SURPASS

Operating Manual

PUBLIC ADDRESS SYSTEM

⚠ **CAUTION** ⚠

TO REDUCE THE RISK OF ELECTRIC SHOCK.

DO NOT REMOVE COVER (OR BACK).

NO USER-SERVICEABLE PARTS INSIDE.

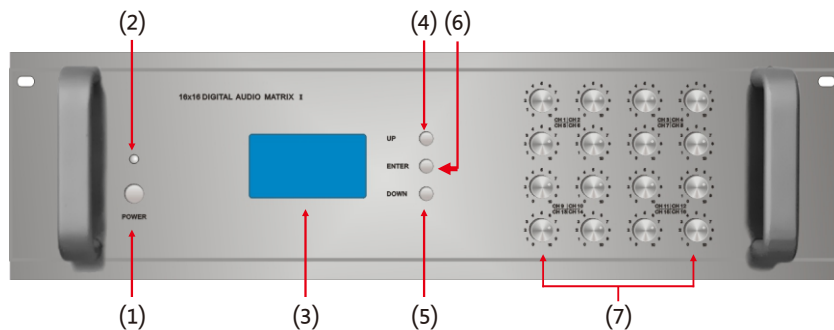REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

16x16 Digital Audio Matrix

Features:

1．16-channel audio input &16-channel output；

2．Each channel has independent volume control knob；

3．16 extension jack for linking with more audio matrix.

4．For audio source B-F, they will be cut by paging from RMIC1 to RMIC5 respectively if there are signals from the correspondant RMIC.

5．The 16th audio source is EMC priority signal input which has two input jacks: EMC1&EMC2. EMC1 can mute EMC2.

6． There's a 25-pin EMC signal input. It can monitor alarm signal automatically and trigger the alarm signal to the 16th audio source .

7．A 128×64 LCD with chinese/English manual which has timing selection function for audio sources and the timing data can be added, modified or removed.

8．Three programming cycles: By date, By week and By month;

9．Three-button operation way:(UP, DOWN and ENTER)；

10．Address setting for the units.;

11．Short circuit signal to turn the unit on for emergency paging;

12． Remote control of ON/OFF and remote selection for audio sources. Providing timing downloading program and collating time automatically..
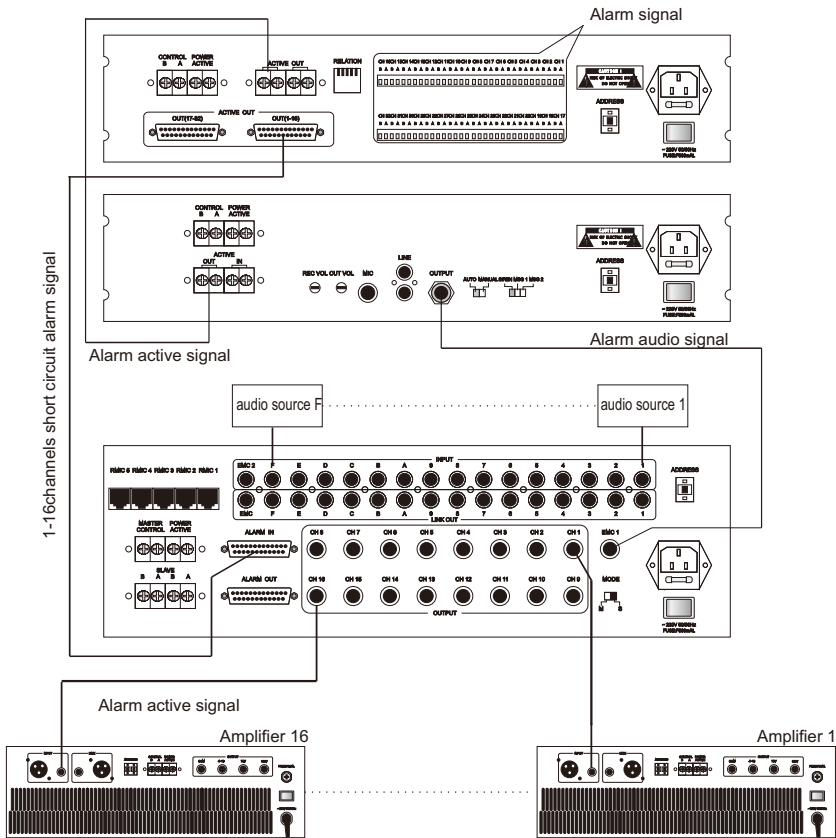
Function:

