In **Input Default Mode**, set the mode for all inputs to **HDCP 1.x Only** or **HDCP 1.x and 2.x**.

7.2 **Preconfig > Screens / Aux Screens**

In [icon] **Preconfig** > [icon] Screens / Aux Screens, set the Operating mode.
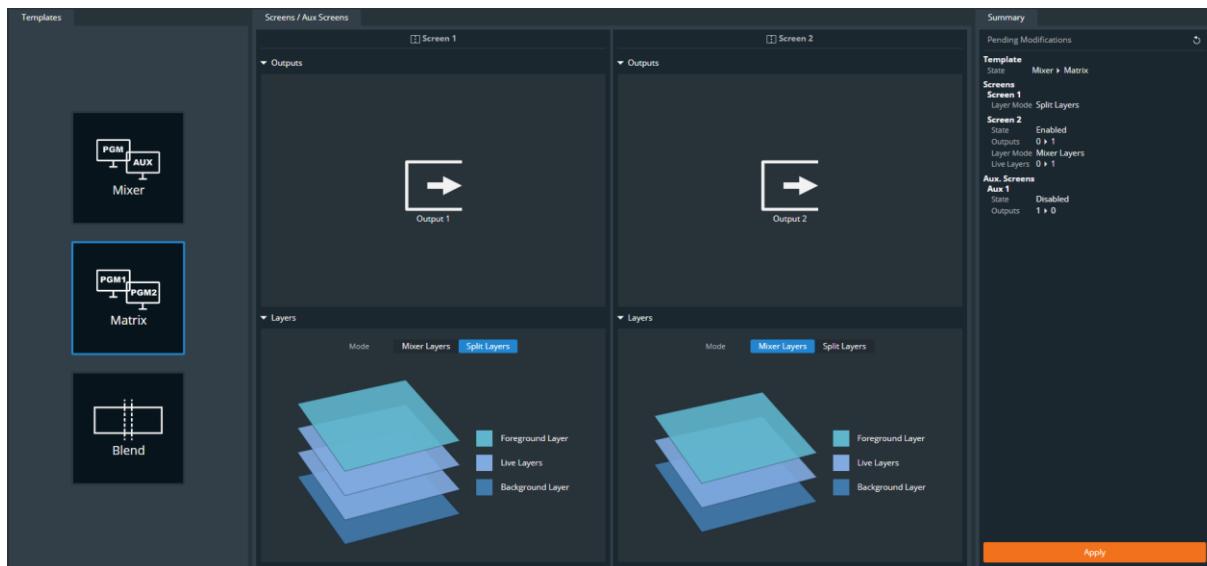
Fig. 14 -   Preconfig – Screens / Aux Screens

7.2.1 **Set Operating mode**

Note: - By default, all Midra 4K devices are in Mixer mode (when possible).

- The QuickVu 4K and QuickMatrix 4K are always set to their predefined operating mode and cannot be changed.

1. Go to [icon] **Preconfig** > [icon] Screens / Aux Screens.
2. In **Template**, select the Operating mode.
3. For each Screen, select the layer mode.
4. Click **Apply** to save new configuration.

Tip: All pending changes are identified with a * and listed in the Summary. If needed, click ↺ to cancel pending changes.

7.3   **Preconfig > Canvas**

In ⊞ **Preconfig** > ⊡ Canvas, set the outputs settings for each Screen (output format and rate, AOI, covering, blending, etc.) and use test patterns.
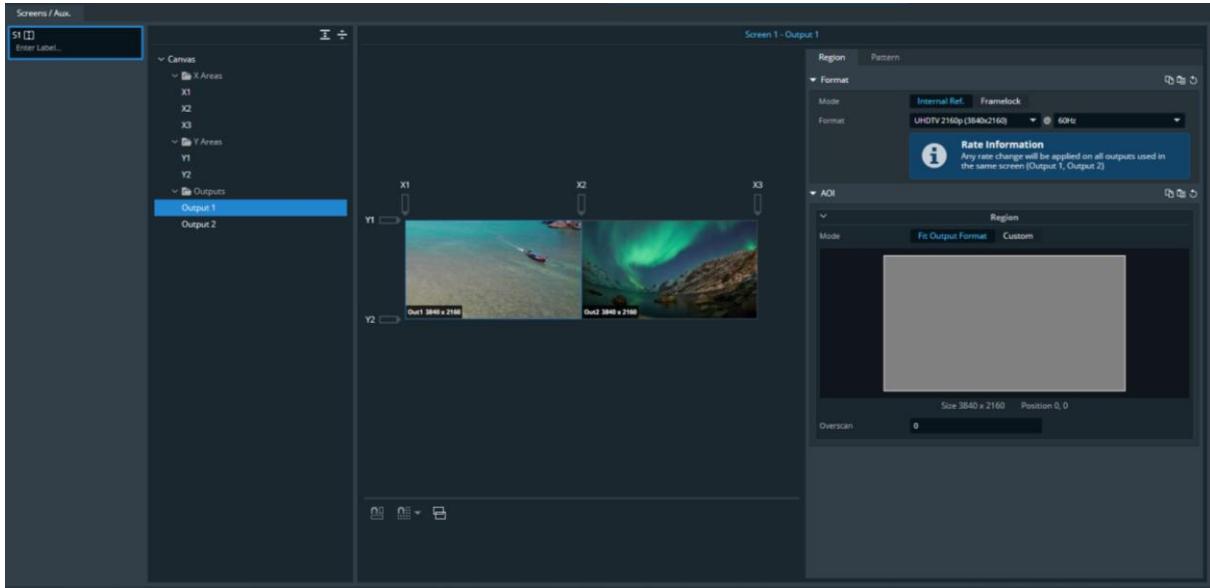
Fig. 15 -   Preconfig - Canvas

7.3.1 **Rename a Screen**

By default, all Screens are named *S1*, *S2*, or A1. To rename a Screen:

1. In ⊞ **Preconfig** > ⊡ Canvas, click a Screen or Aux Screen on **Enter Label…**
2. Enter a screen name.

7.3.2 **Tree view**

In ⊞ **Preconfig** > ⊡ Canvas, select a Screen to display the tree view of the Screen. Select one element to change the corresponding settings in the right panel.

X and Y areas	(Only displayed in Blend mode) Create covering or gap between the grid cells. Set blending and black areas for covering areas.
Outputs	Set the output format, reference mode or pattern. Set an AOI for the output.

7.3.3 **Set Horizontal or Vertical template (Blend mode)**

1. Set the device to **Blend** mode, then go to ⊡ Canvas.
2. In **Settings**, set the template to **Horizontal** or **Vertical** (select **Canvas** on the tree view if needed).

Tip: In Blend mode, outputs are arranged automatically with Output 1 being on the left side or top side.

7.3.4 Set an output format

1. In ⧉ **Preconfig** > ⊡ Canvas, select a Screen (if needed).
2. In the tree view, select an output.
    The output settings are displayed in the right panel.
3. In **Region**, set the rate mode to **Internal reference** or **Framelock**.
    a. In Internal reference mode, set the output format and rate.
    b. In Framelock mode, set the output format, the lock source and the reference factor.

7.3.5 Patterns

Display patterns are used during the Screen configuration phase to test and control how outputs are displayed in Screens. Use patterns to identify and test that the displays are set correctly (color, position, resolution, etc.). Enabling a pattern overrides any content displayed in the output. It is possible to use Screen patterns and Output patterns.

Note: Screen patterns are displayed on top of Output patterns.
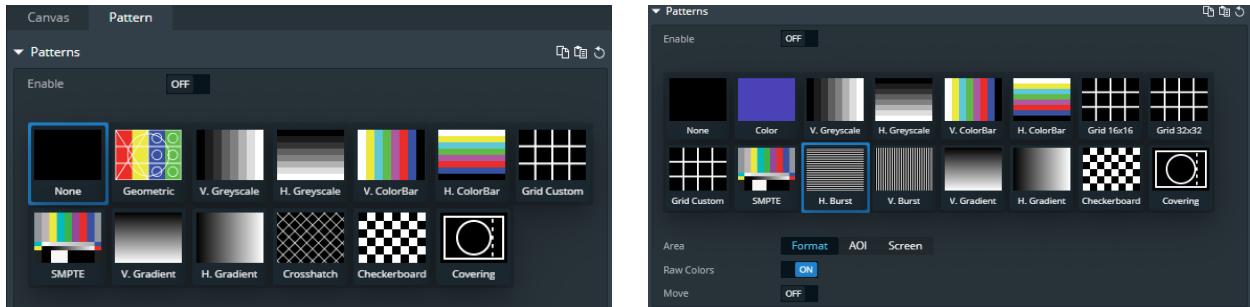
Fig. 16 -   Screen patterns / Output patterns

7.3.5.1   Screen pattern

Use Screen patterns to apply one pattern on the entire screen.

1. In ⧉ **Preconfig** > ⊡ Canvas, select a Screen (if needed).
2. In the tree view, select **Canvas**.
    The canvas settings are displayed in the right panel.
3. In the right panel, click the Patterns tab to show the pattern settings.

Setting name	Description / Setting selection
Patterns	
Enable	On/Off toggle. Display the pattern in the Screen
Patterns	Select the pattern to display

Tip: - Make sure to keep all patterns disabled when they are not needed.

- The pattern *Geometric* is fully customizable to adapt to any screen.

- The patterns *Grid Custom*, *Crosshatch* and *Checkerboard* are customizable patterns with units in pixels.

- The background of the pattern *Covering* can be set to Transparent, Red, Green, Blue, White or Black.

7.3.5.2   Output pattern

Use Output patterns to test and control how outputs are displayed in Screens.

1. In **Preconfig** > Canvas, select a Screen (if needed).
2. In the tree view, select an output.
    The canvas settings are displayed in the right panel.
3. In the right panel, click the Patterns tab to show the pattern settings.

Setting name	Description / Setting selection
Patterns	
Enable	On/Off toggle. Display the pattern in output
Patterns	Select the pattern to display
Area	Set the pattern to fit the format used or the AOI
Raw Colors	On/Off toggle. Using raw colors disables all **Adjustments** settings (ex: Colorimetry, User Gain, etc.)
Raster Box	
Format	Click to enable raster box on whole format
AOI	Click to enable raster box on AOI

Tip: - Remember to enable and disable patterns on all outputs.

- The patterns *Grid Custom*, *Crosshatch* and *Checkerboard* are customizable patterns with units in pixels.

7.3.6 **X and Y areas (Blend mode)**

In **Blend mode**, X and Y areas are added to the canvas. These areas are used to create coverings or gaps between the two outputs of the Screen.

7.3.6.1   Create a covering (blending)

Edge blending is a feature that gradually fades out the overlapping area from both projectors to create a seamless projection. For an effective blending, align the projected images so they are square with each other. Use X and Y areas to create coverings between outputs.

1. Set the device to **Blend** template, then go to Canvas.

2. In **Settings**, set the blend mode to **Horizontal** or **Vertical** (select **Canvas** on the tree view if needed).
3. Select the X or Y area where the covering will be created.
4. In **Configuration**, select Covering and enter the size in pixels.

The canvas is updated with the corresponding values.

5. If needed, in **Blending Curve**, enable the blending and set the Gamma or Bezier curve.
6. If needed, set the black area and black levels.

Note: The maximum covering size is 1000 pixels per row or column.

7.3.6.2   Create a gap (bezel)

In **Blend** mode, use X and Y areas to create coverings between outputs.

1.   Set the device to **Blend** template, then go to ⊡ Canvas.
2.   In **Settings**, set the blend mode to **Horizontal** or **Vertical** (select **Canvas** on the tree view if needed).
3.   Select the X or Y area where the gap will be created.
4.   In **Configuration**, select Gap and enter the size in pixels.

The canvas is updated with the corresponding values.

Note: The maximum gap size is 200 pixels per row or column.

7.3.6.3   Bottom bar buttons – Wireframe

Button	Button description
⊟	On/Off toggle. Hide content to display only layers wireframe.

7.3.7 Advanced output settings (in Preconfig > Canvas)

Note: Output settings are applied to the selected output.

These following settings are specific to outputs and can be used in all canvas types.

7.3.7.1   Create an area of interest (AOI)

The AOI is a cropped area of the display in the output format. Use AOI to remove unseen or useless display areas and operate exclusively on the output area actually displayed.
The AOI can be set with Overscan size or Custom size.

1.   In 🧩 **Preconfig** > ⊡ Canvas, select a Screen.
2.   Select an output.
3.   In AOI, click **Fit Output Format** and set the overscan.

      Or click **Custom** and set the size and position of the AOI.

Tip: Use arrows for fine adjustment.

7.4 **Preconfig > Backgrounds**

In 🧩 **Preconfig** > 📈 Backgrounds, create background sets for each Screen.

7.4.1 Background sets

A Screen is composed of one or two outputs. Assign Inputs and Background Images to these outputs to create background sets. Up to eight Background sets can be saved per screen.

Note: - Background sets can only be used in Background layers.

- The **Pulse 4K** and the **Eikos 4K** can use Images or **Live Inputs as Background content**. Other models can only use Images as Background content.

7.4.2 Background set for a single output Screen

1. In [icon] **Preconfig** > [icon] Backgrounds, select **BS1** in **Screen 1**.

2. If using a **Pulse 4K** or an **Eikos 4K**, click a source icon to open the Inputs or Background Images sources.
    For other models, the Background Images sources are displayed by default.

3. Drag a content and drop it in the virtual canvas or in Output 1.
    Background set 1 is set and saved.

Repeat the procedure with BS2, BS3, etc. to create more Background Sets for Screen 1.

Repeat the procedure for Screen 2 if the device is in Matrix mode.

Tip: In Matrix mode, Screen 1 and Screen 2 both have up to 8 Background Sets.

7.4.3 Background set for an Eikos 4K in Blend mode

The **Eikos 4K** in Edge blending mode has two possible modes for each Background set:

Auto Crop	Single content mode. - An Input will be upscaled or cropped to fit the Screen if needed. - A Background image will fit the Screen according to the Aspect set for this Background image.
Custom	Two inputs mode. (No Background image) Keep the resolution of the Inputs and align them in any of the nine possible positions. - It is possible to assign a different input to each Screen output.

Note: - It is not possible to use Background images in Custom mode.

- Using the same Input content in both outputs of the Screen in Custom mode will duplicate the content. Use Auto Crop mode to spread the Input content on both outputs.

1. In [icon] **Preconfig** > [icon] Backgrounds, select **BS1** in **Screen 1**.

2. Select the mode for this Background set.
3. Click a source icon to open the Inputs or Background Images sources.
4. Drag a content and drop it to each output in the virtual canvas or in the output cards.
5. In custom mode, use the buttons in the virtual canvas to place the content.
    Background set 1 is set and saved.

6. If needed, go to [icon] **Images** to set the Aspect of the Background images.

Repeat the procedure with BS2, BS3, etc. to create more Background Sets.

7.4.4 Reset a background set

1. In [icon] **Preconfig** > [icon] Backgrounds, select a Background Set.

2. Click [icon] in the top right corner of the virtual canvas to clear the background set.

Tip: It is also possible to select each output and press the **Del** key to remove the assigned content one by one.

7.5   Preconfig > Audio

In 🧩 **Preconfig** > 🎵 Audio, set audio routing. For more information, see *17 Audio settings* page 97.

7.6   Preconfig > Quick Preset

In 🧩 **Preconfig** > ⬛ Quick Preset, set the Quick Preset feature.
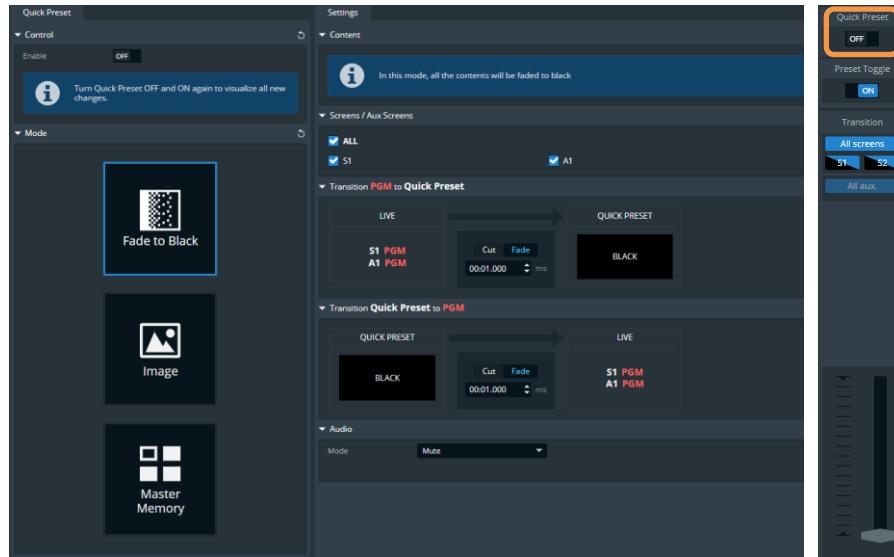
Fig. 17 -   Preconfig > Quick Preset / Quick Preset trigger in Live Screen

Quick Preset is an emergency function that can be triggered from **Live** - **Screens / Aux.** menu or the device front panel. The Quick Preset is displayed on selected Program outputs. When the Quick Preset is disabled, the Program returns to the state set in the **Live** - **Screens / Aux.** menu.

The Quick Preset feature has three different modes:

- Fade to Black
- Image from the Library
- Master Memory

7.6.1 Set Quick Preset to Fade to Black

1. Go to 🧩 **Preconfig** > ⬛ Quick Preset.

2. In **Control**, toggle **Enable** to activate/deactivate the Quick Preset feature.

   > **Note**: Toggle **Enable** OFF and ON again to visualize all new changes.

3. In **Mode**, select **Fade to Black**.
4. In **Settings** > **Screen/Aux Screens**, select the Screens affected by the Quick Preset.
5. In **Transition**, select the transition types (Cut or Fade) and durations when enabling and disabling the Quick Preset.
6. In **Audio**, set the Audio mode when triggering the Quick Preset:
   a. **Preset/Mute** (default mode) will mute the selected Screens.
   b. **Transparent** will keep the audio settings as they are.
   c. **Mute** will mute the selected Screens.
   d. **Force source** will use a selected audio source in the selected Screens as long as the Quick Preset is enabled.

7.6.2 Set Quick Preset to call a Library Image

1. Go to ⊞ **Preconfig** > ⊞ Quick Preset.

2. In **Control**, toggle **Enable** to activate/deactivate the Quick Preset feature.

Note: Toggle **Enable** OFF and ON again to visualize all new changes.

3. In **Mode**, select **Image**.
4. In **Settings** > **Content**:
   a. Select the image from the Library that will be displayed on the selected Screens.
   b. Select the display mode (Centered; Fullscreen; Cropped; 1:1 or Custom).
   c. Toggle **Keep Background** to show / hide the Background image when Quick Preset is enabled.
5. In **Screen/Aux Screens**, select the Screens affected by the Quick Preset.
6. In **Transition**, select the transition types (Cut or Fade) and durations when enabling and disabling the Quick Preset.
7. In **Audio**, set the Audio mode when triggering the Quick Preset:
   a. **Preset/Mute** (default mode) will mute the selected Screens.
   b. **Transparent** will keep the audio settings as they are.
   c. **Mute** will mute the selected Screens.
   d. **Force source** will use a selected audio source in the selected Screens as long as the Quick Preset is enabled.

7.6.3 Set Quick Preset to call a Master Memory

1. Go to ⊞ **Preconfig** > ⊞ Quick Preset.

2. In **Control**, toggle **Enable** to activate/deactivate the Quick Preset feature.

Note: Toggle **Enable** OFF and ON again to visualize all new changes.

3. In **Mode**, select **Master Memory**.
4. In **Settings** > **Content**, select the Master Memory that will be displayed on the selected Screens.
5. In **Screen/Aux Screens**, select the Screens affected by the Quick Preset.
6. In **Transition**, select the transition types (Cut or Fade) and durations when enabling and disabling the Quick Preset.
7. In **Audio**, set the Audio mode when triggering the Quick Preset:
   a. **Preset/Mute** (default mode) will follow the audio settings of the Master Memory.
   b. **Transparent** will keep the audio settings as they are.
   c. **Mute** will mute the selected Screens.
   d. **Force source** will use a selected audio source in the selected Screens as long as the Quick Preset is enabled.

8 Multiviewer

A Multiviewer is an output displaying a user customizable selection of Widgets as display resources. A Widget is a Multiviewer layer containing a program, preview, input or timer. The Multiviewer can display up to 16 Widgets. In (Setup) 🔲 **Multiviewer**, set the Label, Signal parameters, Patterns and Image correction.

Note: Go to (Live) 🔲 Multiviewer to set the Multiviewer layout and Widgets.

8.1 Multiviewer settings

In 🔲 **Multiviewer**, the Multiviewer output is highlighted in the interactive rear panel.

- In the header, rename the Multiviewer.
- On the interactive rear panel, hover over a connector to display information about this input or output.
- On the interactive rear panel, click an input or output to open its settings.
- Click **Blink LED** to identify the selected output connector on the physical rear panel of the unit.
- Click 📷 to capture the video signal into an image file.

8.2 Multiviewer format

In 🔲 **Multiviewer** > **Format**, set the format for the Multiviewer display.

8.3 Multiviewer signal

In 🔲 **Multiviewer** > **Signal**, the following settings are displayed:

Setting name	Description / Setting selection
Color Space	**Auto**, **ITU-R BT.709**, or **ITU-R BT.2020**
Dynamic Range	**Auto**, **SDR**, **HDR10** or **HLG**
Luminance	Select the nit level used for this output
HDMI settings	
Standard Compliance	Enable to scan the output display and filter only supported Pixel encoding modes supported by the display
Pixel Encoding	**Auto** or **RGB Full** (8 or 10 bits), **RGB Limited** (8 or 10 bits), **YCbCr 4:4:4** (8 or 10 bits), **YCbCr 4:2:2 (**12 bits), or **YCbCr 4:2:0** (8 or 10 bits).
DVI mode	Enable to change HDMI signal into DVI signal if using a DVI connector on the Multiviewer display.
HDCP	**Disable***; **Auto**; **HDCP 1.x**; or **HDCP 2.x**

Disabling HDCP reduces possible problems when the content is not fully HDCP compliant. When output HDCP is disabled, HDCP-protected inputs are not displayed.

Recommendation: Always use high quality cables to prevent connection and bandwidth errors when using HDCP.

Setting name	Description / Setting selection
SDI settings	
Standard Compliance	Enable to scan the output display and filter only supported Pixel encoding modes supported by the display
Pixel Encoding	**Auto** or **RGB Full** (8 or 10 bits), **RGB Limited** (8 or 10 bits), **YCbCr 4:4:4** (8 or 10 bits), **YCbCr 4:2:2 (**12 bits), or **YCbCr 4:2:0** (8 or 10 bits).
3G-SDI Standard	**Level A** or **Level B**
Conversion Mode	
Mode	**Auto** or **Custom** (LUT)
Conversion LUT	In LUT Conversion mode, select a LUT from the Conversion LUT library.
BBC Mapping	(only for HLG with SDR as internal profile) **Inverse Tone Mapping** or **Direct Mapping** - Use **Inverse Tone Mapping** if internal processing and main output are using Limited Range color space.
BBC Reference	(only for HLG ⇔ SDR conversion) **Scene Referred** or **Display Referred** - Use **Scene Referred** for camera content. - Use **Display Referred** for computer content.
BBC OETF	(only for Scene Referred) **Square Root** or **Strict**

Note: To import a LUT in the library, see *0* Note: For more information, see *10.2.2 Allocate LUT resources to inputs* page 61. Import a LUT page 72.

8.4 Multiviewer pattern

In **Multiviewer** > **Pattern / Raster**, the following settings are displayed:

Setting name	Description / Setting selection
Patterns	
Enable	On/Off toggle. Display the pattern in Multiviewer
Patterns	Select the pattern to display
Area	Set the pattern to fit the format used or the AOI.
Raw Colors	On/Off toggle. Using raw colors disables all **Adjustments** settings (ex: Colorimetry, User Gain, etc.)
Move	On/Off toggle. Usable on moving patterns.
Raster Box	
Format	Click to enable raster box on whole format
AOI	Click to enable raster box on AOI

Note: For more information on pattern types, see *7.3.4 Patterns* page 47.

