2x SD Encoder – Modulator
SB-SDQM-2130

INSTRUCTION MANUAL
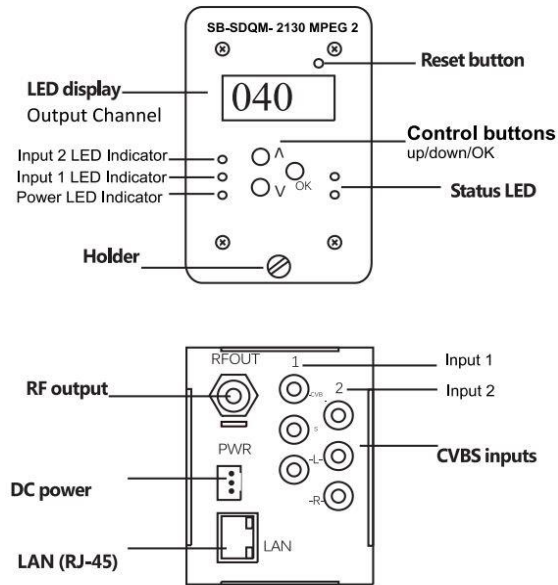
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INTRODUCTION

Thank you for buying the SDM-2130 MPEG-2 SD Encoder Modulator Combo. Please read this manual carefully to install, use and maintain the modulator in the best conditions of performance. Keep the manual at hand for future reference.

General description

Main features

◆ 2U design
◆ Quick Boot-up
◆ Covers frequency range from 54 to 860MHz
◆ Local control via friendly front button Control Panel
◆ Remote control via supplied utility

SAFETY INSTRUCTION

All the safety and operating instructions should be read

before the product is operated. For safety purpose all

 instructions are adhered to.

Cleaning
Unplug the unit from the rack before cleaning. Do not use liquid or aerosol cleaners, use a damp cloth.

Attachments
Do not use attachment that are not recommended by manufacturer as they can cause hazards.

Water and moisture
Do not use this product near water.

Mounting
Ensure the unit is rack mounted securely on the wall or in the 19'' cabinet as not to cause harm to anyone or to damage the product by being dislodged.

Power cord protection
Power-supply cords should be routed so they are not pinched or placed where they could cause a trip hazard.

Ventilation
Slots and openings in the housing are provided for ventilation to prevent overheating and ensure reliable operation.These openings should never be blocked or covered by placing the unit on a carpet, flooring, furniture or fabric surface. The unit should not be placed in a built-in structure such as a cupboard or rack unless proper ventilation is provided.

Power source
This unit should only be operated from the type of power source indicated in the technical specification (page 3 of this manual).

Lightning
For added protection of this unit; unplug it from the wall when left unattended or unused for long periods of time and disconnect the cable system. This will protect the product from lightning strike or power surges

Object and liquid entry
Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-our part that could result in a fire or electric shock. Never spill liquid of any kind on the unit.

Servicing
Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage requiring service
Unplug this unit from the wall or the cabinet and return it to the qualified service personnel for sevicing if any of the following occurs:
- The power supply cord or plug is damaged.
- Liquid has been spilled, or objects have fallen into the unit.
- The unit has been exposed to rain or water.
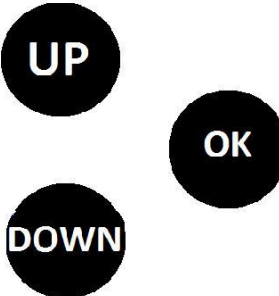- If the unit has been dropped or damaged in anyway.

Heat
The unit should be positioned away from any heat source such as radiators, fireplaces, cooking stoves, or other products (including amplifiers) that produce heat.

