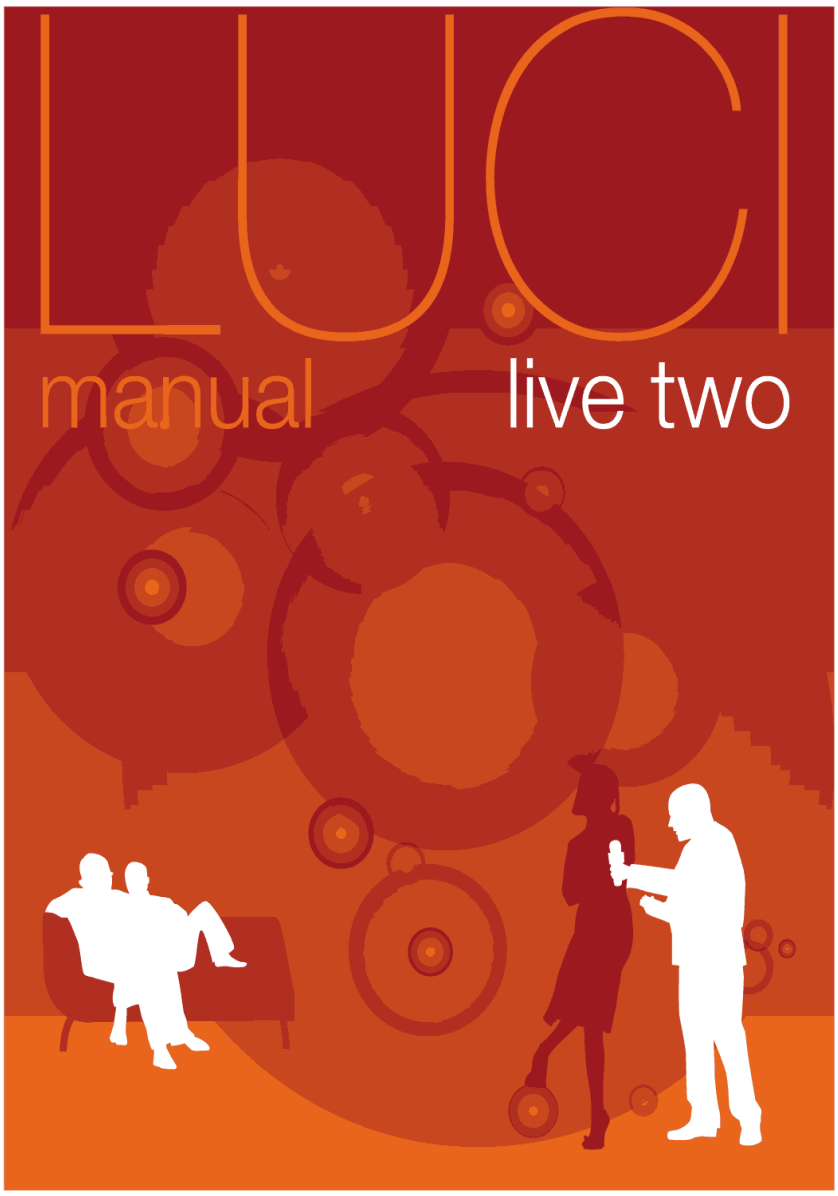


luci TECHNICA DEL ARTE

Luci Live manual, Version 2.1

introduction Luci® live two

Live two way LOW DELAY broadcast, combined with Luci® edit it can even play pre-recorded material while broadcasting

Congratulations with your choice of Luci® live two! Luci® live two transforms your PC, PocketPC or Smartphone into a high quality live internet broadcasting source. Until now you had to use very expensive satellite-time or the suchlike, but now, with the emergence of high-speed wireless internet access and the use of Luci® live two, the cost of live broadcasting is practically zero. We have also built in the possibility to record while broadcasting live, so if something goes wrong you'll still have your original recording to send later on.

Luci® live two has the Luci engine ´under the hood´: you can depend on reliable technology and software, while many features of Luci are also available in Luci® live two, like Input-equalizing and support for high-quality accessories. Luci® live two can even play pre-recorded material while broadcasting!

The main features of Luci® live two are listed below

o RTP or UDP low-delay streaming, two-way, so including a return-channel
o N/ACIP, Shoutcast or icecast server compatible
o ipv4 and ipv6 compatible
o Record while broadcasting
o Play pre-recorded material while broadcasting (if combined with Luci® or Luci® Edit)
o Realtime mpeg-conversion to mp2 and many other AAC variations, 48 kHz sample-rate, 32 to 256 kbps. Mono or stereo.
o Other codecs available upon request
o Excellent broadcast quality
o Constantly updated to the latest IP-technology and standards
o Application also available for personal computer or laptop
o Free helpdesk via email at support@luci.eu

This manual consist of 5 main chapters

SYSTEM REQUIREMENTS
The kind of devices needed, software compatibility, audio cards, plugs etc. for both users, reporters, backoffice and program makers / technicians or web (radio) masters

QUICK INSTALLATION GUIDE
Both software installation and license or registration process is explained in detail for both users, reporters, backoffice and program makers

USER GUIDE / WORKFLOW
For users i.e. reporters who are using a PocketPC equipped with Luci® Software

SET-UP TECHNICAL GUIDE
LuciSetup allows backoffice / program makers / technicians or web (radio) masters to define the technical set-up and the general behaviour of the software

HOW TO
Guides for setting up Luci as a server.

system requirements

Luci® Software can be installed on your PocketPC, personal computer or laptop

In order to install and have optimum use of all Luci® software on your device, you must have one of the following:

For PocketPC:
o Microsoft Windows Mobile 5 and higher
o PPC 2003 SE
o PPC 2003

To see what version you have, go to the Start / Settings / About screen of your PocketPC. Luci for Windows Mobile 5 is recommended if you have Windows Mobile 5.

For PC:
o Windows 7
o Windows Vista
o Windows XP
o Windows 2000
o Windows NT

Minimal technical requirements of a PocketPC:
o Processor of 200 Mhz
o 5 Mbyte of free program-memory

Look at Start / Settings / Memory

Preferred minimal requirements of a PocketPC for ultimate reliability :
o Processor of 400 Mhz
o Flash-card with SLC technology. Like Transcend 1GB 80X type or Sandisk Premier Micro SD-card.

