



National breaks synchronizer plug-in

1. Summary

The national breaks synchronizer plugin tries to sync stations rebroadcasting a main program from the capital, so local commercials can overlap national commercials as best as possible.

Both capital (mother station) and rebroadcasting stations simulcasting must be running Jazler RadioStar same version so there won't be any confusion between the protocols exchanged.

Commands are sent via internet using the UDP protocol. You can use whatever port you want for the communication of the Jazlers end to end.

There is no encryption or security when the program is sending the commands to the simulcasting stations, to archive the least possible latency.

If you are just a computer user without special knowledge of ports and re-direction of them, we strongly advise you to find someone to do this for you. The setup for this situation is not one of the easiest 😊

2. How the system works

The plugin is installed on the installation folder **of the mother station only** and starts when Jazler starts too (as the Jazler backup plugin does). When the first commercial of the commercial break airs, the plugin sends immediately a signal to all rebroadcasting stations that the commercial break started playing, and also informs how many seconds or minutes the commercial break will last.

Jazler takes advantage of the latency of the audio streaming (either from the internet or via satellite) to prepare the rebroadcasting stations to overlap the capital stations commercial break. You can adjust the latency of overlapping from the sync settings of the Jazler hardware rebroadcasting settings.

The rebroadcasting station will prepare the commercial break of this timeslot, and will start playing the local commercials, when the sync delay time comes.

Situation 1 – Local commercials are less than capital motherstations commercials
In this case, Jazler will try to fill the gap with either jingles or songs. We have given a threshold of seconds that you can adjust. If the difference of commercial breaks is 20 seconds, Jazler can fill in only with jingles. If the difference though is bigger than x seconds, Jazler can fill in with a song, and when the time comes for reconnecting to the capital motherstation, Jazler will interrupt the song and go back to rebroadcasting.

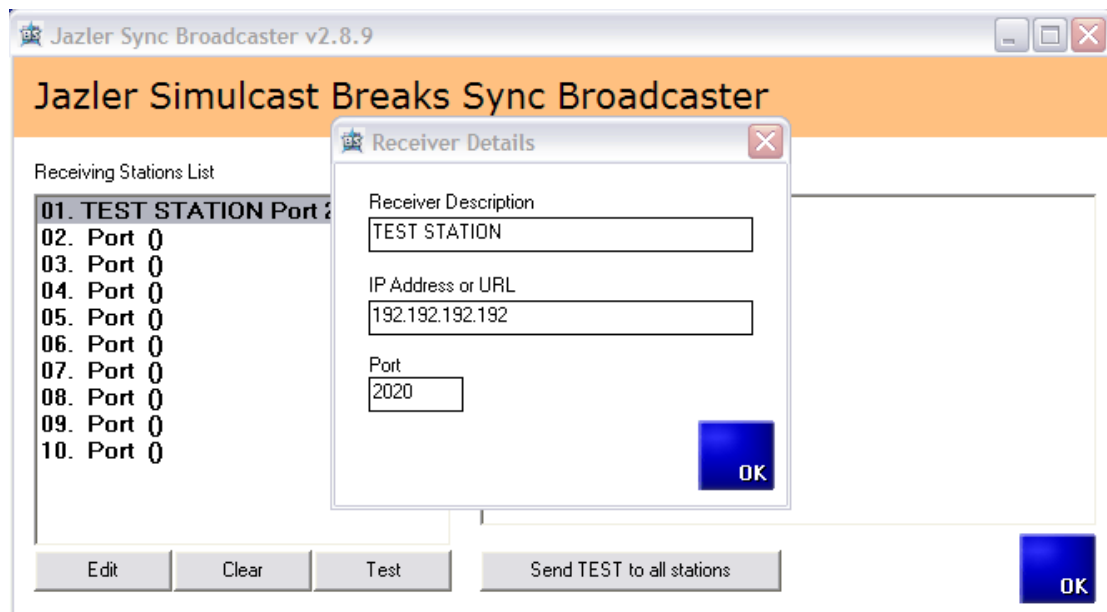
Situation 2 – Local commercials are more (in duration) than capital commercials
Jazler will just switch to the capital radio when the commercial break comes to its end. There is no time-shifting. (yet?)

YOU MUST HAVE THE SAME COMMERCIAL BREAKS (TIMESLOTS) OF THE CAPITAL MOTHERSTATION. Otherwise the plugin won't work.

3. Setting up the motherstation

Setting up the capital motherstation is quite easy. As you have unzipped the plugin folder you downloaded, copy the JZRS2-SB.exe file to the installation folder of Jazler RadioStar. If this file is not in the same folder of JZRS2-ST.exe it won't be able to communicate to your studio application. Be sure to restart Jazler RadioStar so it can detect it and activate it automatically.

When the program initially runs, Windows might ask you if you accept to approve this program to communicate via Internet. Be sure to accept, as Windows will not let it send commands otherwise. We also advise you to add an exception to windows firewall for the plugin so you can be 100% sure.



The plugin gives you the choice of sending a command to up to 10 rebroadcasting stations. If you are in need for more stations, please contact us so we can compile a customized version for you.

The process is quite simple. For each station you click on the left list number, click EDIT, and enter a description of the station, its IP address and its listening port.

This means that all rebroadcasting stations must have a static IP address.

Ok, you can use a dynamic IP address, using *no-ip.com* or some other provider but, this will make it less stable. As the DNS might have not been updated on time, and using names will increase latency because there must also be an IP lookup. So it's **BEST PRACTICE** to use a clear IP address so the command can be sent and received as soon and stable as possible.

