

# **TAKSTAR EBS-1C Digital Central Controller User Manual**

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**EBS-1C Digital Central Controller User Manual** 

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### **PREFACE**

## Dear Customer,

Thank you for purchasing Taster EBS-1C Digital Central Controller. In order to better understand and use the product, please read this manual carefully.

If you have any questions or suggestions, please contact our local dealer.

#### **FEATURES**

- ARM+DSP chip architecture, embedded real-time operating system (RTOS), 4.3-inch capacitive touch screen, graphical interface, full touch operation.
- Supports PC-side editing of timing programs and custom remote control functions.
- Powerful timing function, using real-time clock (RTC) chip with automatic compensation to achieve accuracy
  down to the second.
- Adopts RS485 control bus, MODE BUS protocol, two-way communication, can control peripheral devices and can also be controlled by third-party online devices for easy third-party system integration (optional).
- Supports remote paging station access, which can achieve remote call, audio access, on demand broadcast, zone control, power control and other operations.
- Fire emergency broadcast function, supports local triggering and triggering by external fire alarm matrix, and triggering actions can be customized for each external trigger signal. Supports adjacent zone alarm.
- Built-in 4GB flash memory securely soldered on the circuit board. Expandable with external TF card up to 32GB.
- High-speed USB2.0 interface, through which a computer can directly access the host's memory and TF card, upload and download music files and program files.
- Browse and customize playlists locally, view file names in rolling Chinese/English format. No need to generate playlist or number songs on a computer.
- Programmable locally or on computer. Supports 4 sets of programs, each can contain 180 timed events.

#### **EBS-1C DIGITAL CENTRAL CONTROLLER**

- Integrated FM radio function. Supports preset, automatic or manual search of stations.
- One local mic input, two AUX inputs, four audio outputs, and one remote mic signal synchronous output.
- Remote mics can be connected on all three COM ports, either individually or daisy-chained, supporting a maximum of 16 remote paging mics.
- Local mic settings: mixing, auto evade, evade level, automatic zone triggering and recover time; all configurable in system Settings.
- Edit, browse and run temporary timed tasks locally, quickly setting up various running tasks.
- Supports simple mixer function, intuitive emulated fader on touch screen to adjust the volume of each audio source.
- Powerful decoding capability, supports multiple audio encoding formats, such as MP3, WMA, WAV, etc.
- No restriction on the number of music files you can store, as long as the capacity allows. View all music files at will without restrictions.
- Can control peripheral devices such as CD player, radio, zone selector, power sequencer, override power, fire alarm matrix and so on.
- Supports long-distance remote control (>300 meters) (optional).
- Integrated with 8CH programmable zones, 4CH programmable power supply.
- Supports password login management, customizable user password.
- Adopts highly integrated dual-core decoding ARM+DSP+DAC system-on-chip.
- Help manual and wiring guide on host unit for quick start.
- Achieve remote paging, on-demand broadcast, spot broadcast, and automatic recovery after playback.
   Reboot to automatically resume task execution after power outage.

#### **APPLICATIONS**

Timed messages/signals in schools, factories and the military, and music broadcast in high-end restaurants.

## **PACKING LIST**

- 1 \* Controller (Host Unit)
- 1 \* Antenna
- 1 \* Power Cord
- 1 \* User Manual

# **SPECIFICATIONS**

Storage Method: built-in 4GB flash memory or external TF card

Supported Audio Formats: MP3, WMA, WAV

Radio Mode: FM 87.0-108MHz Output: LINE 500mV Unbalanced

Overall S/N Ratio: ≥85dB

Overall Distortion: <0.1%(1KHz)

Frequency Response: 20Hz-20KHz±3dB Controllable Power Output: -220V/50Hz <3A

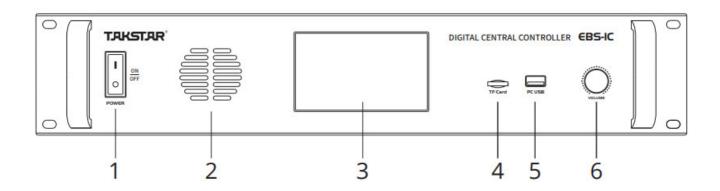
Net Weight: 5.1kg Gross Weight: 6.4kg

Dimensions (mm): 485x350x90 mm

Note: The above data are measured by Take star laboratory which has the final interpretation right!

