PAGA-G3

KNTECH

— Cable CAT5

PAGA SYSTEM

A+B Redundancy system

PAGA SYSTEM

KVM

Voice Recorder
KNREC-SV8

IP PBX(Occ)
KNTD-50

IP PBX(Bcc)
KNTD-50

Network Switch
KNPB-24

Control Center

IP Network

**Acoustic Hoods
KNEX8+RF-13**
ATEX

**Explosion proof telephone
KNEX8**
ATEX

**Explosion proof telephone
KNZD-41**

A+B Redundancy system
Or N+1 Standby system

Loud speaker 30W*6
ATEX

IPGF350(2Pcs)

IP Amplifier Redundancy

Loud speaker 30W*6
ATEX

A+B Redundancy system
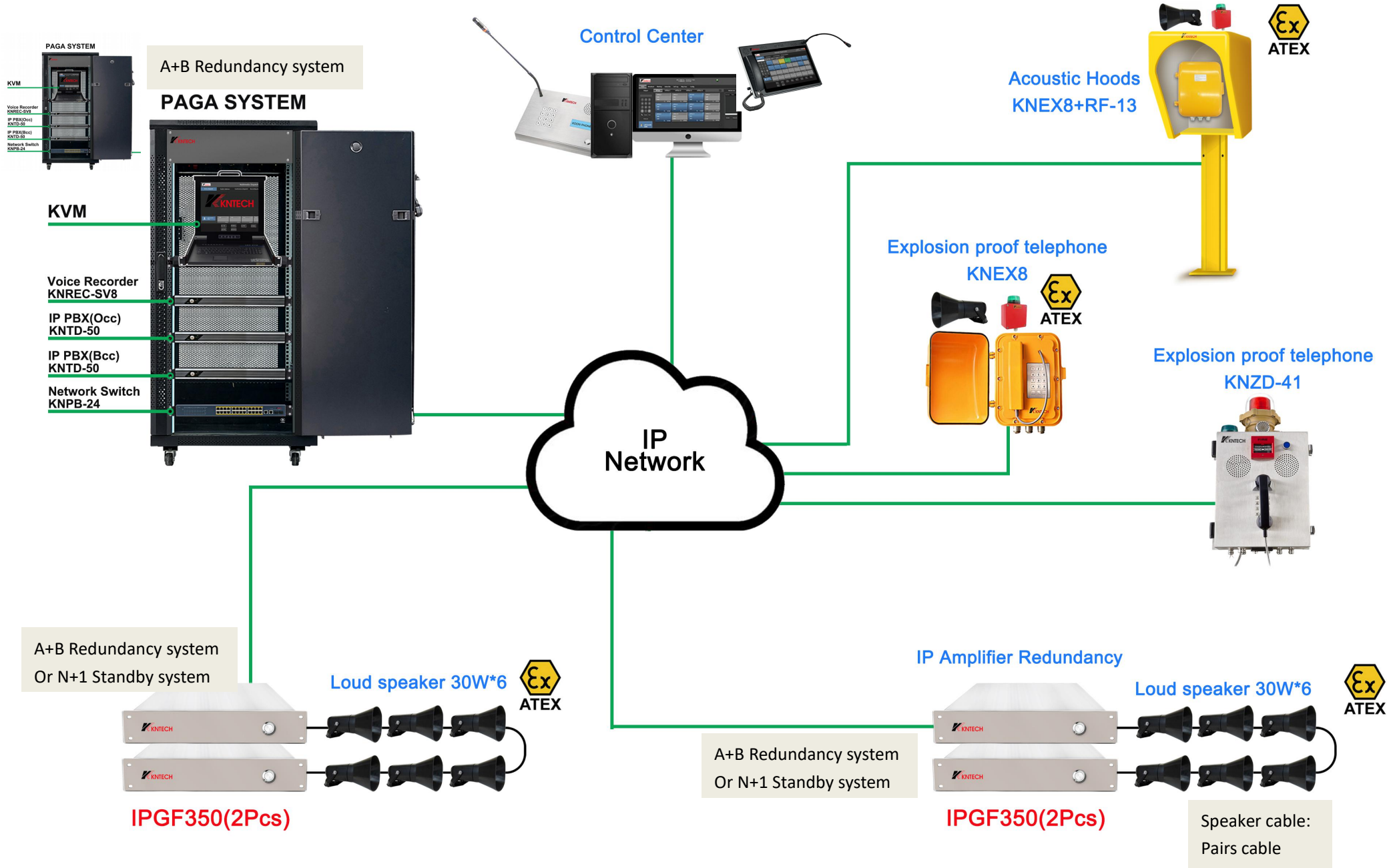Or N+1 Standby system

