

# How to install the SHOUTcast server with Barix Instreamer and Barix Exstreamers

The SHOUTcast server is great tool to provide Internet Radio or to multiply your audio stream to many listeners (PCs) or Exstreamers. It is used from many professionals like radio stations, to make the radio sound in the internet available. This software is for free and can be downloaded from <u>www.shoutcast.com</u>. The SHOUTcast software is available for almost all operating systems, Windows, Linux, Solaris and Mac.

The Shoutcast software has currently two versions, Shoutcast V1 and Shoutcast V2 – both are currently in use. The main difference is the new "Stream ID" and the new protocol (Ultravox 2.1) in version V2. Following you can find two chapters, one for Shoutcast version V1 and one for Shoutcast version V2. The thrid chapter informs about the Shoutcast Source DSP for Winamp (Shoutcast DJ-tool)

The Barix Instreamer supports the SHOUTcast authentication and also Icecast authentication, so it is possible to stream directly to the SHOUTcast server and to be a source for the SHOUTcast server. SHOUTcast and Icecast are similar Internet Streaming Server solutions.

The Instreamer itself supports up to 6 http MP3 audio streams at the same time, if this is not sufficient then SHOUTcast is a perfect solution for you.

The newer Shoutcast version 2 even creates some trouble at VBR source streams, for that reason it is recommended to use CBR streaming on the Instreamer! Note, when the Instreamer stream is set to CBR then MP3 Bit Reservouir must be set to "**use**" (under AUDIO)!

### Shoutcast V1

On the SHOUTcast server configuration you can define how many users can listen the stream (default is 32). The limit is depending from the performance of your system and your network. It has a nice administration GUI to set restrictions or for control purposes.

🖉 SHOUTca	st Administrator - V	Vindows In	ternet E	xplorer					
<b>GO</b> -	http://192.168.	10.172:8000	)/admin.cg	i I	• + >	( G Go	ogle		<b>₽</b> •
🔆 Favoriten	🟉 SHOUTcast Ad	ministrator							
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listener	<u>s   tail log</u>	file	vie	w logfile	ban	ist	reserve i	p list	logout
				Listener	List				
	Address	Connec	t Time	Underruns	Kick IP	Ban IP	Ban Subnet	Reserve IP	
	192.168.10.178	3m 3	35s	0	Kick	Ban	<u>Ban</u>	Reserve	
				Current Stream I	nformation				
	Server	Status:	Server	is currently up	and priva	te.			
	Stream	n Status:	Stream	is up at 152 kl	ops with 1	of 32 lis	teners (1 unique	)	
	Listen	er Peak:	2						
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	Stream	n Title:	Instrea	mer					
	Stream	n Genre:	genre						
	Stream	URL:							
	Stream	1 ICQ:							
	Stream	n AIM:							
	Stream	IRC:							
	Curren	t Song:							
	Source	2	192.16	8.10.175[kick]					
Log file: F:\Si Configuratio Name looku Intro file is di Backup file is Auto client di Sourco ideo	HOUTcast\sc_serv.l n file: F:\SHOUTcast\ ps are off isabled s disabled isconnects are disabled isconnects are disabled	og sc_serv.in oled	i						
Incoming int Get XML Stat	erface: <b>192.168.10.1</b> ts: [ <u>Yes]</u> Stats: [Yes]	75:8001 - (	Outgoing	interface: ANY:	8000				

### Shoutcast startup and configuration

After Shoutcast software installation start Shoutcast over the Shoutcast icon or start it by double-clicking the file "sc\_serv.exe" from the shoutcast program folder.

