Thank you for choosing Analog Way and the Pulse². By following these simple steps, you will be able to set up and use your powerful Dual Scaler Hi-Resolution Seamless Switcher based on Analog Way’s Midra™ platform within minutes. Discover the Pulse² capabilities and intuitive interface while configuring your first show and unleash your creativity for a new experience in show and event management.

**WHAT’S IN THE BOX**

- 1 x Pulse² (PLS350-3G)
- 1 x Power supply cord
- 1 x Ethernet cross cable (for device update)
- 1 x Remote Control Software (RCS²)*
- 1 x Set of 6 audio 5-pin screw terminals
- 1 x Front Rack Ears (the parts are stowed in the packaging foam)
- 1 x User Manual (PDF)*
- 1 x Quick Start guide*

* User manual, quick start guide and the RCS² are available on www.analogway.com

**QUICK SETUP & OPERATION**

**Getting started:**

You may wish to reset the unit to factory settings to get started. Go to: Menu > Control > Reset/Erase > Default Values > Yes

1. Select the Output resolution that matches the native resolution of your display. You will next be able to choose the output rate. Menu > Output > Output format > 1920x1080 > Internal Ref > 60 Hz

2. Inputs can be configured automatically using the Auto Set All function. Menu > Inputs > AutoSet All > Yes This function will scan each input and detect the sync type that is plugged in. You can still do an Autoset or manual setup per input.

The Pulse² has 6 layers available called: FRAME, LAYERS A & B, LOGOS 1 & 2 and a QUICK FRAME. Those layers are stacked and obscure underneath layers.

3. To display a source, select the LAYER A (it will begin to blink) then, select a source (it will also blink). Press TAKE to display the layer on the Program output. To see the layer beneath, you will need to clear or move the layers that are on top.

4. To display a PIP, select the LAYER B (it will begin to blink) then select your source (it will also blink). Press TAKE to display the layer on the Program output.

5. To clear the layer or any other layer, select the layer (it will blink) then, select BLACK. Press TAKE to remove the layer from the Program output.

**TIP:** If you want the Program and Preview to toggle/flipflop during each Take, enable this feature by going to Menu > Control > Functions > Preset Toggle Once enabled, the old Program output will become the new Preview after each Take.

6. To record and display a Quick Frame follow the steps on page 4. See the next page which describes the button lighting color code and other front panel features.

**Pulse² can be used to display:**

- sources seamlessly switched in the LAYER A. (Only 1 layer)
- 1 layer and 1 Logo over the LAYER A.
- 2 layer and 1 Logo over a Frame by resizing the LAYER A.

**IMPORTANT:** Simply selecting a menu item will not set it to that value. Be sure to press the ENTER button when setting the menu items.
**PULSE² - REF. PLS350-3G / FRONT & REAR PANELS DESCRIPTION**

**Menu scroll knob**
- Matrix mode:
  - #1 to #2: select the output
  - #1-2, a layer and a source, then press TAKE

**Layer selection**
- Frame: non-scaled layer
- Logo 1/2: display or change logo
- Layer A/B: scaled layers

**Layer**
- Black: clear the layer
- Freeze: freeze the input linked to the current layer on Program

**Input selection**
- 1 to 4: access source 1 to 4, display Frame/Logo 1 to 4
- HDMI 1/2: access HDMI 1 or HDMI 2, display Frame/Logo 5 to 6
- SDI 1 to SDI 2: access SDI 1 to SDI 2, display Frame/Logo 7 to 8

**Quick Frame**
- allows to quickly display a foreground Frame

**Power supply**
- 100-240 VAC 2.5A 50/60Hz / FUSE F4A 250 VAC; internal, autoswitchable; 110W

**Universal Analog Computer TV/HDTV**
- inputs #1 to #2

**DVI connectors**
- DVI-I inputs #1 to #4.
- Capability to receive digital audio signal from HDMI connector via an adaptor (HDMI-compatible)

**Communication port**
- communication port with a DB9 female connector

**S/PDIF**
- inputs #1 to #2

**SDI to SDI**
- access SDI 1 to SDI 2, display Frame/Logo 7 to 8

**Layer**
- Black: clear the layer
- Freeze: freeze the input linked to the current layer on Program

**TAKE**
- Transition the pre-selected sources onto the Program output with the selected effects

**CAUTION**
- The user should avoid disconnecting the power source (AC input) until the unit is in stand-by mode.
OPERATION OVERVIEW

WORKING IN MIXER MODE
1. Select the Layer A.
2. Select an Input.
3. On the preview screen, the input appears.
4. Select an Effect (open/close).
5. Press TAKE to view the result on the Program.

WORKING WITH PIPS IN MIXER MODE
1. Press the Layer B button. On the preview screen, the layer appears as a color rectangle.
2. Select an Input. On the preview screen, the input appears in the layer rectangle.
3. Adjust the layer with ADJUSTMENT button (Pos & Size or Zoom).
4. Select a transition (open/close) or an effect into Layer menu [Home menu].
5. Press TAKE to view the result on the main screen.
6. To remove layer, press BLACK then TAKE.
7. For another layer setup, repeat from step #1.

