

Inova-bg Ltd

Radina H3322

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1. Main features

Inova-bg Radina H3322 is a communication device with the main purpose to receive data from the radio channel – using LARS, LARS II and ElectronicsLine protocols simultaneously, decode it and sends it to Receiving Server using IP network and/or GPRS mobile network as a transmission channel. The device has an HTML server for easy configuration and status check, protected with a username and a password.



On the front panel there are 3 radio inputs (to connect to radio station output), Ethernet connector and four LED indicators:

P – 12V DC Power

R – Radio Decoder status

G – GPRS Server connection status

I – IP Server connection status

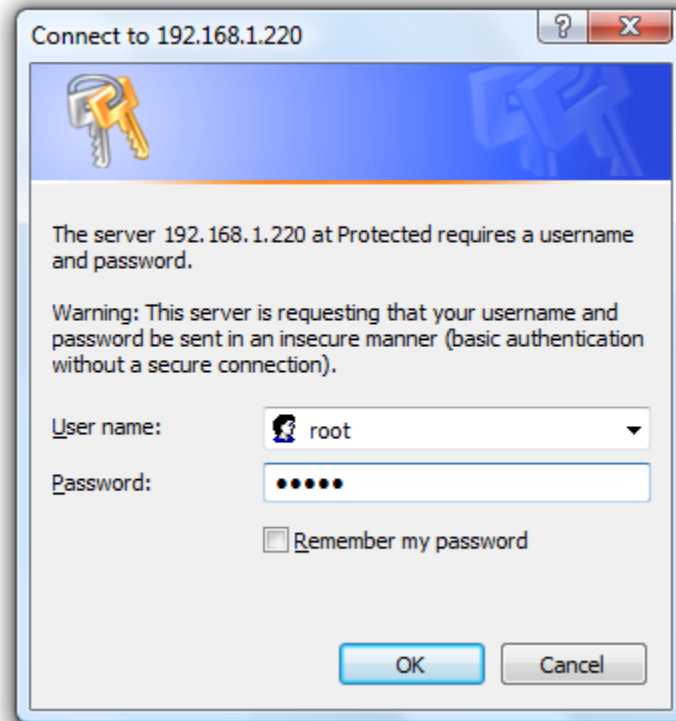


On the back are the connectors for 12V DC power supply, test button, SIM card push-in holder and GPRS mobile network antenna connector.



2. Start working with Radina H3322

The default IP address is 192.168.1.220. To access the web server for configuration use Internet Explorer (Chrome, Firefox, Opera or any other web browser) and enter the H3322's address - **http://192.168.1.220/** (or the new one if you already change it). If the device is accessible from that computer a connection will be established and you will be prompt to enter username and password:



The default settings (which will be recovered after hardware reset) are:

IP Address:	192.168.1.220
Username:	root
Password:	admin

If you enter the right credentials you will have access to the web page for configuration.

3. Homepage

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Inova-bg H3322 - Radio Base Station

Home
Device Config
Login Config
About
Reboot

Welcome to Inova-bg H3322 home page!

Device Information

Device Name:	Inova-bg H3322
Device MAC:	00:04:A3:49:00:CC
Firmware version:	1.3

Connection Status

Ethernet:	Connected
GPRS:	Connected

Buffer Status

Receive Buffer:	0%
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GPRS Current Status

GPRS Operator:	vivacom
GPRS Signal:	●●●● -55 dBm

```
Initializing...
Checking SIM
SIM PIN OK
Searching for network...
GPRS network connected
```

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H3322, ver: 1.3

On the homepage you can find main information about the device and the current status of the connections and also the status of the GPRS network connection and the signal strength.