😵 Nullsoft SHOUTcast Server Monitor	
Kill server Hide Monitor Edit log Edit config	About
<ul> <li>*** SHOUT cast Distributed Network Audio Server</li> <li>*** SHOUT cast Distributed Network Audio Server</li> <li>** Copyright (C) 1998-2004 Nullsoft, Inc. All Rights Reserved.</li> <li>** Use "sc_serv filename.ini" to specify an ini file.</li> <li>** Use "sc_serv filename.ini" to specify an ini file.</li> <li>** Use "sc_serv filename.ini" to specify an ini file.</li> <li>** Use "sc_serv filename.ini" to specify an ini file.</li> <li>** Use "sc_serv.ini (01/24/13@11:58:48&gt; [main] loaded config from F:\SHOUT cast\sc_serv.ini (1/24/13@11:58:48&gt; [main] loaded config from F:\SHOUT cast\sc_serv.ini (1/24/13@11:58:48&gt; [main] No ban file found (sc_serv.ban) (01/24/13@11:58:48&gt; [main] No in file found (sc_serv.ban) (01/24/13@11:58:48&gt; [main] No rip file found (sc_serv.ini) (01/24/13@11:58:48&gt; [main] opening source socket (01/24/13@11:58:48&gt; [main] opening client socket (01/24/13@11:58:48&gt; [main] opening client socket (01/24/13@11:58:48&gt; [main] client Stream thread [0] starting (01/24/13@11:58:49&gt; [main] Client Stream thread [0] starting (01/24/13@11:58:49&gt; [source] connected from 192.168.10.175 (01/24/13@11:58:49&gt; [source] connected from 192.168.10.175 (01/24/13@11:58:49&gt; [source] cicy-name:Instreamer ; icy-genre:genre (01/24/13@11:58:50&gt; [source] icy-inc:shoutcast ; icy-icq: ; icy-aim:</li> </ul>	S
<	2
v1.9.8/win32 0	1/24/13 11:58:51 (0/32)

Next is the configuration of the Shoutcast software, click "Edit config" from the Shoutcast menu for that.

All settings are very well documented in the sv\_serv.ini. I have used the configuration (default) you can see on the right side (all comments are removed).

After your changes save and close the config file and close the application by clicking the "kill server" button. Then start it again.

sc_serv.ini - Editor	
Datei Bearbeiten Format Ansicht	?
MaxUser=32	<b>A</b>
Password=changeme	
PortBase=8000	
LogFile=sc_serv.log	
RealTime=1	
ScreenLog=1	
ShowLastSongs=10	
W3CEnable=Yes	
W3CL0g=SC_W3C. Tog	
Vpont-80	
AutoDumplicons=0	
AutoDumpSourceTime=30	
Rucobumpsour cernme=so	
AllowPublicRelay=Yes	
MetaInterval=8192	
1	<b>T</b>

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#### **Instreamer Configuration**

In the Instreamer configuration are atleast two items to define, the "Streaming Destinations" and the Shoutcast password.

For the "Streaming Destinations" click on the tab "Streaming" where the Instreamer should the stream to. Here select Shoutcast protocol, then define the IP address of the Shoutcast server and also the port number of the Shoutcats service.

The default port number for the SHOUTcast server is port 8000.

Optionally you can also change the ICY parameters and the "Own name". This parameters/information are forwarded to the Shoutcast server and partially also to the listeners.

🌈 Barix Instreamer Instreamer	r - Windows Internet Explorer			
	10.175/index.html	🛨 🛃 🗙 🖸 Goog	gle	<b>P</b> -
🔆 Favoriten 🔛 Barix Instream	er Instreamer			
HOME CONFIGURATION	STATUS DEFAULTS UPDAT	E REBOOT Instreamer 100	0 MAC: 00:08:E1:00:2F:30 FW	VB4.02
INSTREAMER			B A R	X
			5	
Basic Settings	STREAMING SETTINGS			
Advanced Settings	Streaming Mode	send always 💌		
Network	Buffer Underrun Mode (TCP)	skip		
Audio Straeming	Stream Packet Strategy	optimal package 💌		
I/O & Serial	UDP Tx Source Port	0		
Control & SNMP		I		
Security	SHOUTCAST/ICECAST SETT	INGS		
	Own Name	Instreamer		-
Apply Cancel	Radio Path	/xstream	$\longrightarrow$ $\longleftarrow$	-
	icy-url / SIP user	url		-
	icy-genre	genre	→ ←	-
	Shoutcast stream	public 🔻		-
	STREAMING DESTINATIONS			
	# Conn. type Enter IF	P Address or Domain Name	Port	
	1 Shoutcast 192.168	3.10.172	8000	-
	2 not used 💌		0	
	3 not used 💌		0	
	4 not used		0	

The SHOUTcast server requires a password authentication for all streaming sources.

