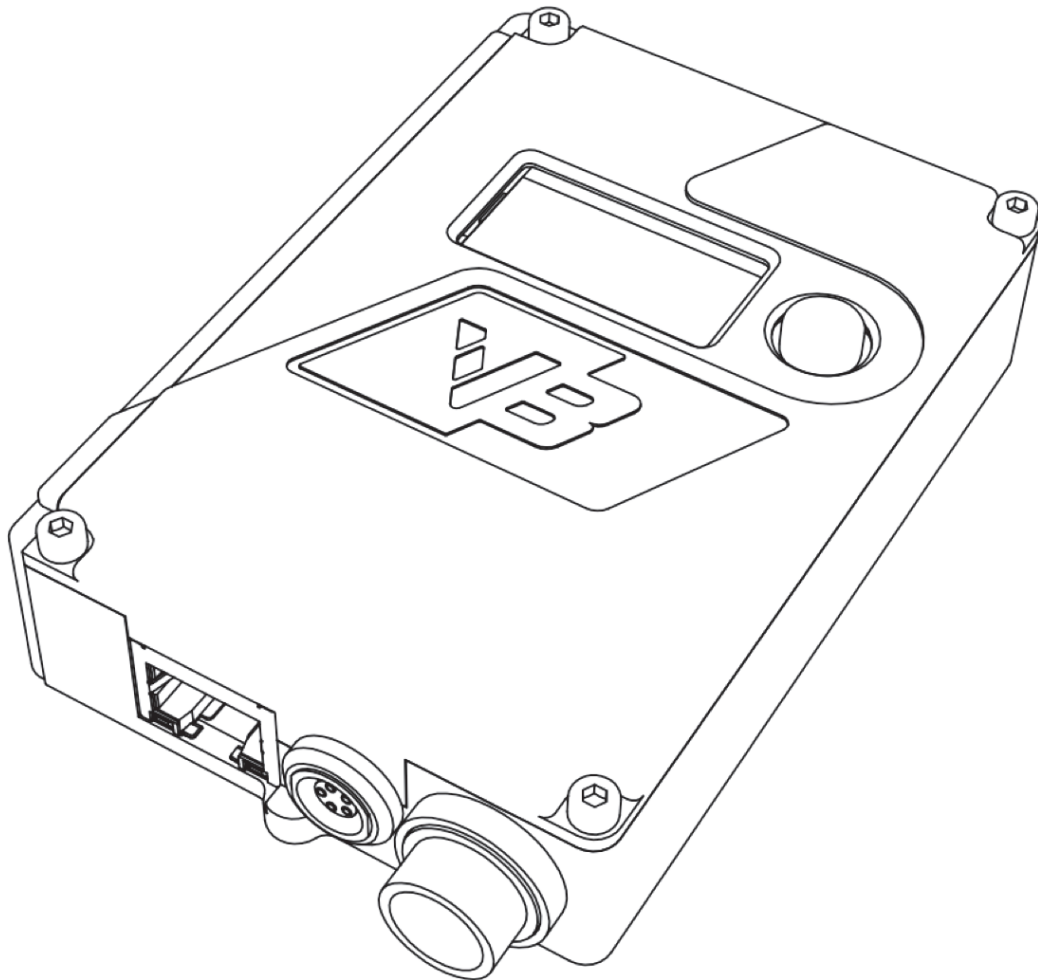
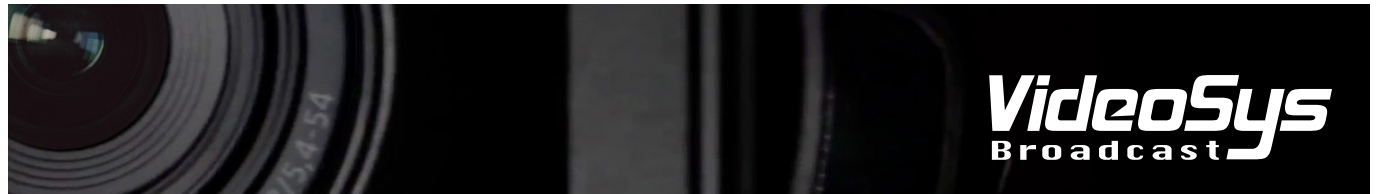