8.5 Multiviewer adjustment (manual image correction)

In [icon] **Multiviewer** > **Adjustments**, in **Manual** correction mode, the following settings are displayed:

Setting name	Description / Setting selection
Brightness	Adjust Global, Red, Green and Blue for Brightness (Global and RGB are cumulative)
Contrast	Adjust Global, Red, Green and Blue for Contrast (Global and RGB are cumulative)
Colorimetry	Adjust Saturation and Hue
Gamma	Adjust Gamma level

8.6 Multiviewer adjustment using Correction LUT

1. In [icon] **Multiviewer** > **Adjustments**, select **LUT** correction mode.

2. In **Correction LUT**, select a LUT from the Correction LUT library.

The Correction LUT is applied to the Multiviewer output.

Note: To import a LUT in the library, see *0* Note: For more information, see *10.2.2 Allocate LUT resources to inputs* page 61.

Import a LUT page 72.

9 Outputs

In ⇥ **Outputs**, set the Label, Signal parameters, Patterns and Image correction for each output.

9.1 Outputs main screen

Go to ⇥ **Outputs**, the outputs main screen displays all outputs in a Grid view.

The following information are displayed per output:
- Resolution
- Format and rate (on hover)
- Output label
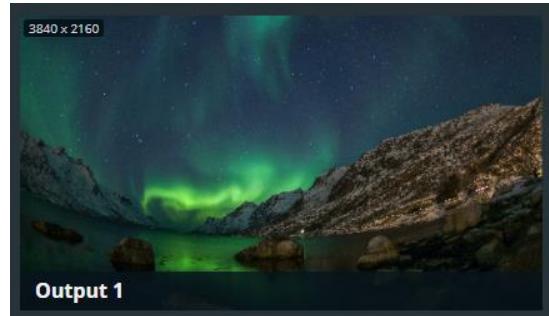
9.2 Output settings

In ⇥ **Outputs**, click an output to open its settings. The selected output is highlighted in the interactive rear panel and all output information is listed next to the Output preview.
- Click **Outputs** to return to the outputs Grid.
- In the header, rename the selected output.
- On the interactive rear panel, hover over a connector to display information about this input or output.
- On the interactive rear panel, click an output to open its settings.

- Click 📷 to capture the Program output video signal into an image file.

- Click **Blink LED** to identify the selected output connector on the physical rear panel of the unit.

9.2.1 Output format

In ⇥ **Outputs**, select an output. In **Format**, the following settings are displayed:

Setting name	Description / Setting selection
Format in Internal reference mode	
Mode	Select **Internal Ref.**
Format	Set the resolution and rate for the output
Format in Framelock mode	
Mode	Select **Framelock**
Format	Set the resolution for the output
Reference	Select the input plug to use as lock reference
Reference factor	Select the reference factor (**x0.5** ; **x1** or **x2**).

9.2.2 Output rate synchronization (Blend mode)

In Blend mode, both outputs must have the same frame rate.

- If one output is set to a different rate, the other output will try to apply the same rate to its current resolution.

If Output A is set to:	If the current resolution of Output B is compatible with the new rate:
Any rate	Keep resolution and apply the same rate as Output A

- If the resolution is not compatible with the new rate, the output is automatically set to a format using the same rate following this table:

If Output A is set to:	New format of Output B if the current resolution is not compatible with the new rate:
A custom format with a non-standard rate	Same custom format as Output A
23/24Hz, 25Hz, 29/30Hz, 47/48Hz, 50Hz, 59/60Hz, 100Hz	HDTV 1080p with the same rate as Output A
144Hz	DMT 1920x1080@144Hz
72Hz, 75Hz or 85Hz	DMT 1280x1024 with the same rate as Output A

Note: It is then possible to change the output to any resolution compatible with the new rate.

9.2.3 Output signal

In ⬚ **Outputs**, select an output. In **Signal**, the following settings are displayed:

Setting name	Description / Setting selection
Color Space	**Auto**, **ITU-R BT.709**, or **ITU-R BT.2020**
Dynamic Range	**Auto**, **SDR**, **HDR10** or **HLG**
Luminance	Select the nit level used for this output
HDMI settings	
Standard Compliance	Enable to scan the output display and filter only supported Pixel encoding modes supported by the display
Pixel Encoding	**Auto** or **RGB Full** (8 or 10 bits), **RGB Limited** (8 or 10 bits), **YCbCr 4:4:4** (8 or 10 bits), **YCbCr 4:2:2 (**12 bits), or **YCbCr 4:2:0** (8 or 10 bits).
DVI mode	Enable to change HDMI signal into DVI signal if using a DVI connector on the Multiviewer display.
HDCP	**Disable***; **Auto**; **HDCP 1.x**; or **HDCP 2.x**

Disabling HDCP reduces possible problems when the content is not fully HDCP compliant. When output HDCP is disabled, HDCP-protected inputs are not displayed.

Recommendation: Always use high quality cables to prevent connection and bandwidth errors when using HDCP.

Setting name	Description / Setting selection
SDI settings	
Standard Compliance	Enable to scan the output display and filter only supported Pixel encoding modes supported by the display
Pixel Encoding	**Auto** or **RGB Full** (8 or 10 bits), **RGB Limited** (8 or 10 bits), **YCbCr 4:4:4** (8 or 10 bits), **YCbCr 4:2:2 (**12 bits), or **YCbCr 4:2:0** (8 or 10 bits).
3G-SDI Standard	**Level A** or **Level B**
Conversion Mode	
Mode	**Auto** or **Custom** (LUT)
Conversion LUT	In Conversion LUT, select a LUT from the Conversion LUT library.
BBC Mapping	(only for HLG with SDR as internal profile) **Inverse Tone Mapping** or **Direct Mapping** - Use **Inverse Tone Mapping** if internal processing and main output are using Limited Range color space.
BBC Reference	(only for HLG ⇔ SDR conversion) **Scene Referred** or **Display Referred** - Use **Scene Referred** for camera content. - Use **Display Referred** for computer content.
BBC OETF	(only for Scene Referred) **Square Root** or **Strict**

Note: To import a LUT in the library, see *0* Note: For more information, see *10.2.2 Allocate LUT resources to inputs* page 61. Import a LUT page 72.

9.2.4 Output pattern

In ⬚ **Outputs**, select an output. In **Pattern**, the following settings are displayed:

Setting name	Description / Setting selection
Patterns	
Enable	On/Off toggle. Display the pattern in place of the output signal.
Patterns	Select the pattern to display
Area	Set the pattern to fit the format used, the AOI or the Screen
Raw Colors	On/Off toggle. Using raw colors disables all **Adjustments** settings (ex: Colorimetry, User Gain, etc.)
Move	On/Off toggle. Usable on moving patterns.

Setting name	Description / Setting selection
Raster Box	
Format	Click to enable raster box on whole format
AOI	Click to enable raster box on AOI

Note: For more information on pattern types, see *7.3.4 Patterns* page 47.

9.2.5 Output adjustment (manual image correction)

In **Outputs**, select an output. In **Adjustments**, in **Manual** correction mode, the following settings are displayed:

Setting name	Description / Setting selection
Brightness	Adjust Global, Red, Green and Blue for Brightness (Global and RGB are cumulative)
Contrast	Adjust Global, Red, Green and Blue for Contrast (Global and RGB are cumulative)
Colorimetry	Adjust Saturation and Hue
Gamma	Adjust Gamma level

9.2.6 Output adjustment using Correction LUT

1. In **Outputs**, select an output.

2. In **Adjustments**, select **LUT** correction mode.

3. In **Correction LUT**, select a LUT from the Correction LUT library.

The Correction LUT is applied to the corresponding output.

Note: To import a LUT in the library, see *0* Note: For more information, see *10.2.2 Allocate LUT resources to inputs* page 61.

Import a LUT page 72.

10   Inputs

In ⬚ **Inputs**, set the Label, Signal parameters, Patterns, Image correction, Aspect and Keying.

10.1 Inputs main screen

In ⬚ **Inputs**, the inputs main screen displays all inputs in a Grid view.

The following information are displayed per input:
- Resolution
- Signal Type (on hover)
- Input number
- Input label
- The tallies turn red and green if the input is used in a **Program** and/or **Preview** Screen ● ●.

10.2 Input settings

In ⬚ **Inputs**, click an input to open its settings. The selected input is highlighted in the interactive rear panel and all input information is listed next to the input preview.
- Click **Inputs** to return to the inputs Grid.
- In the header, rename the selected input.
- On the interactive rear panel, hover over a connector to display information about this input or output.
- On the interactive rear panel, click an input or output to open its settings.

General buttons are available on top of input settings:
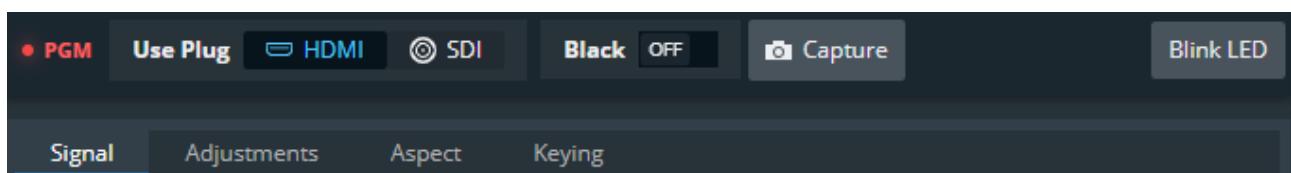
Fig. 18 -   Input settings

- **PGM** turns red if the input is used in a Program screen.
- For **Input 1** and **2**, select the active plug for this input.
- Toggle **Black** to display a black image in all layers using this input.
- Click 📷 to capture the input video signal in use into an image file.
- Click **Blink LED** to identify the selected input connector on the physical rear panel of the unit.

10.2.1 Select the input plug to use for Input 1 and 2

1. In ⬚ **Inputs**, select **Input 1** or **Input 2**.

2. In **Use Plug** on top of the Input settings, click the plug to use for the selected input (see *Fig. 16 - Input settings* above).

Note: For more information on Input 1 and Input 2 plugs, see *6.1 Inputs capacity* page 39.

10.2.2 **Allocate LUT resources to inputs**

LUTs are used for specific dynamic range conversion or color correction. Midra 4K has a LUT resource allocation system for Inputs. Select the four inputs that will support conversion and correction using LUTs.

1. In ⬛ **Inputs**, select an input.

   The LUT resources are displayed with their currently associated Inputs.
2. In **LUT Resources**, use drag and drop to assign a LUT resource to the selected input.

Note: - An input without LUT resource is processed following the internal profile.

- An input without LUT resource still supports manual correction without using LUTs (brightness, contrast, etc.).

10.2.3 **Input signal**

In ⬛ **Inputs**, select an input. In **Signal**, the following settings are displayed:

Setting name	Description / Setting selection
Settings	
Type	**Auto**, **YCbCr**, **RGB Full** (0-255) or **RGB Limited** (16-235).
Dynamic Range	**Auto**, **SDR**, **HDR10** or **HLG**
Luminance	Select the nit level used for this input
HDCP	**None***; **Default**; **HDCP 1.x Only** or **HDCP 1.x and 2.x**
LUT Resource allocation	
LUT Resources	Use drag and drop to assign a LUT resource to the selected input
Conversion Mode	
Mode	(only if the input has LUT resource) **Auto** or **CUSTOM** (LUT)
Conversion LUT	In Conversion LUT, select a LUT from the Conversion LUT library
BBC Mapping	(only for SDR with HLG as internal profile) **Inverse Tone Mapping** or **Direct Mapping** - Use **Inverse Tone Mapping** if internal processing and main input are using Limited Range color space.
BBC Reference	(only for HLG ⇔ SDR conversion) **Scene Referred** or **Display Referred** - Use **Scene Referred** for camera content. - Use **Display Referred** for computer content.
BBC OETF	(only for Display Referred) **Square Root** or **Strict**

Disabling HDCP reduces possible problems when the content is not fully HDCP compliant. When input HDCP is disabled, HDCP-protected inputs are not displayed.

Recommendation: Always use high quality cables to prevent connection and bandwidth errors when using HDCP.

Note: To import a LUT in the library, see *0* Note: For more information, see *10.2.2 Allocate LUT resources to inputs* page 61.

Import a LUT page 72.

10.2.4 Input adjustment (manual image correction)

In [icon] **Inputs**, select an input. In **Adjustments**, in Manual mode the following settings are displayed:

Setting name	Description / Setting selection
Brightness	Adjust Global, Red, Green and Blue for Brightness (Global and RGB are cumulative)
Contrast	Adjust Global, Red, Green and Blue for Contrast (Global and RGB are cumulative)
Colorimetry	Adjust Saturation and Hue
Sharpness	**Low**, **Medium** or **High**

10.2.5 Input adjustment using LUT Correction

1. In [icon] **Inputs**, select an input. Make sure the input has a LUT resource.

2. In **Adjustments**, select **LUT** correction mode.

3. In **Correction LUT**, select a LUT from the Correction LUT library.

The Correction LUT is applied to the corresponding input.

10.2.6 Input aspect

In [icon] **Inputs**, select an input. In **Aspect**, set the Aspect ratio or set input crop.

Note: Aspect ratio and Crop replaces the input content and affects every layer using it. If needed, use crop at layer level in Live or duplicate the input with a splitter.

10.2.6.1 Set input aspect ratio

Change the input aspect ratio in all layers. Use these settings to correct the input aspect ratio if needed.

Note: Change aspect ratio at layer level to keep the input unchanged.

Setting name	Description / Setting selection
Aspect Ratio	
Content ratio	Force an aspect ratio for the input if it needs correction (non-square pixels) (**Native**; **5:4**; **4:3**; **16:10**; **15:9**; **16:9**; **21:9**, **256:135** or **64:27**)
Transform to	Set the final aspect ratio for the input. This will be the native aspect ratio in the layer. (**Signal** Aspect Ratio; **5:4**; **4:3**; **16:10**; **15:9**; **16:9**; **21:9** or **Custom ratio**)
Layer fill option	**Follow layer settings**, **1:1**; **Centered**; **Fullscreen** or **Cropped**

10.2.6.2 Set input crop

Crop input (ex: black bars) and keep only wanted area in layers.

Setting name	Description / Setting selection
Crop	
Finder	On/Off toggle. Display cropping area in output, use during setup and disable Finder to show the crop result output.
Top, Bottom, Left, Right	Enter cropping values (in pixels)

10.2.7 **Input Keying**

In ⬚ **Inputs**, select an input. In **Keying**, key the content using Chroma Keying or Luma Keying.

- Use Chroma Keying to key a color (or hue).
- Use Luma Keying to key a Luma level (or brightness).

10.2.7.1 Set Chroma Keying

1. In ⬚ **Inputs**, select one input and click Keying and **Chroma** mode.
2. In Value, select the Hue to Key (color).
3. Or use the assistant to pick directly from the content:
   a. Enable the assistant.
   b. Select the area to pick in the preview.
   c. Click **Pick** to get the Hue value from the content.
   d. Disable the assistant.
4. Enable the **Color** mask.
   The content becomes blue, gray and red.
5. In Tolerance, adjust the settings until the Keying is correct:

   The preserved content is displayed blue.
   The keyed content is displayed red.

6. In Colorimetry, adjust the Color Correction to fade the selected hue.
7. Enable/Disable Color mask to view the keying result and adjust settings until satisfied.

Note: The **Black and White** mask is similar with the preserved content displayed in white and the keyed content in black.

10.2.7.2 Set Luma Keying

1. In ⬚ **Inputs**, select one input and click Keying and **Luma** mode.
2. In Value, select the Luma to Key (Brightness level).
3. Or use the assistant to pick directly from the content:
   a. Enable the assistant.
   b. Select the area to pick in the preview.
   c. Click **Pick** to get the Luma value from the content.
   d. Disable the assistant.
4. Enable the **Color** mask.
   The content becomes blue, gray and red.
5. In Tolerance, adjust the settings until the Keying is correct:

   The preserved content is displayed blue.
   The keyed content is displayed red.

6. Enable/Disable Color mask to view the keying result and adjust settings until satisfied.

Note: The Black and White mask is similar with the preserved content displayed in white and the keyed content in black.

11   Images and Library

Image management is separated in two menus:

- 📁 **Image Library**: transfer images to the Midra 4K unit.

- 🖼️ **Images**: assign uploaded image to image slot to be used in Background sets and Foreground layers.

11.1 Library

Note: Midra 4K units can store up to 50 images.

In 📁 **Image Library**, all imported images are displayed in a Grid view.

The following information are displayed per image:
- Resolution
- Image number (in Library)
- Image file name

- Download to PC (hover then click ⬇)

- Delete from library (hover then click 🗑)

11.1.1 Image formats

Midra 4K units support the following image formats:
- GIF (not animated)
- JPG (JPEG)
- PNG
- TIF (and TIFF)

Note: Animated images are not supported (ex: animated GIF)

11.1.2 Image specifications

- Maximum width: 18 000 pixels
- Maximum height: 18 000 pixels
- Maximum width x height: 35 Megapixels (ex: 8192 x 4320 ; 18000 x 1960 or 3530 x 10000)
- Maximum file size: 25 MB

The Midra 4K devices will automatically try to downscale or compress images files exceeding these limitations.

Note: - Importing images with a pixel size exceeding 35 Megapixels leads to a scaling that can last up to 3 minutes per image.

- An image with a pixel size exceeding 70 Megapixels cannot be downscaled by the Midra 4K device. Modify it and then re-upload it.

- Images cannot be resized or renamed in the Library. If needed, download the image, modify it and then re-upload it.

11.1.3 Transfer images from the computer to the unit

> **Note:** It is possible to import only one folder at a time. Importing a folder of images can last up to 3 minutes per image if they need to be downscaled or compressed. Wait until a message confirms the transfer is complete.

1. In 📁 **Image Library**, select one or multiple image files (or a folder) on the computer file browser.
2. Drag and drop the selection in the **Drop images or folder of images** block.
3. Or click the block to open the file explorer and select image files to transfer.
    The number of files to be imported is displayed.
4. Click **Upload Images**.

The selected images are imported into the Library and can be loaded in image slots.

11.1.4 Capture a video signal into an image file
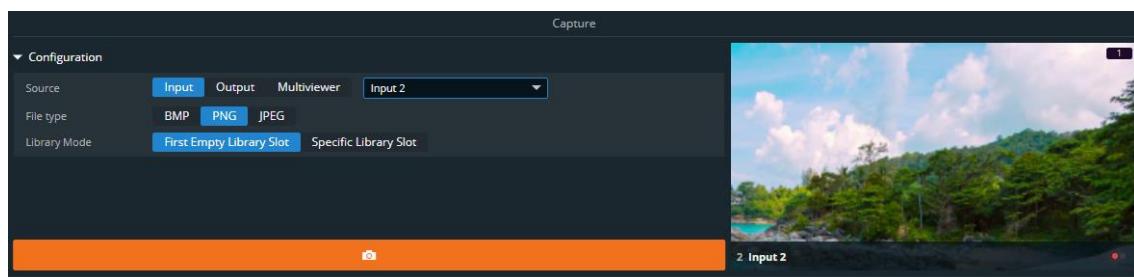
Fig. 19 -   Capture a video signal into an image file

1. Go to 📁 **Image Library** and configure the **Capture** settings.
    a. In **Source**, select the source to capture (Input, Output or Multiviewer).
    b. In **File type**, select the image format for the capture (BMP, PNG or JPG).
    c. In Library Mode, select to save the capture in the first empty slot or select a specific slot.
2. Click 📷 to capture the video signal into an image file.

The image is created in the Library and can be loaded into image slots.

> **Tip**: Image capture is also possible directly from the Live, Multiviewer, Outputs, and Inputs pages.

11.1.5 Download an image file from the unit

- In 📁 **Image Library**, hover over an image then click ⬇.

The selected image is downloaded to the computer.

11.1.6 Delete an image file from the unit

- In 📁 **Image Library**, hover over an image then click 🗑.

The selected image is deleted from the Library.

11.1.7 Manage Library from the Front panel

It is also possible to manage Library images from the front panel in the **Images** menu:
- Download images from a USB drive to the Library (one at a time).
- Download images from the Library to a USB drive (one at a time).
- Delete one or all images from the Library.
- It is also possible to Export and Import the entire Library by exporting the Device configuration and filtering only Images.

Note: For more information, see *19.7 Images* page 114.

11.2 **Images**

11.2.1 Images main screen

In ![icon] **Images**, images presets are displayed in rows of Foreground images and Background images.
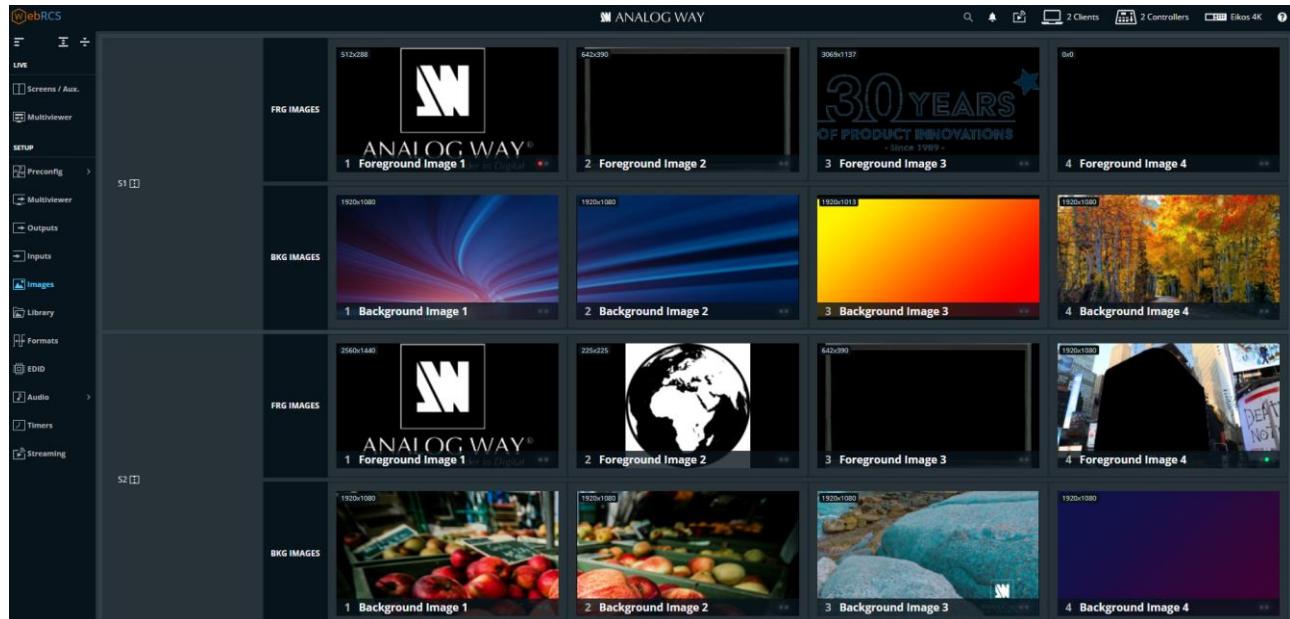
Fig. 20 -   Images – Main screen

The following information are displayed per image slot:
- Slot resolution
- Slot number
- Slot label
- The tallies turn red and green if the image slot is used in a **Program** and/or **Preview** Screen ●●.

Note: - Midra 4K units can use up to 4 Foreground images and 4 Background images per Screen.

11.2.2 Image slots settings

In [image] **Images**, click an image slot to open its settings. The selected image slot is highlighted in the interactive slot grid and all image slot information is listed next to the image slot preview.

- Click **Images** to return to the Images main screen.
- In the header, rename the selected image slot.
- On the interactive slot grid, hover over an image slot to display the image slot preview.
- On the interactive slot grid, click an image slot to open its settings.

11.2.3 Assign an imported image to a Foreground image slot

Note: - A Foreground image is used in a Foreground layer.

- Foreground images used on Screen 2 are automatically rescaled to a limit of 16 Megapixels.

Tip: Click an image slot in the slot grid or use the arrows to browse through the image slots.

1. In [image] **Images**, click a Foreground image slot.

   The image slot settings are displayed.
2. In the header, enter a label to rename the image slot.
3. In the Content tab, select an image from the Library to be used in this Foreground image slot.
4. In the Aspect tab, set the display mode in the layer.

The selected image is now loaded as a Foreground image and is ready to be displayed in the corresponding Screen.

