

ANT-177x – bitrate spike reduction setting – decoder HAS to be Neptune player

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Synopsis

How to minimise data spikes using ANT-177X encoders and a Radio Link.

NOTE Neptune player must be used as decoder

For further help and advice please contact Antrica on: Email: <u>support@antrica.com</u> Phone: +44 1628 626098 ext 3

Document info

Version	date	author	Comments
1.0	3-Aug-17	Les	Initial release
1.1	3-May-22	David M	Extended vs default and re format



1. Setup

1.1. Jitter Buffer

See below the Jitter Buffer settings we've recommended to minimise spikes *Figure 1 : Jitter Buffer Setting*

Mux Setup				
Mux: Mux1				
Record				
Frame Rate				
Encoding				
Encode Mode: CBR GOP: 30 QL Value: 23 Bitrate: 4000 IQ: Auto IQ Value: Auto Extended				
<u>Jitter Buffer</u> Const Bitrate: On Delay(ms): 30 Jitter(In percentage): 100				



1.1.1. Wireshark analysis

We've analysed both streams using Wireshark and we could clearly see that the bit rate signal peaks are restrained when using the Jitter Buffer, see below.





Figure 3 : Wireshark analysis - with buffer jitter





1.2. Encoding -> Extended

Also for improved video quality on the Mux settings under Encoding you'll find the Extended settings, see below.

Figure 4 : Encoding -> Extended option location

Mux Setup
Mux: Mux1
Record
Erame.Rate
Encoding
Encode Mode: CBR
GOP: 30
QL Value:
Bitrate: 3000
IQ: Auto
IQ Value: Auto
Extended
Jitter Buffer
Zoom
Stabilizer
Deinterlace
Extended Codec
Split Setup
Overlay
19EG Setup



Please select Extended and change settings according to the page below (highlighted by the red boxes) and then select Save. Figure 5 shows the setting required, as a reference the default settings are shown in Figure 6Figure 1Figure 6

Figure 5 : setting Extended options

	Mux Setup	
	Extended	Figure 6 : Extended setting - default settings
ſ	Constrained Intra Pred: Enabled	strained Intra Pred: Disabled
	Disabled Deblock: Enabled	bled Deblock: Enabled
	Filter Offset Alpha: 0 (-6~6)	Offset Alpha: 0 (-6~6)
	Filter Offset Beta: 0 (-6~6)	Offset Beta: 0 (-6~6)
	Chroma QP Offset: 10 (-12~12)	ma QP Offset: 10 (-12~12)
	AUD RBSP: Enabled Interview: Enabled SPS/PPS: Enabled Intra Refresh: Enabled	RBSP: Disabled view: Disabled PPS: Disabled Refresh: Disabled
	Intra Refresh Size: 0 (% pict size)	Refresh Size: 0 (% pict size)
	Initial Delay: 0 (0~30)	al Delay: 0 (0~30)
	VBV Buffer Size: 0 (%16k)	Buffer Size: 0 (%16k)
	User QP Min Enable: Disabled	QP Min Enable: Disabled
	User QP Min: 20 (0~51)	QP Min: 20 (0~51)
	User QP Max Enable: Disabled	QP Max Enable: Disabled
	User QP Max: 33 (0~51)	QP Max: 33 (0~51)
	User GAMMA: 75 (0~100)	GAMMA: 75 (0~100)
	RC Interval Mode: Normal Mode	nterval Mode: Frame Level
	MB Interval: 2 (% pict size)	nterval: 2 (% pict size)
	Intra 16X16 Enabled: Enabled	16X16 Enabled: Disabled
	ME Search Range: H(-16~15) V(-16~15) ME Use Zero PMV: Neighbor PMV)search Range: H(-16~15) V(-16~15) Jse Zero PMV: Neighbor PMV
	Intra Cost Weight: 0 (0~51)	Cost Weight: 0 (0~51)
	Enable Auto Skip: Enabled	le Auto Skip: Enabled
	Slice Mode: Slice per picture	Mode: Slice per picture
	Slice Size: 0 (0~255)	Size: 0 (0~255)