

HARRIS Technical Support Bulletin #1055

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Designs by Pacific Research & Engineering – PR&E®

NetWave, RMXd, VMX Digital I-O

SUBJECT: Some digital outputs, when set to 44.1 kHz sample rate, may exhibit artifacts on certain target equipment

PRODUCT: NetWave and RMXdigital consoles & VistaMax Digital I-O cards

URGENCY: As Required

RELEASE DATE: 5/2012

PAGES: 1

REASON FOR THE BULLETIN: All VistaMax devices have an internal sample rate of 48 kHz derived from a very-accurate internal clock. Any digital output set to 48 kHz sample rate uses this very-accurate internal clock and thus have never had any issues with jitter performance.

But, to generate a 44.1 kHz sample clock, the first four outputs of the VistaMax Digital I-O card, any RMXdigital KSU digital output, and any NetWave main card digital output have used an Epson 11.2896 MHz crystal. Some of these parts have had higher-than-expected clock jitter. These crystals are labeled on the top as "EPSON 11.2896" and are part XO1 on the NetWave Main card and VistaMax Digital I-O card or XO2 on RMXdigital KSUs (as shown in the top three photos).

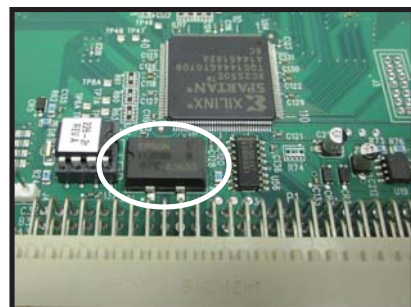
With high clock jitter, some target equipment may exhibit artifacts, like intermittent audio dropouts, pops, or static noise with the sample rate set to 44.1 kHz. The target equipment with the most reported artifacts is the Sage Digital Endec EAS alerter.

In 2009, the EPSON crystals were replaced by an Oscilent ceramic oscillator (shown in the bottom photo). There have not been any reported problems with clock jitter when using the Oscilent part.

WHAT SHOULD BE DONE? Leave the digital outputs set to 48 kHz, if possible or, if you have not had any issues with 44.1 kHz output sample rates, then no action is required.

If you are experiencing audio artifacts (audio dropouts, pops, or other periodic noises) or if the target equipment does not work at all when the output is set to 44.1 kHz, then an advance replacement card, with an Oscilent part installed, can be sent out to exchange your original card through an Advance Replacement RMA.

To obtain an RMA for a NetWave main card, RMXdigital KSU, or VistaMax Digital I-O card, contact Harris PR&E Radio Studio Product Support either via email (tsupport@harris.com) or phone (217.222.8200). An alternate contact is the Harris PR&E Studio Products Service Center (email: presupport@harris.com; contact phone: 760.936.4013).



VISTAMAX DIGITAL I-O CARD



RMXD KSU



NETWAVE MAIN BOARD



OSCILENT PART ON DIGITAL I-O CARD