

SOLON Series



TENDZONE DIGITAL AUDIO PROCESSOR
www.tendzone.com
*For more information, please visit our official website



INTRODUCTION

TENDZONE-digital audio processor, being awarded as the National High Tech Enterprise (China), National Dual software Enterprise(China), Shenzhen Technological & Innovative Enterprise, China professional audio-visual industry Best New Brand enterprise 2011 and China professional audio-visual industry Top Ten brand 2012. It have got more than 30 different type of digital audio processors, more than 40 patents in Design , Creative , Innovation and invention . Products such as the AEC (Acoustic Echo Canceller), AFC (Acoustic Feedback Canceller), ANC (Active noise Canceller) AGC(Automatic Gain Control) and other core algorithm. It is a professional enterprise specializing in research and development, manufacturer, sales and consulting service on digital audio processing . It currently have more than 150 employees and have become the largest digital audio research and development enterprise in China.

TENDZONE has got a rich R&D team that have designing experiences in the audio and video industry. Our products includes MIDIS Multi-media information Distributive & Interactive System, small to large scale digital audio processors, AFC adaptive feedback canceller, AVC adaptive echo canceller, AM all-digital mixers, DA multi-channel digital amplifier and all related DSP based digital audio solutions. In recent years, TENDZONE with its leading technology and innovative products have accurately grasp hold of the customers' demand, keep a high speed growth in the industry. Having many customers and successful case studies in administrative centers, exhibition centers, education centre, hotels, large shopping mall, transportation hubs and courts etc.

At present, we have established sales and technical support centers in China namely ; Beijing, Shanghai, Guangzhou, Chengdu, Xian and many more coming up . Our products have exported to over 12 countries and are still expanding it extensively to other parts of the world with priority in the America and the European markets.

In the year 2013, TENDZONE have differentiate the products into four big series and a Big System : the Distance Conferencing Series - TYCHO Series, The Commercial Distribution Series - TIMON Series, The Digital Signal Processing Series - SOLON Series, The Professional Audio Series – Sophus Series and finally The MIDIS - Multimedia Information Distributive & Interactive System. All Series covers all kinds of large public entertainment areas, culture and sports centers, administrative centers, schools, transportation hubs, video conferences, hotels, hospitals and many more. All series is applicable to the different types of applications and demands , with the perfect combination of supreme appearances, product functions and characteristics.

The latest launched digital audio processor uses a high-speed floating-point DSP chip to control and process the audio stream. In the software operation platform, TENDZONE uses a more intuitive and visual control interface, users can complete the real-time adjustment of the processor which is easy to use for new users. TENDZONE's control software has update to marshalling control, parameter copy, paste and association control function and realize user-friendly operation.

TENDZONE since its inception, has adhering to "Create" the international first-class digital networking audio products with beliefs through unremitting efforts and industry precipitation, TENDZONE have become the leading company in the digital audio industry, and have fast becoming the industry's most influential brands.

TENDZONE HONOR

- ❖ National Dual software Enterprise(China) -correspond with the 《Encourage software industry and integrated circuit industry development certain policy》 and 《The software enterprise determination standards and management method》
- ❖ China professional audio-visual industry Best New Brand enterprise 2011
- ❖ China professional audio-visual Top Ten Brand enterprise 2012
- ❖ Shenzhen Technological & Innovative Enterprise
- ❖ National High Tech Enterprise (China)

TENDZONE BRANDING CULTURE

- ❖ Brand Philosophy : Quality is our life, innovation is our soul, dare makes bold innovation moves , you will be one step ahead of others !
- ❖ Brand Values : Take the customer's demand as the 'priority' center and provide only high quality products!
- ❖ Brand Target : The leader of digital networking audio producer!

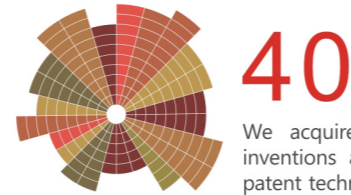


Patents



The year of 2012

If 2012 is the year for rapid developments for Tendzone.
Then 2013, Tendzone will bring you more surprises and innovations !



40

We acquired over 40 patents, including those for inventions and utility models etc. We will own more patent technologies rights in the interactive multimedia , high definition network video and audio transmission for the coming additions .



150

The number of Tendzone's core employees have exceed 150 people. Our powerful sales and R&D capabilities are the main sources of concept of "Made in China" to "Created in China".



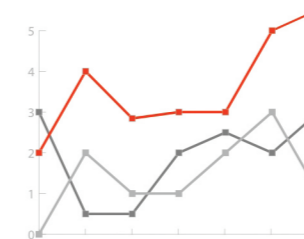
1000

In 2012, we have participated over 1000 projects namely ; Liaoning Aircraft Carrier, Ministry of Commerce, SASAC, People's Bank of China, Organization Department of the CPC Central Committee, Jiangsu Provincial Armed Police, Zhenjiang Administration Center, LuzhouLaoJiao, Taizhou Exhibition Center, Tianjin Traffic Administration, Tianjin Ecological Industrial Park, Member of Harbin Pharmaceutical, Minfeng Building, Chongqing court, Chongqing Agricultural Bank, National Committee of Sichuan Province, Zhejiang Provincial People's Government, Zhejiang Provincial Electric Burea, Zhejiang Customs, Zhejiang Meteorological Bureau, Hefei Charity House, Huaanan Bureau of Mines, Hefei Tobacco Corporation, Yangzhou Technology Building , Hunan Prison System, Commercial Bank of Nanjing, Xinjiang Guesthouse, Wuhan Hankou Gym, Jiangsu Liantong Building, Jiangsu Procuratorate, Fujian Electric Bureau, Xiamen Airline , Fujian College of Engineering and many more .



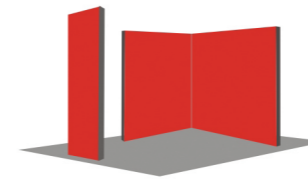
12

We have exported to more than 12 countries, we will continue to develop intensively is with priority in the American and European markets.



4000

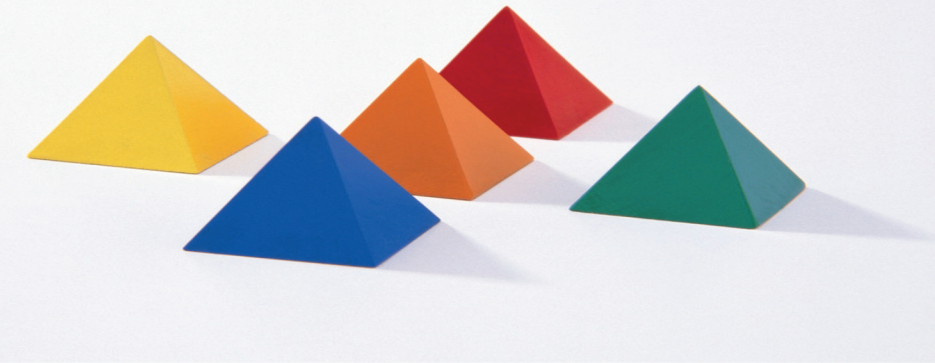
Our annual sales turnover of high end audio processors in 2012 exceed 4000 units, recording a 3 times growth of annual performance compared with the year before ; Sales volume ranks among the top in Chinese professional audio market and far ahead of many imported brands. Tendzone , the leader of digital audio processor!



11

Tendzone will participate in more than 11 professional exhibitions in 2013 : ISE in Holland (Jan), GET SHOW in Guangzhou (March), International Expo on Pro Sound & Light in Guangzhou (March) , Musikmesse/Pro Light & Sound in Frankfurt (Apr) , Beijing INFOCOMM (April), Beijing PALM (May), America INFOCOMM (June), Russia Music Moscow (September), India INFOCOMM (September), Shanghai Light & Sound Show(October), Middle East INFOCOMM (October)....