(1) ON/OFF
(2) Power supply indicator
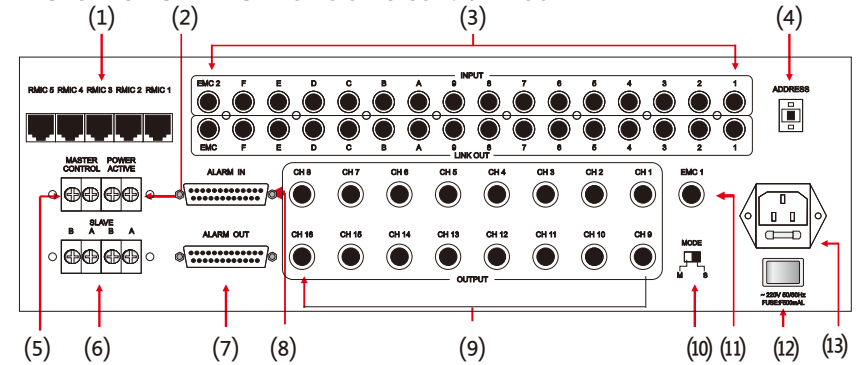(3) 128*64 LCD
(4) UP
(5) DOWN

SPECIFICATION

MODEL	SP-16AMC
LINE input	16 channel:1~F can be connected randomly,EMC2 for emergency broadcast
MIC input	RMIC1~RMIC5：10k ohms(Ω) 10V ,balanced input
LINE output	16 channels:(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 connected randomly)
Connect output	16 channels: 1~ FLINK OUT:1 EMC for emergency broadcast
EMC1 input	10k ohms(Ω) 330mV μnbalanced
LINE input	10k ohms(Ω) 330mV μnbalanced
LINE output	10k ohms(Ω) 0.775V (0 dB) ,unbalanced
mute	RMIC1 &input B are from the same channel, RMIC1 has higher priority; input C& RMIC2 are from the same channel and RMIC2 has higher priority;RMIC3& input D from the same channel and RMIC3 has higher priority; RMIC4& input E are from the same channel and RMIC4 has higher priority; RMIC5& input F are from the same channel and RMIC5 has higher priority; EMC1 and EMC2 are from the same channel and EMC1 has higher priority. When the signal with higher pri-ority inputs, the signal with lower priority will decline 0~30dB.
Freq. response	60 Hz ~ 16k Hz (± 3 dB)
Alarm activate input	(0V)short circuit signal ALARM IN：CH1~CH16
Alarm activate output	(0V)short circuit signal ALARM OUT：CH1~CH16
Display	LCD display, Chinese manual
Function control	16 volume adjust knobs, 3 manual operation buttons, ON/OFF, 1-bit address setting switch, a main/slave selector, 2 LINK jacks, short circuit activate
Indicator	POWER
Protection	AC FUSE× 0.5A× 1
Power supply cable	(3× 0.5 mm^2)× 1.5M（standard)
Power supply	AC 220V ± 10% 50-60Hz
Power consumption	15~20W
Dimensions	133(H)× 483(W)× 390(D)
Package Dimensions	185(H)× 520(W)× 455(D) mm
Net Weight	7.1Kg
Gross Weight	8.4Kg

4．Operation diagram

Alarm signal

Alarm active signal

Alarm audio signal

1-16channels short circuit alarm signal

audio source F ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ audio source 1

Alarm active signal

Amplifier 16   Amplifier 1

⑹ ENTER

⑺ Channel: CH1～CH16 volume control knob

⑴ Remote MIC input

⑵ Power on activation

⑶ Channel: CH1～CH16 input & CH1～CH16 extention outputs

⑷ Address setting

⑸ Control signal connector

⑹ Slave control signal connector

⑺ Alarm signal output

⑻ Alarm signal input

⑼ Channel: CH1～CH16 output

⑽ Main/slave setting

⑾ EMC input

⑿ Power ON/OFF

⒀ Power socket with fuss

1．Operation

Important notice: After setting, must use EXIT to return to the ready mode then the matrix can be controlled by remote paging mic.

1) Power control

When this button is turned off the system is completely off and cannot turn on with the switch on the panel nor can it be opened remotely.

2) LCD display

128×64 LCD display. The multi-level menu provides functions such as set time&date, set off-day, set language, set timing program and so on. Three buttons for operating: UP、DOWN and ENTER. The background lights when

power is on.

3) Check working status

The first two lines of the interface displays the selected audio sources of channel CH1~CH16. The third line displays start time of the program and the last line displays current date and time.

