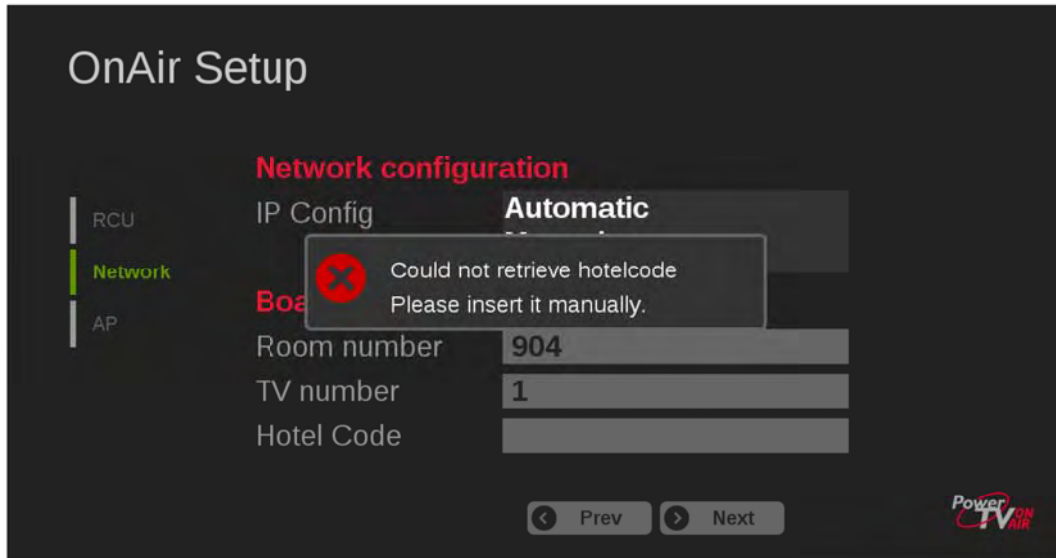The SBB will send a network enquiry to retrieve setup information from the Appliance Server. In case of failure an appropriate message will be displayed on the screen.

The following screen shot shows the warning message generated when using a generic DHCP server, the 'Hotel Code' must be entered manually.
The combination of 'Hotel Code and 'Common Data', uniquely identifies the SBB with in the hotel/property. Please take care when entering the 14 digit 'Hotel Code' as entering an incorrect code will result in the failure of the following connectivity test.
When completed select next and click to proceed with next step: 'connectivity check'

When completed select next and click ok to proceed with next step: 'connectivity check'.

Connectivity check

Regardless of the configuration selected the procedure will lead to a test. If all the data was entered correctly and the network has access to the internet, the connectivity check will validate the configuration. Make sure the network is connected to the internet and that the IP data used to configure the SBB is appropriate for the network internet connection.
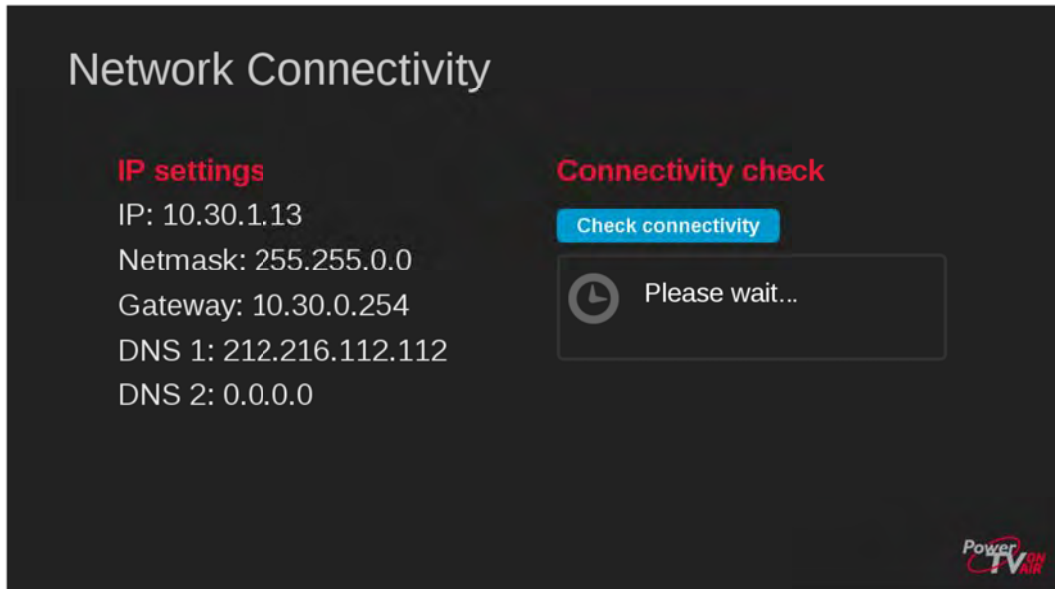

The information window will either display "network successfully configured" with the next button selected, or a 'connectivity fail' message if the OnAir+ SBB was unable to reach the internet, in which case all network and Common Data entered must be checked and the procedure retried. The RCU back button can be used to re-enter forms to check data.