Product Advantages



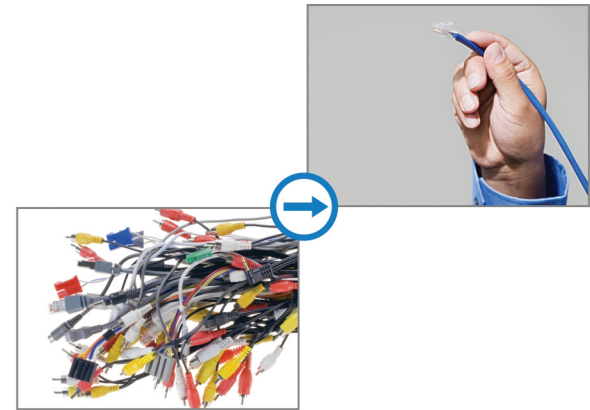
Quality Assurance

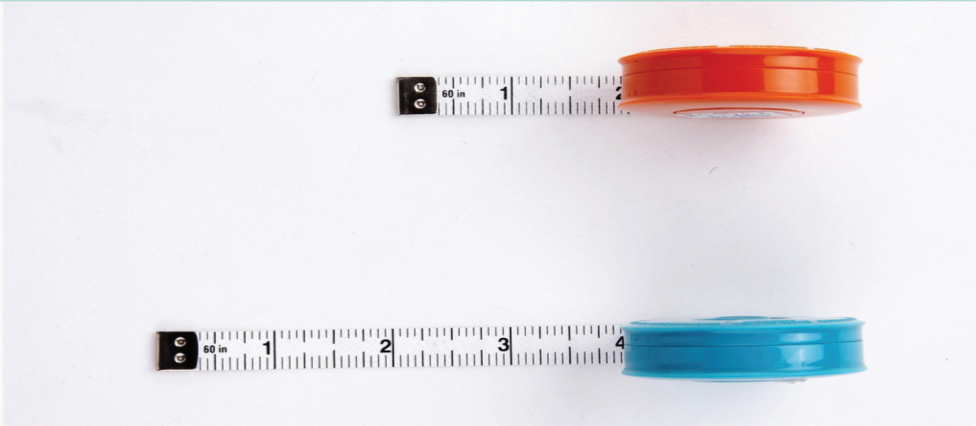
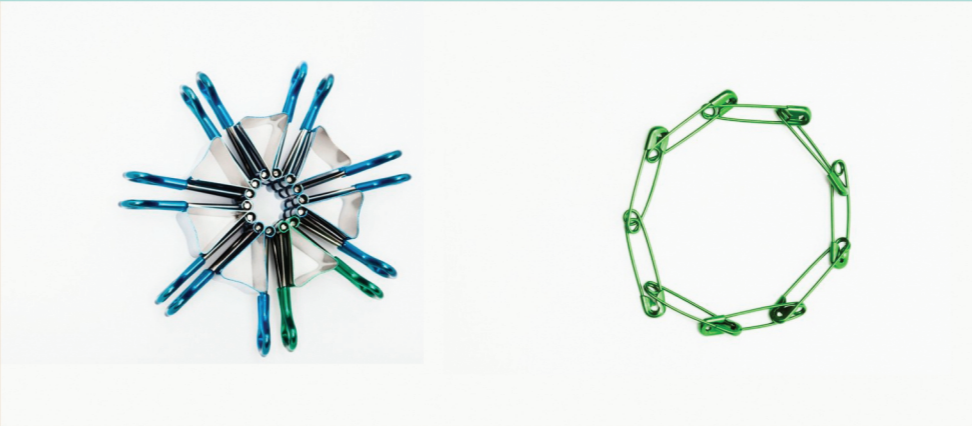
Go through strict quality testing to ensure that all products failure rate at 0.5%, and in accordance with the relevant requirements, through the CE, CCC, FCC, UL, RoHS authentication and so on.



High Efficiency

System is more concise/stable/economical on human resource/updating of software's is convenient with just an internet line could solve all your problems, saving lots of audio wirings , plugs and sockets'welding all under one roof.





Simplicity

An integrated solution without the complexity and complicated wiring system, concise operating platform and humanized control mode, you can feel constantly the value of the SOLON processor. It can provide a variety of combine specifications , different types of DSP application solutions as well as strong processing capacity.

Expandability

All the processors/control panels/external control mode are based on the standard TCP/IP network structure. Only need an internet wiring and it can extend your application no matter is for centralized DSP mode or distributed DSP mode. The centralized DSP mode and distributed DSP mode solutions makes the system more reasonable, simple and convenient thus improving the overall products comprehensive application space.

Reliability

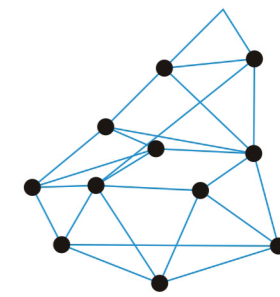
Highly integrative system with simple operation / stable / and cost effective on installations. TENDZONE has been committed to provide users with more simple and yet convenient system solutions, our strong DSP processing ability and intelligent processing function module, make the operation becomes more directly and more reliable controlling.

Flexibility

A perfect flexible system combination, it can be conveniently build on all kinds of large/medium and small system. And also meet the project installation diversity requirements too. Under a diversifying function system , users can combine the products accordingly to the actual function required with multiple panels specifications combining it into a system as well as the customize control key function on the panel thus making it more flexible and easy to operate.



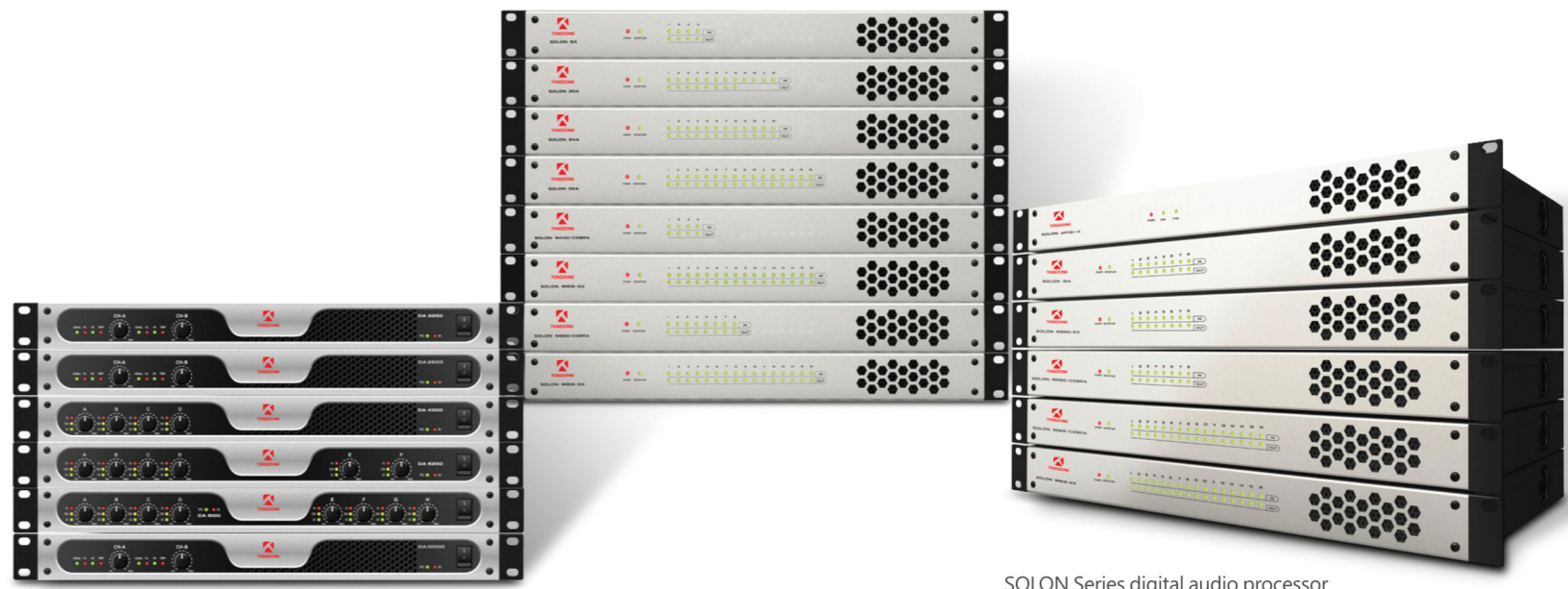
For More.....