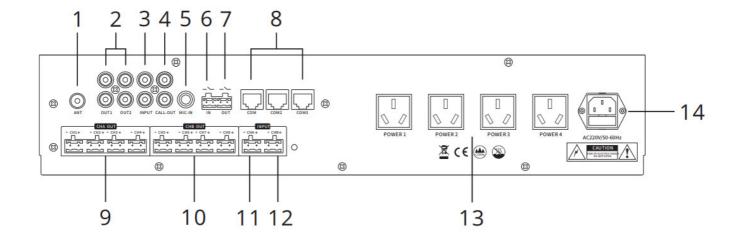
## **DESCRIPTIONS**

#### **FRONT PANEL**



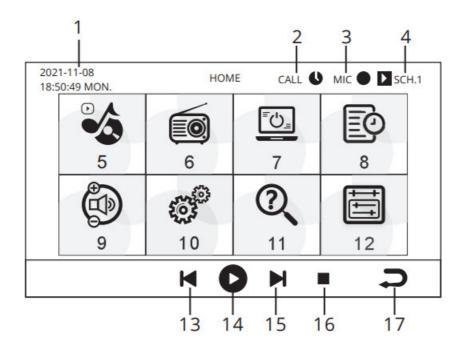
- 1. Power Switch: Turns on/off the power.
- 2. Monitor Opening: Monitor speaker inside for monitoring the content of the program; can be turned on/off.
- 3. 4.3-inch True-Color Capacitive Touch Screen: Shows all the system status and info; for touch control operation.
- 4. TF Card Slot: for TF card installation, expandable up to 32GB.
- 5. USB Socket: Connect with a computer by USB cable for downloading music/schedule files to the machine.
- 6. Master Volume Knob: Adjusts the overall output volume.

# **REAR PANEL**



- 1. Antenna Interface: for connecting remote control/FM radio antenna.
- 2. Audio Output: 4CH audio outputs for connecting to the audio inputs of a power amplifier.
- 3. Line Input: for connecting external audio source such as: CD player, computer audio output, etc.
- 4. Synchronous Output for Programmable Mic: Outputs the audio signal of the programmable mic, can be independently connected to a paging amplifier.
- 5. MIC Input: for connecting mic.
- 6. Dry Contact Short-Circuit Input: Short-circuit input terminal, for connecting to the short-circuit output terminal of other equipment to trigger zone alarm broadcast.
- 7. Dry Contact Output: Short-circuit output terminal, for connecting to the short-circuit input terminal of a short-circuit trigger device; programmable, can be used to trigger power sequencer, etc.
- 8. RJ45 Interface: RS485 bus interface, for connecting to a programmable mic or peripheral equipment (e.g., controlled CD player, controlled power sequencer, controller zone selector) using a network cable.
- 9. Group A Zone Output: Group A contains programmable zones 1~4; its respective power input is CHA power amp input.
- 10. Group B Zone Output: Group B contains programmable zones 5~8; its respective power input is CHB power amp input.
- 11. CHA Power Amp Input: for connecting to the power output terminal of power amp A.
- 12. CHB Power Amp Input: for connecting to the power output terminal of power amp B.
- 13. 4CH Programmable Power Output: Programmable power sockets, can provide AC 220V50Hz with no more than 3A power output.
- 14. AC220V Power Input Socket: for connecting to the power supply for this machine. Insert the plug on the machine first, then connect to the mains.