Preferred requirements of a PocketPC with ease of use in mind:
o Headset input with 2.5 or 3.5 mm jack input. For reliable connection of external microphones
o Non-square screen

Preferred requirements of a PocketPC for maximum connectivity:
o GSM
o Wifi
o HSDPA
o Bluetooth stereo

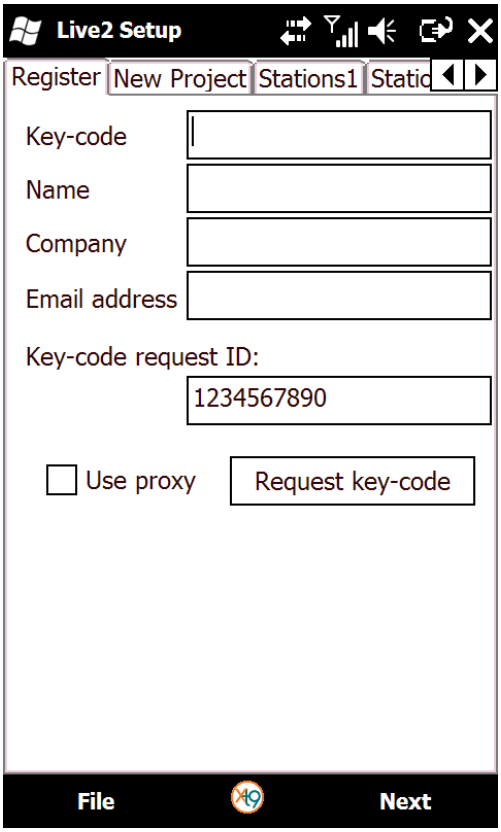
quick installation guide

Software installation

There are 2 ways to install Luci:

- Download the 'PC-install' program directly from www.luci.eu/downloads.html This enables you to install the software with your PC through your ActiveSync connection.
- Download the 'cab'-file directly from www.luci.eu/downloads.html with your PDA and start the installation directly on your PDA.

License installation



Start set up in your Programs Folder

You will now enter the page Register

If you have purchased Luci online via www.luci.eu/purchase.html , your Keycode request ID will be issued in your order confirmation e-mail. If you have purchased Luci any other way you will also receive an e-mail with these important numbers. Be sure to save these numbers in case you need to re-install your Luci® Software.

Registration is the process of unlocking your software for one particular PDA. To unlock, you request a unique 'key-code' that belongs to the particular PDA you use to register and want to use Luci on.

When you buy 1 or more licenses for Luci, you receive only 1 Key-code request ID from us that enables you to request the purchased number of different key-codes from our license server. For each PDA that you register, fill in the key-code request ID and press 'Request key-code'. First, a message appears to confirm that you have an internet-connection:

- If you have an internet-connection and answer OK you will receive the key-code after a few seconds.
- If you do not have an internet connection and still answer OK a license-file called 'Key-code request ID'.lrg (ie 1234567890.lrg in the example on your left) is copied to the 'My documents'-folder. Send this file to sales@luci.eu and we will email you the keycode back.If you use a PC , this file is located int eh installation folder of Luci, usually "Program files\Technica Del Arte\Luci Live2\".
- When you **do** have an internet-connection but something goes wrong you can also email this file to sales@luci.eu.

After you have pressed 'Request key-code' and you received the Key-code it is automatically filled into the field called 'Key-code' and a message appears to indicate how many licenses you have left if you purchased more than one.

Go to adjust the next page or choose menu "File/Save and exit" to save and leave Setup

user guide / workflow

go live

Start Luci live two in your Programs Folder

You will now enter the main 'Go Live' tool that you use to work with.

EXPLANATORY FIELDS AND BUTTONS

my station
Tap on this field and you can choose the station that you want to connect to if you have more than 1 profile setup with Live2Setup. If you have chosen a shoutcast or icecast station you can type in the name of the 'song-title' that will appear in all of your listeners internet radio player
OUT Level-meter
This is the level-meter of the outgoing signal on the internet. Including a peak-hold
IN Level-meter
This is the level-meter of the incoming return signal. Including a peak-hold and a little light with 3 states: off for no incoming signal, green for incoming signal without errors, red when a receiving error occurred
No file loaded
If you load a file for playing while broadcasting, its name will appear here. Now it's only telling you that you have no file loaded yet
Default1-00
The name that will be used when you make a recording
00m:00s
The length of the current recording in minutes:seconds
Furthermore you see 2 big buttons and 2 smaller buttons:
The big buttons are the ‘Play-button’ (shown in the OFF-state here) for playing a pre-recorded project or file and a ‘MIC-button’ to activate the Microphone (internal or external, shown in the OFF-state here).
The smaller buttons are a 'Record-button' (shown in the OFF-state here also) to start recording and an ‘Antenna-button’ (shown in the OFF-state here) to connect to your internet radio-server.

connect to your server

Press the 'Antenna-button'. Luci live two will try to contact your server you have setup with Luci live two Setup. While doing so, half of this button will flash until a connection is made, then the whole button will be lit.

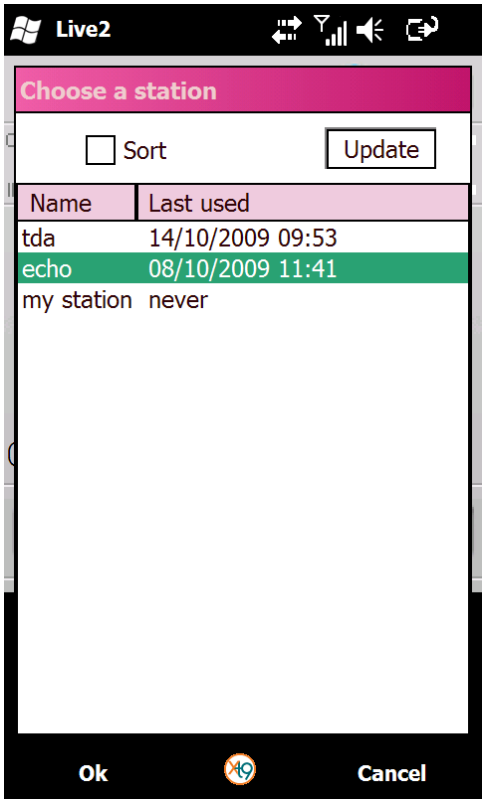
If no connection can be made, flashing will stop after a while and the button will not be lit. Try again and / or contact your program producer back at the radio station.

All set ?

Press the MIC-button to go live

You are now sending your Mic-signal to the server. The server will send a return audio signal back which causes the Input-light to become green indicating you have a valid return signal. You can now communicate with the studio.

If you're using the PC-version you can not move or close this window while you are connected. You must first stop the MIC- and Connect -button. This is a security protection against accidental mouse-clicks that might stop your transmission.



Choose a different station

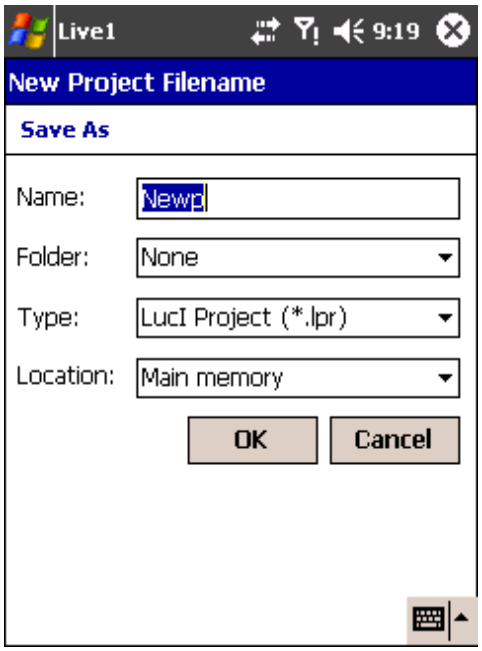
If you have predefined several station profiles in Luci live setup, you can choose the menu-item Tools → Station. Alternatively, you can also click on the name of the station (“my station” in the image above).