IPGF350(2Pcs)

Speaker cable:
Pairs cable

1、PAGA-G3 System Description

KNTECH PAGA-G3 system is based on the network transmission SIP2.0 technology, KNTECH second-generation PAGA-G3 integrates IPPBX communication, paging, broadcasting, self-test, alarm, log, recording, and recording file management functions. The function of the system is that all components have a self-diagnostic function, real-time monitoring of the health status of the entire system, real-time grasp of the health status of various parts of the phone terminal such as the handset keys, and real-time monitoring of the health status of the speakers in each area. Great savings in maintenance costs. The second-generation PAGA adds a more intelligent IP broadcast capability. IP amplifiers in each region can configure web pages and update broadcast files. Manual broadcasting, timed broadcasting, external PLC system can trigger various intelligent broadcasting through private protocol, MODELBUS or I / O hard control. It can be configured to perform group broadcast and sub-area broadcast on the IP amplifier through remote online configuration on the webpage, and the operation is convenient.

This system has flexible multi-level Authority management, and users can configure the use Authority of users at all levels according to the needs of the project. Privileges include dialing outside and outside calls, forcible dismantling, forced insertion, call queue, agent call transfer, partition group broadcast, log viewing, recording site selection and download of recording files, etc.

The system is safe and reliable. The PAGA-G3 host IP PBX is a redundant backup system. The OCC host and the BCC backup device actually synchronize all call and recording records. Real-time heartbeat detection and automatic docking of each terminal and IP power amplifier with IP PBX system. The IP amplifier is also redundant. Even in the case of network disconnection, the local PTT handheld microphone of the IP amplifier can be used to perform artificial broadcasting and speaking in this area.