4. Configuration of the main parameters

The screenshot displays a configuration window for the H3322 device. It is organized into five sections, each with a blue header bar:

- General Settings:** Contains fields for 'Device Name' (filled with 'Inova-bg H3322') and 'Device ID' (filled with '99'). Below these is a checkbox labeled 'Enable Filter "2 of 3" (Highly recommended)' which is checked.
- Network Settings:** Features two radio buttons. The first, 'Obtain an IP address automatically via DHCP', is unselected. The second, 'Use the following IP address:', is selected. Below are fields for 'IP Address' (192.168.1.220), 'Gateway' (192.168.1.1), and 'Subnet Mask' (255.255.255.0).
- Ethernet Server Settings:** Contains fields for 'IP Address' (192.168.1.231) and 'Port' (2549).
- GPRS Server Settings:** Contains fields for 'IP Address' (192.168.1.231) and 'Port' (2549).
- GPRS Settings:** Contains fields for 'SIM PIN Code' (0000), 'APN' (empty), 'APN Username' (empty), and 'APN Password' (empty).

At the bottom center of the window is a button labeled 'Save Config'.

To configure the main parameters of H3322 use **Device Config** menu.
Device Name – Enter the name of the device. This value is used only for user convenience – to identify devices if there are more than one connected to one network.

Device ID – Enter the ID of the device. This value is also received by the Receiving Server – to assure right identification of an incoming signal.

Enable Filter “2of3” – This option is highly recommended! It’s an additional filter to make sure that no false signals will be received.

Obtain an IP address automatically via DHCP – IP address is received automatically from a DHCP server in the current network. If you select this mode but after reboot the device cannot find a DHCP server for more than 10 seconds – H3322 will load the last saved static address. In this case easy way to access the web-server is by entering the following address: **http://inovah3322/**

Use the following IP address – IP address and network parameters are set to static

IP Address – IP address

Gateway –Gateway address.

Subnet Mask – Subnet mask of the IP network.

IP and GPRS Servers:

IP address and **TCP Port** of the receiving server. This parameters could be the same for IP and GPRS or different – depends on the receiving server network.

In the GPRS Settings, the parameters of the mobile operator must be entered. If only IP network is used these fields can be empty.

In **SIM PIN Code** the PIN code must be entered. If the SIM card doesn't use PIN code, this field has no role (empty or not).

APN (Access Point Name), **APN Username** and **APN Password** are parameters of the mobile network. The mobile operator must provide them (in most cases could be empty).

When the **Save Config** button is clicked a validation check is performed. If there is invalid data in one or more fields – they will be colored in red. Additionally under the button **Save Config** a field will be generated – **Error List** – which describes in details the errors and how to fix them. If all the input data are correct H3322 will save the parameters and will reboot with the new configuration.

5. Username and password configuration

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Inova-bg H3322 - Radio Base Station

Home
Device Config
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Login Configuration

This page allows to configure Login Username and Password.

CAUTION: You will need this information to access this page. Use the "Hard Reset" button if you can't remember your Login information. After Reset default Username and Password will be recovered.
Default Username: **root** Password: **admin**

CAUTION: Enter desired configuration and click **Save Config**. This will cause the device to reboot with the new settings.

Enter the new Login settings below (**maximum 11 symbols**):

Login Settings	
User Name:	<input type="text" value="root"/>
Password:	<input type="text" value="admin"/>

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In Login Config menu you can change the username and password used to access the web-server. Maximum length for both fields is 11 symbols. If you forget your credentials you can perform a hardware reset to recover default settings:

Username: root Password: admin

When you click the **Save Config** button a validation check is performed. If there is invalid data in one or more fields – they will be colored in red. If all the input data are correct H3322 will save the parameters and will reboot with the new configuration.

