HDBITT HDMI EXTENDER MATRIX

Dear Customer,

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

INTENDED USE

We do not permit using the device in other ways like described in this user's manual. Use the product only in dry interior rooms. Not attending to these regulations and safety instruction might cause fatal accidents, injuries, and damages to persons and property. The manufacturer/supplier assumes no liability for damages caused by failure to comply with the intended use.

CAUTION To reduce risk of electric shock, this product should ONLY be opened by an authorized technician when service is required. Disconnect the product from mains and other equipment if a problem should occur. Do not expose the product to water or moisture.

1.   Please read the user manual carefully before use this product, and keep these instructions.
2.   Do not mix up transmitter and receiver before installation.
3.   Channel of the transmitter (TX) must be different, otherwise, the system would be breakdown (including transmitter, receiver, IGMP switch etc.).
4.   It is advised to set channel of the transmitter before access to network.
5.   Follow all instructions.
6.   This extender must be installed and operated within the limits of specified operating temperature and humidity.
7.   Do not place objects on top of the unit.
8.   Do not position the matrix extender near any heating source such as heater, radiator, or direct exposure to sun.
9.   Prevent entering of water and moisture into the unit. If necessary, use dehumidifier to reduce humidity.
10.   Use DC5V/2A power supply only, make sure the specification matched if using 3rd party DC adapters.

PRODUCT INTRODUCTION

This HDbitT HDMI Extender Matrix includes a transmitter unit(TX) and a receiver unit(RX). It allows for the distribution and switching of high definition video/audio signal by this product and off-the-shelf IGMP POE switch. It applied advanced HDbitT technology, the resolution supported is up to 4K@30Hz full HD. It can also used in a point-to-point connection, the distance is up to 120 meters. It is widely applied in digital signage advertisement, control room, command centers, entertainment and exhibition center, safety monitoring system, etc.

PRODUCT FEATURES

1.   Applies advanced HDbitT over IP technology.
2.   Resolution supported is up to 4K@30Hz full HD.
3.   Transmission distance is up to 120 meters via CAT6.
4.   Support IR pass back function to control source device from RX location.
5.   Offer scalable and flexible input-output matrix configuration, allows. 100 input to infinite output.
6.   Support computer control software to select and switch source device input.
7.   Plug and play.
8.   Support to select and switch source device input from receiver via remote control and hard button.
9.   Support APP control, user can scan, preview, build up their configuration by using a phone/tablet easily.


PACKAGE CONTENT

* Transmitter unit x 1pc
* IR blaster extension cable x 1pc
* DC5V/2A power adapter x 1pc
* Wall-mount kit x 2pcs
* Screws x 4pcs
* User manual x 1pc
* Receiver unit x 1pc
* IR receiver extension cable x 1pc
* DC5V/2A power adapter x 1pc
* Wall-mount kit x 2pcs
* Screws x 4pcs
* Remote control x 1pc
* User manual x 1pc

Installation Requirements

1.   HDMI source devices: with HDMI OUTPUT interface, DVD, PS3, STB, PC etc.
2.   Display devices: With HDMI INPUT port, SDTV, HDTV, projector etc.
3.   Network cables: UTP/STP CAT5/5E/6 network cables, which following the standard of IEEE-568B.
Transmission length: CAT5 80m/CAT5E 100m/CAT6 120m.

PANEL DESCRIPTION

Transmitter unit
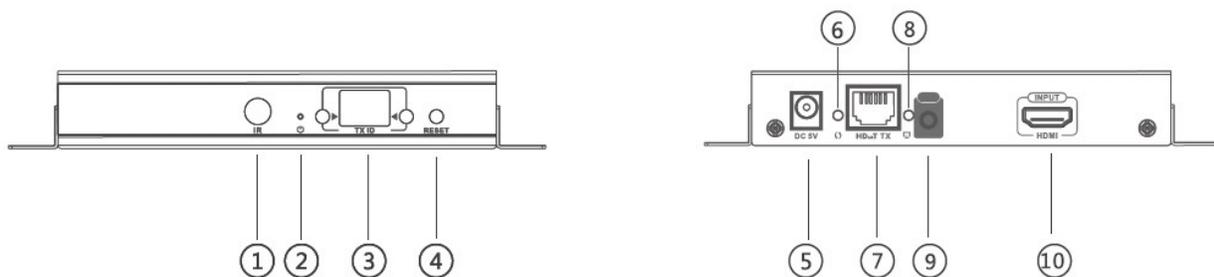
(1)   IR receiver window: remote control channel
(2)   Power indicator
(3)   TX ID: mark transmitter unit's channel as a number, indicator of the current TX ID number
(4)   RESET button
(5)   DC5V power input
(6)   Data transmission indicator
(7)   RJ45 signal output
(8)   Connection indicator
(9)   IR blaster extension cable interface
(10) HDMI signal input

