

LUCI



LUCI Live

User Guide for iOS
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Introduction to LUCI Live

Live two-way studio quality audio, broadcast to many different types of professional IP-codecs.

LUCI Live transforms your PC or Smartphone into a high-quality, live internet broadcasting source. With the availability of mobile or fixed-line internet access and the use of LUCI Live, the cost of live broadcasting is practically zero. LUCI Live includes the built-in options of recording while broadcasting live. It also has the renowned Luci 'under the hood' engine, so you can depend on reliable technology and software while enjoying features like input equalizing and support for high-quality accessories. LUCI Live can even play pre-recorded material during a live broadcast!

Supported devices

- iPhone 3GS, iPhone 4, 4S, 5, 5S, 5C, iPad 1, 2, 3rd and 4th generation
- Apple MAC computer with OSX 6.6 minimum
- PC/laptop/netbook with Windows XP, Windows Vista, Windows 7, Windows 8
- Linux computers PC/laptop/netbook
- Android phones and tablets
- BlackBerry Z10, Q10 and Q5

Features for all platforms

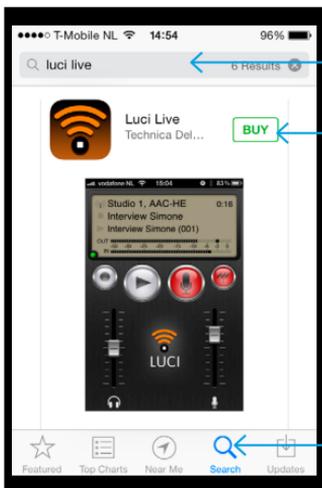
- RTP over UDP low-delay streaming, two-way, so including return channel
- N/ACIP compatible
- 1-Way shoutcast/icecast streaming
- Record while broadcasting
- Play i.e. insert prerecorded material while broadcasting live
- Stream cloning, send redundant streams via 3G, Wifi, Ethernet simultaneously
- Codecs: MP2, AAC, AAC-HE, AAC-HEV2, G711, G722, ULCC
- 24-bit ULCC audio codec, 44.1 to 384 kHz sample-rate
- Sample-rate from 44.1 to 384 kHz
- ASIO support on Windows

- Studio quality audio
- Constantly updated to the latest IP-technology and standards
- Free help desk via email

Installation guide LUCI Live for iOS



Install LUCI Live for iOS via the iTunes App store, so choose App Store on your iPhone



STEP 2: Type LUCI Live in search area

STEP 3: LUCI Live appears and then tap 'BUY' in order to purchase. You will be prompted to the payment page. After payment the LUCI Live App will be installed on your iPhone

STEP 1: Tap search



Choose the LUCI Live app on your iPhone to get started

Quick Start Manual



Important

The Mic level slider is a digital gain, since on the iPhone it is not possible to control the Mic gain of the pre-amplifier. The slider controls the gain after the pre-amplifier and A/D converter. Consequence: if applying a gain below 0dB (attenuate) the resulting level will not reach 0dB anymore. So for example, if the gain is set to -7 dB, the maximum Mic level will also be -7dB. Use attenuation only when you temporarily need to lower the Mic level. The nice thing about this new feature is that you can use the dynamic range of the iPhone to amplify the Mic signal from an otherwise low level while the Input Limiter will make sure that any overmodulation will sound undistorted as long as the Mic input itself is not overloaded of course.

Buttons

Off	On	Explanation
		RECORD button; by activating this button a new recording will be started, but only when the Mic button is also On
		PLAY button; this button will play / insert the chosen recorded playback file
		MIC button; this button activates the mic. If a connection with a station is established, the stream will start immediately
		ANTENNA button; this is the connection button. By activating this button the connection with the station will be established

NOTE: All buttons have an orange state, which means that the function is trying to be activated. For instance, the Antenna button will first turn orange when it's trying to connect, when then when it is connected it will turn red.

Work flow

Recording

To record an interview you need to activate your microphone input. Pressing the MIC button will activate your microphone input. The microphone button will turn RED. To start the recording simply press the RECORD button. While recording the RECORD button will be RED. You will be saving this file as Interview Simone 003 (note the black button and time indicator in the main screen).

Note: If the incoming stream indicator is grey: then you are not transmitting / or not connected to the Echo Server, this is also noticeable by the empty IN peak level meter, when there is no return echo channel.



Playback

To playback a prerecorded file press the PLAY button. During playback the PLAY button will turn RED. You are playing the file Interview Simone 004 (note the black triangle and time indicator in the main screen).

Note: If the incoming stream indicator is grey: then you are not transmitting / not connected to the Echo Server, also noticeable by the empty IN peak level meter, meaning there is no return echo channel.

Real-time Transmission / go live

To transmit a live stream it is best to first switch on the MIC button, check your levels and then press the ANTENNA button to go online. The Microphone input signal will then be transmitting in real-time to the server. In this situation the ANTENNA and MIC buttons will be RED.

Note: The green incoming stream indicator: means your connection to the Echo Server is established, and is ok and returned.



Recording your Real-time Transmission

To record a REAL-TIME TRANSMISSION you will need to activate the RECORD button during the transmission. In this situation the RECORD, MIC and ANTENNA buttons will be RED.

Recording a real-time transmission can be automated.

To do this, simply switch ON in the 'auto_record' option in the Settings screen of the Station configuration. This function will auto activate the RECORD button when the ANTENNA button is activated. The file you are recording will be saved as Interview Simone (005).

Note: The green incoming stream indicator: means your connection to the Echo Server is established, ok and returned.



