

Real-time scoring, audio, and video for SAC 2013

Installation instructions

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Background

- The National Team Contesting trial is intended to increase interest in ham radio and to make it more **media-ready** and **spectator-friendly**
- For team member stations, **mandatory online scoring** is done through cqcontest.net
- Audio and video **streams** are especially useful for journalists and non-hams, and **are strongly encouraged**
- All of the real-time scoring and streaming services are free of charge as such

This document walks you through the needed setup

What do you need?

- An internet connection (upload >100kbps for audio & video, otherwise GPRS is enough)
- A logging program (Win-Test, N1MM, TR4W, ...)
- Audio connected from your radio to the computer
- A built-in webcam or USB webcam
- A user account at <http://www.justin.tv>

What do you need to do?

- Register at <http://cqcontest.net> with your contest callsign
- Set up your logging program for submitting online scores
- Register at <http://www.justin.tv>, choose for example your callsign as the account name
 - Configure an audio + video stream using the web-based interface at justin.tv

OR

- Download the free Adobe Flash Media Encoder and configure the stream (much greater flexibility, stereo audio for SO2R, etc.)

Cqcontest.net: Online scoring (1/2)

Register with the callsign that you will use in the contest.

Remember to fill in your user account name from justin.tv, "TV Login (ID)"

Live Contest Score Server :: User Registering - Mozilla Firefox

cqcontest.net/options/register.php

cqcontest.net User Registration Form [New User]

* Callsign * Password * Pass retype

* E-mail User role

If you are a Club station, please fill the list of operators [Callsigns](#) below:

The list of Callsigns:

Club

TV Server Login (ID)

Country DXCC

WAZ ITU WAC

Domestic (U)RDA UTC offset

Latitude Longitude Grid locator

Click on the map to start. Move mouse over the map and click on your QTH. To clear click map once more.

Kartta Satelliitti

Google Maps

* - required fields. Your IP 137.163.31.190 will be saved

Save Information

Cqcontest.net: Online scoring (2/2)

- At the top of any page at <http://cqcontest.net>, press "Help" and choose the logging program you are using
- On the new page you will find detailed instructions (including screenshots) that show how to set up your logging program for real-time scoring
 - **N1MM** and **TR4W**: Built-in real-time scoring
 - **Win-Test**: Download a small piece of software
- Report total score and **either** full band-by-band numbers **or** total QSOs + mults

Welcome to on-line Contest Server
v 5.07 supported by: to get the list, move mouse over [here](#)

Test Refereeing Options **Help**

Ct-Trx Ct-Band Ct-Power

Participants: 13

Rank	Call	Score	Win-Test	Date
	UC7A		- MixW	2013-08-24 05:49:01
	RT3T		- 8	2013-08-24 07:17:16
	RA0CHK		- 5MContest	2013-08-24 07:07:03
	RA9AP		- AATest	2013-08-24 07:18:20
	RV3ZN		- AATest	2013-08-23 06:52:01
	UA3QAM		- QARTest	2013-08-22 02:23:52
	RT9S		- Writelog	2013-08-24 07:49:25
	UR7MZ		- Writelog	2013-08-24 09:40:03
	RA9MX/9		- UcxLog	2013-08-24 06:32:44
	RU6CS		- UcxLog	2013-08-21 08:23:02
	RZ3Z		- SkookumLogger	2013-08-22 13:07:02
	UR5IHQ		- SkookumLogger	2013-08-23 19:14:37
	EW6GF		- DXLog.net	2013-08-20 15:04:07

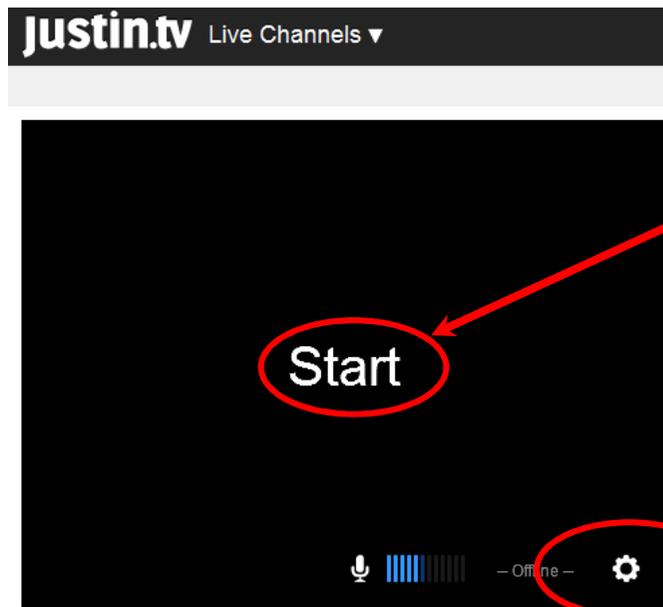
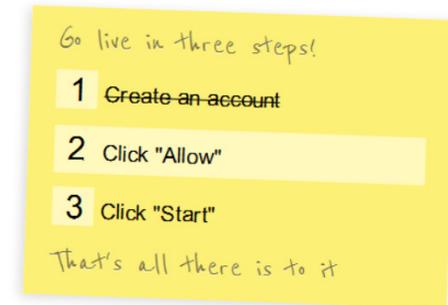
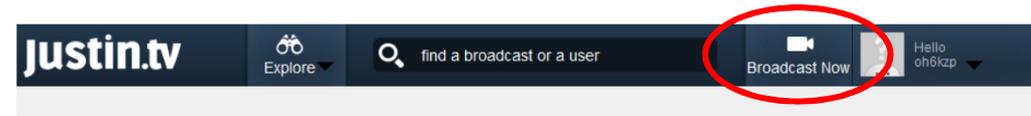
Developer's corner