RC Panel Series

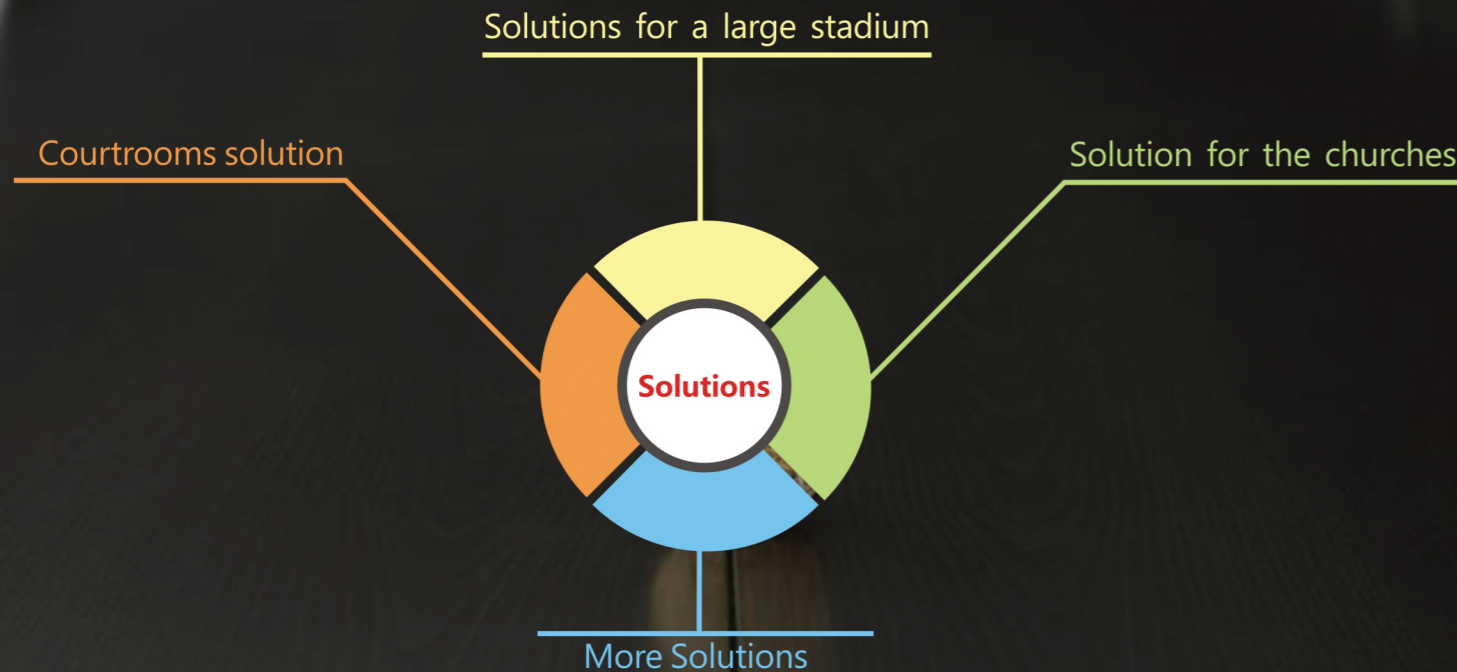


All SOLON Series Products



Overview of SOLON Unique Signal Processing Series

SOLON Unique signal processing Series include networking digital audio processors/amplifiers/multi-functional loudspeaker and external wall control panel. It can provide users unified application solutions, such as the churches/large banquet halls/auditorium, courts/administrative centers, conference centers, multi-function halls, theaters, sports venues, etc. The new SOLON series uses TENDZONE's third generation audio processing technology, high-quality preamplifier circuit and DSP processing bus structure. It provide users a more superior sound quality. In the software operating platform, SOLON Series use a more intuitive operation interface, enabling users to complete real-time adjustment of the processor and It is easy for new users to operate. The SOLON M/Cobra networking digital audio processor is the best choice for a distributed DSP solution. It meets the local premises audio processor's requirements. Beside this, it also have 16 extra networking digital audio process and transmitting channels. Conveniently built for a centralized and distributed management.. there are a total of 4 specifications available; the SOLON M/EX expandable audio processor is the best choice for a centralized DSP solution network. Through the local expansion bus MINI T-LAN can combine any specifications of the equipment to reset, and form a larger audio process system thus meeting a diversity of requirements.

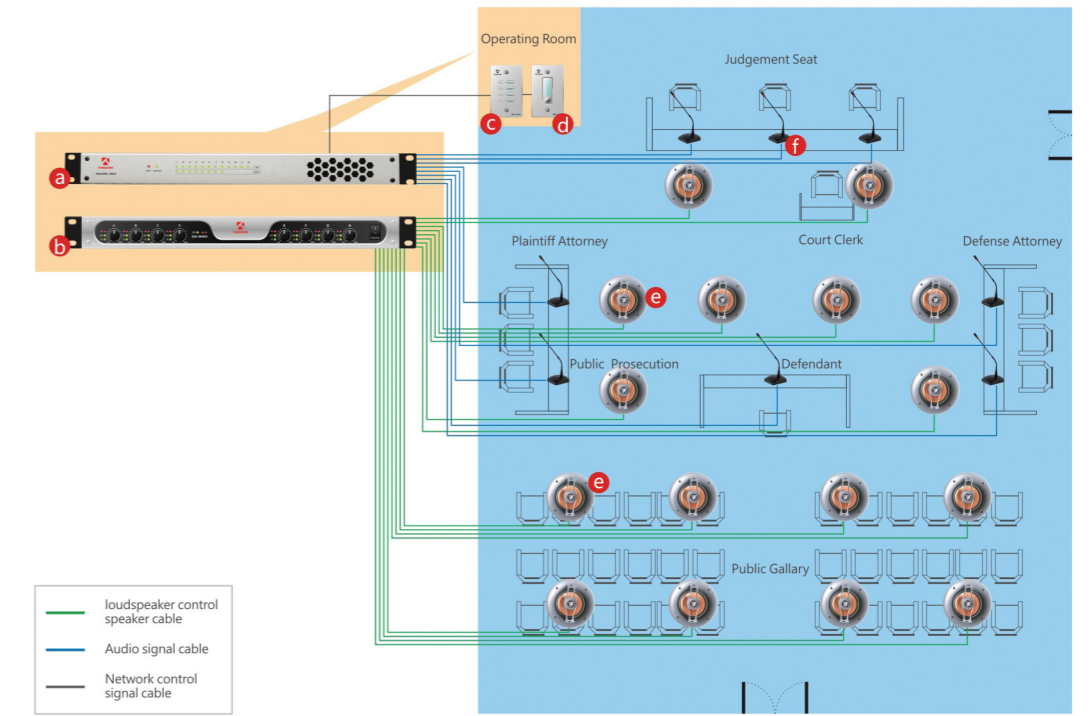


Solutions

Courtrooms solution

In the courtroom, decisions are frequently changed based on the speech and conversations. Because these places are usually small, microphone and speakers would cause feedback problem when they placed too closely. It needs an intelligent DSP processing system for everyone to fully participate in the meeting. In order to obtain clear voice and eliminate feedback, we should separate each microphone from the output of the sound system. Only the microphone being used is in open mode. We can set up contraction mixed system, organize the microphone and speaker by using SOLON 20A, then the conversation would be mute and will not be amplified by the speaker. The powerful threshold function of SOLON 20A provides us with the first-class remix function, making the microphone only work when we use it.

The signal SOLON feedback to DA8100 amplifier, each channel can be used as an independent output area. The impedance of D61 ceiling speaker is eight ohms, every channels of the DA8100 amplifiers can drive 8 pairs of D61. It can also provide independent speaker amplification area for the tribunal, needing eight speakers in the aisle or gallery. We can select a previous setting and adjust volume in a differently matched systems by virtue of RC-TP4 and RC-VOL panels .



Product list

Equipment name	Model
a Digital Audio Processor	SOLON 20A
b Power Amplifier	DA8100
c Button type control panel	RC-TP4
d Knob type control panel	RC-VOL
e Embedded loudspeaker	D61
f Goosneck microphone	P112D

Solutions

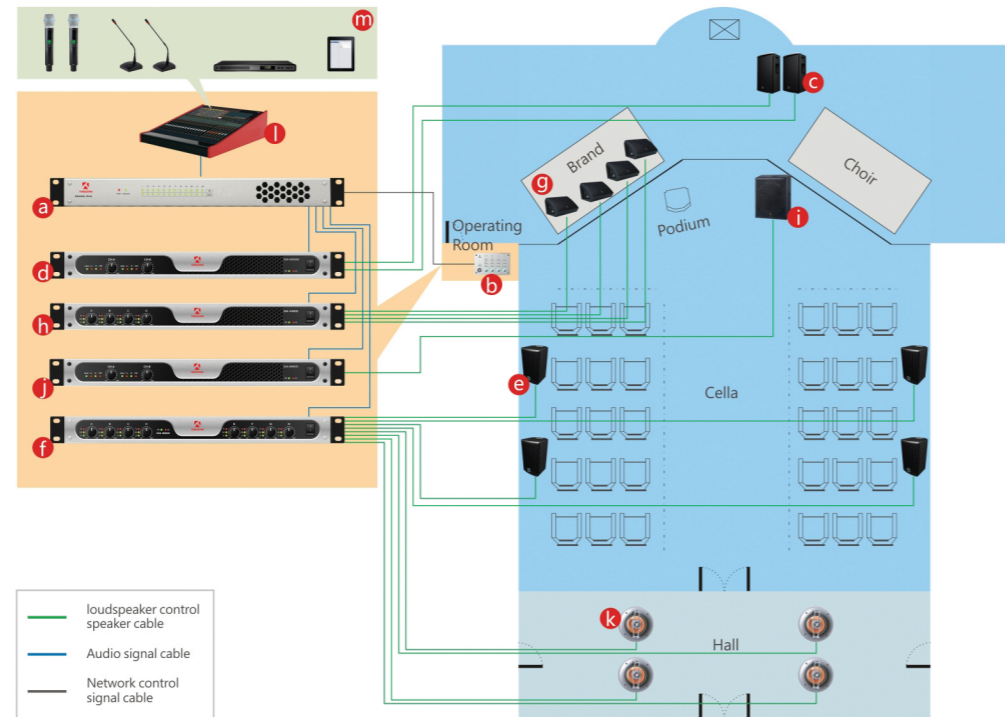
Solution for the churches

This case is applied medium church with in 500 to 750 seats. It can handle two or more different forms of worship and others such as wedding, ceremony, baptism etc. The traditional church may has smaller service be in evening. It needs to operate in site by the turner when the church held the ceremony such as choir or field instruments. The system can still use without the operator in

many other simple or attendance occasions. SOLON24A has 12 road input and output matrix, coupled with powerful signal processing and programmable set, making the application very perfect. 6 commonly used signal source can be connected to SOLON24A high quality microphone preamplifier, front table microphone or wireless microphone, the priest platform microphone, prior recorded music (tape recorder, CD player), etc. Another 4 way inputs are reversed for the digital mixer, and can control the different areas, other two ways control channels for return to the system.

