

LPX500

Optional Quad Analyzers

Quick Start Guide



December 2024

Version 4

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Connecting SDI Inputs (System IO)

Use **System IO** to check that SDI inputs are successfully connected to the BNC **SDI In** connectors on the rear panel.

Launch System IO to check the presence of the SDI inputs as follows:

- 1 Tap  and open the **Instruments** tab.



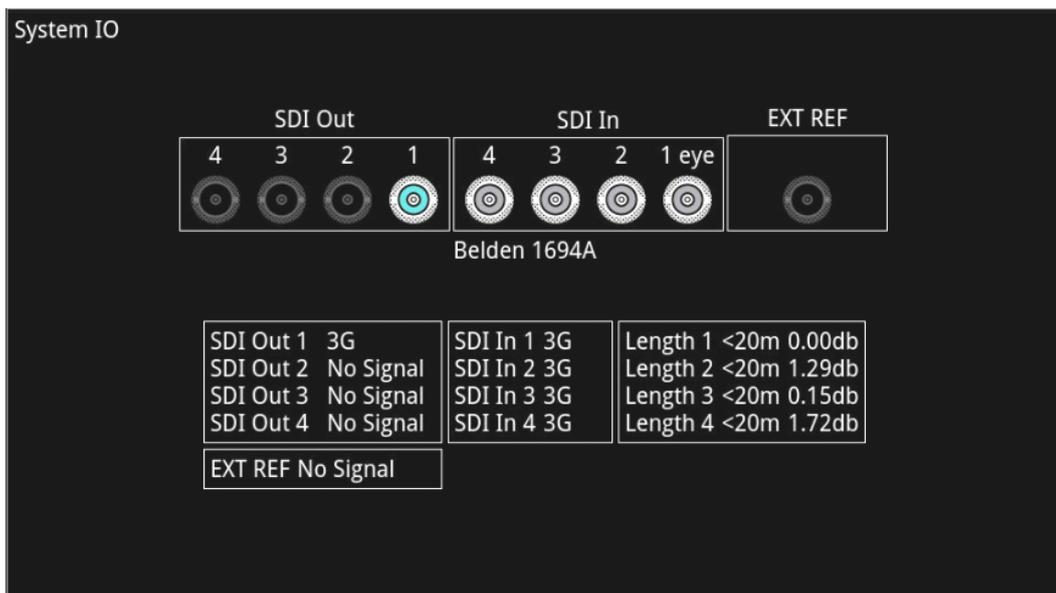
- 2 Tap . System IO opens in the active layout.

When successfully receiving SDI inputs on **SDI In 1 to 4**, the SDI In connector icons show a light-gray center:

Active SDI Input: 

No Input / Output: 

Active SDI Output:  (Requires software option: **LPX500-GEN**)



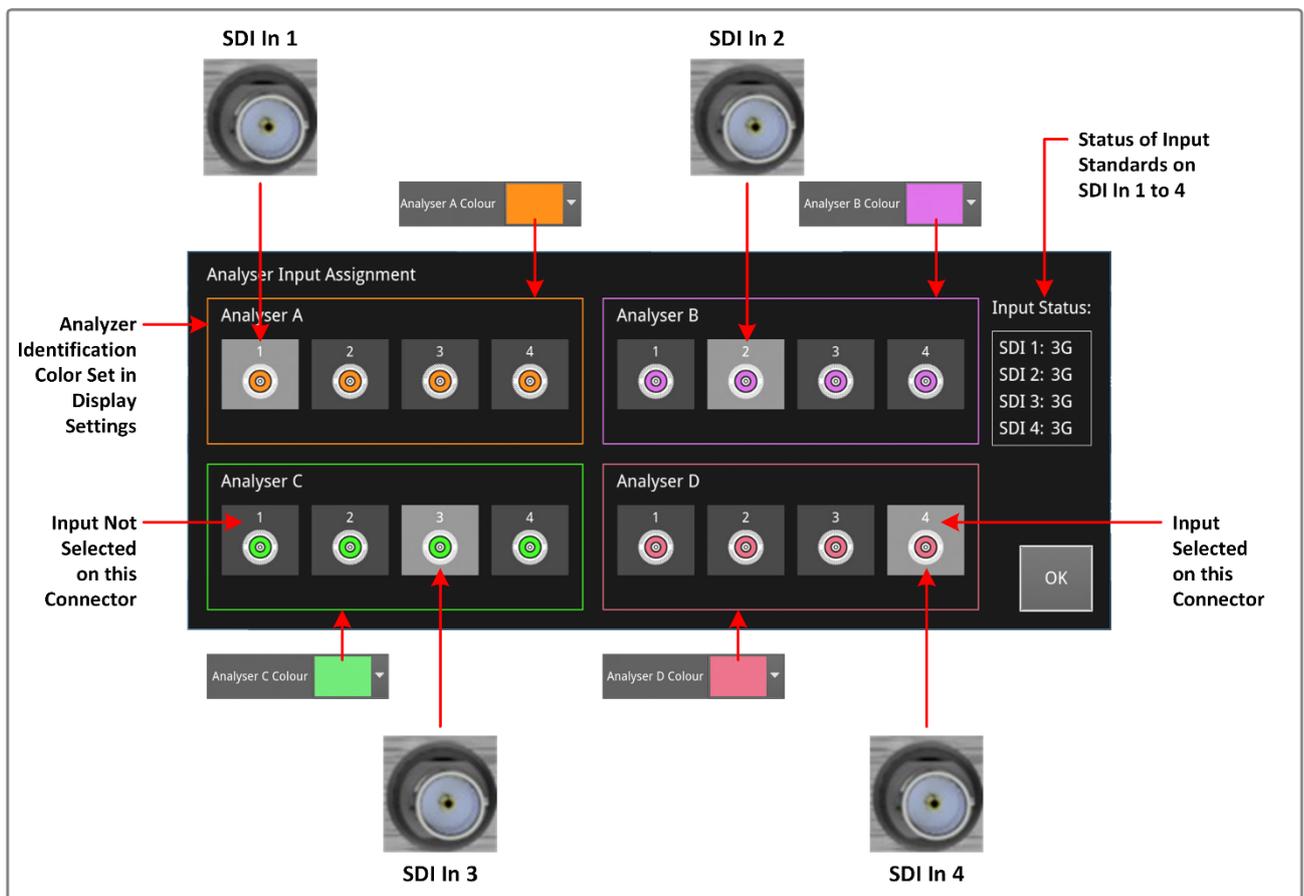
Assigning SDI Inputs to Analyzers

To enable your analysis instruments to evaluate the SDI source inputs, you need to assign each of up to four physical inputs on the **SDI In** BNCs on the rear panel to the four analyzers. To do so, use the **Analyzer Input Assignment** dialog in the Settings tab.

Open the **Analyzer Input Assignment** dialog as follows:

- 1 Tap  and open the **Settings** tab.
- 2 Tap:  to launch the dialog shown below.
- 3 Tap or click the icon representing the SDI input connector to assign the physical inputs to the target analyzer.

You will see the background behind the connector icon changes to light-gray when selected.