Receiver unit
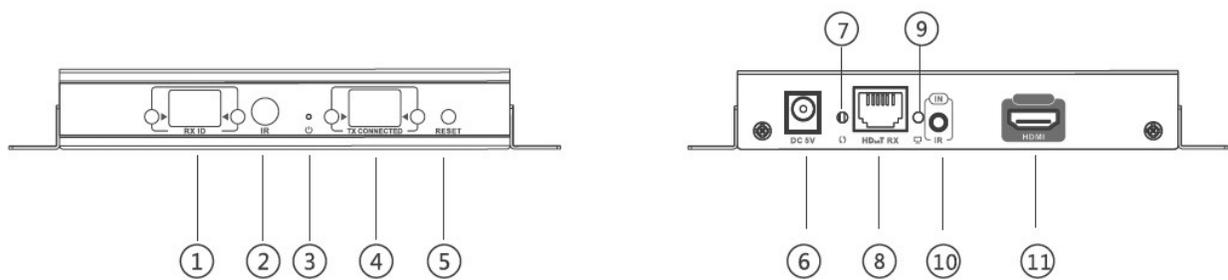
(1) RX ID: mark receiver unit as a number, indicator of the current RX ID number

(2) IR receiver window: remote control channel

(3) Power indicator

(4) TX CONNECTED: indicate the input channel as a number, and when the channel of receiver as same as the channel of transmitter, transmission connected

(5) RESET button

(6) DC5V power input

(7) Data transmission indicator

(8) RJ45 signal input

(9) Connection indicator

(10) IR receiver extension cable interface

(11) HDMI signal output

INSTALLATION AND CONNECTION

How to make a CAT5/5E/6 network cable Follow the standard of IEEE-568B:

CONNECTION DRAWING

 Matrix configuration
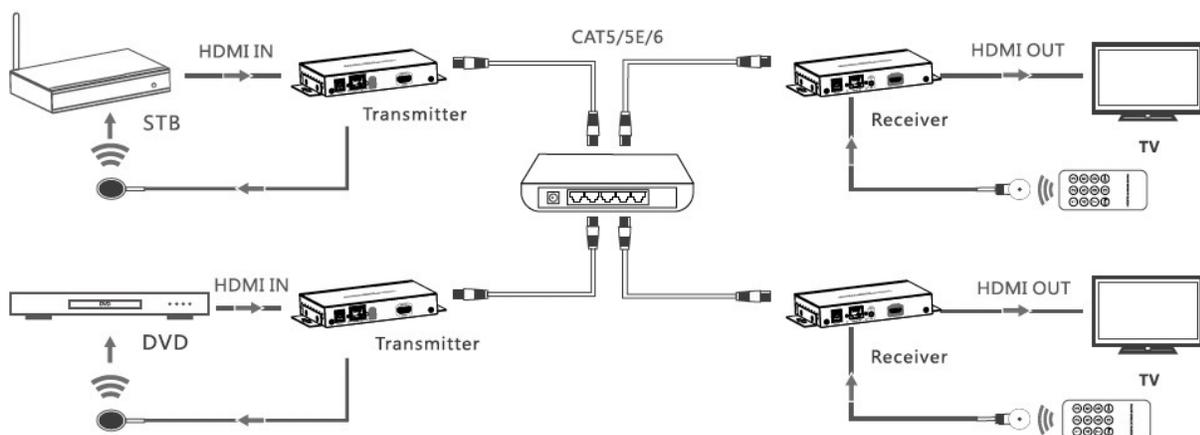
NOTE: The switch has to support IGMP function

IR USE GUIDE

IR passback

IR blaster extension cable should plug into the IR-out port of TX (Transmitter) of this extender matrix, and the IR receiver extension cable should plug into the IR-in port of the RX (Receiver) of this matrix extender. The emitter of IR blaster should as close as possible to the IR receiver window of the signal source device.