When the 'network successfully configured' message is display, skip next section and proceed directly to 'Step 6 : The Wi-Fi bubble' on page 20.
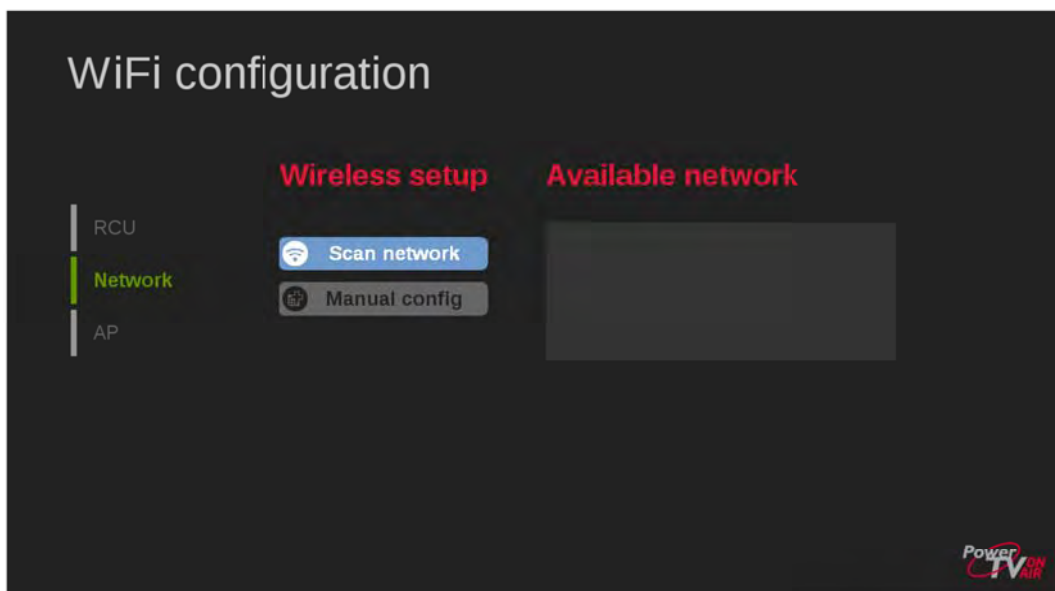
Wireless

Please have all 'Common Data' details, 'Hotel Code' and Your Wi-Fi network connection details to hand before proceeding[5].

Using the SBB internal Wi-Fi in client mode, disables the SBBS local AP (Access-Point) feature, these 2 options are mutual exclusive. See 'Step 6 : The Wi-Fi bubble' page 20.
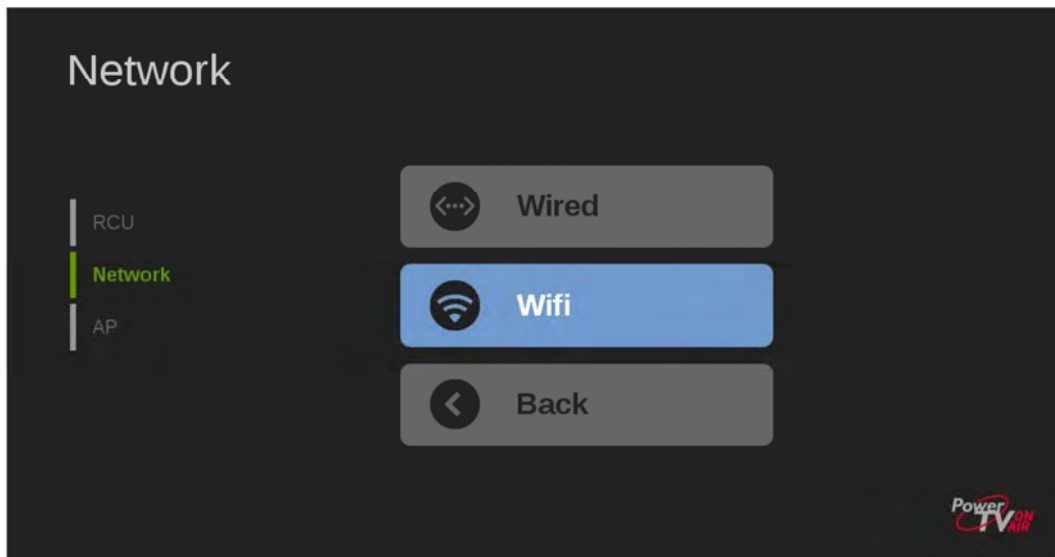
Select 'Wi-Fi' and press **ok** to proceed to next step.

Select 'Scan network' and press **ok** to display the SSIDs of available networks.

---

5   OnAir+ SBB cannot connect to Wi-Fi networks that require user-name and password to be entered to be granted access.

When the scan of available networks has completed, use the up and down arrow keys to select

the network to be used with OnAir+ and click **ok** to confirm.