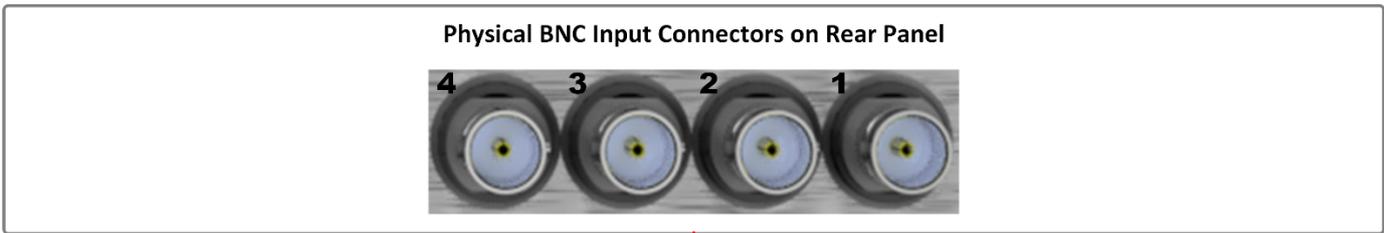


Note: Each of the analyzers in the Assignment dialog has a border in a different color. This color is also assigned to any instrument using the source input from this analyzer in the active layout.

When you connect an SDI input to one of the SDI In BNCs, the icon for that input in the Assignment dialog has a center in the analyzer's color. If there is no input, the connector center is black:



The following graphic gives an overview of the analyzer assignment process from the physical SDI In BNCs to the assignment of analyzer inputs, through to the choice of layout modes.



Up to Four SDI Inputs
(4 x Single, 2 x Dual, or 1 x Quad)

Launch Analyzer Input Assignment from Settings Tab

Use to Select Which Physical SDI Inputs are Assigned to Each Analyzer A to D
In this Example:
SDI In 1 is Assigned to Analyzer A,
SDI In 2 is Assigned to Analyzer B,
SDI In 3 is Assigned to Analyzer C,
SDI In 4 is Assigned to Analyzer D

Define Layout(s)

The Type of Layout Used Defines How Instruments Access Analyzer Inputs

Single Layout

All Analyzer Instruments Use the Same Analyzer Input Source

Multi Unlinked Layout

Each Analyzer Instrument Can Select Any Analyzer Input Source

Multi Linked Layout

Up to Four Analyzer Instruments Assigned to All Four Analyzer Input Sources Simultaneously

Working with Layouts

Layouts provide multiple screens in which to display instrument windows. By careful planning of your layouts, you can extend the screen area available on your unit to give the best possible viewing and touch experience. With an optional second screen, you can have up to **16** different, independent layouts on each display.

Layout Modes

The LPX500 allows you to define layouts in either of two possible analyzer management modes - **Single** or **Multi** – with a further operational state – **Linked** - which can link Single and Multi modes, allowing quick switching between them.

The layout modes define how analysis instruments use the source input from the analyzers:

Multi Analyzer Layout Mode: Each analysis instrument can select an input from any analyzer. If you switch the input for one analysis instrument, other open analysis instruments are unaffected. No limitations on choice, positioning, or sizing of instruments when not linked.

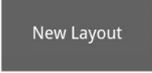
The default screen on startup is **Multi** mode, into which you can launch multiple instruments and choose which analysis instruments use input from the analyzers. From the default active layout, you can either launch instruments or add a new layout to the left or right.

Single Analyzer Layout Mode: All open analysis instruments use input from the same analyzer, at the same time. You can **switch** to an input from a different analyzer, but all open analysis instruments will use the input from that analyzer. No limitations on the choice, positioning, or sizing of instruments when not linked.

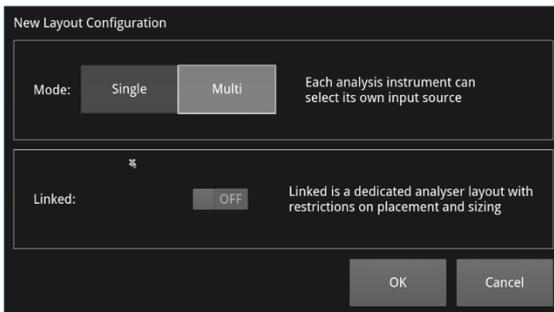
Linked Mode: Links single and multi layouts, allowing you to switch quickly between them for enhanced viewing. Linked layouts have a dedicated format, only for **analysis** instruments, with restrictions on the placement and sizing of instrument windows.

Adding New Layouts

Define new layouts using the **New Layout Configuration** dialog, which you can open in several ways, including:

- By swiping left or right on the touchscreen until the New Layout Configuration dialog opens.
- By hovering the mouse cursor in the center left- or right-hand margin of the screen, clicking  or  to navigate to the extreme left or right layout, then clicking  when displayed.
- By launching the **Layouts** dialog from the Settings tab, then tapping .

Adding Multi (Default) Layout Type



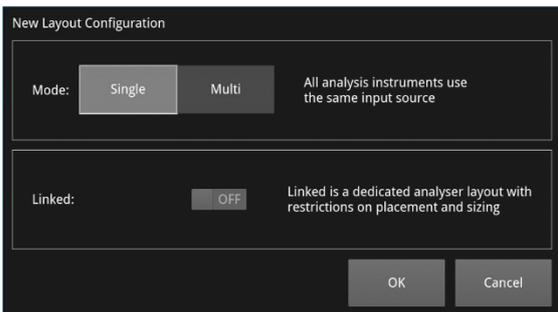
New Layout Configuration

Mode: Single Multi Each analysis instrument can select its own input source

Linked: OFF Linked is a dedicated analyser layout with restrictions on placement and sizing

OK Cancel

Adding Single Unlinked Layout Type



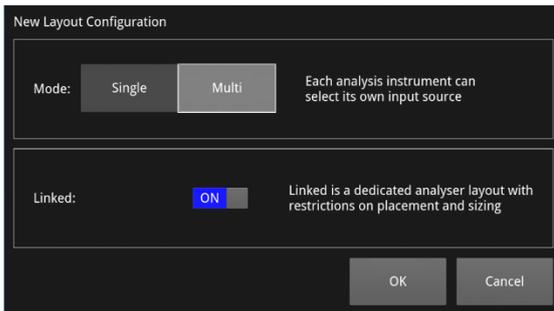
New Layout Configuration

Mode: Single Multi All analysis instruments use the same input source

Linked: OFF Linked is a dedicated analyser layout with restrictions on placement and sizing

OK Cancel

Adding Multi Linked Layout Type



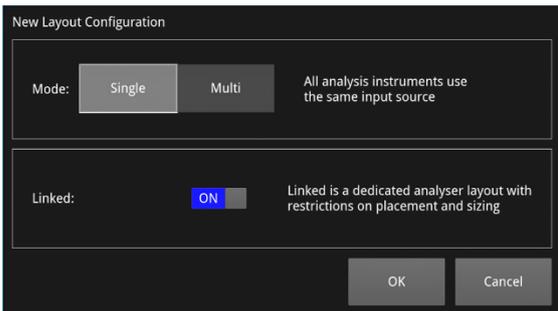
New Layout Configuration

Mode: Single Multi Each analysis instrument can select its own input source

Linked: ON Linked is a dedicated analyser layout with restrictions on placement and sizing