House monitor is composed by two sets of MS - 15 / B. According to the shape of a room, we will use the directivity for 70 ° x 70 ° horn to meet the level directivity of 140. We installed a low frequency sound box MS – 18SUB in order to make the music has low frequency impact.

By DA10000 amplifiers drive main expansion. Made up of four channel DA4300 amplifiers drive MS - 6 / B wall speakers to cover two be block area. DA8100 by four channel drive 4 installed in the hall D61 ceiling speaker. For players, there are two road monitoring signal through the DA4300 drive four MS - 12 m foldback speakers. The final remix be feed-in recording equipment used to record the whole event. Another output is provided to infrared or wireless auxiliary listening transmitter, used for wireless headset.



Product list

Equipment name	Model
a Digital Audio Processor	SOLON 24A
b RC Control Panel	RC-MIX
c Main Expanding Voice Box	MS-15/B
d The main power amplifier amplification	DA10000
e Fill Loudspeaker	MS-6/B
f Fill Power Amplifier	DA8100
g Return Listening Speakers	MS-12M
h Return Listening Amplifier	DA4300
i Subwoofer	MS-18SUB
j Subwoofer Amplifier	DA2600
k Embedded Loudspeaker	D61
l Audio Mixer	DSMC
m Audio Source	Wireless speaker /gooseneck speaker/DVD ect.

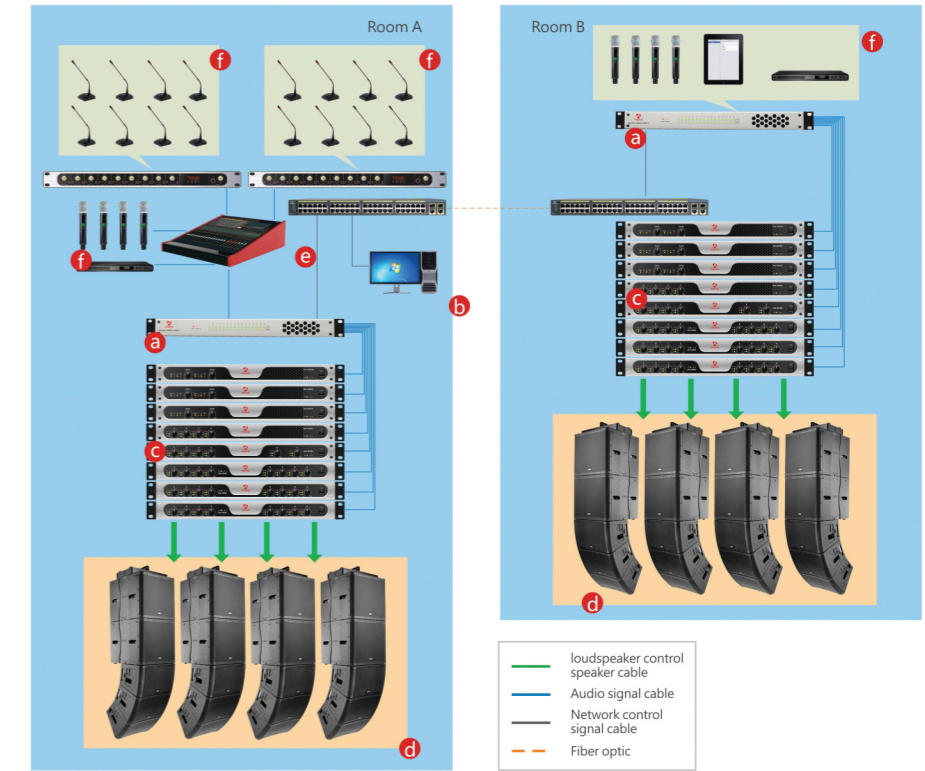
Solutions for a large stadium

Let's take an example of a large stadium with a seating capacity of 20,000 using the SOLON series solution package.

Simple Wiring : SOLON M1616 / COBRA uses a bare wire for 2 audio input ports and CobraNet (network audio protocol) two types of audio input mode, the input/output lines are simple and are easy to maintain.

Scene Preset: Since sports venues has many functions in different situations such as sports, entertainment deductive, collective congress, the requirements for the speaker is different. In the early period, sound engineers can preset many scenes. Then, stadium manager can switch mode only opening control software in different situations. It is quite convenient and precise for the mode switch.

Audio Data Transmission: stadium is normally have two equipment rooms namely ; room A and B and they are responsible for speaker amplification and signal processing on both sides. The distance between the two rooms is normally far and it will eliminate and cause the signal transmission line to be weak . At this time, by using the SOLON M1616 / COBRA network audio interface it can connect Room A and Room B audio system onto a centralized control unit and amplification processing by the CobraNet agreement.



Product list

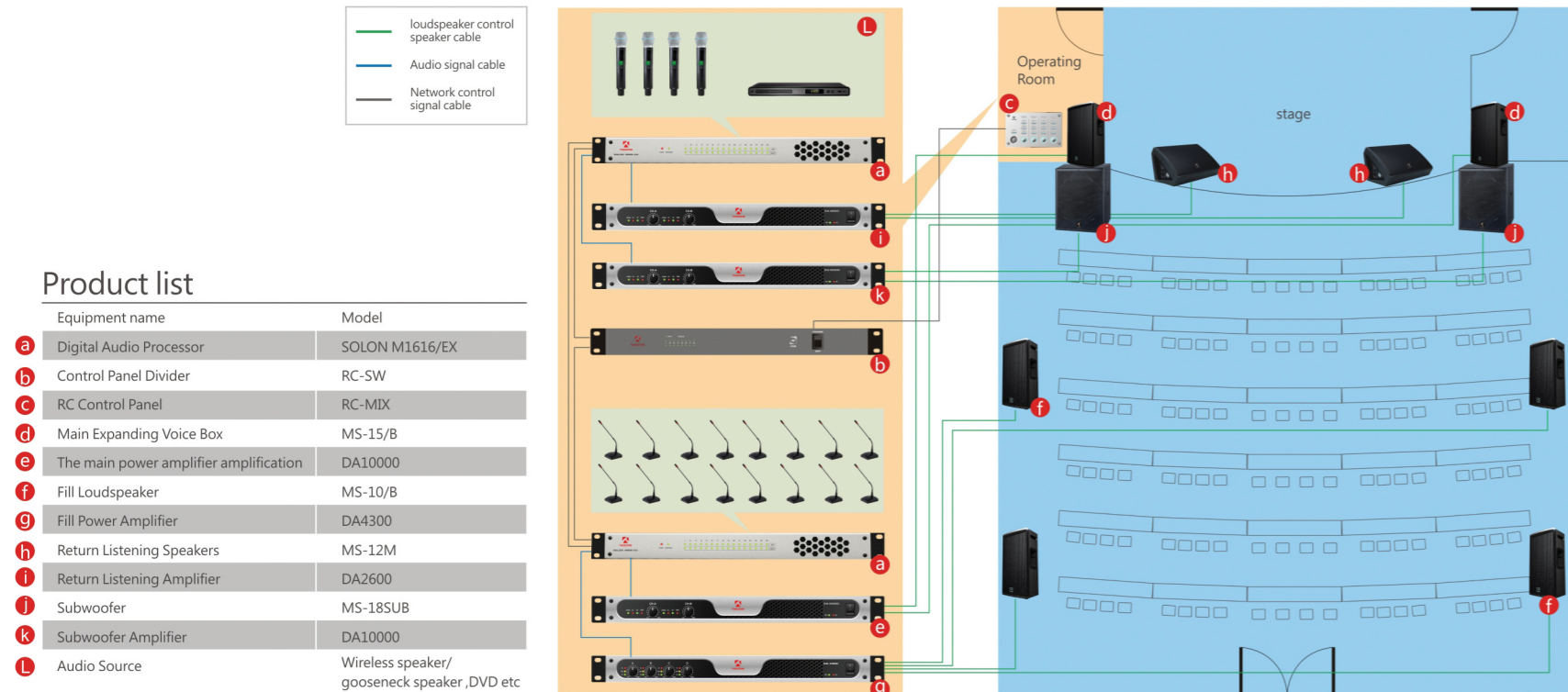
Equipment name	Model
a Digital Audio Processor	M1616/COBRA
b Control Computer	
c Amplifier Group	DA(by actual site)
d Line Array Loudspeaker	(by actual site)
e Audio Mixer	
f Audio Source	DVD/wireless speaker /gooseneck speaker ect.

