BARIX

THE VOICE OF SIMPLICITY

USB-FTP Recorder System

MPEG- USB audio recorder with FTP upload and streaming, supervised by ICgraph.

App User Manual

Version   1.1
Firmware   va1.1
Released   3Oth October 2010
Supported on:
Annuncicom 100/200

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1 Introduction

1.1 About the USB FTP Recorder application

With Barix "USB FTP Recorder System" it's possible to record to an attached USB stick, upload the recorded audio files to FTP server, record the audio stream on a Windows PC (with AudioLogger software) and supervise the application with ICgraph software.
Below a schematic of the system.

ANNUNCICOM (x8)

mic/line in

indication led

Annuncicom
+
USB stick

push button for recording activation

network

CONTROL ROOM

computer with:
- ICgraph software
- AudioLogger recording software
- FTP software
- Syslog software
- NTP software

network

network
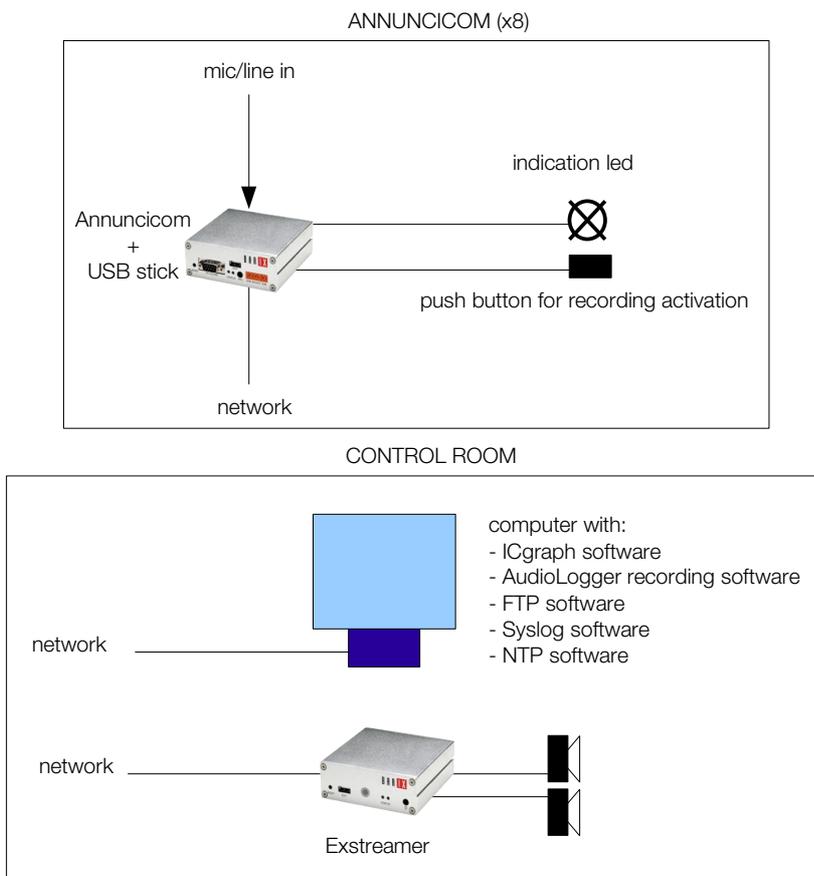
Exstreamer

Illustration 1: USB-FTP Recorder System

The device (Annuncicom 100/200) records the audio locally (and then sends the files to FTP server). It also sends the audio streaming to AudioLogger for recording and to an Exstreamer for playing.

The recording and streaming audio format are MPEG mono, with selectable sampling frequency, bit-rate and quality.

All the system (maximum 8 Annuncicom) is supervised with ICgraph software.

With ICgraph is possible to select for playing, the audio signal coming from the Annuncicom: the signal will be played on Exstreamer.

The commands of start/stop recording are local (with push button and indication led) or, remote,

from ICgraph.

The USB FTP Recorder requires that a USB Mass Storage disk be attached to the device, formatted with the FAT16 or FAT32 file system.

The application is contained in ABCL firmware package (also as source).
The complete system package (ABCL package + AudioLogger + ICgraph + this manual) is downloadable from the Barix website: it's stored under 'ABCL applications' in the downloads section; select 'USB-FTP Recorder System'.