Off	off	off	off	off	off	off	off
off	off	off	off	off	off	off	off
Timing:			—		—:		—
01-01				12:00:00			

Interface of sleep status

4) Menu operation

Press ENTER to operation and it will display menu as below:

✍ Manual setting: for selecting audio sources manually

🔔 Edit program: for setting timing program

Set time: for setting the system time

Set date: for setting the system date

Set off-day: the program doesn't work on off-day

Set holiday: the program doesn't work during holiday

Set cycling mode

Language select

✂ Clear: for removing all the timing programs
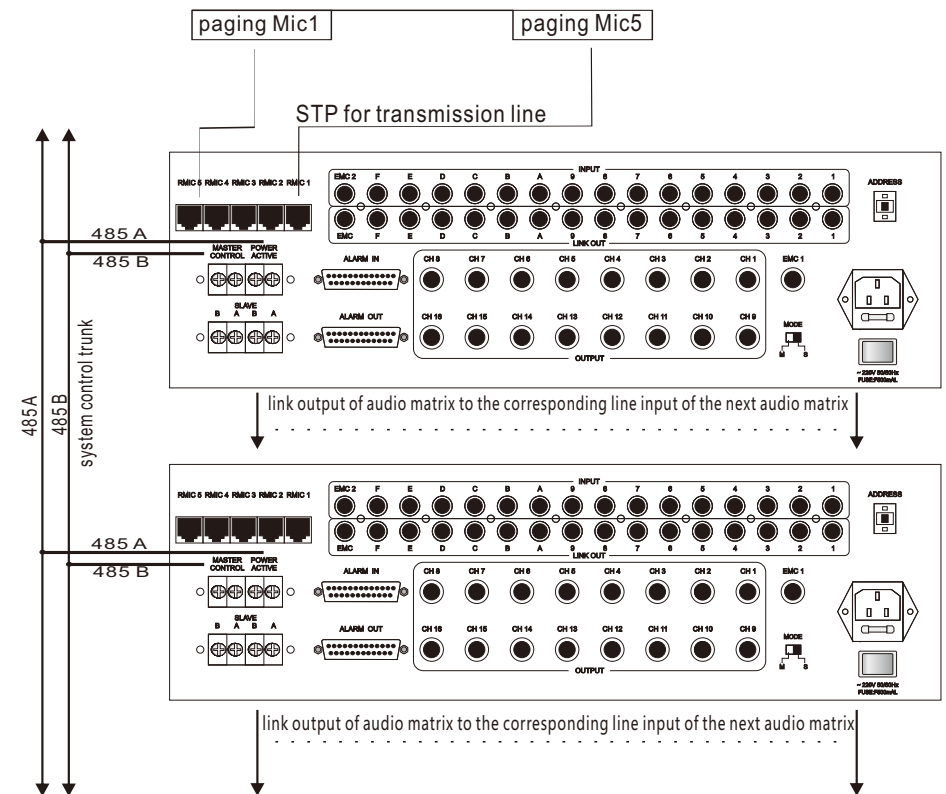
Exit: back to the sleep status

Use UP and DOWN to select menu.. Press ENTER to operate the submenu. It will return to main menu after operation and press"Exit" back to sleep status.
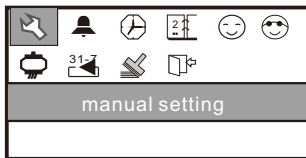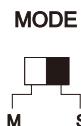
manual setting

5) Select audio sources manually

Users can select the corresponding audio sources of each channel through manual setting. Diagram is as below:

diagram is below:

paging Mic1   paging Mic5

STP for transmission line

link output of audio matrix to the corresponding line input of the next audio matrix

link output of audio matrix to the corresponding line input of the next audio matrix

and diagram is as below:

MODE

M   S

It's main equipment if MODE switched to "M" and "S" for slave.

15)　Alarm function

It can check and switch the signal to the 16th audio source automatically if there's emergency signal input.(The 16th audio source can be used for alarm audio source equipment.) The LCD displays "a". The system will return to normal status auto when alarm cancelled. There are 2 input jacks of the 16th audio source and EMC1 can mute EMC2.

16)　Delete all timing records

Select "clear" to delete all the programs.

17)　Alarm activation

This function is for emergency paging. If there's an alarm or paging when the unit is power off, the short circuit signal will activate power supply for paging and will power off auto after the paging or alarm.

18）Address setting

Address setting range 1~9 and press "+"&"--" for setting. NOTE: Turn off the power for about 5 seconds after address setting and turn power on again..