OK Cancel

Adding Single Linked Layout Type



New Layout Configuration

Mode: Single Multi All analysis instruments use the same input source

Linked: ON Linked is a dedicated analyser layout with restrictions on placement and sizing

OK Cancel

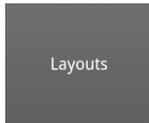
Managing Layouts in the Layouts Dialog

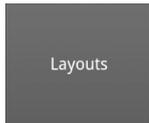
Use the Layouts dialog to:

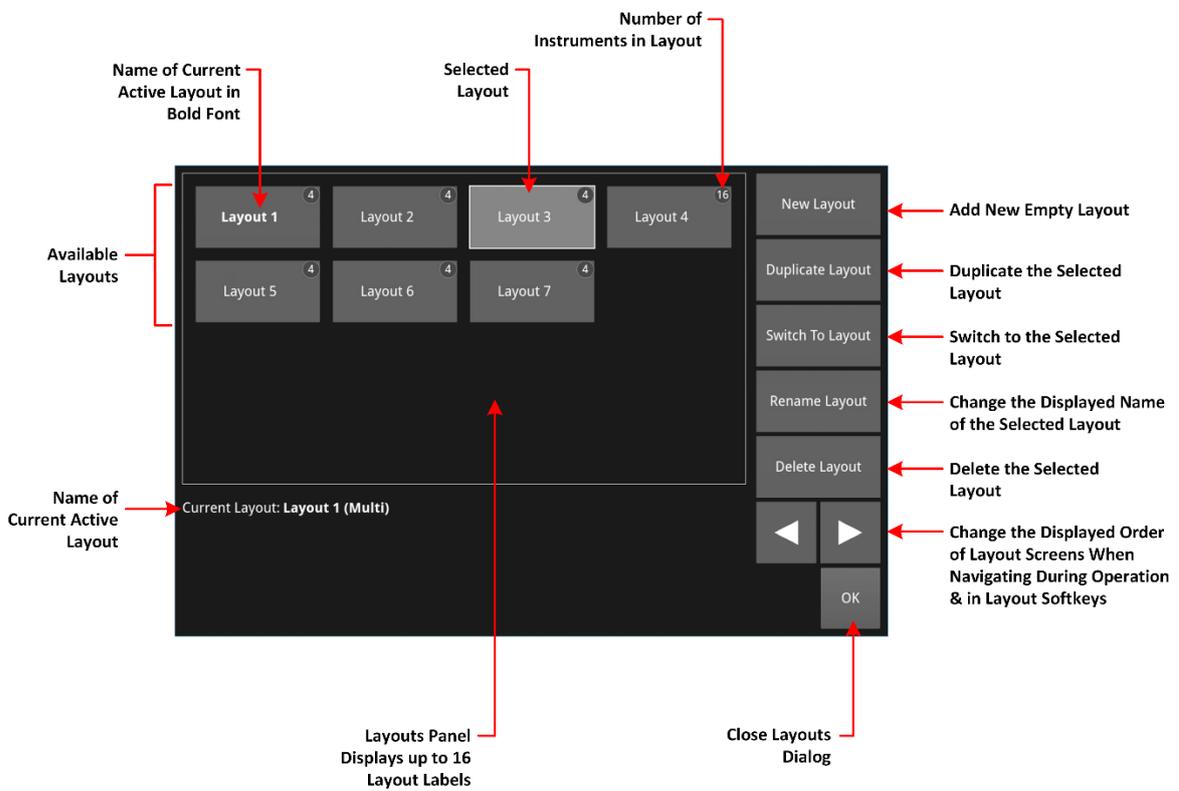
- Create placeholders for empty layouts to launch instruments later.
- Change the displayed order of Layout softkeys in the toolbar.
- Duplicate, rename or delete layouts.
- Switch to a different active layout.

Open the **Layouts** dialog as follows:

- 1 Tap  and open the **Settings** tab.



- 2 Tap:  to launch the dialog shown below.



Locking / Unlocking Layouts

The lock function of the LPX500 provides a method to secure your layouts to prevent accidental changes to the position of instruments, or new layouts/instruments being launched or created.

Lock a layout using either the softkey  in the toolbar or the lock icon at the top-left of the

screen in the Setup menus: 

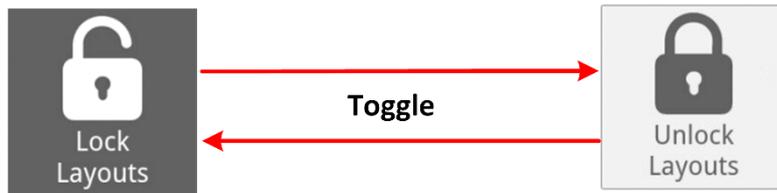
When you lock a layout, all layouts on the main unit and second screen are locked.

If you need to unlock a locked layout, for example, to launch an instrument or add a new layout, toggle the softkey in the toolbar or the lock /unlock icon in the Setup menus, see below:

Lock / Unlock Layouts Softkey in Favorites Toolbar



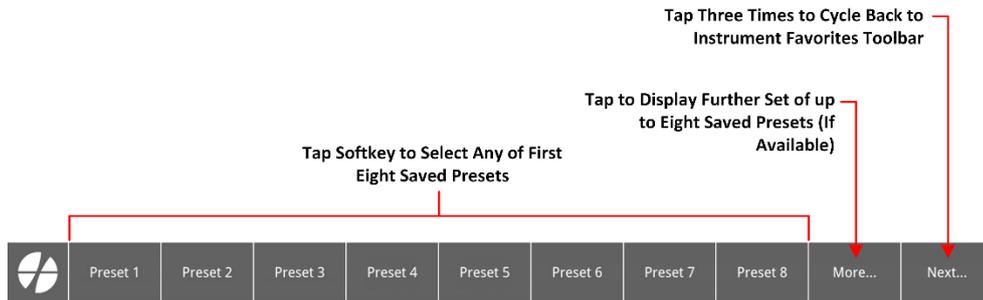
Lock / Unlock Layouts Icon in Setup Menus



