Team SoftEx, Inc.

EVO Pure

DVI Teaching Broadcast System (Audio & Video)

Operation Guide

Contents

Chapter 1 EVO Pure at a glance

Welcome to use EVO Pure This guide describes the instruction of how to install and use EVO Pure System with video & audio function, its application and the structure of the system.

EVO Pure, the teaching DVI broadcast system with main purpose of the Broadcast System is to digitally transmit up to HD 2560*1080 video and clear sound during class. The whole system eliminates the inevitable issues of analogue broadcast system including blurs, ghosting, smears, water ripples, and any other issues due to low resolution.

EVO Pure DVI Teaching Broadcast System uses DVI-D digital signal formats, transmitting instant high-resolution images through Cat5e and Cat 6 cables without distortion. This high-effect system enables teacher to deliver high quality tutorial smoothly and simultaneously which makes it easier for student to absorb the teaching contents during class.

1.1 What EVO Pure can be applied to?

EVO Pure can be applied to varieties of teaching context such as general computer lab, internet classroom, exam center, multi-media classroom, interpretation classroom, language lab, self-learning lab and any location with demands for computer teaching.

Instructor can decide how to use this high effect system to facilitate its lecture without any interruption due to any other low resolution in most existing broadcast system.

1.2 Device Precautions for Use

- Do not install the product in the damp, liquid sprayed, direct sunlight exposed, air conditioning vented and fire nearby environment.
- This product is a precision machine. Do not drop down to the ground, vibration or strongly bump.
- Do not disassemble by yourself.
- Please make sure all the cables are correctly plug into right position before power on.

1.3 Preservation Notice

- Do not store the product in the following places:

Liquid spray area

Any places with high temperature, high humidity, sunlight exposure, dust, salt and other substances.

Any places with concern of bumps and shakes.

Places with storage of chemicals or locations with concerns of corrosive gases emission.
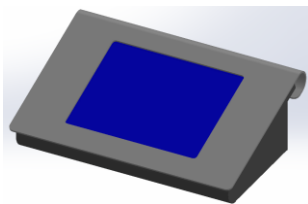
Chapter 2

Getting started to know each part of EVO Pure System

2.1 CT-100S- Central Control Unit

The function of CT-100S is to allow instructor to control the work of whole system through tapping different function on the touch screen.

Main instruction of CT-100S is on page 14.

Front Appearance

Rear Appearance

Connector	Description
LAN	10/100 Mbps Ethernet Port
RS-232	RS-232 COM Port
BUS-L	System Network Output Port, L Signal(Cat.5e Network Cable)
USB	USB Port
DC-12V	DC 12V Power Input Port

2.2 MT-131D- Master Unit

MT-131D is to link with CT-100S, instructor's source of teaching material and monitor.

There are many kinds of sources which can be input into MT-131D including PC, laptop, tablet PC, smart phone and other handheld devices. Instructors can connect sources through DVI-D to DVI-D or DVI-D to HDMI cables. Each source will be corresponding to PC 1, PC2 and PC3 on the master unit box. On the touch screen of CT-100S, Tutor 1~3 represents PC1~PC3 from master unit box. (CT-100S

instruction is on Page 14)

LCD-1 on the master unit box is to connect with the only monitor of instructor. Instructors can select which source (tutor 1~tutor3) displayed on the monitor linking with LCD-1.
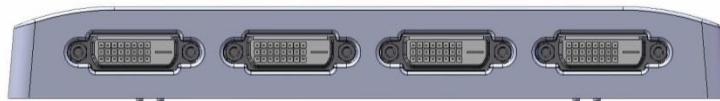
Top view of MT-131D

Front Appearance
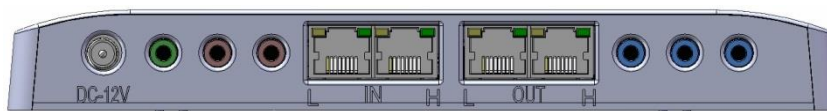
Rear Appearance

Connector	Description
LCD-1	Monitor 1 DVI-D Output
PC-1	PC1 DVI-D Input
PC-2	PC2 DVI-D Input
PC-3	PC3 DVI-D Input

2.3 RT-191D- Repeater

Function of RT-191D is to expand the numbers of connection for students' units. Each pair of Bus-In and Bus-Out can be streamed to 5 student units which are for up to 10 students. The numbers of connection ports of RT-191D depends on the total number of the class members within one classroom.

