

Engineering Department

Engineering Change Order (ECO)

ECO #: ECO-XE-004A-003

Effective Date: January 28, 2016

Title: DVD Maker RevD 2016 Driver and Firmware for NTSC and PAL

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Date: January 28, 2016

Engineering Approval: aeg

Date: January 29, 2016

Operations Approval: John Vestri

Date: February 21, 2014

Summary:

As part of the new release of DVD Maker, new driver and firmware versions will be released for NTSC and PAL cameras.

Parts Affected:

Part Number	Notes	Removed	Added	Modified
XE-004A	Electronics Package KWorld DVD Maker 2 Package	☐	☐	☒

Detail:

Since the release of the new DVD maker from Kworld, stated in ECO-XE-004A-002, there has been issues with on screen noise with panels including a LYNN and when switching between external and main camera in cockpit. On panels including a LYNN, switching the LYNN on and off multiple times will generate this noise on screen. On all panels, switching between the external camera and main camera multiple times will generate this noise on screen. The noise appears like a color overlay on top of the camera image, as shown on Fig1.



Fig1: DVD Maker 2 color noise

The noise can be replicated whenever the video signal to the DVD Maker is switched either on and off or between other cameras sources. When the video signal going into the DVD Maker is switched, the device tries to auto detect whether the video signal is PAL or NTSC. During this process the color noise appears until the detection has been completed. A secondary problem with the new DVD maker is image being affected by an external monitor. When a secondary monitor is connected to a panel, the image in cockpit will get darker and affect visibility. This is only the case when an analog device is connected to the panel.

As a solution, Kworld has provided a driver that will disable auto detect and correct the image darkening. This will avoid the detection process and eliminate color noise overlay on screen. The driver will be set to detect NTSC video only. This will not be an issue for the Production department, since Videoray has discontinued the use of PAL cameras. However, this will become an issue for Repairs department, since systems coming in for repairs may include a PAL camera. As a result, with the release of the driver, Kworld has also provide firmware for the DVD maker that will enable to use with NTSC or PAL cameras with the new DVD Maker. Each video format will have a specific firmware that will need to be downloaded to the DVD Maker. Instructions including driver installation and firmware download will be provided for Production and Repairs.

Note: Firmware Programmer is ONLY for Production use.

Action Item:

Action	Department	Acknowledgement Initials
Provide driver installation instructions	Engineering	CH
Provide Firmware installation instructions	Engineering	CH
Implement new DVD Maker driver and firmware into Pro4 computer build	Production	CZ
Update Videoray Website with latest driver	Support	TG
Complete PO with Kworld and have the remaining pieces shipped to Videoray	Purchasing	NS
Implement driver version check on QC documentation as part of final QC. Driver version should read 5.2016.120.128 under "USB 2828x Device" in device manager.	QC	NS

Modified / Referenced Documents:

Document	Current Revision
DVD Maker RevD 2016 Driver Installation	1.0
DVD Maker RevD 2016 Firmware Installation	1.0

-- END OF ORDER --