11.2.4 Assign an imported image to a Background image slot

Note: - A Background image is used in a Background set.

- A Background image is not a Screen source and cannot be used directly in any Screen or Aux. Screen layer.

Tip: Click an image slot in the slot grid or use the arrows to browse through the image slots.

1. In [image] **Images**, click a Background image slot.

   The image slot settings are displayed.
2. In the header, enter a label to rename the image slot.
3. In the Content tab, select an image from the Library to be used in this Background image slot.
4. In the Aspect tab, set the display mode in the layer.

The selected image is now loaded as a Background image and is ready to be used in a Background set for the corresponding Screen.

11.2.5 **Image aspect**

In **Images**, select an image slot. In **Aspect**, set the Aspect ratio.

Note: - The Aspect ratio replaces the image slot content and affects every layer using it. If needed, use crop at layer level in Live.

- The Aspect ratio set for an image slot remains when changing the image source.

11.2.5.1 Set Foreground image aspect ratio

Change the image aspect ratio in all layers. Use these settings to correct the image aspect ratio if needed.

Note: Change aspect ratio at layer level to keep the image unchanged.

Setting name	Description / Setting selection
Aspect Ratio	
Display mode	**1:1**; **Native aspect ratio** or **Custom**
Scale ratio	(Only for Native aspect ratio mode) Set the ratio factor.
Custom width and Custom height	(Only for Custom mode) Set custom values.

11.2.5.2 Set Background image aspect ratio

Change the image aspect ratio in all layers. Use these settings to correct the image aspect ratio if needed.

Note: Change aspect ratio at layer level to keep the image unchanged.

Setting name	Description / Setting selection
Aspect Ratio	
Display mode	**Centered**; **Fullscreen**; **Cropped**; **1:1** or **Custom**
Custom width and Custom height	(Only for Custom mode) Set custom values.

12   Formats and EDID

12.1 Formats

In **Formats**, create and manage up to 16 custom formats. Custom formats are very useful for LED wall applications and non-standard display applications (ex: pixel frequency over 165MHz or Dual-link outputs with single link formats 2400x700@60Hz).

Custom formats can also be used to create custom EDIDs and then reset or request the preferred EDID of connected outputs and inputs.

Custom format creation is separated in two modes:

- In **CVT mode**, set the width, height and rate of the format and indicate if the format has reduced blanking intervals. The system computes the remaining format parameters according to the CVT 1.1 standard.

- In **FULL mode**, set all the parameters of the format (H&V front porch, H&V sync, H&V back porch, width, height, sync polarity, ...).

12.1.1 Create a custom format

1. Go to **Formats**.
2. Select a Template format to prefill the settings.
3. Enter a label for the new custom format
4. Select CVT or Full mode.
5. Enter the format settings (use the help in the right panel).
6. Click **Check** to verify if the custom format is valid and can be processed by the unit.
7. If format is valid, click **Save as** then select a memory slot.
8. Click **Save**.

The custom format is added to the formats library and can be used as a format preset.

Note: Custom formats line frequency [*frame rate x V total size*] is limited to 200kHz.

12.1.2 Edit a custom format

1. Go to **Formats**.
2. Select the Custom format memory slot to edit as Template.
3. Edit the format settings.
4. Click **Check** to verify if the custom format is valid and can be processed by the unit.
5. If format is valid, click **Save as** then select the same memory slot.
6. Click **Overwrite**.

12.1.3 Delete a custom format

- In **Formats**, hover over Custom format then click .

The selected Custom format is deleted from the formats library.

12.2 **EDID**
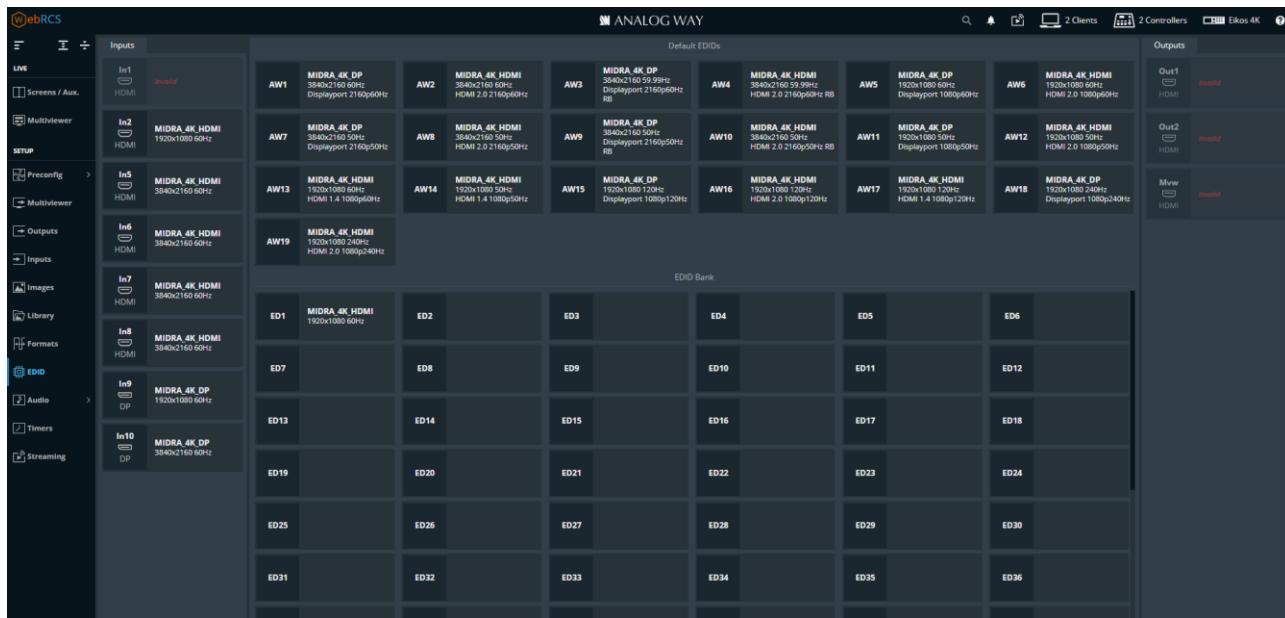
Fig. 21 -   EDID menu

EDID is a metadata format used by displays to indicate their preferred format. A Midra 4K unit receives EDIDs from connected inputs and outputs. It is possible to store these EDIDs in a memory called EDID bank.
It is then possible to overwrite the preferred format of inputs and outputs.

12.2.1 **EDID bank**

All Midra 4K units have 14 preinstalled EDIDs by default which correspond to standard formats for DisplayPort and HDMI outputs. In addition, the EDID bank can store up to 64 EDID memories saved from connected input/outputs, custom formats or EDIDs files imported from computer.

12.2.2 **Save an EDID from inputs and outputs**

To save EDIDs in the EDID bank, drag and drop EDIDs from inputs and outputs to the EDID bank.

12.2.3 **Replace an Input EDID with an EDID from the bank**

To set a new preferred format on an Input, drag and drop an EDID from the bank to the input slot.

To reset an input preferred format, hover over the input and click the reset icon   .

12.2.4 **Set a template format for an EDID**

1. In   **EDID**, hover over an input EDID or an EDID created in the bank and

    click   in the top right corner to show more settings.

2. Click **Template** and select the format to use as EDID.
3. Click **Apply to EDID**.

    The EDID is now usable as an input preferred format.

12.2.5 Set a custom format for an EDID

It is possible to change the preferred format of an input EDID with the settings of a created Custom format.

1. In ⊞ **EDID**, hover over an input EDID or an EDID created in the

   bank and click ⋮ in the top right corner to show more settings.

2. Click **Custom format** and select the memory to use as EDID.
3. Click **Apply to EDID**.

The EDID with custom format is now usable as an input preferred format.

Tip: Clicking ⋮ also displays more EDID information such as extensions (CEA, and Display ID).

SLOT 4			⤓ ⤒

Enter Label...

PREFERRED FORMAT

Custom Format	Template

M1 *1400x2200 60Hz* ▼

Apply to EDID

STATUS

HID	BNQ801E
Product Name	BenQ LCD
Serial n°	21573
Hash Code	2616992489
Preferred Format	3840x2160 59.99Hz

EXTENSIONS

Type	HDMI	HDR	Audio	Preferred Format
CEA 861	✓	✗	✓	-
-	-	-	-	-
-	-	-	-	-

12.2.6 Export an EDID to computer

1. In ⊞ **EDID**, hover over an EDID and click ⋮ in the top right corner to show more settings.

2. Click ⤓ to download the EDID to the computer.

12.2.7 Import an EDID from computer

1. In ⊞ **EDID**, hover over an EDID and click ⋮ in the top right corner to show more settings.

2. Click ⤒ and select the EDID file to upload from the computer to the unit.

12.2.8 Delete a custom EDID

- In ⊞ **EDID**, hover over an EDID in the EDID bank then click 🗑.

The selected custom EDID is deleted from the EDID bank.

12.2.9 AW EDID Editor

AW EDID Editor is a simple and powerful software developed by Analog Way to create, edit and import/export EDID files in just a few minutes. Import the EDID file in the Web RCS to change the preferred format of any input and solve compatibility issues. AW EDID Editor supports EDID 1.3 and 1.4 as well as DisplayID 1.3 and CEA-861-G extensions.

13   LUT Libraries

In **LUT Libraries**, manage Lookup Tables (LUTs). Midra 4K uses LUTs to instantly transform the colors of an Input or Output according to a mapping table. The LUTs are separated in two types:

Conversion LUTs	Used to convert the signal of an input or output (ex: SDR to HDR)
Correction LUTs	Used to change the color tone of an input or output (ex: cooler or warmer colors, black and white, etc.)

13.1 Allocate LUT resources to inputs

LUTs are used for specific dynamic range conversion or color correction. Midra 4K has a LUT resource allocation system for Inputs. Select the four inputs that will support conversion and correction using LUTs.

Note: For more information, see *10.2.2 Allocate LUT resources to inputs* page 61.

13.2 Import a LUT

1. Go to **LUT Libraries**.

2. In the Conversion or Correction LUT library, click **Upload LUT File** on an empty slot to open the file explorer and select a custom LUT to transfer.
   The Upload LUT form is displayed.

3. Enter LUT label and fill the parameters corresponding to this LUT.
   Make sure to set the parameters correctly as they will be used for processing.

4. Click **Upload**.

The selected LUT is imported to the corresponding library.

13.3 Use a LUT

Conversion and Correction LUTs can be used in the **Inputs** and **Outputs** menus.

13.4 Export a LUT to computer

- In **LUT Libraries**, hover over an LUT slot and click to download the LUT to the computer.

13.5 Delete a LUT

- In **LUT Libraries**, hover over an LUT slot then click .

The selected LUT is deleted from the LUT library.

14 Timers

Timers are time-based contents to be displayed in the Multiviewer. Midra 4K units can generate up to three timers and three different modes.
There are three types of timers:
- Current time
- Countdown
- Stopwatch (count up)

14.1 Create a timer

1. In ⟋ **Timers**, select a timer slot to use.

2. If needed, enter a label.

3. Select the timer type:
   a. In **Current Time** mode, select the display format and set timer offset if needed.
   b. In **Countdown** mode, select the display format and set the countdown duration.
   c. In **Stopwatch** mode, select the display format.

4. For Countdown and Stopwatch modes, use the buttons to run, pause and stop the counters.

Note: Current time displays the device time set in Dashboard > Device.

14.2 Control counter timers in the Multiviewer page

It is possible to run, pause and stop the counters directly in the source panel in Live > Multiviewer.

1. In ⊡ **Multiviewer**, open the timers source panel.

2. Hover over a timer and click ⋮ to show control options.

3. Click **Setup …** to enter timer settings.
   Or use the buttons to run, pause and stop the counter.
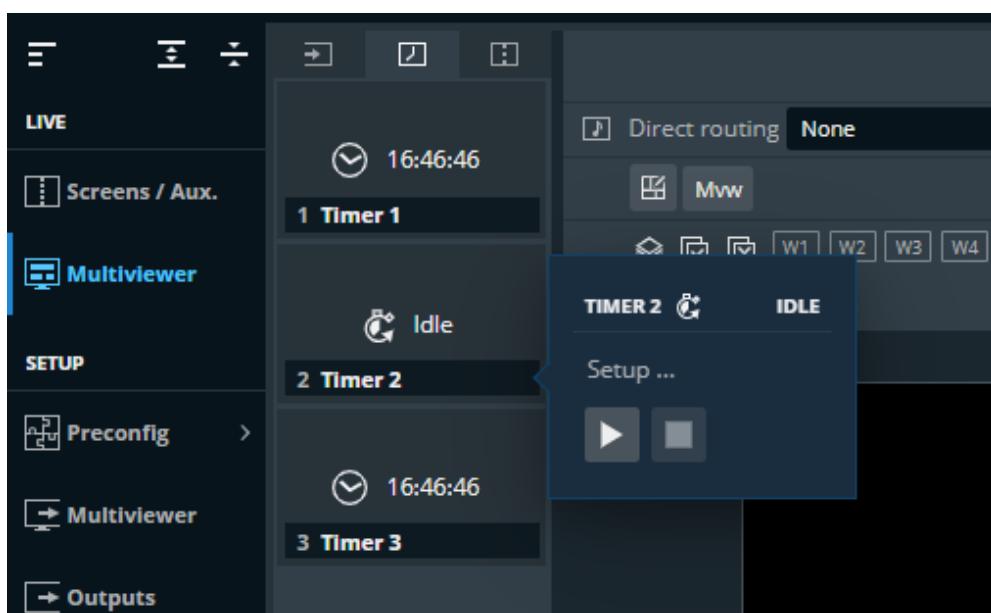
Fig. 22 -   Timer controls in Multiviewer

15 Screens / Aux.

Screens / Aux. is the main page for controlling a show after all pre-configurations are set:

- Display content in layers in Screens and Aux Screens
- Create dynamic layer transitions
- Transition Preview to Program
- Save and Load Screen memories and Master memories
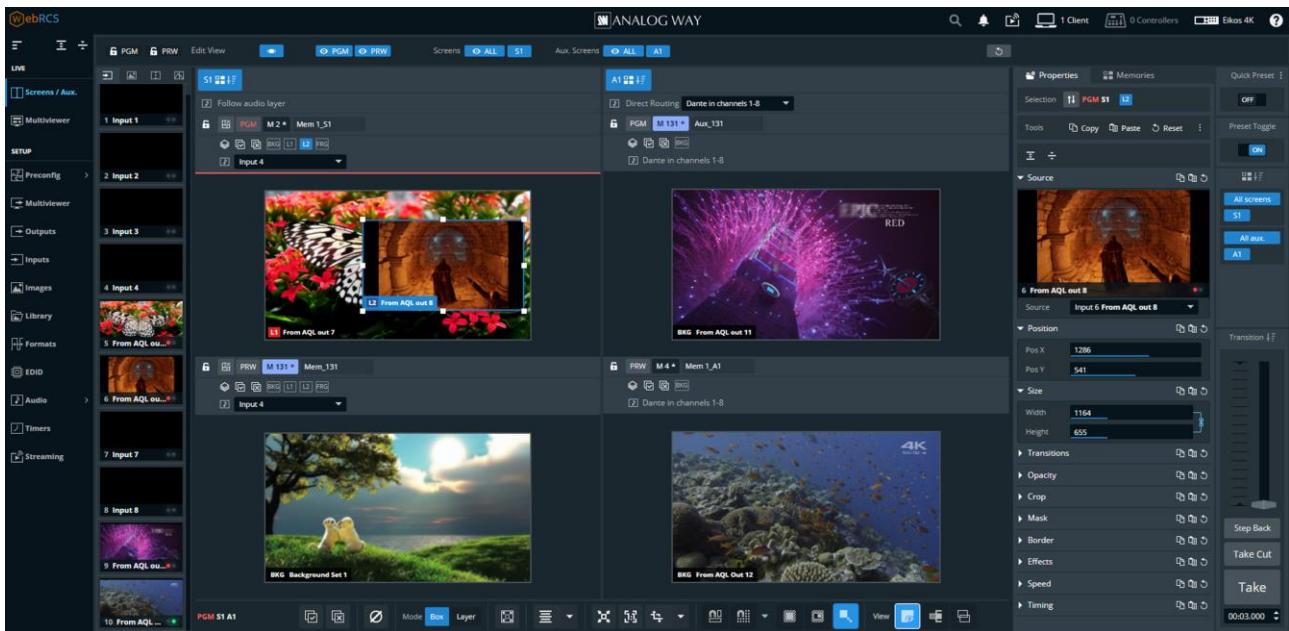
Fig. 23 -   Live – Screens / Aux. menu

15.1 Screens menu interface

15.1.1 Program and Preview

Screens / Aux. is composed of **Program** (PGM) and **Preview** (PRW) windows for each screen, as well as access to sources, layer properties, memories and transition panel. Program windows are always displayed on top of Preview windows.

15.1.2 **Views**

The **Live** menu offers a customizable view of the workspace for Screens and Aux Screens.

15.1.2.1 View filters – Top bar buttons

Fig. 24 -   View filters

Setting name	Description / Setting selection
🔒 PGM / PRW	Toggle to lock all the Screens and Aux Screens. Prevent edits during Live, or lock Program to only edit in Preview. Layers cannot be modified; Memories cannot be loaded but transition can be triggered.
👁 PGM / PRW / ALL	Toggle to show/hide all Program, Preview, Screens and/or Aux. Screens. Use the scroller when displaying more than five Screens.
↺	Reset to default view (Screens visibility, size and order).

Note: Hiding and locking Screens do not affect the Transition. To exclude a Screen from transition, see *15.1.7 Transitions - Right panel* page 77.

15.1.2.2 Resize and reorder Screen windows

In addition to showing and hiding Screens, it is also possible to resize and reorder the Screens in the interface.
- Use drag and drop on a border to resize the Screen width or height.
- Use drag and drop on a Screen name to move it and change the Screens order.

15.1.3 **Sources - Left panel**

The Sources are located in the left panel. Click the icons to show the corresponding sources:

	Source type	Can be displayed in
→	Live inputs	Live layers or Aux layers
⛰	Foreground images	Foreground layers
⋮	Program Screens	Aux layers
⩘	Background sets	Background layers

The following information are displayed per source content:
- Source number
- Source label
- The tallies turn red and green if the content is used in a **Program** and/or **Preview** Screen ●●.

- Click ⋮ on the bottom-right corner of a source thumbnail to open options (ex: Select the active input for Input 1 & 2 or access the setup menu for the selected source).

15.1.4 Layer selection

This bar shows tools and all available layers for the corresponding Screen.
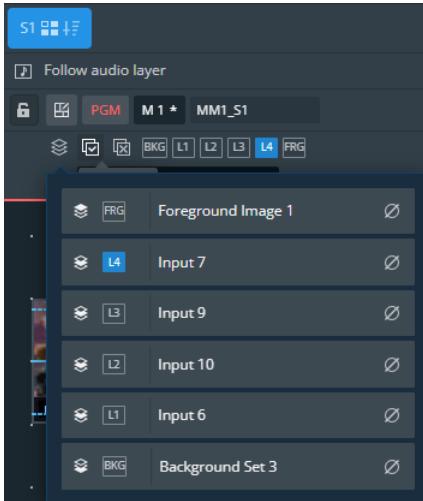
Setting name	Description / Setting selection
S1 (toggle icon)	Toggle to include / exclude the Screen or Aux from transition selection
(audio icon)	Indicates the Screen audio mode.
or (lock icons)	Toggle to lock the selected PGM or PRW Screen. Layers cannot be modified; Memories cannot be loaded but transition can be triggered.
(layout editor icon)	Open the layout editor, see the following section.
PGM or PRW	Indicates the Program or Preview Screens.
(layers icon)	Open a detailed view of all layers in the selected Screen. Click ∅ to empty the layer content and keep other properties
(select all icon)	Select all layers in this Screen
(deselect all icon)	Deselect all layers in this Screen
Layer icon	Select a layer (hold **Ctrl** or **Shift** to select multiple layers)

15.1.5 Screen layout editor

Click (icon) to open the layout editor, a smart tool to place layers in the Screen easily.
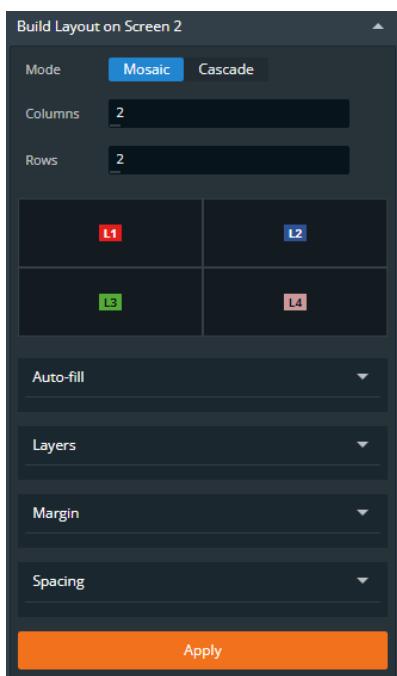
Setting name	Description / Setting selection
Mode	**Mosaic** places layers in custom grid. Mosaic layout automatically arranges the layers in rows. The last slot is empty if the number of layers is odd. **Cascade** places all layers in cascade except Layer 1 in Fullscreen.
Columns & Rows	Create a custom grid for the Mosaic mode
Autofill	Select the source content to put in layers
Layers	Select layers to include/exclude from this layout
Margin	Reduce the area of this layout (ex: **Top: 50%** will ignore the top half of the Screen
Spacing	In Mosaic mode, set gaps between columns and/or rows

15.1.6 PGM and PRW buttons – Screen controls

Click the **PGM** or **PRW** button in any Screen to open options.
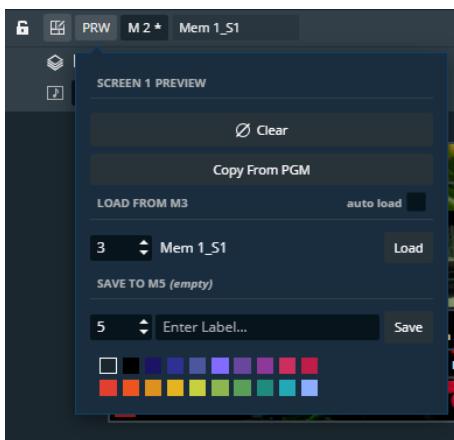
Setting name	Description / Setting selection
⊘ Clear	Empty the layers content and keep other properties for this PGM or PRW Screen
Copy from PGM	Copy layers settings from the corresponding PGM Screen (PRW only)
Load from	Load the Layer settings from a selected Screen Memory Enable auto load to display on Screen directly when selecting the Screen memory
Save to	Save the current Layer settings for this PGM or PRW Screen in a selected Screen memory
Label	Rename the selected Screen memory Select a color for the memory slot.

15.1.7 Transitions - Right panel

Setting name	Description / Setting selection
Quick Preset	Toggle to turn the Quick Preset on and off. Click ⋮ to see the settings.
Preset Toggle	Copy Program to Preview after the transition. If Preset Toggle is enabled for a Screen, the layers in PGM replace the layers in PRW during a **Take** or **Take Cut** ("swap" effect). If Preset Toggle is disabled, the layers in PRW are copied to PGM and remain in PRW Screens during a **Take** or Take **Cut**.
Screen transition filter	Select the Screens and Aux affected by transition (by default, all Screens and all Aux are selected). Also indicated in the bottom bar. The black shade indicates if the Screen is affected by the Quick Preset.
T-Bar	Transition the selection manually
Step Back	Revert the last change in layer settings. Does not work with a deletion.
Take Cut	Instant transition. Replace PGM layers with the PRW layers for the selected Screens with an immediate cut effect. The Global transition duration and the layers settings for Transitions, Speed and Timing are Not applied.
Take	Replace the PGM layers with the PRW layers for the selected Screens. Set the Global transition duration under the Take button (minutes:seconds.milliseconds). The layers settings for Transitions, Speed and Timing are applied to the **Take**.

15.1.8 Bottom bar buttons

Use the buttons in the bottom bar to help setting the layers in Screens.