Front Appearance

Rear Appearance

| Connector		Description
P0	H	System Output Port0, H Signal (Use Cat.6 Network Cable)
	L	System Output Port0, L Signal (Use Cat.5e Network Cable)
P1	H	System Output Port1, H Signal (Use Cat.6 Network Cable)
	L	System Output Port1, L Signal (Use Cat.5e Network Cable)
P2	H	System Output Port2, H Signal (Use Cat.6 Network Cable)
	L	System Output Port2, L Signal (Use Cat.5e Network Cable)
P3	H	System Output Port3, H Signal (Use Cat.6 Network Cable)
	L	System Output Port3, L Signal (UseCat.5e Network Cable)
P4	H	System Output Port4, H Signal (Use Cat.6 Network Cable)
	L	System Output Port4, L Signal (Use Cat.5e Network Cable)
P5	H	System Output Port5, H Signal (Use Cat.6 Network Cable)
	L	System Output Port5, L Signal (Use Cat.5e Network Cable)
P6	H	System Output Port6, H Signal (Use Cat.6 Network Cable)
	L	System Output Port6, L Signal (Use Cat.5e Network Cable)
P7	H	System Output Port7, H Signal (Use Cat.6 Network Cable)
	L	System Output Port7, L Signal (Use Cat.5e Network Cable)
P8	H	System Output Port8, H Signal (Use Cat.6 Network Cable)
	L	System Output Port8, L Signal (Use Cat.5e Network Cable)

RT-191D (continuously)

Connector		Description
DC-12V		DC 12V Power Input Port
BUS-IN	H	System Network Input Port, H Signal (Use Cat.6 Network Cable)
	L	System Network Input Port, L Signal (Use Cat.5e Network Cable)
BUS-OUT	H	System Network Output Port, H Signal (Use Cat.6 Network Cable)
	L	System Network Output Port, L Signal (Use Cat.5e Network Cable)

2.4 UT-121D- Student Unit

Top View of UT-121D

Front Appearance
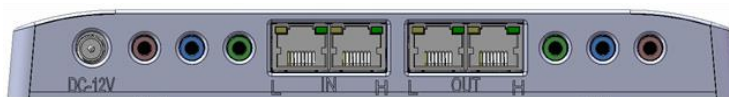
Rear Appearance

UT-121D is the student unit box linking with up to 2 students' PCs and monitors via DVI-D to DVI-D or DVID to HDMI cables depending on the port type of PC and monitor. Function of UT-121D is to transmit signal to pairs of students' PCs and monitors. Generally speaking, in the whole system of EVO Pure, the 1st student unit box is linked from RT-191D. The 1st student unit extends to the 2nd student unit box and after goes to 3rd and 4th continuously.

PC1 and LCD1 on the student unit box are to link with the same student PC and monitor. PC2 and LCD2 are to link with the other student's.

Chapter3 Display & Signal Connection

3.1 Display Connection of MT-131D

(DVI-D to DVI-D, DVI to HDMI; Audio cables and Mic)

Tutor 3 PC Audio   Tutor 2 PC Audio   Tutor 1 PC Audio   Tutor 2 Mic   Tutor 1 Mic   Tutor's

Tutor's Monitor   Tutor 1 PC   Tutor 2 PC   Tutor 3 PC
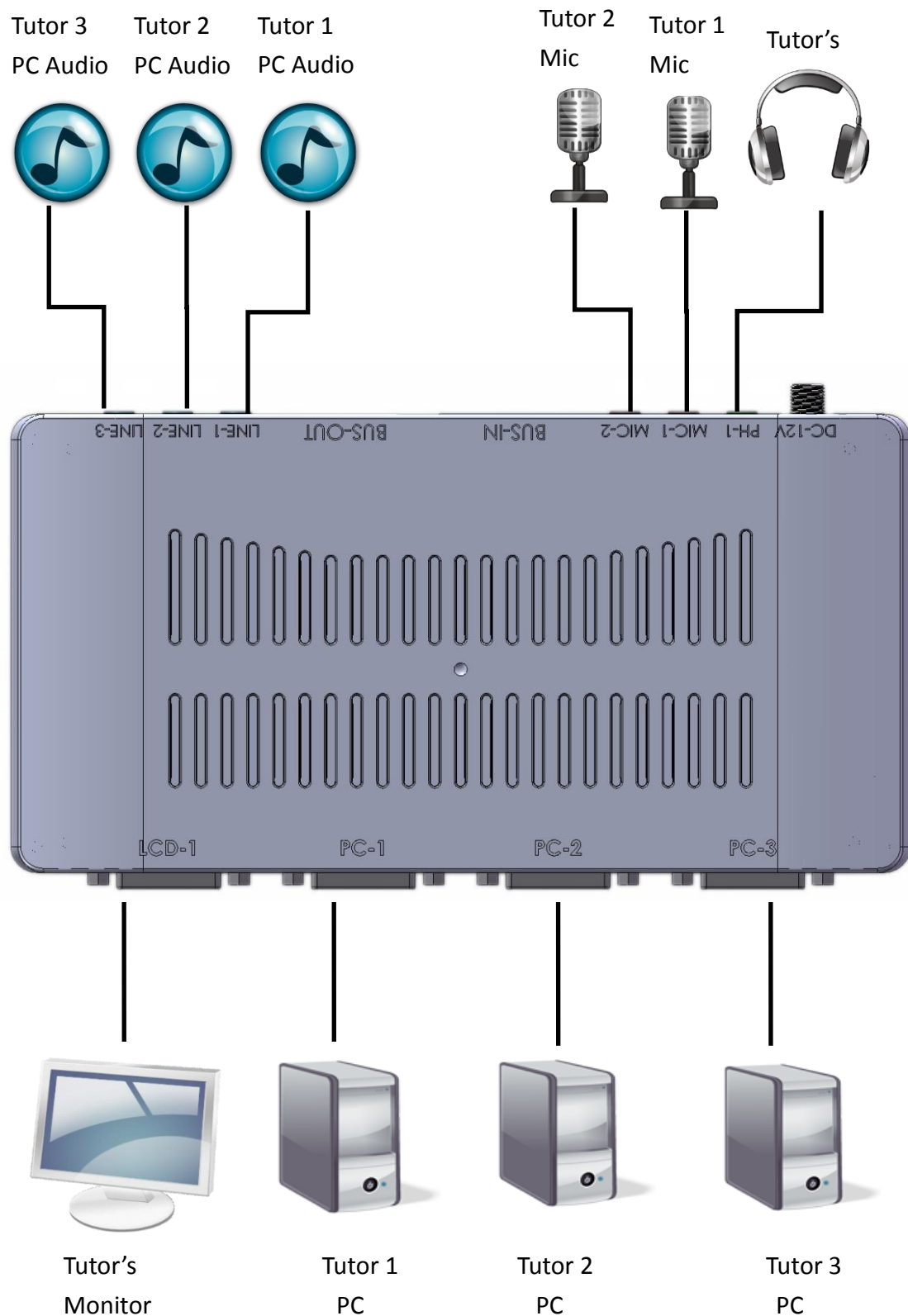
3.2 Display Connection of UT-121D
(DVI-D to DVI-D, DVI to HDMI; Audio cables and Mic)