This password you have to define in the SECURITY section of the Instreamer's web configuration.

Default password: changeme

The password you can find in the Shoutcast server configuration file "sc\_serv.ini".

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🔆 Favoriten 🔢 Barix Instream	er Instreamer				
HOME CONFIGURATION	STATUS DEFAULTS UPD	DATE REBOOT	Instreamer 100	MAC: 00:08:E1:00:	2F:30 FW VB4.02
INSTREAMER				E	3 A R 🛛 🗙
Basic Settings					
Advanced Settings	SECURITY SETTINGS				
Network	Level	Password			
Audio	Save Configuration				
Streaming	View Configuration				
Control & SNMP	Control/Command				
Security	User Password				
Apply Cancel	Icecast/Shoutcast	•••••			
	Listening	not protecte	d ▼		
	SNMP Community RWrite	not protecte	J ▼		
	SNMP Community Read	not protecte	d ▼		

#### **Extreamer Configuration**

How to listen the SHOUTcast server with a Barix Exstreamer ?

The Barix Exstreamers (except Exstreamer 500/1000) comes with the Streaming Client firmware preloaded. There the configuration is pretty simple, only Shoutcast listen URL has to be defined in one of the three URLs under "STREAMING" (see picture below).

### Define there: http://"IP-address of the Shoutcast server":port number

The port number is the same as the Instreamer is using to stream to the Shoutcast server.

🖉 Barix Streaming Client - Wind	ows Internet Explorer	
🕞 🕞 🗢 🔟 http://192.168.1	0.178/	Fy X Google
🔶 Favoriten 🛛 🔢 Barix Streaming	Client	
HOME CONFIGURATION	STATUS DEFAULTS	UPDATE REBOOT Exstreamer 110 MAC: 00:08:E1:01:0D:CF FW VB2.30
STREAMING CL	_IENT	B A R I X
Basic Settings Advanced Settings	STREAMING SETTINGS	5
Network	1. URL	http://192.168.10.172:8000
Streaming	2. URL	http://www.barix.com/radio.m3u
Audio & Playback	3. URL	playlistm3u
Serial & Control	Stream Check Period	1 seconds
I/O	Check Period Limit	30 seconds
Remote Management Security	RTP delay	600 ms
Apply Consol	STREAMING OPTIONS	
Apply Calicer	USB backup	play complete files 🔻
		1. URL 2. URL 3. URL
	Refresh	once 💌 once 💌
	On reconnect play the	same song 💌 same song 💌
	Playlist fails	if all items fail 💌 if all items fail 💌 if all items fail 💌

Ready, now you can enjoy to the Instreamer MP3 audio stream over a SHOUTcast server on the Exstreamer.

## Shoutcast V2

Currently the Instreamer is not fully supporting the new Shoutcast V2 protocol (only Shoutcast V1), there is no possibility in the Instreamer setup to define a SID for the stream.

But because of the backward compatibility of the Shoutcast V2 software it is also working, but with the default "streamid=1" only.

The application Shoutcast V2 is now command line based, in the little menu you can select between default config files and own configurations. When the number for the according config file is selected then it starts.