1.2   USB FTP Recorder firmware features

- MPEG audio recording on USB memory (FAT16 and FAT32 file system);
- audio format: MPEG1 32, 44.1, 48 kHz; MPEG2 16, 22.05, 24   kHz (selectable quality);
- file name: month_day_hour_minutes.mp3;
- sending of recorded files to FTP server;
- programmable sending to FTP sever, at hour (daily) or time interval;
- sending of two contemporary streams to control room for recording and playing; recording: streaming   on configurable TCP port (default 2020); playing: broadcast UDP streaming on configurable ports (default from 3031 to 3038);
- recording+streaming start/stop remote (from ICGraph) or local via logic contact (push button) with led indication;
- clock synchronization with NTP server;
- all parameters selectable on web interface;
- communication protocol with ICgraph software.
- remote update of the firmware;
- syslog;
- automatic network configuration (BOOTP, DHCP, AutoIP and IPzator) as well as manual static IP   configuration;
- Features SonicIP ® announcing the IP address on power up over the audio outputs (configurable).

1.3   ICgraph control software features

control boxes for 8 Annuncicom;
for each Annuncicom there are the following controls:
- start/stop streaming (for playing);
- start/stop recording/streaming;
- start uploading to FTP server;
- start/stop playing on Exstreamer (Ex 1) (when recording is not active, it needs to activate also streaming to activate playing);
- open browser on device web;
for each Annuncicom there are the following indications:
- remote device connected or not connected;
- streaming active;
- FTP uploading active;
- FTP error;
- TCP error (error on AudioLogger recording);
- USB memory on error/not present;
- USB memory occupied (kilobyte);
- no sync with NTP server.

It is possible to control the notification of the following warnings via email (enabling/disabling from file icgraph.cfg.):

- • remote device not connected;
- • remote device connected;
- • recording/streaming started;
- • recording/streaming ended;
- • FTP uploading started;
- • FTP uploading ended;
- • FTP error;
- • USB memory partially full;
- • USB memory full;
- • USB memory not present;
- • clock error: no sync with NTP server.

All system activities are logged on file ICgraph.log.
The current logs are showed pushing Show LOG button.

1.4   AudioLogger recording software features

AudioLogger was made from Lake of Soft Ltd. and you can download it for free from www.Barix.com (under Download – Software).
It can be started as service or as normal program. The advantage of AudioLogger is that it saves the audio files automatically in a folder with the current date or name.
For every Annuncicom and every day, is automatically created (inside /record/audiologger directory) a directory named roomname_day_month_year, and inside it are saved the MP3 files roomname_hour_minutes_seconds.mp3.
The maximum files size is configurable.
File type is MP3.
Multiple streams from multiple Barix devices can be recorded on same port at the same time.
AudioLogger will run in the background, there is no GUI. It opens only two TCP ports, where your Barix devices can stream to.
The AudioLogger.ini file contains the configuration of AudioLogger.
There you can define:

- • file length (in seconds)
- • file length (in bytes)
- • folder name to save the files
- • file name schema
- • update time for the AudioLogger.ini
- • TCP port numbers
- • and some other parameters.

1.5   About this manual

Links to chapters

References to chapters (e.g. X Chapter name) are red and underlined and serve as direct links when viewed in Adobe Acrobat Viewer. Click on the link to jump to the referenced chapter , click on the left arrow icon to jump back to where you came from .

Links to the Dictionary

Some technical terms (e.g. DHCP) are underlined and red. Click on them to jump to the dictionary

at the end of this manual, click on the left arrow icon to jump back.

Bookmarks pane in Adobe Acrobat

The complete "Table of Contents" is available in Adobe Acrobat Viewer. Click on the "Bookmarks" pane tab on the left side of Adobe Acrobat Viewer to open it. Click on any bookmark to directly jump to the corresponding part of the manual.

2 Hardware Description

2.1 Annucicom

The audio signal is fed to Annuncicom through line input connectors: Terminal Block on Annuncicom 200 and RCA on Annuncicom 100.
For the connection details, see the "Quick Install Guide" supplied with the device.
A printed version is included in the box, if you have lost it, a new one can be downloaded from our site www.barix.com.
It's possible to use a push button to start/stop recording, and a led for state report.
They must be connected to RS232 serial port with the following schematic.
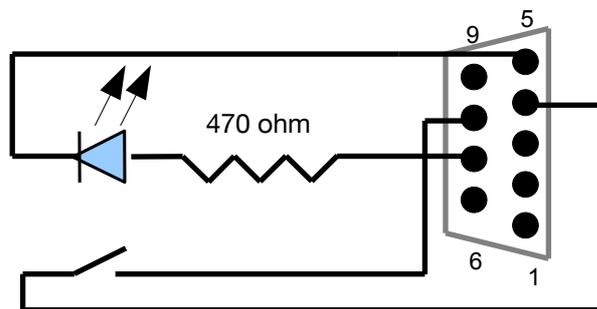
Illustration 2: RS232 connection for push-button and led

2.2 Push button and led indication

Press the push button to start recording/streaming.
Press again to stop.
In the table below there are the led indications.