2、PAGA-G3 system's composition

PAGA-G3 includes three parts:
(1) The PAGA host, including the main controller IP PBX KNTD-50 work as OCC. IP PBX KNTD-50 BCC work as standby main controller. Audio recorder KNREC-SV8 to record all the Audio broadcast and call records. (Extra PC or KVM for configuration provide by user.)
(2) PAGA operating station, Control center, KNDDT-A17 with touch screen for operator console and configuration.
(3) Zone Terminal equipment, including IP amplifier and speakers, sound and light alarm device, emergency waterproof /explosion-proof telephone and so on.
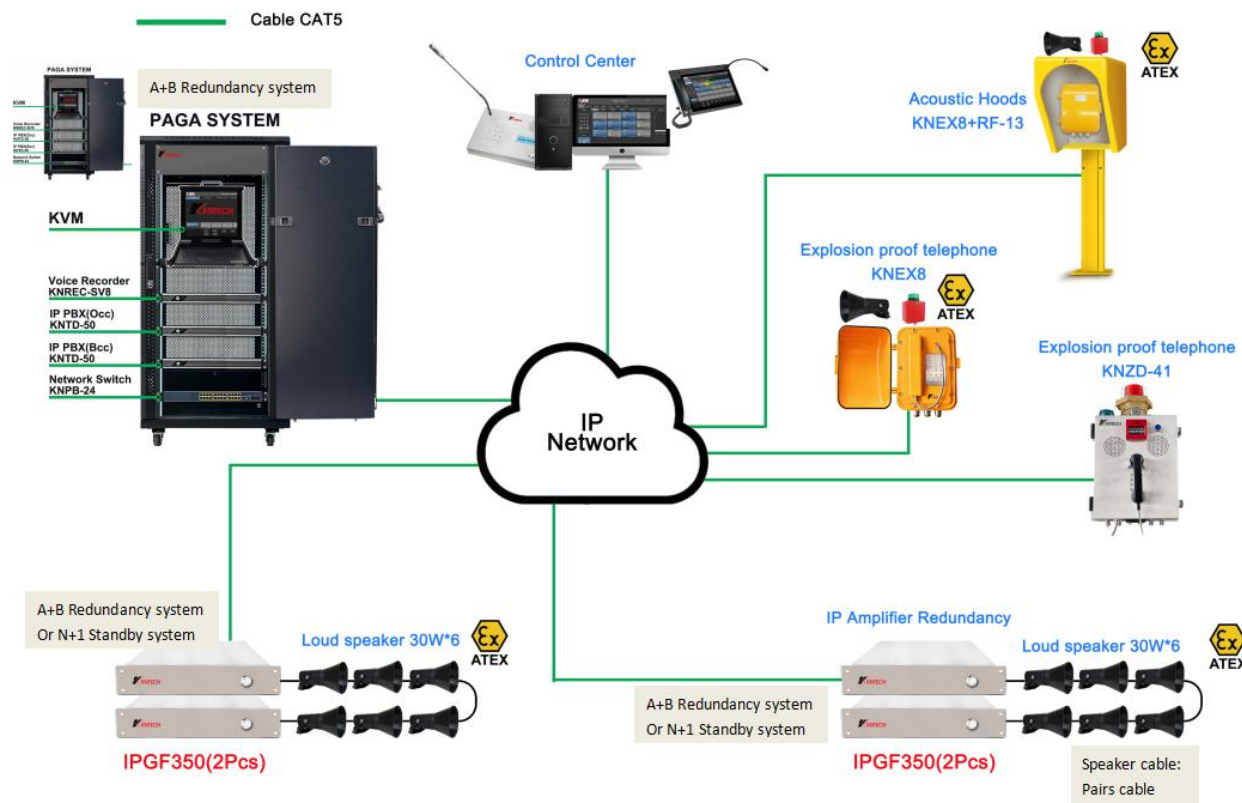
3. The function of PAGA-G3 system

(1) Public Address, also namely the function of PA

The main functions are Public Address and voice broadcast. It is the highest use frequency on function of this system. Staff through control center or any telephone station and IP amplifier input port, and the voice information will be broadcast through a speaker to achieves the public address. The system make the people who are usually from place to place can hear the broadcast in daily operation. Broadcasting system can also have the function of distinguish different region.

(2) General Alarm function, also namely the function of the GA

This function is mainly for playing regular alarm messages. When an emergency occurs in the area, the employee can trigger the corresponding alarm device linkage system to broadcast an alarm to enable the employee to perform related emergency operations. The PAGA system IP PBX server stores more than 30 kinds of alarm audio. At the same time, it provides multiple interfaces for other systems for alarm activation / alarm termination. At the same time, different alarm activations (eg fire alarm, gas alarm, abandon alarm) and alarm end function can be programmed for the buttons of each control station. The GA function of the system is as follows:

--Alarm sound can be started / stopped from the central control center dispatching console or each I / O interface

--Editable alarm tone stored in Control unit server

--Each sub-control station can alarm the local area through the IP sound amplifier I / O of this station.

![KNTECH logo]

(3) Central Unit of PA/GA and Intercom System

This Central unit of PA/GA and Intercom system Including emergency call, emergency intercom, if equipped with video phone can realize video intercom and dispatching functions. In daily work, if you need to communicate with other staff members or encounter an emergency, you can use emergency conversations, including one-click triggering full calls to all sites, one-to-one single calls, partition or group call functions. Control center personnel can forcibly remove calls from extensions and forcibly insert calls between extensions when the permission is enabled. The system has universal IP PBX functions including: call queue, agent transfer, call transfer transfer, call record query, monitoring, Recording, etc.