Solutions

Solution for the multifunctional hall

With the development and progress of the society, multi-function halls in an organisation, government sectors are demanding a higher expectations from the general public .Multi function halls now needs to fulfill different functions such as meeting, reporting and performing.

System configuration: On the performance stage ,install two MS - 15 / B on both isde for main sound expansion, on the audience area , we can install four MS - 10 / B as complementary sound speaker so as to strengthen the effect of low frequency equipped with two MS - sub ultra-low frequency speakers for better performance of the atmosphere. It will sum up on the performing stage on surround speaker with two 12 inch coaxial speakers MS - 12 m. Center speaker and subwoofer speakers will be drive by the DA10000; Complementary sound speaker will be drive by a 4 channel DA4300; surround speakers will be drive by a DA2600 . Considering such a large multi-function hall, microphones and various sound sources, equipped with 2 units of our SOLON M1616 / EX with extended function audio processing, the processor of the channel can use up to 32 channels, with a view for a later addition of another audio system equipment in place , you can just simply add another EX series processor to realize further processor channel expansion. In order to facilitate the field control, installing a pusher type wall panel to achieve (meetings, reporting, performing) scene switching and volume controlling.



Solutions for the conference centers

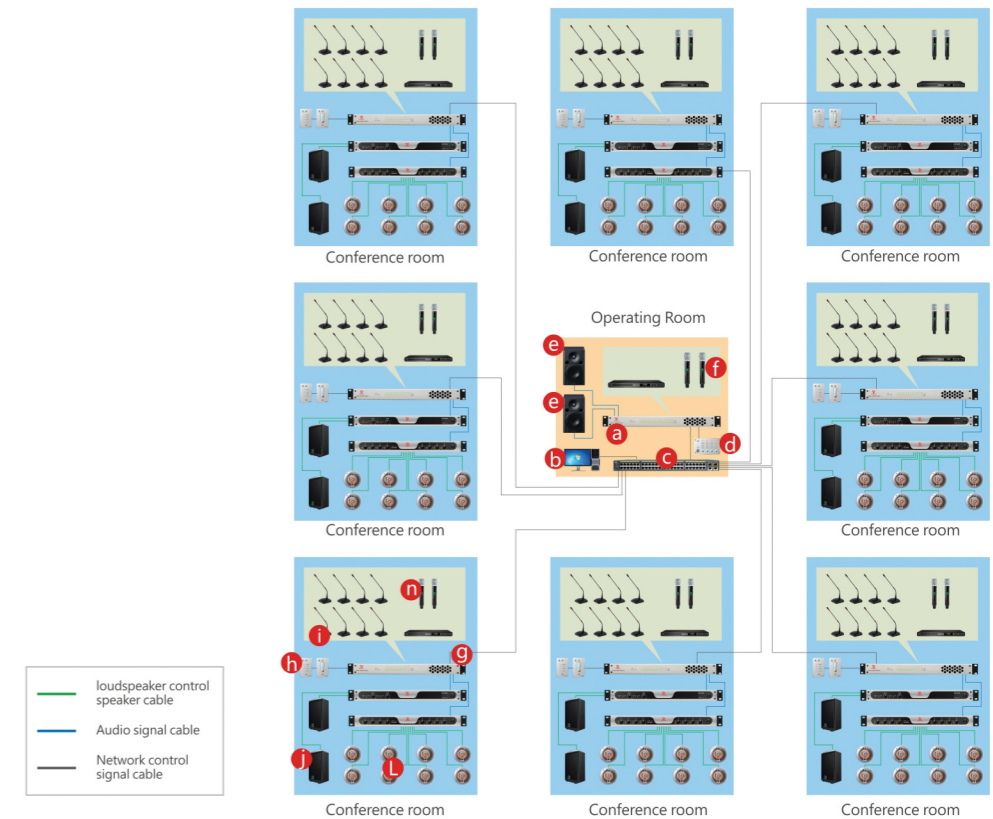
The conference center have 8 conference rooms/one central control room. Each room has a independent audio amplification system(Normally the conference room is used alone), it can achieve relatively independent meeting discussion/media player function etc, it also can achieve audio communication between all conference rooms. In the central control center, it can monitor all the eight conference rooms PA system's situations, and remotely controlling on each system. This is a typical multi-conferences system with central control and distributed processing.

In the configuration section, configure a media matrix pttrocessor with Cobranet interface on every meeting rooms and the central control rooms , Then in the main control room configure a controlling computer that builds a standard Ethernet and connect up with each of the meeting room with the master control room, That formed the main structure of the system.

You will then further configure a corresponding pickup system equipment, broadcast system equipment, amplification system equipment, speaker system equipment, sound recording system equipment and monitoring system thus completing the whole setting up of the system configuration.

Product list

Equipment name	Model
Control room	
a	Digital audio processor SOLON M1616/COBRA
b	Control computer
c	Network switch
d	Control wall panel RC-MIX
e	Active monitor speaker
f	Audio source DVD/wireless microphone and etc
Conference room (8)	
g	Digital audio processor SOLON M1208/COBRA
h	Control wall panel RC-TP4
i	Control wall panel RC-VOL
j	Main speaker MS-8/B
k	Main amplifier DA2250
L	Sub speaker D61
m	Sub amplifier DA8100
n	Audio source DVD/ wireless microphone and etc



Software Interface

The new SOLON series use TENDZONE's third generation audio processing technology, high- quality preamplifier circuit and DSP processing bus structure, build-in different types of DSP algorithm, it provide users with a more superior sound quality, and can now meet the diversifying kinds of different application specifications.

SOLON series can meet the requirements for small-medium sized conferences/remote video conferences/teleconferences/exhibition halls/public transportation centers/gymnasium/electronic classroom/churches/public address system and many other applications

SOLON series has uses a faster floating-point DSP chip to control the audio stream. In the software operating platform,SOLON series use a more intuitive operation interface, enabling users to complete the real-time adjustment of the processor. It's easy to operate for new users. SOLON control software has updated on its marshalling control, parameter copy/paste and associated control function and user-friendly control operation.



SOLON 8A, SOLON 16A
SOLON 20A, SOLON 24A, SOLON 32A



M440/COBRA, M880/COBRA
M1208/COBRA, M1616/COBRA (CobraNet)



M880/EX, M1616/EX



Built-in digital automatic mixing, intelligent microphones mixing management platform



SOLON M880/EX
SOLON M1616/EX
Built-in cascade mixing module



M440/COBRA, M880/COBRA
M1208/COBRA, M1616/COBRA
Built-in automatic mixing/AFC/AEC/Cobranet mixing function



SOLON M880/EX
SOLON M1616/EX
Built-in echo cancellation module, enable to solve the remote meeting echo problems with a simple operation



Embedded feedback cancellation module, can easily solve the hissing sound problem



Input interface



audio input

audio output

Output interface



audio input

audio output



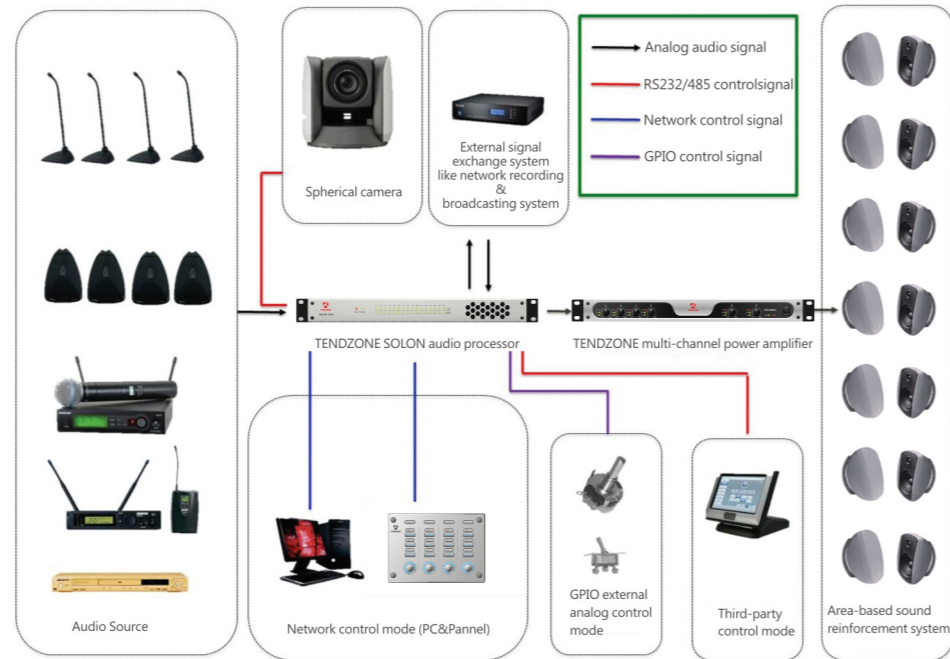
SOLON Series Audio Processor SOLON 8A, SOLON 16A, SOLON 20A, SOLON 24A, SOLON 32A

SOLON series use TENDZONE's third generation audio processing technology, high- quality preamplifier circuit and DSP processing bus structure, it provide users a more superior sound quality, SOLON Series can meet the requirements for theatre/remote video conference/stadium/churches/conference centers/theme parks and other PA systems. SOLON control software has updated on marshalling control, parameter copy/paste and associated control function and user-friendly control operation.