Stu.1 Mic

Stu.1 PC Audio

Stu.1

Stu.2

Stu.2 PC Audio

Stu.2 Mic

MIC-1 LINE-1 PH-1 BUS-OUT BUS-IN PH-2 LINE-2 MIC-2 DC-12V

PC-1 PC-2 LCD-1 LCD-2

Stu.1 PC

Stu.2 PC

Stu.1 Monitor

Stu.2 Monitor
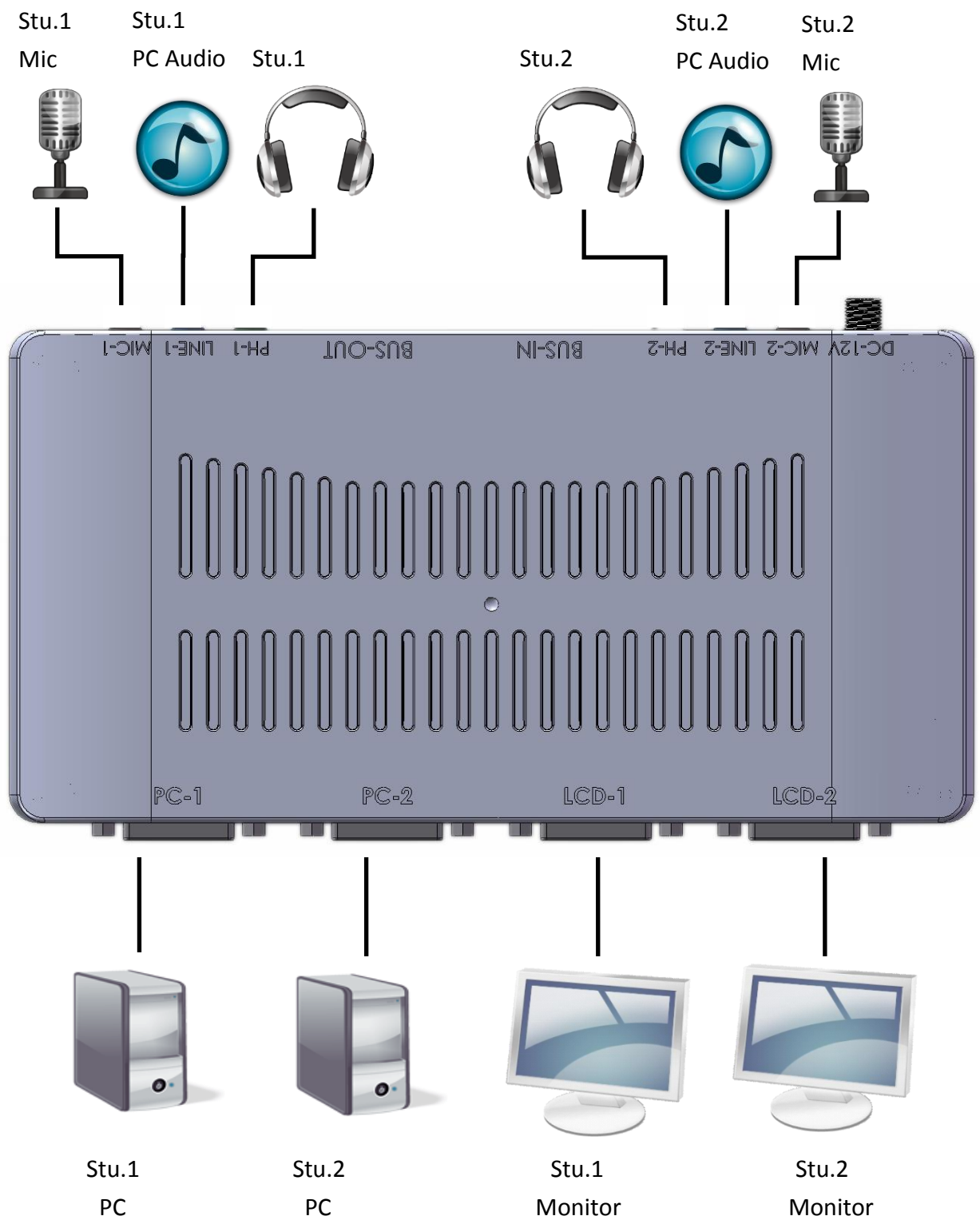
3.3 Signal Connection for the whole system (Cat5e & Cat 6 Cables)