Negotiating to connect to the network will auto-complete certain fields based on the encryption method detected. In the case of WPA, for example, just the pass phrase has to be entered, enter appropriate credentials for other types of encryption.
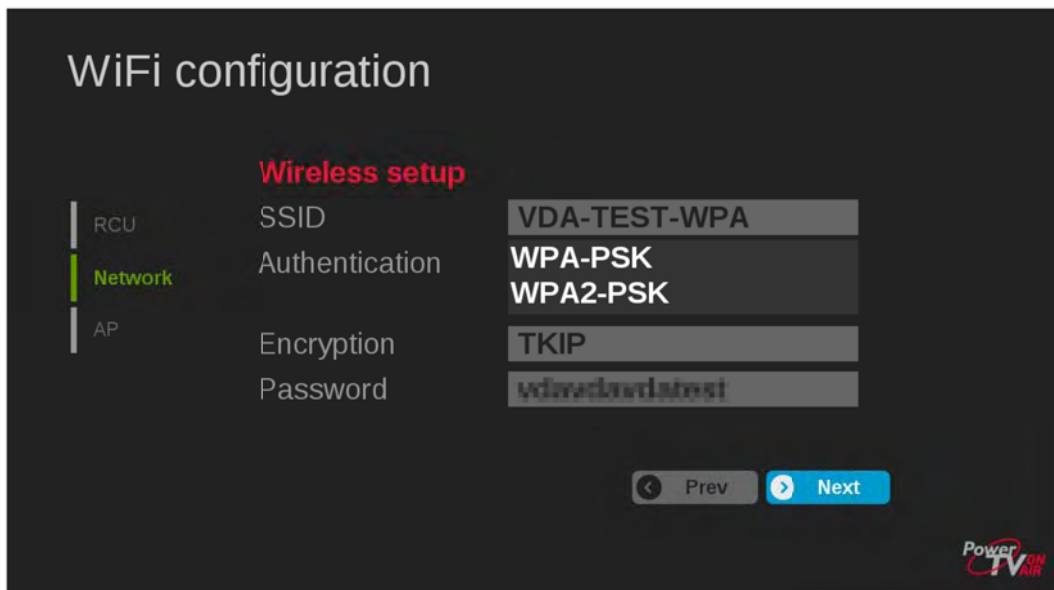
When all required data is entered select 'next' and press **ok** to fully connect to the network.

When fully connected to the Wi-Fi network the guided procedure will present the same setup pages as described for 'Wired' connection on page 13.

# Step 6 : The Wi-Fi bubble

Access point Setup

OnAir+ SBB has an internal Wi-Fi b/g/n/ card that can be used to provide a local Wi-Fi AP (Access Point) in the room. Tablets, phones, notebooks, or any other Wi-Fi enabled device, can get connectivity via the OnAir+ SBB. The corresponding SSID and WPA2 key are only available from a menu page on the television connected to the SBB.
Please note this option is only available when the SBB is configured 'Wired' internet connection.

This feature can be enabled or disabled as required. If enabled for use select the country where you are installing the SBB[6], and the Wi-Fi area coverage you require, low, medium or high. These are estimated coverage and are influenced by many factors, such as walls, objects and distance. This parameter has to be 'tuned' and tested on a case by case basis.

The SSID cannot be manually configured, it is generated automatically by an algorithm in SBB to avoid confusion with adjacent SBBs. Authentication is fixed to WPA2 and is also generated automatically by an algorithm in SBB , both the SSID and WPA2 are displayed for information only.
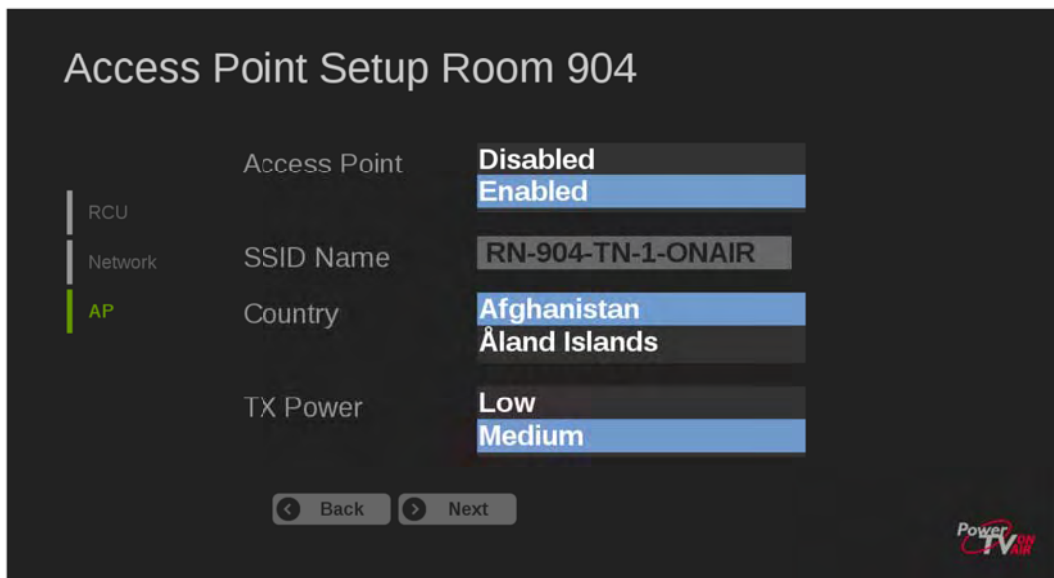
Select next and press **ok** to display a summary of the configured local access point.