6. Reboot

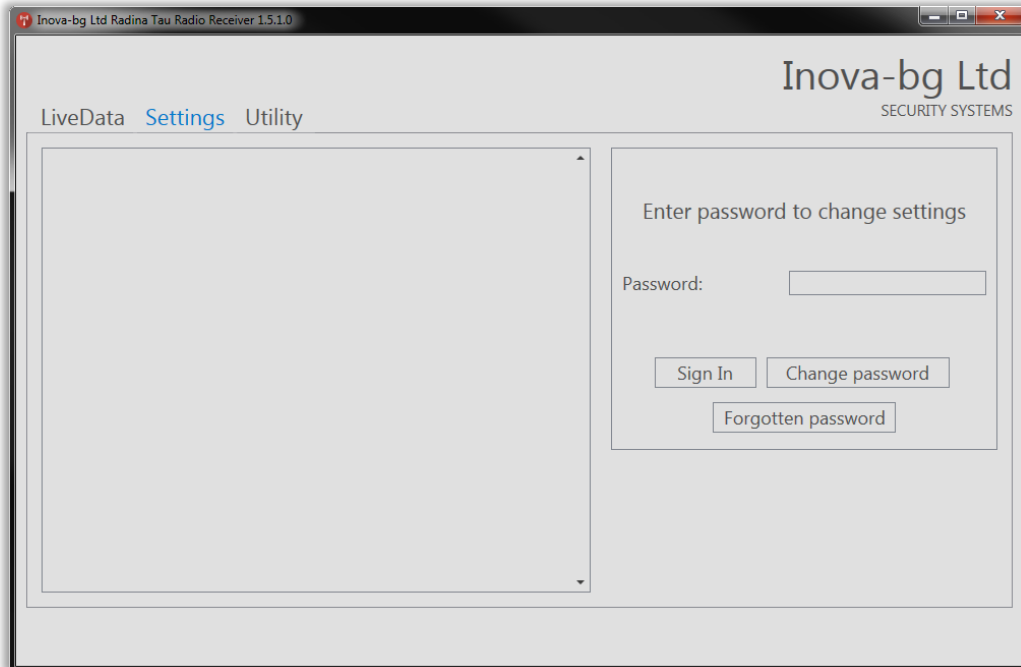
Clicking on the Reboot menu will cause the device to restart.

7. Hardware reset

In case you changed the settings and can't reach the device or if you forgot your username or password, H3322 is capable to return to its factory defaults. For this purpose you must disconnect from power supply, push and hold the button for hardware reset (test button) and reconnect to the power supply. Hold the button for 5 seconds until the yellow LED (G) is blinking. Once the LED goes constantly ON you can release the button and connect to the device.

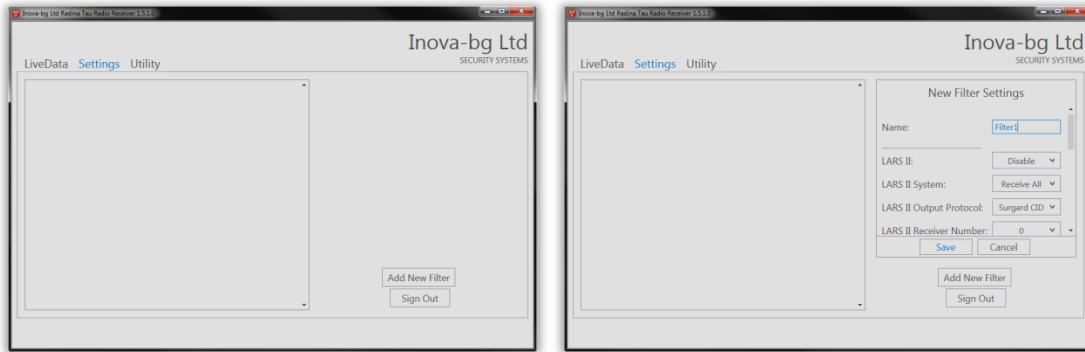
8. Radina Tau Radio Receiver

Radina Tau Radio Receiver is server software that receives all the data from all of the installed receivers - H3322. It decodes, filter, checks the integrity of the data and sends it to the correct output to monitoring software.