RXSM-E User Manual

Revision 1.2 20/11/2019





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Your Camera Control Data Receiver

Getting Started

Thank you for purchasing a VideoSys RX, we hope that you will find the necessary information within this manual and our specific quick setup guides, if however, you require additional support please don't hesitate to contact your local distributor.

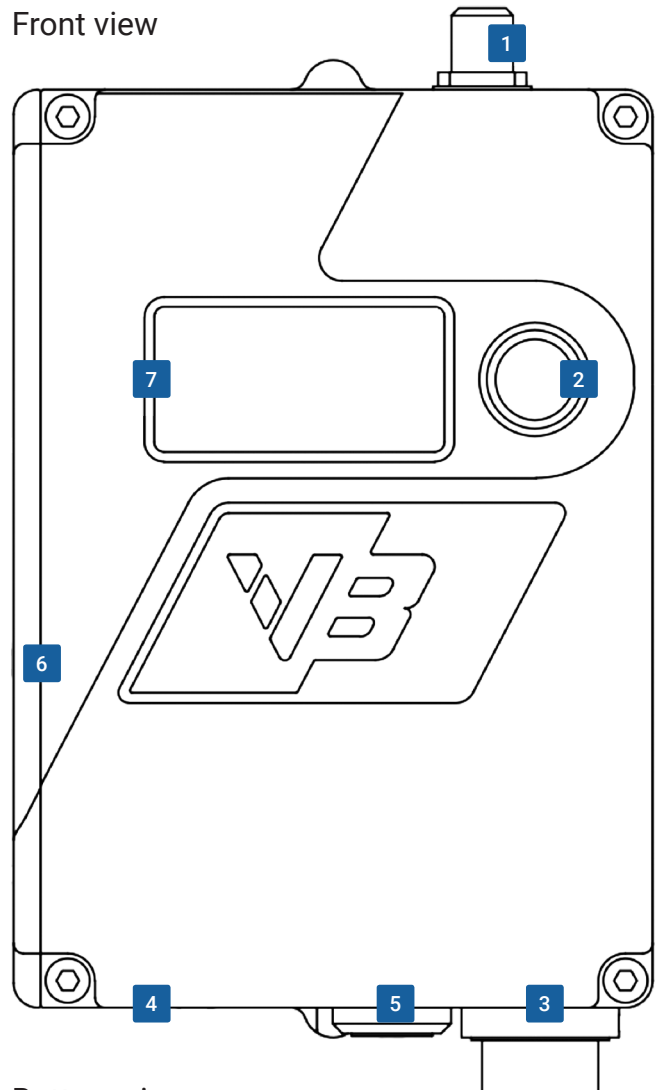
Introduction

The VideoSys camera control system allows replacement of the cables between Remote Control Panels (RCP), Camera Control Units and Cameras with a robust broadcast quality wireless link.

The VideoSys camera control solution consists of three distinct components; an 'IDU' (Indoor Unit), 'ODU' (Outdoor Unit) and an 'RX' (Receiver). Multiples of these components can be used to best fit the operator's requirements, for example multiple IDUs can be connected to allow for many camera control paths over one ODU. Multiple ODUs can be used to increase RF coverage, and each camera to be controlled requires an RX.

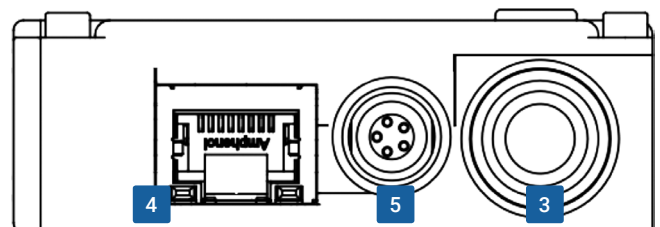
From this point on to avoid ambiguity and keep things concise, the terms IDU, ODU, RCP and RX will be used.