Button	Button description
Action buttons	
PGM S1 A1	Screen selection for transition (same as the Screen transition filter in the right panel)
	Select all layers in the Screens selected for transition (indicated on the left side)
	Deselect all layers
	Empty the layers content and keep other properties for the selected layers
Mode	**Box mode**: the layer selection is considered as a box (ex: Middle center position puts the center of the box in the center of the Screen). **Layer mode**: all selected layers will be affected (ex: Middle center position puts the selected layers overlapped in the center of the Screen)
	Scale the layer selection to full screen
	Align the layer selection (**Top**, **Bottom**, **Left**, **Right**, **Corner**, **Center**, **Horizontal** or **Vertical**)
	Set layer size to source ratio (reduce size to cancel empty area of the layer)
	Set layer size to content size (**5:4**, **4:3**, **16:10**, **15:9**, **16:9**, **21:9** or **source size**)
	Set layer size to an aspect ratio
Assist buttons (On/Off toggle buttons)	
	Snap to Screen border and other layer borders
	Snap to grid cells Click the arrow to set the grid (columns & rows)
	Force layers outside of Screen to snap to Screen borders
	Force layers to stay inside of Screen borders
	Keep aspect ratio
Interface buttons (On/Off toggle buttons)	
	Hide empty and preempted items (layers and sources)
	Hide content outside of Screen borders
	Hide content to display only layers wireframe

15.2 Layer properties

When a layer is selected, the following layer settings are displayed in the Properties tab:

Setting name	Description / Setting selection
Source	Select a content for this layer. It is also possible to set a solid color for a background layer.
Position	Set layer Vertical and Horizontal position in pixels.
Size*	Set layer Height and Width in pixels.
Transitions	Set Opening and Closing transition during Take.
Opacity	Set layer transparency.
Crop	Set layer cropping (zoom effect with content resized) in percentage or pixels (top, bottom, left and right) and layer aspect (None; 1:1; Centered; Fullscreen; Cropped).
Mask	Set layer masking (content not resized) in percentage or pixels (top, bottom, left and right).
Border*	Set a layer border and layer shadow.
Effects*	Set color filters (Black and white; Negative; Sepia; Solar) and Horizontal or Vertical flip.
Speed	Set the acceleration curve for the transition during Take.
Timing	Set the timings for delayed layer transition during Take.

*Live layers only

15.2.1 Layer selection and tools
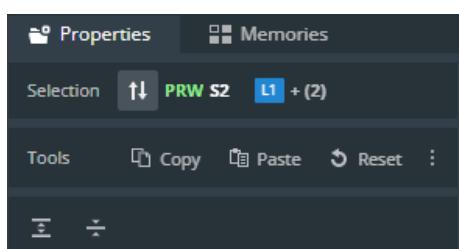
Setting name	Description / Setting selection
↑↓	Keep the layer selection and toggle to Program or Preview
PRW S2 L1 + (2)	Current layer selection. The layer indicated is the Reference layer. The following layers will have the same settings applied if possible.
Copy / Paste / Reset	Copy, paste or reset multiple layer properties. By default, all layer properties are selected. Click ⋮ to filter the selection.
⤒	Expand to open all layer properties details
⤓	Collapse all layer properties

15.2.2 **Layer position and size**

15.2.2.1 Set layer position with the layout editor

Layouts are predefined templates arranging layers automatically in one Screen.

1. In ▭ **Screens / Aux.**, click ▱ in the selected Screen to open the layout editor.
2. Create a custom layout in Mosaic or Cascade mode.
3. Auto-fill the layers with a type of source.
4. Select layers to include/exclude from the layout.
5. Apply the layout on Screen.

All the Screen layers are arranged automatically. For more information, see *15.1.5 Screen layout editor* page 76.

15.2.2.2 Set layer position and size manually

> Note: Layer size is only available for Live layers. BKG layers are Fullscreen and FRG layers follow the size set in ▱ **Images**.

1. In ▭ **Screens / Aux.**, select a layer.

The selected layer is highlighted.

2. Use drag and drop on the layer to move it in the Screen.
3. Use drag and drop on a layer border point to change its size.

It is also possible to use the Properties panel:

4. Go to Properties, click **Position** and **Size** to show the corresponding settings.
5. Set the Position and Size by entering values or using drag and drop.

> **Tip:** - In the **Size** property, click ▱ to keep the aspect ratio when changing the size values.
>
> - Use bottom bar buttons (Keep aspect ratio, snap to items) to have layers of equal size or alignment. When enabling snap to item, layer borders are automatically attracted to other objects (Screen border, layer border, grid snap point) to match their position or size.

15.2.3 **Layer source**

15.2.3.1 Assign content to a layer

> **Note**: It is only possible to assign source to corresponding layers (Background set to Background layer, etc.).

1. In ▭ **Screens / Aux.**, click a source icon in the left panel.
2. Select a Layer or make sure it is available for drag and drop.
3. Drag a content and drop it in the layer.

The content thumbnail is displayed in the layer with the source label at the bottom.

> **Tip:** It is also possible to assign a content in other ways:
> - Drag and drop the selected content into the layer letter icon on the top of each screen.
> - Select a Layer then go to Properties > Source and select the content in the dropdown list.

15.2.3.2 Set a colored layer

1. In **Screens / Aux.**, select a layer.

2. In **Properties**, click **Source** to show the corresponding settings.
3. In the Source dropdown list, select **Color**.
4. In Color, enter the hexadecimal color code or click the color preview to open the color picker.

15.2.3.3 Set a colored background

In addition to the eight background sets, each Screen is able to display a color in the background layer.

1. In **Screens / Aux.**, select a background layer (BKG).

2. In **Properties**, click **Source** to show the corresponding settings.
3. In the Source dropdown list, select **None**.
4. In Color, enter the hexadecimal color code or click the color preview to open the color picker.

Note: - The background color is always present and can be displayed during a background set Crossfade.

- By default, all Screens display a background with black color (#000000).

15.2.3.4 Remove a content from a layer

1. In **Screens / Aux.**, select one or multiple layers.

2. Press the **Del** key to remove all layers content (this cannot be reversed).
    The selected layers are empty but other properties are kept.

Tip: It is also possible to remove a content in other ways:

- Click next to the layer letter icons then click to clear the corresponding layer.

- Go to Properties > Source, then click or select None in the source dropdown list.

15.2.4 **Set layer opacity**

1. In **Screens / Aux.**, select a layer.

2. In **Properties**, click **Opacity** to show the corresponding setting.
3. Set the transparency level with a value from 0 to 256.

15.2.5 Set layer crop and aspect

Layer crop looks like a zoom effect and the content is resized to fit the layer. It is set for a layer and only affects the content used in this layer without changing the native content.

1. In ⬚ **Screens / Aux.**, select a layer.
2. In **Properties**, click **Crop** to show the corresponding settings.
3. Set the cropping per side in percentage or pixels.
4. In **Aspect**, set how the content is filling the layer (**Global settings** (set from front panel), **1:1**; **Centered**; **Fullscreen, Cropped** or **Input setting**).

Note: - The aspect set at layer level overrides the aspect set at content level (input or image).

- When multiple layers are selected, the crop is set on the following layers in percentage so the ratio stays the same even with content with different resolutions.

15.2.6 Set layer mask

Layer mask looks like an erasing effect and the content is not resized. It is set for a layer and only affects the content used in this layer without changing the native content.

1. In ⬚ **Screens / Aux.**, select a layer.
2. In **Properties**, click **Mask** to show the corresponding settings.
3. Set the masking per side in percentage or pixels.

Note: When multiple layers are selected, the crop is set on the following layers in percentage so the ratio stays the same even with content with different resolutions.

15.2.7 Set layer border

Note: Layer border is only available for Live layers.

1. In ⬚ **Screens / Aux.**, select a layer.
2. In **Properties**, click **Border** to show the corresponding settings.
3. Toggle **Edge** to apply layer border settings.
4. Toggle **Smooth** to create a fading effect on the borders.
5. **In Edge / Smooth**, enter the hexadecimal color code or click the color preview to open the color picker.
6. Set the H size, V size and Opacity.
7. If needed, toggle **Round** to apply round corners settings and set the round corner radius.

15.2.8 Set layer smooth border

Note: Layer border is only available for Live layers.

Setting a smooth border without enabling **Edge** creates a smooth effect around the content.

1. In **Screens / Aux.**, select a layer.

2. In **Properties**, click **Border** to show the corresponding settings.
3. Keep the **Edge** toggle disabled.
4. Toggle **Smooth** to create a fading effect around the content.
5. In **Edge / Smooth**, set the H size, V size and Opacity.
6. If needed, toggle **Round** to apply round corners settings and set the round corner radius.

15.2.9 Set layer shadow

Note: Layer shadow is only available for Live layers.

1. In **Screens / Aux.**, select a layer.

2. In **Properties**, click **Border** to show the corresponding settings.
3. Toggle **Shadow** to apply layer shadow settings.
4. Set the X and Y positions for the shadow direction.
5. Set the shadow Opacity level.
6. If needed, toggle **Round** to apply round corners settings and set the round corner radius.

15.2.10   Set layer color filter

1. In **Screens / Aux.**, select a layer.

2. In **Properties**, click **Effects** to show the corresponding settings.
3. In **Filter**, toggle the On/Off buttons to enable the corresponding effects (**Black and White**; **Negative**; **Sepia**; **Solar**).

15.2.11   Set layer Horizontal and Vertical flip

1. In **Screens / Aux.**, select a layer.

2. In **Properties**, click **Effects** to show the corresponding settings.
3. In **Transform**, toggle the On/Off buttons to enable the corresponding effects (**H flip** and **V flip**).

15.3 Layer transition

The transition is the animations of the layers during **Take**. Each layer can be defined by an opening and a closing transition. The opening effect is triggered when the layer switches from one source to another or when the layer appears on Screen. The closing effect is triggered if the layer is not used in the new screen. The global transition Timing is set under the **Take** button.

Note: - Transition effect, timing and speed are not applied when using the **Take Cut** button.

15.3.1 Set layer transition effect

1. In ⬚ **Screens / Aux.**, select a layer.

2. In **Properties**, click **Transitions** to show the corresponding settings.
3. In **Opening**, select a transition type and transition direction.
4. In **Closing**, select a transition type and transition direction.
5. If needed, disable Cross effect and Cross depth.

Cross Effect	Seamless effect between two contents (ex: Crossfade). If disabled, the first content disappears before the next one appears.
Cross Depth	Same content changing Layer (ex: L1 to L2). The layer moves in depth to reach new z-position. If disabled, the transition is done inside the Layers. The content closes inside one layer and opens in the new layer.

15.3.2 Set layer transition timing

1. In ⬚ **Screens / Aux.**, select a layer.

2. Set the global transition timing under the **Take** button.
3. In **Properties**, click **Timing** to show the corresponding settings.
4. In **Opening**, enter a starting time and an ending time for the selected layer.
5. In **Closing**, enter a starting time and an ending time for the selected layer.

15.3.3 Set layer transition speed

1. In ⬚ **Screens / Aux.**, select a layer.

2. In **Properties**, click **Speed** to show the corresponding settings.
3. Toggle **Linear** to use a linear speed and hide the other settings.
   If Linear is Off, the Speed curve is displayed.
4. Set the starting and ending speed to create a custom speed.

15.4 Aux Screen layer

The Aux Screen layer does not support Seamless transitions (one content will disappear before the new one is visible) and/or Alpha channels (transparent content is displayed in the same color as the background layer).

16   Memories

▣ **Memories** are used to save layers settings.

Master memory	Saves/loads multiple Screen memories at once (one per screen).
Screen memory	Saves/loads the layers settings for one Screen.
Aux memory	Saves/loads the settings for one Aux Screen.

The Midra 4K can save up to 50 Master memories, 200 Screen memories and 200 Aux memories.
Memories can be saved from and loaded to Program or Preview Screens.

16.1 Memories tab

In ▤ **Screens / Aux.**, next to the Properties tab is the ▣ **Memories** tab located in the right panel.
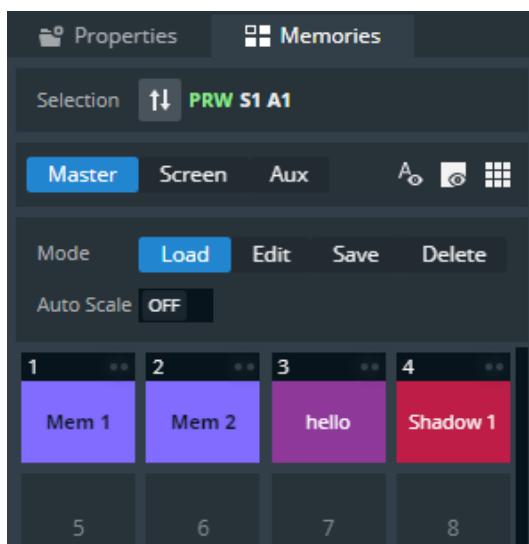
Fig. 25 -   Memories tab

Button / Setting	Description / Setting selection
A◉	Show / hide Memories labels
◉	Show / hide empty Memory slots
▦	Toggle the number of Memory slot per column (1; 2 or 4 per column)
Auto Scale	Toggle to rescale the layers to fit the Screen(s) on load or keep the parameters as saved in the Memory.
●●	The tallies turn red and green if the content is used in a **Program** and/or **Preview** Screen ●●.

16.2 **Master Memories**

16.2.1 **Save a Master memory from current Screens**

Master memory is the default saving mode and can be used alone as it loads settings on all Screens. A Master memory saves the selected Screens in the current settings. Using Filters, select which Screens, Aux, Layers and Layer settings to save in the Master memory. By default, all Layers and all Layer settings are selected.

A Master memory is made of multiple Screen memories Saving a Master memory actually saves one Screen memory per Screen. These Screen memories can be accessed when using the **Screen** mode.

Note: - When a Master memory is loaded to Preview, only the Screens included in the memory are selected for Transition.

- It is also possible to save a Master Memory using self-contained Screen Memories. Self-contained Memories do not create Screen or Aux Screen Memories and can only be edited by loading and overwriting the Master Memory.

1. In [icon] **Screens / Aux.**, click the [icon] **Memories** tab in the right panel.
2. Select **Master** mode and click **Save** to open the Master memory saving window:

Setting name	Description / Setting selection
Mode	Select to save the current layers settings from Program or Preview Screens with or without creating Screen/Aux Memories (self-contained mode).
Select	Select the Screens and Aux to include/exclude from the Master Memory. Select the Screen Memory slots to use in the corresponding Screens. Click **Auto select…** to use the first empty slots.
Filter	Select the layer settings to include/exclude from the Master Memory. Select the layers to include/exclude from the Master Memory.
Save to	Select the Master Memory slot to use. Enter a label for the Master Memory. Select a color for the memory slot.

3. Select the settings to save in the Master memory using the table above.
4. Click **Save**.

Note: - Selecting existing Screen memories and Master memories slot will overwrite them.

- Changing (and deleting) a Screen memory also affects a Master memory using it. If needed, create a duplicate of the Screen memory before making changes.

16.2.2 Save a Master memory from existing Screen memories

Because a Master memory is made from Screen memories. It is also possible to create a Master memory by using existing Screen memories.

1. In ⬚ **Screens / Aux.**, click the ▦ **Memories** tab in the right panel.

2. Select **Master** mode and click **Save** to open the Master memory saving window:
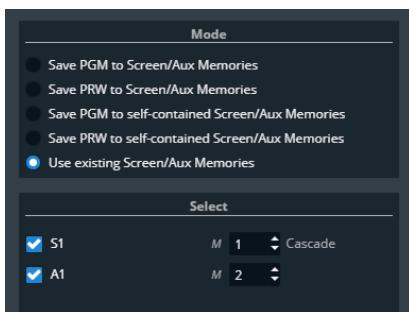
Setting name	Description / Setting selection
Mode	Select **Use existing Screen Memories**
Select	Select the Screens and Aux Screens to include/exclude from the Master Memory. Select the Screen Memory slots to use for the corresponding Screens.
Save to	Select the Master Memory slot to use. Enter a label for the Master Memory. Select a color for the memory slot.

3. Select the Screen memories to use in the Master memory.

4. Click **Save**.

> **Note:** Changing (and deleting) a Screen memory also affects a Master memory using it.
>
> If needed, create a duplicate of the Screen memory before making changes.

16.2.3 Load a Master memory

1. In ⬚ **Screens / Aux.**, click the ▦ **Memories** tab in the right panel.

2. Select **Master** mode and click **Load**.

3. If needed, enable **Auto Scale** to adapt the loaded memories to fit the Screens.

4. Click a layer in Program or Preview.

5. Click a Master memory slot.

The Master memory is loaded to Program or Preview in the Screens selected in the Master memory.

The Screens selected in the Master memory are enabled for transition in the Screen selection filter.

> **Tip:** It is also possible to drag a memory slot to a Program or Preview Screen.

16.2.4 Edit a Master memory

1. Load a Master memory.

2. Click **Save** to open the Master memory saving window.

3. Select the settings to save.

4. Select the existing Master memory slot to edit.

5. Click **Save** to overwrite the previous Master memory.

16.3 **Screen Memories**

16.3.1 **Save a Screen memory**

A Screen memory saves the selected Screen in the current settings.

Using Filters, select which Layers and Layer settings to save in the Screen memory. By default, all Layers and all Layer settings are selected.

1. In ⬚ **Screens / Aux.**, click the ⬚ **Memories** tab in the right panel.
2. Select **Screen** mode.
3. Click **Save** to open the Screen memory saving window:

Setting name	Description / Setting selection
Mode	Select to save the current layers settings from Program or Preview Screen.
Select	Select the Screen to save
Filter	Select the layer settings to include/exclude from the Screen Memory. Select the layer to include/exclude from the Screen Memory.
Save to	Select the Screen Memory slot to use. Enter a label for the Screen Memory. Select a color for the memory slot.

4. Select the settings to save in the Screen memory using the table above.
5. Click **Save**.

16.3.2 Load a Screen memory

1. In ⬚ **Screens / Aux.**, click the ⬚ **Memories** tab in the right panel.
2. Select **Screen** mode and click **Load**.
3. If needed, enable **Auto Scale** to adapt the loaded memory to fit the Screen.
4. Use the [S1 ⬚] buttons or Screen transition filter to select the Screen(s).

   The Screens selected for Screen Memory loading are also indicated under the ⬚ **Memories** tab:
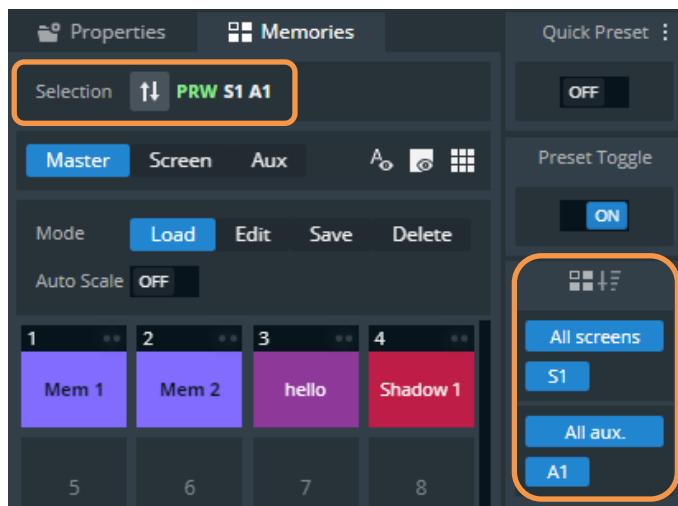
5. Click a Screen memory slot.

   The Screen memory is loaded to the selected Screen in Program or Preview.

> **Tip:** It is also possible to drag a memory slot to a Program or Preview Screen.

16.3.3 Edit a Screen memory

1. Load a Screen memory.
2. Click **Save** to open the Screen memory saving window.
3. Select the settings to save.
4. Select the existing Screen memory slot to edit.
5. Click **Save** to overwrite the previous Screen memory.

16.3.4 Quick overwrite or revert

When a Screen memory is loaded in a Screen, a button with the memory slot number appears.
If changes are made to the Screen, a * appears next to the memory slot number.

1. Click the memory button to show more options.
2. Click **Save** to overwrite the Screen memory with the new layer settings.

   Or click **Revert** to reload the Screen memory.

16.4 Aux Screen Memories

Aux Screen memories are only available when the device is set to **Mixer mode**. They work exactly like Screen memories but are stored in their own bank.

> **Note**: Screen memories can only be used in Screens and Aux Screen memories can only be used in Aux Screens.

16.5 Rename a Memory

1. In ▦ **Screens / Aux.**, click the ▦ **Memories** tab in the right panel.
2. Click **Edit**.
3. Click ⋮ in the top right corner of the memory slot to open the **Label** and **Color** fields.
4. Enter a new name for the memory slot.

16.6 Change the color of a Memory slot

1. In ▦ **Screens / Aux.**, click the ▦ **Memories** tab in the right panel.
2. Click **Edit**.
3. Click ⋮ in the top right corner of the memory slot to open the **Label** and **Color** fields.
4. Select a color for the memory slot.

> **Tip:** To reset all memory slots to default colors, click ⋮ on top of the memory slots and click **Reset colors**.

16.7 Reorder memories

1. In ▦ **Screens / Aux.**, click the ▦ **Memories** tab in the right panel.
2. Select **Master** or **Screen** mode.
3. Click **Edit**.
4. Drag a memory slot to a new place to organize the memory slots in a custom order.

> **Note:** - Reordering memory slots does not change the memory slot number and does not impact external controllers and RC400T.
>
> - Reordering Screen memories does not impact Master memories.

> **Tip:** To reset to default order, click ⋮ on top of the memory slots and click **Reset order**.

16.8 Delete a memory

1. In ▦ **Screens / Aux.**, click the ▦ **Memories** tab in the right panel.
2. Select **Master** or **Screen** mode.
3. Click **Delete**.
4. Select one or multiple memory slots to delete.
5. Click **Delete** at the bottom of the slots.

17   Multiviewer

Tip: Go to 🖥 **Multiviewer** after all pre-configurations are set.

The Multiviewer is an output displaying a user customizable selection of Widgets as display resources. A Widget works like a layer and can display a program, preview, input or timer. The Multiviewer can display up to 16 Widgets.

In 🖥 **Multiviewer**, set the Multiviewer layout and Widgets.

Note: Go to Setup ➡ Multiviewer to set the Label, Signal parameters, Patterns and Image correction.

17.1 Tips and recommendations

- Widgets cannot be placed on top of each other (overlap error).
- The same source cannot be used in more than one widget.

17.2 Multiviewer menu interface

The menu 🖥 **Multiviewer** behaves much like the menu ⋮⋮ **Screens**:

- Sources on the left panel: ➡ Inputs; ╱ Timers and ⋮⋮ Screens.

- Widget letter icons and Bottom bar icons.
- Widget properties and Memories on the right panel.

Note: There are no transition or Program/Preview features in the Multiviewer.

17.2.1 Sources - Left panel

The Sources are located in the left panel. Click the icons to show the corresponding sources:

Multiviewer sources		
➡ Inputs	╱ Timers	⋮⋮ Screens

The following information are displayed per source content:
- Source number
- Source label
- The tallies turn red and green if the content is used in a **Program** and/or **Preview** Screen ●●.

- Click ⋮ on the bottom-right corner of a source thumbnail to open options (ex: Select the active input for Input 1 & 2 or access the setup menu for the selected source).

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17.2.1.1 Control counter timers in the Multiviewer

It is possible to run, pause and stop the counters directly in the source panel in Live > Multiviewer.

