

BARIX Discovery Tool

User Manual

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Table of Contents

1 Introduction.....	3
2 Starting the Barix Discovery Tool.....	3
3 Using the Tool.....	4
3.1 Tool buttons.....	4
The GET button.....	4
The SET button.....	4
The CLEAR button.....	5
The WEB BROWSER button.....	5
3.2 Using the tool to set an Annunicom 155 in Bootloader Mode.....	5
Prerequisites.....	5
Steps to follow.....	6
3.3 Displayed data.....	8
4 List of discovery enabled firmware.....	8
5 Legal Information.....	10

1 Introduction

The Barix Discovery Tool has been developed to allow discovering the available Barix devices on the local network (LAN). It is particularly useful in the following situations:

- Find a Barix device, which has an IP address valid for the LAN to which it is connected;
- Find a Barix device, which has an IP address which is not part of the local LAN address range;
- Access and configure the network settings of a Barix device that has no means of obtaining an IP address from an external service (I.e no DHCP or Bootp server available and/or Self IP configuration AutoIP, IpZator may not be active);
- Access and configure the network settings of a Barix device that has no IP address.

It is only intended for a local LAN environment, and will not work for a WAN, or Intranet. To be more precise, it is required that the devices are reachable with an Ethernet broadcast.

NOTE: The Discovery protocol has been introduced in 2009, hence devices running older firmware are not guaranteed to be 'discovered'. Please get a newer version of your FW from the Barix website if you want to be able to discover these devices.

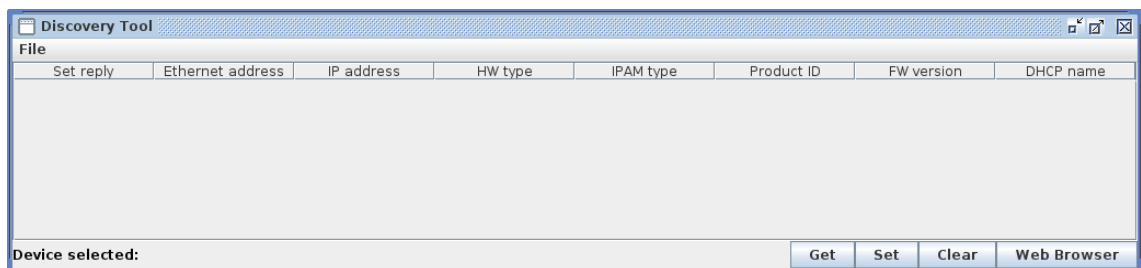
2 Starting the Barix Discovery Tool

The Barix Discovery Tool is implemented in Java, and requires Java Standard Edition 5 or later. As the application has a GUI, the X-Windows system is required when running on Linux/FreeBSD and other *NIX systems.

The application is distributed as a simple JAR archive. To run the Discovery tool under most operating systems, simply run the Discover.jar file. An alternative way of starting the tool would be to start the tool manually from a command line interface

```
java -jar Discover.jar
```

Once started, a screen similar to the one below will be shown (there may be variations due to the operating system platform you are using the tool on).



3 Using the Tool

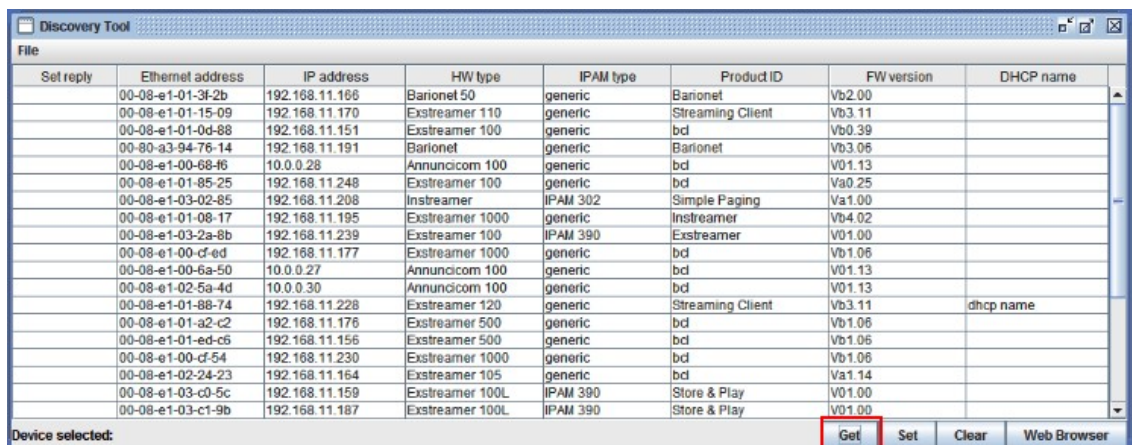
On first startup, the tool will not show any devices, you need to tell the tool it to look for them.