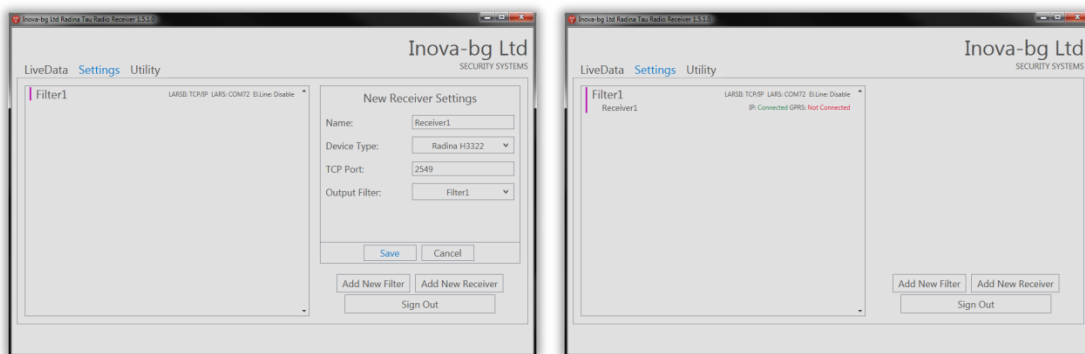


To add new receivers to the Receiving Server go to Settings Tab. To make changes to the configuration a password is need.

Default Password: admin

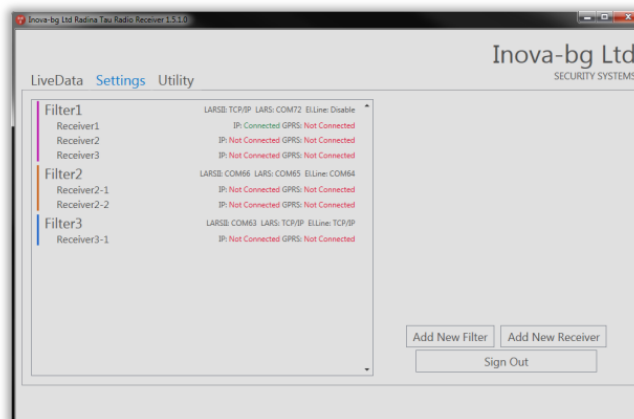


Create new filter by clicking on “Add new filter”. Change the filter settings corresponding to your system and click “Save”.

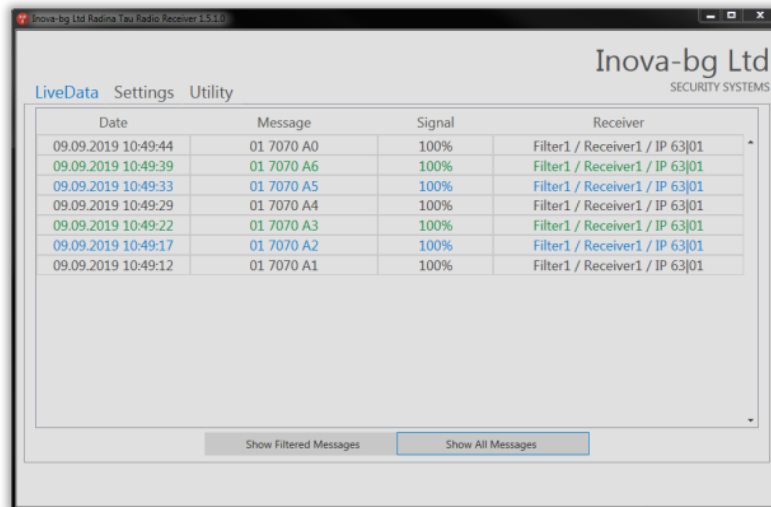


After a filter is created new Receivers can be added. Click “Add New Receiver” and change the receiver settings corresponding to your system. Note that every receiver should have a different TCP Port.