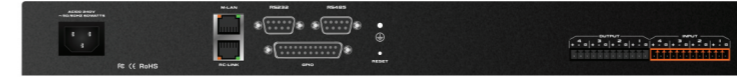


AFC AGC SP AM M-LAN

System Connection Diagram



SOLON 8A Rear Panel



SOLON 16A Rear Panel



SOLON 20A Rear Panel



SOLON 24A Rear Panel



SOLON 32A Rear Panel



Technical Parameters

Type	SOLON 8A	SOLON 16A	SOLON 20A	SOLON 24A	SOLON 32A
Framework	4×4 matrix/dual DSP	8×8 matrix/dual DSP	12×8 matrix/dual DSP	12×12 matrix/dual DSP	16×16 matrix/dual DSP
Sampling rate	48KHZ				
Input	Analog	1×Euroblock(12P, Mic/Line balanced)	2×Euroblock(12P, Mic/Line balanced)	3×Euroblock(12P, Mic/Line balanced)	4×Euroblock(12P, Mic/Line balanced)
Output	Analog	1×Euroblock(12P, Mic/Line balanced)	2×Euroblock(12P, Mic/Line balanced)	3×Euroblock(12P, Mic/Line balanced)	4×Euroblock(12P, Mic/Line balanced)
Control	8 x GPIO input				
	8 x GPIO output				
	Ethernet 100Base-TX				
	RS-232 RS-485				
Product feature	Basic function: •DSP audio processor; input : pre-amplifier/generator/expander/Compressor/5 band PEQ/mixer; • output : Speaker Processor(8 band PEQ/latency/crossover/high pass filter/low pass filter)/limiter;• DUCKER;• built-in SPL; • full-function matrix mixing; • M-LAN multi-function data transmission and control port; • built-in automatic voice tracking; • RS-232 bi-directional serial control interface used to control other external equipment such as video matrix and other RS-232 devices or receive the command from a third-party RS-232, such as AMX/Crestron and etc; • RS-485 camera control port;• GPIO programmable control port;• support SNMP/SMTP remote management; • support 8 groups of scene preset.				
Size/weight	483×44×258mm/2.9kg				

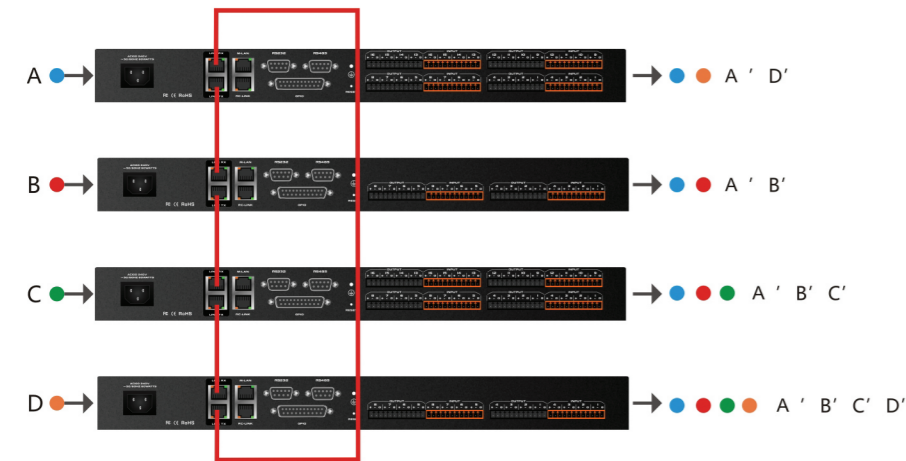
SOLON Series Audio Processor

SOLON M880/EX, SOLON M1616/EX



- AFC
- AGC
- SP
- AM
- DIGI-EXP
- M-LAN

System Connection Diagram



→ Analog digital signal — Mini T-LAN

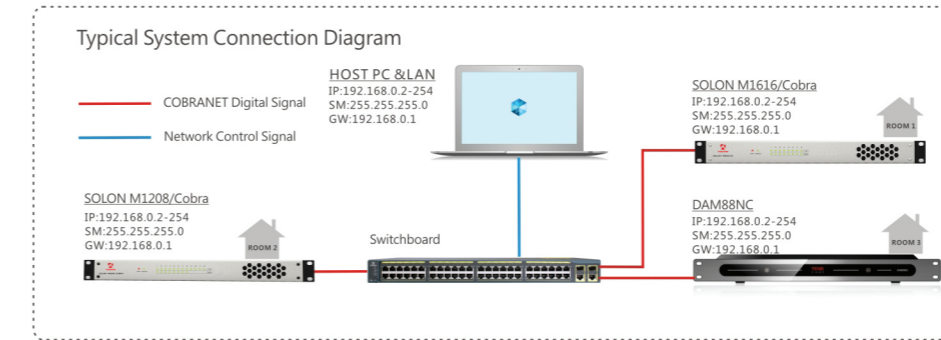
Mini T-LAN is the extended version of T-LAN private local extension agreement, Mini T-LAN is an extension protocol that can unidirectionally transmit audio and control signal via CAT5; point-to-point transmission distance is 5 meters; extra 16 channels Mini T-LAN private digital audio expansion bus: transmission delay is 3ms.

Technical Parameter

Type	SOLON M880 / EX	SOLON M1616 / EX
Sampling rate	4x4 matrix/dual DSP	8x8 matrix/dual DSP
Framework	48KHZ	48KHZ
Input	Analog: 1xEuroblock(12P, Mic/Line balanced)	2xEuroblock(12P, Mic/Line balanced)
Output	Analog: 1xEuroblock(12P, Mic/Line balanced)	2xEuroblock(12P, Mic/Line balanced)
Control	8 x GPIO input	
	8 x GPIO output	
	Ethernet 100Base-TX	
	RS-232	
Product feature	RS-485	
	Basic function: •DSP audio processor; input: pre-amplifier/generator/expander/Compressor/5 band PEQ/mixer; • output: Speaker Processor(8 band PEQ/latency/crossover/high pass filter/low pass filter)/limiter;• AFC; • AEC; • full function matrix mixing;• build-in digital automatic mixing;• M-LAN multi-function data transmission and control port;• built-in automatic voice tracking;• RS-232 bi-directional serial control interface used to control other external equipment such as video matrix and other RS-232 devices or receive the command from a third-party RS-232, such as AMX/Crestron and etc;• RS-485 camera control port;• GPIO programmable control port;• support SNMP/SMTP remote control; • support 8 groups of scene preset.	
	Size/weight	
	483x44x258mm/2.9kg	

SOLON Series Digital Signal Processing

SOLON M440/COBRA, SOLON M880/COBRA
SOLON M1208/COBRA, SOLON M1616/COBRA



Technical Parameter

Type	SOLON M440 / COBRA	SOLON M880 / COBRA	SOLON M1208 / COBRA	SOLON M1616 / COBRA
Sampling rate	4x4 matrix/dual DSP	8x8 matrix/dual DSP	12x8 matrix/dual DSP	12x8 matrix/dual DSP
Framework	48KHZ	48KHZ	48KHZ	48KHZ
Input	Analog: 1xEuroblock(12P, Mic/Line balanced)	2xEuroblock(12P, Mic/Line balanced)	3xEuroblock(12P, Mic/Line balanced)	3xEuroblock(12P, Mic/Line balanced)
	Digital: Rj45 for solon/cobranet(8ch)	Rj45 for solon/cobranet(8ch)	Rj45 for solon/cobranet(8ch)	Rj45 for solon/cobranet(8ch)
Output	Analog: 1xEuroblock(12P, Mic/Line balanced)	2xEuroblock(12P, Mic/Line balanced)	2xEuroblock(12P, Mic/Line balanced)	2xEuroblock(12P, Mic/Line balanced)
	Digital: Rj45 for solon/cobranet(8ch)	Rj45 for solon/cobranet(8ch)	Rj45 for solon/cobranet(8ch)	Rj45 for solon/cobranet(8ch)
Control	8 x GPIO input			
	8 x GPIO output			
	Ethernet 100Base-TX			
	RS-232			
Product feature	RS-485			
	Basic function: •DSP audio processor; input: pre-amplifier/generator/expander/Compressor/5 band PEQ/mixer; • output: Speaker Processor(8 band PEQ/latency/crossover/high pass filter/low pass filter)/limiter;• AFC; • AEC; • full function matrix mixing;• build-in digital automatic mixing;• M-LAN multi-function data transmission and control port;• support Cobrate network transmission protocol; • built-in automatic voice tracking;• RS-232 bi-directional serial control interface used to control other external equipment such as video matrix and other RS-232 devices or receive the command from a third-party RS-232, such as AMX/Crestron and etc;• RS-485 camera control port;• O programmable control port;• support SNMP/SMTP remote control; • support 8 groups of scene preset.			
Size/weight	483x44x258mm/2.9kg			