---

6   Set as needed to indicate country in which device is operating to set regulatory domain. This can limit available channels and transmit power.

Details displayed are made available to the dedicated 'app' that guides a user to establish the connection to this Wi-Fi Bubble[7].
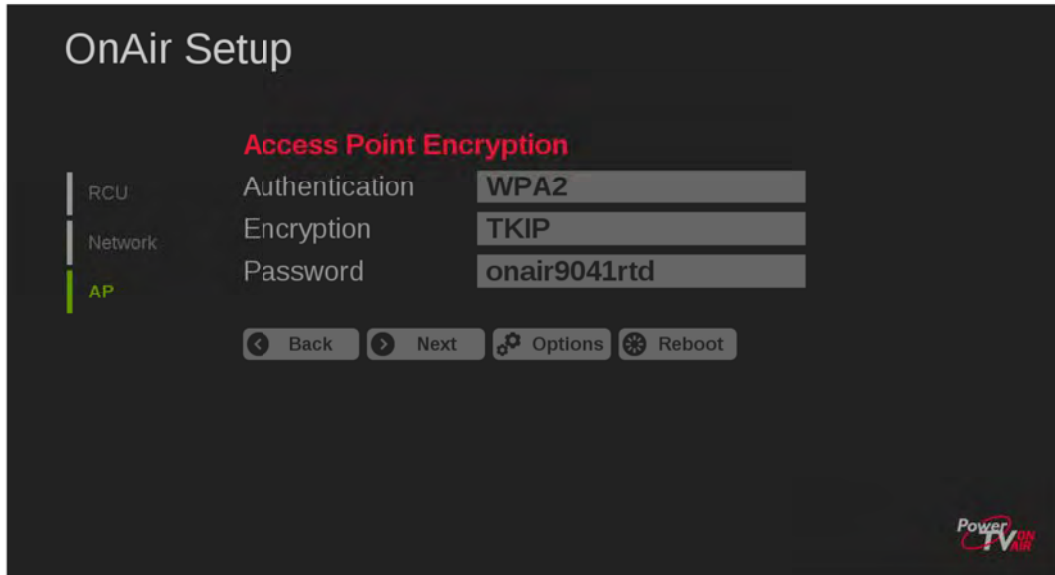
Select the 'Save' button and click **ok** to complete the guided procedure.

Select the 'Reboot' and click **ok** to apply the entire configuration and reboot the SBB. After the reboot, the SBB is ready for use and configured in the previous steps.
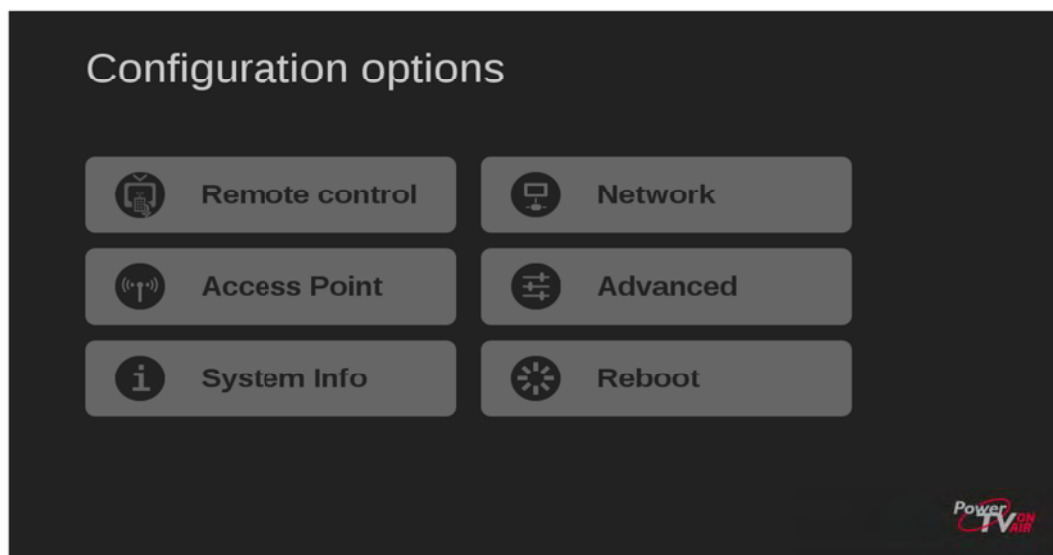
---

7   Wi-Fi bubble is an option and subject to limitation.

Advanced Features

Several additional features are available once the initial setup procedure has been completed. To access to these features a specific code must be sent to the SBB using the paired RCU. Entry of the correct code forces the television to display the 'Configuration Options' menu below[8].

"Network" and "Access Point" are already described on pages 12-18 being part of the initial setup procedure. The following gives a brief description of the additional features and additional setup procedures available for complex installation scenario or for maintenance purposes.