Front view



Bottom view

Detail view, numbering as above



1. Receive antenna connector (SMA Female)
2. Multi-directional navigation button
3. Generic Camera Connectors
4. Ethernet Connector (RJ45)
5. Tally Output Connector (5 Pin LEMO)
6. Peripheral connector (Behind dust cover) (2mm Pogo pin receptacle)
7. OLED Display

Principal of Operation

The VideoSys RX is more than just a data receiver, it emulates a camera manufacturer's RCP, allowing for a light weight communication protocol better optimised for transmission over RF to be used.

Two fundamentally different operating modes can be selected between; Uni-directional camera control and Bi-directional camera control. In Uni-directional mode camera control is achieved with no return data path, this provides the most robust camera control link. The downside of Uni-directional control is that it limits the number of features on a manufacturer's RCP that can be used to those that we have specifically supported.

Bi-directional control requires a return data path, typically provided by a COFDM video transmitter, it allows for the full functionality of a manufacturer's RCP. The downsides of Bi-directional control are firstly that it needs two RF links,

both need to be good for successful control. Secondly a synchronising process is needed to inform the RCP of the camera's features (or potentially the other way around, manufacturer dependant), this can lead to slower 'wake up' times than with unidirectional control. Wake up time is software/camera/panel and manufacturer dependant.

For more information on the functionality of the RX as part of a camera control system, please refer to the IDU manual and our range of specific set up guides.

The most basic Uni-directional set up is shown in Fig 1. Where a single ODU is sending control data to be received by a single RX.

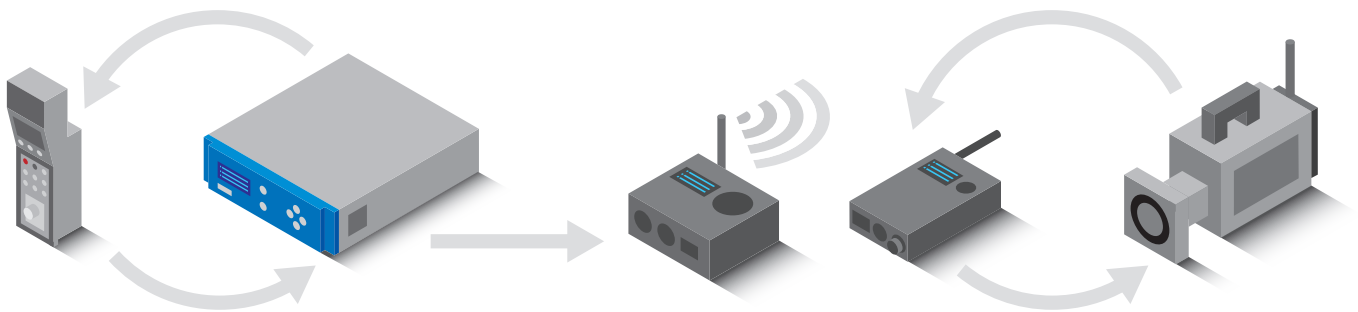


Fig 1. A simple Uni-directional camera control setup

Connecting Components

The camera control RX requires three things, a source of power, a means of communicating with a camera and an antenna with which to receive data from the rest of a camera control system.

Power can be supplied via the generic camera connector, or the tally connector.

Connection to the camera can be via either the generic camera connector or via Ethernet using the RJ45 connector.

Navigating Menus

The Up, Down, Left, Right and Enter buttons can be used to navigate through the menus. Menus are organised into lists, these can be scrolled through with the Up and Down buttons. To enter the selected submenu or option, press the Right button. Left will return to the previous menu. The centre-click Enter button is used to set or save options such as frequency or IP addresses.