A small window appears with all stations in a list. Choose one and press OK to switch over to that station or just double click on one

You can also sort the stations according to the alphabet or the last time you were connected.

user guide / workflow

save live



Recording while broadcasting live

You have the ability to save the live audio that you transmit by recording the item. This is a precaution in case you loose your internet-connection but are still sending important news and you do not want your recordings to get lost. Like in Luci Basic it is best to define a new project before starting to record.

Choose menu File → New project for recording

Luci will then ask your:

Name
Type your projects name
Folder
Select folder in which all project files should be saved
Type
There is only one type of project to select at this moment
Location
Decide if you want to save the project files in the Main Memory or storage card for example. The storage card is recommended

For this example the name 'Newp' is chosen.

If you have set up everything, select OK to confirm the settings and continue, or Cancel to return.

Now Go Live by tapping the MIC-button

Then press the Record-button

The time-indicator will start to run and the name besides the Record-button will be the file you are recording. If you press the Record-button again, recording stops. If you then press the Record-button again, recording continues in the same file as before. Only if you deactivate the MIC-button, this recording will be closed and the filename increments to Newp01 to indicate the new filename you will record the next time.
You can also record without broadcasting Live: Press Record and then MiC or vice-versa.

user guide / workflow

insert pre-recorded material while live

You can play pre-recorded material while you are on the air

For this you must first load a single uncompressed wave-file to play. The file must also contain the same number of channels as the stream you are transmitting. So, stereo file for stereo and mono file for mono. Supported sample rates are 44.1 and 48 Khz. Supported bit depth is 16 or 24-bit.

To load a single file choose menu File → Open file for playing

After you have chosen the file called ‘My Interview00’ for instance, the name will appear above the ‘Play-button’ and the total recorded time of this file will appear at the bottom left of this button.

Add pre-recorded files while broadcasting live

Go live by pressing the MIC-button

After a short live introduction you can now add the pre-recorded file by pressing the ‘Play-button’. You will now see that the MIC is switched off automatically (for the case where you have set the fade to be Auto mic mute in Live2Setup) until the playing of the pre-recorded file is finished. Then it will switch on again automatically.

Watch the time-indicator at the bottom left of this button. It will start to count down and the ‘Play-button’ will gradually ‘run empty’ (see next screenshot).

If you want to interrupt the transmission of the pre-recorded file: press the ‘Play-button’ again, or press the ‘MIC-button’ in order to immediately switch over to live broadcasting yourself.

You can of course also transmit only pre-recorded files without actually broadcasting live yourself.

playing

Watch the time indicator at the bottom left of the Play-button. It is counting down and the Play-button will gradually 'run empty'. 5 seconds left and then this file has been transmitted completely.

user guide / workflow

keyboard shortcuts

The following keyboard shortcuts are available on the PC:

S = Choose Station

C = Connect

Space-bar= Mic

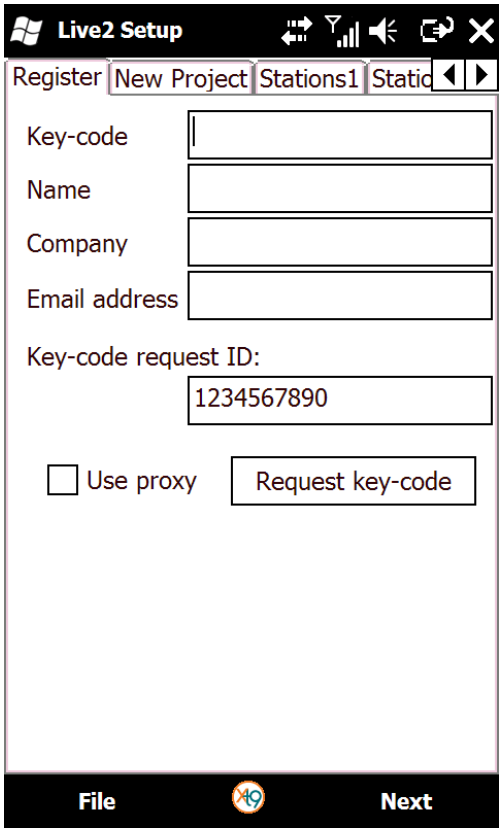
P = Play

L = Load file or project for playing

Switch on the “button-guard” when you are afraid of accidental keyboard-presses, see Setup/Options page

set up technical guide

Register



Start set up in your Programs Folder

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- When you **do** have an internet-connection but something goes wrong you can also email this file to sales@luci.eu.

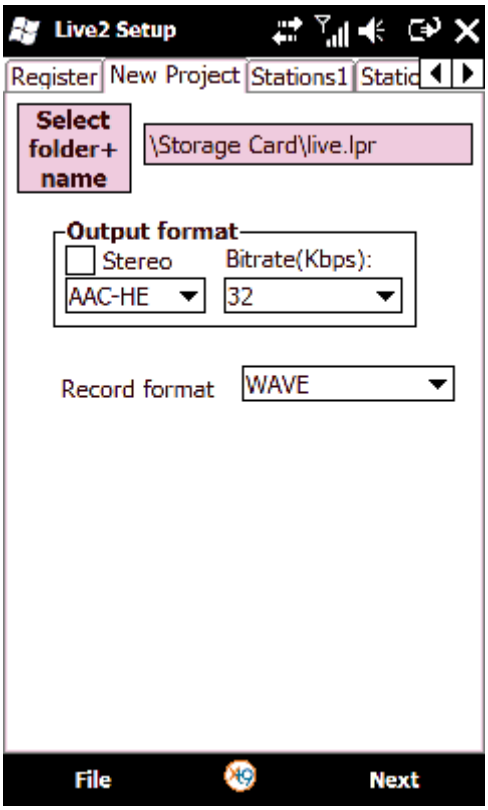
After you have pressed 'Request key-code' and you received the Key-code it is automatically filled into the field called 'Key-code' and a message appears to indicate how many licenses you have left if you purchased more than one.