1. In ⊞ **Multiviewer**, open the timers source panel.

2. Hover over a timer and click ⋮ to show control options.

3. Click **Setup …** to enter timer settings.
    Or use the buttons to run, pause and stop the counter.
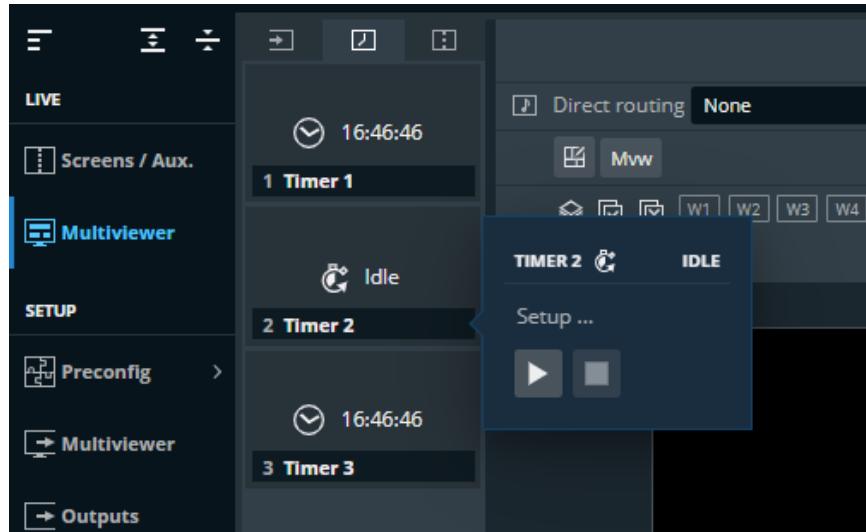
Fig. 26 -   Timer controls in Multiviewer

17.2.2 Widget selection

This bar shows tools and all available widgets for the Multiviewer.
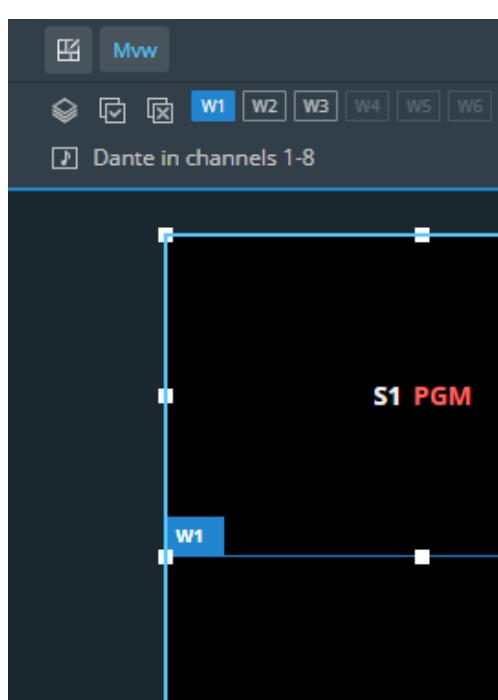
Setting name	Description / Setting selection
🖉	Open the layout editor, see *16.2.3 Multiviewer layout* editor page 93.
◈	Open a detailed view of all widgets (source number). Click ⊘ to empty the widget content and keep other properties
☑	Select all widgets
☒	Deselect all widgets
Widget letter	Select a widget (hold **Ctrl** or **Shift** to select multiple widgets)

17.2.3 Multiviewer layout editor

Click ⬚✎ to open the layout editor, a smart tool to place widget in the Multiviewer easily.
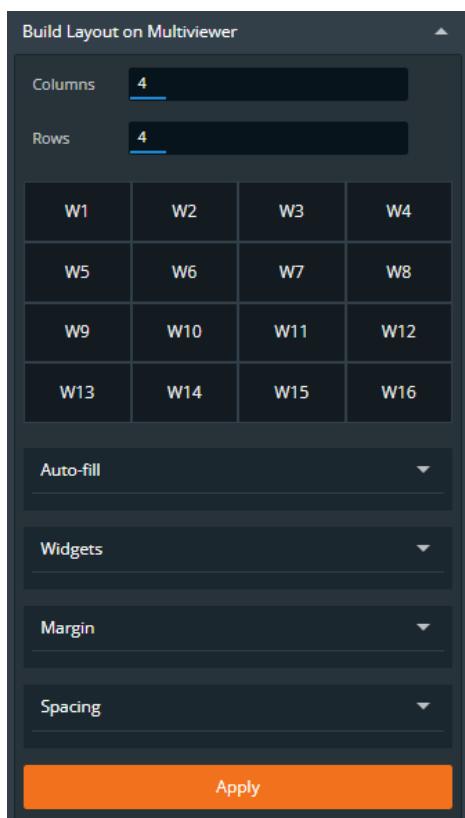
Setting name	Description / Setting selection
Columns & Rows	Create a custom grid
Autofill	Select the source content to put in widgets
Widgets	Select widgets to include/exclude from this layout
Margin	Reduce the area of this layout (ex: **Top: 50%** will ignore the top half of the Multiviewer)
Spacing	Set gaps between columns and/or rows

17.2.4 Bottom bar buttons

Button	Button description
Action buttons	
	Select all widgets in the Multiviewer
	Deselect all widgets
	Empty the widgets content and keep other properties for the selected widgets
Assist buttons (On/Off toggle buttons)	
	Snap to Multiviewer border and other widgets borders.
	Snap to grid cells. Click the arrow to set the grid (columns and rows).
	Keep aspect ratio.
Interface buttons (On/Off toggle buttons)	
	Hide empty and preempted items (layers and sources).
	Hide content to display only widgets wireframe.

17.3 **Widget properties**

When a widget is selected, the following widget settings are displayed in the Properties tab.

Setting name	Description / Setting selection

View	**Enable**: Toggle to show/hide the widget.
	OSD (On Screen Display):
	    - **Off**: Hide OSD information.
	    - **Basic**: Only show the title of the source in widget OSD.
	    - **Detailed**: Show full OSD information on the widget.

Source	Select a content for this widget.
Position/Size	Set widget Vertical and Horizontal position in pixels. Set widget Height and Width in pixels.

17.3.1 **Widget position and size**

Note: A widget is limited to a width of 1920 pixels and a height of 1080 pixels.

17.3.1.1 Set widget position with the layout editor

Layouts are predefined templates arranging widgets automatically in the Multiviewer.

1. In ⊞ **Multiviewer**, click ⬒ to open the layout editor.
2. Auto-fill the widgets with a type of source.
3. Select widgets to include/exclude from the layout.
4. Apply the layout on Multiviewer.

All the Multiviewer widgets are arranged automatically. For more information, see *16.2.3 Multiviewer layout editor* page 93.

17.3.1.2 Set widget position and size manually

1. In ⊞ **Multiviewer**, select a widget.

The selected widget is highlighted.

2. Use drag and drop on the widget to move it in the Screen.
3. Use drag and drop on a widget border point to change its size.

It is also possible to use the Properties panel:

4. Go to Properties, click **Position** and **Size** to show the corresponding settings.
5. Set the Position and Size by entering values or using drag and drop.

Tip: - In the **Size** property, click ⬚ to keep the aspect ratio when changing the size values.

- Use bottom bar buttons (Keep aspect ratio, snap to items) to have widgets of equal size or alignment. When enabling snap to item, widgets borders are automatically attracted to other objects (Multiviewer border, widget border, grid snap point) to match their position or size.

17.3.2 Widget source - Assign content to a widget

1. In ⊞ **Multiviewer**, click a source icon in the left panel.
2. Select a widget or make sure it is available for drag and drop.
3. Drag a content to the widget.

The content thumbnail is displayed in the widget with the source label at the bottom.

Note: The content of a Screen in a widget cannot exceed the size of the Screen and is limited to 1920x1080.

Tip: It is also possible to assign a content in other ways:

- Drag and drop the selected content into the widget letter icon on the top of each Multiviewer.

- Select a widget then go to Properties > Source and select the content in the dropdown list.

17.4 Multiviewer memories

A Multiviewer memory saves the selected Multiviewer in the current settings. All widgets settings are saved/loaded. The Midra 4K is able to save up to 20 Multiviewer memories.

17.4.1 Save a Multiviewer memory

1. In ⊞ **Multiviewer**, click the ▦ **Memories** tab in the right panel.
2. Click **Save** to open the memory saving window.
3. Select the memory slot and enter a label.
4. Select a color for the memory slot.
5. Click **Save**.

17.4.2 Load a Multiviewer memory

1. In ⊞ **Multiviewer**, click the ▦ **Memories** tab in the right panel.
2. Click **Load**.
3. If needed, enable **Auto Scale** to adapt the loaded memory to fit the Multiviewer.
4. Click a Multiviewer memory slot.

The Multiviewer memory is loaded to the Multiviewer.

Tip: It is also possible to drag a memory slot to a Multiviewer.

17.4.3 Edit a Multiviewer memory

1. Load a Multiviewer memory.
2. Click **Save** to open the memory saving window.
3. Select the existing Multiviewer memory slot to edit.
4. Click **Save** to overwrite the previous Multiviewer memory.

17.4.4 Rename a Memory

1. In **Multiviewer**, click the **Memories** tab in the right panel.
2. Click **Edit**.
3. Click ⋮ in the top right corner of the memory slot to open the **Label** and **Color** fields.
4. Enter a new name for the memory slot.

17.4.5 Change the color of a Memory slot

1. In **Multiviewer**, click the **Memories** tab in the right panel.
2. Click **Edit**.
3. Click ⋮ in the top right corner of the memory slot to open the **Label** and **Color** fields.
4. Select a color for the memory slot.

Tip: To reset all memory slots to default colors, click ⋮ on top of the memory slots and click **Reset colors**.

17.4.6 Reorder memories

1. In **Multiviewer**, click the **Memories** tab in the right panel.
2. Click **Edit**.
3. Drag a memory slot to a new place to organize the memory slots in a custom order.

Note: Reordering memory slots does not change the memory slot number and does not impact external controllers and RC400T.

Tip: To reset to default order, click ⋮ on top of the memory slots and click **Reset order**.

18   Audio settings

All Midra 4K units have audio management embedded in the device. They can de-embed audio channels from all inputs and re-embed on all outputs. With the addition of the optional Analog and Dante audio card, it is possible to route even more audio inputs and outputs audio channels.

In ♩ **Audio** > Dante, check the status of the card, the channels and the networks.

In ♩ **Audio** > Custom, create custom sets composed of 8 channels among all the available input channels.

In ⧉ **Preconfig** > ♩ Audio, set audio internal processing rate, audio routing, etc.

Note: - Advanced audio settings are accessible from the front panel menu and will be added to the Web RCS in a future version.

- Dante audio can only be controlled from the Dante ports with an optional Audio card installed. For Dante control, use Dante software.

18.1 Reboot or reset the Dante audio card

In ♩ **Audio** > Dante, the Dante card status is displayed (Dante version, network status, etc.)

- Click Reboot to restart the Dante card.
- Click Factory Reset to reset the firmware of the Dante card.

Tip: The update of the Dante card is integrated in the firmware update of the Midra 4K unit.

18.2 Audio custom set

In ♩ **Audio** > Custom, it is possible to create custom sets composed of 8 channels among all the available input channels (analog and Dante audio input channels are also available with the optional audio card).
A Midra 4K device can create up to 10 Custom sets.
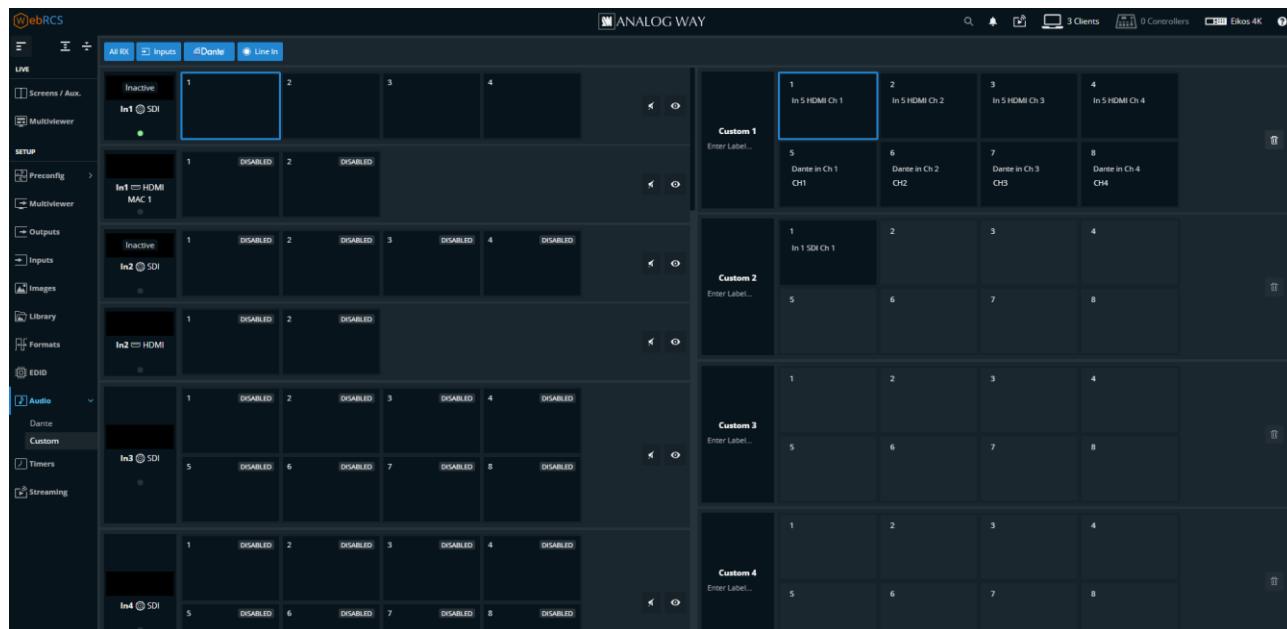
Fig. 27 -   Audio custom menu

Audio custom menu:

Channel receivers (Inputs, Dante IN and Line IN audio channels) are located in the left panel:

- Click 🔇 to mute the selected audio channels.
- Click 👁 to highlight transmitter channels using this receiver channels and display the audio level.
- Enter (or reset) channel labels (for Dante and Custom sources)

Channel transmitters (Custom 1 to 10) audio channels are located in the right panel:

- Click 🗑 to delete the audio routing.

In the top bar:

- Use the filter buttons to show/hide audio channels.

18.3 Create custom audio sources

1. Go to 🎵 **Audio** > **Custom**.

   The 8 channels of all available audio inputs are displayed in the left panel.
   The 10 Custom sets and their channel slots are displayed in the right panel.

2. Drag and drop a receiver channel to a transmitter channel.

The selected audio channel of the receiver is routed to the selected audio channels of the transmitter.

3. Repeat the drag and drop for all the audio channels of the Custom set.
   The custom set is ready to be used as a custom audio source.

4. If needed, click a Custom Set label and enter a new label to rename it.
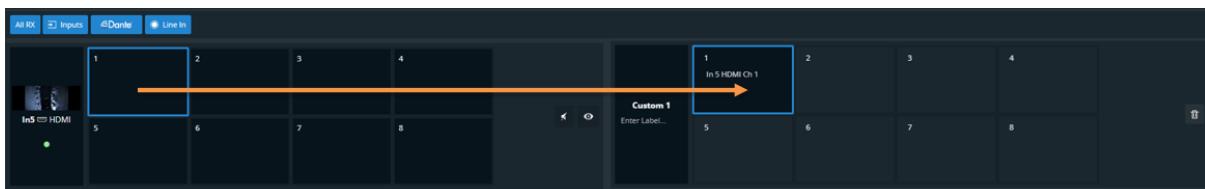
Fig. 28 -   Audio routing for Custom audio sources

Note: Adjustments set for an input audio channel also affect a custom set using that audio channel.

18.4 Preconfig > Audio

In 🧩 **Preconfig** > 🎵 Audio, set audio internal processing rate, audio routing, etc.

18.4.1 Set audio internal reference and global transition delay

1. Go to 🧩 **Preconfig** > 🎵 Audio.

2. In **Rate**:
   a. Select **Internal Ref.** and set the audio rate (32kHz, 44.1kHz or 48kHz).
   b. Select **Dante Reference** to follow Dante reference.

3. In **Transition**, set the Global transition delay (between 200ms and 2000ms).

18.5 Audio routing concept

Each output of the Midra 4K units can be routed to one audio source.

Note: - In Blend mode, Output 1 and Output 2 are used in the same Screen but can be routed to different audio sources.

- Follow audio layer mode creates an audio layer with properties saved in Screen Memories.

- Direct routing mode is not affected by Memories.

1. The first step is to set the audio mode for the output:
    a. **None** will send no audio in the output audio channels.
    b. **Auto** will follow the audio settings as set in the Screen in the Live menu.
    c. **Direct routing** will use an audio source ignoring the Screen audio settings.
2. If the output is set to **Auto**, select the audio mode for the corresponding Screen:
    a. **Direct routing** will set the Screen to select an audio source in the Live menu.
    b. **Follow live layer content** will set the Screen to use the audio source from the input used in the selected live layer.
    c. **Follow audio layer** will set the Screen to select an audio source in the Live menu.

    If the output is set to **Direct routing**, select the audio source from drop down list.
3. The audio source set for the corresponding output is displayed.
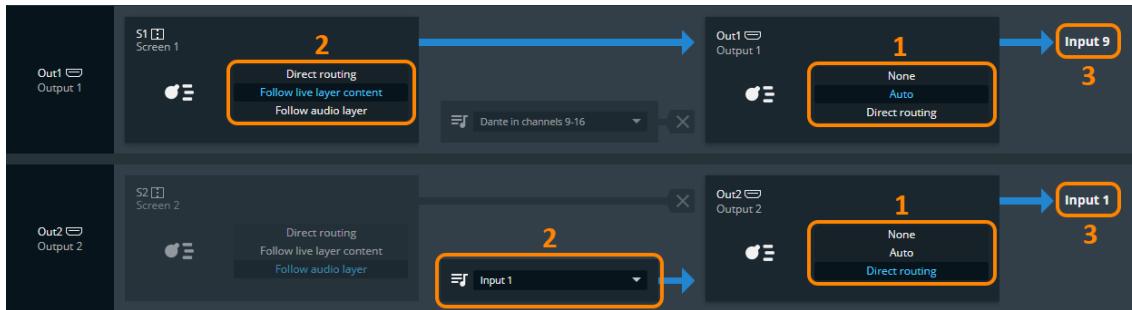
Fig. 29 -   Audio concept

18.6 Route an audio source directly to an output audio

Tip: In **Direct routing** mode, the Output audio source is not saved in the Screen, Aux or Master Memories.
Memories and transitions will not affect the audio source.

Caution: If an output is set to direct routing, the audio settings of the Screen might not affect the output audio content.

1. Go to [icon] **Preconfig** > [icon] Audio.
2. Set an output audio mode on **Direct routing** (step 1 on *Fig. 24 - Audio concept* page 99).
3. Click the audio source dropdown list and select an audio source for the output (step 2).

The audio source set for the corresponding output is displayed (step 3).

18.7 Set an output audio to follow Screen settings

An output set on **Auto** audio mode will follow the audio settings of the corresponding Screen.

Note: The Output audio mode and Screen audio mode are set in Preconfig > Audio.

The Screen audio source is set in Live – Screens / Aux Screens.

18.7.1 Route an audio source directly to a Screen audio

Tip: In **Direct routing** mode, the Screen audio source is not saved in the Screen, Aux or Master Memories.
Memories and transitions will not affect the audio content.

1. Go to ⬚ **Preconfig** > ♪ Audio.
2. Set an output audio mode on **Auto** (step 1 on *Fig. 24 - Audio concept* page 99).
3. Set the Screen audio mode on **Direct routing** (step 2).
4. Go to ⬚ **Screens / Aux.**
5. The Screen audio mode is set on **Direct routing**, click the audio source dropdown list and select an audio source for the Screen.

18.7.2 Set a Screen to use the audio of the input used in a selected live layer

In **Follow live layer content** mode, a live layer is set a reference and the input content of this layer in the Program Screen is used as source for the audio.

Tip: In **Follow live layer** mode, the Screen audio source is affected by the content saved in the Memories.
Memories and transitions can affect the audio content if the input of the audio reference live layer content changes.

1. Go to ⬚ **Preconfig** > ♪ Audio.
2. Set an output audio mode on **Auto** (step 1 on *Fig. 24 - Audio concept* page 99).
3. Set the Screen audio mode on **Follow live layer content** (step 2).
4. Go to ⬚ **Screens / Aux.**
5. The Screen audio mode is set on **Follow live layer content**, click the layer list and select the layer to use as reference for the Screen audio source.

If Layer 1 is set as reference, the audio channels corresponding to the input content displayed in Layer 1 (Program) will be set as audio source for the Screen and Output.

Note: In advanced audio configurations, the audio channels of an input can be different from the video content of the input.

18.7.3 Set a Screen to use an audio layer

In **Follow audio layer** mode, an audio layer is created for the Screen. This audio layer is available in Program and Preview to set the Screen audio source.

Tip: **Follow audio layer mode** is the default mode for all Screens and Outputs.
In **Follow audio layer** mode, the Screen audio source is saved in the Screen, Aux or Master Memories.
Memories and transitions can affect the audio content if the audio source of the audio layer changes.

1. Go to ⬚ **Preconfig** > ♪ Audio.
2. Set an output audio mode on **Auto** (step 1 on *Fig. 24 - Audio concept* page 99).
3. Set the Screen audio mode on **Follow audio layer** (step 2).
4. Go to ⬚ **Screens / Aux.**
5. The Screen audio mode is set on **Follow audio layer**, click the audio source list in Program and/or Preview and select audio source for the Screen.

Note: In advanced audio configurations, the audio channels of an input can be different from the video content of the input.

18.8 Set the Multiviewer output audio source

The Multiviewer output audio is set just as a Screen output, it can be set to direct routing or to follow a selected widget as a reference for audio content.

Note: If the Multiviewer (Screen) is set to direct routing, the Multiviewer audio source is saved in the Multiviewer Memories.

18.9 Set the audio source for a Dante output (optional audio card required)

1. Dante channels are grouped by eight, set the audio mode for the Dante channel group:
   a. **Direct routing** will use an audio source ignoring the Screen audio settings.
   b. **Follow Screen** will follow the audio settings as set in a Screen in the Live menu.
2. If the output is set to **Direct routing**, select the audio source from drop down list.
   If the output is set to **Follow Screen**, select the Screen to use as reference.

The audio source set for the corresponding Dante channels is displayed.

18.10 Set the audio source for Analog audio output (optional audio card required)

1. Set the audio mode for the Analog audio line out:
   a. **Direct routing** will use an audio source ignoring the Screen audio settings.
   b. **Follow Screen** will follow the audio settings as set in a Screen in the Live menu.
2. If the output is set to **Direct routing**, select the audio source from drop down list.
   If the output is set to **Follow Screen**, select the Screen to use as reference.
3. Set the pair of channels to use for the Analog audio output.

The audio source set for the corresponding Analog audio output is displayed.

18.11 Advanced audio routing example (Screen 1 > Dante Out > Dante In > Out 1)

This example sets the following configuration:
The user wants the content in Layer 1 to go to the Dante network and return to the Midra 4K device finally to be output from Output 1:
- Screen 1 uses the audio of the input content of Layer 1.
- Dante Out 1-8 outputs the audio of Screen 1.
- The audio is managed by Dante and goes back to the Midra 4K device via Dante In channels 25-32
- Output 1 uses the Dante In channels 25-32

1. Go to [icon] **Preconfig** > [icon] Audio.
2. Set **Output 1** audio mode on **Auto** (step 1 on *Fig. 24 - Audio concept* page 99).
3. Set the Screen audio mode on **Follow live layer content** (step 2).
4. Go to [icon] **Screens / Aux.**
5. The Screen audio mode is set on **Follow live layer content**, click the layer list and select **Layer 1** to use it as reference for the Screen audio source.
6. Go back to [icon] **Preconfig** > [icon] Audio.
7. Change **Output 1** audio mode to **Direct routing**.
   The audio output of Screen 1 is still the content of Layer 1.
8. Click the audio source dropdown list and select **Dante in channels 25-32**.
9. Set the audio mode for the **Dante out channels 1-8** on **Follow Screen**.
10. Select **Screen 1** to use as reference for the Dante out channels.

19 Streaming

All Midra 4K units provides IP streaming functionality. The duplicate of one input or output video signal can be broadcast over IP to an online web service or to a private network. The Streaming functionality is separated in two modes:

Client mode	Stream to one preconfigured destination (Facebook, Twitch, Youtube, etc.)
Server mode	Stream to an RTMP address to be used as a source

Note: - It is possible to stream one output, not one Screen.

- When Streaming is ON, the Configuration settings cannot be changed (destination, source, quality, etc.).

- Make sure port 1935 is available on your network and/or not blocked by firewall to use HTTPS.

19.1 Stream to a private network

Use Server mode to stream to a private network. The stream can be recovered and edited using a software like OBS Studio. The default URL to get the stream content is: **rtmp://192.168.2.140:1935/stream/live**
Adapt the RTMP URL with your device IP address if needed.

1. Go to [icon] **Streaming**.

2. In Configuration > Select, select **Server mode**.
3. In Video > Source, select the Input, Output or Multiviewer source to stream.
4. In Video > Profile, select the output format (**1920x1080 30Hz**, **1280x720 60 Hz** or **1280x720 30Hz**).
5. In Video > Quality, select **Low**, **Medium** or **High**.