Within a text edit screen, the Left and Right buttons can be used to select the character being edited and the Up and Down buttons to change that character. To save and return press the Enter button, to discard and return use the Left button to scroll back to the first character and then press Left once more to return.

Status Screens

The first screen that will be displayed to the user is the status screen (Fig 2), this is designed to give a quick overview of the units' configuration and operating status.

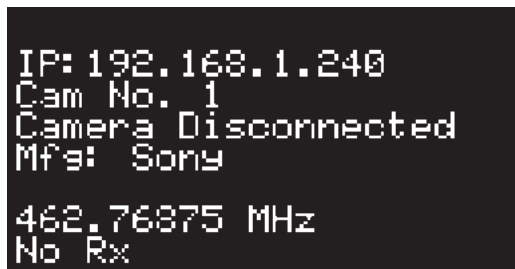
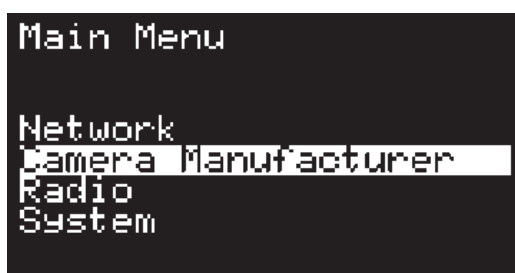


Fig 2. The RX status screen

Menu Structure

From the main menu, you are presented with 5 selectable options:

- Network
- Camera Manufacturer
- Radio
- System
- Camera Number



Camera Manufacturer

Here, the unit allows for the Camera Manufacturer to be set according to the camera used with the RX.

For the list of Camera Manufacturers; consult the release note for the version of firmware that is currently installed.

Using the Multi-directional navigation button, select the manufacturer that matches the camera and press Enter.

Progression 'dots' will be displayed on the screen (Fig 3) and will force the RX to Restart ready to operate with the camera..

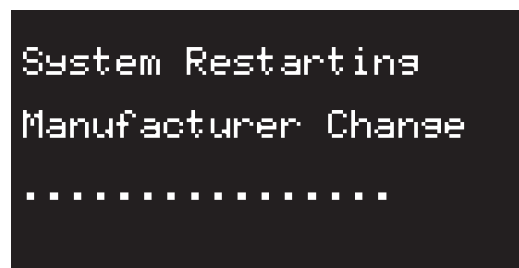


Fig 3. Manufacturer Change

Radio

The radio frequency can be changed by pressing to the Right. The **Radio Functions** screen displays the current frequency (Fig 4.) Pressing Enter allows for the frequency to be changed (Fig 5.).

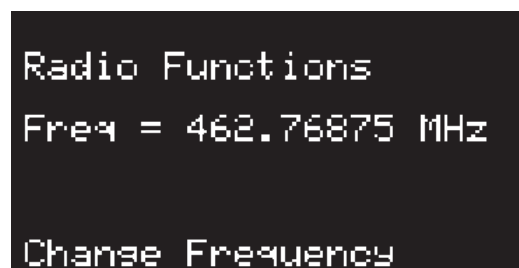


Fig 4.

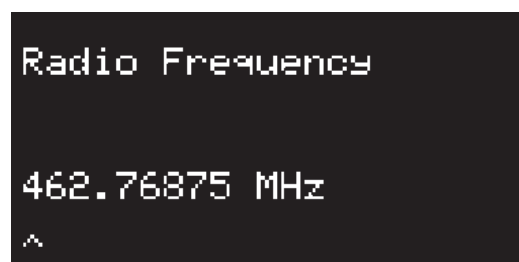
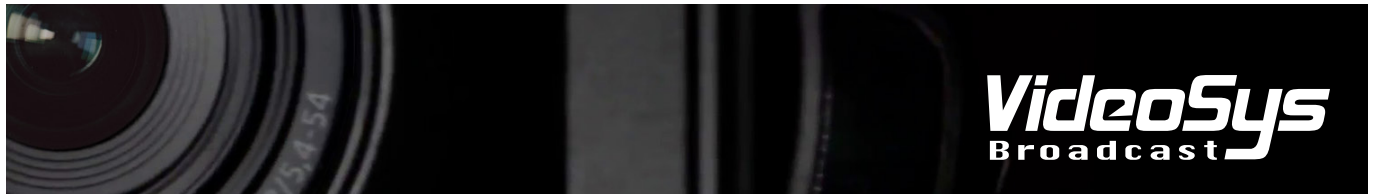


Fig 5.



