VoiceCollect®

How to Configure:

EQUALIZATION

Voice Recording System VC-MDX

Version 2201

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Equalization is a feature used in case of a pair of redundant recorders. Both recorders must have the same configuration, same hardware, same inputs, same buffer size, same users, same TTL settings etc. It can be used with all types of acquisitions. But note that the input signals must be in parallel on both recorders, so they have identical records in theory.

The purpose of this feature is to keep both recorders equal after a power loss of one or in case of maintenance as much as possible.

In praxis it is to be expected that the inputs are not really identical. Especially if signalling is coming via acquisition cards it might come to differences, caused by very small time shifts during signal processing on the cards. But there are more parameters influencing the real bits in the IR-buffer. One is the real clock time.

To minimize influences both recorders clocks must be synchronized by NTP or an equivalent. The real time is not relevant, but the time gap between the clocks.

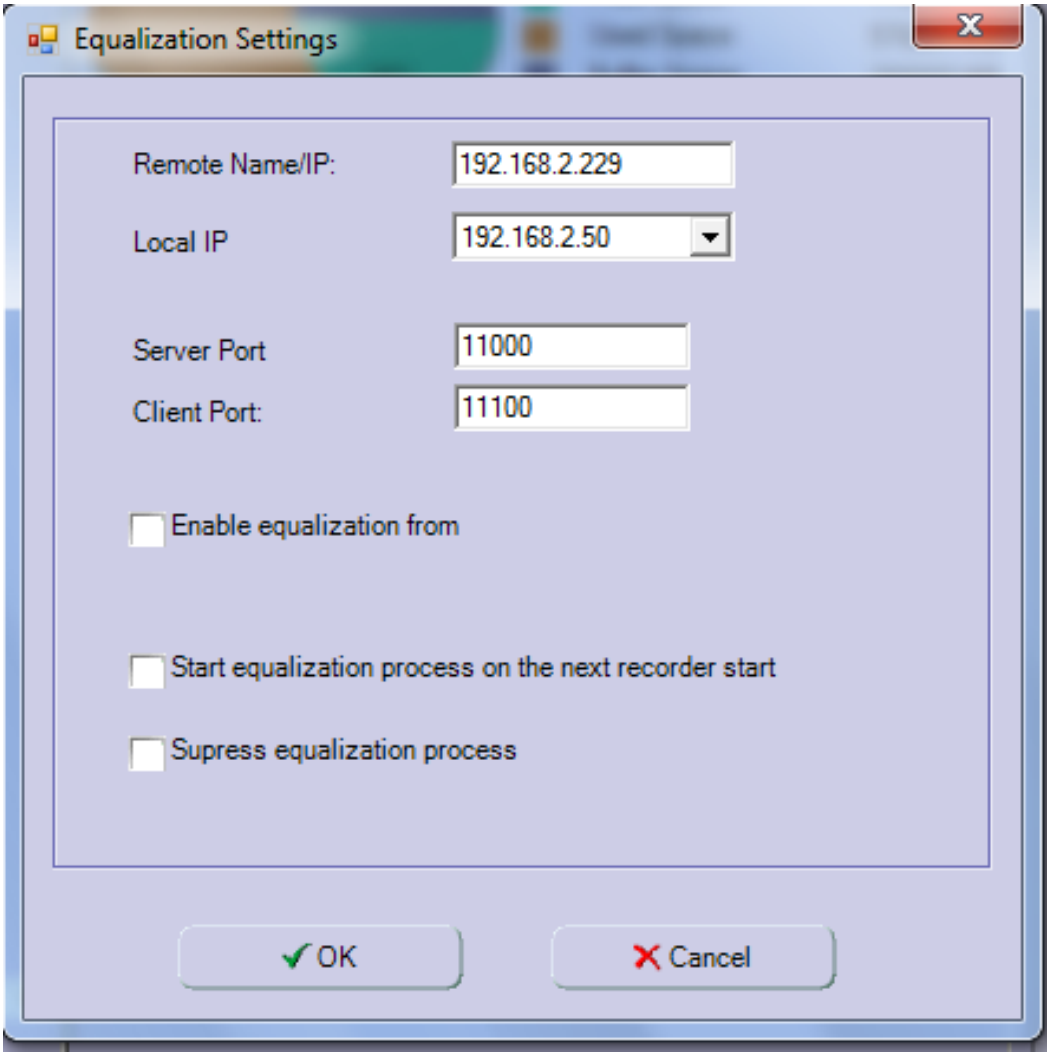
To distinguish the recorders it is recommended to mark and label them as REC-A and REC-B. Note this is not a master-slave-scenario. Both are equal in function and role.