    Or select Custom Bitrate and enter a value in kbps.

6. In Audio > Mode, select to Follow content or select Direct routing and set the audio source.
7. On the top of the page, click **Start**.
    The stream starts and the settings under Configuration cannot be changed until the stream stops.
8. If needed, in Audio Live, mute the stream or change the pair of audio channels to use.

19.2 Streaming to a live streaming platform

Use Client mode to stream to an online web service such as Facebook, Twitch or Youtube.
The Midra 4K can save up to 10 destinations.

Note: - In Client mode, It is possible to stream to only one destination (use restream.io to stream to multiple platforms at the same time).

- In Client mode, it is possible to stream to any platform supporting RTMP and RTMPS.

19.2.1 Create a Streaming destination

Tip: - Memories 1 to 4 are prefilled with labels and URLs for most famous web services.

If needed, click [icon] to reset a memory and recover these URLs.

- In Options, enable **Keep Streaming Key** to save the streaming keys in the device configuration.

1. Go to [icon] **Streaming**. The streaming destinations are displayed on the right panel.

2. In Library, set a streaming destination.
    a. Enter a Label.
    b. Enter an *RTMP* or *RTMPS* URL.
    c. If needed, enter a Streaming Key.
3. If needed, repeat these steps to create more destinations.

19.2.2 Stream to a live streaming platform

1. Go to ▶ **Streaming**.
2. In Configuration > Select, select **Client mode** and the streaming **Destination**.
3. In Video > Source, select the Input, Output or Multiviewer source to stream.
4. In Video > Profile, select the output format (**1920x1080 30Hz**, **1280x720 60Hz** or **1280x720 30 Hz**).
5. In Video > Quality, select **Low**, **Medium** or **High**.

   Or select Custom Bitrate and enter a value in kbps.
6. In Audio > Mode, select to **Follow content** or select **Direct routing** and set the audio source.
7. On the top of the page, click **Start**.
   The stream starts and the settings under Configuration cannot be changed until the stream stops.
8. If needed, in Audio Live, mute the stream or change the pair of audio channels to use.

19.3 Streaming Quick Access

In the top bar, the icon ▶ shows the status of the online stream. Click it to access quick settings.

From this page, it is possible to:

- Go to the Streaming setup page
- Start/Stop the stream
- Mute the stream
- Change the pair of audio channels to use
- Get the URL of the stream in Server mode
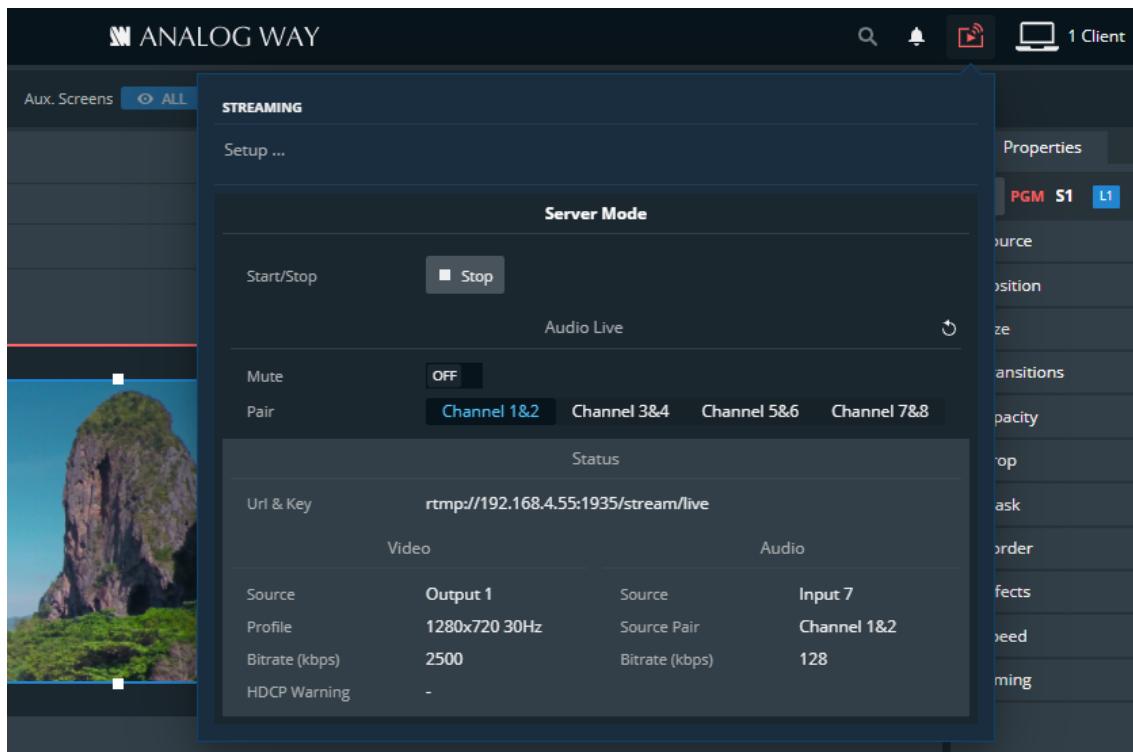
Fig. 30 - Streaming Quick Access

20   User Maintenance and Troubleshooting

20.1 User Maintenance

Midra 4K units do not require specific user maintenance operation.

20.2 Troubleshooting

The Web browser cannot access the Web RCS

- Make sure to use correct network cables and that they are free from defects. (Crossover or straight cable as required).
- Check the IP address of the control computer. It must have a unique IP address on the same network as the Midra 4K unit.
- Temporarily disable any other networks on the computer, such as turning off the Wi-Fi connection.
- Refresh the browser.
- Close and restart the browser.

Error: timeout of 20000ms exceeded

- Check that the anti-virus is not blocking the connection. Open your anti-virus program and add the IP address of your units as trusted connection.

Modifications triggered from RC400T do not work when synchronized

- Check that the target Preview and Program Screens are not protected by lock.

21   Control from the front panel

All Midra 4K units can be fully controlled from their front panel. This chapter describes procedure to configure the device from the front panel without repeating explanations described in previous chapters.
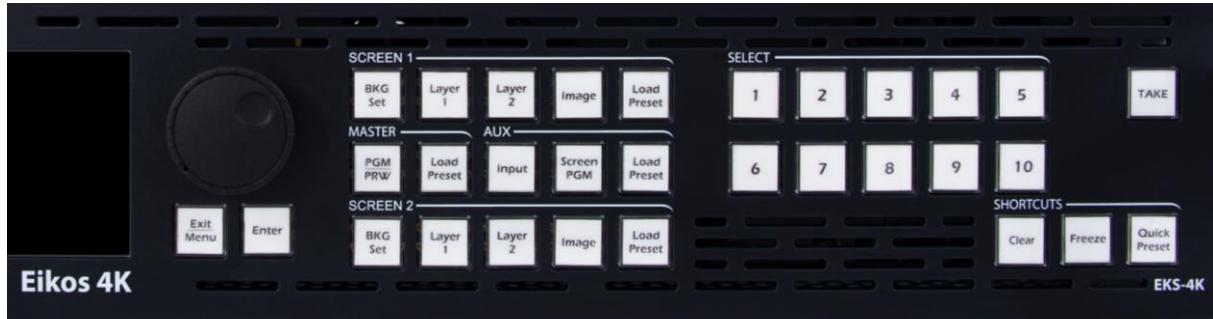
Fig. 31 -   Midra 4K front panel (ex: Eikos 4K)

The knob, the Exit/Menu and Enter buttons are used to select the menus and configure the unit.
The other keys are used for Live editing functions such as assign content in layer, loading memories or Take.

Tip: Press a "live" key two times to access its settings directly.
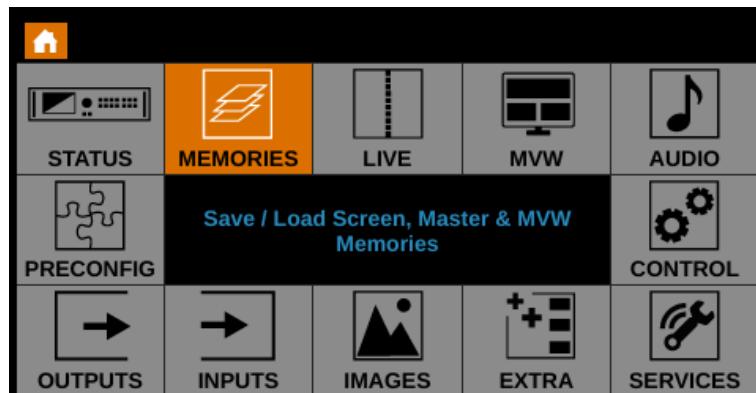
Fig. 32 -   Front panel Main menu

21.1 Monitor an input or output on the front panel LCD Screen

All Midra 4K units can display the content of any input or output directly on the front panel screen.

1. Press the **Monitor** key.
2. Select an input plug or output. The content is displayed on the front panel screen.
3. Press the **Exit** key end monitoring.

Note: Monitoring on LCD can be used at any moment and does not affect processing or Program Screens.

21.2 Status

Check the status of:

-   Output signals (Screens, Aux. Screens, Multiviewer, Audio on outputs and Audio on Analog line out.
-   Screens and Aux Screens
-   Inputs signals (Video, Audio on inputs and Audio on Analog line in).
-   Dante input and output channels
-   Images on Library

21.3 **Quick access**

This section describes how to get the show ready within a few minutes using the keys of the front panel.

21.3.1 **Assign content to layers in Mixer mode**

1. In the *MASTER area*, press the **PGM/PRW** key to select to work on Program Screens or Preview Screens.
2. In the *SCREEN 1 area*, press **BKG Set** to select the Background layer, then press a number key in the *SELECT area* to assign the corresponding background set.
3. In the *SCREEN 1 area*, press **Layer 1** or **Layer 2** then press a number key in the *SELECT area* to assign the corresponding live input.
4. In the *SCREEN 1 area*, press **Image** to select the Foreground layer, then press a number key in the *SELECT area* to assign the corresponding foreground image.
5. In the *AUX area*, press **Input** or **Screen PGM** to select the source type, then press a number key in the SELECT area to assign the corresponding content to the Aux layer.
6. Go to **Live** > **Screen 1** > **Layer X** for more layer settings (position, size, transition, etc.) or to select Layer 3 and 4.
7. To clear a layer, select the layer, then press **CLEAR** in the *SHORTCUTS area*.

Note: In Mixer mode, the Screen 2 area is disabled.

21.3.2 **Assign content to layers in Matrix mode**

1. In the *MASTER area*, press the **PGM/PRW** key to select to work on Program Screens or Preview Screens.
2. In each *SCREEN area*, press **BKG Set** to select the Background layer, then press a number key in the *SELECT area* to assign the corresponding background set.
3. In each *SCREEN area*, press **Layer 1** or **Layer 2** then press a number key in the *SELECT area* to assign the corresponding live input.
4. In each *SCREEN area*, press **Image** to select the Foreground layer, then press a number key in the *SELECT area* to assign the corresponding foreground image.
5. Go to **Live** > **Screen 1** (or Screen 2) > **Layer X** for more layer settings (position, size, transition, etc.).
6. To clear a layer, select the layer, then press **CLEAR** in the *SHORTCUTS area*.

Note: In Matrix mode, the AUX area is disabled.

21.3.3 **Assign content to layers in Blend mode**

1. In the *MASTER area*, press the **PGM/PRW** key to select to work on Program Screens or Preview Screens.
2. In the *SCREEN 1 area*, press **BKG Set** to select the Background layer, then press a number key in the *SELECT area* to assign the corresponding background set.
3. In the *SCREEN 1 area*, press **Layer 1** or **Layer 2**, then press a number key in the *SELECT area* to assign the corresponding live input.
4. In the *SCREEN 1 area*, press **Image** to select the Foreground layer, then press a number key in the *SELECT area* to assign the corresponding foreground image.
5. Go to **Live** > **Screen 1** > **Layer X** for more layer settings (position, size, transition, etc.) or to select Layer 3 and 4.
6. To clear a layer, select the layer, then press **CLEAR** in the *SHORTCUTS area*.

Note: In Blend mode, the Aux and Screen 2 areas are disabled.

21.3.4 Button color guide

Button color	Description
Solid green	- Preview mode is active - Element, Source or Function is available - Layer or Aux element is empty - Input is connected and available
Weak green	- No Input connected (Safe input mode disabled)
Blinking green	- Screen layer or Load preset is currently selected and empty
Solid orange	- Layer or Aux element has a source - «Select» element is currently used in the selection
Blinking orange	- Screen layer or Load preset is currently selected and has a source
Solid red	- Program mode is active - Take is available
Blinking red	- Take in progress
Button Off	- Element is not available - Input is disabled or not connected (Safe input mode enabled)

21.4 Preconfig

21.4.1 Set the Operating mode

- Go to **Preconfig > Templates** and select the operating mode of the device.

The outputs are automatically configured to match the selected operating mode.

21.4.2 Set Color Processing

1. Go to **Preconfig > System**.
2. In **Color Processing**, select the general color space used for processing (**BT.709** or **BT.2020**).

21.4.3 Allocate LUT resources

1. Go to **Preconfig > System**.
2. In **LUT Resources**, assign the LUT resources to the corresponding inputs.

21.4.4 Set the general Dynamic range

1. Go to **Preconfig > System**.
2. In **Dynamic Range**, select the internal profile (**Standard (SDR)**, **HDR10** or **HLG**).

21.4.5 Set Quick HDCP

1. Go to **Preconfig > System**.
2. In **HDCP**, quickly enable /disable HDCP for all inputs and outputs.

21.4.6 Set Genlock output settings

1. Go to **Preconfig > System**.
2. In **Genlock**, set the Genlock output to loop the Genlock input or to output a custom rate.

21.4.7 Set a Screen Label

1. Go to **Preconfig > Screen/Aux Configuration**.
2. If applicable, select a Screen.
3. Go to **Edit Label**.
4. Use the virtual keyboard to enter a label for the selected Screen.

21.4.8 Set a Screen pattern

1. Go to **Preconfig > Screen/Aux Configuration**.
2. If applicable, select a Screen.
3. Go to **Pattern** and enable the Pattern display on Screen.
4. Select a pattern and configure it if needed.

Tip: Make sure to keep all patterns disabled when they are not needed.

Note: For more information on pattern types, see *7.3.4 Patterns* page 47.

21.4.9 Set the Screen layer mode

1. Go to **Preconfig > Screen/Aux Configuration**.
2. If applicable, select a Screen.
3. Go to **Layer mode**.
4. Select the layer mode for the selected Screen (Mixing layers or Split layers).

21.4.10 Set a covering (Blend mode)

1. Go to **Preconfig > Screen/Aux Configuration > Canvas**.
2. In **Area**, select the area to set.

Tip: (**X2** is the middle vertical area in Horizontal Blend and **Y2** is the middle vertical area in Vertical Blend).

3. In **Blend**, select Horizontal or Vertical blend.
4. In **Mode**, select Covering.
5. Set the covering size in pixels.
6. If needed, set the Blending Curve, Black Offset and Black Levels.

Note: The maximum covering size is 1000 pixels per row or column.

21.4.11 Set a Gap (Blend mode)

1. Go to **Preconfig > Screen/Aux Configuration > Canvas**.
2. In **Blend**, select Horizontal or Vertical blend.
3. In **Area**, select the area to set.

Tip: (**X2** is the middle vertical area in Horizontal Blend and **Y2** is the middle vertical area in Vertical Blend).

4. In **Mode,** select Gap.
5. Set the gap size in pixels.

Note: The maximum gap size is 200 pixels per row or column.

21.4.12　Set a Background set

1. Go to **Preconfig > Background Set Configuration**.
2. If applicable, select a Screen.
3. Select a Background set slot.
4. If applicable, select a Crop mode.
5. In **Content**, select the source for the Background set.
6. If needed, go to the Background image settings to edit it (label, source or display mode).
7. In **Backup**, set the background set to use when source is lost.

21.5 Outputs

Configure Output 1, Output 2, the Multiviewer output and the Genlock output.

21.5.1 Output signal status

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Go to **Output Status** to display the status of the selected output (mode, reference, format and AOI).

21.5.2 Output plug status

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Go to **Plugs Status** to display the status of each output plug (HDMI and SDI).

21.5.3 Set an Output label

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Go to **Edit Label**.
4. Use the virtual keyboard to enter a label for the selected Screen.

21.5.4 Output LED blink

Use the LED blink feature to identify a connector on the rear panel.

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Go to **Blink LED** to make the LED blink for a few seconds.

21.5.5 Set an Output format

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Go to **Format** and select **Internal Ref**.
4. Select a format for the selected output.
5. Select a rate.

21.5.6 Set a framelock Output format

1. Go to **Outputs**.
2. Select an output (1 or 2).
3. Go to **Format** and select **Framelock**.
4. Select a format for the selected output.
5. Select the reference factor (**x0.5** ; **x1** or **x2**).
6. Select the input plug to use as framelock reference.

21.5.7 Set an output Area of interest (AOI)

1. Go to **Outputs**.
2. Select an output (1 or 2).
3. Go to **Area of interest**.
4. Enable **Fit Format Resolution** and set an **Overscan Compensation** in percentage.
5. Or disable **Fit Format Resolution** to enter a custom AOI.
6. If needed, go to **Reset** to cancel AOI settings.

21.5.8 Output HDMI plug settings

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Select **Plugs Settings**.
4. Select **HDMI**.
   a. In **HDCP Detection**, select the HDCP (**Disable**; **Auto**; **HDCP 1.x** or **HDCP 2.x**).
   b. In **Force DVI Mode**, enable to change signal into DVI signal if using a DVI connector on the display.
   c. In **Pixel Encoding**, enable /disable Standard compliance and set the encoding format.

21.5.9 Output SDI plug settings

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Select **Plugs Settings**.
4. Select **SDI**.
   a. In **Color Space**, select the Color Space and Color Depth combination.
   b. In **3G Transport Mode**, select **Level A** or **Level B**.

21.5.10 Output Image correction

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Select **Image Correction**.
4. In **Manual** mode, adjust as needed (Gamma, Brightness, Contrast, etc.).

21.5.11 Output Image correction using LUT

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Select **Image Correction**.
4. In **LUT** mode, select a LUT in the list.

21.5.12   Output Colorimetry and Dynamic Range

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. In **Colorimetry Correction**, select the colorimetry (**Auto**, **BT.709** or **BT.2020**).
4. In **Dynamic Range**, select the dynamic range (**Auto**, **Standard (SDR)**, **HDR10** or **HLG**).

21.5.13   Output LUT selection

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. In **LUT Selection**, select **Auto** or **Custom**.
4. In custom mode, go to **Custom Selection** and select a LUT in the list.

21.5.14   Output pattern

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Go to **Pattern** and enable the Pattern display on Screen.
4. If needed, enable Format Raster Box or AOI Raster Box.
5. Select the area for the pattern (**Format**, **AOI** or **Screen**).
6. Select a pattern and configure it if needed.
7. If needed, enable **Inhibit Colorimetry** to disable image correction.
8. If needed, enable **Motion** to make the pattern move on Screen.

Tip: Make sure to keep all patterns disabled when they are not needed.

Note: For more information on pattern types, see *7.3.4 Patterns* page 47.

21.5.15   Monitor output on the front panel LCD Screen

1. Go to **Outputs**.
2. Select an output (1, 2 or MVW).
3. Go to **Monitor on LCD** to display the output signal on the front panel screen.

21.6 **Inputs**

21.6.1 Inputs signal status

1. Go to **Inputs**.
2. Go to **Inputs status** to display the status for all inputs (Active plug, Color space, Format, etc.)

21.6.2 Autoset all inputs

The autoset reads the signals received on the plugs of Input 1 & 2. If a valid signal is detected on a plug, the plug becomes active.

1. Go to **Inputs**.
2. Go to **Autoset all Inputs**.

21.6.3 Select the active plug (Input 1 & 2)

1. Go to **Inputs**.
2. Select Input 1 or Input 2
3. Go to **Select Active Plug**.
4. Select the HDMI or SDI plug.

21.6.4 Input LED blink

Use the LED blink feature to identify a connector on the rear panel.

1. Go to **Inputs**.
2. Select an input.
3. Go to **Blink LED** to make the LED blink for a few seconds.

21.6.5 Force Black on an input

1. Go to **Inputs**.
2. Select an input.
3. Enable **Force Black** to replace the input signal with a black pattern.

21.6.6 Input HDMI, SDI or DisplayPort settings

1. Go to **Inputs**.
2. Select an input.
3. Select **HDMI Settings**, **SDI Settings** or **DisplayPort Settings**.
   a. In **Status**, display the input status (Active plug, Color space, Format, etc.).
   b. In **Edit Label**, enter a label for the input or input plug.
   c. In **Autoset**, auto scan input plugs to set the Active plug.
   d. In **Enabled**, toggle off to disable the plug.
   e. In **Disable Loop Plug** (Input 5 and Input 8 only), toggle on to disable the plug.
   f. In **Type**, select the Color Space.
   g. In **EDID**, check the EDID status or change the Preferred format.
   h. In **HDCP** (HDMI only), set the HDCP detection to None, Default, 1.x Only or 1.x and 2.x.
   i. In **HDCP** (for SDI and DP), enable or disable the detection.
   j. In **Passive Splitter Mode** (SDI only), enable or disable the feature.
   k. In **DisplayPort Standard** (DP only), select Default or 1.1.
   l. In **LUT Selection** (if LUT resource is allocated in Preconfig), select **Auto** or **Custom**.
      In **Custom** mode, select a Conversion LUT in the list.
   m. In **Backup**, select the input to use when the source is lost.

21.6.7 **Input image settings**

21.6.7.1 Input aspect ratio

1. Go to **Inputs**.
2. Select an input.
3. Go to **Image settings**.
4. In **Signal Aspect Ratio**, force an aspect ratio for the input if it needs correction (non-square pixels).
5. In **Display Aspect Ratio**, set the final aspect ratio for the input. This will be the native aspect ratio in the layer.
6. In **Layer Aspect Ratio**, select how the input fills the layer.

21.6.7.2 Input crop

1. Go to **Inputs**.
2. Select an input.
3. Go to **Image settings**.
4. Go to **Cropping**.
5. Set cropping values for Top, Left, Bottom and Right.

21.6.7.3 Input image correction

1. Go to **Inputs**.
2. Select an input.
3. Go to **Image settings**.
4. In **Sharpness**, set the level (Low, Medium or High).
5. In **Color Adjustments**, adjust as needed (Gamma, Brightness, Contrast, etc.).
   If LUT resource is allocated in Preconfig, select **Manual** or **LUT**.
   In **LUT** mode, select a Correction LUT in the list.

21.6.7.4 Input keying

1. Go to **Inputs**.
2. Select an input.
3. Go to **Image settings**.
4. Go to **Settings**.
5. From this point, follow procedures from *10.2.6 Input Keying* page 63.

21.6.8 **Monitor input on the front panel LCD Screen**

1. Go to **Inputs**.
2. Select an input
3. Go to **Monitor on LCD** to display the input signal on the front panel screen.

21.7 Images

Tip: For more information about image management, see *6.4 Images management in Midra 4K* page 40.

21.7.1 Transfer an image to the unit

1. Connect a USB drive on the front panel USB plug.
2. Go to **Images** > **Import**.
3. Browse the files and the select an image.
4. Press **Enter** to import the image.
5. Select **Auto slot selection (First slot available)** or manually select an image slot in the Library.

21.7.2 Capture an image from an input to the Image Library

1. Go to **Images** > **Capture**.
2. In **Capture from**, select the Input or Output plug to capture.
3. In **Destination**, select Library.
4. Select the Library slot to save to.
5. Select the file format (BMP, JPG or PNG)
6. Select **Start the Capture**.
7. Press **Enter** to start the capture.

21.7.3 Capture an image from an input to a USB drive

1. Connect a USB drive on the front panel USB plug.
2. Go to **Images** > **Capture**.
3. In **Capture from**, select the Input or Output plug to capture.
4. In **Destination**, select File.
5. Select the directory to save to.
6. Select the file format (BMP, JPG or PNG)
7. Select **Start the Capture**.
8. Press **Enter** to start the capture.

21.7.4 Images in the Library

1. Go to **Images** > **Library**.
   The images stored in the Library are displayed.
2. If needed, select an image to:
   a. View it on the front panel screen.
   b. Export it to a USB drive connected on the front panel USB plug.
   c. Or delete it from the Image Library.