System

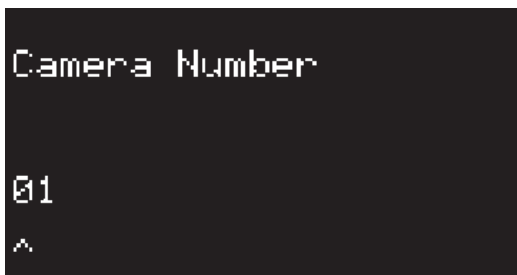
This screen consists of six options that display various information about the RX. Navigating Up, Down and Enter allows the user to view and display detailed information.



Fig 6. Manufacturer Change

Camera Number

Allows for a camera number to be set between 01 to 96



Network

This menu allows changes to the IP Address, Netmask and Net Gateway. Using the navigation button to set the IP values to suite the network

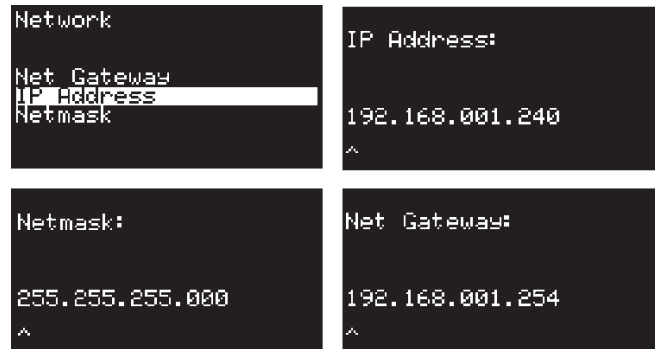
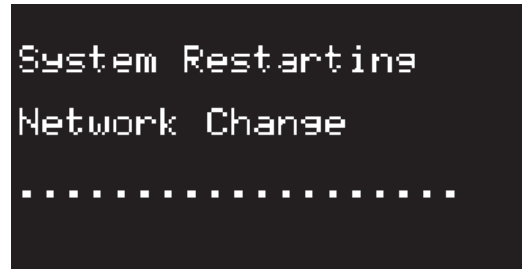


Fig 7. Network Menu

When changes are applied return to the Network Menu and back to the Main Menu where the RX will restart and set the Network Change(s).



Web Interface

The RX has a built-in webserver and serves a range of useful control pages, if there is a device with a web browser on the same network, this interface can be used to quickly change settings and perform updates directly from a computer.

Accessing the Web Interface

To access the Web Interface, firstly power up the RX and connect a PC or laptop up to the same IP network as the RX. By default, the RX is set to 192.168.1.240.

Open a web browser and type in the IP address of the RX.

A GUI Web interface is presented (Fig 8.).