SPECIFICATIONS

VIDEO

Input format:	(CVBS) Audio/Video
Port number:	2 programs in one carrier
Encoding format:	MPEG-2 Video (ISO/IEC 13818-2)
	MPEG-2 MP@ML
Resolution:	480i: 720×480, 60Hz
Aspect Ratio:	4:3, 16:9 manual selectable, 4:3 default

RF OUTPUT

Channel range:	CH2-CH134 STD channel plan
Frequency range:	54-860 MHz
Output level:	+15dBmV to +30dBmV
QAM mode:	ITU-T J.83, Annex B 64, 256QAM
MER:	38dB minimum
Output impedance: 75	

AUDIO

Port number:	1 & 2
Input format:	Stereo (L/R) (10K)
Encoding format:	MPEG-1 Audio Layer II (ISO/IEC 1117-3)
Sampling rate:	48 KHz

CONTROL

Local operation:	Figure 8 number LED, Buttons
Remote operation:	Web browser

STREAM

TS Mux:	Mux 2×Video & 2×Audio transport stream
PSIP:	MGT/CVCT/STT
Closed Caption: EIA-608	

GENERAL

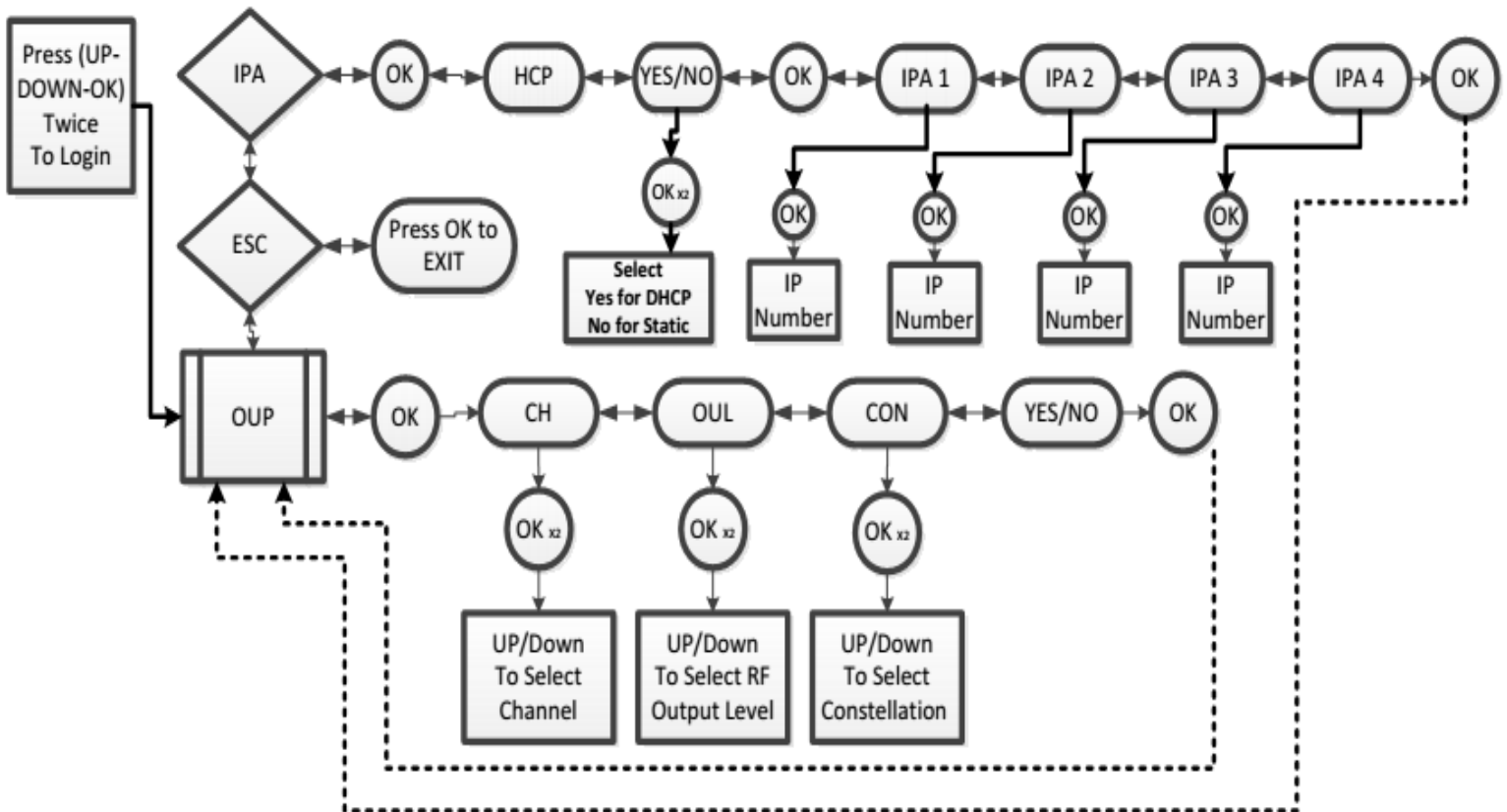|	
Dimensions:	68×50×250 mm
Weight	0.8 kg
Power source:	DC 12V@440mA / DC 5V@920mA
PWR. consumption: 10W	