Playback during a Real-time Transmission

To playback a prerecorded file during a real-time transmission, simply press the PLAY button. The PLAY button will turn RED. In this situation the PLAY, MIC and ANTENNA buttons will be RED. You are now playing / inserting Interview Simone (003)

Note: Out peak level meter is the audio level of interview Simone (003). In peak level meter is the audio level of the returned echo channel.

Note: The green incoming stream indicator: means your connection to the Echo Server is established, ok and returned.

Playback and recording during a Real-time Transmission

You can also PLAYBACK a pre-recorded file while you are recording in a real-time transmission, activate the PLAY button, and it will turn RED. In this situation all four buttons (RECORD, PLAY, MIC, and ANTENNA) are RED.

Note: The complete transmission will be saved as Interview Simone (005) which includes the playback file.

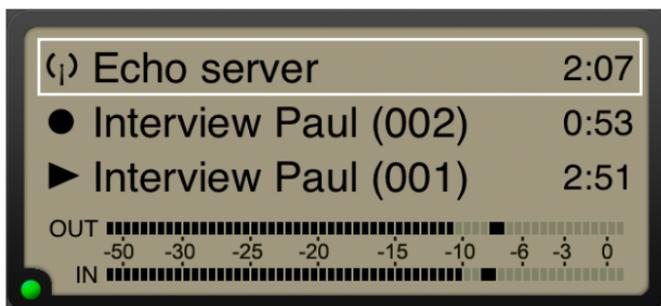


Main display details

Details of the main display when you start LUCI Live for the first time.



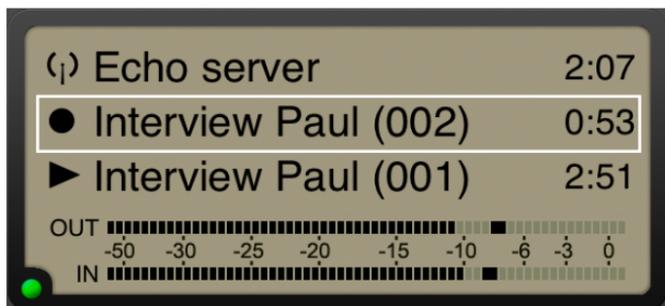
Details of the fully loaded main display when you have setup the app completely and you are streaming. In the following pages we will explain how to set it up.



Echo server = chosen station

The Echo server is loaded by default. The Echo server is a free service and is meant for testing purposes only. You can use the Echo server to test your internet connection, the stream you send will be sent back, so you will hear yourself with a short delay. The server is located in a datacenter in Amsterdam, The Netherlands. Also, IPV6 will be used if available on your local internet connection. To choose a new station simply tap this area. To add or edit a station see [settings > stations](#).
NOTE: The antenna icon on the left has turned black and is in motion: you are now transmitting.

NOTE: The connection time indicator on the right appears when you are transmitting.



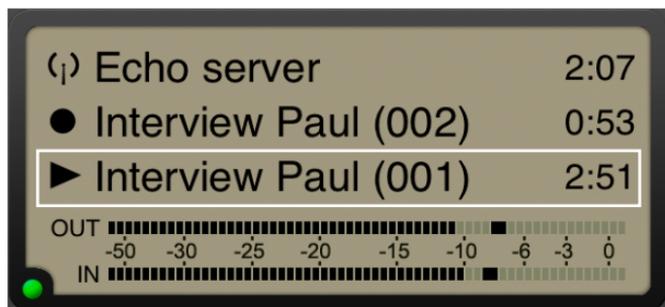
Interview Paul (002) = the name of the file your live item is recorded to

You can set the name of 'the selected file to record to' by tapping this area. For each new recording the number between the () will increment and a new file will be written unless you change the name. As this is the second recording in this file the number 2 was added.

For creating new recording files see [Settings > Record to](#).

NOTE: The rec icon on the left has turned black: meaning you are now recording.

NOTE: The recording time indicator on the right appears when you are recording.

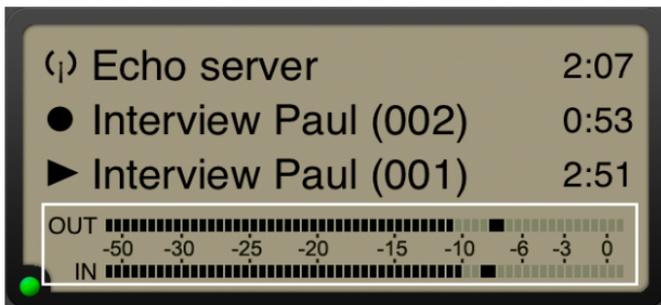


Interview Paul (001) = the name of the file you want to play or insert

You can insert a pre-recorded file while broadcasting live. While playing this file the Mic signal will be muted. For inserting a pre-recorded file tap this area and or see [Settings > Play from](#).

NOTE: The play icon on the left has turned black: meaning you are now inserting a pre-recorded file into your live transmission.

NOTE: The remaining play time indicator on the right is counting backwards.



Peak level meters = indicators of the signal levels

OUT: indicates the level of the signal transmitted to the station, either generated from your MIC or from your inserted file.

IN: indicates the level of the return signal from the station.

NOTE: The green button at the bottom left, this is the incoming stream indicator and can be gray, green or red. (Green = OK, Gray = no incoming stream, Red = error). An error does not necessarily mean you can hear this or something is seriously wrong. LUCI Live will try to make errors inaudible. When the red light turns on intermittently every second or even turns grey (= no stream for a second), then the network conditions are too bad for a decent live report. Always check your iOS Status Bar before going live. This displays your connection and signal strength.

Important

LUCI Live integrates a software Limiter which protects the outgoing signal from clipping. If the limiter kicks in, the peak indicator will become orange, if the audio input overloads the peak indicator will become red.