Detailed information of these additional features and procedures is available in the OnAir+- Setup Guide document available from: -   http://www.powertvonair.com/manuals/OnAir+-Setup_Guide.pdf

Configuration options: Remote Control

Allow additional RF4CE input devices (like remote controls or keyboards) to be paired with the SBB.

Configuration options: Reboot

Forces a soft reboot of the SBB, the only way to exit the setup menu.

Configuration options: System Info

Displays details of the SBBs current setup and configuration, including firmware version and network settings.

---

8   See the Troubleshooting chapter below for the key sequence to access the setup menu.

Configuration options: Advanced

Displays more configuration options; grouped here as a sub menu to avoid accidental access.
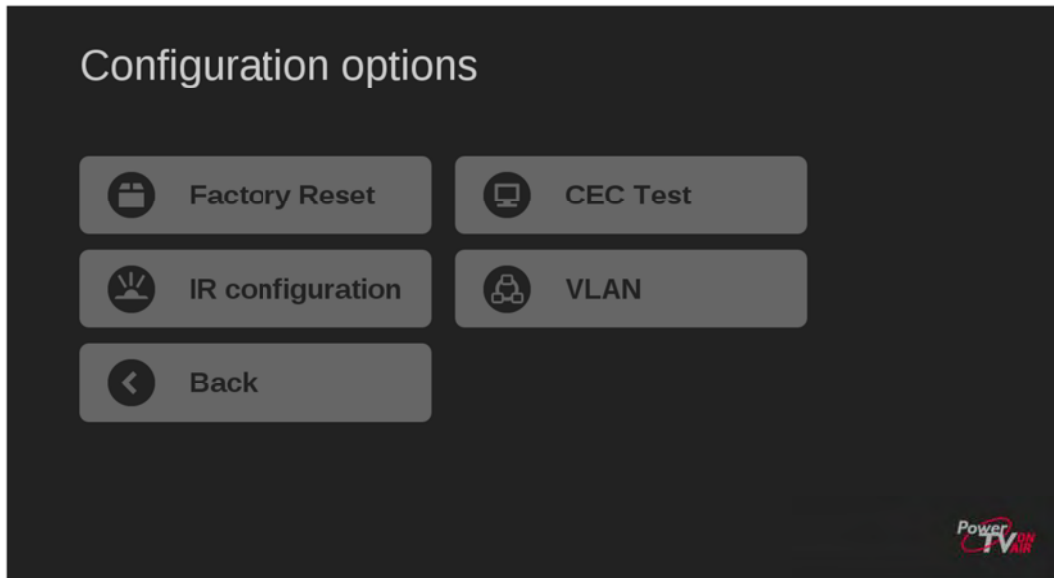
Advanced : Factory Reset

Selecting this options forces the SBB to erase all data and return the SBB to the 'Factory Default' condition. After a 'Factory Reset' the SBB will reboot and enter the initial configuration procedure.

Advanced: VLAN

If enabled, allows the installer to define 3 additional VLAN ID's.

1. Mobile ID, used to host mobile devices, like in-room tablets, within a specific vlan, enhancing security, performance and control[9].

2. HSIA Wired ID used to host guest laptops for wired internet navigation. This Vlan is mapped to the RJ45 port labelled 'LAN' on the SBB.

3. HSIA Wi-Fi ID is used to host guest laptops for Wi-Fi internet navigation, using the SBBs the Wi-Fi access-point.

VLANs for HSIA are usually an integral part of the VDA HSIA solution, however they are available for use with 3rd party HSIA controllers, they are not used in a 'standalone' mode.

---

9   Mobile ID vlan works only when applied together with specific configurations at networking level.

Advanced: IR Configuration

The RCU (Remote Control Unit) is a dual technology device, using both RF4CE and IR transmission, RCU buttons are grouped by function and each group can be assigned to use one of the two transmission methods.

The RF4CE and IR settings of the first RCU / SBB of a new installation must be discovered and configured manually, however if a VDA Appliance Server is part of the installation then the remaining RCUs can be configured automatically by repeating the 'paring' procedure. Please note without an Appliance Server all RCUs must be configured manually.

Once the optimal RCU settings are established for the installation, it is strongly recommended the Appliance Server is configured to automatically manage the RCU settings.

(Refer to 'Manual Setup - Remote Control Unit' on page 28 and 'Appliance Server Setup Guide' document available from : -
http://www.powertvonair.com/manuals/OnAir+-Appliance_Server_Setup_Guide.pdf

Advanced: CEC Test

It is important to establish how well the CEC protocol has been implemented in the television in order to define the best control configuration possible.

