MultiView™II DVI-Rx-1K Receiver: Quick Start Guide

The **Magenta MultiView™II DVI-Rx-1K** receiver extends DVI-D digital video, and optionally audio, and serial auxiliary signals over F/UTP‡ cable. There are user-configurable settings for audio and serial options which can be controlled from the front panel. For more details please refer to the complete **MultiView™II DVI-Rx-1K User Guide**, available for download at ***www.tvone.com***.

NOTE: The MVII-DVI-Rx-1K receiver will ONLY work correctly with a matching MVII-DVI-Tx transmitter (Fixed-Sync mode).

Required Tools / Hardware / Materials: Tools include appropriate screwdriver(s) and mounting hardware (optional, for example: rack-mount, wall or under-desk mounting). Required materials include appropriate cables for your specific application.

PRECAUTIONS: (1) Do not apply AC power until instructed to do so. (2) This equipment is not intended for, nor does it support, distribution through an Ethernet network. Do not connect these devices to any sort of networking or telecommunications equipment! (3) Use only tvONE-approved MultiView™ power adapters. Failure to do so may damage this device and will void the warranty.

***(Optional)* Depending on installation requirements**: At any time during installation, the receiver may be securely mounted using appropriate brackets and hardware.

❷ (*Optional*) Make your serial and/or audio connections via the DB9 **IOIO** or **AUX I/O** connectors, as needed.

Note: The DB9 serial port is only available when the "SAP" option is present.

❶ Connect the DVI OUT connector to the display device.

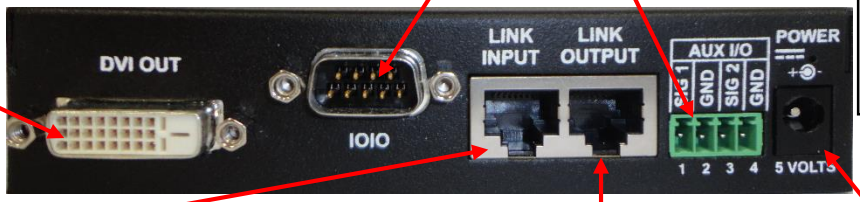

Figure 1 – MVII DVI-Rx-1K Receiver Rear View

❸ To see video, connect the F/UTP cable via the **LINK INPUT** port to an active MultiView II DVI-Tx video source.

❹ (*Optional*) Connect the output F/UTP cable via the **LINK OUTPUT** port to more Rx units.

❺ Connect the DC power cable (+5VDC @ 2.6A. max) to the **POWER** port.

CFG indicator:
Off = Normal
On = Config mode

Figure 2 – MVII DVI-Rx-1K Receiver Front View

SKEW/SEL indicator

EQ/SKEW range indicators

Power **ON** indicator

Power-up Check: Connect all signal and power cables, then apply AC power. The power **ON** indicator should light. If there is a **DVI OUT** monitor attached, a video image should appear on the monitor. If there is no image on the display, recheck the MVII DVI-Tx has a valid source, all cables are connected, and ensure the display is turned on.

Setting the EQ and Skew: By default, the MVII-DVI-Rx-1K has the "auto-EQ/Skew" feature enabled. Within a few seconds of connecting the F/UTP cable to the link-input, EQ and Skew settings should be automatically found which give a picture on the **DVI OUT**. While the receiver is actively auto-detecting, the range LEDs will repeatedly scan from 1 to 8 (this is EQ-hunt mode). When valid EQ and Skew settings are found, the range LEDs will stop and display the final EQ setting. The "auto-EQ/Skew" will give a picture, but during installation you **MUST** fine-tune for good video output. **The EQ/Skew setting is critical** – or there will be no video output at all.

Front Panel Controls: (Refer to Figure-2) There are four buttons (**CFG/MODE**, **SKEW/SEL, DOWN** and **UP)**, and several green LED status indicators. These are used to control the operating modes of the receiver, and to display current status.