IR remote control

Using the IR remote controller to set/select the channel of this HDMI Extender Matrix

APP CONTROL USE GUIDE

HDbitT Matrix Controller MODE--APP "Matrix Controller"

1. Android User: Download the App "Matrix Controller" by your mobile phone from the website:
http://www.hdbitt.com/download-matrix/.

IOS User: Download the APP"Matrix Controller" from the APP Store.

2. Firstly, connect the video matrix controller to the IGMP switch. Then, connect mobile phone/tablet and the video matrix controller via hotspot"matrix"with each other (as figure 1). At this time, open the downloaded APP"matrix control", will enter to the interface as figure 2, and APP control starts.
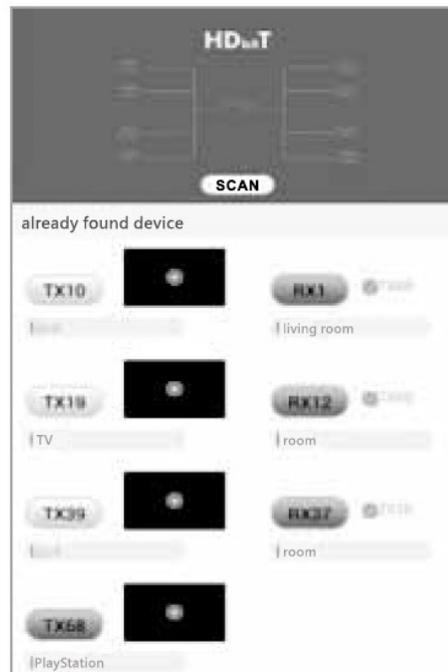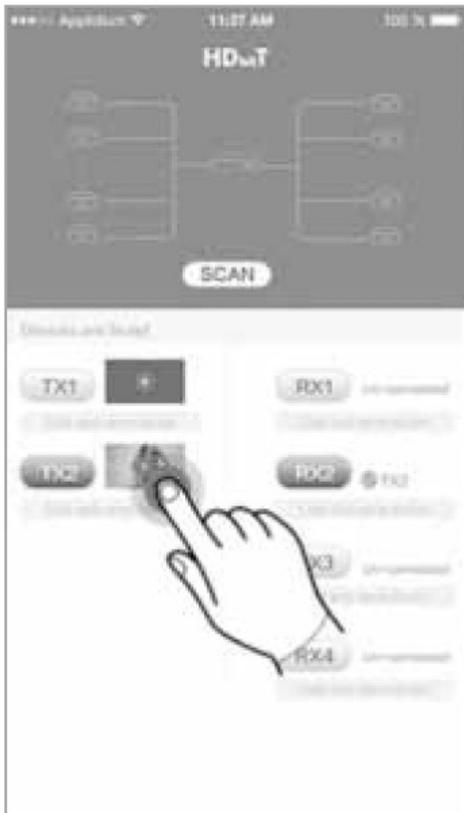

Figure 1

Figure 2

APP function

1. Preview

Click "play" button to preview the content of the source device.

2. Edit
Click the frame under the TX/RX button to edit device name.

3. Drag and drop

Drag ”TX”button to the RX side and drop, to set up new connection.

Note: please do not use more than one mobile phone/tablet to control the system simultaneously.

Router MODE--APP "Matrix Control Lite”

1.   Android User: Download the APP ”Matrix Control Lite” from APP Store.

2.   Firstly, connect the router to the IGMP switch. Then, connect mobile phone and the router with each other, open the downloaded APP ”Matrix Control Lite” will enter to the interface as figure 3, TX ID, RX ID, TX connected number can be re-set by this APP, also can edit device name for marking.

BUTTON CONTROL

There is a "TX ID" on Transmitter unit, and there is an "RX" on both Transmitter and Receiver

ID”and "TX connected" on the RX unit. Each of them consists of two Nixie tubes and two buttons (beside the Nixie tube), the left button controls the value of the left Nixie tube, and the right one to control the value of the right Nixie tube. The value of each Nixie tube is from 0 to 9, each button is pressed value of TX ID is "00”, and press the left button once, also press the right button once, then the value of TX ID is changed to "11”. When the value of "TX connected ” on the RX unit is as same as the value of "TX ID” on the TX unit, a connection built between the TX and RX units.