Central Control Unit CT-100S

Master Unit MT-131D

Repeater RT-191D

Student Unit UT-121D

Student Unit UT-121D

Student Unit UT-121D

Cat 5e Cable

Cat 6 Cable

Link 1

Link 2

Link 3

Link 4

Link 5
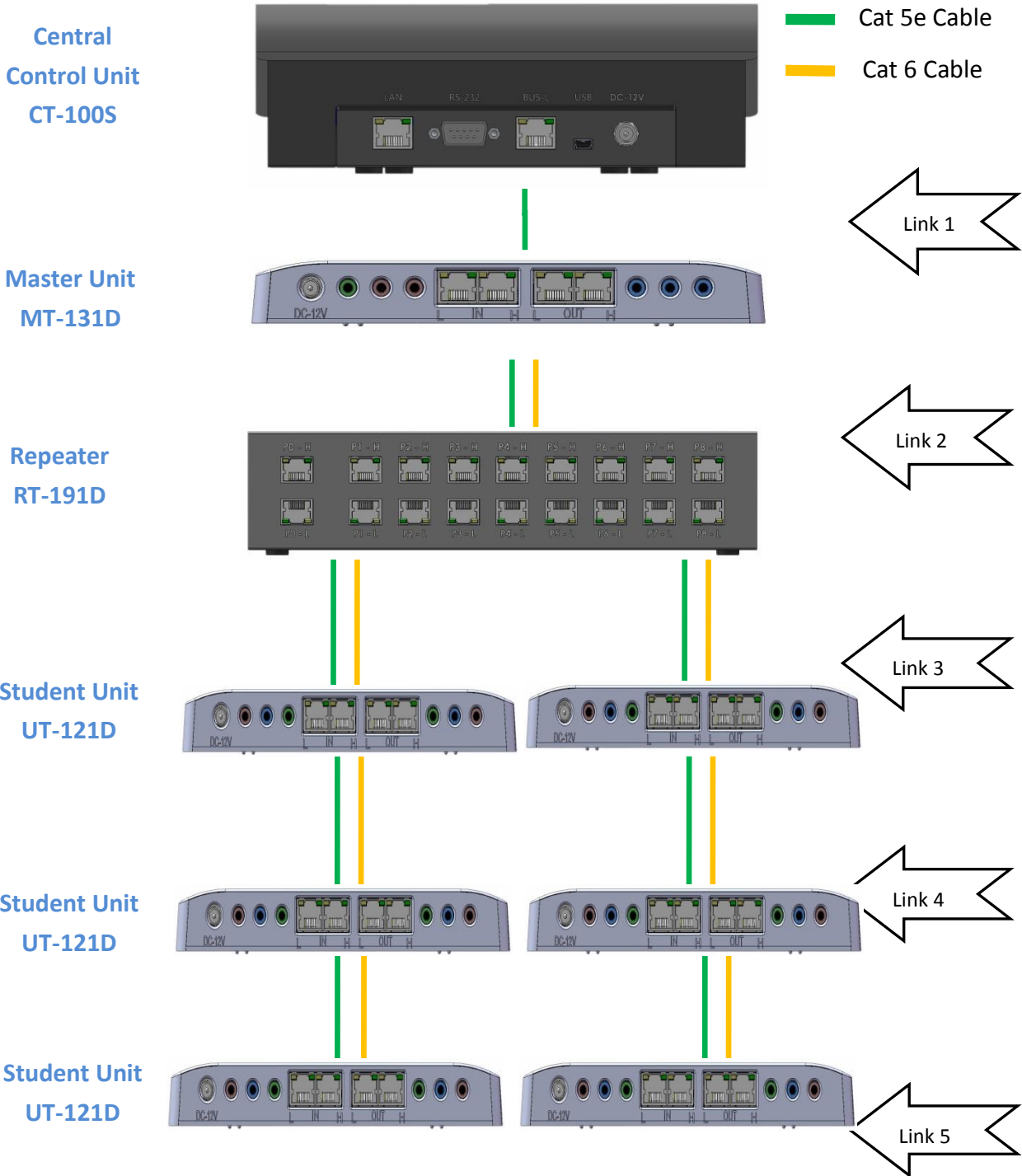
3.3.1 Details of signal connection

