

RealVideo and RealAudio8 Recommended Encoding Settings

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Background:

This information is to provide best targets for encoding RealVideo8 with the RealProducer Plus, 8.5.

Using RealProducer Settings:

Use the following RealProducer Plus settings on most all of your low to high bitrate encoding: VBR, Two Pass Analysis, Low Noise Filter, HQ Resize, De-Interlace Filter (if video source), Inverse Telecine (if film source). Crop all black edges and over-scanned captures in the video settings menu.

Notes on Resize:

Note: When resizing Uncompressed, Film or Broadcast 720x486 (or 480) source, do not use the "maintain aspect ratio" check box for resizing. Simply crop the overscanned or letterbox height and width areas (the black edges) as needed, (usually to 704 width) and resize to dimensions divisible by the 640x480 RGB 4:3 ratio computer display. Thus if you have a film that is letterbox capture at 720: for the width crop the sides 8 pixels each, and resize the width manually to 640; for the height, crop the top and bottom as needed and leave the height "as is", un-resized.

** To create "in-between" window widths at 400 to 560 pixels wide, follow instructions above, but resize the height to match the dimensions of the width. Thus, enter the resize height to 500, for example, instead of 640, and check on the "maintain aspect ratio" setting to determine the height. However, turn off "maintain aspect ratio" before encoding and enter your numbers manually to keep the context of the original cropped capture.

General Encoding Guidelines:

Below 128 kbps = average 15 fps in 200 pixel window width or smaller

Above 128 - 200kbps = average 30 fps in 320 pixel window width or greater

At 500 - 1000kbps = average 30 fps in 640 pixel window width. Or, for downloadable content, target at or above 320 width, up to 640 width.

Quality of Input on Video or Audio Tape Format and/or Input File Source

Content quality can vary depending on quality of source media. Higher quality video formats such as broadcast analog Beta SP or any other digital broadcast format will encode particularly well with an appropriate input capture card such as component or SDI. Video capture cards input can vary - component and/or digital inputs provide an optimum capture source at for higher bitrates above 300kbps. For on-demand video, make sure your source capture is saved in an uncompressed file format: the RealProducer Plus 8.5 can now work with files over 2 GB in size.

Low to High Action Media:

The targets listed below will provide excellent results for low to high action media.

Content that is particularly low action, such as "talking heads", will encode well -you may want to increase your window size or decrease your bit rate to save bandwidth.

Content that is particularly high action and shot on video, such as sports footage, you may want to decrease the framerate at or below 15 fps for bandwidths below 200 kbps.

Suggestions For Live Encoding:

Two pass encoding does not apply towards live encoding. Use all settings otherwise as indicated above.

Single Rate Suggested Ranges

Aspect Ratio		Target Audience	Window Size	Bit Rate	Audio (Voice)	Audio (Music)	Frame Rate
4:3	TV	Download/Broadband	640w X 480 H	500 to 1000 Kbps	64 to 96 k/s - RA8 stereo	64 to 96 k/s - RA8 stereo	30 fps
		Broadband	400 to 560 widths x corresponding height	400-650 Kbps	44 to 64 k/s - RA8 stereo	64 to 96 k/s - RA8 stereo	30 fps
		Midband	320w x 240 H	300 Kbps 100 Kbps (possible)	44 to 64 k/s - RA8 stereo 16 k/s - RA8 stereo	44 to 64 k/s - RA8 stereo 20 k/s - RA8 stereo	30 fps 15-30 fps
		Narrowband	192w x H	Below 100 Kbps	12 k/s Stereo Music	12 k/s Stereo Music	8 or 15 fps
16:9 letterbox		Download/Broadband	640w X H	500 to 1000 Kbps	64 to 96 k/s - RA8 stereo	96 to 132 k/s - RA8 stereo	30 fps
		Broadband	400 to 560 widths x corresponding height	400-650 Kbps	44 to 64 k/s - RA8 stereo	64 to 96 k/s - RA8 stereo	30 fps
		Midband	320w x H	300 Kbps 100 Kbps (possible)	44 to 64 k/s - RA8 stereo 16 k/s - RA8 stereo	44 to 64 k/s - RA8 stereo 20 k/s - RA8 stereo	30 fps 15-30 fps
		Narrowband	192w x H	Below 100 Kbps	12 k/s Stereo or Mono	12 k/s Stereo Music	8 or 15 fps

SureStream Suggested Ranges

Aspect Ratio		Target Audience	Window Size	Bit Rate	Audio (Voice)	Audio (Music)	Frame Rate
4:3	TV	Download/Broadband	640w x 480h	750 Kbps & up 500 Kbps & up	64 to 96 k/s - RA8 stereo 44 k/s - RA8 stereo & up	64 to 96 k/s - RA8 stereo 64 k/s - RA8 stereo & up	30 fps 30 fps
		Midband	320w x 240h	300 to 400 Kbps max. 128 Kbps & up	44 k/s - RA8 stereo 32 k/s - RA8 stereo	64 k/s - RA8 stereo 44 k/s - RA8 stereo	30 fps 30 fps
		Narrowband	192w x H	100Kbps	16 k/s - RA8 stereo	20 k/s - RA8 stereo	30 fps
				34 Kbps 20 Kbps	8.5 k/s - voice mono 6.5 k/s - voice mono	11k/s - music mono 8 k/s - music mono	8 fps 8 fps
16:9 letterbox		Download/Broadband	640w X H	750 Kbps & up 500 Kbps & up	64 to 96 k/s - RA8 stereo 44 k/s - RA8 stereo & up	64 to 96 k/s - RA8 stereo 64 k/s - RA8 stereo & up	30 fps 30 fps
		Midband	320w x H	300 to 400 Kbps max. 128 Kbps & up	44 to 64 k/s - RA8 stereo 32 to 44 k/s - RA8 stereo	64 k/s - RA8 stereo 44 k/s - RA8 stereo	30 fps 30 fps
		Narrowband	192w x H	100 Kbps max.	16 k/s - RA8 stereo	20 k/s - RA8 stereo	30 fps
				34 Kbps 20 Kbps	8.5 k/s - voice mono 6.5 k/s - voice mono	11k/s - music mono 8 k/s - music mono	8 fps 8 fps

RealAudio

Audio Only Download

Target Bit Rate	Audio (Voice)	Audio (Music)	Notes
96 kbs	96 kbs - RA8	96 kbs - RA8	

Audio SureStream

Target Bit Rate	Audio (Voice)	Audio (Music)	Notes
64 kbs	64 kbs - RA8	64 kbs - RA8	CD quality
32 kbs	32 kbs - RA8	32 kbs - RA8	
20 kbs	20 kbs - RA8	20 kbs - RA8	