Short press: Press to set IGMP group and display the selected value. Product switches automatically to the corresponding IGMP group 5 seconds after the press. Long press: Press and keep 3 seconds to reset the product.

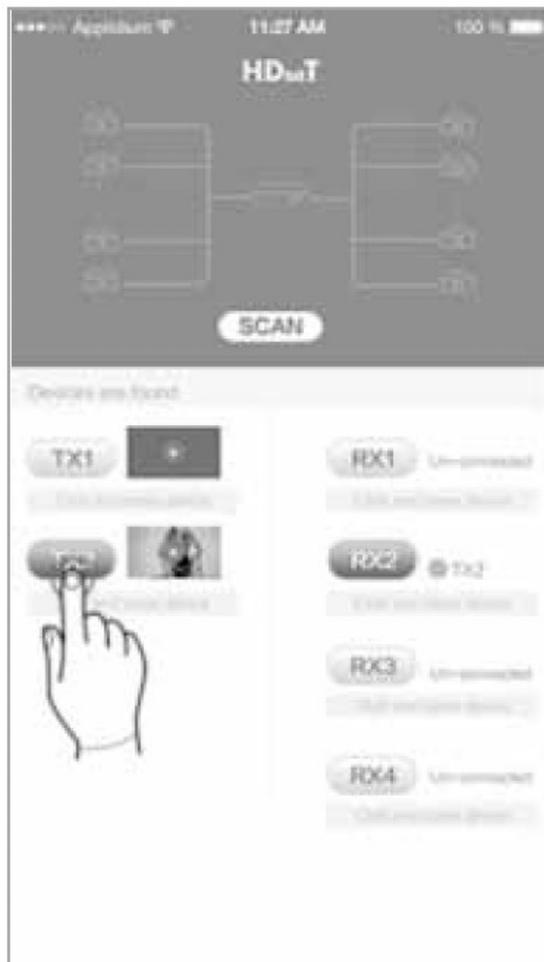**COMPUTER SOFTWARE CONTROL USE GUIDE**

1.   Access to network

Connect your PC/computer with the off-the-shelf IGMP Ethernet switch via a single network cable

2. PC/computer setting

Change the PC/computer's IP to 192.168.1.xxx

(xxx can be 0 to 255) , which as same as the IP segment of TX unit and RX

unit.

3. Web operation

Open application program "HDbitT E-Matrix Control center", it displays the interface as Figure 1

IP SETTING

TX and RX have their own default IP address, TX's IP is 192.168.1.238, and RX's IP is 192.168.1.239. Generally, it is no need to change the device IP address, as the system can work normally even though multiple TX units and multiple RX units connected into the system with their default IP address.

If IP setting is really needed, please follow up the operation as Figure 2 (here make an example of TX's IP setting only, RX's setting is the same as TX's)
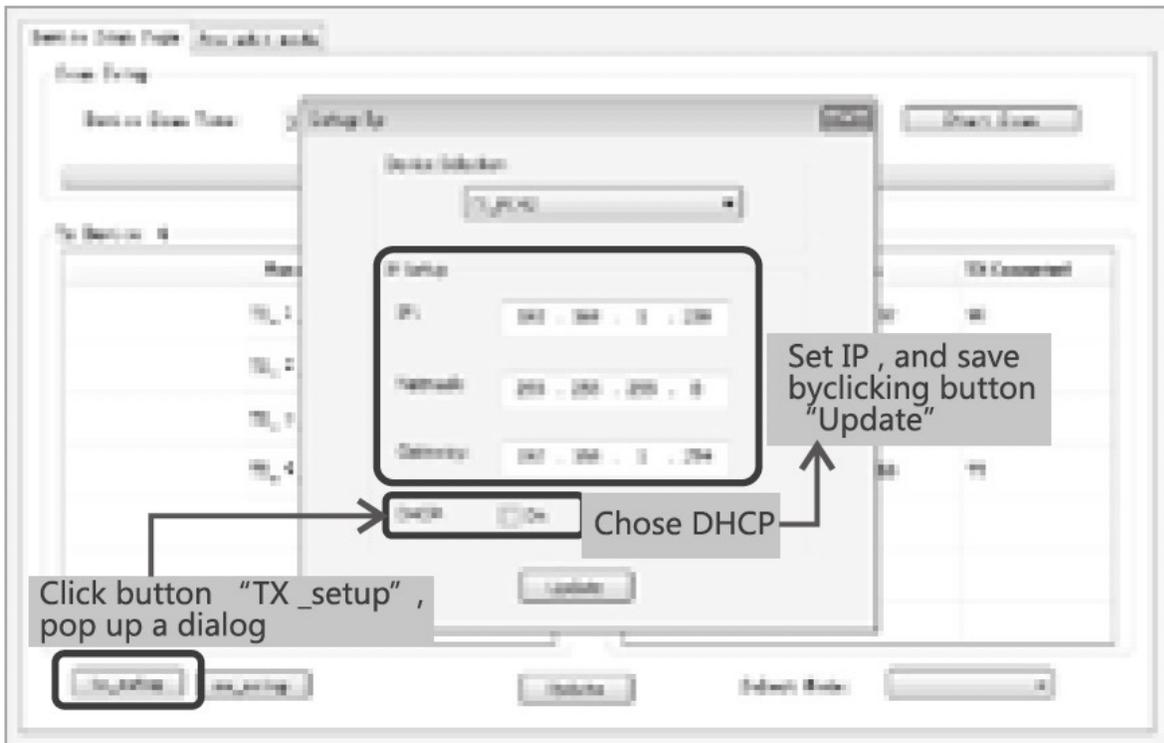