LINK 1: CT-100S link with MT-131D

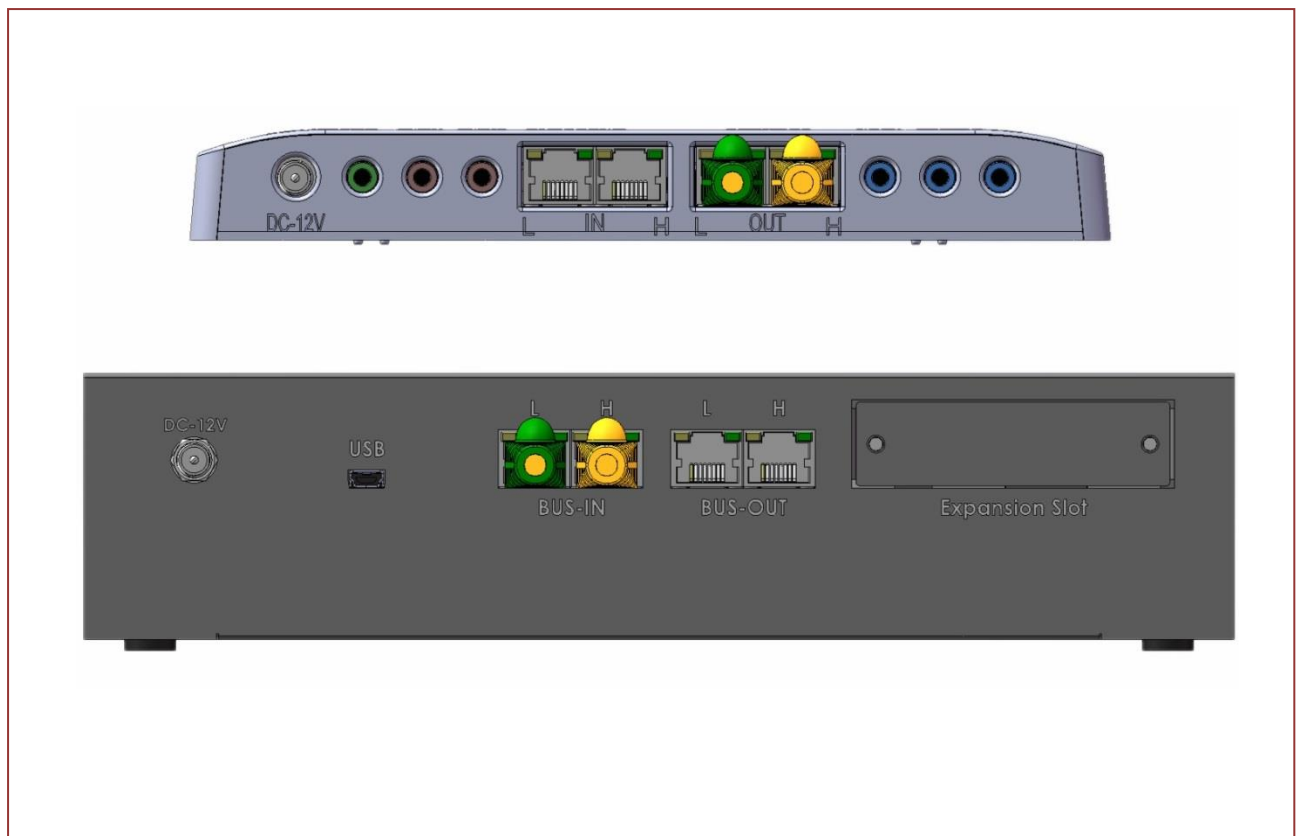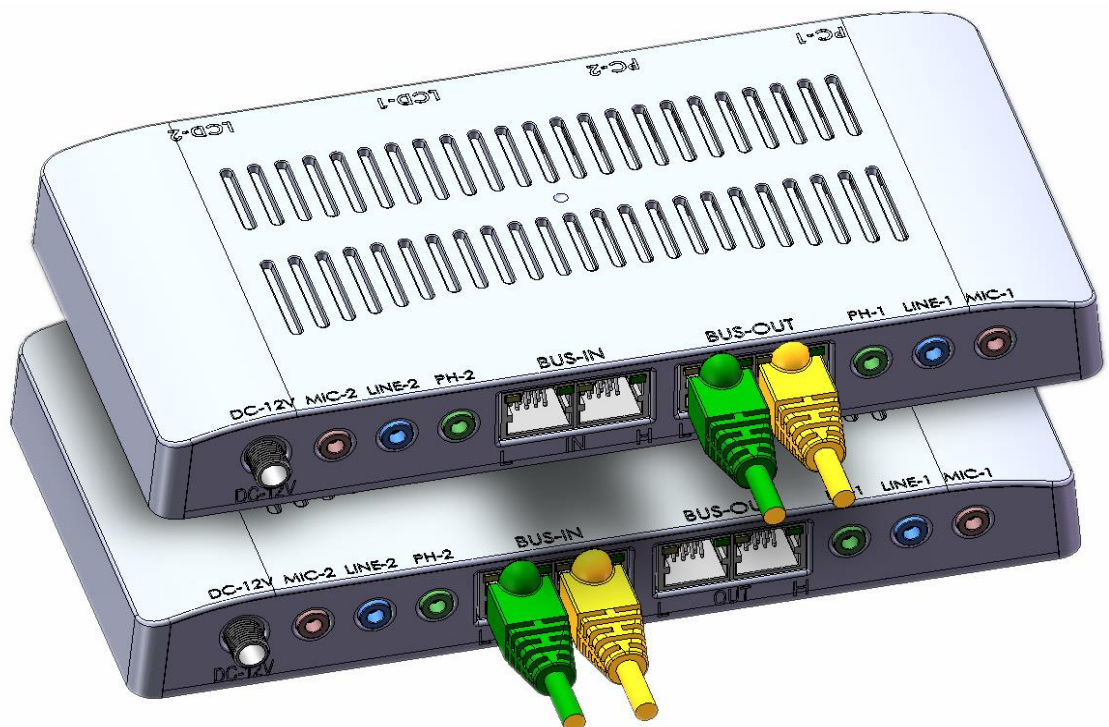LINK 2: MT-131D link with RT-191D, Green L to Green L; Yellow H to Yellow H