A guided test will rank the TV's performance and will be used to define the final OnAir+ remote control configuration.
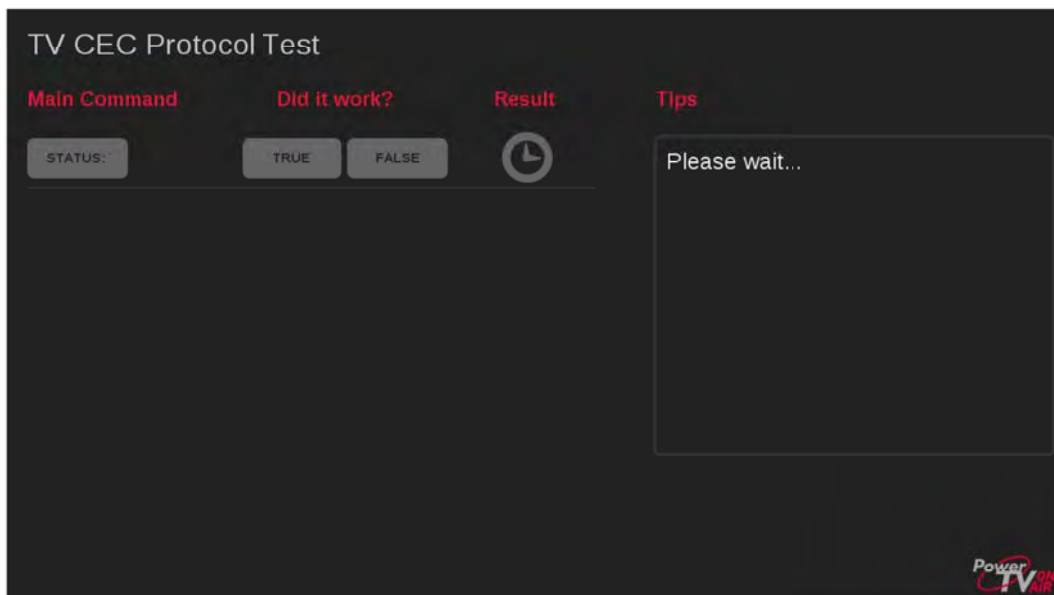
Each test is launched by selecting an item in the 'Main Command' column and pressing [ok], the result of the test is registered by selecting the appropriate button under the "Did it Work" column.
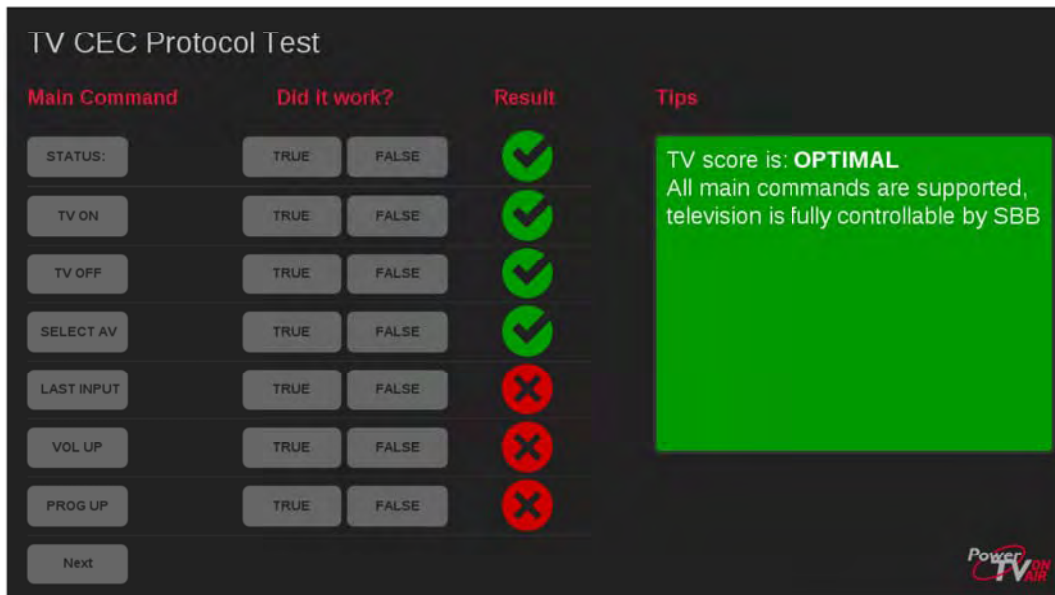
After completing all tests the ranking result will be displayed.