🔤 Eingabeau	fforderung - sc_	_serv	_ <mark>_ □</mark> ×
F∶\SHOUTcas 2013-01-25	t_v2>sc_serv 09:24:45	I	msg:< <del>***</del> > Logger startup
2013-01-25	09:24:45	Ī	$msg:\langle *** \rangle$ version 2.0.0.29
2013-01-25	09:24:45	D	$msg:\langle x x x \rangle$
2013-01-25	09:24:45	ĩ	msg: <del>XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX</del>
XXXXXXXXXXXX	XXXXXXXXX	-	103-
2013-01-25 » (DNAS)	09:24:45	Ι	msg:** SHOUTcast Distributed Network Audio Serve
2013-01-25	09:24:45	Ι	msg:*** Copyright (C) 1999-2011 Nullsoft, Inc. A
11 Rights R 2013-01-25	eserved. 09:24:45	I	msg:** Use "sc_serv filename.conf" to specify a
config file 2013-01-25	09:24:45	I	msg: <del>************************************</del>
<del>**********</del> 2013–01–25	xxxxxxxx 09:24:45	т	msg:[SHOUTeast] DNAS/win32 u2 0 0 29 (Jul 31 201
1) starting	up	1	MSg+1000100303 DA007 W102 V2.0.0.27 (001 51 201
2013-01-25	09:24:45	I	msg:[MAIN] PID: 3360
2013-01-25	09:24:45	I	msg:
2013-01-25	09:24:45	Ī	msg:[CONFIG] Choose one of the detected config f
ile(s) to l	oad or		
2013-01-25	09:24:45	I	msg:[CONFIG] enter `x' to close this instance of
the DNAS:			-
2013-01-25	09:24:45	I	msg:[CONFIG] Note: Press 'Enter' after choosing
the config	file.		
2013-01-25	09:24:45	I	msg:
2013-01-25	09:24:45	I	msg:[CONFIG] [0] : sc_serv.conf
2013-01-25	09:24:45	I	msg:[CONFIG] [1] : sc_serv_basic.conf
2013-01-25	09:24:45	I	msg:[CONFIG] [2] : sc_serv_debug.conf
2013-01-25	09:24:45	I	msg:[CONFIG] [3] : sc_serv_public.conf
2013-01-25	09:24:45	I	msg:[CONFIG] [4] : sc_serv_relay.conf
2013-01-25	09:24:45	I	msg:[CONFIG] [5] : sc_serv_simple.conf
2013-01-25	09:24:45	I	msg:[CONFIG] [6] : sc_serv_Barix.conf
2013-01-25	09:24:45	Ī	msg:[CONFIG] [7] : sc serv .conf
2013-01-25	09:24:45	Ī	msg:[CONFIG] [8] : sc trans.conf
2013-01-25	09:24:45	Ī	msg:
6			
2013-01-25	09:24:49	Ī	msg:[MAIN] Logger updating log file to use
2013-01-25	09:24:49	I	msg:[MAIN] Loaded config from sc_serv_Barix.conf
2013-01-25	09:24:49	Ι	msg:[MAIN] Calculated CPU count is 2
2013-01-25	09:24:49	I	msg:[MAIN] Starting 2 network threads
2013-01-25	09:24:49	I	msg:[MICROSERVER] Listening for connection on po
rt 8000			
2013-01-25	09:24:49	I	msg:[MICROSERVER] Listening for connection on po
rt 8001			
2013-01-25	09:24:51	Ι	msg:[SRC 192.168.10.175:54607 sid=1] SHOUTcast 1
source con	nection.		
2013-01-25	09:25:31	I	msg:[DST 192.168.10.178:53320 sid=1] SHOUTcast 1
client con	nection acce	pted. Ba	arix Streaming Client
2013-01-25	09:25:31	I	msg:[DST 192.168.10.178:53321 sid=1] SHOUTcast 1
client con	nection acce	pted. Ba	arix Streaming Client
			· · · · · · · · · · · · · · · · · · ·

On the right you can see the used config file (all comments removed). As you see except the "streamid" enty and the "AdminPassword" it is the same as in Shoutcast V1. Even if the "streamid" entry is omitted, then it will use "streamid=1" as default.

📕 sc_serv_Barix.conf - Editor 📃 🛛 🗙
Datei Bearbeiten Format Ansicht ?
MaxUser=32 streamid=1 Password=changeme PortBase=8000 LogFile=sc_serv.log ScreenLog=1 ShowLastSongs=10 W3CEnable=Yes W3CLog=sc_W3c.log SrcIP=ANY DestIP=ANY Yport=80
NameLookups=0 AdminPassword=adminpass AutoDumpUsers=0 AutoDumpSourceTime=30 PublicServer=never AllowRelay=Yes AllowPublicRelay=Yes MetaInterval=8192

Also here the software has a WEB user interface for administration.



#### Instreamer and Exstreamer configuration

The Instreamer and Exstreamer configuration are the same as with Shoutcast V1, please see page 3 and 4 of this guide.