Set IP , and save byclicking button "Update"

Chose DHCP

Click button "TX _setup" , pop up a dialog

Figure 2

Device scanning and setting (here make an example of TX's setting only, RX's setting is same as TX's)
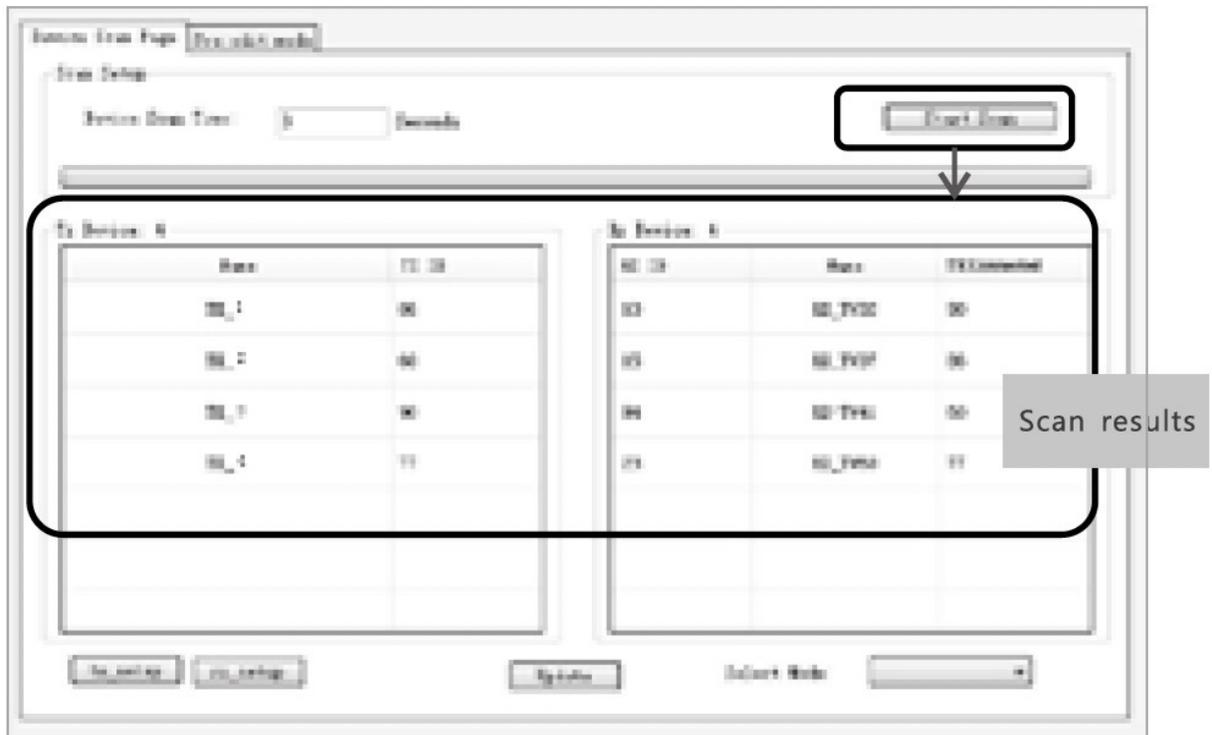＊Click button "Start Scan" the scanned result shows as Figure 3