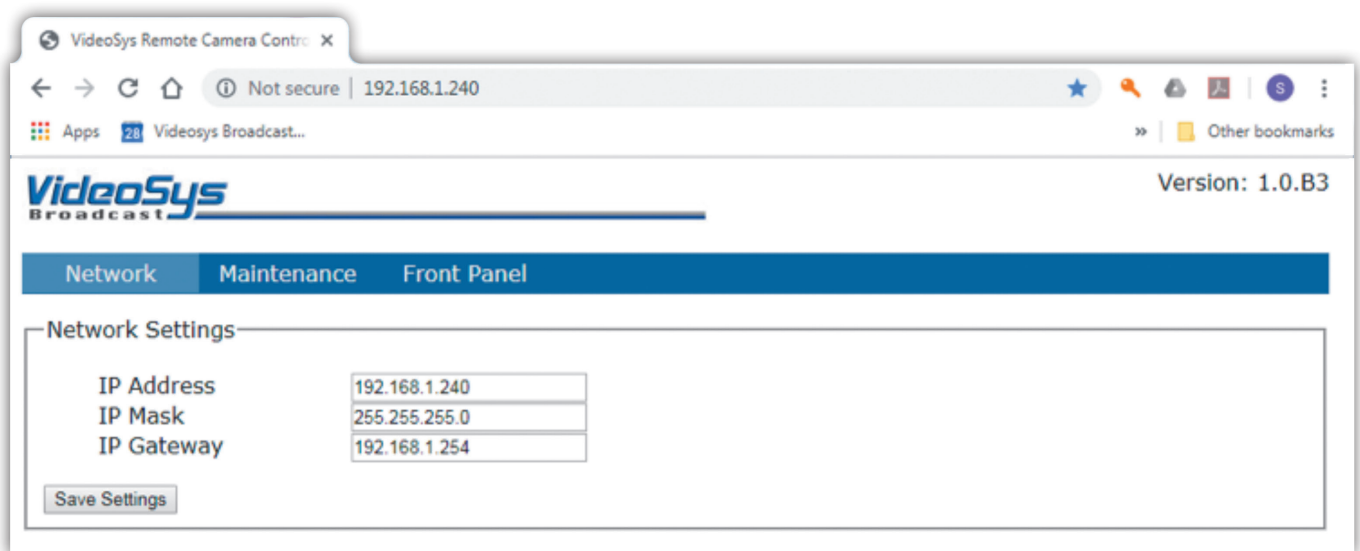
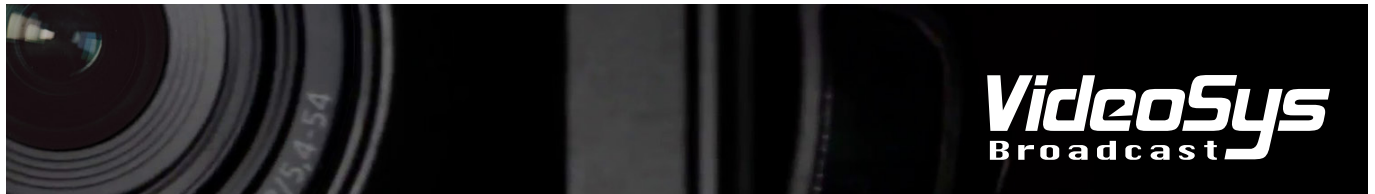


Fig 9. RX GUI Web Interface

The Web Interface allows for changes to network settings, software updates and access to the front panel where changes can be made as on the actual RX.



Unit Updates

Selecting the Maintenance tab on the Web interface displays the Software Update screen.

Updates can be downloaded from the VideoSys website.

Once downloaded, click on the Choose File button.

Downloads are usually found in the Downloads folder (Fig 10.).

Once the file has been selected click on Perform Upgrade.

The upgrade should only take a few seconds and will restart the RX once complete. It is important that the RX does not lose power whilst the upgrade is taking place.