LINK 3: Repeater P1~P9 are BUS-OUT, please respectively link with UT-121D BUS-IN

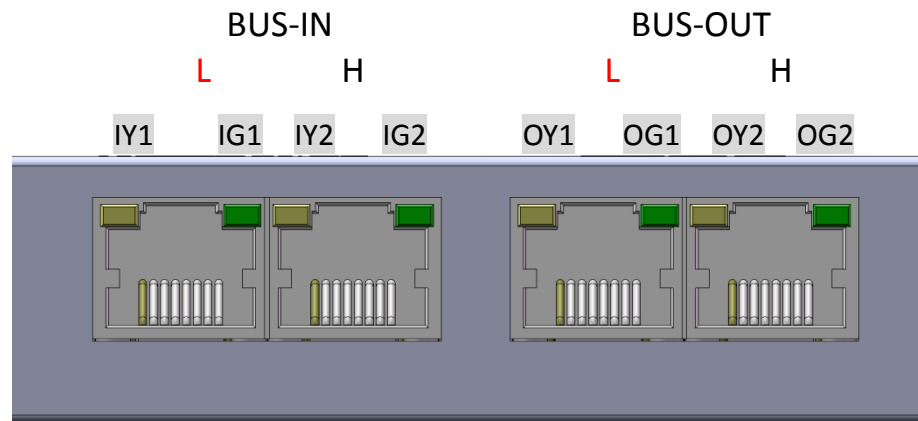LINK 4 & 5: UT-121D link with UT-121D.

For example, 1st student unit from RT-191D will link from BUS-OUT of itself to BUS-IN of 2nd student unit and go continuously to 3rd and 4th student unit.

Green L to Green L; Yellow H to Yellow H.

3.4 State for Power Led of MT-131D & UT-121D

BUS	No	State	Description
BUS-IN L	IY1	Steady Bright	Receiving Order
		Blinking	Received order and processing
	IG1	Off	Abnormal connection last unit
		Steady Bright	Normal connection of L signal to last unit
		Blinking	Data transmitting of L signal to last unit
BUS-IN H	IY2	Off	Not received image signal from last unit
		Blinking	Receiving image signal from last unit
	IG2	Off	Abnormal connection of H signal to last unit
		Steady Bright	Normal connection of H signal to last unit
BUS-OUT L	OY1	Off	No order transmitting
		Blinking	Transmitting order
	OG1	Off	Abnormal L signal connection to next unit
		Steady Bright	Normal L signal connection to next unit
		Blinking	Data transmitting of L signal to next unit
BUS-IN H	OY2	Off	Stop transmitting image to next unit
		Blinking	Transmitting image signal to next unit
	OG2	Off	Abnormal connection of H signal to next unit
		Steady Bright	Normal connection of H signal to next unit