In the bottom right of the screen there are four buttons.

3.1 Tool buttons

The GET button

Use this button when you would like the tool to broadcast a request to all devices on the network. Barix devices with a Discovery-enabled firmware listen for GET requests and respond to them with information about themselves:



The SET button

This allows the user to set the IP address of a Discovered device. To do so, first select (click on) the device. The device details will be highlighted in blue and the MAC address will be shown bottom left:

Discovery Tool							
File							
Set reply	Ethernet address	IP address	HW type	IPAM type	Product ID	FW version	DHCP name
	00-08-e1-01-3f-2b	192.168.11.166	Barionet 50	generic	Barionet	Vb2.00	
	00-08-e1-01-15-09	192.168.11.170	Exstreamer 110	generic	Streaming Client	Vb3.11	
	00-08-e1-01-0d-88	192.168.11.151	Exstreamer 100	generic	bcd	Vb0.39	
	00-80-a3-94-76-14	192.168.11.191	Barionet	generic	Barionet	Vb3.06	
	00-08-e1-00-68-f6	10.0.0.28	Annunicom 100	generic	bcd	V01.13	
	00-08-e1-01-85-25	192.168.11.248	Exstreamer 100	generic	bcd	Va0.25	
	00-08-e1-03-02-85	192.168.11.208	Instreamer	IPAM 302	Simple Paging	Va1.00	
	00-08-e1-01-08-17	192.168.11.195	Exstreamer 1000	generic	Instreamer	Vb4.02	
	00-08-e1-03-2a-8b	192.168.11.239	Exstreamer 100	IPAM 390	Exstreamer	V01.00	
	00-08-e1-00-cf-ed	192.168.11.177	Exstreamer 1000	generic	bcd	Vb1.06	
	00-08-e1-00-6a-50	10.0.0.27	Annunicom 100	generic	bcd	V01.13	
	00-08-e1-02-5a-4d	10.0.0.30	Annunicom 100	generic	bcd	V01.13	
	00-08-e1-01-88-74	192.168.11.228	Exstreamer 120	generic	Streaming Client	Vb3.11	dhcp name
	00-08-e1-01-a2-c2	192.168.11.176	Exstreamer 500	generic	bcd	Vb1.06	
	00-08-e1-01-ed-c6	192.168.11.156	Exstreamer 500	generic	bcd	Vb1.06	
	00-08-e1-00-cf-54	192.168.11.230	Exstreamer 1000	generic	bcd	Vb1.06	
	00-08-e1-02-24-23	192.168.11.164	Exstreamer 105	generic	bcd	Va1.14	
	00-08-e1-03-c0-5c	192.168.11.159	Exstreamer 100L	IPAM 390	Store & Play	V01.00	
	00-08-e1-03-c1-9b	192.168.11.187	Exstreamer 100L	IPAM 390	Store & Play	V01.00	
Device selected: 00-08-e1-03-c0-5c						Get	Set
						Clear	Web Browser

Next, double click in the IP address field for the selected device, type a new IP address , and press <ENTER> so that the new data are accepted by the application. Then, click the SET button. The application will send the data to the selected device, which shall immediately reboot with the new settings.

NOTE 1: If the data have been successfully transferred to the device, a “No error” message will be displayed in the “Set reply” column. Use a new “GET” to confirm if the device has rebooted with the desired IP address.

NOTE 2: The IP address returned by the GET command can be a DHCP address, if the SET command is used without supplying a new IP address, the effect will be to set the DHCP generated (non-fixed) IP address as the static IP for that device.