Faders



The **headphone fader** controls the level of the returning IN signal from the station going to the headphones. Range -20dB to +20dB one step per dB. The headphone can be muted by tapping the headphone icon at the bottom of the fader.



Tap on
unmuted



Tap off
muted



The **microphone fader** controls the level of your streaming OUT signal going to the studio. Range -20dB to +20dB one step per dB. Check the OUT-peak level meter if you need to adjust the level of the out-going signal to the station. In order to hear yourself back through your headphone, you can cue your mic signal by tapping the microphone icon at the bottom of the fader.



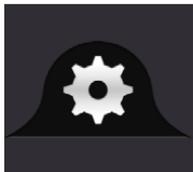
Tap uncued microphone



Tap cued microphone

NOTE: The Mic level fader is a digital gain control as on the iPhone itself it is not possible to control the Mic gain of the preamplifier. This means that it will control the gain after the preamplifier and A/D converter and will have one important consequence: if you apply a gain below 0dB (attenuate) the resulting level will not reach 0dB anymore. So if you for instance set the gain to -7dB, the maximum outgoing Mic level will be -7dB also. So use the LUCI attenuation only when you temporarily need to lower the Mic level. Nice thing about this new feature is that you can use the very good dynamic range of the iPhone to amplify the Mic signal from an otherwise too low level while the Input Limiter will make sure that an overload will sound undistorted as long as the Mic input itself is not overloaded of course.

Settings



Tap settings in the main screen in order to alter or adjust the following settings:

The screenshot shows the Settings app interface with the following options and callouts:

- Stations** (Echo server) > Go to '[Stations](#)' for setting up, choosing and/or adding stations
- Record to** (Interview Simone) > Go to '[Recording](#)' for choosing new or existing files
- Play from** (Interview Simone (008)) > Go to '[Playback](#)' for choosing playback files
- Edit recordings** > Go to '[Recordings](#)' for choosing a recorded file to be edited
- Call diversion warning** (Off) > Go to '[Call diversion](#)' for dis- or enabling phone diversion warning
- XTalk compensation** (On) > Go to '[Compensate](#)' for dis- or enabling cross talk
- Defaults** (Empty) > Go to '[Defaults](#)' to set up user name and password for SIP server
- General** > Go to '[General](#)' to check port number and auto load recordings
- About Luci Live** > Go to '[About](#)' to see the LUCI Live product & version info
- Home indicator** > Go back to [main screen](#)

NOTE: Scroll down in settings if you don't see all the parameters.

[Go to contents](#)

Settings > Stations



The screenshot shows the 'Stations' settings page. At the top, there is a back arrow, the text 'Settings Stations', and an 'Edit' button. Below this, a list of stations is shown: 'Call the Luci office' and 'Echo server'. The 'Echo server' is selected with a blue checkmark. To the right of each station name is an information icon (i) and a right-pointing arrow. At the bottom left, there is an iTunes icon and a plus sign (+) button. A separate dialog box titled 'Add a new station' is shown to the right, with three options: 'From phonebook', 'Custom station', and 'Cancel'.

Use 'edit' for removing a station in the list. You will be prompted to choose the station you want to remove

Go to 'info' to view and adjust the station parameters (protocol; codec; bitrate; jitter buffer; destination; channels; bit depth; auto record; sample rate)

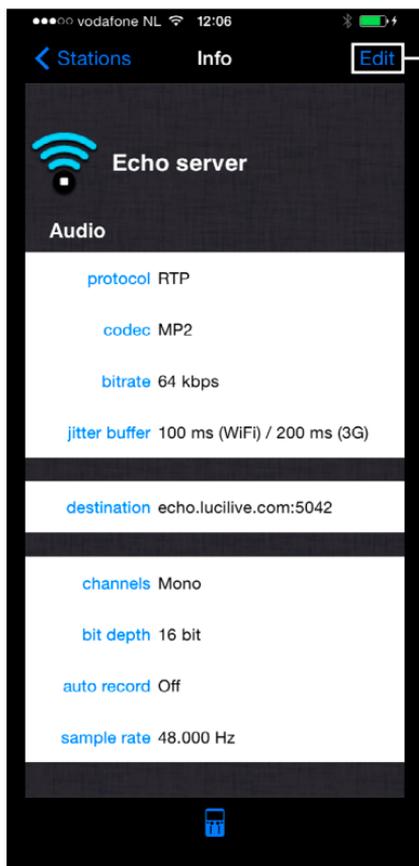
Use + to add new stations either by importing a phonebook (*.csv) page 16 or by custom adding a station page 17

Go back to main screen

After choosing "Stations" of the Settings menu you will find the list of predefined stations, the possibility to edit the stations and to create new ones. To choose a predefined station, simply click on its name. A checkmark will indicate the chosen station. In this figure you see the default list and the checked station is 'Echo server'. The Echo server is a free service and is meant for test purpose only. You can always use this to test your internet connection, the stream you send will be sent back, so you will be able to hear yourself back with a short delay. The server is located in a datacenter in Amsterdam, The Netherlands. If you would choose 'Call the LUCI office' you will establish a direct connection between you and the Luci office. You will be talking to one of our support engineers, this will help us in supporting you. We can then do measurements of your stream for example, or to simply help you in determining issues with your audio card.

