



# ARINC 818 Xf Tuner

## for Titan, Callisto, and Europa systems

The ARINC 818 Xf Tuner quickly adjusts format characteristics in real time and easily injects errors into an ARINC 818 stream—all by means of an intuitive software GUI. XF Tuner is a card and software application installed by Great River as an option or upgrade to its Titan, Callisto, and Europa systems. Use it to test ARINC 818 receivers in cockpit displays, flight recorders, or switches. Quickly test the robustness of nearly any ARINC 818 interface.

**Save protocol to file**

**Load protocol from file**

**Load image to card**

**Graphically view critical timing parameters**

ARINC 818 Xf Tuner (v2.00) - Card 0 Is Open

Card 0 is ready

Mode Name: 2G\_XGA\_RGB

Link Speed: 2.125

Horizontal Active: 1024

Vertical Active: 768

Pixel Packing Format: RGB 8:8:8

Target Frame Rate (Hz): 60

Calculated Frame Rate (Hz): 60.004445

Fiber Channel Frame Per Line: 2

Inactive Lines Pre-SOFI: 7

Inactive Lines Post-SOFI: 23

Obj0 Data Long Words (LW): 4.000000

Class OS: Class 1

Obj0 Only:

Send to Card:  Calculate:

FC 0 4 LW

Sofi to Sofn (first) = 480.332000 (us)

3 Idles 6 Idles  10 Idles

FC 1 384 LW

FC 2 384 LW

t3 0.188235 (us)

t4 5.900471 (us)

Video Line Time 20.884000 (us)

10 (Idles)

314 (Idles)

16.665432 (ms)

FC 3 384 LW

FC 4 384 LW

FC 1535 384 LW

FC 1536 384 LW

EOFT to SOFI = 149.232353 (us)

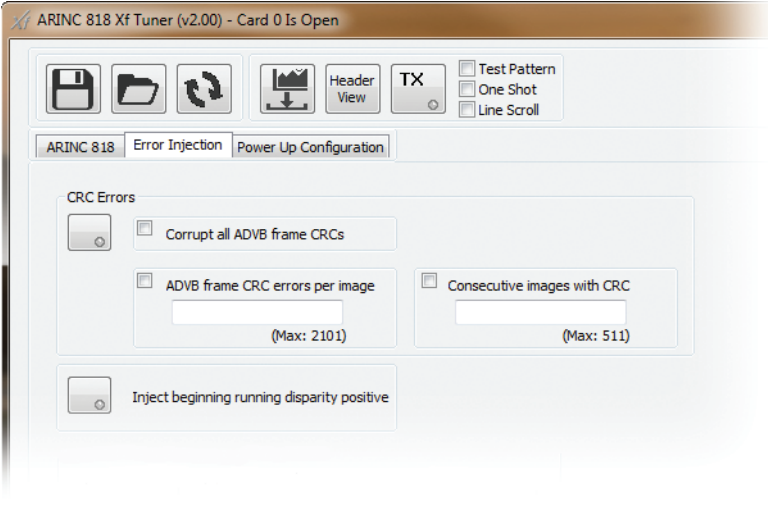
FC 0 4 LW

Loaded Image: 1024 X 768

**Install protocol to card**

**Adjust and calculate protocol in real time**

**View thumbnail of image to be transmitted**



### Error injection

ARINC 818 Xf Tuner facilitates injection of errors into the ARINC 818 stream:

- Packet CRC errors to all ADVB frames
- Packet CRC errors to selected frames
- Ordered Set beginning running disparity errors

Create configurations with slightly different frame, line, or image timing.

## Applications

Use Xf Tuner for

- Interface control document (ICD) creation
- Display/receiver development
- Robustness testing
- Qualification testing

Xf Tuner gives you complete control over the protocol. Use it to set link rates to 1.0625, 2.125, 3.1875, or 4.25 Gb/s.

## Operation/features

Protocol adjustments can be made in real time to establish various operational limits of the ARINC 818 system.

The graphical view shows all the critical timing parameters of the transmitted ARINC 818, such as line-rate and frame-rate limits.

To establish the desired protocol and timing, input image parameters, such as resolution, pixel type, and frame rate. The resulting ARINC 818 protocol timing will be displayed in the software GUI and transmitted on the ARINC 818 output port.

Xf Tuner transmits any .bmp test image and will size the image to match your protocol settings.

## Obj 0 loading, data-only transmission

Use Xf Tuner to set the size of ARINC 818 Object 0 and to load data into the card for transmission. This tool also affords data-only transmission (without video payload) using either a continuous or one-shot method.

## Tuner card configuration

Once you have finalized an ARINC 818 protocol—in effect, designed your ICD—Xf Tuner software loads the configuration onto the Xf Tuner card. The configured card is compatible with GRT's Matrix Plus application software. Matrix Plus is a feature-rich application that includes a broad range of transmit and receive capabilities.

## Creation of protocol libraries

Once protocol timing (ICD) has been established, it can also be filed for later use. Having previously saved protocol variations greatly reduces time required for qualification testing.

**Learn more about Europa, Callisto, and Titan systems and recorders at [www.greatrivertech.com](http://www.greatrivertech.com).**



## How to buy

The ARINC 818 Xf Tuner can be purchased as an option for or upgrade to any Titan, Callisto, or Europa system/recorder from Great River Technology.

Consult our Distributors page:

(<http://www.greatrivertech.com/distributors.html>)

If no distributor is listed for your region or country, order directly from GRT.