Discovery Tool							
File							
Set reply	Ethernet address	IP address	HW type	IPAM type	Product ID	FW version	DHCP name
	00-08-e1-01-3f-2b	192.168.11.166	Barionet 50	generic	Barionet	Vb2.00	
	00-08-e1-01-15-09	192.168.11.170	Exstreamer 110	generic	Streaming Client	Vb3.11	
	00-08-e1-01-0d-88	192.168.11.151	Exstreamer 100	generic	bcd	Vb0.39	
	00-80-a3-94-76-14	192.168.11.191	Barionet	generic	Barionet	Vb3.06	
	00-08-e1-00-68-f6	10.0.0.28	Annunicom 100	generic	bcd	V01.13	
	00-08-e1-01-85-25	192.168.11.248	Exstreamer 100	generic	bcd	Va0.25	
	00-08-e1-03-02-85	192.168.11.208	Instreamer	IPAM 302	Simple Paging	Va1.00	
	00-08-e1-01-08-17	192.168.11.195	Exstreamer 1000	generic	Instreamer	Vb4.02	
	00-08-e1-03-2a-8b	192.168.11.239	Exstreamer 100	IPAM 390	Exstreamer	V01.00	
	00-08-e1-00-cf-ed	192.168.11.177	Exstreamer 1000	generic	bcd	Vb1.06	
	00-08-e1-00-6a-50	10.0.0.27	Annunicom 100	generic	bcd	V01.13	
	00-08-e1-02-5a-4d	10.0.0.30	Annunicom 100	generic	bcd	V01.13	
	00-08-e1-01-88-74	192.168.11.228	Exstreamer 120	generic	Streaming Client	Vb3.11	dhcp name
	00-08-e1-01-a2-c2	192.168.11.176	Exstreamer 500	generic	bcd	Vb1.06	
	00-08-e1-01-ed-c6	192.168.11.156	Exstreamer 500	generic	bcd	Vb1.06	
	00-08-e1-00-cf-54	192.168.11.230	Exstreamer 1000	generic	bcd	Vb1.06	
	00-08-e1-02-24-23	192.168.11.164	Exstreamer 105	generic	bcd	Va1.14	
	00-08-e1-03-c0-5c	192.168.11.159	Exstreamer 100L	IPAM 390	Store & Play	V01.00	
	00-08-e1-03-c1-9b	192.168.11.187	Exstreamer 100L	IPAM 390	Store & Play	V01.00	
Device selected: 00-08-e1-03-c0-5c						Get	Set
						Clear	Web Browser

The CLEAR button

The tool's display is not dynamically updated, therefore we recommend that between each GET command, the CLEAR command is used to remove the previous results; this clears the display to the startup position, ensuring that the next GET only shows the devices that have responded to the last GET request.

The WEB BROWSER button

Clicking on this button will open the device web page in your default browser

3.2 Using the tool to set an Annunicom 155 in Bootloader Mode

Most Barix devices have a reset button, and holding it pressed while powering on the device, will bring the unit into the "Bootloader" mode. Once in the Bootloader mode, a repair action can be started by re-loading the existing or loading a new software.

However, the Annunicom 155 device does not have a reset button. To solve this problem, the **Recovery** feature of the Discovery Tool can be used. The use of this feature depends on the device having compatible Bootloader SW loaded, included from version V99.19.

NOTE: As of Bootloader version V99.22 (January 2011) this feature is only supported in the Annunicom 155 FW.

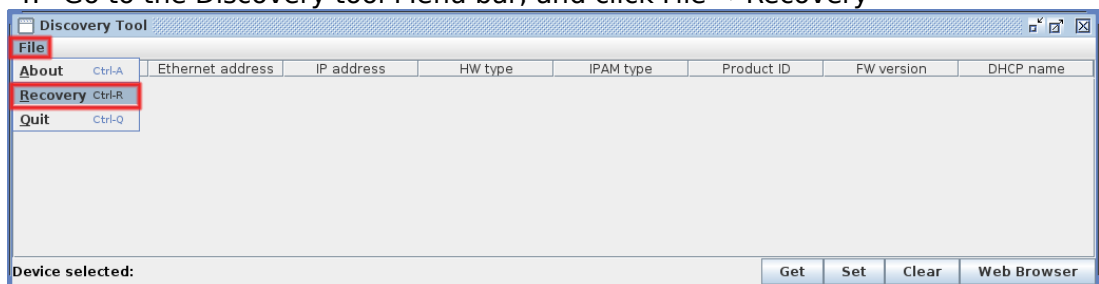
Prerequisites

You will require the following:

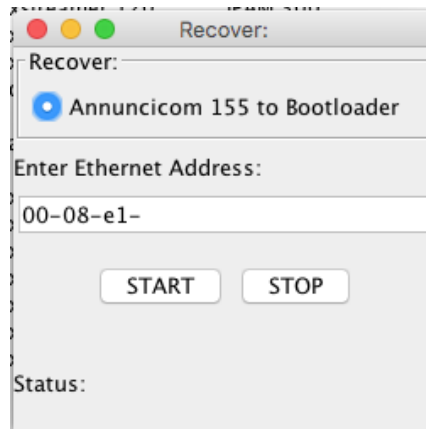
- Physical access to the device to perform a power up;
- A local Ethernet connection to the device;
- A note of the device's Ethernet address;
- The target Barix device has Bootloader version V99.22 or later.
- Your network switches should be set not to block frequently sent UDP broadcasts, or this function may not work

Steps to follow

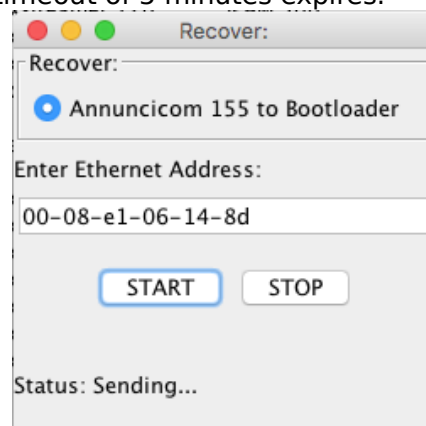
1. Start the Discovery Tool, and look for your Annunicom 155 device. If it is not listed within the discovered devices, please note down its MAC address, printed on the bottom of the box
2. Switch off your Annunicom 155 device.
3. Click on the device in the Discovery tool window (if listed) to select it
4. Go to the Discovery tool Menu bar, and click File → Recovery



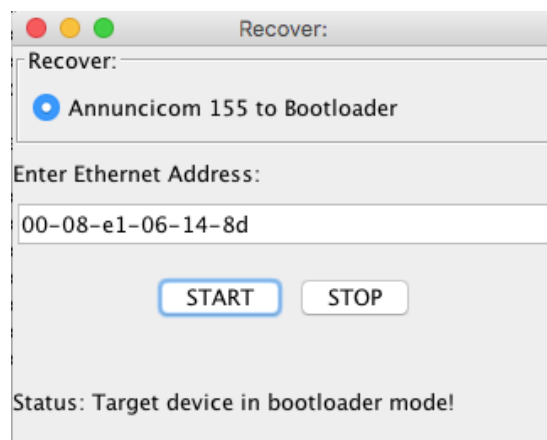
5. A pop-up box will appear with the complete MAC address of the device if it has been listed in the Discovery Tool window, or half empty if it was not present in the list. Check if the MAC address is correct, or type it in manually.



6. Click the “Start” button. The Discovery tool will start sending discovery packets to the configured MAC address until it responds, the user clicks “Stop”, or a timeout of 5 minutes expires.

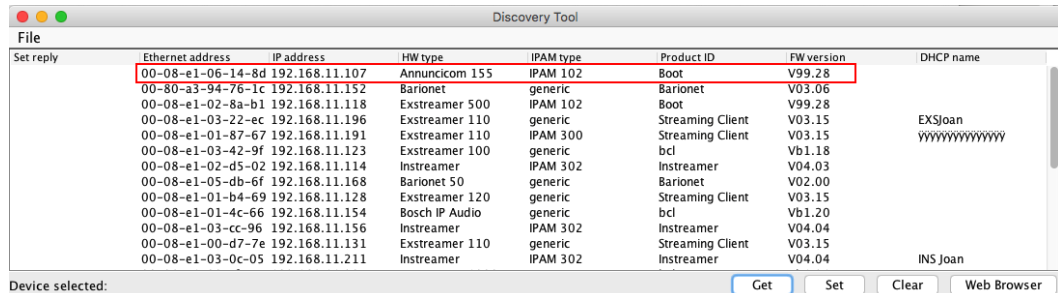


7. Now, power on the device, and observe the pop-up window while it is booting. If the device enters successfully in Bootloader mode, the message “Target device is in bootloader mode!” will be reported as Status