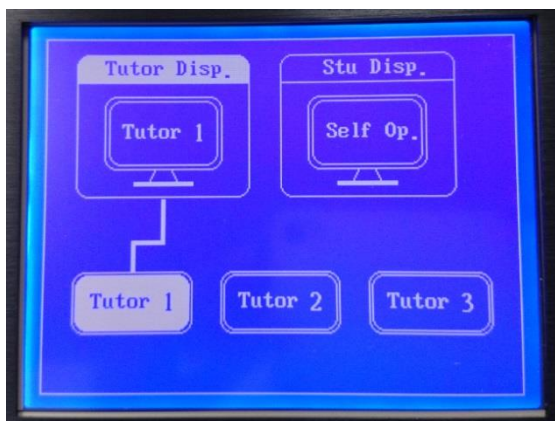# Chapter 4 Operation of Central Control Unit (CT-100S)

4.1 Main Screen
Pressing anywhere of the screen leads to main function page.

4.2 Tutor's Display on Monitor
Tutor can choose which source displayed on his/her monitor. Students now stay in self-operate.
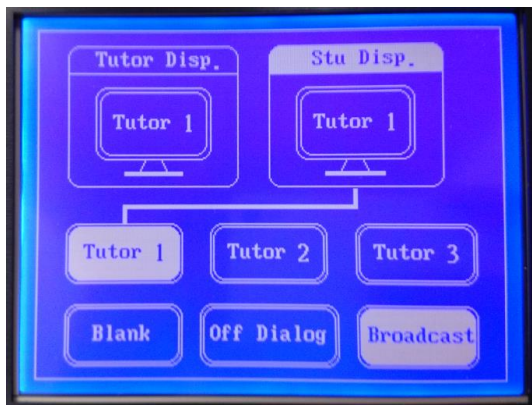

4.3 Start to Control Students' Computers
When choosing "Tutor 1" as display on tutor's monitor without selecting "Broadcast", students stay in self-operate.

When selecting source of "Tutor 1" and then choosing broadcast to students, the source of "Tutor 1" will be displayed on students' monitor.

User (instructor) can also choose "Tutor 1" as display in his/her monitor; meanwhile different source can be broadcasted to students. For example, now "Tutor 2" is displayed in students' monitors and user (instructor) is viewing source of Tutor 1.
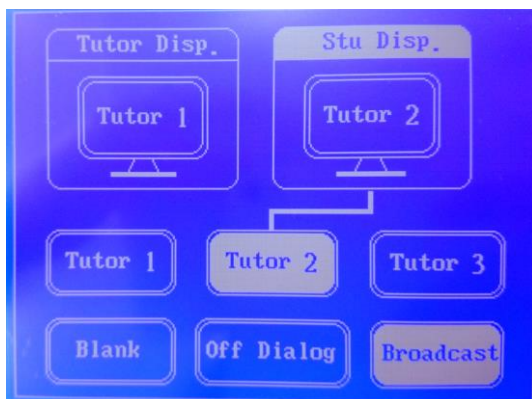
4.4 Black Screen

When selecting "Blank" in student display part, user (instructor) can bind students' screen to stay in black screen status even Tutor 1 is chosen.

4.5 Audio Function

When selecting "Tutor 2" to broadcast, meanwhile, "Dual Talk" means two students sharing the same student box can talk via Mic. In this situation, the video or image is under broadcast.
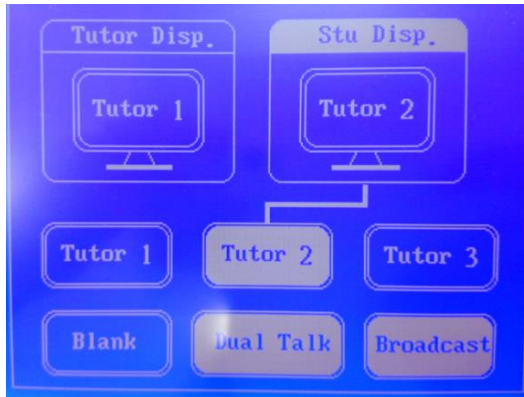
In the same situation, selecting "All Talk"; all of the class members connecting within EVO Pure system can talk as a group. Meanwhile, the video or image is under broadcast.