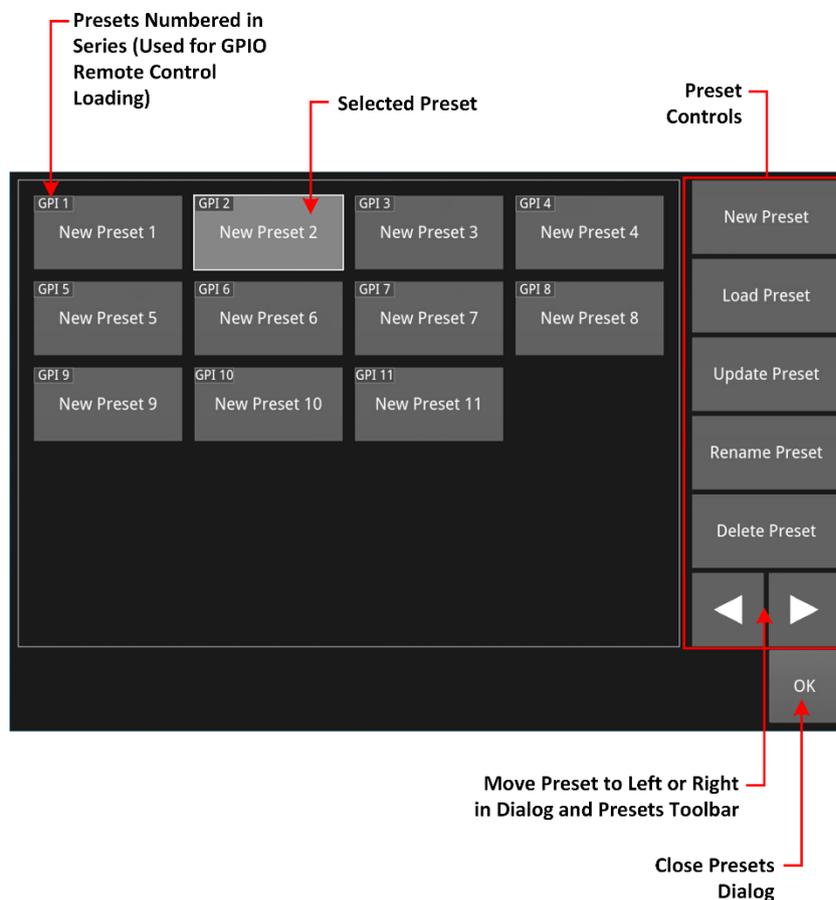
Working with Presets

A **Preset** is a customized configuration (including layouts, instruments and their settings) that you can save at any point when operating the LPX500. When you load a saved preset, the system is restored to the configuration at the point you saved the preset.

The unit saves presets to the Presets toolbar:



And to the Presets dialog:



Load a preset using either of the following methods:

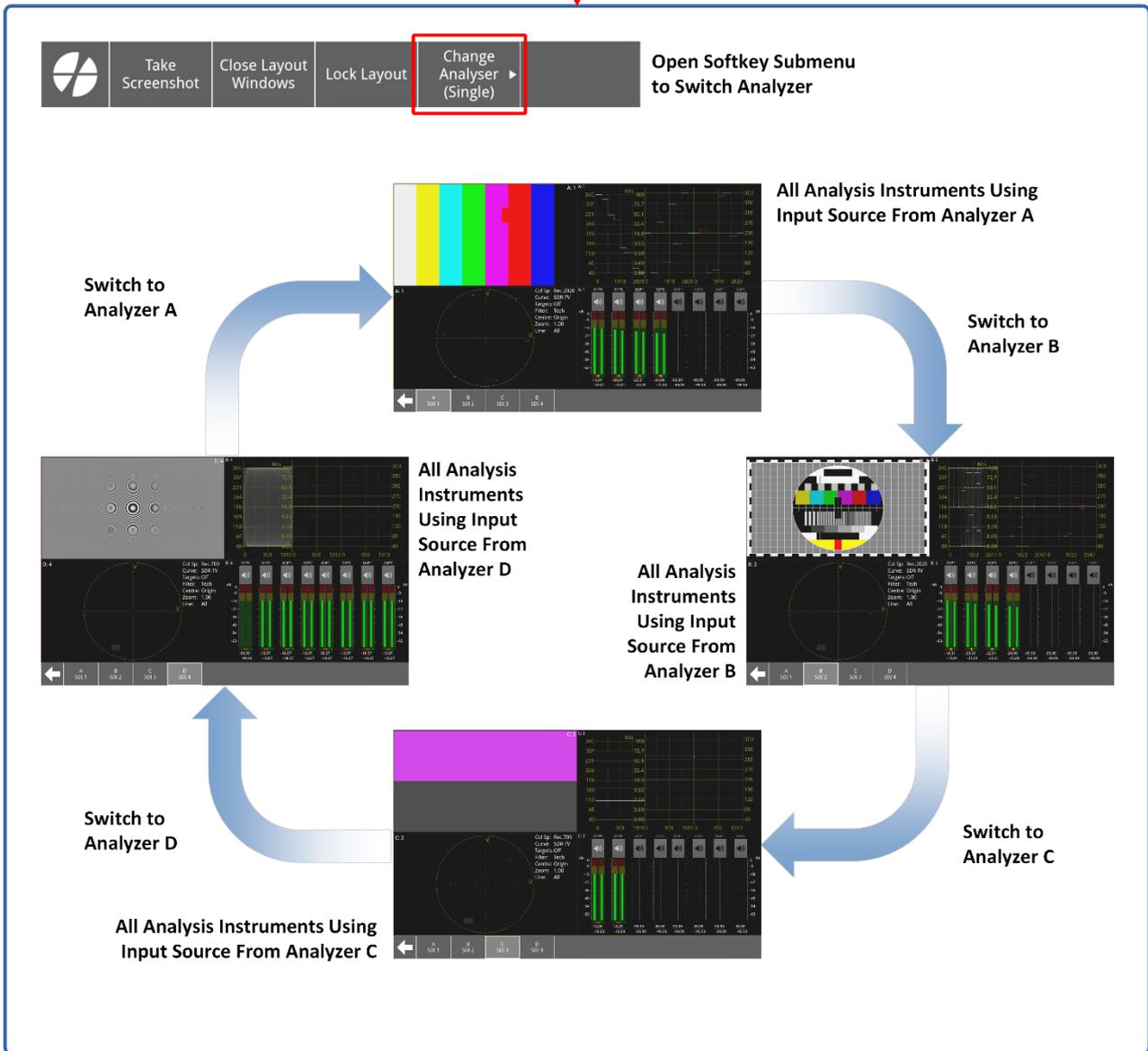
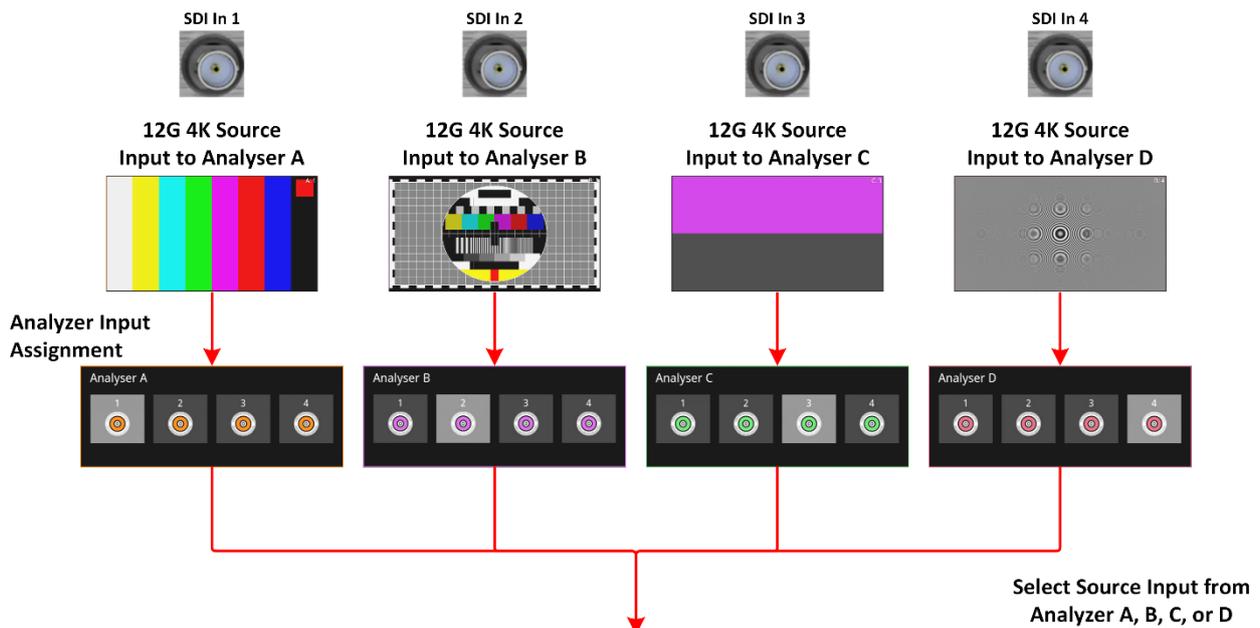
- Tap the softkey displaying the label of the preset you want to load in the Presets toolbar, or:
- Open the Presets dialog from the Settings tab, tap the preset you want to load, then tap:



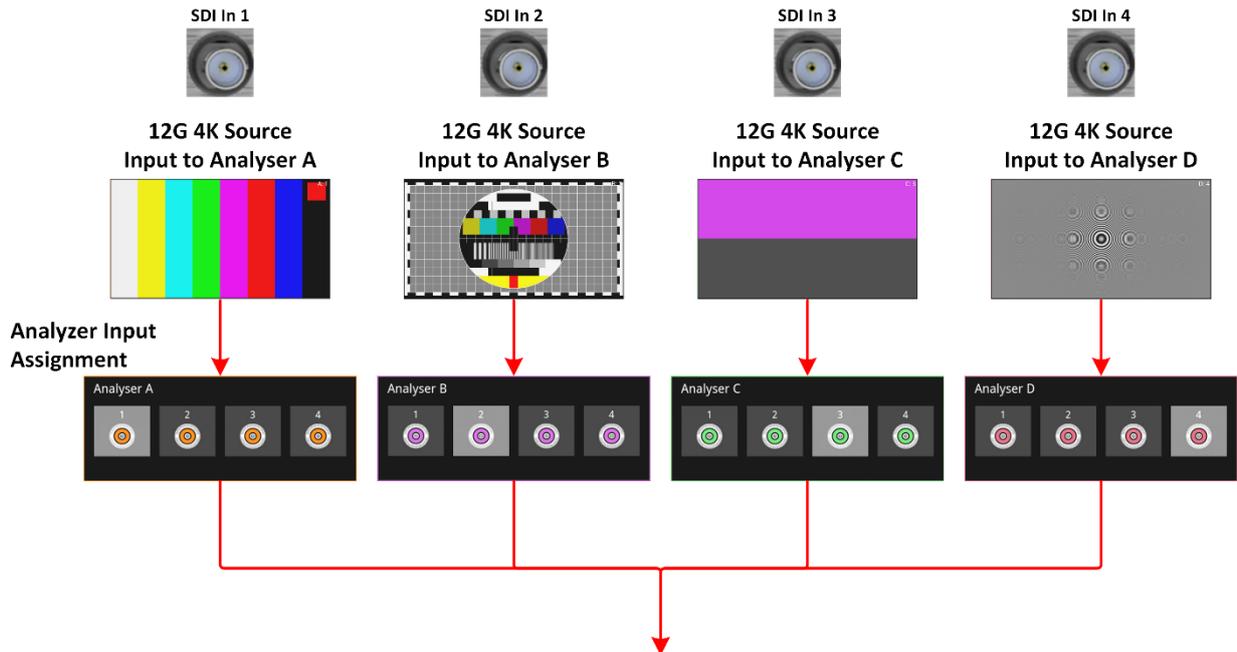
Note: If you have more than nine saved presets, you may need to tap the softkey  to display additional presets.

Setting up 12G 4K SDI for a Single Layout

The following overview shows the effect of switching the analyzer Input for a Single mode layout in which all analysis instruments use the same analyzer input source at the same time:

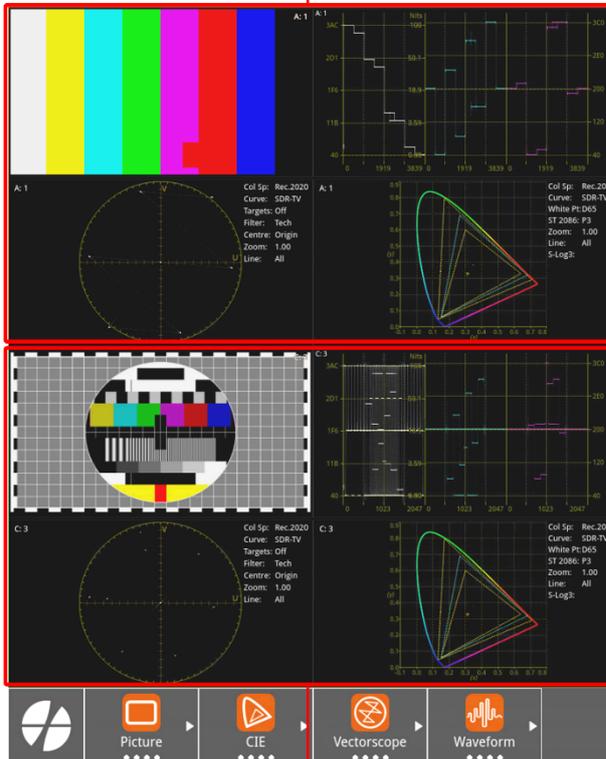


Setting up 12G 4K SDI for Four-input Multi Linked Display

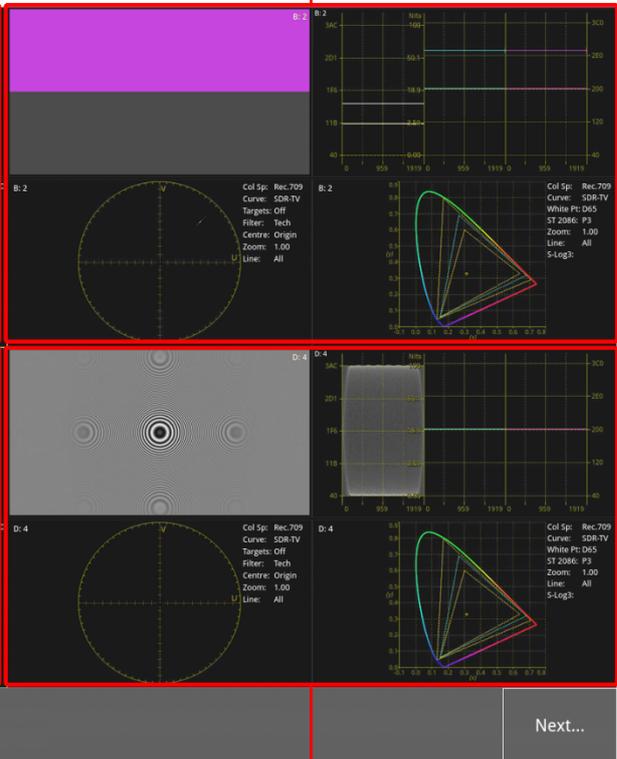


Launch Four Required Analysis Instruments into Default Tile Format

Four Analysis Instruments Using Source Input from Analyzer A



Four Analysis Instruments Using Source Input from Analyzer B



Four Analysis Instruments Using Source Input from Analyzer C

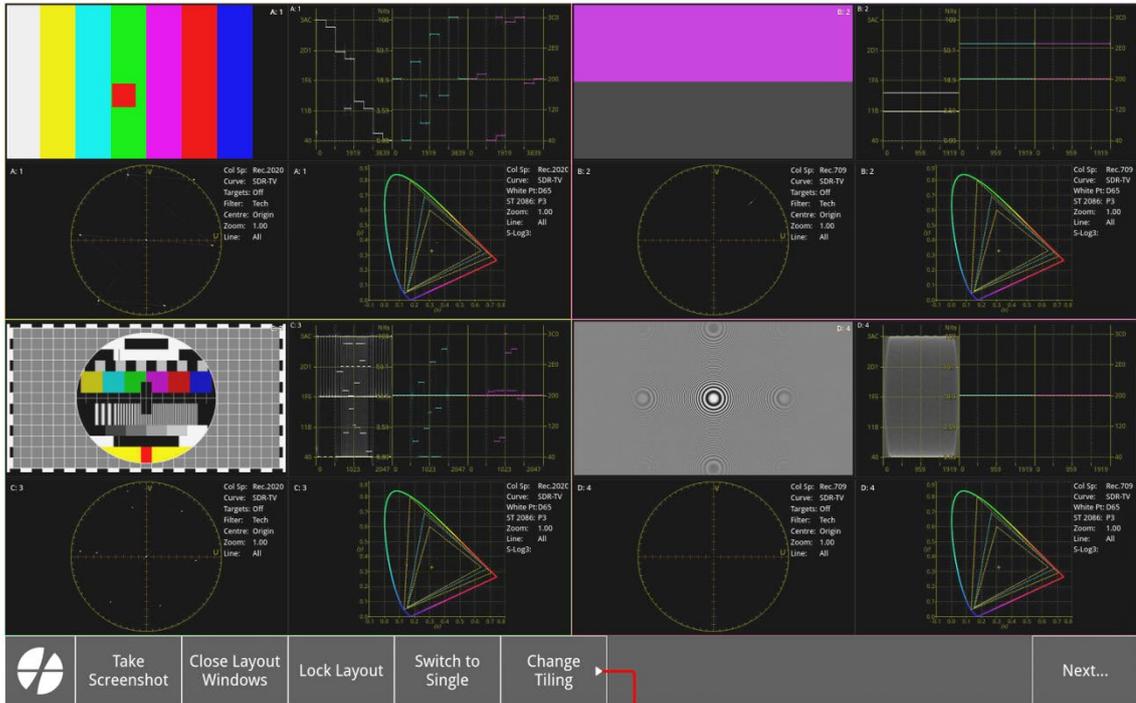
Four Analysis Instruments Using Source Input from Analyzer D

Changing the Tiling Format of Multi Linked Layouts

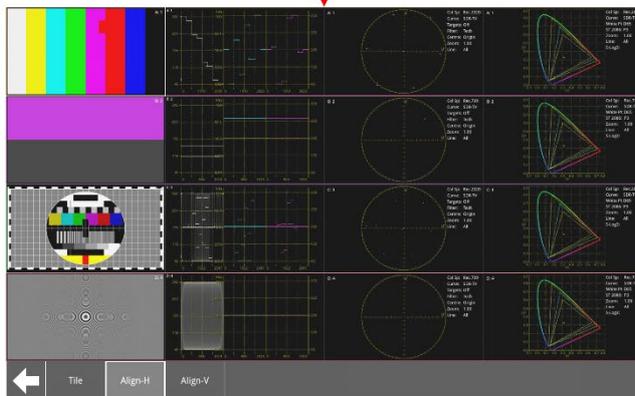
To change the tiling view from the default (Tile):

- 1 In the toolbar tap **Next...** to display the general toolbar, then tap **Change Tiling**.
- 2 Choose either ALIGN-H (horizontal) or ALIGN-V (vertical) tiling formats.

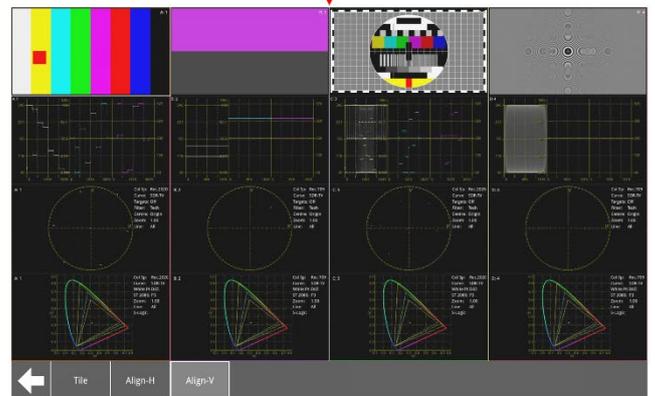
Four Groups of Analysis Instruments Aligned in Quadrants (Tile Format)



Select Change Tiling to Open Submenu of Softkeys to Switch Tiling Formats



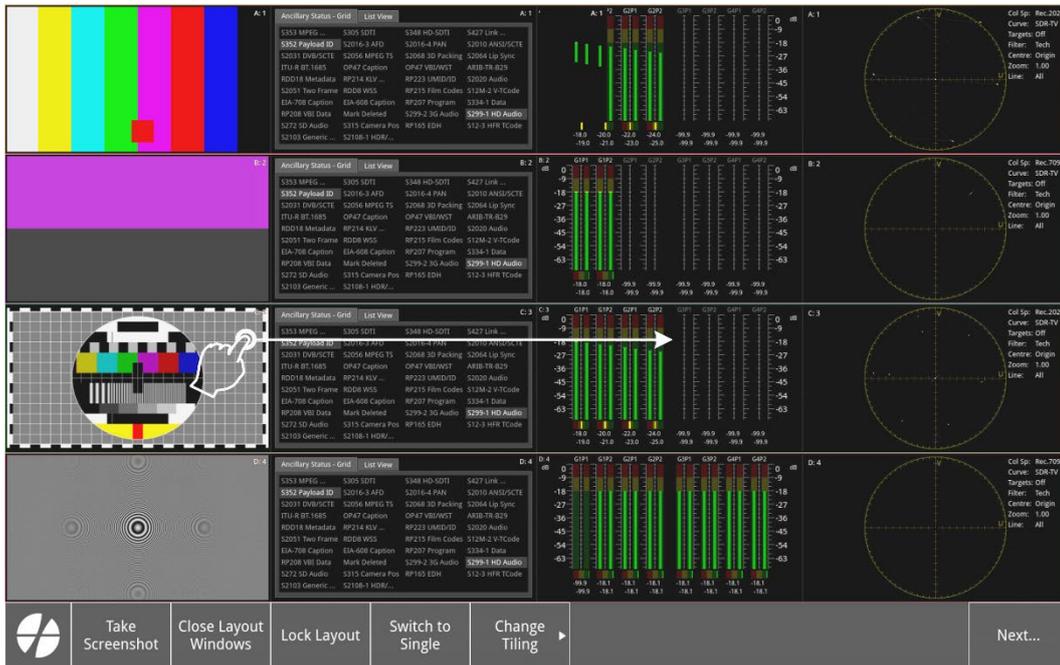
Four Groups of Analysis Instruments Aligned Horizontally (Align-H Format)