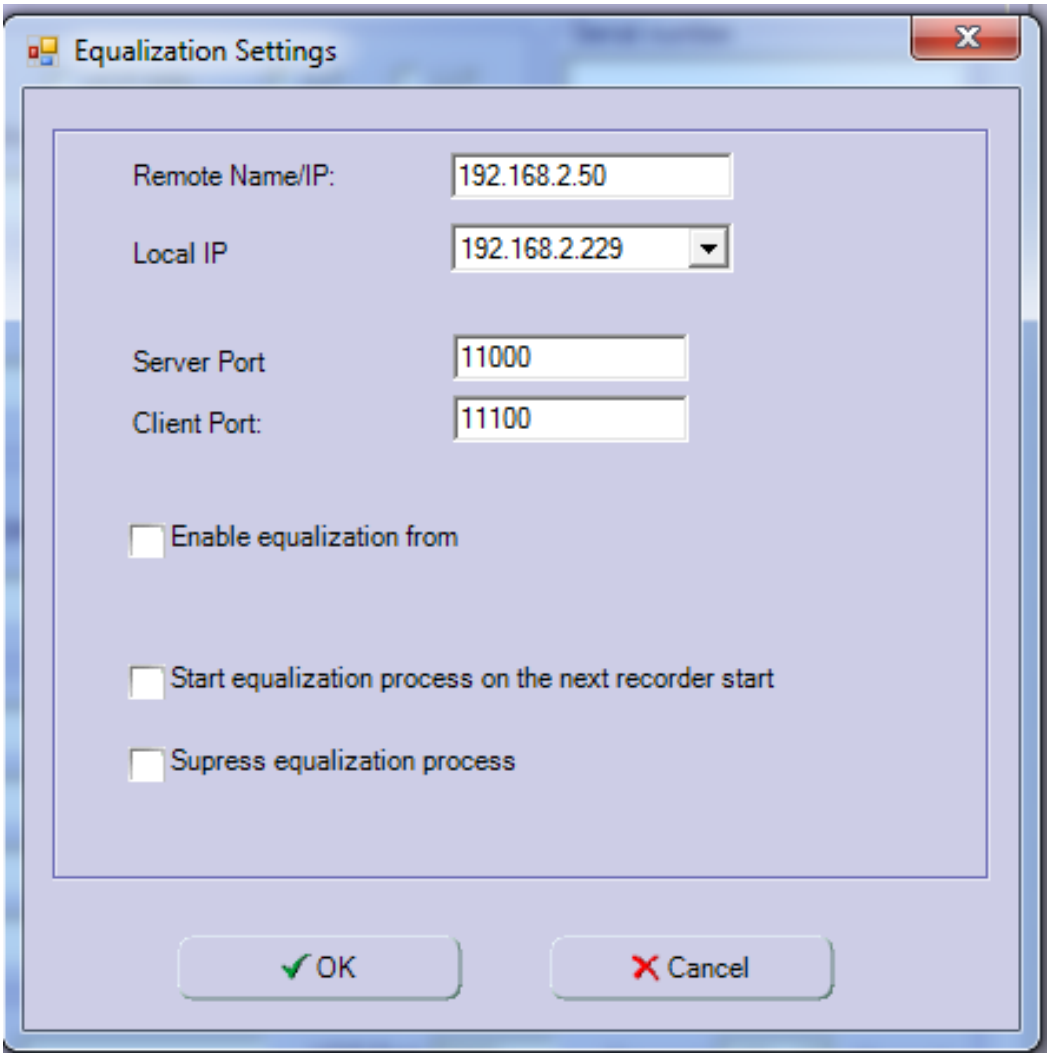
In this document REC-A is configured with IP address 192.168.2.50 and REC-B with IP 192.168.2.229.

NOTE:
The time until both recorders are equal (synchronised) again depends on various conditions such as: Number of data sets, number of recordings; type of recording interface, length of calls, used compression and speed and performance of used network.