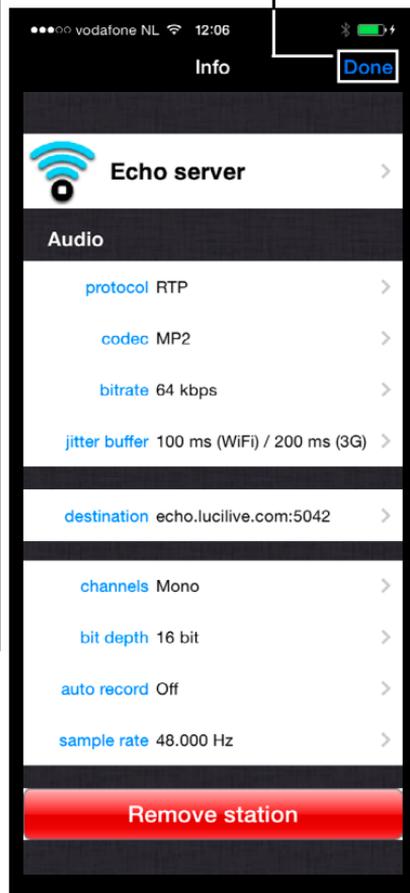
NOTE: The connection with the Luci office is normally not active, please schedule an appointment at support@luci.eu if you want to connect to us.

Stations > Info



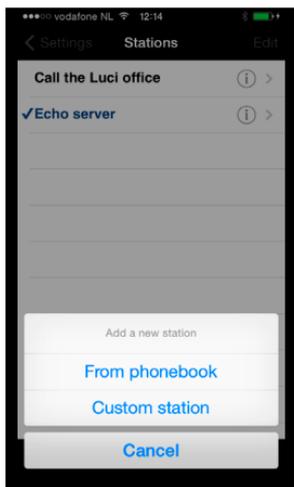
Use 'edit' for changing the station parameters

Choose 'done' when ready changing station parameters

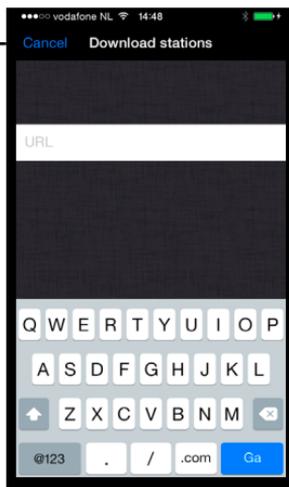


NOTE: Scroll down in both view info mode (left) as in edit info mode (right) if you don't see all parameters.

Stations > + > From phonebook > Download stations

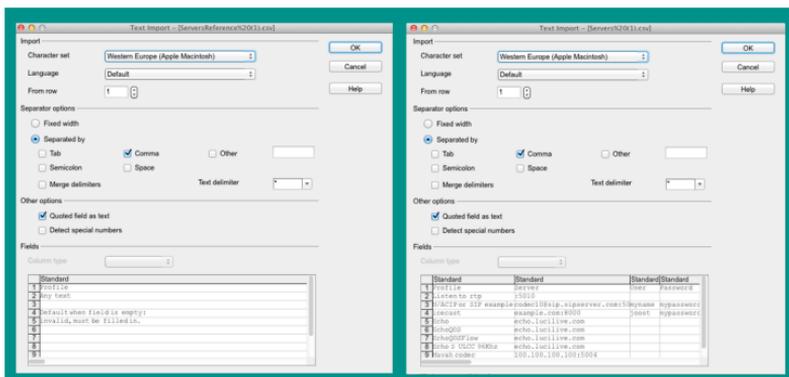


By choosing 'From phonebook', you will be prompted to 'Download stations'. Here you can load your csv file from a specific URL location. For instance: `http://luci.eu/example.csv`

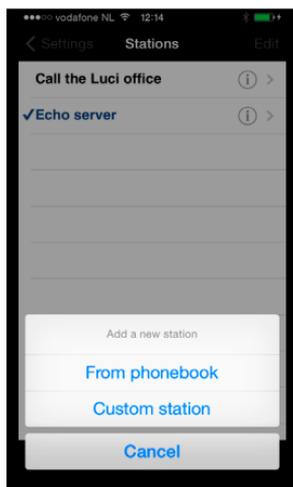


With this function a CSV-formatted phonebook can be loaded into your LUCI Live app. To define your own csv-formatted phonebook for your reporters we have an example and a reference CSV formatted phonebook on our support page of our website. In this phonebook you can define

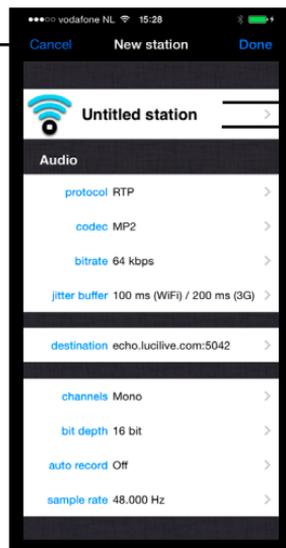
the stations and your log-in details. [Go to contents](#)



Stations > + > Custom station > New Station



By choosing Custom station you will start the menu for setting up a new station.



By choosing Custom station you will start the menu for setting up a new station. As the Echo Server was checked before, your New station window will have exactly the same settings as the Echo server.

untitled station

From here you will be prompted to 'Title'.

> Title

Fill in the name of your station. Always start by giving the new station a name, otherwise it will not be saved. In this case we will name it Studio 1 and alter the settings.



Stations > + > Custom station > New station

Audio > Streaming

protocol

The following supported protocols can be set:

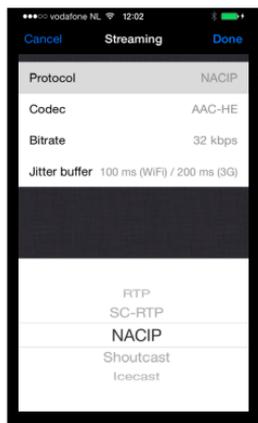
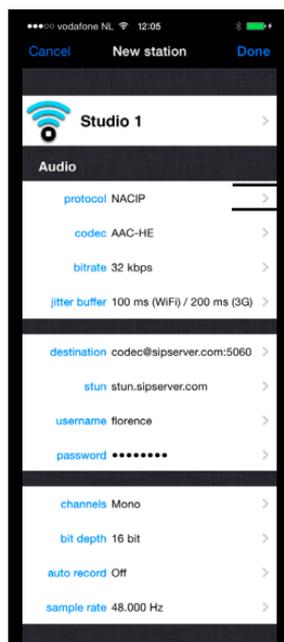
RTP: send and receive a symmetric RTP stream with integrated signalling.