Audio and Video

- Many radios have an audio/line out connector in their rear panel. Connect the signal to your soundcard's "Line In"
 - The soundcard's normal microphone input may not be ok, because the driving signal level can be too high
 - If you have a Microham MK2R+ or something similar, you can get the audio through the "USB Audio Codec" that it creates on the computer
- Any webcam with a USB cable will do
 - Try to find an interesting camera angle that shows some of the equipment and you using it
 - **DON'T show the VFO frequency!**
- *The next pages give detailed info on how to stream your audio and video through <http://www.justin.tv> so that it is viewable at <http://cqcontest.net>, where also your score is*

Basic streaming (1/2)

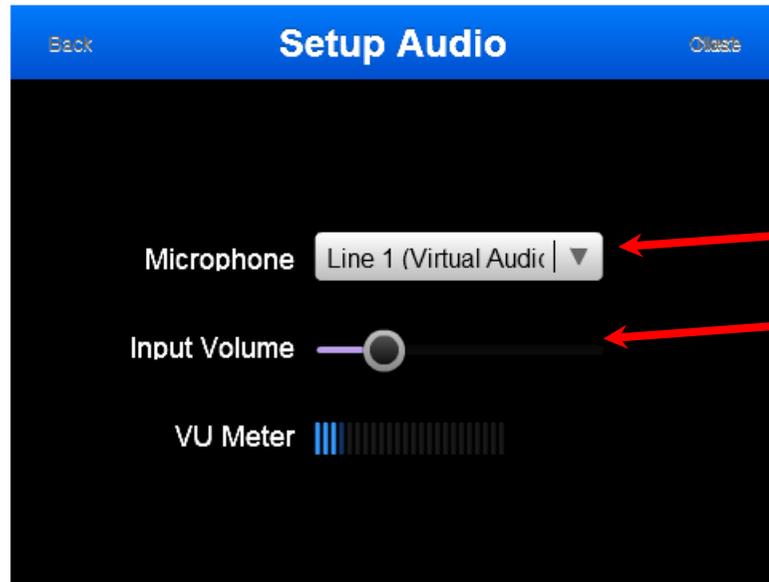
1. Log in at <http://www.justin.tv> with your user account
2. Click "Broadcast Now" in the upper right corner
3. Click "Allow" to open your webcam connection



Click here to start your stream after editing the settings

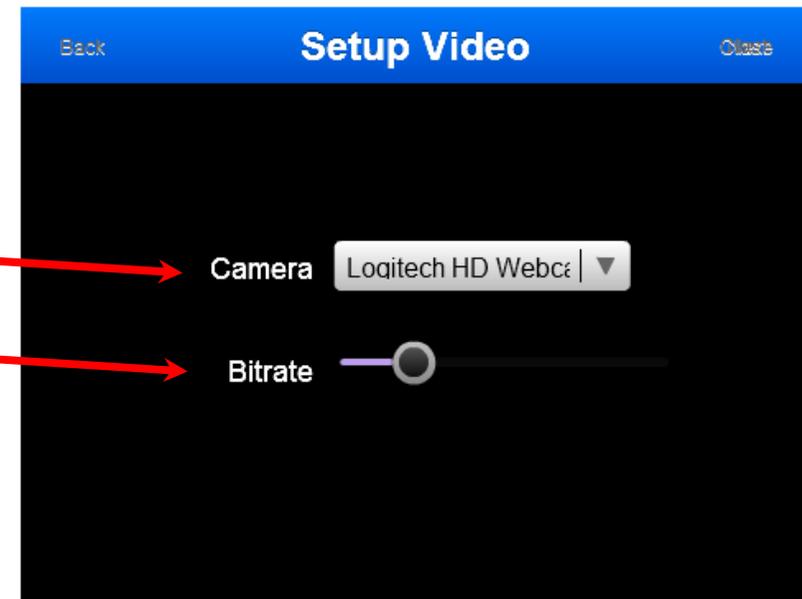
Click here to edit audio/video settings (next page) before pressing "Start"

Basic streaming (2/2)



Drop-down menu for choosing audio source

Set input audio level



Drop-down menu for choosing video source

Set video quality level

When you're done with the settings, press "Close", then "Start" on the new page.
That's it!