Led state	Indication
OFF	Device OFF/upload FTP active
ON	Device ready
200 ms ON, 200 ms OFF	Error (NTP, USB, FTP)
1000 ms ON, 1000 ms OFF	Recording/streaming active

2.3 USB stick

Barix do not supply USB sticks, you will need to provide one of your own.

2.4 Loading the USB FTP Recorder Firmware

No Barix device is supplied with the USB FTP recorder application preloaded; you will need to update the firmware in the device.

The ABCL package is inside the "USB FTP Recorder System" package, Unzip the package and

follow the instructions in the '_Readme1st' file inside to load the application.

After loading the ABCL firmware and rebooting the device, you need to revert to the factory defaults as described in Chapter 3.1. Now your device is ready to run the FTP MP3 application, and you can continue configuring it following this manual.

3 Annuncicom configuration

You can adjust network settings and monitoring settings of Barix devices via the device's Web interface. To enter the configuration mode you will need:

- the IP address, as announced over the audio outputs (see the Quick Install Guide)
- a standard web browser

Open your web browser and type in the IP address of the Barix device in the URL field and hit the "Enter" key.

- Example: "192.168.0.12"
- When Annuncicom is properly configured inside the USB-FTP Recorder System, it's possible to open the Web interface pressing the button "Device Web" from ICgraph.

The USB FTP recorder Control page will show up. Click on the needed button to navigate to the corresponding web UI page (e.g. click on the "Network Configuration" button to open the network configuration page).

3.1 Settings page

Use SonicIP

If set to "yes", the device will announce its IP address over the audio output when the device boots up. The default setting is: "yes".

IP Address

Enter the 4 values of the desired device IP address e.g.: "0.0.0.0" for automatic discovery (DHCP/Bootp, IPzator, AutoIP), or a specific IP for an internal LAN.
Default value: "0.0.0.0"

Netmask

Enter the 4 values of the desired Static IP, e.g.:"0.0.0.0" for a default Netmask depending on the used IP Address. "255.255.255.0" for a C class network.

Gateway IP Address

Enter the 4 values of the desired Gateway IP address e.g.: "0.0.0.0" for no Gateway, or the IP of the gateway in your LAN.
Note: The Gateway has to be set only when connecting to other devices over the WAN (through a router).
Default: "0.0.0.0"

Primary DNS

In this field you can give the desired primary and alternative DNS IP address to be able to connect to URLs (e.g. www.radio.com). Example: "195.186.1.111"
Default: "0.0.0.0"

Alternative DNS

In this field you can type the desired alternative DNS IP address in case the primary DNS is not reachable.
Example: "195.186.4.111"
Default: "0.0.0.0"

Syslog Address
> Destination address for syslog messages sent by the BCL program via the SYSLOG command.
> Set this to your syslog logging machine, if your syslog messages are recorded centrally.
> If set to 0.0.0.0, syslog messages are broadcasted.
> Default: "0.0.0.0"

DHCP Host Name
> Name of the device sent in DHCP request. If left empty, a name based on the device's MAC
> address is generated automatically. Enter up to 15 Characters.

Web server port
> Defines the port where the webserver of the device can be reached. If set to "0" the default HTTP
> port (80) is used.

Default Ethernet Port
> On devices with dual-ethernet connection this parameter selects the default port to be used.
> If you change this parameter do not forget to connect the Ethernet cable to the proper port on the
> rear of the device.

Use Serial For
> Select "BCL Application".
> Default: "BCL Application"

Baud rate
> Select the serial transmission speed ("300" to "230400" Baud).
> Default: "9600"

Data bits
> Select "7" or "8" data bits.
> Default: "8"

Parity
> Select "no", "even" or "odd" parity.
> Default: "no"

Stop bits
> Select "1" or "2" stop bits.
> Default: "1"

Handshake
> Select the type of handshake:
> RTS/CTS lines not used: "none"
> RS232/RS422: "Software flow control(XON/XOFF)" or "Hardware flow control (RTS/CTS)"
> RS485: "RS485 direction control"
> Default: "none"

Reset Function
> Enable or disable the "Reset" function on the Reset button and on the WEB UI. In order to restart
> the device press the Reset button once.
> Default: "enabled"

Factory Defaults
> Enable or disable the "Factory Defaults" function on the Reset button. In order to revert all settings
> to factory defaults keep the Reset button pressed until the red LED starts blinking (approx. 10
> seconds).