Appendix A: EVO Pure System Structure
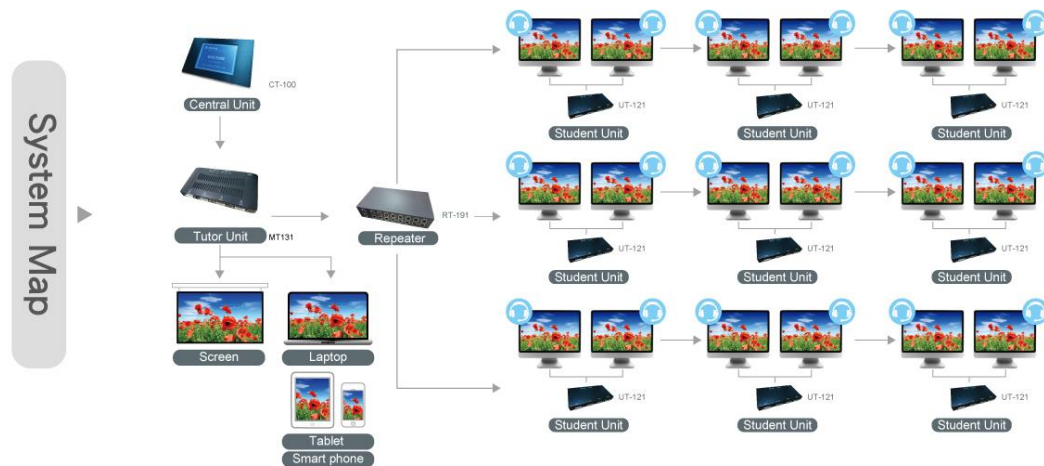

Appendix B: Simple Troubleshooting

Q1: No display on monitor

A: Please check whether the power input is correctly inserted and locked.

Please check if DVI and monitor cables are correctly connected.

Please check whether the setting of monitor display is in DVI in.

Q2: Monitor display is interrupted occasionally or small green speckles appear.

A: Please check whether RJ-45 BUS port is solidly inserted.

Please also try to move this student unit to another repeater BUS Port with less streamed student units. The maximum streamed student units from each pair of BUS Port of repeater are 5 units.

Q3: The image of broadcast cannot be received.

A: Please check whether RJ-45 port is solidly and correctly inserted.

Please check whether monitor from student unit supports the resolution of the broadcast images of master unit.

Q4: The monitor display of broadcast images from student unit is vague and not very clear.

A: Please adjust the display resolution from master unit and monitor display resolution from student unit to be consistent.

Q5: When user (instructor) chooses "All Talk", and there is unusual noise appearing.

A: Please volume down audio input from instructor's source. If tutor unit connects

with audio amplifier, you may also volume down the amplifier or move the audio output device such as earphone or speaker a bit far away from the microphone.

Appendix C: Specifications

Model	CT-100S
Role	Central Control Unit
Resolution	LCM 320x240
Output port	RJ-45 (Single) x 1
Input port	LANx1、RS-232x1、USBx1
Mechanical Specification	
Size	137mm(L) x 210mm(W) x 70mm(H)
Weight(g)	800g
Input Voltage	12V 2A DC
Power Consumption	1.8W
Temperature	0℃~40℃ [32~104°F]
Humidity	20~90% RH [no condensation]

Model	RT-191D
Role	Repeater
Support Resolution	Max 2560x1080
System Input Port	RJ-45 (Dual) x 1
System Input Connector	RJ-45 (Dual) x 1
System Input Connector	RJ-45 (Dual) x 9
Video Signal Turbo	0 dB
Signal Bandwidth	Max 3.0Gbps
Mechanical Specification	
Size	106mm(L) x 208mm(W) x 25mm(H)
Weight(g)	1120g
Input Voltage	12V 2A DC
Power Consumption	1.8W
Temperature	0℃~40℃ [32~104°F]
Humidity	20~90% RH [no condensation]

Model	MT-131D
System Role	Master Unit
Support Resolution	Max 2560x1080
Video Input Port	DVI-D (Single Link) x 3
Video Output Port	DVI-D (DVI-D) x 1
System Input Ports	RJ-45 (Dual) x 1
System Output Ports	RJ-45 (Dual) x 1
Signal Turbo	0 ~ 2.4 dB
Signal Bandwidth	Max 3.0Gbps
Audio Output Port	3.5mm phone jack (Stereo) x 1
Mic Input Port	3.5mm phone jack x 2
Audio Input Port	3.5mm phone jack (Stereo) x 3

Mechanical Specification

Size	106(L)x208(W) x 25(H)mm	Power Consumption	1.8W
Weight(g)	260g	Temperature	0℃~40℃[32~104°F]

Model	UT-121D
System Role	Student Unit
Supported Resolution	Max 2560x1080
Video Input Port	DVI-D (Single Link) x 2
Video Output Port	DVI-D (DVID) x 2
System Input Port	RJ-45 (Dual) x 1
System Output Port	RJ-45 (Dual) x 1
Signal Turbo	0 ~ 2.4 dB
Signal Bandwidth	Max 3.0Gbps
Audio Output Port	3.5mm phone jack (Stereo) x 2
Mic Input Port	3.5mm phone jack x 2
Audio Input Port	3.5mm phone jack (Stereo) x 2

Mechanical Specification

Size	106mm(L) x 208mm(W) x 25mm(H) Connector exclusive
Weight(g)	260g
Input Voltage	12V 2A DC
Power Consumption	1.8W
Temperature	0℃~40℃[32~104°F]

Relative Humidity	20~90% RH [no condensation]

Appendix D: Support Service

Website of Team SoftEx, Inc.

http://www.teamsoftex.com.tw/en/

Taipei Headquarter

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