Go to adjust the next page or choose menu “File/Save and exit” to save and leave Setup

You will now have full access to the Luci® Software with all features included in the application of your choice without any interruption.

set up technical guide

New project



Start set up in your Programs Folder

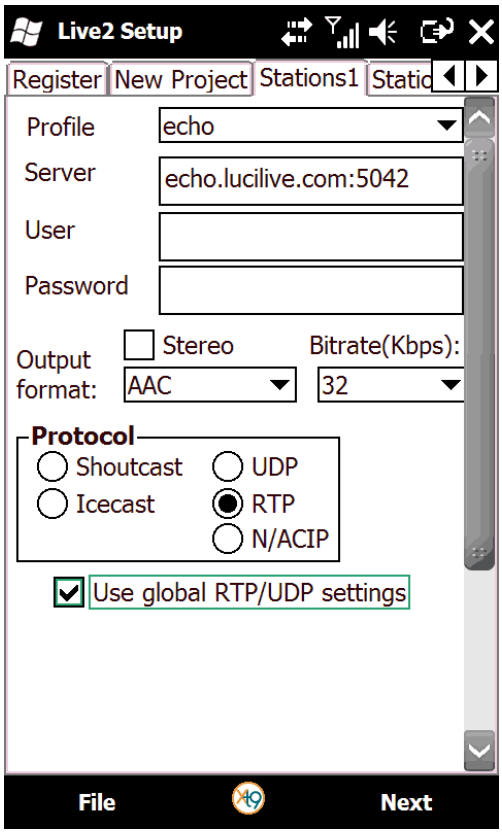
Select page New Project

EXPLANATORY FIELDS AND BUTTONS

Select folder+name
Enables you to select the default folder and name of a new project that is used for recording.
Output format
Stereo
Tick this to broadcast in Stereo.
AAC-HE
If you don't have any other codecs installed, you can only choose MP2. Other codecs can be obtained by purchasing the correct plugin . Activating a plugin will be done during registration. If you buy a plugin after registration you simple re-register with the same keycode and the plugin will be activated.
Bitrate (Kbps)
The bitrate is adjustable. The sample frequency is ALWAYS 48 kHz, even if a PocketPC can only record with 44.1 kHz maximum. Luci contains sample rate converters that are automatically activated when necessary during recording and playback without you having to do anything. Adviced bit rates are dependent of the codec used:
MP2: 48 to 256 kbps.
AAC mono: 32 to 160 kbps
AAC stereo: 64 to 256 kbps
AAC-HE mono: 16 to 64 kbps
AAC-HE stereo: 16 to 128 kbps
AAC-HEv2 stereo: 16 to 56 kbps.
AAC-HE oversampled SBR stereo: 96 to 256 kbps.
ps.: Not all codecs are available on PocketPC or smartphone
Record format
If the user records with the main program, you have 2 options for the format of the recording:
Output format – the recording will be done using the same format as set above. This feature is very useful if you want to locally backup everything that is transmitted without the need of playing this live again.
Wave – the recording will be done in uncompressed wave-format. This is useful if you want to use the recording in Luci Edit or in Luci Live2 again.
Go to adjust the next page or choose menu “File/Save and exit” to save and leave Setup

set up technical guide

Stations1



Start set up in your Programs Folder

Select page Stations1
EXPLANATORY FIELDS AND BUTTONS FOR THE RTP AND UDP PROTOCOL

Profile
You can store up to 100 server profiles. In live two you then have the ability to choose between them. You will see a drop-down list with all currently defined profiles and a profile called ´New´ that enables you to add a new profile and ´Delete´ that will delete the currently selected profile. If you have only 1 profile you can not delete that. Each profile can use a different output format. If you choose Output format “New project” this profile will use the general output format as set before in the 'New project” page. Look at the 'New project' setup for explanation about the different available formats.

Server
The name of your radio server and port-number. In the common form: ´servername:portnr´ for instance ´radio789.com:5004´. If you do not fill in the :portnr Luci will use the default port, which is 5004. If you use Luci live two only as a receiver i.e. server do not fill in the ip-address. But fill in :5004 for instance(including the colon). It will still send a stream back when it receives a valid stream.
Besides using a URL you can also fill in an ip-address.
For ipv4 for instance: 192.168.1.100
For ipv6 you should put the address between square brackets like this: [2001:980:4937:1:1483:291:1351:a206] . You can of course also use a URL with ipv6.

User
Fill in the user-name you use to login at your server.

Password
Fill in the password belonging to your user name. This password can also be used in a simple RTP authentication.

Protocol
Shoutcast, Icecast, RTP, UDP or N/ACIP
Luci Live two's use of the UDP and RTP protocol is explained extensively in the server installation guide. We advice to use RTP on port 5004 .

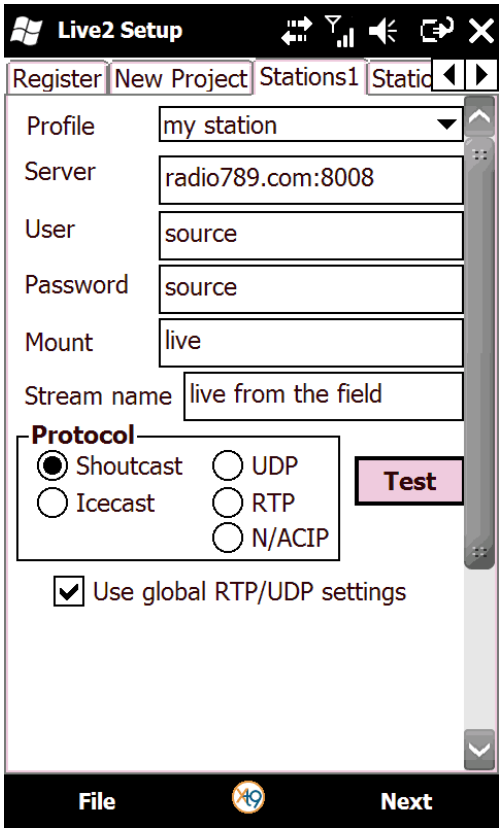
N/ACIP
For this protocol you should use the following conventions for the different fields.
Field *Server:* “user@URL:port”
So, “user” is the one who you want to call. If you want to call without specifying a user name, just enter here something like “dummy”.
Some examples:

- “502@204.24.156.12:5062″ means you want to call user 502 at ip-address 204.24.156.12 on sip-port 5062
- “echo@iptel.org” means you call user echo at iptel.org on sip-port 5060 (5060 is the default when no port has been specified). Btw, this address actually works, but only with G711 codecs.

Fields *User* and *Password* are YOUR credentials when you want to logon to a sip-server. When you do NOT specify a user, Luci will not try to REGISTER to the sip-server.

Use global RTP/UDP settings
You can have different RTP/UDP settings per station or you can use the global RTP/UDP settings set with the RTP/UDP page. For an explanation of the settings, see the RTP/UDP page.

Go to adjust the next page or choose menu “File/Save and exit” to save and leave Setup



EXPLANATORY FIELDS AND BUTTONS FOR THE SHOUTCAST AND ICECAST PROTOCOL

If you have chosen the shoutcast or icecast protocol you will see another feature list, as can be seen on the left. Some features are removed, others are added:

Mount
The mount-name, for Icecast servers.