SC-RTP: send and receive a symmetric RTP stream with integrated signalling. Send the same stream on all available active network-interfaces. So when you have 3G and a WIFI connection, LUCI will send 2 streams. This way, if 1 connection breaks up, the studio will still receive the other. In addition to this, LUCI will send also streams via IPV4 and PV6 if the network-interface and the studio support it.

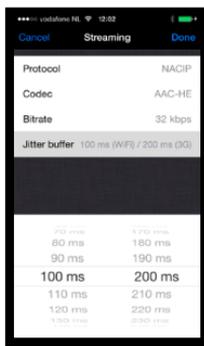
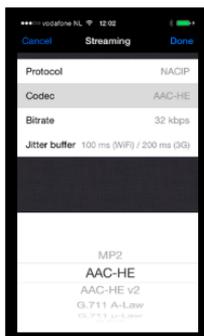
N/ACIP: is an EBU standard that is basically the same as SIP. You can use N/ACIP in combination with formats like G711, G722 to connect to standard VOIP equipment. Or use other codecs like AAC-HE or MP2 to connect to other N/ACIP compliant codecs.

Shoutcast: Luci can be a source for a Shoutcast internet radio station you operate.

Icecast: Luci can be a source for an Icecast internet radio station you operate.



Audio > Streaming



codec

Select here one of the following codec formats for the outgoing stream to the studio:

MP2

AAC-HE or AAC-HE v2

G.711 A-Law or G711 u-Law

G.722

L16

ULCC or ULCC-S

bitrate

Default value is set on 64 kbps. Set the bitrate of the codec format you select.

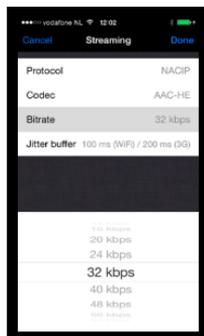
For the outgoing stream.

Supported bitrates

depend on the chosen codec.

jitter buffer

Default value 100 ms (WiFi) / 200 ms (3G). Supported buffer length WiFi and 3G: **10 ms to 500 ms**. This is the jitter buffer that LUCI uses for the RETURN stream. This will NOT have any influence on the outgoing stream to the studio.



Overview for the supported codecs and bitrates

MP2 mono	>	40 - 192 kbps	L16 mono	>	768 kbps
MP2 stereo	>	112 - 384 kbps	L16 stereo	>	1536 kbps
AAC-HE mono	>	12 - 64 kbps	ULCC mono	>	252 kbps
AAC-HE v2 mono and stereo	>	18 - 64 kbps	ULCC stereo	>	492 kbps
G.711 A-Law mono	>	64 kbps	ULVV-S mono	>	51 kbps
G.711 u-Law mono	>	64 kbps			
G.722 mono	>	64 kbps			

Stations > + > Custom station > New station

destination

From here you will be prompted to 'Host' for filling in the IP address of your station, the Port number and the Stun (use only for N/ACIP protocol if needed)

Audio > Host

host

The connection details of the server/codec

For protocol RTP

Use an IP-address or URL

examples: 83.163.21.56 or echo.lucilive.com

For Protocol N/ACIP *

Use CODEC@SIPSERVER or CODEC (when there is no SIPserver) where SIPSERVER is the URL or IP-address of the SIPserver

examples: echo@iptel.org or 102409@167.45.7.234 or 102.78.90.45

For Protocol Shoutcast or Icecast

Use an IP-address or URL

examples: 83.163.21.56 or shoutcast.lucilive.com

port

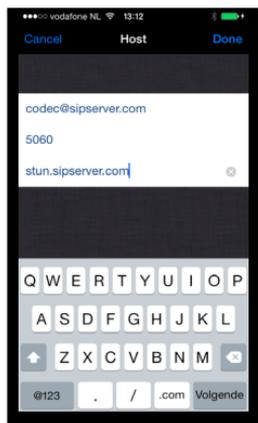
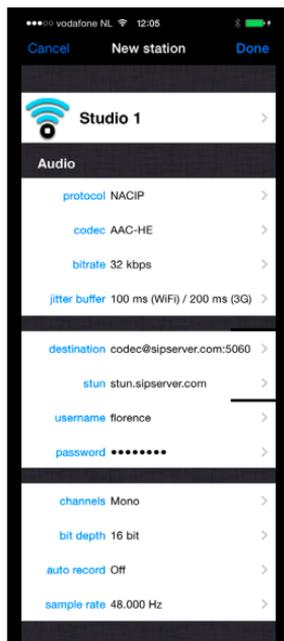
Fill in the port number you want to use.

stun

Only valid for the N/ACIP protocol, when needed.

Use an IP-address or URL

examples: 83.163.21.56 or stun.iptel.org



Stations > + > Custom station > New station

username

From here you will be prompted to 'Credentials' to fill in your login credentials.