#### **HOME SCREEN**



#### Home screen functions:

- 1. System date and time.
- 2. Remote mic input icon, which turns green when the remote mic is activated.
- 3. MIC signal input icon, which turns green when there is MIC signal input.
- 4. Current running mode.
- 5. Music player, where you can browse music files, preset which music to be played, and select the playback mode.
- 6. FM radio, where you can listen to FM radio stations, use preset stations, manually or auto search stations.
- 7. Zone and power control, where you can turn on/off any zone/power.
- 8. Schedule editing, where you can edit, modify, view, run, or delete events inside each schedule.
- 9. Volume adjustment, where you can adjust the volume of each audio source and the mixed master volume.
- 10. System settings, where you can set the operating parameters, such as: language, monitoring, fire alarm trigger, MIC trigger/evasion, remote control, etc.
- 11. Help manual, which contains a brief introduction and a quick start guide.
- 12. External device management. External controlled peripherals are connected through RS485 data bus, e.g., controlled zone selector, controlled power sequencer, controlled CD player, controlled radio.
- 13. Previous track button, which can switch to the previous song when playing music. In standby mode, click to automatically invoke Music player.
- 14. Play/Pause button, which can pause or resume playback when playing music.
- 15. Next track button, which can switch to the next song when playing music. In standby mode, click to automatically invoke Music player.
- 16. Stop button, which can stop music playback.
- 17. Return button, which can return to the standby interface.

## **ZONE BROADCAST SYSTEM SOFTWARE**



# Schedule editing steps:

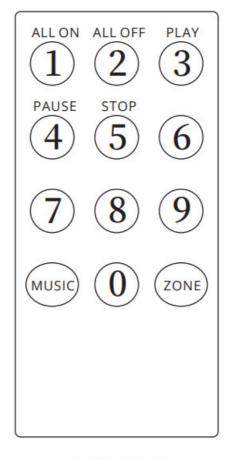
- Step 1: Connect the host to a computer with a USB cable.
- Step 2: When connected successfully, select which schedule to edit on the left column of the above interface, from "Schedule 1", "Schedule 2", "Schedule 3", to "Schedule 4".
- Step 3: Set the task time and date in "Setting Time" (check which day of the week).
- Step 4: Set the program content in "AUX". If you want to play MP3 files stored in the host memory, first, select the "Local MP3" tab, then click "Add", select the mobile disk

corresponding to the host memory, and select the music files in the root directory of the disk. If you want to play music files in the TF card, select the TF card, then rselect the mobile disk corresponding to the host SD card, and add the music files in the root directory of the disk.

- Step 5: Select which zone and power you want to turn on.
- Step 6: Click "Save" to save the editing timed task. (Remember to save each record after editing.)
- Step 7: Click "Export" at the top of the window, and select the root directory of the host system memory disk to save.
- Step 8: After the file is downloaded, unplug the USB cable. The schedule will be automatically installed in the host system, and the host will run the edited schedule accordingly.

## **OPTIONAL ACCESSORIES**

#### 1.1 RF REMOTE CONTROL



(OPTIONAL)

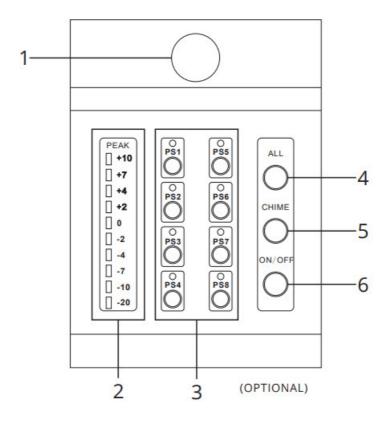
# Users can select music files using the remote control as follows:

- 1. On-demand music: Press "MUSIC" -> "01" means to select the first track, "02" means to select the second track, and so on to "09". To select the tenth track, press "10", or the eleventh, press "11", such and so forth.
- 2. Zone control: Press the "ZONE" key, and then press number 1~8 to control the respective zone.
- 3. Compound key: Directly press number "1" to turn on all zones; number "2" to turn off all zones; number "3" to play the selected music track; number "4" to pause playback; number "5" to stop playback.
- 4. Note that the remote can only request music files in the root directory of the host's memory disk. The request number corresponds to the file ID, therefore the file IDs must be set in advance. For example, the first song should be named: "01\_XXXX.MP3", where "01" is the ID, and "XXXXX" represents the file name.