OPERATION

Manual Operation- Via Push Button and LED Display
Web Interface/ Remote Operation – Via LAN Port

Manual Operation

To enter the Menu in manual mode, use this sequence of key strokes:
Key strokes = Press **UP** arrow, **DOWN** arrow, and **OK**. Do this two times!
OUP should appear

To navigate through the menus refer to System LED Function Outline along with the Navigational Flowchart.
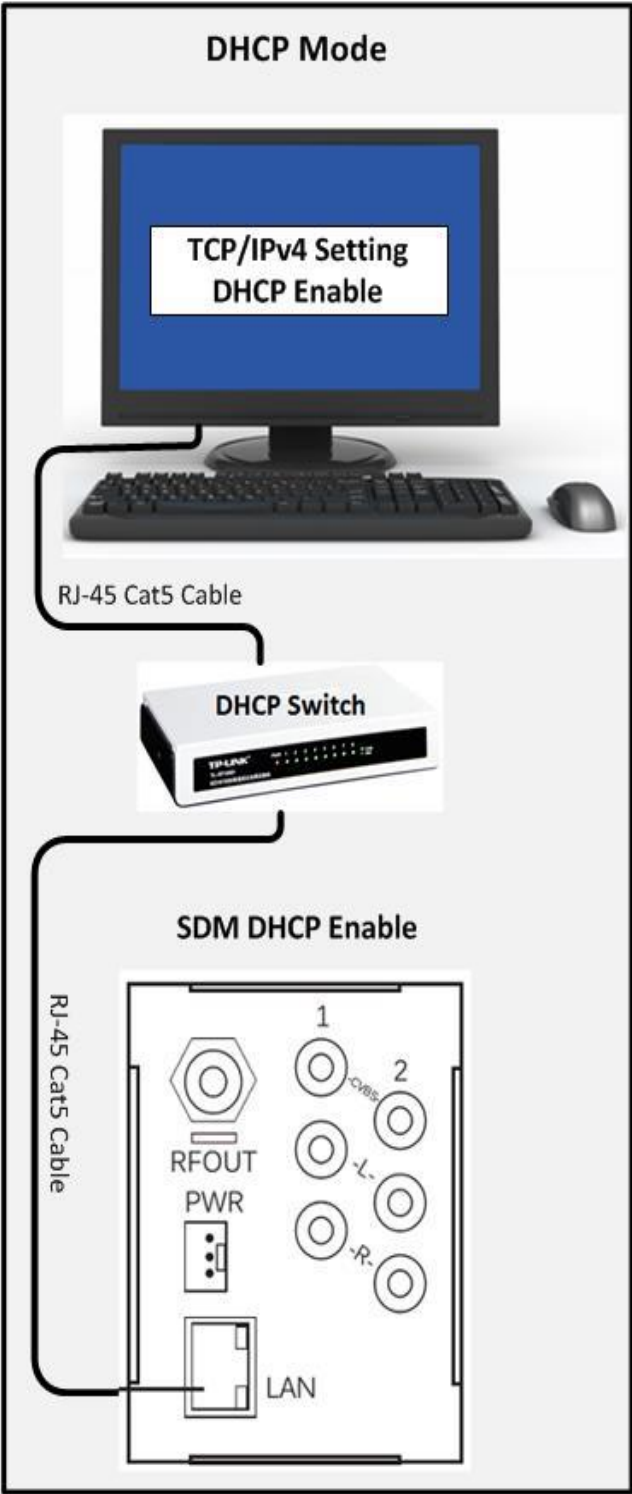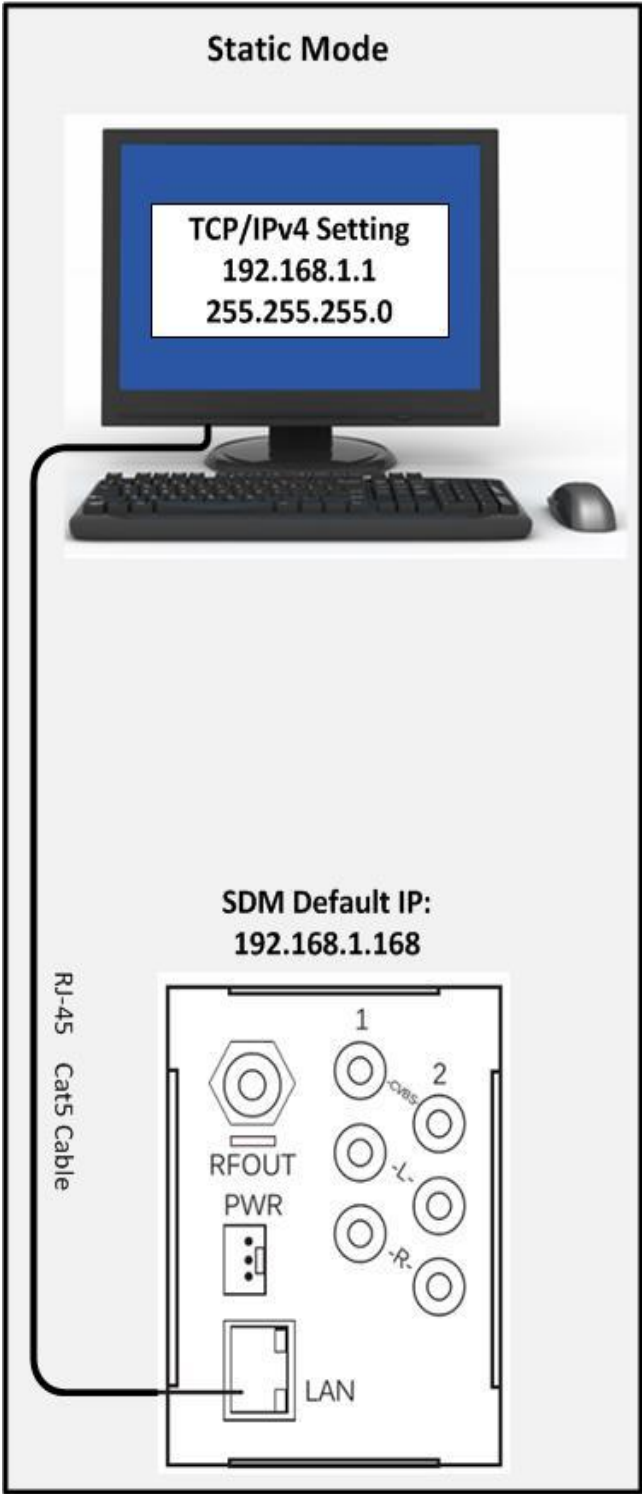
SYSTEM LED FUNCTION OUTLINE