Audio > Credentials

default user

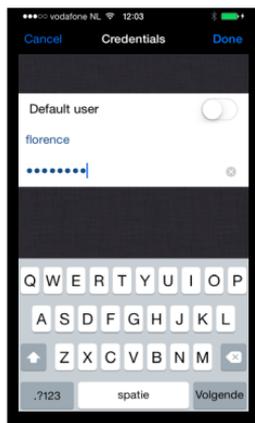
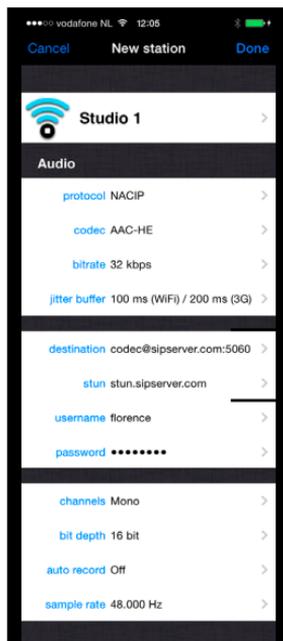
Switch on if you want to use the credentials of the default user that you have set in [Settings>Defaults](#)

username

Your username is the name you use to login at your server. Only fill in username if you want to log in to a N/ACIP, Shoutcast or Icecast server.

password

Your password is your personal log on credential belonging to your username. Passwords are used only together with usernames for logging in to N/ACIP, Shoutcast or Icecast servers.



Stations > + > Custom Station > New Station

Audio > Audio

channels

Default on Mono. Select Stereo if you want to broadcast in Stereo. This depends on the chosen codec ([Stations > New station > Streaming](#)).

bit depth

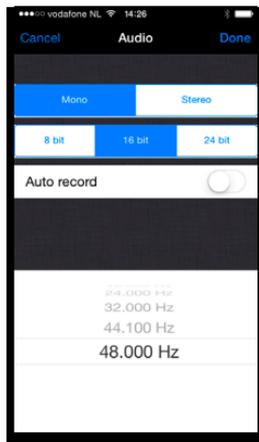
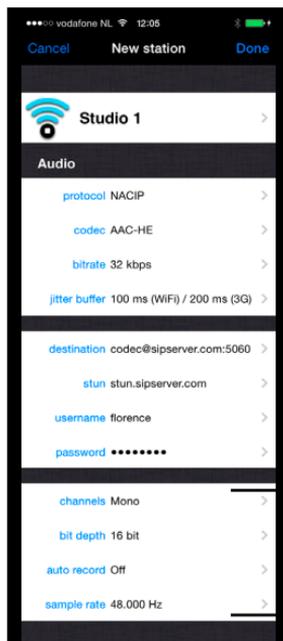
Default value is 16bit. Supported bit depths: 8bit, 16bit or 24bit.

auto record

Default Off. If Activated you will automatically record your outgoing stream when you are connected live with your station.

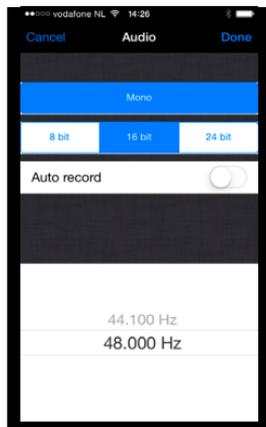
sample rate

Default value 48KHz. Set Sample-rate of the codec format you selected for the outgoing stream.



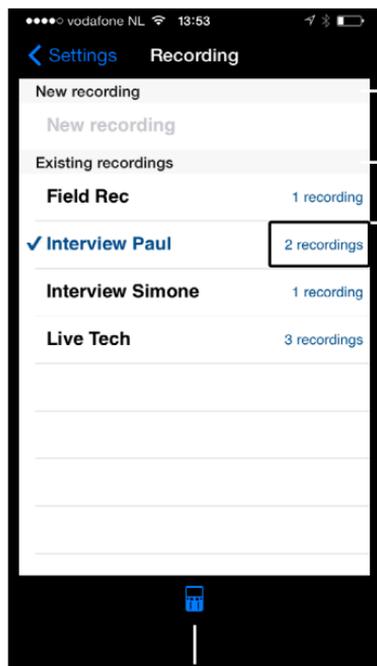
The chosen codec for Studio 1 is AAC-HE and therefore the Mono channel is only visible.

If for instance the codec would be MP2, you could switch to stereo as well.



Settings > Recording

'Record to' in Settings will activate the Recording menu. You can choose either a new recording or one of the existing recordings to become the file you want your next recording to be added to.



Type the name you want to give to your new recording file. If you then go back to the main screen this name appears as the file your live item is recorded to. Your first recording will start if you push the REC On button (number 001 appears in between the brackets).

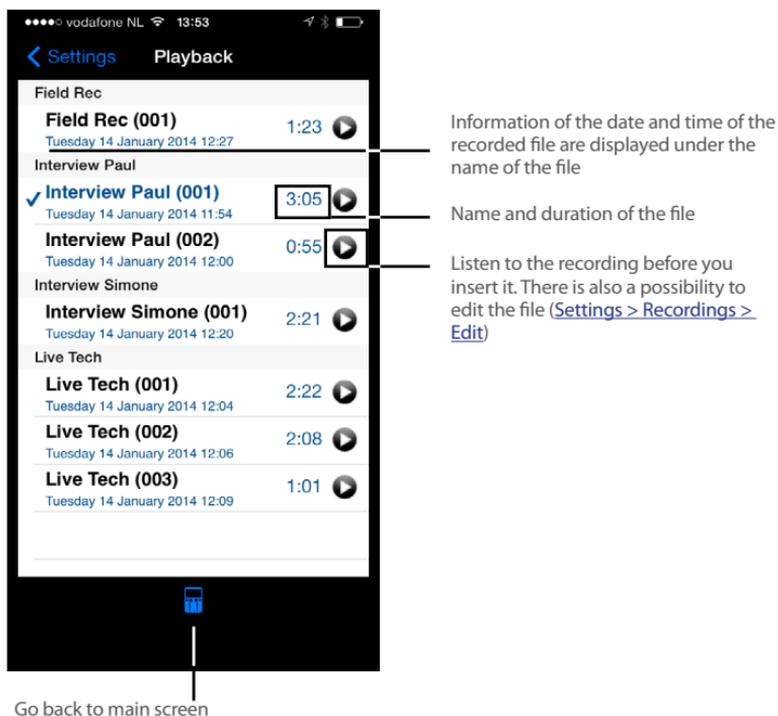
On the right side of the existing recordings you will see the amount of recorded files of each specific recorded session. To choose an existing recording tap its name, a checkmark will indicate the chosen file. The next time you will start a recording, this name appears in the main screen. If you then push the REC On button the next number will show automatically to this name (between the brackets).