Remember that [the plugin uses the UDP protocol](#) (as it is quicker than TCP-IP) so be aware that your router wont filter out this protocol.

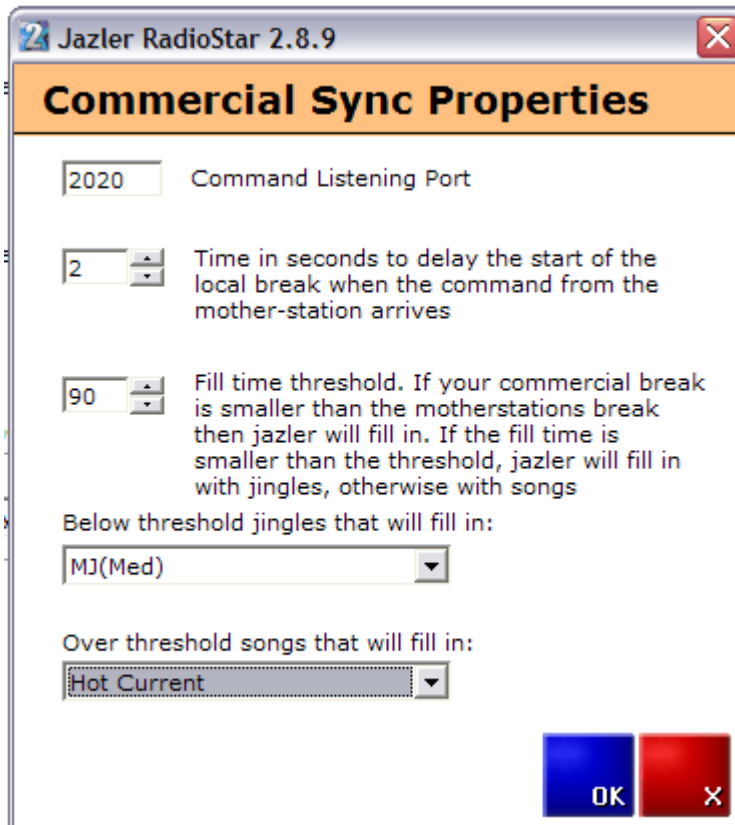
Clicking on the TEST button, the plugin will send a TEST signal to the motherstations, SIMULATING that the motherstation is starting to broadcast a commercial break at 13:00, so you can test that the rebroadcasting stations are receiving the signal.

4. Setting up the rebroadcasting station

Ok, first of all, as you have a static IP, just be sure that the listening port you have set, is being forwarded to the Jazler computer. This can be done from your internet router.

The screenshot shows the 'Rebroadcast Hardware Adjustment' window in Jazler RadioStar 2.8.9. The window has a light blue header with a satellite icon and the title 'Rebroadcast Hardware Adjustment'. Below the header, there are three unchecked checkboxes: 'Enable Rebroadcast Line 1', 'Enable Rebroadcast Line 2', and 'Enable Rebroadcast Line 3'. Below these is a checked checkbox for 'Enable Internet Streaming'. Underneath, there is a form with two input fields: 'Stream URL' containing 'http://www.sky.fm/mp3/the80s.pls' and 'Program Source Name' containing 'SKY FM 80's Channel'. To the right of these fields is a 'Test Stream' button. Below the form, there is a section titled 'Fade input line when local audio is...' with two radio button options: 'Already fading (recommended)' (selected) and 'Has vanished'. Below this is a 'Fade Speed' section with a spin box set to '700' and the unit 'ms'. There are two checked checkboxes: 'Warn me everytime Jazler is going to interrupt for spots' and 'Turn temporarily to auto-pilot if no audio is present for more than 10 seconds'. At the bottom left, there is a 'Commercial Sync Properties' button and a checked checkbox for 'Enable Commercial Breaks Sync'. At the bottom right, there are 'Expert Settings' and 'OK' buttons. At the bottom left, there is a 'Useful Links' section with a link to 'Rebroadcast Scheduler'.

Check the “Enable Commercial Breaks Sync” and click on the “Commercial Sync Properties” button.



Command listening port

Set here the port that Jazler will be listening too. Remember to...

- 1) Have an exception to this port on your windows firewall
- 2) Have this port redirected to the Jazler Studio Computer from your router
- 3) Be sure that UDP requests pass through.

Time in seconds to delay...

How many seconds pass till the audio from the capital motherstation is broadcasted by the rebroadcasting station? Set here the latency of the stream or satellite reception. Adjust this property to make the sync as best as possible.

Threshold

If the time difference is below this threshold, Jazler will fill in with Jingles. Make sure you have jingles with various durations, so Jazler can find the best suitable jingles to fill the gap. If the difference of the commercial breaks is bigger than this threshold, Jazler will fill in with a song.

If you don't want a song, and want a BED ID to play, or something instrumental, you can make a category in your songs with these instrumentals and set them in this screen.

5. Conclusions

In the studio screen, set Jazler in Rebroadcast mode. Make sure that the “Play Programmed Spots” is DISABLED (blue) otherwise Jazler will interrupt the rebroadcast without waiting for the signal from the motherstation.

If the rebroadcasting station has no commercials programmed for a specific time slot, Jazler will fill in with songs and music until the motherstation finishes its commercial break. If you do not have a same commercials time slot with the motherstation in the rebroadcasting station, Jazler will NOT interrupt to overlap the motherstations commercial break.