A ranking colour of green (OPTIMAL), if all crucial commands are supported, or orange (AVERAGE) if just basic commands are supported, or red (BAD), if no reply is received from the television.
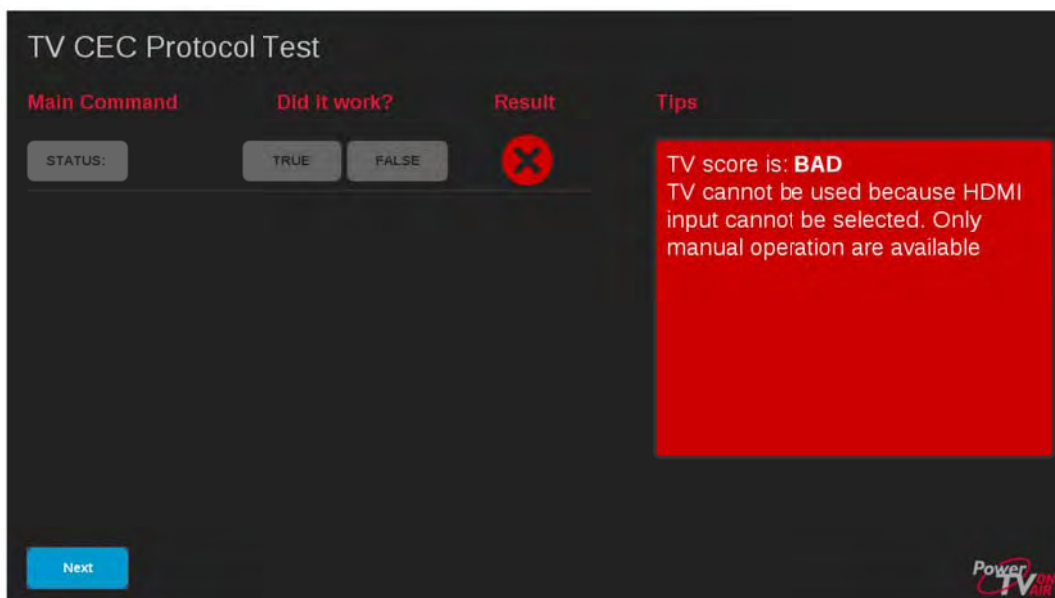
The summary screen below provides guidance about the next step of the setup procedure which can be manual or automatic.

OnAir Setup

Remote IR configuration

		IPTV Channels	COAX Channels
RCU	On/Off	IR	IR
Network	0...9	RF4CE	IR
AP	Volume + / -	RF4CE	IR
Graphics	Channel + / -	RF4CE	IR
	Colour	RF4CE	RF4CE
	Source	IR	IR

Back   Next
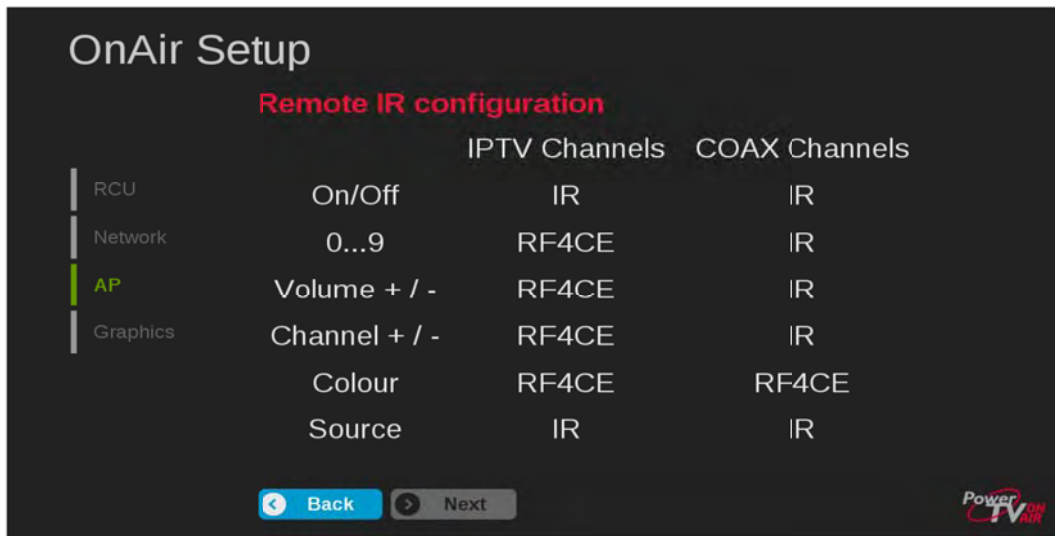
Use the information reported to configure the RCU and achieve the best control of your system.
Refer 'Advanced: IR Configuration' on page 24 and 'Manual Setup - Remote Control Unit' on page 28 for more details.

Define the System Environment

Generic guideline

'Out of the box' - first time use, the RCU has no specific configuration.

Based on the ranking results of the previous chapter, it may be necessary to configure certain RCU buttons to send IR (infrared) codes directly to the TV.

Select which of the 2 following tables (IPTV / SMATV) best describes the installation and then note the comment against the ranking result achieved in the previous step.

IPTV channel distribution

OPTIMAL	No special action is required.
AVERAGE	The on/off button should be set to use IR.
BAD	The on/off button should be set to use IR. Configure TV to switch on to

HDMI1, alternatively the source button should be set to use IR – manual selection of HDMI port required[10].

SMATV channel distribution

OPTIMAL	Channel up/down should be set to use IR.
AVERAGE	Channel up/down, numeric buttons and on/off button should be set to use IR.
BAD	Channel up/down, numeric buttons and on/off button should be set to use IR. Configure TV to switch on to HDMI1, alternatively the source

button should be set to use IR – manual selection of HDMI port required[11].

---

10   A television ranking as 'BAD', is and indication that TV cannot, automatically or by command, select the correct HDMI input supporting the OnAir+ box.

11   This can be overcome by either configuring the TV to always switch-on to the correct HDMI input, or set the "source" button on the RCU to be IR, the user can then manually select the correct HDMI input.