Go back to main screen

NOTE: For each new recording the number between the () will increment and a new file will be written.

Settings > Playback

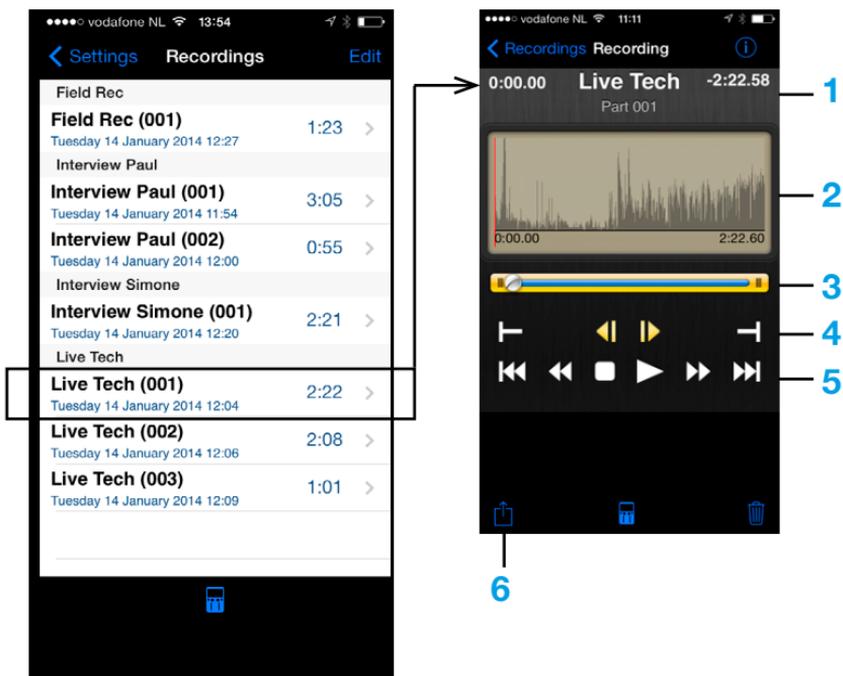
'Play from' of Settings will direct you to the 'Playback' menu. Here you will find the list with your recorded sessions and files. A session can include different files. To choose one of the files for playback just tap it, a checkmark will appear in front of the file which indicates the selected playback file. If you then go back to the main screen this name appears as the file that will be inserted into your live item. If you then push the PLAY button this file will be played and the MIC will be automatically muted.



NOTE: By clicking and holding on a name of a file you will be prompted to choose an installed application to open the file with.

Settings > Recordings > Recording

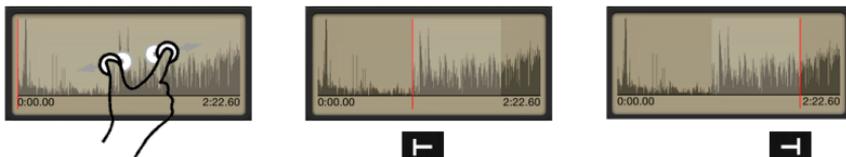
'Edit recordings' of Settings will direct you to the 'Recordings' menu. Mind the S, this menu is different than the 'Recording' menu as this is the menu to edit your recordings and even publish separately to an FTP server or to another application installed on your iOS device. By selecting one of the recorded files the editor will be started. In this case we selected the file: Live Tech (001).



1. The name of the recording, start and end time
2. Waveform representation of the recording
3. Scroll bar
4. Edit navigation buttons
5. Playback navigation buttons
6. Publish this

Start editing

Zoom in and out your waveform screen by pinching and zooming. Set markers Left and Right to define the beginning and ending. You can drag using the scroll bar (1) to the desired location of the recording. To fine adjust you can use the two buttons (2). By pressing the set marker left button (3), the playback starting time will be set. To define a different end of recording position, drag the score button (1) to the desired position and press the set marker right / end selection button (4).



The selected area will be highlighted in the waveform screen and only this part of the file will be published. By clicking the publish button (5) you will be prompted to publish the selection you made to an FTP server or to another application installed on your iOS device.



NOTE: You did some non-destructive cut and copy. You can delete the file by tapping the trashcan (6).

Settings > Recordings > Recording > Publish



By clicking the publish button you will be prompted by a dialog to publish the selection you made to an FTP server or to another application installed on your iOS device. If you choose FTP the 'Publish' menu will open.

file name

This is the name of the file to be broadcasted

ftp address

Please fill in the FTP address you want to publish to

username

If needed please fill here the user name for your FTP server

password

If needed please fill here your password needed for your FTP server

codec

Here you can set the codec of the published file

bitrate

Here you can set the bitrate of the file

BWF

BWF Broadcast Wave File is by default activated

reporter/description/

country/organisation

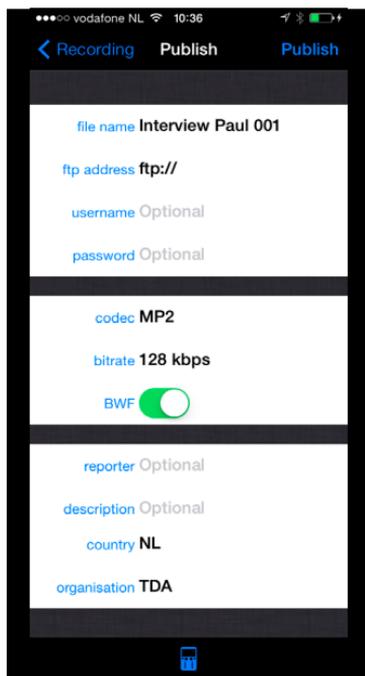
The last part is your metadata that will be sent along with your audiofile. You will see these parameters only when BWF is activated

publish

If you have completed all fields you can then choose publish in the top right corner.