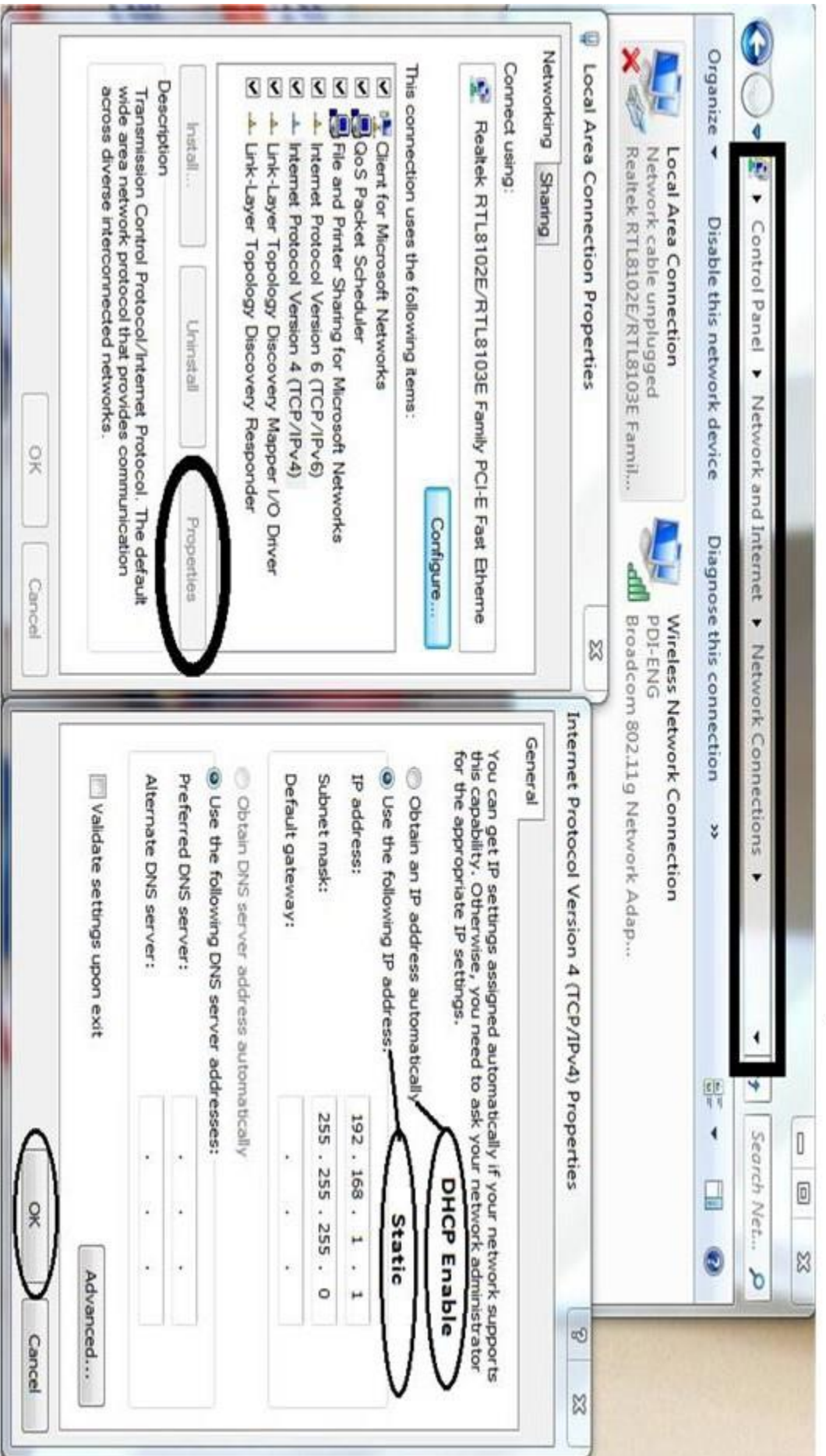|	
OUP	Press the OK button on OUP to enter the 'Output' mode.
CHA	Press the OK button to access channel adjustment mode. Use the UP or DOWN buttons to set the channel number. Press OK button to save the channel assigned. (CH2-CH134).
OUL	Use the same steps as above to set the Frequency Output Level (+15dBmV-+30dBmV).
COM	Use the same steps as above to set the Constellation (ITU-T J.83, QAM256).
N / Y	Press the UP or DOWN buttons to select YES or NO. Select '**y**' for yes, all changes made will be stored in the memory. Select '**n**' for no to cancel.
IPA	Following the flow charts to enter the 'IPA' IP address mode.
IP1	Press OK to enter IP adjustment mode. Use the UP or DOWN buttons to set the first number of IP1. Press the DOWN button to advance to the next digit and UP and DOWN button to set (0-999). Press the OK button to save.
IP2	Use the same steps as above to set the IP2 numbers. (0-999)
IP3	Use the same steps as above to set the IP3 numbers. (0-999)
IP4	Use the same steps as above to set the IP4 numbers. (0-999)
IPA Y/S	When all the sections in 'IPA' completed Press the UP or DOWN Button to select YES or NO. Select '**y**' for yes, all the settings above will be stored in the memory. Select '**n**' for no to cancel.
ESC	Press the OK button to exit to system home screen interface.