DA Multi-Channel Digital Amplifier DA2250, DA2600, DA4300, DA6250, DA8100, DA10000

The DA system amplifier is a high-performance amplifier designed with most advanced and efficient power switching (SMPS) and TD power amplifier circuit (CLASS TD). It uses a highly efficient amplifier circuit to provide very high output within a limited 1U space. The TD amplifier operates at close to the efficiency of CLASS D power amplifiers and represents the industry's best combination of performance and sound quality. DA uses high-quality porous heat sinks with a patented design to ensure fast heat radiating. The DA switching power supply uses intelligent adjustable control technology (R SMPS) with stable and efficient performance to ensure stable output under a variety of AC voltage fluctuations (190V-250V). The switching power supply transformers use imported Teflon coated high temperature wires to ensure inside components can work efficiently under all conditions. DA has eight optional sensitivity and compression modes. TD features light weight, small size, and outstanding sound quality ensuring that it will be a favorite in a variety of night fixed installation and live sound situations. The sound quality of the TD amps is similar to warm Class AB amplifiers used in professional HIFI and they represent the perfect combination of tone and power.



Full range of protection: short circuit, overheat, overload, over-current, output DC, soft start, current fuse protection and transformer overheat protection.

Intelligent Constant Power Technology

When the load connected to the amplifier is less than rated, the output power will be automatically controlled; the power will be kept constant within a safety range, greatly improving the stability of the amplifier.

Resonant Soft-Switching Technology

Specially design for professional high-end amplifiers, also known as the zero crossing turn-on/turn-off technology, minimizes start-up current draw.

High Density Heat Sinking Technology

A unique smart thermal regulation circuit, coupled with an aviation industry high-density aluminum radiator helps regulate the unit's operating temperature and ensure high stability.

Convection Cooling Technology

Amplifier modules use a tunnel type architecture, greatly improving cooling efficiency and stability.

Humanized Aesthetic Design

The unique 3D front panel design, provides a strong visual impression.

The use of a large power bridge rectifier, together with a high-density aluminum grid radiator, ensures optimal performance under large dynamic range and large SPL demands and improves the load capacity and stability of the amps.

The amplifier circuit is optimized and improved from a traditional HIFI-class TD circuit. The sound quality is natural, transparent, smooth with excellent extension in the mid/high frequency range.

Precision, low noise resistors and capacitors ensure high performance and zero drift of the circuit.



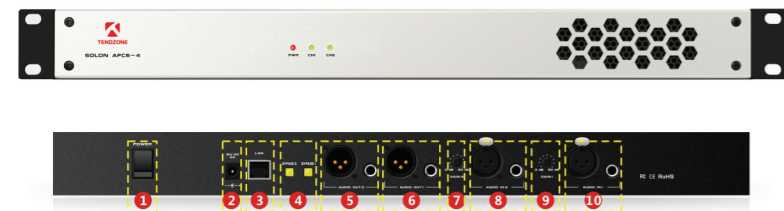
Technical Parameters

Model	DA2250	DA2600	DA4300	DA6250	DA8100	DA10000
Number of channels	2	2	4	6	8	2
8Ω Load	250W X 2	600W X 2	300W X 4	250W X 6	100W X 8	1000W X 2
4Ω Load	350W X 2	900W X 2	450W X 4	375W X 6	150W X 8	1500W X 2
Frequency response	20Hz~20KHz+0/-0.5dB					
THD+N	<0.05%@8Ω 1KHz					
S/N Ratio	>105dB					
Conversion Rate	40V/μs					
Damping Factor	>600@8Ω					
Channel Isolation	>1000dB@8Ω 1KHz					
Input impedance	20KΩ(balance)/10kΩ(unbalance)					
Input sensitivity	1.0V					
Protection Function	DC, short circuit, over heat, softstart					
Control Function	Front Panel: power Switch/CH volume Rear Panel: mode/low pass/grounding					
Height	1U					
Volume	0.012m3					

Dual-Channel Feedback Canceller

AFC6-4

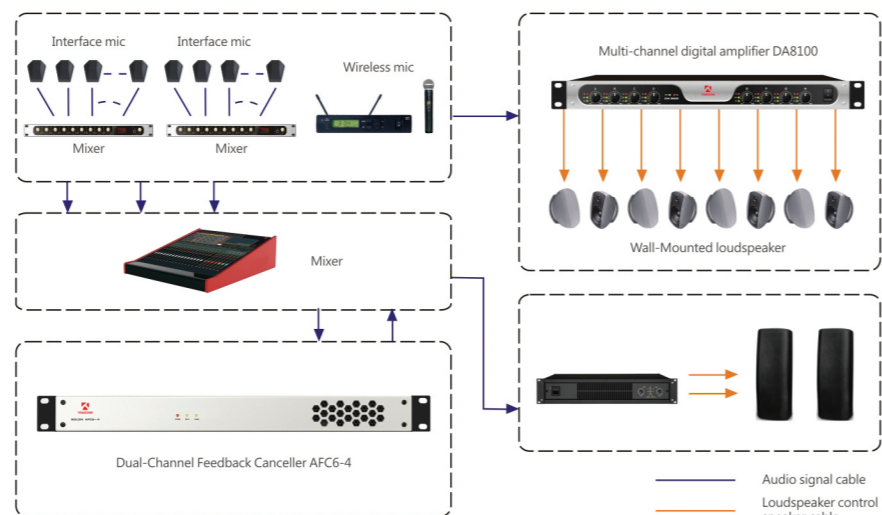
AFC6 is an industry-leading, third-generation digital feedback cancellation product designed specifically to serve high-quality sound reinforcement systems. The AFC6 guarantees high-quality audio signal playback. Waveform comparison technology originally designed for military field applications and adaptive processing are used to effectively and dynamically filter out the acoustic feedback of a live sound reinforcement system. AFC6 is a sophisticated DSP computer with high-speed real-time audio signal processing. Regardless of changes in location, temperature, humidity, and room acoustics, the system installation is, accurate, reliable and simple to use.



1. Power switch
2. Power
3. Audio Out2: Output channel 2, with a 3.5 mm/6.5 mm plug
4. Audio Out1: Output channel 1, with a 3.5 mm/6.5 mm plug
5. Audio In : & 2: Input channels with either XLR or 6.5 mm plug. Only one plug may be connected at one time.
6. SelectionI input mode selection of Channel 1 and Channel 2, Mic/Line input.
7. Output Gain: Gain control of the output channels, the total gain value is the sum of corresponding values for each DIP switch
8. LAN: Network connection for program upgrading

Technical Parameters

Digital signal processing	Howling suppression(adaptive)
Transmission gain	10dB
Background noise	14 dB
Feedback suppression	10 dB
Gain control	-12 dB~+36 dB,+/-6 dB
Working frequency band	20Hz~20KHz
Frequency response	50Hz~20KHz
Total harmonic distortion	THD typical <96dB (0.002%) @ 1KHZ, +12 dBu output
Storage temperature	-30°C~70°C
Humidity	Max. 90%, non-condensing
Surface decoration	Metal front panel; plating coating steel enclosure
Display	LED display
Package Dimensions(mm)	545 x 365 x 145
Weight	1.9Kg
Power voltage	220V AC,50-60Hz
Power consumption	<10W
Parts warranty	5 years



RC Control Interfaced

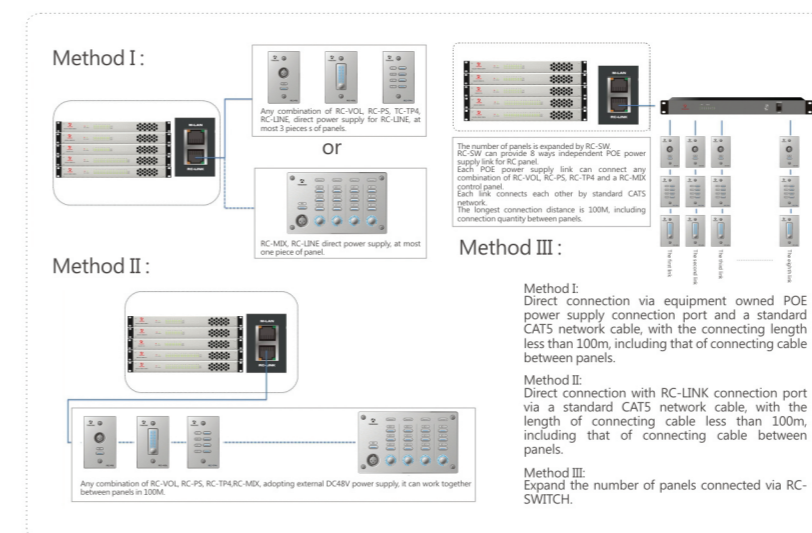
RC-TP4 / RC-VOL / RC-PS / RC-MIX

TENDZONE has always been dedicated in providing users with a simple and yet convenient solutions. External control panels are an important part of a user friendly external control system. The introduction of RC wall control panels will continue to enhance its functionality and user flexibility of TENDZONE Audio Matrix systems.