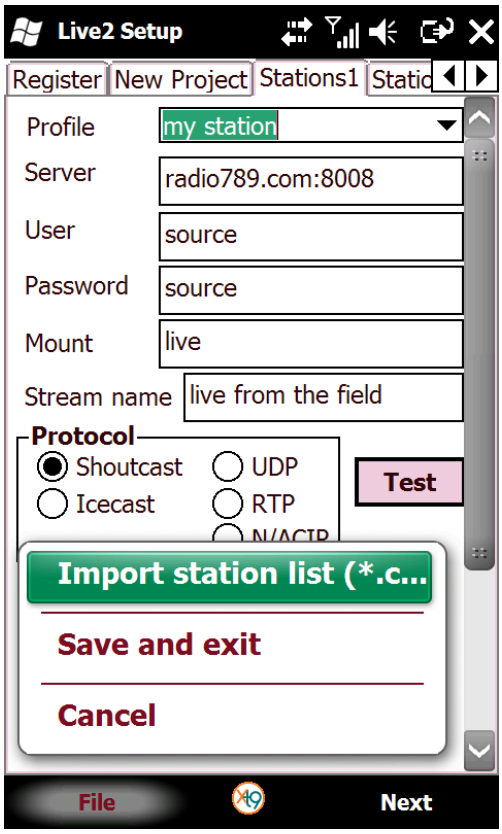
Stream name
The name of your radio-station.

Test
You can test your server-settings with this button. Luci live two will try to contact your server.

Go to adjust the next page or choose menu “File/Save and exit” to save and leave Setup

set up technical guide

Import station list



To save you the burden of manually inputting a long list of servers you can use also use a spreadsheet to define your stations and imort this spreadsheet in Setup.
File-format is csv (comma seperated values), this is a common format for simple lists which can be made and edited with any spreadsheet or even text-editor. Below you see an example list. The first line of the csv-file must be the same as the first line of this example.
All entries are not case-sensitive while the is optional. Each line beneath the first line represents a different server-profile.

Entries are self-explaining, for the encoder format use the same words as in the drop down menu's of Live2Setup.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Profile	Server	User	Password	Mount	Description	Protocol	Encoder	Mode	Bitrate		
2	Listen to rtp	:5004					UDP	mp2	mono	64		
3	Myself	127.0.0.1:5004	joost	mypassword	mymount	myradio	icecast	HQ SBR	stereo	32		
4	technica	technicadelarte.com					rtp	aac	mono	64		
5												
6												
7												
8												

set up technical guide

Stations2

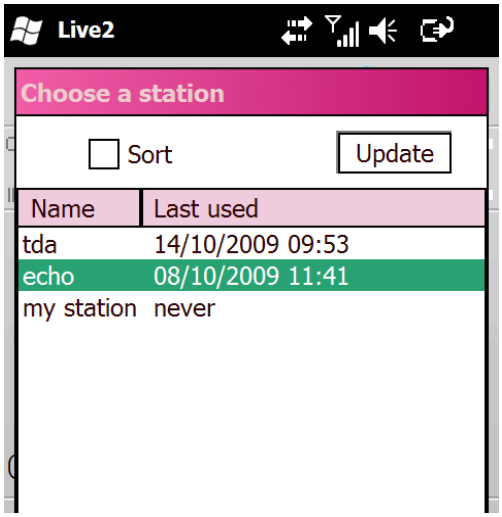
Start set up in your Programs Folder

Select page Stations2
The user can update the list with a station-list you can store on any webserver. Format (CSV) is the same as import station-list.

EXPLANATORY FIELDS AND BUTTONS.

External station file URL
Only when a URL is entered the user will see a button called “Update” in the “Choose a Station” window, see image below. The imported stations are appended to the local list from Live2Setup and cached locally. The list is always updated manually, no automatic update takes place.

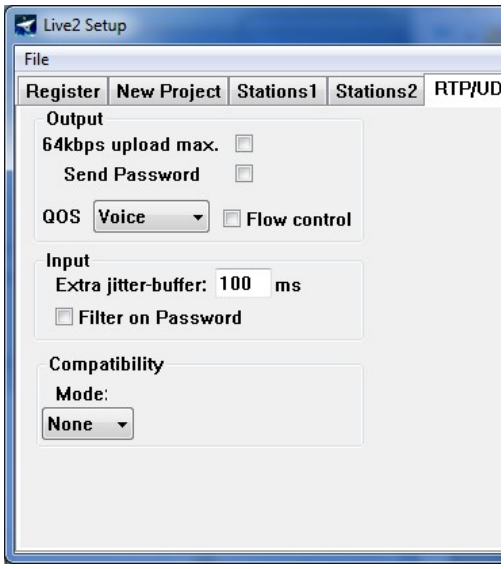
Go to adjust the next page or choose menu “File/Save and exit” to save and leave Setup



The user will see a button called “Update”.

set up technical guide

RTP / UDP



Start set up in your Programs Folder

Select page RTP / UDP
EXPLANATORY FIELDS AND BUTTONS

Output
64kbps upload max.
If you have an upload connection of only 64 kbps you must tick this box. Luci will then only allow you to choose bitrates of 32,48 and 56 kbps. And because extra bytes have to be sent for the internet protocol, Luci will also optimize the data that is sent so that it really fits 64kbps with the shortest possible delay.
Send password
Only valid for RTP protocol. Luci will encrypt the password and send it with the RTP-protocol in the so-called SSRC field. At the receiver, this can then be used to authenticate a stream.
This is not standardized within the RTP protocol but is a simple way to add extra security and authentication. At this moment this only works with Luci at the receiving end.
QOS
Quality Of Service uses the DiffServ conventions to define the type of stream that Luci sends in ipv4 or ipv6 packets. You can set the type “Voice” for maximum priority and “Audio/Video” for slightly less priority as Voice.
Flow control
When QOS is set you can enable “Flow control” which will let the Windows OS manage the stream better as the streaming bitrate will be known to the OS.

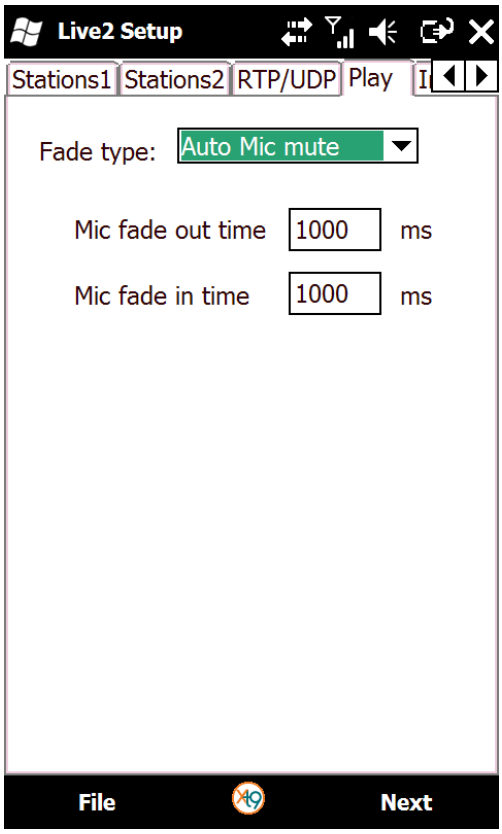
Input
Extra jitter-buffer
Fill in the number of milliseconds you want to use for the buffer to compensate for network-jitter.
Filter on password
Only valid for RTP protocol. If you receive a stream from another Luci live two you can refuse any stream that hasn't got the same password set as you.