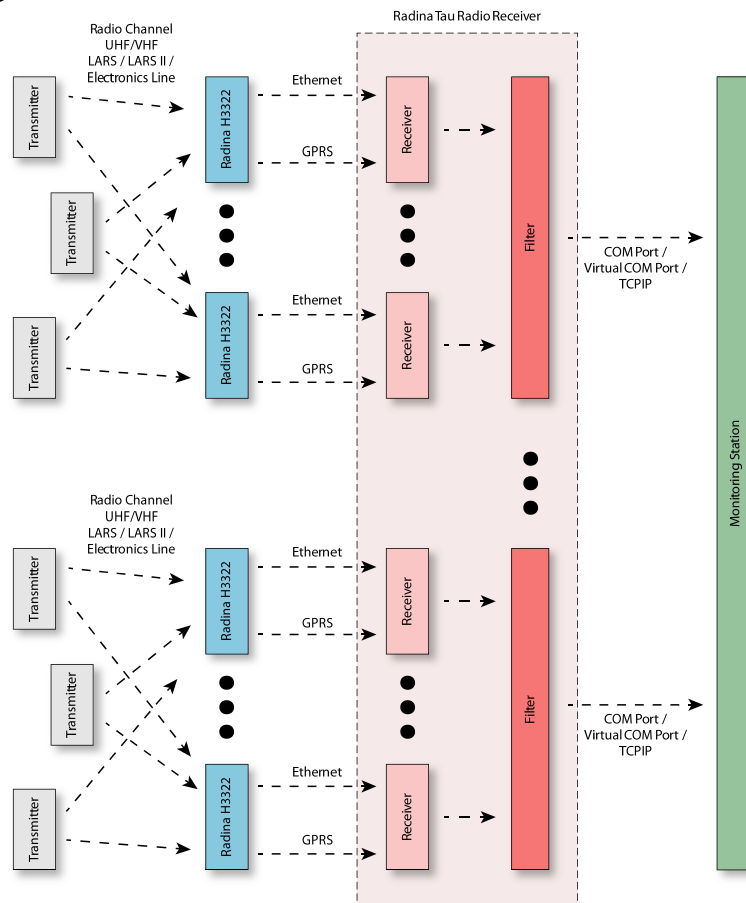
Click “Save”. The new receiver should be shown in the system treeview. The status of the IP and GPRS connection to each receiver is shown here.



Depending on your system you can add as many filters and receivers as needed. Each filter acts like new/separate radio system with its own receivers as receiving points.



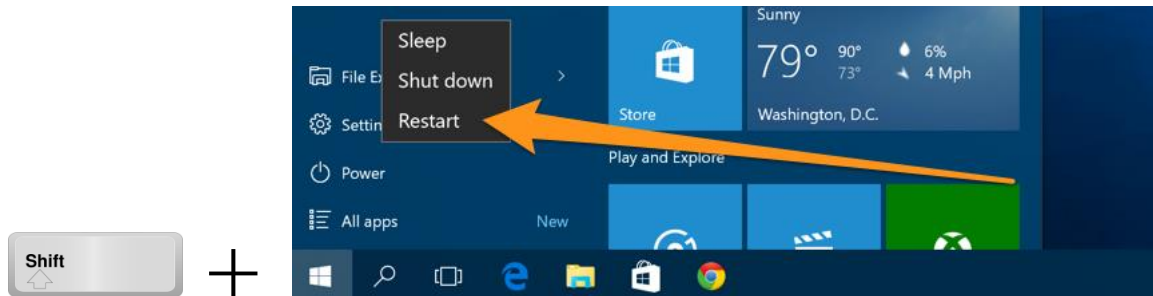
LiveData tab displays incoming signals from all the receivers. “Show Filtered Messages” shows only the signals that are sent to the monitoring station. “Show All Messages” shows all the signals that are received by all of the configured receivers.



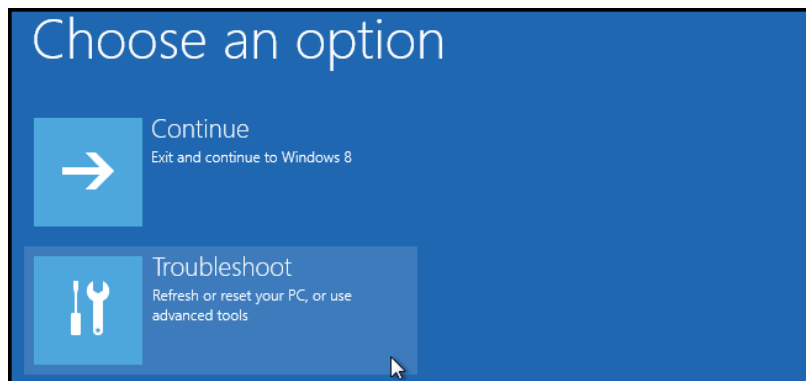
9. Windows 8.1/10 x64 unsigned driver installation