2．Remote paging

There are 5 jacks for remote operated microphones (RMIC1~RMIC5) which correspond to the audio sources B～F and will mute the line input of the corresponding channels. It provides remote paging to each channel when linked with microphones. STP for transmission cable and balanced transmission for audio signals that enables high capacity of anti-jamming, distant transmission and perfect sound quality. The 5 microphones correspond to different channels and can page each channel simultaneously. There can be 5 microphones max for each 2816S and can be distinguished by the address in the back of the unit (refer to 2816RT for details)。There should be a audio matrix as main unit for remote paging function. (The switch is in the back of the unit, M for main and S for slave.) NOTE: There should be one and only one main unit in each system to avoid mistakes that might cause malfunction. There can be 8 units max in while using this function and address range is 1~8. If there are several units in one system, link the signal control jack SLAVE accordingly, link A with A, B with B. Link error may cause malfunction of even damage. Connection
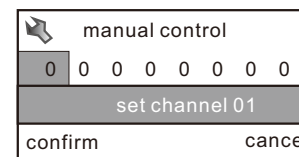
Select audio sources of channel 1

Users can select channels by "UP"&"DOWN", it will display the selected channel and 0~F are available. 0 means off. The 16th cannot be selected as it's for alarm use. Press ENTER and use UP&DOWN to select audio sources after selecting a channel. Press CONFIRM to save the setting. And press EXIT to exit without saving.
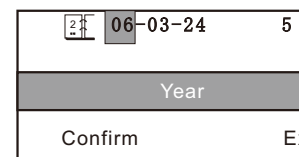
6) Modify time

Enter the item SET TIME and press ENTER to modify. Press UP or DOWN to set the time and press ENTER to finish. Press CONFIRM to save the setting and return to menu, and press EXIT to exit without saving.
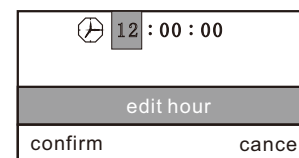
7) Modify date

Re to operation of time setting. 1 is Monday, 2 is Tuesday and so on.

interface of date setting

8) Set timing program

Users can set some programs to play automatically.

Users have to select cycle mode before setting timing program. three modes are optional, week, month and date. In "Edit program", there are 5 icons: add record, remove record, copy record, edit record and exit.

Edit program

① Enter "add record" and select date(within a week/month) to set timing record. It will enter setting interface directly if under date cycle mode.. Use UP&DOWN to select and press ENTER to set. Use UP&DOWN to add or remove and press ENTER to confirm. The setting is the same for channel audio sources, UP&DOWN to set and ENTER to confirm. Press "exit" to return to the prior menu and "confirm" to save the setting. If it shows"continue?", press "confirm" to add more programs(in the same day) and "exit" to return to the prior menu.
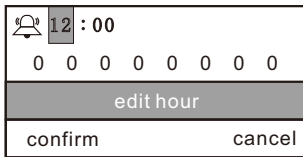
Add program

② Enter "delet all day record" and select the date to be deleted. Press "confirm" when the system shows"delete record". Same operation to delete other records.

③ Enter "copy all day record" and select data source (all the records of the day) to copy them to the chosen day. This function is unavailable under the date mode.

④ Enter "edit record" and all the timing programs are listed. Users can use UP&DOWN to check all the records. Select the record to be edited and press ENTER to operate. Modifying or deleting are enabled in the submenu. Press "return" to back to menu interface and "exit" to record interface.

⑤ Users can select "exit" to go back to the prior menu.

9) Set off-day

All the timing programs don't work on off-days. Enter the item "set off-day", use UP&DOWN to select the day(Monday~Sunday) and ENTER to set. In the block before the selected day there will be black dots. Press "confirm" to save the setting.
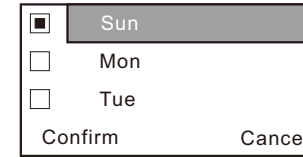
Set off-day

10) Set holiday

The timing program doesn't work during holiday. There are three submenus: "add","delete" and "exit". In "add" users should input the beginning month&date and the ending month&date. The beginning date and the ending date should be the same. That means one time can only set one day for holiday. And many holidays set be set. Press "confirm" to save the setting or "cancel" to exit. Press "delete" to delete all the holidays and "exit" to go back to menu.
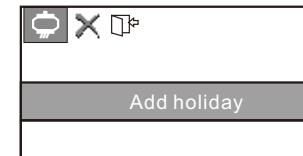
Set holiday

11) Set cycling mode.

The timing program can work according to a certain cycle mode. There are three cycle modes: day, week and month. Press ENTER to confirm after selecting the cyclical pattern.

12) Select language

Chinese and English can be available. Enter the item "select language" and use UP&DOWN to select. It will change language automatically after setting. Press "confirm" to save the setting before exit.

Select language

13) Back to sleep status

Press "exit" to return to sleep status.

14) Main/slave setting

There should be one and only one audio matrix as main equipment when linked with remote paging microphone. Setting switch is on the real panel