NAVIGATIONAL FLOWCHART

Press (UP-DOWN-OK) Twice To Login

IPA ← OK ← HCP ← YES/NO ← OK ← IPA 1 ← IPA 2 ← IPA 3 ← IPA 4 → OK

ESC → Press OK to EXIT

OK x2

Select Yes for DHCP No for Static

OK → IP Number

OK → IP Number

OK → IP Number

OK → IP Number

OUP ← OK → CH ← OUL ← CON → YES/NO → OK

OK x2 → UP/Down To Select Channel

OK x2 → UP/Down To Select RF Output Level

OK x2 → UP/Down To Select Constellation

Network Connection

Static Mode

TCP/IPv4 Setting
192.168.1.1
255.255.255.0

SDM Default IP:
192.168.1.168

RJ-45 Cat5 Cable

1
2
-CVBS-
RFOUT
-L-
PWR
-R-
LAN

DHCP Mode

TCP/IPv4 Setting
DHCP Enable

RJ-45 Cat5 Cable

DHCP Switch

TP-LINK

SDM DHCP Enable

RJ-45 Cat5 Cable

1
2
-CVBS-
RFOUT
-L-
PWR
-R-
LAN

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TCP/IP Setting

STEP #1: Control Panel-Network and Internet -Network Connections

STEP #2: Right Click on Local Area Connection and select Properties

STEP #3: Select TCP/IPv4 then click on Properties

Step #4: Select Mode for DHCP or Static

{Note: DHCP switch is required in order to use DHCP mode}

{Note: For static mode please enter the above IP/Subnet mask}

Step #5: Click on OK then Close.

WEB INTERFACE CONNECTION

Ethernet connector
LAN (RJ-45)
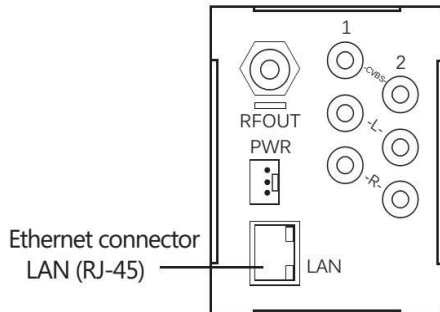
Ethernet connection

The web browser allow the user fully configure the SB- SDQM-2130 unit via an Ethernet connection and a web browser.

A. Connect the PC to the LAN port of the SB-SDQM-2130 unit. See below diagram.

B. The configuration process must be made in local mode; although later you will be able to access the unit from any PC in the LAN.

C. Launch the web browser and enter the SB-SDQM-2130 IP address. See Flowchart for instruction.

System Login

Enter the default password '1234' to Login.

Note: Password can be changed after logged in under System parameters tab.

RF Parameters

User can edit the parameters such as Country, Frequency, and Output Level etc.
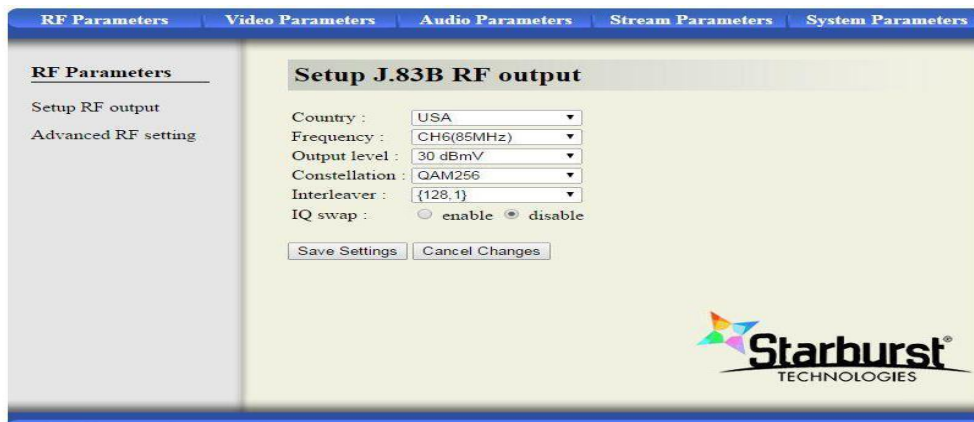
Video Parameters

User can edit the video source and Tune color in 'Video Parameters'.

| RF Parameters | Video Parameters | Audio Parameters | Stream Parameters | System Parameters |

Video Parameters

Set video source

Tune color

Tune color

Port : 1 ▾ ⊘ OK
Contrast : 20   (0~50)
Brightness : 21   (0~50)
Hue : 25   (0~50)
Saturation : 35   (0~50)