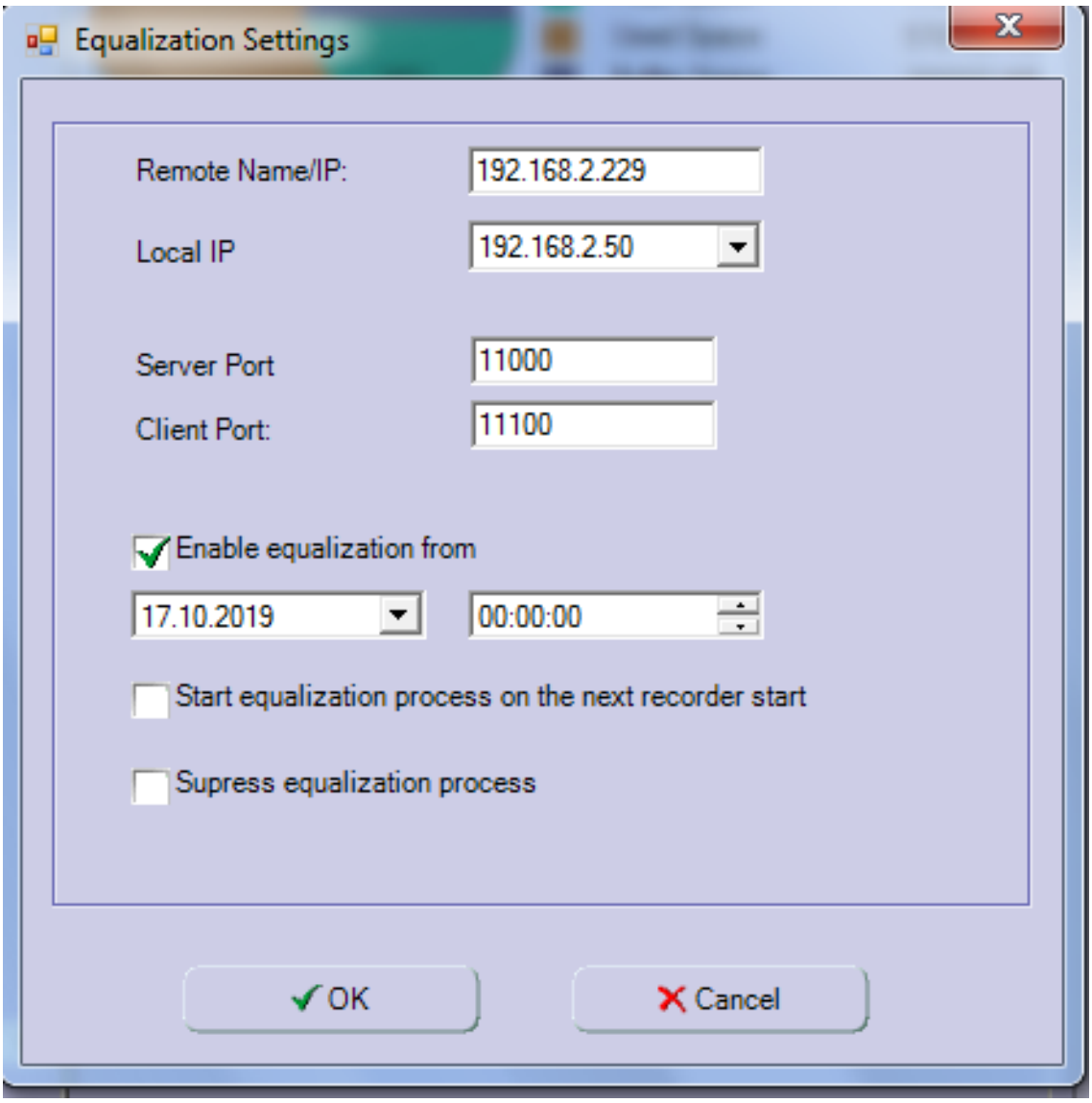
Configuration Steps

1. Both machines must not run the recorder application. Ensure that all channels are set to "No Operation".
2. Verify that the feature is active in the Dongle (license).
3. Open VC-MDx Configurator and ensure that the buffers are empty and never used before. Else they must be created new on both recorders.
4. Ensure that buffers are set equal in size and files.
5. Go to "Channel Allocation" and ensure that all inputs are set equal. Card ID's and channels must correspond. Don't forget to check VoIP settings.
6. Go to “Equalization” section and set up IP and ports:





7. Ensure again that NO inputs are active or can lead to an active recording on one of the recorders.
8. Set up other configuration like
   - “Enable equalization from”: This function allows to check the “equalization” of the pair recorders only beginning with the date time selected.
   - “Surpress equalization process”: This function was designed to disable the equalization process but leaving unchanged the Remote Name/IP, Local IP, Server Port and Client Port parameters (Same functionality as these parameters are not set (empty fields)
9. Please do **not** enable now "Start Equalization Process on the next recorder start". This will be done later.
10. Close Configurator by **OK**.



11. Start recorder application on both recorders. Login as Super and wait until GUI loading is complete.
12. Go to "Channel Settings" (Configuration button).
13. Set up your channels and ensure that all (!) settings are equal on both recorders. This includes channel names.
14. Apply settings on both and close the dialogue.
15. Start channels on both recorders.
16. Start the inputs.
17. Check if both recorders are recording the same by playback some calls.

Note: The record ID's might differ on REC-A and REC-B. You must check the content of records to be sure. Good indicators for success is the message "Equalization completed" and the "From" – "To" values of the buffer which should not differ too much (maybe some minutes) after execution.

Operation Cases

Precondition:

- ✓ Equalization configured in VC.configurator.
- ✓ Pair of redundant recorders in active parallel recording.
- ✓ Define recorders A and B (REC A / REC B).
- ✓ Both recorders must be synchronized in time (NTP).
- ✓ The less active recordings the faster is the process.
- ✓ Same for buffer usage.

I) Maintenance Case:

Equalization after normal shutdown of one recorder, steps (corresponding to FT-267):

1. In IR Buffer section check the total of records on both recorders; it should be equal.
2. Check and note IR Buffer dates and times "From - To".
3. Start channels on both recorders
4. Start audio inputs.
5. Check the total of active calls on both recorders; it must be equal.
6. Stop channels on REC B.
7. Shutdown recorder application on REC B.
8. Open Configurator and set "Start Equalization Process on the next recorder start" to active.
9. Close Configurator.
10. Start Recorder B.
11. Wait for display completely shown, equalization finished.
12. Check channels status on both.
13. Check IR Buffer dates and times "From - To".
14. Check the total of records on both recorders; it should be equal.
15. Check the audio content of some records on both.

Expected Results:

2. Dates and times are equal on A and B.

12. Status must be the same, e.g. numbers of channels in recording.

13. From - To values must be equal.

14. Total should be equal. Note here that interrupted records on REC-B are now split. Per call it can be one truncated piece and one restored. Same is for new records after start.

II) Power fail Case:

Automatic equalization after loss of power on one recorder, steps:

1. Check the total of calls on both recorders; it must be equal.
2. Cut power of REC A by removing both cables of the redundant Power Supply.
3. Wait for new calls on REC B.
4. Repower REC A.
5. Wait until recorder application is started and channels are started.
6. Unlock the application with Super account.
7. Check the "From - To" values in buffer section on both recorders; they should be equal.
8. Verify the active recordings on both recorders.

Expected Results:

7. Buffer From - To values should be equal.
8. The amount of active recordings is same.

III) Full Buffer Restore:

Complete equalization after creation of a new buffer on one recorder. A possible scenario is the restore of one recorder after loss of the buffer or complete recorder, steps:

1. Verify that REC-A is working without any faults and keep it untouched.
2. Stop channels on REC-B.
3. Close application of REC-B.
4. Open Configurator on REC-B.
5. Delete Buffer.
6. Click on Apply.
7. Create new Buffer with the very same parameters.
8. Go to Equalization settings and activate the "Start equalization process on the next recorder start" box.
9. Close Configurator.
10. Start recorder application on REC-B.
11. Logon with "Super" and wait until the process is completed.
12. Verify both buffers on A & B.

Expected Results:

11. GUI informs about to wait until process is finished.
12. The From - To values of both buffers are reasonable.

Note: The surviving recorder must be healthy and should not be stopped or changed until equalization is complete. Depending on the buffer usage this can take several hours.

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