But there is one exception for the Exstreamer configuration, when the Exstreamer should play a Shoutcast V2 stream with a higher "streamid" than 1 (a non-Instreamer stream), then the configured URL must look like the following:

http://"IP-address of the Shoutcast server":port number/stream/"streamid"

e.g. http://"192.168.10.172:8000/stream/333 (for streamid=333)

### SHOUTcast with the DSP plug-in (DJ-software for Winamp)

The SHOUTcast server can manage different sources. Beside sources like the Instreamer you could use also a PC as Shoutcast source. For that is a Winamp DJ-Tool (Shoutcast Source DSP plug-in) existing this allows to stream locally on the PC stored audio files to the Shoutcast server. Also a normal HTTP (Internet radio) Instreamer stream can be listened on Winamp and forwarded over this way to Shoutcast.

The Shoutcast DJ tool can convert also in different audio formats, like MP3, AAC+ and WAV. Both, Winamp (<u>www.winamp.com</u>) and the Shoutcast DJ-tool (<u>www.shoutcast.com</u>) are freeware from the internet.

The Shoutcast Source DSP plug-in can run on the same PC than the SHOUTcast server is running, but it must not. The SHOUTcast Source DSP plug-in is not needed when you will use only a Instreamer as a source. You need this only if you will create MP3 / WAV playlists for your SHOUTcast server.

After the installation start Winamp and go to "OPTIONS" – "Preferences" – "DSP/Effect" and click on "Nullsoft SHOUTcast Source DSP ....". This will pop up the configuration and monitor of SHOUTcast source . Then close the "Preferences", the configuration window will remain open.

	🚀 Nullsoft SHOUTcast Source	
🔗 Winamp Einstellungen	Summary Output Input About	1
Obspice of the second se	Output     Output 1       akth     Output 2       Output 3     Not Connected       Output 4     Auto Connect       Output 5     Auto Connect       Connection     Yellow Pages       Connection     Yellow Pages       Output 4     Output 3       Output 5     Auto Connect       Connection     Yellow Pages       Connection     Yellow Pages       Output Configuration     Address       Address     Port       Stream ID     192.168.10.172       User ID     Password	Spielen Optionen Ansicht Hile spielen Optionen Ansicht Hile weevwe Company Compo
Skills	Username       ••••••••         Image: Automatic reconnection on connection failure         Reconnection timeout       20         seconds         Image: Use SHOUTcast v1 mode (for legacy servers)         Seconds         Connecting to a SHOUTcast v1 server in non-legacy mode will likely cause the last status message to remain on "Cipher response received". To fix this you need to enable the "SHOUTcast v1 mode" above.	e Ent) (EAus) (SVers) (Diazzi as C) Playlist verw.)

There go to "Output" – "Connection" – "Address" and define the IP address of the PC where the SHOUTcast server is installed. The "Port", the "Password" and the "Stream-ID" (with Shoutcast V2) must also fit to the settings in the sc\_serv.ini . The "Encoder" setting can be changed optionally if other formats are needed.

Start the stream to the server by clicking the "Connect" button.

Then you can choose your favourite playlists, MP3 files also radio streams in the Winamp Playlist Editor and click on the play icon.

Ready !! Now you can connect your clients / Exstreamers.

Over this workaround you can make a Instreamer stream also	
compatible for a higher Stream-ID than 1.	

WINAMP	
Eile Elay Options View Help	
• 00:00 KBPS: VKHZ:	
	PLML
S PLAYLIST EDITOR	
Eile <u>P</u> laylist <u>S</u> ort <u>H</u> elp	
1. http://192.168.10.175/xstream	
2. ACDC - High Voltage	4:03
3. AC DC - Can't Stand Still	3:41
4. AC DC - All Screwed Up	4:36
5. ACDC - Thunderstruck	4:52
6. ACDC - Big Balls	2:37
7. ACDC - Live Wire	5:49
8. ACDC - T.n.t.	3:34
9. ACDC - Are You Ready	4:10
10. ACDC - She's Got Balls	4:50
Add Rem ESel Misc CHORAGE A Manage F	Playlist