21.7.5 Assign an image to a Background image slot

1. Go to **Images** > **Library > BKG/FRG Images**.
2. If applicable, select a Screen.
3. Select **Background**.
4. Select a Background Image slot.
5. Select Edit Label and enter a label for this background image slot.
6. Go to **Select Image from Library** and assign an image from the Library to this background image slot.
7. Go to **Display Mode** and set the layer fill option (**Centered, Fullscreen, Cropped, 1:1** or **Custom**).

21.7.6 Assign an image to a Foreground image slot

1. Go to **Images** > **Library** > **BKG/FRG Images**.
2. If applicable, select a Screen.
3. Select **Foreground**.
4. Select a Foreground Image slot.
5. Select Edit Label and enter a label for this foreground image slot.
6. Go to **Select Image from Library** and assign an image from the Library to this foreground image slot.
7. Go to **Display Mode** and set the layer fill option (**1:1** ; **Native aspect ratio** or **Custom**).

21.8 Extra

21.8.1 Create a Custom Format

1. Go to **Extra** > **Custom Formats** > **Create New Format**.
2. Load from a template or other format to prefill the new custom format settings.
3. Adjust the custom format settings (H Active, V Active, Reduced blanking, etc.)
4. Go to **Check** to verify if the custom format is valid and can be processed by the unit.
5. If format is valid, go to **Edit Custom Format Label** to enter a label.
6. Go to **Save as**.
7. Select a memory slot.

21.8.2 Edit a Custom Format

1. Go to **Extra** > **Custom Formats** > **Create New Format**.
2. Load the Custom format to edit.
3. Adjust the custom format settings (H Active, V Active, Reduced blanking, etc.)
4. Go to **Check** to verify if the custom format is valid and can be processed by the unit.
5. If format is valid, go to **Edit Custom Format Label** to enter a label.
6. Go to **Save as**.
7. Select the same memory slot to overwrite it.

21.8.3 Delete a Custom Format

1. Go to **Extra** > **Custom Formats > Delete Custom Format**.
2. Select a Custom format memory to delete it.

This action cannot be reverted.

21.8.4 Import EDID form USB drive

1. Connect a USB drive on the front panel USB plug.
2. Go to **Extra** > **EDID Manager** > **Import**.
3. Browse the USB drive and select the EDID data to import.

21.8.5 Manage Input EDID

1. Go to **Extra** > **EDID Manager** > **Inputs**.

   All Inputs EDID status are displayed.

2. Select an Input to:
   a. Display the preferred format of each extension (CEA and DisplayID).
   b. Load an EDID from the Library to replace the preferred EDID of the selected input.
   c. Export the input EDID to a connected USB drive.
   d. Reset the input to the default EDID.
3. If needed, go to Reset all inputs EDID to default.

21.8.6 Manage output EDID

1. Go to **Extra** > **EDID Manager** > **Outputs**.
2. Select an output to display the EDID of the displays connected to the output plugs.
3. Select an output plug to:
   a. Export the output EDID to a connected USB drive.
   b. Save the EDID to the EDID Library.

21.8.7 Export an EDID

1. Go to **Extra** > **EDID Manager** > **Library**.

   All the EDID stored in the EDID Library are displayed.

2. Select an EDID to export it to a connected USB drive.

21.8.8 Create a Custom EDID

1. Go to **Extra** > **EDID Manager** > **Outputs**.
2. Select an output to display the EDID of the displays connected to the output plugs.
3. Select an output plug and select **Save EDID in Bank**.
4. Select an EDID slot to use.
5. Go to **Extra** > **EDID Manager** > **Library**.
6. Select the saved EDID slot.
7. In **Edit Preferred Format**, select the new resolution and rate.

The Custom EDID is saved and ready to be used a preferred format for an input.

21.8.9 Set Quick Preset key to Fade to Black

Quick Preset is a customizable key available in the *Shortcuts area* of the front panel.

1. Go to **Extra** > **Quick Preset**.
2. Toggle **Enable Button on Front Panel** to activate the key/feature.
3. In **Screen/Aux Select**, select the Screens affected by the Quick Preset.
4. Go to **Settings**.
5. In **Select Mode**, select **Fade to Black**.
6. In **Transition**, set the in and out transitions (Cut or Fade).
7. In **Audio**, set the Audio mode when triggering the Quick Preset.

21.8.10   Set Quick Preset key to call preset images

1. Go to **Extra** > **Quick Preset**.
2. Toggle **Enable Button on Front Panel** to activate the key/feature.
3. In **Screen/Aux Select**, select the Screens affected by the Quick Preset.
4. Go to **Settings**.
5. In **Select Mode**, select **Image Preset**.
6. In **Transition**, set the in and out transitions (Cut or Fade).
7. In **Audio**, set the Audio mode when triggering the Quick Preset.
8. In **Image**, select an image from the Library that will be displayed in all Screens.
9. In **Image Display Mode**, select the display aspect (Centered, Fullscreen, Cropped or 1:1).
10. In **Keep Background**, toggle to keep or hid the background set when triggering the Quick Preset.

21.8.11   Set Quick Preset key to call a Master Memory

1. Go to **Extra** > **Quick Preset**.
2. Toggle **Enable Button on Front Panel** to activate the key/feature.
3. In **Screen/Aux Select**, select the Screens affected by the Quick Preset.
4. Go to **Settings**.
5. In **Select Mode**, select **Master Preset**.
6. In **Transition**, set the in and out transitions (Cut or Fade).
7. In **Audio**, set the Audio mode when triggering the Quick Preset.
8. In **Master Preset Selection**, select a Master Memory to load when triggering the Quick Preset.

21.8.12   Streaming in Server mode

1. Go to **Extra** > **Streaming**.
2. Go to **Destination**.
3. In Mode, select **Server** mode.
4. Go to **Video**,
   a. In **Source**, select the Input, Output or Multiviewer source to stream.
   b. In **Quality**, select Low, Medium or High.
      Or select **Custom Bitrate** and enter a value in kbps.
5. Go to **Audio** > **Mode**, select to Follow content or select Direct routing and set the audio source.
6. Go to **Control** to check the stream status.
7. Press **Enter** to start (or stop) the stream.

The stream starts and the Stream settings cannot be applied until the stream stops.

8. If needed, in **Audio**, mute the stream or change the pair of audio channels to use.

21.8.13   Configure a streaming destination

1. Go to **Extra** > **Streaming**.
2. Go to **Destination**.
3. In Mode, select **Client** mode.
4. Toggle **Remember Key** to save the destination streaming keys in the device memory.
5. Go to **Destination Settings**.
   a. Select a Destination slot.
   b. Enter a Label.
   c. Enter an *RTMP* or *RTMPS* URL.
   d. If needed, enter a Streaming Key.
   e. If needed, select Reset.

21.8.14   Streaming in Client mode

1. Go to **Extra** > **Streaming**.
2. Go to **Destination**.
3. In Mode, select **Client** mode.
4. Select a destination to use.
5. Go to **Video**,
   a. In **Source**, select the Input, Output or Multiviewer source to stream.
   b. In **Quality**, select Low, Medium or High.
      Or select **Custom Bitrate** and enter a value in kbps.
6. Go to **Audio** > **Mode**, select to Follow content or select Direct routing and set the audio source.
7. Go to **Control** to check the stream status.
8. Press **Enter** to start (or stop) the stream.

The stream starts and the Stream settings cannot be applied until the stream stops.

9. If needed, in **Audio**, mute the stream or change the pair of audio channels to use.

21.8.15   Enable TSL protocol

1. Go to **Extra** > **Tally Protocol**.
2. Go to **Settings**.
3. Toggle **Enable** to activate the feature.
4. Go to **Network Settings**, set the IP address, the port and apply.
5. In Protocol, select **TSL UMD Udp Protocol 3.1** or **4.0**.
   a. In 4.0 protocol, select the **UMD color**.
6. Go to **Tally 1 – Tally 4** to select the behavior (None, Screen PGM, Screen PRW, Aux PGM, Aux PRV).
   a. In 4.0 protocol, select a color for the tally.

21.8.16   TSL tally assignment

1. Go to **Extra** > **Tally Protocol**.
2. Go to **Tallies Assignment**.
3. Select a channel ID.
   a. In **Source**, select an Input.
   b. In **UMD**, enter a label.
   c. In **Screen 1**, select PGM, PRW or both.
   d. In **Aux 1**, select PGM, PRW or both.

21.8.17   Import LUT from USB drive

1. Go to **Extra** > **LUT Libraries**.
2. Go to **Conversion Library** or **Correction Library** > **Import**.
3. Browse the USB drive folders and select the LUT to import.

21.8.18   Export or Delete a LUT

1. Go to **Extra** > **LUT Libraries**.
2. Go to **Conversion Library** or **Correction Library**.
3. Select **Export to…** to export the LUT to the USB drive.
   Select **Delete** to remove a LUT from the Library.

21.9 Services

21.9.1 Export device configuration to a USB drive

1. Connect a USB drive on the front panel USB plug.
2. Go to **Services** > **Device Config** > **Export**.
3. Select the settings to export (All is selected by default).
4. Go to **Select Path**.
5. Browse the USB drive folders and select **EXPORT TO THIS FOLDER**.

21.9.2 Import device configuration

1. Connect a USB drive on the front panel USB plug.
2. Go to **Services** > **Device Config** > **Import**.
3. Browse the USB drive folders and select the configuration file to import.

21.9.3 Save a configuration to the unit memory

1. Go to **Services** > **Device Config** > **Internal Device Storage**.
2. Go to **Save current device configuration**.
3. Select a memory slot.
4. Filter the settings to save and select **Save**.
5. Go to **Edit Bank Label** and enter a label for the device configuration.
6. Go to **Save** to save the device configuration in the unit memory.

21.9.4 Load a configuration from the unit memory

1. Go to **Services** > **Device Config** > **Internal Device Storage**.
2. Go to **Load saved configuration**.
3. Select a memory slot.

21.9.5 Export a saved configuration

1. Connect a USB drive on the front panel USB plug.
2. Go to **Services** > **Device Config** > **Internal Device Storage**.
3. Go to **Export saved configuration**.
4. Select a memory slot.
5. Browse the USB drive folders and select **EXPORT TO THIS FOLDER**.

21.9.6 Delete a saved configuration

1. Go to **Services** > **Device Config** > **Internal Device Storage**.
2. Go to **Erase saved configuration** and select a memory slot.

21.10 Control

21.10.1 Network connection

1. Go to **Control** > **Connection** to set the network parameters.
2. Go to **LAN Setup IPv4**.
3. Set connection as DHCP or enter the IP address.
4. Select **Apply** to save the settings.

21.10.2 Firmware Update

1. Go to **www.analogway.com** and download the latest Midra 4K updater.
2. Load the updater file on a USB drive (root).
3. Connect the USB drive to the front panel.

The Midra 4K unit automatically detects updater files on the USB drive.

If the updater file is not detected, go to **Control** > **USB Host** > **Scan for Updater**.

4. The available updater files are displayed, select a file or select **YES** to extract.

The updater files are extracted and verified. Then the new firmware is installed.

After the installation, the Midra 4K unit reboots.

5. If needed, import saved Configuration.

Recommendation: Perform a default reset after a firmware update.

21.10.3 Set after power failure behavior

1. Go to **Control** > **Functions** > **Standby settings** > **Standby power loss behavior**.
2. Set **Remain on Standby** or **Reboot** when connected to power or after a power failure.

21.10.4 Set device Date and Time

1. Go to **Control** > **Functions** > **Date/Time**.
2. Set date and time then Apply.

21.10.5 Front panel settings

1. Go to **Control** > **Front Panel**.
2. Set a lock on all Front panel keys or only the configuration menu.
3. Set LCD screen Brightness.
4. Set the Keys buttons Brightness.
5. Enable/Disable **Safe Input Select**.
6. Set the LCD screen timeout before standby.
7. Enable timeout into main menu or disable to return to last visited page after screen timeout.

Note: Safe Input Select disables invalid inputs on the front panel and prevents assigning them to layers using the front panel keys.

- Screen layers saved in Memories will be loaded whether the inputs are valid or not.

21.10.6   Reset to default values

1. Go to **Control** > **Reset to default values**.
2. Select **YES** to confirm.

21.10.7   Factory reset

1. Go to **Control** > **Factory Reset (out of the box)**.
2. Select **YES** to confirm.

21.10.8   Reset erase specific settings

1. Go to **Control** > **Reset/Erase**.
2. Select the settings to reset or erase (Input settings, Image library, etc.).

21.11   Live – Screen settings

21.11.1   Global Settings

1. Go to **Live** > **Global Settings**.
2. In **Take Policy,** select if the front panel TAKE button affects All screens or only the currently selected Screen.
3. In **Work On**, select to work on Preview Screens or Program Screens (this works the same as pressing the PGM/PRW button).
4. In **Layer Content Aspect**, set the default aspect applied to the content in a Screen layer.
5. In **Aux Content Aspect**, set the default aspect applied to the content in the Aux Screen.

21.11.2   Screen Transitions

1. Go to **Live**.
2. Select **Screen 1**, **Screen 2** or **Aux 1**.
3. Go to **Global Settings**.
4. Set the transition duration for this Screen (in seconds).
5. Enable/disable **Preset Toggle** for this Screen.

21.11.3   Screen step back

1. Go to **Live** > **Screen 1 (**or **Screen 2**) > **Global Settings**.
2. Select **Step Back** to revert the last changes for this Screen.

21.11.4   Copy Program to Preview

1. Go to **Live** > **Screen 1 (**or **Screen 2**) > **Global Settings**.
2. Select **Copy Program to Preview**.

21.11.5   Set a Live Layers layout

1. Go to **Live** > **Screen 1 (**or **Screen 2**) > **Live Layers Layout**.
2. In **Mode**, select **Mosaic** or **Cascade**.
3. In **Mosaic mode**, set the columns and rows to create a custom grid for the Live Layers.
4. Select **Apply** to save the settings.

21.11.6   Set the Background layer

1. Go to **Live** > **Screen 1 (**or **Screen 2**) > **Background**.
    Or press the **BKG Set** button twice in the corresponding Screen area.
2. In **Set Selection**, select the Background Set to assign to the Background layer.
3. In **Color**, set the solid color displayed behind the background set or when the background layer is empty / in transition. The default color is black, and the color is set in RGB values.
4. In **Opacity**, set the transparency level of the Background Set.
5. In **Mask**, use the Top, Bottom, Left and Right settings to erase the content of the Background set without changing the aspect of the content.

21.11.7   Set the Live layer

1. Go to **Live** > **Screen 1 (**or **Screen 2**) > **Layer X**.
    Or press the **Layer** button twice in the corresponding Screen area.
2. Go to **Source**.
    a. In **Live input**, select the input to assign to the layer.
    b. In **Solid Color**, set the solid color displayed if **Live input** is set to **Color**. The default color is black, and the color is set in RGB values.
3. In **Content Aspect**, set the aspect (follow Global settings or Input settings, 1:1, Centered, etc.).
4. In **Effect Flags**, set flip and/or color effects.
5. In **Position & Size**, place the layer in the Screen.
6. In **Opacity**, set the transparency level of the layer.
7. In **Crop**, use the Top, Bottom, Left and Right settings to erase the content with a zoom effect to keep the filling of the layer.
8. In **Mask**, use the Top, Bottom, Left and Right settings to erase the content without changing the aspect of the content.
9. In **Border**, add a border, shadow and/or smooth effect on the border of the layer.

21.11.8   Set the Foreground layer

1. Go to **Live** > **Screen 1 (**or **Screen 2**) > **Foreground Image**.
    Or press the **Image** button twice in the corresponding Screen area.
2. In **Source**, select the Foreground image to assign to the Foreground layer.
3. In **H Position** and **V Position**, place the layer in the Screen. (The size is set in the **Images** menu)
4. In **Opacity**, set the transparency level of the Foreground Set.
5. In **Crop**, use the Top, Bottom, Left and Right settings to erase the content with a zoom effect to keep the filling of the layer.
6. In **Mask**, use the Top, Bottom, Left and Right settings to erase the content without changing the aspect of the content.

21.11.9   Set layer Transition

1. Go to **Live** > **Screen 1 (**or **Screen 2**).
2. Select a layer (Background, 1, 2 or Foreground).
3. Go to **Transition**.
4. If applicable, in **Options**, enable Allow Cross Effect and Allow Cross Depth.
5. In **Open**, set the transition of the layer when entering Program (Effect type and direction, starting and ending points).
6. In **Close**, set the transition of the layer when exiting Program (Effect type and direction, starting and ending points).
7. In **Speed**, set a preset or custom speed.
8. If applicable, in **Flying Curve**, set the layer movement type.

21.11.10   Set Aux Screen background color

1. Go to **Live** > **Aux 1** > **Background** > **Color**.
2. Set the solid color displayed behind the content or when the Aux layer is empty / in transition. The default color is black, and the color is set in RGB values.

21.11.11   Set Aux Screen layer

1. Go to **Live** > **Aux 1** > **Content**.
2. In **Content**, select the Input or Program source to assign to the Aux layer.
3. In **Content Aspect**, set the aspect (follow Global settings or Input settings, 1:1, Centered, etc.).
4. In **Content Transition**, set the transition type (Cut or Fade).

21.12   Multiviewer

21.12.1   Set Multiviewer template

1. Go to **Multiviewer (MVW)** > **Template**.
2. Select the template to load on the Multiviewer output (**Inputs**, **Inputs + PRW**, **PGM + PRW** or **Inputs + PGM +PRW**).

21.12.2   Set Multiviewer widget manually

1. Go to **Multiviewer (MVW)** > **Widgets**.
   The Multiviewer virtual screen is displayed with widgets in wireframe.
2. Select a widget.
3. Enable the widget to make it visible in the Multiviewer.
4. Select a source for the widget (Input, Program or Timer).
5. Select the OSD type (Off, Basic or Detailed).
6. Set the widget position and size.

21.12.3   Set a Current Time timer

1. Go to **Multiviewer (MVW)** > **Timers**.
2. Select a Timer.
3. In **Type**, select **Current Time**.
4. If needed, enter a timer label and/or set an offset in seconds.
5. In **Current Time Mode**, set the display mode (24h or 12h AM-PM).

21.12.4   Set a Countdown timer

1. Go to **Multiviewer (MVW)** > **Timers**.
2. Select a Timer.
3. In **Type**, select **Countdown**.
4. In **Unit Mode**, set the display mode (in Hours, in Minutes or in Seconds).
5. In **Countdown Duration**, set the duration in seconds.
6. Go to **Start**, **Stop** or **Reset** to control the Timer.

21.12.5   Set a Stopwatch timer

1. Go to **Multiviewer (MVW)** > **Timers**.
2. Select a Timer.
3. In **Type**, select **Stopwatch**.
4. In **Unit Mode**, set the display mode (in Hours, in Minutes or in Seconds).
5. Go to **Start**, **Stop** or **Reset** to control the Timer.

21.12.6   Save a Multiviewer memory

1. Go to **Multiviewer (MVW)** > **Memories** > **Save**.
2. Go to **Categories** and filter the widget settings to save in the Memory.
3. Go to **Save** and select a MVW Memory slot.
4. Go to **Edit Memory Name** and enter a label for the Memory.
5. Go to **Save** to save the Memory.

21.12.7   Load a Multiviewer memory

1. Go to **Multiviewer (MVW)** > **Memories** > **Load**.
2. Select a Memory to load.
3. Enable **Autoscale** to automatically fit the memory to the Multiviewer resolution.
4. Select **Categories** and filter the widget settings to load in the Multiviewer.
5. Select **Load** to load the Memory.

21.12.8   Delete a Multiviewer memory

1. Go to **Multiviewer (MVW)** > **Memories** > **Delete**.
2. Select a Memory to delete.
3. Select **YES** to confirm.

21.13   Screen Memories

21.13.1   Autoscale on load

In **Memories**, enable **Autoscale On Load…** to automatically fit all memory loads to the Screens resolution.

21.13.2   Save a Master Memory from current Screens (self-contained)

1. Go to **Memories** > **Master Memories** > **Save** > **PGM/PRW to self-contained Memories**.
2. In **Screen/Aux Select**, filter the Screens to include in the Master Memory.
3. In **Type**, select to save from Preview or Program Screens.
4. In **Screen Categories**, filter the layer settings to include in the Memory.
5. In **Layer**, filter the layers to include in the Memory.
6. Go to **Save** and select a Master Memory slot.
7. Go to **Edit Memory Name** and enter a label for the Memory.
8. Go to **Save** to save the Memory.

21.13.3   Save a Master Memory from current Screens (to Screen Memories)

1. Go to **Memories** > **Master Memories** > **Save** > **PGM/PRW to Screen/Aux Memories**.
2. In **Screen/Aux Select**, filter the Screens to include in the Master Memory.
3. In **Type**, select to save from Preview or Program Screens.
4. In **Screen Categories**, filter the layer settings to include in the Memory.
5. In **Layer**, filter the layers to include in the Memory.
6. Go to **Save** and select the Screen Memory slots to save to.
   Or select **Auto select empty memories.**
7. Go to **Save** and select a Master Memory slot.
8. Go to **Edit Memory Name** and enter a label for the Memory.
9. Go to **Save** to save the Memory.

21.13.4   Save a Master Memory from Screens Memories

1. Go to **Memories** > **Master Memories** > **Save** > **Using Screen/Aux Memories**.
2. Filter the Screens to include in the Master Memory.
3. Go to **Save**.
4. Select the Memory slots to use for the corresponding Screens.
   Or select **Auto select empty memories.**
5. Go to **Save** and select a Master Memory slot.
6. Go to **Edit Memory Name** and enter a label for the Memory.
7. Go to **Save** to save the Memory.

21.13.5   Save a Screen Memory

1. Go to **Memories** > **Screen Memories** > **Save**.
2. In **Screen**, select the Screen to use.
3. In **Type**, select to save from Preview or Program Screen.
4. In **Categories**, filter the layer settings to include in the Memory.
5. In **Layer**, filter the layers to include in the Memory.
6. Go to **Save** and select a Screen Memory slot.
7. Go to **Edit Memory Name** and enter a label for the Memory.
8. Go to **Save** to save the Memory.

21.13.6 Save a Aux. Screen Memory

1. Go to **Memories** > **Aux Memories** > **Save**.
2. In **Type**, select to save from Preview or Program Aux Screen.
3. In **Categories**, filter the layer settings to include in the Memory.
4. Go to **Save** and select an Aux Memory slot.
5. Go to **Edit Memory Name** and enter a label for the Memory.
6. Go to **Save** to save the Memory.

21.13.7 Load a Master Memory

1. Go to **Memories** > **Master Memories** > **Load**.
2. Select a Memory slot.
3. In **Destination**, select to load the Memory to the Preview or Program Screens.
4. In **Screen/Aux Selected**, filter the Screens affected by the Master Memory. Unselected Screens remain unchanged after loading the Master Memory.
5. Go to **Load** to save the Memory.

21.13.8 Load a Screen Memory

1. Go to **Memories** > **Screen Memories** > **Load**.
2. Select a Memory slot.
3. In **Destination**, select to load the Memory to the Preview or Program Screen.
4. In **Categories**, filter the layer settings to load.
5. In **Layer**, filter the layers affected by the Memory.
6. Go to **Load** to save the Memory.

21.13.9 Load an Aux Screen Memory

1. Go to **Memories** > **Aux Memories** > **Load**.
2. Select a Memory slot.
3. In **Destination**, select to load the Memory to the Preview or Program Screen.
4. In **Categories**, filter the settings to load.
5. Go to **Load** to save the Memory.

21.13.10 Delete a Memory

1. Go to **Memories**.
2. Select **Master Memories**, **Screen Memories** or **Aux Memories**.
3. Select **Delete**.
4. Select a Memory to delete.
5. Select **YES** to confirm.

22   Advanced audio settings (via front panel)

Note: Some advanced audio settings are currently only accessible from the front panel menu. They will be supported in the Web RCS in a future version.

22.1 Audio internal processing rate

22.1.1 Set a custom internal reference and global transition delay

1. Go to **Audio** > **Global Settings**.
2. In **Rate Mode**, select Internal Ref. (32kHz, 44.1kHz or 48kHz).
3. Set the Global transition delay (between 0.2 and 2.0 seconds).