Manual Setup - Remote Control Unit

All RCU configurations are set using the programming mode feature.
Choosing the correct code (s) is crucial, once identified, the button assignment code(s) must be set into the RCU. This chapter will guide the user for the manual setup of the remote control.
There are several advanced features to simplify cloning / loading of the RCU configuration for multiple rooms, please refer to 'Advanced: IR Configuration' on page 24.

RCU programming Mode

To enter programming mode hold down both **ok** + **i** buttons (2.5 Seconds), until the green LED blinks twice, please note programming mode will terminate after 10 seconds of inactivity.

After entering programming mode, enter the 4-digit code for your TV set all 4 digits must be entered consecutively including leading zeros. The green LED blinks twice for a correct code or stays lit two seconds for a bad code.

The code for your TV can be found in the "TV code list" document available for download from:
- http://www.powertvonair.com/manuals/tv_code_list.pdf

Test the TV functions

After the TV type code has been entered into the RCU, all numeric, on/off, colour button, volume up/down, channel up/down, mute and source button, will emit IR commands only.
To verify correct operation, while aiming the RCU at the TV, press all relevant keys in turn and confirm they operate as expected. If the TV does not respond correctly start again and / or try an alternative code. Do not proceed until correct operation is verified.

Re- assigning 'Key Groups' to IR/RF

After code programming, all keys are set to directly control the TV database (see key description). Some 'Key Groups' must now be assigned to control the OnAir+ SBB and the television according to the IPTV channel distribution or SMATV channel distribution result.

The following procedure details how to assign appropriate 'Key Group' code(s) to the RCU. Study the following table and select code(s) that will assign appropriate RCU key(s) and/or 'Key Groups' for RF or IR control.

Use the programming sequence (see above chapter RCU programming Mode on page 28) to enter 4-digits code listed on the table RF-IR-Key group according to your selection. Repeat the above sequence until all required codes for the suggested configuration have been entered.

RF	IR	Key group
0020	0030	All data base keys
0021	0031	Numeric keys
0022	0032	On/off (Standby) key
0023	0033	Channel keys
0024	0034	Volume keys
0025	0035	Color keys
0026	0036	Source keys

For example, the programming sequence for a LG ™ TV where only the on/off button is required will be:

Set all buttons to use IR

ok + i <wait 2.5s> <two green blinks> 0 6 5 3 <two blinks>

Set all buttons to use RF4CE

ok + i <wait 2.5s> <two green blinks> 0 0 2 0 <two blinks>

Set only on/off button to use IR

ok + i <wait 2.5s> <two green blinks> 0 0 3 2 <two blinks>

Useful commands for problem solving

To query the stored 4-digit code:
Enter programming mode and enter code '0002' the green LED blinks twice:-
Press '1' and count the number of green LED flashes for the value of the first digit of the code, repeat pressing '2' '3' and '4' for the second, third and fourth digits of the code, note there are no flashes for digit "0"

Reset the RCU:
Enter programming mode and enter code '0000' the green LED blinks twice:-
The RCU is set to default (no TV set programmed)

Troubleshooting

Q:How can I enter setup again?

A: Using the paired / working RCU, enter ⏮ ᴼᴺ ᴬᴵᴿ ⏭ ⏸▶ ⏮ in sequence, the SBB will be forced to display to the setup menu. Please note that the SBB must be rebooted to exit the setup menu.

Q:How can I pair a new remote?
A: Power off/on the OnAir+ SBB, after 10secs, the front blue light will slowly cycle on/off at 1 sec intervals, this indicates the SBB is listening for additional pairing requests. Refer to "pairing your remote" chapter for guidance.

Q:What is the remote operating range?
A: For both RF4CE and IR, the range is around 8-10mt (line-of-sight for IR). RF4CE may still control the OnAir+ SBB even if you are in a different room but within the operating range, however this not a guaranteed ability and is dependant on construction materials used in the property.

Q:Do I need test each TV for CEC protocol?
A: You need only test different models - keep track of code brand and setup. Different room, same television will requires the same configuration.

Q:Will the Appliance Server help me with CEC?
A: Yes, once you have detected the best setup for each television type, enter the setup data, brand-code and RCU configuration for each room of the property into the Appliance Server, it will be retrieved automatically. Refer to the "OnAir+-Appliance Server quick setup guide" document.

Q:How do I recognize the RCU is paired?
A:If unpaired the RCUs red led emits a fast series of blinks.

Q:How do I recognize if a button is IR or RF4CE?
A:The RCUs red led will blink during RF4CE transmission, while the green led blinks for IR.

Q:What is the 'Hotel-Code'?
A:It is a unique identifier for the installation equipment including OnAir+ SBBs and Servers. It is assigned / generated after the purchasing order is received. There are several hotel-codes used for demos or testing that can be requested for temporary use.

Q:How can I enter text into web form / template?
A: Virtual keyboard can be recalled anytime by pressing the RCUs blue button.

VDA Multimedia S.p.A.

Head Quarter
Viale Lino Zanussi, 3   Ph. +39 0434 516111
33170 Pordenone   Fax +39 0434 516200
ITALY

www.powertvonair.com
www.vdavda.com

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