Compatibility
Choose the compatibility mode when you connect to an IP-codec that needs special signalling to work with Luci. At the moment we only have a Mayah Centauri compatibility mode where you can choose the format and bitrate of the return-signal.

Go to adjust the next page or choose menu “File/Save and exit” to save and leave Setup

set up technical guide

Play



Start set up in your Programs Folder

Select page Play
Here you can set how the Mic-input is muted when you play pre recorded files. You can choose to mute instantly, or fade in and out, or even gently cross-fade.

EXPLANATORY FIELDS AND BUTTONS

Fade type
In this drop-down menu you will find 5 options:

1. **Auto Mic mute**
   The Mic is muted instantly when you press the play button and is automatically switched on when the playing stops.
2. **Manual Mic mute**
   When you start to play the file the Mic is only muted when you manually switch it off. You must also manually switch it on again near the end of the playing file.
3. **Auto Mic fade**
   Like 1. but now the Mic is faded out with the fade-time you set in the below field 'Mic fade out time'. The same goes for the fade-in near the end of the playing file.
4. **Manual Mic fade**
   Like 3. but now you have to manually start the fade-out and fade-in.
5. **Auto Xfade**
   A gentle cross-fade is made between the playing file and the Mic. Using the fade-out and -in times set below. Fade-out time is for when you start playing the file. Fade-in time is for near the end of the playing file.

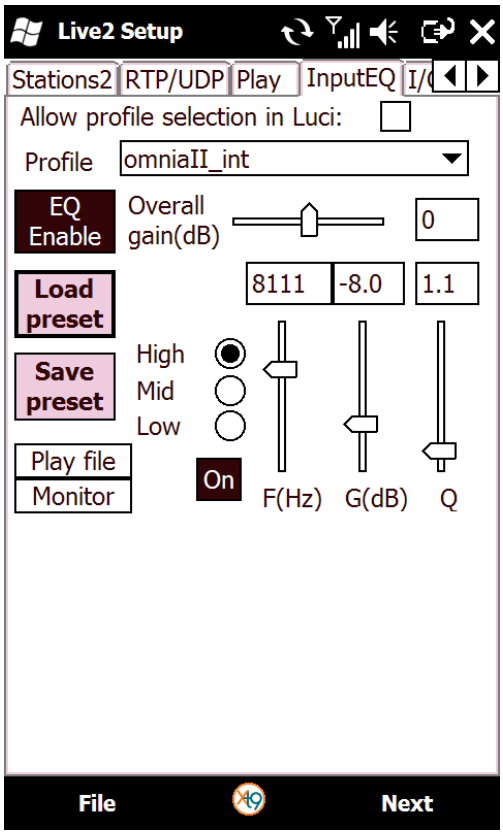
Mic fade out time
Type in the nu,ber of milliseconds you want the fade-out to last.

Mic fade in time
Type in the nu,ber of milliseconds you want the fade-in to last.

Go to adjust the next page or choose menu “File/Save and exit” to save and leave Setup.

set up technical guide

InputEQ



Start set up in your Programs Folder

Select page InputEQ

The 'Input EQ' enables you to perform some equalizing during recording so you can improve the frequency-response or sound-quality of any Pocket PC. We also added support for saving and loading presets, so you can use equalizing for already known Pocket PC's.
Check http://www.luci.eu/downloads.html for available EQ presets.
To set or adjust the EQ yourself you have the ability to play a prerecorded un-EQ'd wav-file, while you are adjusting the EQ:
If you do not have Luci installed yet, install Luci. First you use LuciSetup to enable Luci to record a wav-file ('new project'-tab) and no Input EQ (deselect 'EQ Enable'). Start Luci, create a new project and record a test-file while you are speaking into the microphone you are going to use, the recorded file will be called 'default00.wav' for instance. Quit Luci and start live two Setup, go to the Input EQ and press 'Play file', you can choose any wav-file you have recorded earlier, but for this example choose 'default00.wav'. The recording will be played continuously, so you can now set the EQ to improve the quality of the recording. Be sure to select 'EQ Enable' and press 'On' for every band you want to use.

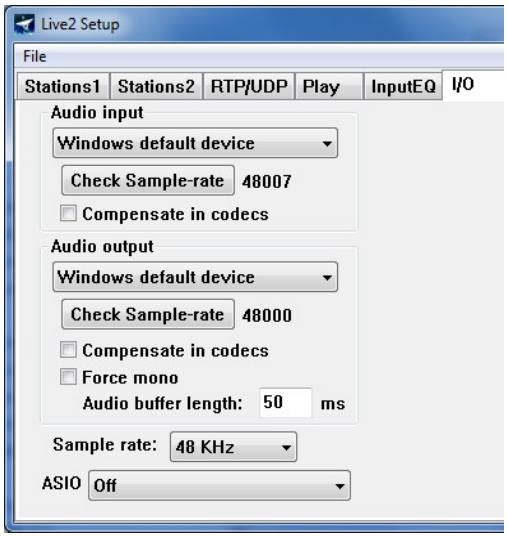
EXPLANATORY FIELDS AND BUTTONS

Allow profile selection in Luci
Switch this on to allow the user to choose an Input EQ type you predefined here. This allows them to use different EQ settings for internal Microphone, external Microphone of type A, external Microphone of type B , etc.
Profile
Choose a profile or give a profile a name. You can define 5 profiles maximum.
Overall gain
Set the overall gain of this EQ setting.
High – Mid - Low
There are 3 parametric bands available: low, mid and high. You can individually switch On or Off each band.
EQ Enable
Here you can switch On or Off the EQ all together.

Go to adjust the next page or choose menu “File/Save and exit” to save and leave Setup

set up technical guide

I / O



Start set up in your Programs Folder

Select page I / O

The I/O (Input / Output) tab enables you to setup the audio input and output.

EXPLANATORY FIELDS AND BUTTONS

Audio Input
Choose the input you want to use from the drop-down menu.
Check Sample-rate
Many PDA's have a sample-rate that is not as accurate as one likes it to be. With this option you have the ability to measure the exact sample-rate of your PDA and let Luci compensate for this inaccuracy. To measure, press the button 'Check sample-rate' and wait until the sample-rate stabilizes. You will see the real sample-rate of your PDA appearing to the right of the button. 44100 is the value it is supposed to be. Some PDA's have a sample-rate that is even as high as 44300
Compensate in codecs
Mark the box 'Compensate in codecs' to let Luci compensate for any inaccuracy encountered in the sample-rate.
On a PC this is not necessary.

Audio Output
Choose the output you want to use from the drop-down menu.
Check Sample-rate
Same as above
Compensate in codecs
Mark the box 'Compensate in codecs' to let Luci compensate for any inaccuracy encountered in the sample-rate.
On a PC this is not necessary.
Force mono
Force the output to be mono always even when a stereo stream arrives. This can be useful for devices that can not output a stereo audio-signal.
Generally , switch this On on the remote device and Off when Luci is used as a server.
Audio buffer length
Here you can set the buffer-length of the Audio I/O. Usually the default of 50 ms is a good setting, but for a low performance soundcard on Windows Vista or Windows 7 this should be set to 100 to 200 ms.