11   Annuncicom configuration

Default: "enabled"

Update Function

Enable or disable the WEB Update function of the device.
If the Update function is disabled, the only way to update the firmware is to use the serial rescue.
Default: "enabled"

Set Password

This is visible as long as no password is set.
Enter a password (up to 25 characters) and hit the "Apply" button. After the restart you should close the browser window and open a new browser window. You will be asked to supply user name and password. The user name can be omitted but the password has to be supplied in order to see the web configuration.

Old Password / New Password

These fields are visible as long as a password is set.
To allow free access (clearing the password) enter the old password and leave the field "New Password" empty. Enter the old password in the password field above the "Apply" button as well and then hit the "Apply" button.
After the restart you will not be asked for user name and password anymore.
To change the password enter the old password and enter the new password in the field "New Password". Enter the old password in the password field above the "Apply" button as well and then hit the "Apply" button.
After the restart you will be asked for user name and password. The user name can be omitted but the new password has to be supplied in order to see the web configuration.

3.2   Application page

At the bottom of the page there are the following buttons:

Config - switch to ftp-usb recorder configuration page

State - switch to ftp-usb recorder state page

Start - start recording to USB

Stop - stop recording or playing

USB List - show current list of USB directory

Upload - upload all USB files to FTP immediately

Send Command - send a typed command like FTP client

State page

The header shows the current state (typically "idle"). If device fulfils a command, the state is updated for each 2 seconds in format:

<command> [<parameter>] by <input> : <date&time>

Terminal window below shows the latest FTP command and device reply (up to 500 characters). It allows to use this page like FTP client (send commands by button and get reply).

Command set:

"OPEN <FTP IP>" -- open FTP
"CLOSE" -- close FTP
"LIST" -- get FTP "dir"
"NLST" -- get FTP "ls"
"RETR <filename>" -- get file from server
"STOR <filename>" -- send file to server
"UTXT <filename>" -- get existing USB text file
"ULST" -- get USB directory
"UDEL <filename>" -- delete USB file
"UPLD" -- upload USB directory to FTP
"PLAY <filename>" -- play USB mp3 file
"UREC <filename>" -- record USB mp3 file
"FREC <filename>" -- record FTP mp3 file
"QUIT" -- quit & end of program
...and also many other usual FTP commands directly from FTP server, for example, USER, PASS, CWD, DELE, HELP, SYST, STAT, etc.

All these commands can be sent also from serial terminal connected to COM port or by datagrams to UDP command port 12301. Start/stop recording/streaming are triggered also with the push button connected to RS232 (see chapter 2.1).

Configuration page

To store the settings click on "Apply" at the bottom of the page.
The device will restart with the new settings.

NTP Server

Enter the IP or DNS address of the desired NTP Server (e.g. "80.96.120.253"). When a valid NTP Server is given, the internal clock is setted at start up and during the normal operating.

Time Zone

Enter the time zone information for your geographic location in order to display the correct local time.

Input source

Choose the desired input source.
Default setting is "Mic".

Microphone gain

Choose the desired gain ("21" - "43.5" dB) for the microphone.
Default setting is "21" dB.

A/D amplifier gain

Choose the desired gain ("-3" - "19.5" dB) for the A/D amplifier.
Default setting is "-3" dB.

Encoding

Choose between different encoding types and sampling frequencies.
Default encoding is "MPEG1/48kHz".

Encoding quality

Choose the encoding quality from "0" (lowest) to "7" (highest).
Default quality is "0".

Volume

Choose between "0"% and "100"% in 5% steps.
Default: "50"%

Destination FTP Server

Enter IP or DNS address of the FTP server.

User ID (Login Name)

Enter your User ID for access to FTP server.

Password

Enter your password for access to FTP server.
To clear the password, enter 25 arbitrary characters.

Path

Enter path to the destination directory on the server.
NOTE:
A directory with this name must be present inside root directory of FTP server.
This name must correspond to the labels inside ICgrag.cfg file (annucicom1 - annucicom8).

Upload Period / Time

Enter the period (time interval: amount of minutes) or daytime (in "hh:mm" format) in order to automatically upload the recorded USB mp3 files to FTP server.

Note:
The empty value will completely disable FTP upload and store MP3 files only locally on the USB disk.
Default: empty (disabled). The value 0 will result in direct record to FTP with parallel saving on USB disk (you can just remove USB disk if it is not necessary) (in this mode Start/Stop Recordcommands on ICgraph do not work).

Destination TCP/UDP Sockets

Enter "IP:port" or "DNS:port" for streaming to receiving TCP backup (AudioLogger) or playing devices (Exstreamer - for UDP you can use also broadcast IP for multiplying or cross streaming). Empty Socket will disable the proper stream.