22.1.2 Set the internal reference to follow Dante reference

1. Go to **Audio** > **Global Settings**.
2. In **Rate Mode**, select Dante Reference.
3. Set the Global transition delay (between 0.2 and 2.0 seconds).

22.2 Audio in inputs

22.2.1 Select audio from another input plug

By default, all inputs use the audio of the active plug. If needed, it is possible for an input to reuse the audio signal from another input plug.

1. Go to **Inputs**.
2. Select an input.
3. In **Audio Selection**, select the input plug or audio source that will be used by the selected input.

Note: Adjustments set for an input audio channel also affects other inputs using that audio channel.

22.2.2 Set an input audio (Basic mode)

In **Basic** mode, every pair of channels of the input has the same settings.

1. Go to **Audio** > **Inputs**.
   The audio status of each input is displayed.
2. Select an input.
3. In **Level Meter**, check the level for all the channels of the input.
4. In **Mode**, select Basic.
5. Enable **Mute** to mute all channels.
6. Enable **Force Mono** to set the same signal on each pair of channels.
7. In **Balance**, adjust the left and right audio balance level.
8. In **Level**, adjust the volume for all the channels of the input.

Note: The Clipped indicator blinks when the level of one of the channels is too high.

22.2.3 Set an input audio (Advanced mode)

In **Advanced** mode, each channel of the input has specific settings.

1. Go to **Audio** > **Inputs**.
   The audio status of each input is displayed.
2. Select an input.
3. In **Level Meter**, check the level for all the channels of the input.
4. In **Mode**, select Advanced.
5. Select a pair of channels.
6. Disable **Stereo** to set the same signal on both channels.
7. In **Balance**, adjust the left and right audio balance level.
8. Enable **Mute Chanel X** to mute the channel.
9. In **Level Channel X**, adjust the volume for the channel.

Note: The Clipped indicator blinks when the level of the channel is too high.

22.2.4 Inputs audio level

- Go to **Audio** > **Sources** > **Level Meter** to check the level meter of all input sources.

22.2.5 Set Embed group for an SDI input

1. Go to **Inputs**.
2. Select an input with an SDI plug.
3. In **Audio Selection**, select the input plug or audio source that will be used by the selected input.
4. In **SDI Settings** > **Audio Settings**, select the audio group to use for the First and Second Embed. Groups.

22.3 Custom audio sources

1. Go to **Audio** > **Sources** > **Custom Set**.
2. Select a custom set.
3. Go to **Edit Name** and enter a label for the custom set.
4. Select **Channel 1** and assign a source among all the available audio channels.
5. Repeat step 4 for all channels.
6. The custom set is ready to be used as a custom audio source.

Note: Adjustments set for an input audio channel also affects a custom set using that audio channel.

22.4 Audio in outputs

22.4.1 Set the number of audio output channels

1. Go to **Outputs** and select an output.
2. Go to **Plug Settings** and select a plug.
3. Go to **Audio Mode** and select the number of channels to use.

22.4.2 Set an output audio (Basic mode)

In **Basic** mode, every pair of channels of the output has the same settings.

1. Go to **Audio** > **Outputs**.
   The audio status of each output is displayed.
2. Select an output.
3. In **Level Meter**, check the level for all the channels of the output.
4. In **Mode**, select Basic.
5. In **Source**, select an audio input to always use that audio source on the selected output.

   Or select **Auto** to follow the Screen audio mode.
6. Enable **Auto Delay** to follow the transition delay set in Global.

   Or disable Auto Delay and set a custom delay for the transition of the selected output.
7. Enable **Mute** to mute all channels.
8. Enable **Force Mono** to set the same signal on each pair of channels.
9. In **Balance**, adjust the left and right audio balance level.
10. In **Level**, adjust the volume for all the channels of the output.
11. If needed, go to **Pattern** and select an audio pattern to output.

Note: The Clipped indicator blinks when the level of one of the channels is too high.

22.4.3 Set an output audio (Advanced mode)

In **Advanced** mode, each channel of the output has specific settings.

1. Go to **Audio** > **Outputs**.
   The audio status of each output is displayed.
2. Select an output.
3. In **Level Meter**, check the level for all the channels of the output.
4. In **Mode**, select Advanced.
5. In **Source**, select an audio input to always use that audio source on the selected output.

   Or select **Auto** to follow the Screen audio mode.
6. Enable **Auto Delay** to follow the transition delay set in Global.

   Or disable Auto Delay and set a custom delay for the transition of the selected output.
7. Select a pair of channels.
8. Disable **Stereo** to set the same signal on both channels.
9. In **Balance**, adjust the left and right audio balance level.
10. Enable **Mute Chanel X** to mute the channel.
11. In **Level Channel X**, adjust the volume for the channel.
12. If needed, go to **Pattern Channel X** and select an audio pattern to output.

Note: The Clipped indicator blinks when the level of one of the channels is too high.

22.4.4 Set Dante output

1. Go to **Audio** > **Outputs**.
   The audio status of each output is displayed.
2. Select a group of Dante output channels.
3. In **Level Meter**, check the level for all the channels of the output.
4. In **Mode**, select Basic or Advanced.
5. Go to **Source**.
6. In **Output mode** select Direct routing or Follow Screen.
   a. In **Direct routing** mode, select the input to assign to the selected output.
   b. In **Follow Screen** mode, select the Screen to assign to the selected output.
7. Set the other parameters as for a regular output.

Note: The Clipped indicator blinks when the level of one of the channels is too high.

Tip: The Output mode of the Dante output channels can also be set in Audio > Dante > Outputs Settings.

22.4.5 Set Line output

1. Go to **Audio** > **Outputs**.
   The audio status of each output is displayed.
2. Select a Line output.
3. In **Level Meter**, check the level for all the channels of the output.
4. In **Mode**, select Basic or Advanced.
5. Go to **Source**.
6. In **Output mode** select Direct routing or Follow Screen.
   a. In **Direct routing** mode, select the input and pair of channels to assign to the selected output.
   b. In **Follow Screen** mode, select the Screen and pair of channels to assign to the selected output.
7. Set the other parameters as for a regular output.

Note: The Clipped indicator blinks when the level of one of the channels is too high.

22.5 Set Screen or Aux. Screen audio

Tip: The audio status of the Screen is displayed in **Live** > **Screen X** > **Audio**.

22.5.1 Set a Screen to use the audio of one input

The Screen will use the audio channels of one selected input.

1. Go to **Preconfig** > **Screen X** > **Audio mode**.
2. In **Mode**, select Direct routing.
3. In **Direct Routing Source**, select the input to use.

22.5.2 Set a Screen audio to follow the layer content

The Screen will use the audio channels of the input content assigned to the selected layer.

1. Go to **Preconfig** > **Screen X** > **Audio mode**.
2. In **Mode**, select Follow live layer content.
3. In **Follow Live Layer**, select the layer to use as reference for audio content.

22.5.3 Set a Screen to follow the audio layer

The audio layer is an optional layer usable only for audio content.
The Screen will use the audio channels of the content assigned to the audio layer.

1. Go to **Preconfig** > **Screen X** > **Audio mode**.
2. In **Mode**, select Follow audio layer content.
3. Go to **Live** > **Screen X** > **Audio**.
4. In **Source Selection**, select the input to use in the audio layer.

22.6 Set Multiviewer audio

1. Go to **Multiviewer (MVW)** > **Audio**.
2. In **Mode**, select Direct routing or Follow widget.
   a. In **Direct Routing Source** mode, select the input to use.
   b. In **Follow Widget** mode, select the widget to use.

22.7 Dante settings

Tip: Go to **Audio** > **Dante** > **Status** to check the status of the Dante card, inputs and outputs.

22.7.1 Reset the Dante card

1. Go to **Audio** > **Dante** > **Factory Reset**.
2. Select **YES** to reset the Dante card to default value.

22.7.2 Reboot the Dante card

1. Go to **Audio** > **Dante** > **Reboot**.
2. Select **YES** to restart the Dante card only.

APPENDICES

Appendix A. RC400T

The **RC400T** event controller has been designed to greatly increase the level of operational efficiency and to give instant access to the crucial functionalities of the LivePremier and Midra 4K image processors such as screens, layers, sources and memories. The RC400T offers 56 user programmable buttons, a high-resolution T-bar and a three-axis joystick for easy and fast programming (assign source in layers, load memories, etc.). The RC400T can work with the Web RCS at the same time as both selections are synchronized.

Caution: The fuse(s) present in the unit have not been designed to be replaceable. In case of problem, contact Analog Way support.

Fig. 33 -   RC400T

A.a. Installation

The RC400T has been designed to be used directly on a table. It is equipped with a wrist rest and four anti-slip rubber feet. The wrist rest can be removed for a recessed installation of the RC400T.

Recessed installation - Remove the wrist rest

1. Turn the rear panel power switch off and disconnect the power supply.
2. Remove the screws of the wrist rest on both sides of the RC400T using a T10 Torx screwdriver.
3. Safely remove the wrist rest.

The RC400T is ready for recessed installation. Before embedding the RC400T, connect all cables and turn the rear panel power switch on or make sure they can be accessed.
RC400T dimensions: L 570 mm x H 122.5 mm x P 382 mm (W 22.44'' x H 4.82'' x D 15.04'')

A.a. Controller description

A.a.a. Top area

The top area is composed of one Power button, one LCD display, one rotary encoder and two LED keys: **Confirm** and **Cancel**. This area is used mainly for configuring the RC400T (status, network, upgrade, factory reset, etc.).

Use the rotary encoder to move the selection and use the buttons to Confirm / Cancel the choices.

Note: The three-axis joystick will be fully functional in a future version.

A.a.b. XLR lamp (optional)

The XLR lamp is used to light the RC400T if needed.

To turn the lamp on, go to **Front panel settings** and enable **Power on light**.

Note: For more information on the XLR lamp for RC400T, visit **www.analogway.com** or contact Analog Way support.

A.a.c. Program/Preview key

Press the Program/Preview key to toggle between Program and Preview modes.
- **Program** mode is enabled when the key is on with a red light.
- **Preview** mode is enabled when the key is off.

Note: The **Program/Preview** key affects the entire Selection area.

A.a.d. Selection area - Multi-purpose area

The Selection area is used for Screen composition. Select Screens, Aux Screens, Layers, and assign Sources or reload Memories. The Selection area is composed of 4 identical rows of keys. Each row is composed of 12 LED keys with labels in OLED displays, one LCD key and one rotary encoder. Each row can display a predefined group of items depending on the mode selected by the user.

A.a.e. User keys area and Joystick

The User keys area is composed of 8 LED keys, one OLED display, one LCD key and one rotary encoder. This area has been designed to be evolutive and user customizable. The user keys are predefined slots for features or actions set by the user (trigger the Quick Preset, remove a source content, set transition time, disable the T-bar, etc.). The Joystick is used to adjust the crop, size and position of one layer. It is used together with the user keys.

Note: More features will be coming in future versions and users are welcome to request new User keys features.

A.a.f. Transition area

The Transition area is composed of one T-bar and 3 LED keys: **Take Cut**, **Step Back** and **TAKE**:
- **Take Cut** triggers an immediate transition from Preview to Program without effects or duration.
- **Step Back** reloads the former Program to the Preview.
- **TAKE** triggers the transition from Preview to Program with effects, duration, etc.
The T-bar is a manual Take triggered by the user for a smooth transition.

Note: The transition applies only to Screens selected in the Selection area.

A.a.g. RC400T rear panel

Fig. 34 - RC400T - rear panel

The rear panel is composed of:

- One power plug with a switch button
- One Ethernet plug for network connection
- One HDMI plug
- One USB plug

Note: The HDMI plug will be fully functional in a future version.

A.b. Getting started

Note: - In the Web RCS, in Dashboard > Remote Control, make sure the connection with RC400T is enabled.

- Make sure that ports 80, 443, 10591, 10606, 10691, 10692 and 10693 are available on your network and/or not blocked by firewall.

A.b.a. Start the RC400T

The RC400T controls Midra 4K devices using standard Ethernet LAN networking.

1. Connect the power supply cord on the rear panel.
2. Connect the RC400T to the same network as the Midra 4K unit.
3. Turn the RC400T on (rear and front On/Off buttons).

A.b.b. Turn the RC400T off

Press the On/Off button on the front panel and confirm to turn the RC400T off.

A.b.c. Configure the RC400T network

1. On the front panel, go to **Remote Device Network** > **Remote device LAN settings**.
2. Select a device slot, set the IP address of the Midra 4K unit and Apply (192.168.2.140 by default).
3. If needed, repeat in the other device slots to add more connected units.
4. If needed, go to **Console Network**, set the IP address of the RC400T and Apply (192.168.2.130 by default).

The connection status is displayed on screen.

If the connection is not starting:

- Check that both IP addresses are on the same network and subnet.
- Check that no device has the same IP address (prevent IP conflicts).
- Check that all network configurations have been applied.
- Check that the Midra 4K unit and RC400T have the latest firmware version installed.
- Check the network cables. If connecting the RC400T and the Midra 4K unit directly, make sure to use an Ethernet crossover cable. If a hub or switch is involved, use straight or crossed Ethernet cables.

A.b.d. Control multiple units with the RC400T

When multiple LivePremier or Midra 4K units are enabled for remote control, the **RC400T** displays a new home page to select the device to use (by default, the active unit is the one configured in the first device slot).
  - Press the **Exit/Menu** button on the Setting page to display the device selection page.

Note: - An RC400T can be connected to up to four LivePremier or Midra 4K units (only one at a time is enabled).

- A Midra 4K unit can be connected to up to two RC400T controllers.

A.b.e. Firmware upgrade

Download the RC400T updater on **www.analogway.com**

1. Put the updater file on a USB drive.
2. Connect the USB drive on the front panel.
3. The updater file is automatically detected. Otherwise, go to **Console Control** > **Update from USB**.
4. Extract the updater file.
5. Install the new firmware.

Tip: It is also recommended to update the Midra 4K unit with the latest firmware.

A.b.f. Reset to default values

1. On the front panel, go to **Console Control** > **Reset to default values**.
2. Confirm to reset the device to default values.

A.b.g. Enable / Disable the T-bar

The T-bar status is displayed in the corresponding display. The T-bar can be disabled if needed.
  - On the **User keys area**, press the **T-bar Enable** key to enable / disable the T-bar.

A.c. Midra 4K control with RC400T

A.c.a. Select a row mode

1. On the **Selection area**, press the LCD key of a row. The row is on Mode selection and the available modes are displayed in the OLED screens.
2. Select a mode using the corresponding LED key. The row is now in the selected mode.
3. Use the rotary encoder to change the page if needed.

Note: The same mode can be selected in different rows.

Here are some examples of configurations:

Loading Master memories (default view):
Row 1: Screens / Aux Screens
Row 2: Master memories 1 to 12 (page 1)
Row 3: Master memories 13 to 24 (page 2)
Row 4: Master memories 25 to 36 (page 3)

Assigning inputs to layers:
Row 1: Screens / Aux Screens
Row 2: Layers or Scr./Aux. Layers
Row 3: Inputs 1 to 12 (page 1)
Row 4: Inputs 13 to 24 (page 2)

A.c.b. Layer selection

The RC400T has two modes for selecting layers.

Layers	Shows all available live layers in the selected Screens as **BKG Layer**, **Layer 1**, **Layer 2**, etc.
	This mode allows quick selection of the same layer in multiple screens.
	It is recommended when programming shows with lots of Screens and Layers.
Scr./Aux. Layers	Shows all available live layers in the selected Screens as **S1.BKG**, **S1.L1**, **S1.L2**, etc.
	This mode allows selecting a single layer when multiple Screens are selected.
	It is recommended when programming shows with less than 36 layers in total.

Note: It is only possible to select a layer when the corresponding Screen or Aux is selected, even when using Scr./Aux. Layers mode.

Select one or multiple layer

Some of the following procedures will require to ask to select one or multiple layers.

1. On the **Selection area**, press the LCD key of a row. The row is on Mode selection.
2. Select the **Screens & Aux.** mode using the corresponding LED key. The row is on Screen mode.
3. Select the Screen using the corresponding LED key.
4. On another row, press the LCD key and select the **Layers** mode.
5. Select one or multiple layers. Use the rotary encoder to change the page if needed.

Or

1. On the **Selection area**, press the LCD key of a row. The row is on Mode selection.
2. Select the **Scr./Aux. Layers** mode using the corresponding LED key.
3. Select one or multiple layers. Use the rotary encoder to change the page if needed.

A.c.c. Assign a source to a layer

1. Select the Program or Preview mode.
2. Select one or multiple layers.
3. On another row, press the LCD key and select a source (BKG sets, Inputs or Images).
4. Select a source. Use the rotary encoder to change the page if needed.

The source is now assigned to the selected layers in the selected Screen.

Tip:
- When different types of layers are selected at the same time, a new source is affected only if the layer is compatible (ex: BG set to BKG layer), otherwise the source stays the same.
- When multiple live layers are selected:

    - If they use the same source content, the key of the source in use is On with a solid orange color .

    - If they use different contents, the key(s) of the source(s) in use is On with a weak orange color .

For more information, see *A.c.p Button color guide* page 140.

A.c.d. Remove a source from a layer

1. Select the Program or Preview mode.
2. Select one or multiple layers.
3. On the **User keys area**, press the **Source None** key.

The selected layers are cleared from any source.

A.c.e. Set a layer position and size

1. Select the Program or Preview mode.
2. Select one layer.
3. On the **User keys area**, press the **Layer Pos/Size** key.
    The selected layer is indicated on the display.

    - Rotate the joystick clockwise or counterclockwise to resize the layer while keeping the aspect ratio.
    - For fine adjustment, press a key to select a setting (**Pos X**, **Pos Y**, **Width** or **Height**), then use the rotary encoder.
    - Push the joystick to move the layer.
4. Use the **Back** key to quit the Layer Pos/Size menu.

A.c.f. Set a layer crop

1. Select the Program or Preview mode.
2. Select one layer.
3. On the **User keys area**, press the **Layer Crop** key.
    The selected layer is indicated on the display.

    - Rotate the joystick clockwise or counterclockwise to crop the layer equally on all sides.
    - For fine adjustment, press a key to select a side (**Top**, **Left**, **Bottom** or **Right**), then use the rotary encoder.
    - Push the joystick to move the crop area.
4. If needed, use the **Reset Crop** key to reset the layer crop.
5. Use the **Back** key to quit the Layer Crop menu.

A.c.g. Set an input crop

Input crop is set by selecting the layer using the input to be cropped.

1. On the **Selection area**, press the LCD key of a row. The row is on Mode selection.
2. Select one layer.
3. Assign an input to this layer.
4. On the **User keys area**, press the **Input Crop** key.
    The selected layer is indicated on the display.

    - Rotate the joystick clockwise or counterclockwise to crop the input equally on all sides.
    - For fine adjustment, press a key to select a side (**Top**, **Left**, **Bottom** or **Right**), then use the rotary encoder.
    - Push the joystick to move the crop area.
5. If needed, use the **Reset Crop** key to reset the input crop.
6. Use the **Back** key to quit the Input Crop menu.

A.c.h. Load a Screen memory

1. Select the Program or Preview mode.
2. On the **Selection area**, press the LCD key of a row. The row is on Mode selection.
3. Select the **Screens & Aux.** mode using the corresponding LED key. The row is on Screen mode.
4. Select the Screen using the corresponding LED key.
5. On another row, select the **Screen Memories** mode.
6. Select a memory. Use the rotary encoder to change the page if needed.

The Screen memory is now loaded to the selected Screen.

A.c.i. Load a Master memory

1. Select the Program or Preview mode.
2. On the **Selection area**, select the **Master Memories** mode.
3. Select a memory. Use the rotary encoder to change the page if needed.

The Master memory is now loaded to Screens as set in the Master memory.

A.c.j. Screen selection for Transitions

After loading a memory in Preview, select / deselect the Screens to transition.
1. On the **Selection area**, select the **Screens & Aux.** mode.
2. Select the Screens to transition.

> **Tip**: To select all Screens, press the **Select Scrs&Auxs** key on the User keys area.

3. On the **User keys area**, press the **Take duration** key and use the rotary encoder to set the transition time.
4. On the **Transition area**, trigger the transition.

The selected Preview Screens are sent to Program.

A.c.k. Load a Multiviewer memory

1. On the **Selection area**, press the LCD key of a row. The row is on Mode selection.
2. Select the **Multiviewer** mode using the corresponding LED key. The row is on Multiviewer mode.
3. Select the Multiviewer output using the corresponding LED key.
4. On another row, select the **Mvw Memories** mode.
5. Select a memory. Use the rotary encoder to change the page if needed.

The Multiviewer memory is now loaded to the selected Multiviewer.

A.c.l. Save a Master Memory

Note: Saving Master Memories from the RC400T will always include all Screens, all layers and all layer properties.

1. Select the Program or Preview mode to save the corresponding Screens.
2. On the **User keys area**, press the **Memories** key.
3. Press the **Master Memories** key.
4. Use the rotary encoder to select a memory slot.
5. Press **Save**.

The Master Memory is now saved.

A.c.m. Save a Screen Memory

Note: Saving Screen Memories from the RC400T will always include all layers and all layer properties.

1. Select the Program or Preview mode to save the corresponding selection.
2. On the **Selection area**, select one Screen to save.
3. On the **User keys area**, press the **Memories** key.
4. Press the **Screen Memories** key.
5. Use the rotary encoder to select a memory slot.
6. Press **Save**.

The Screen Memory is now saved.

A.c.n. Save an Aux Memory

Note: Saving Aux Memories from the RC400T will always include all layer properties.

1. Select the Program or Preview mode to save the corresponding selection.
2. On the **Selection area**, select the Aux Screen to save.
3. On the **User keys area**, press the **Memories** key.
4. Press the **Aux Memories** key.
5. Use the rotary encoder to select a memory slot.
6. Press **Save**.

The Aux Memory is now saved.

A.c.o. Delete a memory

1. On the **User keys area**, press the **Memories** key.
2. Press the **Master, Screen or Aux Memories** key.
3. Use the rotary encoder to select a memory slot.
4. Press the **Delete** key to delete a memory.

A.c.p. Button color guide

Button color		Description
Solid green		- Element, Source or Function is available and not selected - T-bar is disabled
Solid orange		- Screen, Aux or Multiviewer element is selected for edition and for transition - Master Memory is currently loaded - Screen Memory is loaded in all selected Screens - Layer is selected in all the selected Screens - Source element is currently used in all the selected Layers - BKG set is currently used in the all the selected Screens - T-bar is enabled
Weak orange		- Screen Memory is loaded in some of the selected Screens - Layer is selected in some of the selected Screens - Source element is currently used in some of the selected Layers - BKG set is currently used in some of the selected Screens
Blinking orange		- Row waiting for Mode Selection - Set transition duration
Solid red		- Program mode is active - Take is available
Blinking red		- Take in progress
Button Off		- Preview mode is active - Element is not available

Appendix B. Use the Shot Box² and Control Box³ with Midra 4K

Analog Way Shot Box² and Control Box³ can be used to recall Memories and trigger transitions.

> **Tip**: With the software **AW Shotbox Control**, Shot Box² and Control Box³ can also be used when connected to a computer on the same network as the Midra 4K device.

> **Note**: - In the Web RCS, in Dashboard > Remote Control, make sure the connection with External USB Controllers is enabled.
>
> - The Control Box³ (SB124T-3) has been designed specifically for the latest Analog Way product lines.
>
> The previous version, Control Box² (SB124T-2 designed for LiveCore products) is still compatible but some features are limited or not supported.

| Shot Box²	Control Box³

To use these controllers:

1. Connect the controller directly to the Midra 4K unit via USB ports.
2. On the unit front panel, go to Control > Controller.
   The reference of the controller is indicated.
   The tallies indicate the connection status (● = OK ; ● = Connecting ; ● = No Connection)
3. Enable Identify to display ID on the controller (1 to 4).
4. Select the controller to open its settings:

Controller setting	Description
Enable	Enable or disable the controller
Backlight	Set the keyboard brightness (in %)
Mode*	Choose to recall Screen Memories or Master Memories
Screen*	Choose the Screen
Destination*	Choose to interact with Program or Preview
Autoscale	Enable to rescale Memory to applied Screen canvas size
Take on load	Enable to automatically trigger the transition when loading a Memory on Preview
Reset	Reset the controller configuration

*only available with the ShotBox².

5. Use the keys of the controller to recall Memories and trigger transitions.

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