Advanced streaming (1/2)

- Enables stereo audio for SO2R operators and gives greater streaming flexibility (bitrate, etc.)
- Uses Adobe Flash Media Encoder software instead of the web-based broadcast interface
 - Log in at <http://www.justin.tv>
 - Download from http://www.justin.tv/broadcast/adv_other and install
 - Also press the "Config File" button on that page and save the xml file to a determined directory on your hard disk
 - Rename the xml file to <your_justintv_username>.xml
 - Start the Adobe Flash Media Encoder program
 - Choose File -> Open Profile, and load the renamed xml file
(Don't worry about the "Log File" and "Profile Validation" pop-up windows)
 - Edit the audio and video settings. **The next page can be used as a guide.** It is configured for stereo audio and a low bitrate H.264-encoded video.
 - Start streaming by pressing "Start". You can move between the "Encoding Options" and "Encoding Log" tabs while streaming.

Advanced streaming (2/2)

The screenshot shows the Adobe Flash Media Live Encoder 3.2 interface. At the top, there are 'Input' and 'Output' preview windows, both at 100% zoom. The 'Input' window shows a video feed of a window with blinds. The 'Output' window is currently black. Below the preview windows is the 'Encoding Options' panel. The 'Preset' is set to 'Custom'. The 'Video' section is expanded, showing settings for 'Logitech HD Webcam C270' with 'Format: H.264', 'Frame Rate: 1.00 fps', and 'Input Size: 320x240'. The 'Audio' section is also expanded, showing settings for 'Line 1 (Virtual Audio Cable)' with 'Format: Mp3', 'Channels: Stereo', 'Sample Rate: 22050 Hz', and 'Bit Rate: 48 Kbps'. The 'Output Size' is set to 320x240. The 'Total Video 1 + Audio Bit Rate: 98 kbps' and 'Total bandwidth required to stream: 98 kbps' are displayed. On the right, the 'Panel Options' are set to 'Output', and the 'Stream to Flash Media Server' section is expanded, showing 'FMS URL: rtmp://live.justin.tv/app' and a 'Stream' field containing 'STREAM ENTRY CODE HERE'. At the bottom, there is a 'Start' button and a 'Stop' button. A red circle highlights the 'Start' button.

This should be filled in when you've loaded the xml file

When the settings are ok, start the stream here

The End Result

The screenshot shows the 'Live Contest Score Server' interface in a Firefox browser. The page title is 'Hello to On-line Contest Score Server!'. The current contest is 'SAC-CW'. The table below shows results for various countries, with Sweden at the top. A red arrow points to the 'TV 2' column for the OH6KZP call sign, which is selected. To the right, a video player shows a live stream of OH6KZP with the Justin.tv logo and a 'LIVE' indicator.

Category	Call	Score	QSO	160	80	40	20	15	10	MULT	Stat	Cty	Zone	Pfx	Time	TV 1	TV 2
Sweden		1764															
SINGLE-OP ALL HIGH CW	SM5AJV	1,596	32		10		20	1	1	21	21				525:57	<input type="radio"/>	<input type="radio"/>
SINGLE-OP ALL HIGH CW	SE5E	168	11				11			6	6				533:08	<input type="radio"/>	<input type="radio"/>
Norway		0															
	LA1AA																
	LA2AA																
Finland		0															
	OH1AA																
	OH6KZP															<input checked="" type="radio"/>	<input type="radio"/>
Denmark		0															
	OZ1AA																
	OZ2AA																
Iceland		0															
	TF1AA																
	TF2AA																

Choose stream with these buttons

OH6KZP

Justin.tv

0 LIVE

TV 2

Team results and real-time streams will be available on a dedicated SAC National Team Contesting page:

<http://cqcontest.net/groups/nationteams.php>

(Groups -> National Teams)

If you have difficulties starting the stream at <http://cqcontest.net>, load it once directly in another browser tab through <http://www.justin.tv/<yourusername>>

Getting it Running

- Please test your setup well in advance of the contest!
- Check that your score gets uploaded:
<http://cqcontest.net/arch/testscore.php>
- Check that your audio/video stream works:
<http://www.justin.tv/<yourusername>>
(remember to provide your justin.tv user name when registering at cqcontest.net with your contest callsign!)
- **Feedback will be much appreciated**
- Good luck, and enjoy the contest!