Figure 3

＊Device Name setting as Figure 4
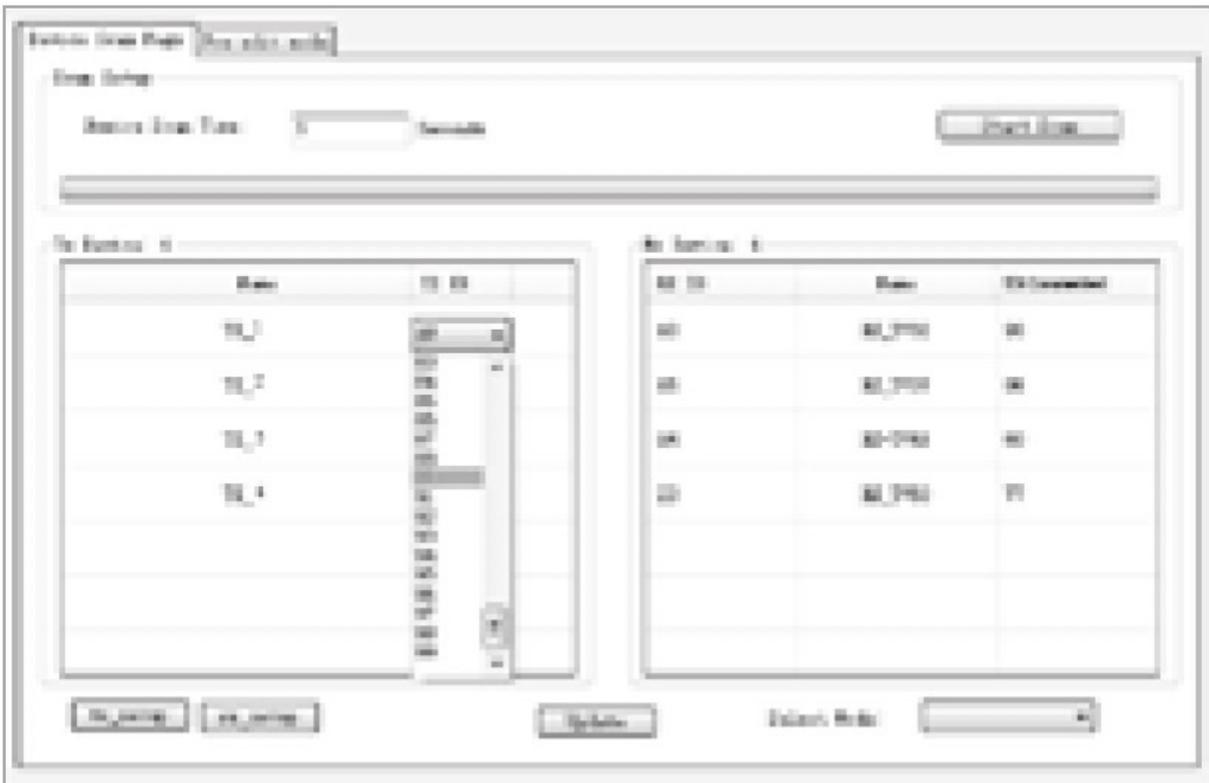＊ Device channel (TX ID) setting as Figure 5

Figure 5

Click button "Update", new configuration saved Pre-operation mode editing , show as Figure 6

Operation mode selection setting
Follow up Figure 7, Click button "Select Mode", to choose the mode needed.