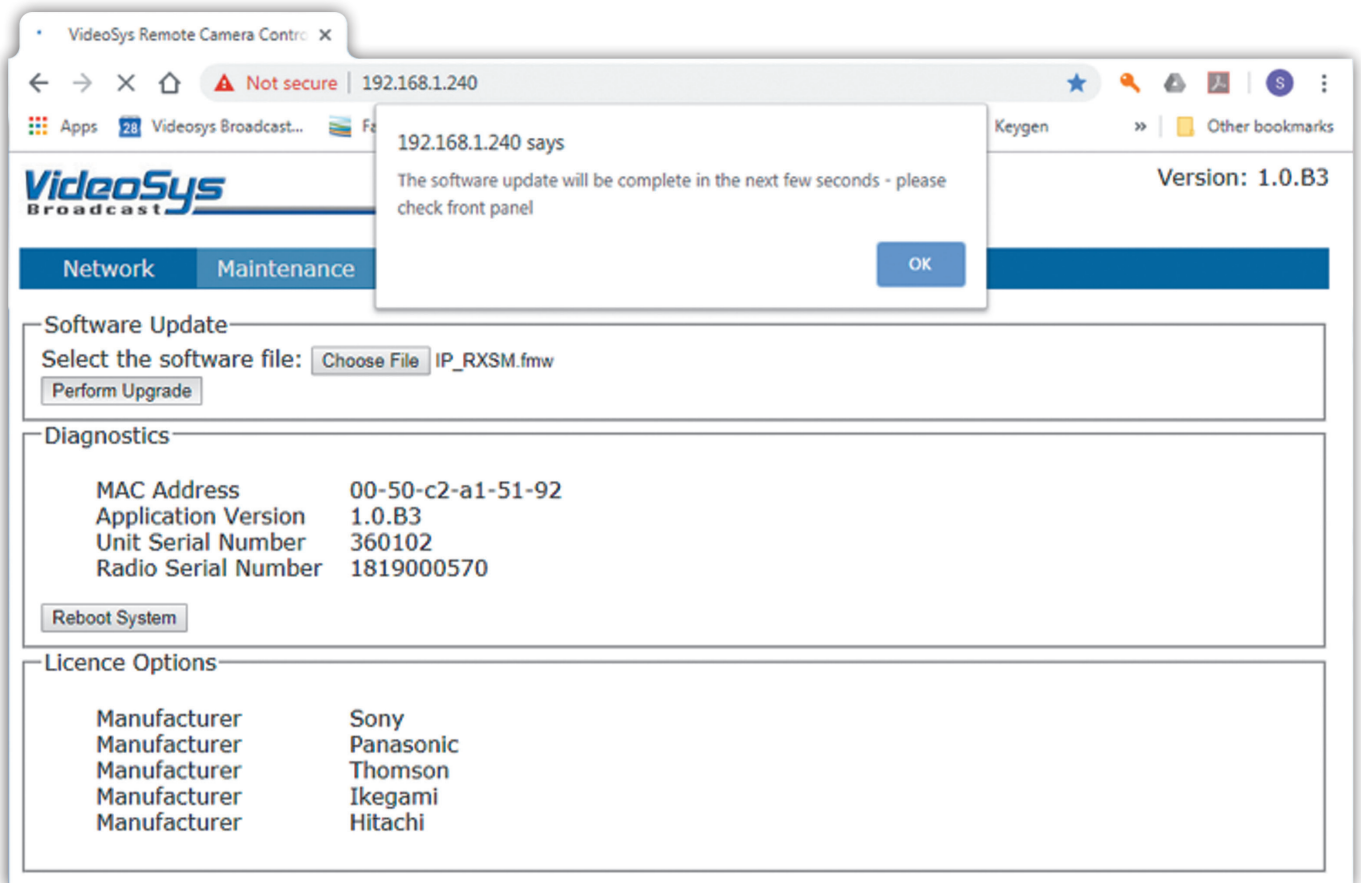


Fig 10. Updating the RX

Specifications

Power	DC 9-17v supplied through camera cable or Lemo
Connectors	Generic Connector for all Manufacturer Hirose HR10A-10P (73) FGG.0B.305 LEMO External Tally Output SMA RF antenna connector Ethernet port - RJ45
Dimensions	W 60mm x D 20mm x H 92mm
Frequency	403 -473 MHz
Interface	OLED screen with function buttons
Occupied Bandwidth	12.5 kHz
Sensitivity	114 dBm

License Options

Sony | Grass Valley | Hitachi | Ikegami | Panasonic
(Subject to expansion with firmware updates)

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