Save Settings   Cancel Changes

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Audio Parameters

User can set the encoder rate in 'Audio parameters'.

| RF Parameters | Video Parameters | Audio Parameters | Stream Parameters | System Parameters |

Audio Parameters

Set audio

Set audio

Port : 1 ▾
Encoder Rate : 128 Kbps ▾

Save Settings   Cancel Changes

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Stream Parameters

User can set channel name, PID and major channel number in 'Stream Parameters'.
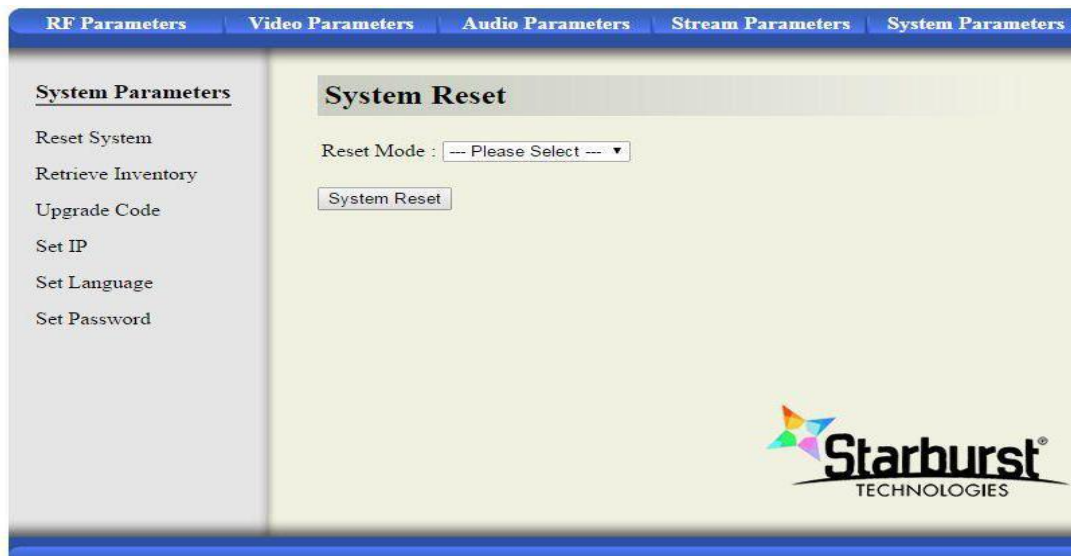
System Parameters

User can reset the system or retrieve inventory in 'System Parameters'.

The password configuration enable user to change the password for access to the web interface of SB-SDQM-2130.

U.S.A Channel Frequency Assignments (Cable)

Ch No.	Center Freq. (MHz)	Ch No.	Center Freq. (MHz)	Ch No.	Center Freq. (MHz)	Ch No.	Center Freq. (MHz)	Ch No.	Center Freq. (MHz)
2	57	29	255	56	417	83	579	110	711
3	63	30	261	57	423	84	585	111	717
4	69	31	267	58	429	85	591	112	723
5	79	32	273	59	435	86	597	113	729
6	85	33	279	60	441	87	603	114	735
7	177	34	285	61	447	88	609	115	741
8	183	35	291	62	453	89	615	116	747
9	189	36	297	63	459	90	621	117	753
10	195	37	303	64	465	91	627	118	759
11	201	38	309	65	471	92	633	119	765
12	207	39	315	66	477	93	639	120	771
13	213	40	321	67	483	94	645	121	777
14	123	41	327	68	489	95	93	122	783
15	129	42	333	69	495	96	99	123	789
16	135	43	339	70	501	97	105	124	795
17	141	44	345	71	507	98	111	125	801
18	147	45	351	72	513	99	117	126	807
19	153	46	357	73	519	100	651	127	813
20	159	47	363	74	525	101	657	128	819
21	165	48	369	75	531	102	663	129	825
22	171	49	375	76	537	103	669	130	831
23	219	50	381	77	543	104	675	131	837
24	225	51	387	78	549	105	681	132	843
25	231	52	393	79	555	106	687	133	849
26	237	53	399	80	561	107	693	134	855
27	243	54	405	81	567	108	699		
28	249	55	411	82	573	109	705		