By using standard TCP/IP network communication control protocol, you can easily form a large networked control system. Our external control panels also support POE (Power over Ethernet) power supplies, requiring only a standard Cat5 network cable for the connection with the panel. Users can combine multiple panels in any manner to get an external control system with more functions. For additional panel flexibility, our software allows users to customize control key functions on the panels and even define multiple purposes for each key.



Connection graphic



Technical Specifications

Model	RC-TP4	RC-VOL	RC-PS	RC-MIX
Type	Key Type Control Panel	Knob Type Control Panel	Call Type Control Panel	Pusher Type Control Panel

Graphical Presentation	RC-TP4	RC-VOL	RC-PS	RC-MIX
Programmable LED	4(Bicolors)	1 (strip-type LED)	1(monochrome)	12 Bicolors LED & 4group strip-type LED
Programmable Decoder		1	-	4
Programmable Key	4	1	1	12
Communication interface number	-	2	-	2
MIC Interface	-	-	1	-
Control Protocol	Standard TCP/IP			
Address Set Way	TCP/IP			
Interface Type	Standard CAT5 Network Interface			
Color	Grey, Black			
Material	White Metal Blast Cleaning			
Dimension	70 x 114mm	70 x 114mm	70 x 114mm	202 x 114mm
Hole Dimension	60 x 110mm	60 x 110mm	60 x 110mm	186 x 97mm
Power Supply Mode	POE(IEEE 802.3AF-2003) or external DC 48V power supply			

Speaker Series

Wall-mounted Speaker SMS6



Main Features

- 2-way ceiling type speaker
- Color of the housing and cover match the environment perfectly.
- Use sophisticated components and high-quality partial design
- The speaker panel with high, bass plus and minus 3 db regulation
- Use high quality trimmings material to enhance the low frequency effect
- Delicate brimless design of ceiling speaker can be along with all sorts of decoration style.

Technical Parameters

Product Model	D61
Type	2 ways
HF Unit	25 mm(1 Inch)
LF Unit	165 mm (6.5 Inch)
Impedance	8Ω
Power	40 Watt
Peak Power	200 Watt
Frequency Response	56 Hz~20 kHz
Sensitivity	>90 dB
Dimensions	250 x 79.2mm (Diameter x Depth)
Hole size	Diameter 220mm
Net Weight(kg)	1.25 kg each

Same as the Embedded full-frequency speakers(40W/8Ω, LF:6.5", HF:1", Sensitivity:>90dB, Treble +/-3dB adjust)

Multi-function Sub-woofer loudspeaker



MS-18Sub

MS-218Sub

Technical Parameters

Product Model	D61	D61
Bass	18inch	2x18 inch
Impedance	8Ohm	4 Ohm
Rated Power	900Watt	1600 Watt
Peak Power	1800Watt	3200 Watt
Frequency Response	50 Hz~150KHz(±3dB)	50 Hz~150KHz(±3dB)
Sensitivity	98dB	99dB
Outer Dimensions	523 x 700 x 695mm	1031 x 700 x 695mm
Net Weight (kg)	45KG	90KG
Maximum Sound Pressure Level(SPL)	130dB	133dB
Connection Method	2 x NL4R Speakon	2 x NL4R Speakon
Amplifier Use	1000W/8Ω~1500W/8Ω	1200W/8Ω~1500W/8Ω

Coaxial Return-to-listen Loudspeakers

MS-12M and MS-15M are multi-functional coaxial monitor loudspeaker and utilize superior neodymium magnetic coaxial drivers. They feature efficient power output in an extremely compact package. They are excellent for use in live performance, sound reinforcement for meetings and exhibitions, or as the main acoustic amplification system for a stage monitor system. With the MS-18sub, they are able to present flat and accurate frequency response in the full frequency range.



MS-12M



MS-15M

Product Model	MS-12M	MS-15M
Treble	1xThroat 1.75xVoice coil	1x3
Bass	10 inch	1x15 inch
Impedance	8 Ω	8 Ω
Rated Power	250Watt	450Watt
Peak Power	500Watt	900Watt
Frequency Response	55Hz~19KHz(±3dB)	50Hz~18KHz(±3dB)
Sensitivity	94dB	99dB
Outer Dimensions	445x345x249mm	545x400x388mm
Net Weight(kg)	13kg	20.5kg
Maximum Sound Pressure Level(SPL)	122dB	132dB
Nominal Coverage	90°(±20°)	90°(±20°)
Connection Method	2xNL4R Speakon	2xNL4R Speakon
Amplifier Use	300W/8Ω~500W/8Ω	500W/8Ω~800W/8Ω

Speaker Series

MS Multi-Functional Loudspeaker

MS-6 and MS-8 are Compact near field multi-function loudspeaker with the body made of sturdy multi-layer plates. It is suitable for small spaces requiring high sound pressure due to small size, high output sound pressure, stable performance. They also can be used as the main loudspeaker in small and medium-sized systems or sound compensation loudspeaker and pull-down audio and video speaker systems in theaters or other large places. They are the ideal options for sound compensation and pull-down audio and video speaker systems in high-end conference rooms, theaters and other large spaces.



MS-6/B



MS-8/B

Technical Parameters

Product Model	MS-6/B	MS-8/B
Treble	1xThroat 1xVoice coil	1xThroat 1xVoice coil
Bass	6.5 inch	8 inch
Impedance	8Ω	8 Ω
Rated Power	120Watt	150Watt
Peak Power	240Watt	300Watt
Frequency Response	75Hz~20KHz(±3dB)	90Hz~20KHz(±3dB)
Sensitivity	98dB	98dB
Angle of Flare	90°x60°	90°x60°
Connection Method	NL4R Speakon	NL4R Speakon

MS Multi-Functional Loudspeaker

MS-10, MS-12 and MS-15 are near-field"two way directly radiating"constant directional horn loudspeakers. They use a proprietary "CMD" matching design technique(Coverage Matching Design) to ensure smooth transition of the coverage characteristics of the high-frequency horn and the directional property of low frequency drive unit.



MS-10/B



MS-12/B



MS-15/B

Technical Parameters

Product Model	MS-10/B	MS-12/B	MS-15/B
Treble	1xThroat 1.75xVoice coil	1xThroat 1.75xVoice coil	1xThroat 2xVoice coil
Bass	10 inch	12 inch	15 inch
Impedance	8Ω	8Ω	8Ω
Rated Power	250Watt	350Watt	450Watt
Peak Power	500Watt	700Watt	900Watt
Frequency Response	53Hz~20KHz(±3dB)	60Hz~20KHz(±3dB)	45Hz~20KHz(±3dB)
Sensitivity	97dB	99dB	99dB
Angle of Flare	60°x60°	60°x60°	70°x70°
Connection Method	2xNL4R Speakon	2xNL4R Speakon	2xNL4R Speakon

ALL PRODUCTS

TENDZONE has got a rich R&D team that have designing experiences in the audio and video industry. Our products includes MIDIS Multi-media information Distributive & Interactive System, small to large scale digital audio processors/AFC adaptive feedback canceller/AVC adaptive echo canceller/AM all-digital mixers/DA multi-channel digital amplifier and all related DSP based digital audio solutions.

NDZONE have differentiate the products into four big series and a Big System : the Distance Conferencing Series - TYCHO Series/The Commercial Distribution Series - TIMON Series/The Digital Signal Processing Series - SOLON Series/The Professional Audio Series – Sophus Series and finally The MIDIS - Multimedia Information Distributive & Interactive System.

TYCHO Series



MIDIS-Multimedia Information Distributive & Interactive System



TIMON Series



DA Series



SOLON Series



Mixer, AFC, AVC



RC Control Panel



SOPHUS Series



Speaker manager



Digital Live Mixing Console

MIC & Speakers Series