3.3   Configuration example (server IP = 192.168.10.2)

NETWORK

NTP Server	192.168.10.2
Time Zone	+1 (West Europe, Berlin, Paris, Rome, Madrid) ▼ hours offset to UTC

AUDIO

Input source	⦿ Line ○ Mic
Microphone gain	21 ▼ dB
A/D amplifier gain	0 ▼ dB
Encoding/Sampling frequency	MPEG2 / 16 kHz ▼
Encoding quality	3 ▼
Volume	50 ▼ %

FTP SETTINGS

Destination FTP Server	192.168.10.2
User ID (Login Name)	barix
Password	set
Path	annuncicom1
Upload Period / Time	14:30 min / hh:mm

BACKUP STREAMS

Destination TCP Socket	192.168.10.2:2020
Destination UDP Socket	192.168.10.255:3031

Illustration 3: Annuncicom configuration page

4 Exstreamer configuration

On the Exstreamer must be installed the Exstreamer standard firmware that can be downloaded at the following link:
http://www.barix.com/downloads/Exstreamer_Standard_Firmware/1971
For the firmware installation instructions see:
http://wiki.barix.com/index.php5/FW_Update (web update)
To enter the configuration mode you will need:
the IP address, as announced over the audio outputs (see the Quick Install Guide)
a standard web browser

Open your web browser and type in the IP address of the Barix device in the URL field and hit the "Enter" key.
Example: "192.168.0.12"

For configuration see help on web UI (right side).
All the settings must remain at default value, except Streaming Mode and Own Name:
Mode = 4 - Streaming Receiver
Own Name = ex_1

Note:
This name must correspond to the labels inside ICgrag.cfg file.

When Exstreamer is properly configured inside the USB-FTP Recorder System, it's possible to open the Web interface pressing the button "Device Web" from Icgraph.

Illustration 4: Exstreamer configuration

5 Software configuration

5.1   FTP server

The FTP server must be configured with a directory for each Annuncicom, with same name setted on "path" of Annuncicom configuration page.
Username and password must correspond to that setted on Annuncicom configuration page.

5.2   AudioLogger

The configuration is inside the file audiologger.ini.
Inside ipLookup.txt file there is a table with Annuncicom name-IP address association.
Install instructions you can find in the readme.txt which is contained in the Audiologger folder.

Running modes

Under Windows NT/2K/XP/2003: either as service, or as console application.
Under Windows 95/98/ME: console application only.

Install - Uninstall - Start - Stop

To install the application as a service, run it once with /install switch:
>audioLogger.exe /install
Make sure it was not installed as a service before (see uninstall).
To uninstall this application from services, run it once with /uninstall switch:
>audioLogger.exe /uninstall
Use Service Manager to start/stop the "IP Logger" service, or run this application with /start or /stop switch to start or shutdown the service:
>audioLogger.exe /start
>audioLogger.exe /stop
To suppress output messages, in addition use /q switch, for example:
>audioLogger.exe /q /install
>audioLogger.exe /q /start
To run this application in console mode rather than as service under WinNT/2K/XP/2003, use the /win95 switch:
>audioLogger.exe /win95
A console window will be created, where application's output will be directed.
Press ENTER inside this console window to exit application normally.
WARNING! Do not terminate the application by closing the console window.
Some resources and data may be lost in this case.
NOTE: Console mode is the only possible running mode under Windows 95/98/ME, regardless of /win95 switch.

Main configuration file

When started, application (in either console or service mode) opens the main configuration file, which should be located in the same directory as main .exe file, and named the same, but with .ini extension ("audioLogger.ini" by default).
Edit all required configuration parameters, before starting the application for the first time.
There are three different types of configuration sections. Each section has unique name:
[srv.config]
This section contains configuration parameters that apply to main application.
[SLG.NN]
These sections contain configuration parameters that apply to individual components only (NN specifies the number of a component to which this section applies).

The content of .ini file could be changed at any time. Application will re-read it periodically ("refresh.interval" parameter), and apply any changes as necessary (new components will be created, or some components will be removed, and new configuration parameters will be applied as needed).
NOTE: since application can re-read the .ini file at any time, make sure you made ALL REQUIRED CHANGES AT ONCE. The best way to ensure this is by editing a copy of main .ini file, and then overwriting the main .ini file with a new copy.
Or, simply stop the application, make required changes and restart it.
When application is running as a service, it is also possible to pause/resume it using Service Manager. You can safety edit main .ini file when service is paused.