8. Now, perform a new “Get” with the Discovery tool, and you shall be able to

see your device IP address



File	Ethernet address	IP address	HW type	IPAM type	Product ID	FW version	DHCP name
Set reply	00-08-e1-06-14-8d	192.168.11.107	Annunicom 155	IPAM 102	Boot	V99.28	
	00-80-a3-94-76-1c	192.168.11.152	Barionet	generic	Barionet	V03.06	
	00-08-e1-02-8a-b1	192.168.11.118	Exstreamer 500	IPAM 102	Boot	V99.28	
	00-08-e1-03-22-ec	192.168.11.196	Exstreamer 110	generic	Streaming Client	V03.15	EXSJoan
	00-08-e1-01-87-67	192.168.11.191	Exstreamer 110	IPAM 300	Streaming Client	V03.15	YYYYYYYYYYYY
	00-08-e1-03-42-9f	192.168.11.123	Exstreamer 100	generic	bcl	Vb1.18	
	00-08-e1-02-d5-02	192.168.11.114	Instreamer	IPAM 302	Instreamer	V04.03	
	00-08-e1-05-db-6f	192.168.11.168	Barionet 50	generic	Barionet	V02.00	
	00-08-e1-01-b4-69	192.168.11.128	Exstreamer 120	generic	Streaming Client	V03.15	
	00-08-e1-01-4c-66	192.168.11.154	Bosch IP Audio	generic	bcl	Vb1.20	
	00-08-e1-03-cc-96	192.168.11.156	Instreamer	IPAM 302	Instreamer	V04.04	
	00-08-e1-00-d7-7e	192.168.11.131	Exstreamer 110	generic	Streaming Client	V03.15	
	00-08-e1-03-0c-05	192.168.11.211	Instreamer	IPAM 302	Instreamer	V04.04	INS Joan

Device selected:

Get Set Clear Web Browser

3.3 Displayed data

The following columns are available in the Discovery tool window

Set reply: The response from the device to a SET command, 'no error' means successful.

Ethernet address: The MAC address of the device, as printed on the barcode label on the underside of the unit.

IP Address: Currently set address of the unit. Typing this into a standard browser will bring up the device UI. Double clicking here allows a new IP to be assigned, as explained above.

HW Type: The type of Barix device that is responding.

IPAM Type: The IP Audio Module type of Barix device that is responding.

Product ID: The firmware type that is installed on the device. Note: ABCL or bcl means any program running on the ABCL platform; to find the specific application, it would be necessary to log on to the device UI and check.

FW Version: The version of the installed firmware. The latest releases are available from www.barix.com/download – firmwares evolve as new features and patches are implemented; Barix recommends keeping the version up to date in your devices.

DHCP name: if assigned, the device DHCP name is shown here.

4 List of discovery enabled firmware

The following non-exhaustive list shows the devices, and the relevant FW that support the discovery protocol:

Firmware	Version greater than	Date
Annunicicom	3.01	09/29/08
Instreamer	B3.06	09/02/08
Exstreamer	B8.25	08/25/09
Streaming Client	B2.09	08/05/09
Barionet100	2.26	03/03/09
Barionet 50	1.03	10/20/09
ABCL	B0.21	04/21/09
BCL packages	ABCL platform \geq B0.21	04/21/09
Simple Paging	2.08	16/09/13
Store & Play	1.31	05/01/14
Store & Play S	1.54	11/26/14
Soundscape	0.42	04/01/15
Remote Spot	0.17	14/05/17
Retail Player		07/07/17
IP Audio Client		20/02/20
Reeflector Client		11/09/18
IPAM400 Dev Kit		11/09/18
SIP Opus Codec		03/04/18
Generic Flexa		27/09/21
AudioPoint 3.0		20/08/18
Paging Gateway		18/01/23
IC Paging		18/01/23

5 Legal Information

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