Status Indicators at power-up: When the receiver is first powered on, the status indicators will cycle through a test sequence. If the auto-EQ feature is enabled, the receiver will then immediately begin its auto-EQ procedure. The "normal" LED status will then be:

- **POWER-ON** indicator is on.
- **CFG** indicator is off.
- **SKEW/RGB** indicator is off.
- **EQ/SKEW** indicators will be hunting for the correct EQ setting, then display the current EQ settings (1 to 8 = 0 to 100% range).

‡ F/UTP cable is constructed of 4 unshielded twisted pairs, with a foil screen around all 4 pairs

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Manual EQ Adjustment: To manually adjust the EQ setting, simply use the **UP** or **DOWN** buttons. The **EQ/SKEW** indicators 1-8 will show the current setting as 1-8 (0-100%) of the available EQ adjustment range.

(starting in normal-mode)

❶ Press & hold the **UP** or **DOWN** button until the **SKEW/RGB** indicator turns on (VIOLET). Release the **UP** or **DOWN** button.
❷ Press the **UP** or **DOWN** buttons repeatedly to adjust the EQ setting, either one step at a time or hold for auto-repeat.
❸ To exit EQ-ADJUST mode, leave the buttons untouched for 10 seconds, or press the **CFG** button once.

Note: For best results, use the Magenta EQ/Skew "test pattern" image if possible. This is available from the tvONE website.

Manual Skew Adjustment: To manually adjust the Skew setting, simply use the **UP** or **DOWN** buttons after getting into "Skew-adjust" mode. The **EQ/SKEW** indicators 1-8 will show the current setting as 1-8 (0-100%) of the available Skew adjustment range for each color.

(starting in normal-mode)

❶ **RED skew adjust:** Press & hold the **SKEW/SEL** button until the **SKEW/RGB** indicator turns on RED. Release SKEW button.
❷ Press the **UP** or **DOWN** button repeatedly to adjust the RED skew value.
❸ **GREEN skew adjust:** Press and release the **SKEW/SEL** button. The **SKEW/RGB** indicator will turn GREEN.
❹ Press the **UP** or **DOWN** button repeatedly to adjust the GREEN value.
❺ **BLUE skew adjust:** Press and release the **SKEW/SEL** button. The **SKEW/RGB** indicator will turn BLUE.
❻ Press the **UP** or **DOWN** button to adjust the BLUE value.
❼ Pressing the **SKEW/SEL** button again will return you to step-2, allowing adjustment of the RED skew again.
❽ To exit SKEW-ADJUST mode, leave the buttons untouched for 10 seconds or press the **CFG** button.

Note: For best results, use the Magenta EQ/Skew "test pattern" image if possible. This is available from the tvONE website.

Re-enabling the auto-EQ/Skew feature: From normal mode, press both the UP and DOWN buttons simultaneously. Hold both buttons down for 1 second or more. The auto-EQ/Skew feature will be enabled and the receiver will immediately enter EQ-hunt mode. Within seconds, valid EQ and Skew settings will be found. You **MUST** manually adjust for the best picture.

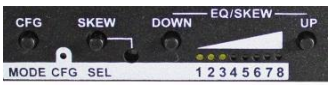
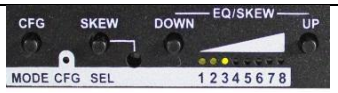
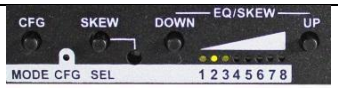
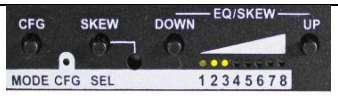
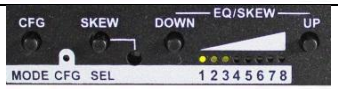
Changing Internal Settings: In configuration-mode (**CFG indicator = on**), the **CFG** and **SKEW/SEL** buttons, plus the LED indicators (1-8) will allow you to change internal configuration settings. The changes are effective immediately and are saved in non-volatile memory.

- **To enter configuration-mode:** Press and hold the **CFG** button until the **CFG** indicator is **ON.** Once in this mode, LEDs 1-8 will display the current settings as described in the tables below.
- **To exit configuration-mode:** Leave the buttons untouched for 10 seconds or press the **CFG** button again. The **CFG** indicator will turn off (normal-mode).