Main log file

Application writes some output diagnostic messages into main log file. The name of this file could be configured in the main .ini file ("log.name" parameter) and the level (amount) of messages is specified by the "log.mode" configuration parameter.
When running in console mode, same messages are also written into console window.

Audio logger component

This component has one TCP server component listening on port number specified by "port" parameter.
When new connection is established with server, it creates a new "logger" module, which simply writes all incoming data into file (or files) specified by "fileCount" and "fileNameFormat.NN" parameters. Refer to ini file for more details about file names.
All files are created in a folder, specified by "rootFolder" parameter. It is not possible to create any files outside this folder. (HACK: use ".." to go up one level).
File name can contain IP address and port of remote connection. If "iplookupFile" parameter specifies existing lookup file, symbolic names will be used instead of IP address when possible.
If no data will be received within "dataTimeout" interval, server will close the connection and "logger" module will be destroyed. Same will occur if remote side drops connection.
In addition, each file may have own (or default) max size and max writing time.
Default max size (in bytes) for all files is specified by "maxSize" parameter.
Individual file may have own max size, specified by "maxSize.NN" parameter.
When size of file exceeds specified max size, it will be close and new file will be created.
Therefore it is important that file name includes seconds or milliseconds in its name.
Default max writing time (in seconds) for all files is specified by "maxTime" parameter.
Individual file may have own max writing time, specified by "maxTime.NN" parameter.
When writing into file was performed for a period longer than specified max value, a new file will be created.
Therefore it is important that file name includes seconds or milliseconds in its name.
Both max size and max writing time values may be set to 0, in which case no max limits will be applied.

5.3   ICgraph

ICgraph is developed with Sun´s Java development kit 5.0 and is compatible to Sun Java Runtime Environment (JRE) 6.0 and probably earlier versions. This must run on the ICgraph PC.
This JRE is available for free for many operating systems (e.g. Windows, Mac, Linux) and is downloadable from : www.java.sun.com
Sun JRE should be installed first on the PC, if this is already installed on the PC you should go to the next step. Otherwise please download and install the JRE on your PC.
Note, we have tested the application with JRE6.0, this JRE version should be also backward compatible to JRE 5.0.
Please reboot the PC after the JRE installation!
For ICgraph detailed configuration information see ICgraph manual here:

ICgraph configuration

ICgraph communicate with Annucicom devices using UDP port 12301
With the following instructions says to Exstreamer which channel (Annuncicom) to play:
MB|ex1_on#r1|0|0|0|0|S=udp://0.0.0.0:3031|ex_1|| #switch ON Exstreamer 1 to annuncicom 1
stream
MB|ex1_on#r2|0|0|0|0|S=udp://0.0.0.0:3032|ex_1|| #switch ON Exstreamer 1 to annuncicom 2
stream
MB|ex1_on#r3|0|0|0|0|S=udp://0.0.0.0:3033|ex_1|| #switch ON Exstreamer 1 to annuncicom 3
stream
MB|ex1_on#r4|0|0|0|0|S=udp://0.0.0.0:3034|ex_1|| #switch ON Exstreamer 1 to annuncicom 5
stream
MB|ex1_on#r5|0|0|0|0|S=udp://0.0.0.0:3035|ex_1|| #switch ON Exstreamer 1 to annuncicom 6
stream
MB|ex1_on#r7|0|0|0|0|S=udp://0.0.0.0:3037|ex_1|| #switch ON Exstreamer 1 to annuncicom 4
stream
MB|ex1_on#r8|0|0|0|0|S=udp://0.0.0.0:3038|ex_1|| #switch ON Exstreamer 1 to annuncicom 8
stream
If on Annucicom configuration you change the UDP port on Destination UDP Sockets, the strings
above must be changed accordingly.

5.4 Email configuration

The SMTP parameters are configured inside the file e-mail.bat inside the directory.
Es:
bmail -s 10.132.15.209 -t aem@localdomain -f test@localdomain -h -a "%1"
Follow the help below:
Usage: bmail [options]
-s   SMTP Server Name
-p   SMTP Port Number (optional, defaults to 25)
-t   To: Address
-f   From: Address
-b   Text Body of Message (optional)
-h   Generate Headers
-a   Subject (optional)
-m   Filename (optional) Use file as Body of Message
-c   Prefix above file with CR/LF to separate body from header
-d   Debug (Show all mail server communications)
To enable the email function, edit the file Icgraph.cfg inside Cgraph directory, and remove the
comment character "#" in the corresponding section.
Es:
annuncicom1
PB|annuncicom1|0|0|0|0||| #annuncicom1