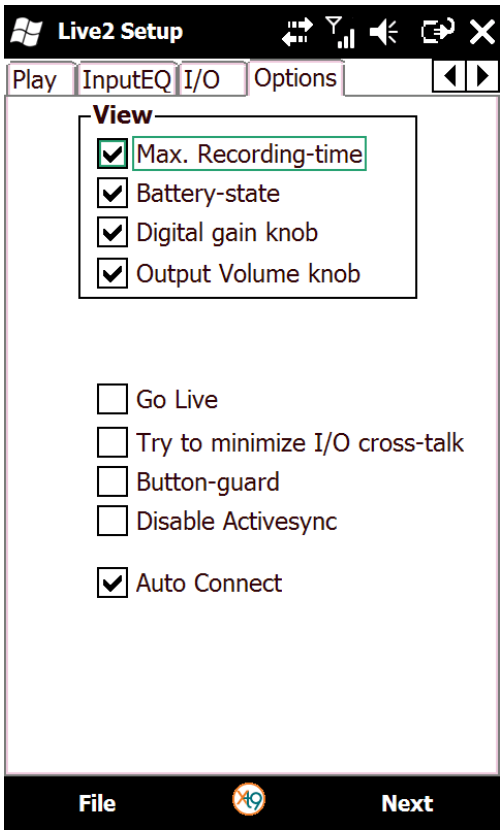
Sample-rate:
Choose the sample-rate for the input and output you want to use. Be careful with a PocketPC ! If you set it at 48 Khz Windows Mobile will probably sample-rate convert it to 44.1 Khz for the audio-drivers to function properly. It's best to leave it at 44.1 Khz on a PocketPC and let Luci's high-quality sample-rate converters convert it to 48 Khz. On PC it's generally safe to set it at 48 Khz.

ASIO
If you have a soundcard with ASIO driver you can choose it here.

Go to adjust the next page or choose menu “File/Save and exit” to save and leave Setup

set up technical guide

Options



Start set up in your Programs Folder

Select page Options
The Options tab enables you to switch On the display of several features of the 'Go Live' tool in Luci live two. In addition you can also switch on and off some options concerning the behaviour of Luci Live2.

EXPLANATORY FIELDS AND BUTTONS

View
Switch on and off some features in the 'Go Live' tool.
Max. Recording time
Show the maximum recording time available
Battery-state
Show the battery-state
Digital gain knob
Show a gain knob in order to adjust the gain of the input.
Output Volume knob
Show an output volume knob in order to adjust the output level.

Go Live
Check this and live two will go on air immediately after starting up

Try to minimize I/O cross-talk
If you experience cross-talk of the return-channel into the signal that is broadcasted, tick this. Luci will then try to reduce this. This only works when an external microphone is connected.

Button-guard
If you enable this, Luci Live2 will ask you for confirmation when you want to stop the live-stream.

Disable Activesync
Activesync sometimes inteerupts the processor to perform tasks in the background, this might causes interruptions in the Live transmission. With this option On Luci will shut down Activesync when you go Live. It's best to switch this on.

Auto Connect
On a PDA only. Connects your PDA to the internet automatically when you want to stream (press the Antenna button).

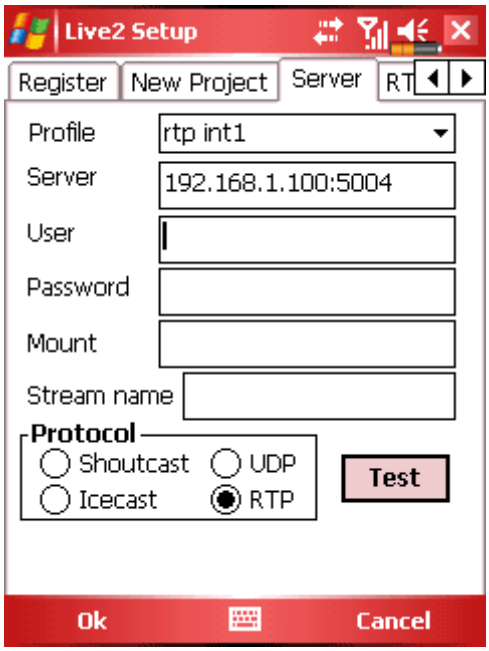
Choose menu “File/Save and exit” to save and leave Setup.

how to

setup and connect Luci live two with another Luci live two

As Luci Live two works in both ways it is easily possible to connect two Luci Live two's together. RTP is the preferred protocol for this. Here is how you setup and use Live two in several network situations.

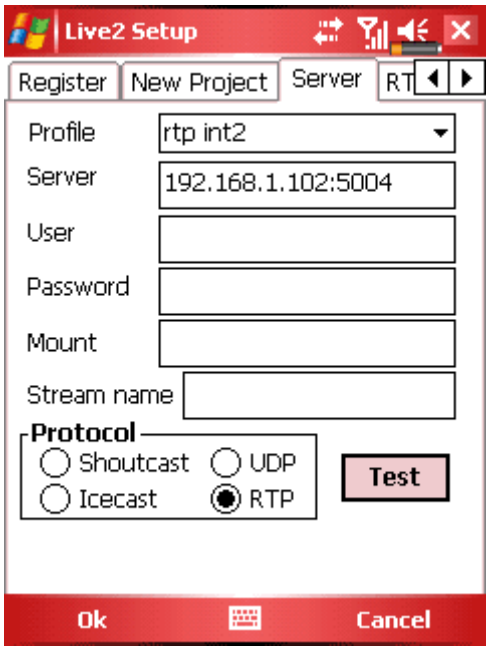
Both on the internal network.



Set the one that's at 192.168.1.102 to connect to the other: 192.168.1.100 at port 5004.

If your network uses computer-names you can also use these names instead of the ip-address. So if for instance 192.168.1.100 is a computer called "intcomp1" you can also fill in " intcomp1:5004 "

If your network uses a DHCP-server, using the computer-names is also the best way to connect.



Set the one that's at 192.168.1.100 to connect to the other: 192.168.1.102 at port 5004.

Start Luci Live two on both, choose the station (rtp int1 for the first in this example) and set them both to connect, like on the left. They will then both listen for an incoming stream on the RTP-port. As soon as one wants to talk, press on the Mic, the stream will arrive at the other end and the other listener hears the other talk and can decide to start talking also by pressing the Mic button.

One side on internal network, the other the internet

This is the common case when you have reporters in the field with Luci Live two on their PDA or laptop and they want to transmit live to the studio for direct transmission on-air.

The studio will have it's own static ip-address and may even have webservers running in house. Luce Live two will then have to be configured for use as a live contributor on the PDA and as a server in the studio.

First thing you have to do is to make sure that the port for RTP (normally 5004) is forwarded to the computer where your copy of Luci Live two is running on (call it a Live-server). This is exactly the same as what you do when you forward traffic for your webserver on port 80 to your webserver.