# 1.2 PROGRAMMABLE MICROPHONE

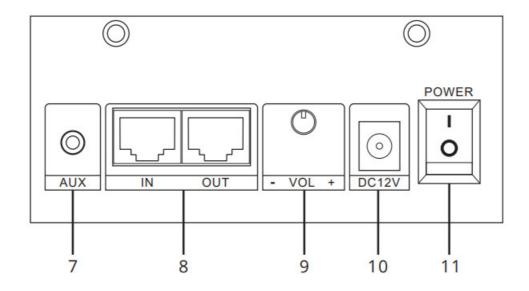
- 1. The control command uses RS485 bus protocol, which can call eight zones from somewhere afar.
- 2. The audio signal utilizes balanced transmission, with strong anti-interference capability to ensure high audio fidelity. Effective transmission distance is more than 500 meters.
- 3. Supports AUX input, can broadcast local music to each zone.
- 4. Supports daisy chain connection, can directly hook up with 1 device.

# **CONTROL PANEL**



- 1. MIC socket: Press and hold the socket tab to insert MIC pole.
- 2. 10-Segment MIC volume indicator: Used to indicate the mic volume level when speaking.
- 3. ZONE1~ZONE8: Individual control for each zone. The indicator lights up when the zone is turned on, and off when the zone is turned off.
- 4. ALL: Click to turn on/off all zones.
- 5. CHIME: Play the paging tone.
- 6. ON/OFF: Turns on/off the remote mic.

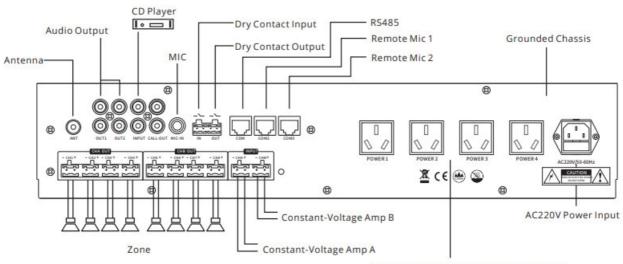
# **REAR PANEL**



- 1. AUX: External audio source input.
- 2. IN/OUT: RS485 cable input and output ports, which supports daisy chain connection.
- 3. VOL: Mic volume adjustment knob.
- 4. DC12V: External 12V power supply input.

5. POWER: Pager power switch, on/off.

## SYSTEM DIAGRAM



4CH AC220V Programmable Power Output

#### **TROUBLESHOOTING**

ISSUES	CAUSES	MEASURES
Display does not show anything	<ol> <li>Power is not turned on</li> <li>Fuse is blown</li> <li>Mains AC outage</li> </ol>	<ul><li>1.Turn on the power switch</li><li>2.Replace the fuse</li><li>3. Check the mains power supply</li></ul>
Scheduled event did not start as expected	1. Not set or set incorrectly	Check if the settings are correct
No playback from the audio s ource corresponding to the s cheduled event	Not linked or set incorrectly     The audio source device is not in the preset controlled state     Volume is low	1.Check if the settings are correct 2.Whether the audio source device is on and whether the playback media is correct 3. Adjust the volume
Output contact corresponding to the schedul ed event is not activated	Not linked or set incorrectly	1.Check if the settings are correct

#### **CAUTIONS**

To avoid electric shock, overheat, fire, radiation, explosion, mechanical risk and injury or property loss due to improper use, please read and observe the following items before use:

- 1. Please check if the power of the connected equipment matches with that of this product before operation. Adjust the volume to proper level during operation. Do not operate at overpower or high-volume level for extended time to avoid product malfunction or hearing impairment.
- 2. If there is any abnormality during use (e.g., smoke, strange odor), please kill the power switc and unplug from power source, then send the product to the dealer for repair.

- 3. Keep this product and its accessories in a dry and ventilated area. Do not store in a humid or dusty area for extended time. Keep away from fire, rain, liquid intrusion, bumping, throwing, vibrating, or from blocking any ventilation openings, to prevent malfunction.
- 4. The product must, when installed on walls or ceilings, be fixed firmly in place at adequate strength to prevent from falling.
- 5. Please abide by safety rules during operation. Do not use the product in places prohibited by laws or regulations to avoid accident.
- 6. Do not disassemble or repair the product by yourself to avoid injury. If you have any questions or require any services, please contact our local dealer.

# TAKSTAR® 得胜

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## **Documents / Resources**



Manuals+,