MB|dis#r1|0|0|0|0 |>e-mail.bat riunioni_not_connected| # call mail
MB|con#r1|0|0|0|0 |>e-mail.bat riunioni_now_connected| # call mail
MB|rec_start#r1|0|0|0|0 |>e-mail.bat riunioni_rec_started| # call mail
MB|rec_end#r1|0|0|0|0 |>e-mail.bat riunioni_rec_ended| # call mail
MB|FTP_start#r1|0|0|0|0 |>e-mail.bat riunioni_FTP_started| # call mail
MB|FTP_end#r1|0|0|0|0 |>e-mail.bat riunioni_FTP_ended| # call mail
MB|FTP_error#r1|0|0|0|0 |>e-mail.bat riunioni_FTP_error| # call mail
MB|USB_full#r1|0|0|0|0 |>e-mail.bat riunioni_USB_full| # call mail

```
MB|USB_warning#r1|0|0|0|0 |>e-mail.bat riunioni_USB_warning|   # call mail
MB|USB_absent#r1|0|0|0|0  |>e-mail.bat riunioni_USB_absent|    # call mail
MB|NTP_error#r1|0|0|0|0   |>e-mail.bat riunioni_NTP_error|     # call mail
```

6 ICgraph operation

To start ICgraph, run the ICgraph .bat file inside the ICgraph folder.
The ICgraph screen is composed by 9 sections: 8 Annuncicom sections and one Exstreamer section (Preview).
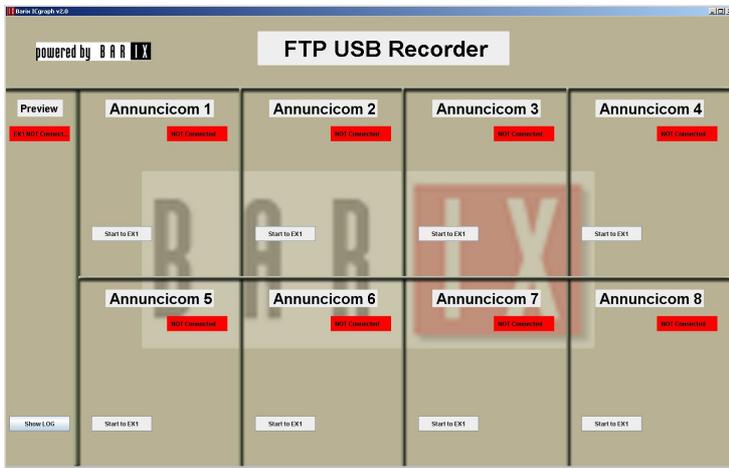

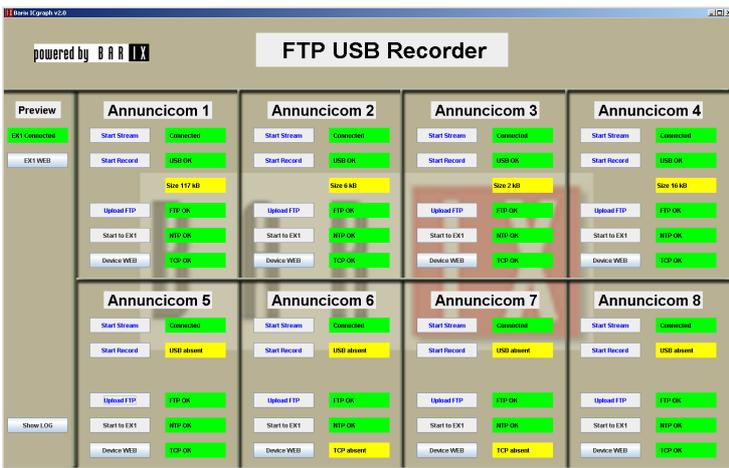Illustration 5: ICgraph screen (without devices connected)
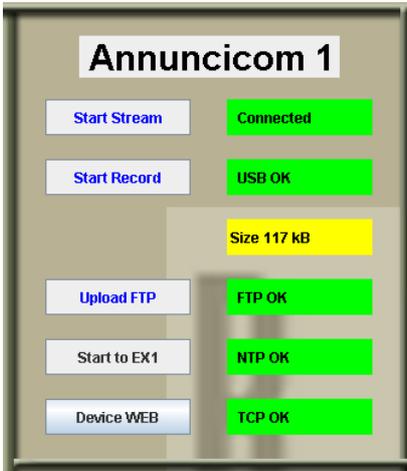

Illustration 6: ICgraph screen (with devices connected)

Illustration 7: ICgraph screen: Annuncicom window

llustration 8: ICgraph screen: Exstreamer window

6.1 Push-buttons description

Start Stream — Start UDP audio stream to target configured on Destination UDP Socket. During recording this button is disabled, since the streams start automatically pushing recoding button.