On the Live-server

All you have to do is to not fill in the name or address of the server (ie. no server) like on the left.

Notice there is no ip-address or URL filled in. Please don't forget the colon before the port number.
This will cause Luci Live two to listen to incoming streams and not send any stream if there is no stream coming in. If it receives a valid stream, it will start sending back to the Ip-address and port where the stream is coming from. This technique is commonly known as "Symmetric RTP" .

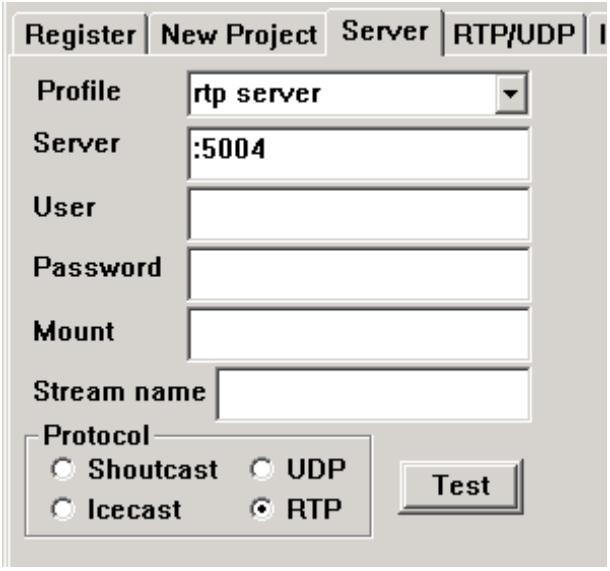
You should use this in combination with the Start-up option "Go Live' in the Options-page of setup.This will cause Luci Live two to immediately start listening when you start the program. It is also wise to put a shortcut to Luci Live two in the startup-folder of your PC, so it starts automatically each time the computer restarts.

On the PDA

You have to fill in the public ip-address or URL of the studio. Like on the left.

how to

setup Luci Live two as a server



Any Luci Live two can act as a mono or stereo server for high quality audio over IP.

To make Luci Live two act as a server, do not fill in any ip-address in the "server"-field at the "Server"-page in Live2Setup. Like you can see on the right. Don't forget to add the colon (:) before the port you want to use. This will cause Luci Live two to listen to incoming streams and not send any stream if there is no stream coming in. If it receives a valid stream, it will start sending back to the Ip-address and port where the stream is coming from. This technique is commonly known as "Symmetric RTP" .

To be able to connect to the server from outside your own network, you must make sure that the port for RTP (normally 5004) is forwarded to the computer where your copy of Luci Live two is running on (call it a Live-server). This is exactly the same as what you do when you forward traffic for your webserver on port 80 to your webserver.

how to

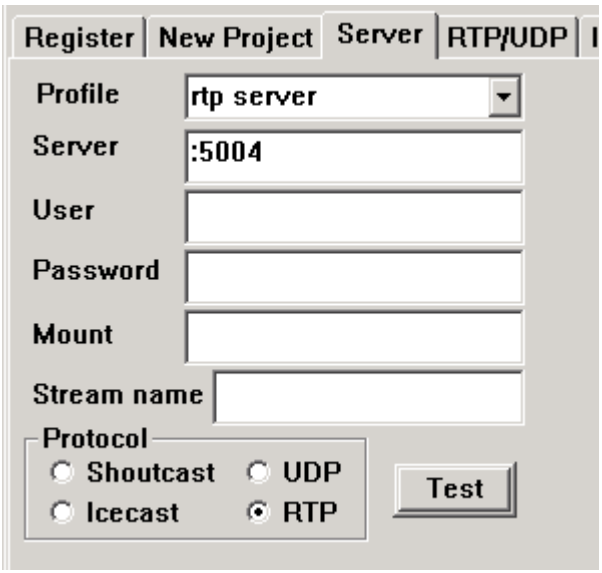
setup Luci Live two as a multi-channel server

It is possible to start Luci live two several times simultaneously on the same PC with different settings. Then there are multiple so-called "instances" of Live2 running which enables you to receive multiple streams simultaneously. To accomplish this do the following.

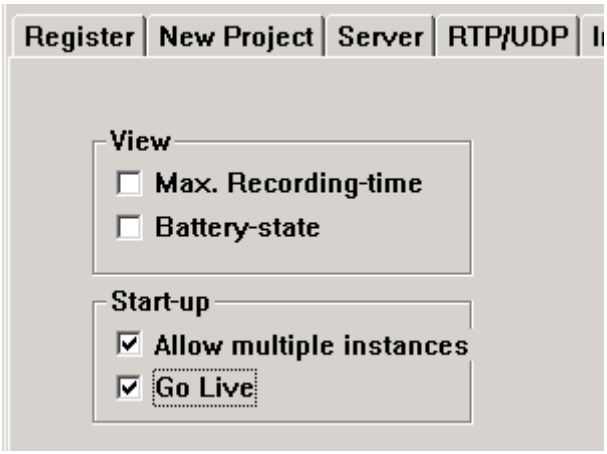
1.Download live2.zip

2.Create as many folders on your harddisk as you want multiple Live two's running. For instance Live2a,Live2b and Live2c

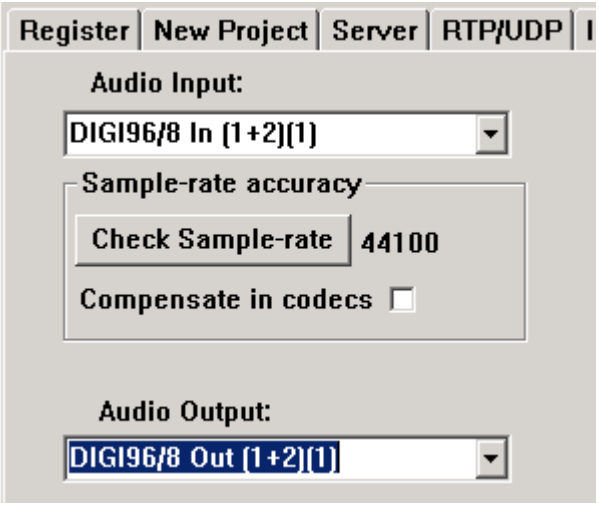
3.Copy the contents of the downloaded zip-file to each of these folders.



4.Start Live2Setup in each of these folders and fill-in a port-number as the server, like :5004. Each instance should have a different port-number , something like :5004, :5006 and :5008



5.Also switch on "Allow multiple instances" and "Go Live" in the Options-page in all Live2Setups.



6.Also choose a different Audio input and output for each instance in the I/O-page in Live2Setup.

7.Copy shortcuts to the individual live2.exe programs in the folders to the start-up folder of your computer.

8.Restart your PC or start the programs all up individually, arrange the windows across the screen.

You now have the ability to receive multiple simultaneous mono or stereo streams that are output at different audio-outputs. Each stream also has separate return-channels.