64-Bit editions of Windows 8.1 / Windows 10 require digitally signed drivers. To disable driver signature verification use the following steps:

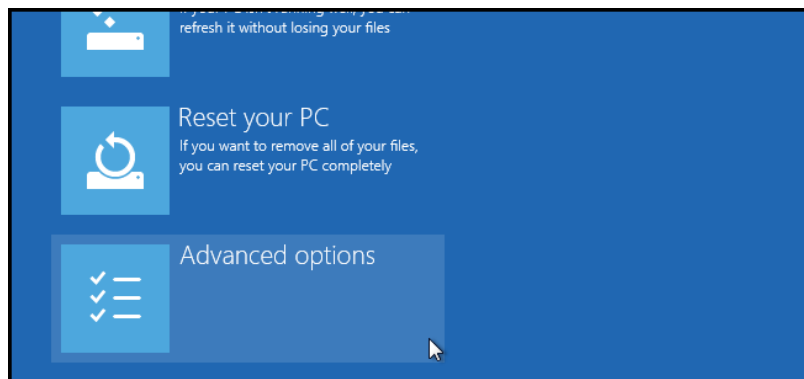
Hold the shift key and press restart:



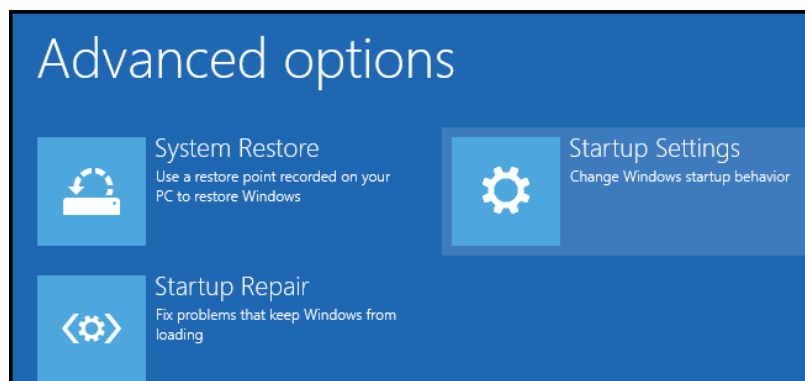
Once your computer has rebooted you will be able to choose the Troubleshoot option.



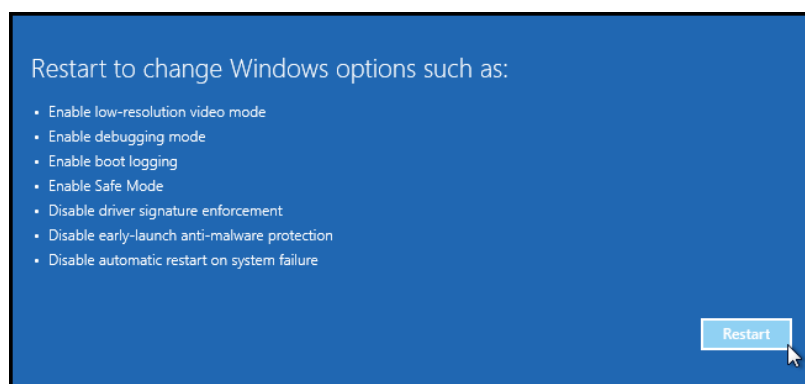
Then head into Advanced options.



Then Startup Settings.



Since we are modifying boot time configuration settings, you will need to restart your Computer one last time.



Finally, you will be given a list of startup settings that you can change. The one we are looking for is “Disable driver signature enforcement”. To choose the setting, you will need to press the F7 key.