NOTE: All your recordings are uncompressed by default. If you need to send your file compressed set the right codec in order to do so.

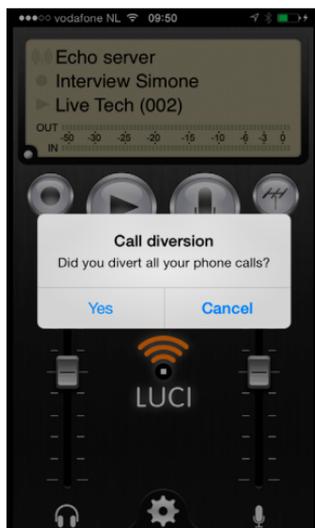
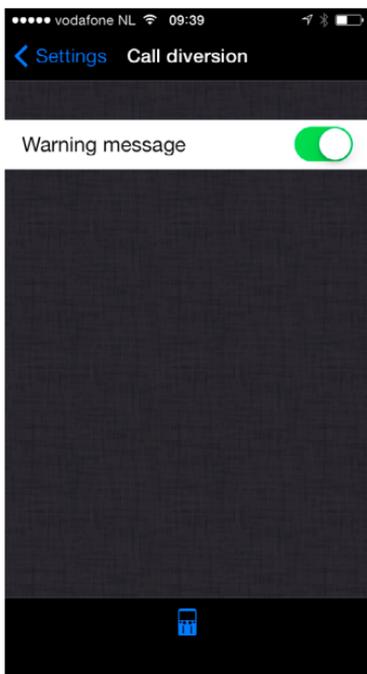
NOTE: Scroll down if you don't see all parameters.



Settings > Call diversion

'Call diversion warning' in Settings will direct you to the 'Call diversion' menu. By default the warning message function is disabled. Enabling this function will result in a warning message appearing on the main screen of LUCI Live every time you activate the Antenna button in order to broadcast live.

NOTE: The warning message can be annoying but on the other hand you will not like it if your phone rings while you are on the air live. Check your iOS manual for diverting your calls so you will not be disturbed during your live broadcast.



Settings > XTalk Compensation

'XTalk compensation' in Settings is on by default. That means that cross talk on the headset will be cancelled. If you use a headset or MIKI cable and the radio-station hears themselves back too loud, turning compensate On is advised. This will cause LUCI to output inverted audio on the L and R headphone output.



Settings > Defaults

This submenu is used to set up your username and password for your SIP server.

username

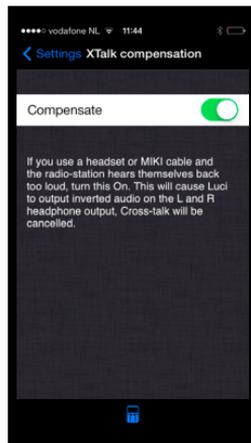
Fill in the username you use to log in at your server

password

Fill in your password belonging to your username

SIP server

Fill in the address of your SIP server



Settings > General

This will get you to the additional general settings.

N/ACIP RTP port

Fill in the port number of the RTP stream of a N/ACIP connection. Default value is set on 5004

Auto load recordings

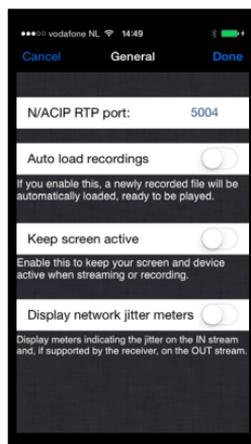
Is default Off. If you enable this, a newly recorded file will be automatically loaded, ready to be played.

Keep screen active

Enable this to keep your screen and device active when streaming or recording.

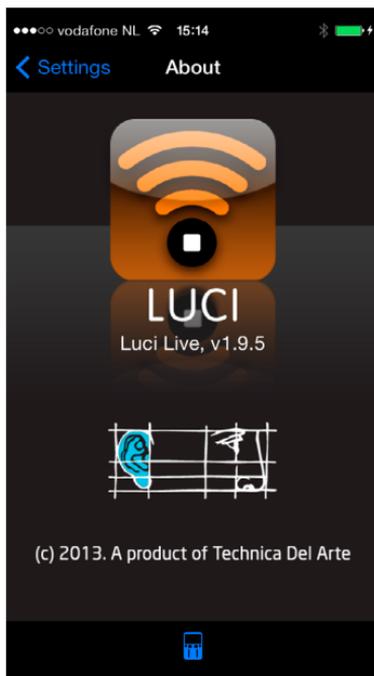
Display network jitter meters

Display meters indicating the jitter on the IN stream and, if supported by the receiver, on the OUT stream.



Settings > About

The About screen of LUCI Live tells you what version you have and gives you information about the developers. Check out the website www.luci.eu for the latest news on upgrades, updates, features and applications. LUCI Live is constantly updated to the latest IP technology and standards. All updates are free. For upgrades to LUCI Live AV for instance - adding the LUCI Live Video features to LUCI Live Audio - there will be extra but reasonable charges.



Learn more

[Development blogs](#)

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