Configuration Mode, 4th Pair Options: The MVII-DVI-Rx-1K provides several options for using the 4th-pair signals (pairs 1-3 are generally used for video). The factory-default settings support analog audio (L+R summed) on the 4th-pair. Note that the connected MultiView transmitter and any daisy-chained receivers must be configured with a matching 4th-pair operating mode. Otherwise, the desired 4th-pair signal will not work as expected – but the video will not be affected. **Note:** If the optional SAP daughterboard is installed then the **4th-pair options are fixed and unchangeable.**

(starting in normal-mode)

1. Press & hold the **CFG** button until the **CFG** indictor is **ON**. Release the **CFG** button.
   - LEDs 1-8 will show the current value for all configuration settings as bright/off.
2. Press & release the **SKEW/SEL** button.
3. **LED indicators 1-3** should be illuminated (either DIM or ON); all others (indicators 4-8) should be off.
4. Press the **UP** or **DOWN** buttons to step through the available 4th-pair settings as shown below.
5. To leave configuration-mode, leave the buttons untouched for 10 seconds or press the **CFG** button.

LED1	LED2	LED3	Front Panel View	4th-pair Operating Mode
dim	dim	dim		**If option-module is installed:** 4th-pair operating mode is defined by the presence of the option-module (SAP) and this setting cannot be changed. **If the option-module is not installed:** 4th-pair signals are disabled. This "mutes" anything being sent on the 4th pair. This can be useful for diagnostic purposes.
dim	dim	ON		Direct pass-through of 4th-pair wires (custom applications).
dim	**ON**	**dim**		**External analog (L+R summed) audio ("-A" mode).** **This is the factory-default mode if no daughterboard option is installed.** (Remember to also check 4th-pair termination setting)
dim	ON	ON		External S/PDIF digital audio. Output-impedance = 75-ohms. (Remember to also check 4th-pair termination setting)
ON	dim	dim		Simplex-serial ("-S" mode) (Remember to also check 4th-pair termination setting)
ON	dim	ON		Re-embeds DVI-D audio from the MVII-DVI-Tx into the output video stream (Remember to also check 4th-pair termination setting)

Configuration Mode, 4th Pair Termination: The MVII-DVI-Rx-1K provides settings for 4th pair termination: **ON** or **OFF**. This setting has an effect for all operating modes. **Note:** It is not possible to access the 4th-pair setting if an option board is installed – since this setting is ignored.

- Set to **ON** for all **single-receiver** applications, and for the **last receiver** in a daisy-chained configuration.
  - **This is the factory-default.**
- Set to **OFF** only for **mid-span** receivers in a daisy-chain configuration.

(starting in normal-mode)

1. Press and hold the **CFG** button until the **CFG** indictor is **ON**.
   - LEDs 1-8 will show the current value for all configuration settings as bright/off.
2. Press and release the **SKEW/SEL** button twice.
3. **LED indicator 4** should be illuminated (either DIM or ON); all others (indicators 1-3 and 5-8) should be off.
4. Press the **UP** or **DOWN** buttons to turn 4th-pair termination ON (bright) or OFF (dim).
5. To leave configuration-mode, leave the buttons untouched for 10 seconds or press the **CFG** button.

To reset all user-configurable options back to factory-default settings:

1. Disconnect the DC power cable (or AC power).
2. Press and hold the **CFG** button.
3. Connect the DC power cable (or AC power). All LEDs will blink 3 times – all settings are now changed back to factory-defaults.
4. Release the **CFG** button.

Troubleshooting: In many cases, problems encountered when installing MultiView™II extension products can be resolved by checking the F/UTP cable termination. It must be pinned out according to the TIA/EIA 568B standard wiring specification. For additional troubleshooting information or to obtain the TIA/EIA 568B wiring specifications please refer to the MVII-DVI-Rx-1K User Guide, downloadable from http://www.tvone.com/