FAQ

Q: TV display "Waiting for connection" on the right corner:
A: 1) Please check if the power supply of transmitter and switcher is connected, and make sure all connection is correct and well.
2)   Please check and make sure receiver 's channel number is within transmitter's channel list.
3)   Please check and make sure all of the transmitter's channel are different.
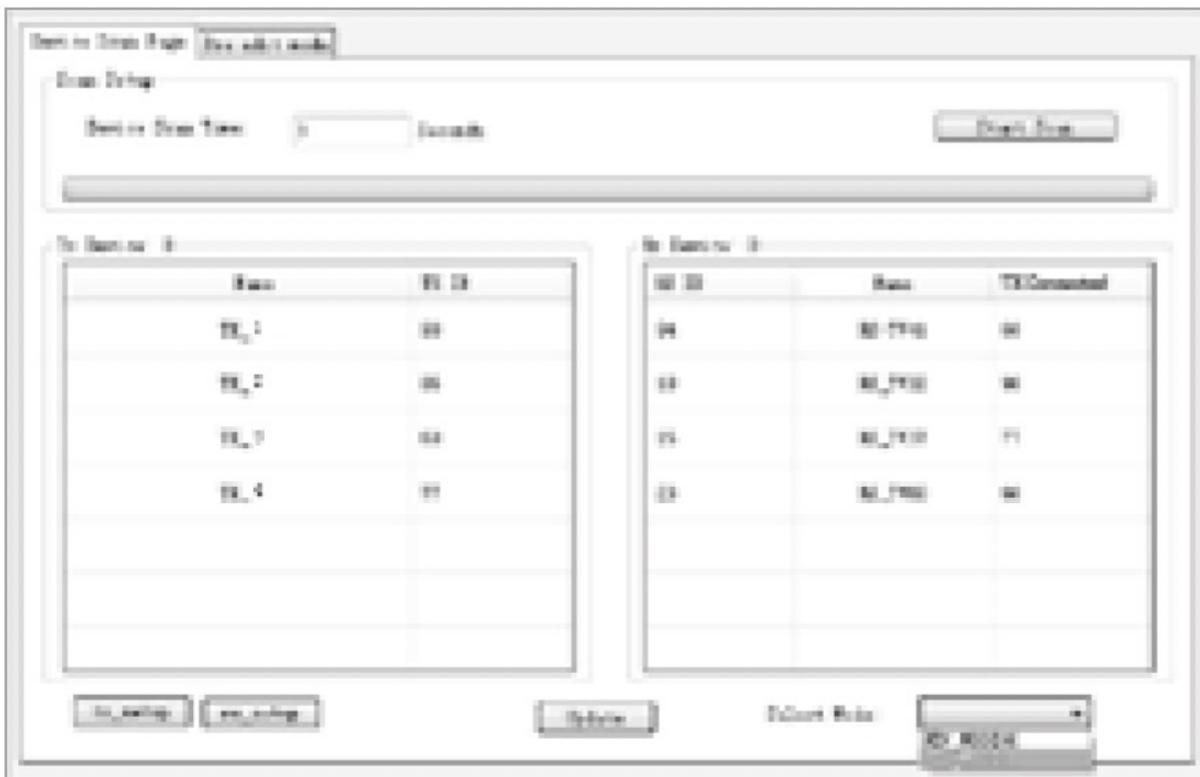
Figure 7

Q: TV display "Please check the transmitter input signal":
A: 1) please check if there is a HDMI signal input of transmitter;
(2) Try to connect the signal source directly to display device to see if there is signal output from source device, or change the signal source, HDMI wire and try again.

Q: Display is not fluent, not stable?
A: 1) Please check and make sure your switch is with IGMP function,
 and the IGMP function is open.
Q: Black screen or no image on displays?
A: 1) Cut off the input of source device, if TV displays "Please check the transmitter input signal"after about 10 seconds, please connect the source again, change and try another resolution.

SPECIFICATIONS:

HDMI Signal HDMI1.3 compliant to HDCP
Network bandwidth 18Mbps
Supported resolution
480i@60Hz, 480p@60Hz, 576i@60Hz,
576p@60Hz, 720p@50/60Hz,
1080i@50/60Hz, 1080p@50/60Hz
Audio format PCM
TMDS signal 0.7~1.2Vp-p

DDC signal 5Vp-p
Remote control Support
IR passback Supports IR 20~60KHz devices
APP Control
Support APP control, user can scan,
preview, build up their configuration by
using a phone/tablet easily, OS system
supports IOS and Android
Matrix configuration Up to 100 sources can be connected
and switched to infinite output
Power supply 5V/2A
Power consumption TX ≤4W ; RX≤4W
Weight TX260g ; RX250g
Working temperature 0~60°C
Storage temperature -20 ~ 70°C
Relative humidity 0 ~ 95% (no condensation)
Color Black