Stop Stream — Streaming active: press to stop UDP audio stream.

Start Record — Start recording. If audio stream is active this button is disabled.

Stop Record — Recording active: press to stop recording.

Upload FTP — Start FTP upload.

Upload FTP — FTP upload active.
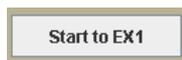
Start to EX1 — Start Exstreamer to play the UDP stream.
Pressing this button on another Annucicom switch the play to this Annuncicom.

Stop to EX1 — Playing active on Exstreamer. Press to stop playing, or press Start to EX1 another Annuncicom to switch playing.
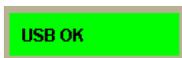
Device WEB — Press to open device web interface.

6.2 Error indications description

Connected — Device connected.

NOT Connected — Device not connected

USB OK — USB stick present and working.

USB absent — USB stick not present or not detected.

USB error — USB error.

Size 12 kB — USB space occupied.
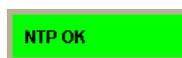
NTP OK — Network Time Protocol ok: internal clock synchronized with NTP server.

NTP error — Network Time Protocol error: unable to contact NTP server.

TCP OK	AudioLogger available.
TCP absent	AudioLogger available.
TCP error	AudioLogger error.
EX1 Connected	Exstreamer connected
EX1 NOT Connect...	Exstreamer not connected
EX1 WEB	Press to open device web interface.

7 Notes

- The recording capacity (e.g. on 4GB USB memory), with the encoding parameters MPEG2/16 Khz, quality 3, is about 200 hours.

- On ICgraph start or on Annuncicom 200 start, is possible to have some errors. In this case start a test recording and a test FTP upload. In case of USB error try to restart the device manually or from web interface.

- It is possible the recording on AudioLogger also with USB memory not present.

- The audio files are deleted after to be copied on FTP server.

- In case of FTP connection problems, a file still present on USB memory could be partially copied on FTP server: in this case there is an FTP error. Check if there is a file with the same name inside the server and inside the USB memory (use for checking the State page using the web interface).

- When recording is not active, to activate the preview it need to activate also the streaming.

- When the streaming is active is not possible to start recording.

- During the FTP upload is not possible to activate the recording.

- During the recording is not possible to activate the FTP upload.

- If during the expiry of upload to FTP (time or interval), the Annuncicom is recording, the upload will start automatically after end the registration process.
- The Annuncicom 200 reboots automatically when is inserted/removed the USB stick.

- Using an Exstreamer (optional) at conference rooms is possible to send the audio from a room to another room (Start Stream function).

8 Dictionary

DHCP	Short for Dynamic Host Configuration Protocol, a protocol used to assign an IP address to a device connected to a Network.
IP	Short for Internet Protocol, the IP is an address of a computer or other network device on a network using IP or TCP/IP. Every device on an IP-based network requires an IP address to identify its location or address on the network. Example: 192.168.2.10
IPzator	Barix IPzator™ technology is designed for the purpose that the Barix device can create its own IP address according to the network structure in case it can't receive one from your network. If DHCP, AUTOIP or BOOTP fail, IPzator will create an IP address within the subnet and test it. If the address works and is not being used by another device on the network, it will give the address to the Barix device.
MAC address	Abbreviation for Medium Access Control, a MAC is a unique address number formatted in hexadecimal format and given to each computer and/or network device on a computer network. Because a MAC address is a unique address a computer network will not have the same MAC address assigned to more than one computer or network device. Example: A1:B2:C3:D4:E5:F6
Netmask	A number used to identify a sub network so that an IP address can be shared on a LAN (Local Area Network). A mask is used to determine what subnet an IP address belongs to. An IP address has two components, the network address and the host address. For example, consider the IP address 150.215.17.009. Assuming this is part of a Class B network, the first two numbers (150.2) represent the Class B network address, and the second two numbers (.017.009) identify a particular host on this network. The Netmask would then be 255.255.0.0 .
Ping	Ping is a basic Internet program that lets you verify that a particular IP address exists and can accept requests. Example: ping 192.168.2.10
SonicIP	Barix SonicIP® technology is designed to vocally announce the Barix devices current IP address. This makes it easier and faster to obtain the necessary network information. To make use of SonicIP plug in the included earphone into RCA audio out, connect the network and plug in the power supply. It will announce the address over the earphones right after power up.
Static IP	A Static IP is a fixed IP address that you assign manually to a device on the network. It remains valid until you disable it.

9 Legal Information

For information about our devices and the latest version of this manual please visit www.barix.com.

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