FRONT PANEL MENU
- Mode: select to choose which mode the Pulse² will work in (Mixer/Matrix mode).
- Output 1: select to set the output types and resolutions of Output #1.
- Input: select to configure the 8 individual input types and resolutions.
- Preset: select to store and use presets.
- Image: select to change source image settings of an input.
- Keying/Titling: select to access keying and titling controls and parameters when video layer is selected.
- Screen: setup your background color and your Quick Frame.
- Logos/frames: select to store (record), use and manage logos and frames into the Pulse².
- Audio: select to access all audio input and output parameters.
- Control: select to access device software information, LAN settings, reset factory settings, amongst other user oriented functions (see next page).

MCO male connectors

INPUT SETUP
1. Press the EXIT/MENU button from the Home menu (all functions must be confirmed by the ENTER button).
2. Press Input and Autoset ALL.
3. If the acquisition is successful the source appears on Preview.
4. If the acquisition has failed, check all connections and perform a manual setup.
5. For a comprehensive Input Setup, please refer to user’s Manual.
6. For a manual input setup, press the EXIT/MENU button:
   a) Press Input.
   b) Select the right input from Input #1 up to SDI #2, then
   c) Select Active plug.
   d) Select Type and choose the input type.

NOTE: To adjust layer Size or Pos, use the Layer Menus. To adjust Blanking, use the Auto Centering or Blanking adjustments in the Image menu.

OUTPUT SETUP
1. Press the EXIT/MENU button from the Home menu (all functions must be confirmed by the Enter button).
2. Select Output.
3. Select Output format and then Output rate.
4. On Format line, select the display’s native resolution.
5. Control or adjust your display device (Monitor or Video Projector).
6. If necessary, select Test Pattern in the Output menu.

INPUT/OUTPUT CONNECTIONS
MCO male connectors
Inputs #1 to #4: balanced & unbalanced connection

BALANCED

Inputs #3 & #4: DVI and HDMI embedded audio HDMI
Inputs SPDIF #1 and #2: digital audio inputs
Inputs HDMI #1 and #2: embedded audio HDMI
Inputs SDI #1 to #2: embedded audio SDI

Outputs #1 and #2: balanced & unbalanced connection
Outputs SPDIF #1 and #2: digital audio outputs
Outputs #1 and #2: Embedded audio HDMI (over DVI connectors)
Output SDI: embedded SDI audio output

BUTTON COLOR USAGE
Solid red: #1 = Source is on the Program output
#2 = Freeze enable

Solid green: #1 = Source is on Preview
#2 = Function available for modification
#3 = Current output on Matrix mode

Solid orange: Input can be selected but has no valid signal

Blinking red: Layer/source selected or is currently active on the Program output

Blinking green: Layer/source selected or is not currently active on the Program output

NOTE: To adjust layer Size or Pos, use the Layer Menus. To adjust Blanking, use the Auto Centering or Blanking adjustments in the Image menu.
HOW TO DO AN AUTOTAKE?

The Autotake function performs a TAKE automatically each time an input is selected.

HOW TO RECORD & DISPLAY A QUICK FRAME?

QUICK FRAME: full and individual frame that can be displayed on top of every layer.
It is possible to store up to 8 frames in the device non volatile memory.
- Select RECORD FRAMES in the frames menu.
- A white rectangle will appear on your Program display, indicating the frame which will be captured and saved. (The Frame can be captured in Preview too.)
- To select the Quick frame, please go into the SCREEN menu, select QUICK FRAME menu and then choose a Frame slot. The selected frame will be your QUICK FRAME.
Now to display it, simply press the front panel button QUICK FRAME. It becomes solid RED.
- To remove the QUICK FRAME, press the QUICK FRAME button on the front panel. It becomes solid green.

TIP: a long press on the BLACK button will clear all layers on Preview. Press TAKE to view your Program display turn to black.

HOW TO DISABLE THE HDCP ENCRYPTION?

The HDCP Encryption can be disabled on HDMI/DVI inputs or/and Program Output #1 / Program Output #2. This can be useful when your computer detects the HDCP compliance of your switcher and protects the content by encrypting the signal from this computer. This feature will disable the HDCP compliance on this specific HDMI/DVI input only.
If you want to use HDCP content from your sources, be sure to use only HDCP compliant screens or projector. If it’s not the case, the output image could be disabled.
Screen will go to black without displaying the HDCP input image, or concerned layers will output to grey.
The output status can provide you all information about the output in real time. This feature is particularly useful when HDCP is used with long cable to be sure the communication is well handled.

HOW TO USE THE AUTO-LOCK FUNCTION?

AUTO-LOCK allows to select an input only if a valid signal is detected on its current plug.

WARRANTY AND SERVICE

This Analog Way product has a 3 year warranty on parts and labor, back to factory. This warranty does not include faults resulting from user negligence, special modifications, electrical surges, abuse (drop/crush), and/or other unusual damage. In the unlikely event of a malfunction, please contact your local Analog Way office for service.

GOING FURTHER WITH THE PULSE²

For complete details and operations procedures, please refer to the Pulse² User’s Manual and our website for further information: www.analogway.com