Four Groups of Analysis Instruments Aligned Vertically (Align-V Format)

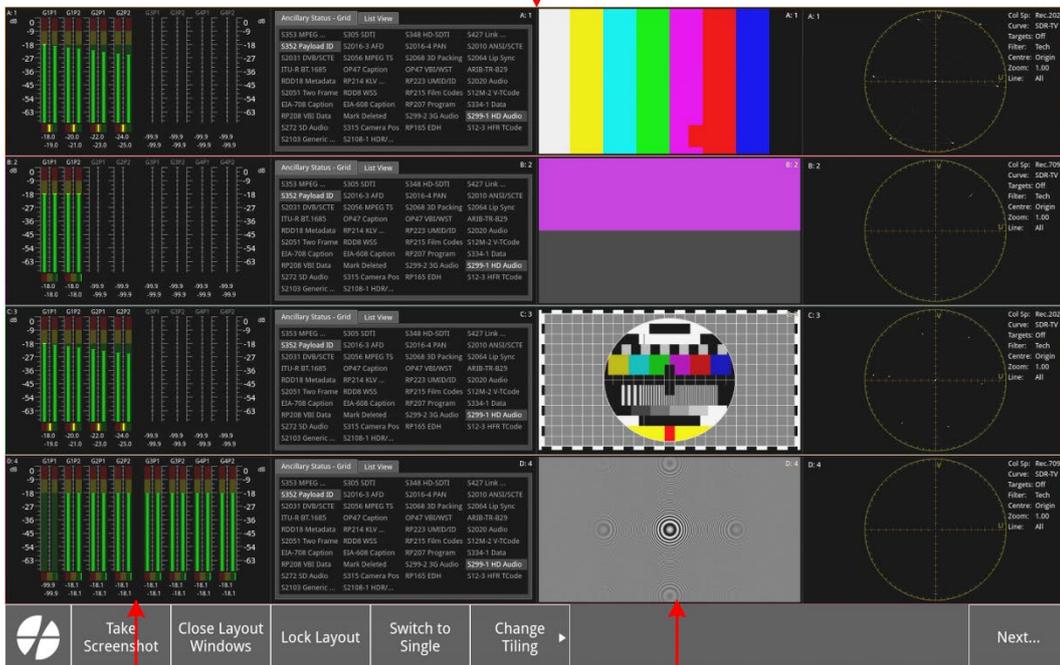
Moving Windows in a Single or Multi Linked Layouts

Move any of the open windows in a multi linked layout by touching the target window and dragging to a new position in the same analyzer group. Release the target window and the neighboring windows move to fill the original gap and prevent overlapping of windows.



Touch and Drag Target Window to New Position in the Same Analyzer Group

Drop Window in the Desired Position



All Replaced Windows Move Back to Fill the Gap

All Windows of the Same Type Move to the New Position Within the Analyzer Group

What Instruments Can I Launch in Single or Multi Linked Layouts?

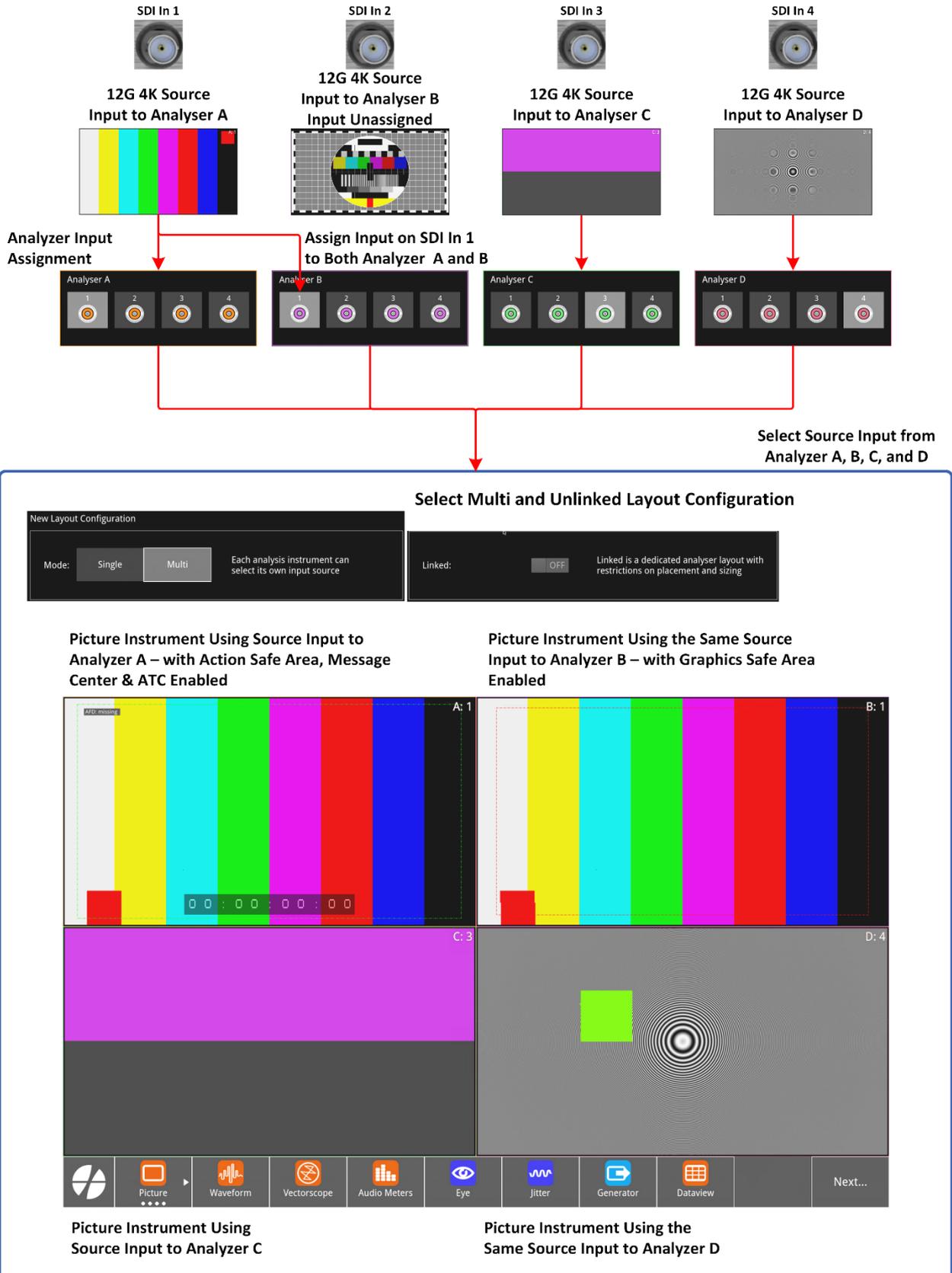
You can launch only the following analysis instruments in single or multi linked layouts:

- Analyzer – Video Standard
- Analyzer – Ancillary Inspector
- Analyzer – Audio Channel Status
- Analyzer – Audio Meters
- Analyzer – CIE Chart (Requires software option: **LPX500-HDR**)
- Analyzer – Picture
- Analyzer – Vectorscope
- Analyzer – Waveform

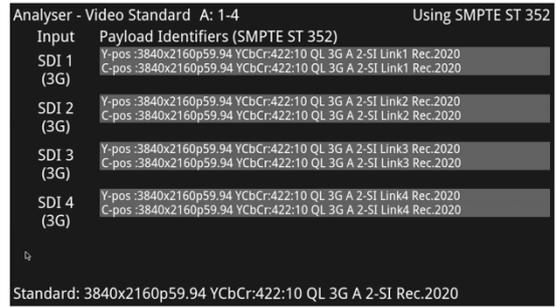
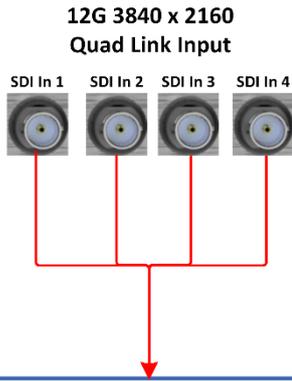
Comparing Input to Single BNC on Two Analyzers (Picture Copy)

To compare the same input in side-by-side Picture instruments, assign the same physical input to two different analyzers, for example, assign the source input on **SDI In 1** to Analyzer A **and** Analyzer B:

On the two Picture windows (**A: 1** and **B: 1** below) you can enable different functions, including closed captions, safe areas, ancillary time code, message center, etc.



Setting up 3G Quad Link 4K SDI for Multi Unlinked Display



Quad Link Details in Analyser – Video Standard Instrument

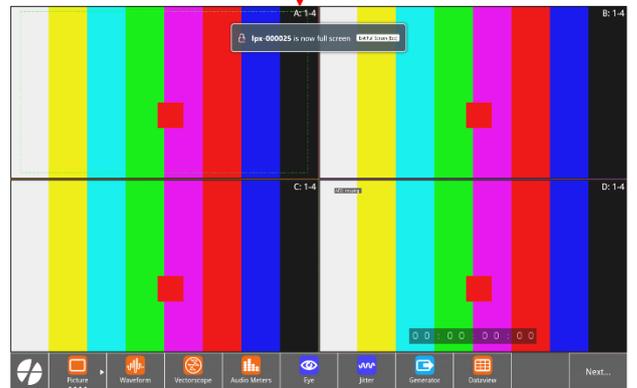
Select All Source Inputs on One Analyzer



Select All Source Inputs on All Analyzer to Compare Side-by-Side



Multi Unlinked Layout with Single Picture Instrument Using All Four Inputs From Analyzer A



Multi Unlinked Layout with Four Picture Instruments Using All Four Inputs From Analyzers A, B, C and D

Working with the Extended Monitor

The extended monitor provides a second, independent touchscreen with all the capabilities of the main unit.



When working with the optional extended monitor, note the following:

- Make sure that the Extended Monitor License is installed (software option: **LPX500-EM**).
- Connect the extended monitor to the main unit **only** with the supplied USB-C (male) to USB-C (male) cable.
- Locate the extended monitor on the **left** side of the main unit, looking from the front.
- Configure up to 16 layouts, independent of the layouts on the main unit, giving a maximum 32 layouts across both units.
- Move the mouse cursor between both screens.
- Locking layouts, locks **all** layouts on **both** units.
- If you disconnect the extended at any point, then reconnect the display, you will need to reboot the main unit.
- When you save a Preset, it includes layouts defined on both the main unit and extended monitor.
- The function  simultaneously captures both screens and saves them to two separate files, appending the suffix **S1** or **S2** to the filename, differentiating the source.

Upgrading the Software

Upgrade the software on the unit as follows:

- 1 Download the LPX500 software from the LeaderPhabrix website:
<https://leaderphabrix.com/contact-support/leader-product-software/>
- 2 Copy the **.pug** file to a USB stick.
- 3 Power-up the LPX500.
- 4 Insert the USB into one of the USB ports on the front panel of the unit.

After a short delay for checking the software package, the unit automatically reboots and loads the software from the **.pug** file.

How To - Quick Reference

How to Launch a Remote Session Using a Generic VNC Client Viewer

How to connect using a generic VNC client application (for example, RealVNC VNC Connect viewer)

In the address bar of the VNC Viewer, enter the following:

To open a session on the main unit: *<hostname>*:0

For example: **lpx-000025:0**

To open a session on the second screen: *<hostname>*:1

For example: **lpx-000025:1**

Where the hostname is displayed in the **mDNS Server** field of the **Network & Automation** instrument.

How to Launch a Remote Session Using noVNC from a Web Browser

You can open connections to the integrated noVNC client on either the main unit or second screen as follows:

To open a connection on the main unit, enter the following into a web browser address bar:

http://<hostname>/novnc_0

For example: **http://lpx-000025/novnc_0**

To open a connection on the second screen, enter the following into a web browser address bar:

http://<hostname>/novnc_1

For example: **http://lpx-000025/novnc_1**

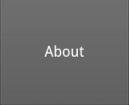
Enter the following noVNC login credentials when prompted:

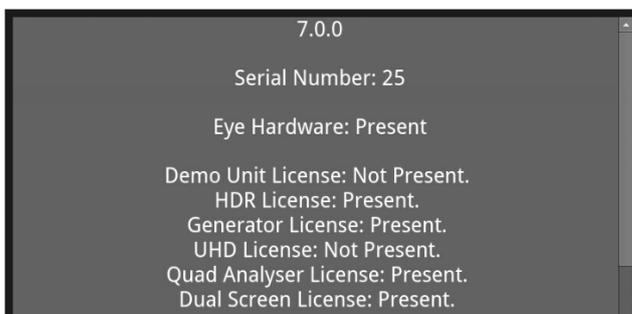
User name: **user**

Password: **leader**

How to Check the Software Licenses Available on the LPX500

- 1 Tap  and open the **Settings** tab.

- 2 Tap  to open the About dialog, listing the available software licenses:



Tap anywhere outside the dialog to close it.

How to Stop the Toolbar Popping Up

The toolbar is enabled to pop-up, by default, for use when accessing the unit remotely on a DisplayPort monitor. To stop the popup:

- 1 Tap  and open the **Settings** tab.
- 2 Tap .
- 3 Tap the **Function Bar Popup** switch to **OFF**.

How to Switch On /Off Analyzer Labels.

Labels to identify the source input and analyzer are displayed by default in the title bar, usually in the top-right corner, of the analysis instrument. For example, **A: 1** shows that the source input is:

Analyzer A, SDI In 1.

- 1 Tap  and open the **Settings** tab.
- 2 Tap .
- 3 Tap the **Analyzer Label** switch to ON or OFF.