Product information --- System features
- Model KNTD-50/--KNTD5000 main unit for 19", 1U mount
- With 50 up to 5000 ports of IP station or IP amplifier speakers been controlled.
- More models available up to 5000 ports of station or speakers been controlled.
- browser programmed for input and output, system diagnosis, password control.
- Built-in paging for talkback PABX function.
- Available for A/B redundant backup system, with alarm synchronization.
- With Manual/ or automatic alarms.
- Entertainment broadcast with free zone selection.
- Connecting with IP amplifier by standard network through RJ45.
- Unlimited amplifier and speaker expansion.
- Output for activating external GA system.
- Synchronization with external GA tones.
- Unlimited alarms in this system.
- light signal column activation.
- built in audio output for peripheral device.
- Mutable external alarm facility.
- Powered by 110V/220V AC
- Overload, fault indication and amplifier monitoring and trouble alarm.
- The Central Unit have facilities to test the whole system and continuously provide status information to Operator Console(s).

Kind of Signal in/out/Mute/alarm
Unlimited signal input/output
1. Abandon muster: Automatically operated
2. GA: Hand & Auto
3. Fire Alarm: 1300Hz, 110Hz, 0.25 sec. Interval/Sustained.
4. Machinery alarm (Optional)
5. Personal alarm(Optional).
6. Cargo alarm (Optional)
7. Gas Det. Alarm (Optional)
8. General Alarm or General Alarm test
9. Fire Alarm or Fire Alarm test
10. Any other kind of alarm which you need just inform

Software GUI

A/B System Redundant Backup
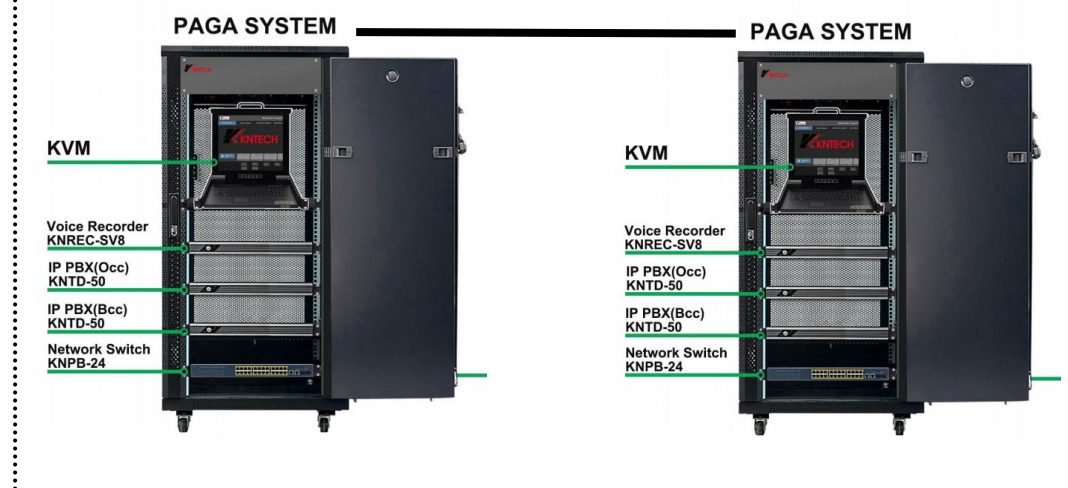
(4) Remote IP Amplifier

This Remote VoIP amplifier units is IP-based power amplifier. The units is connected to the central exchange unit via Ethernet. Copper CAT5 or CAT6 or fiber cable. The amplifier is a Class D power amplifier due to its especially high efficiency, low power consumption and long life. The remote IP-based power amplifier is integrated speaker monitoring. Speaker circuits are to be continuously monitored for short circuit, earth leakage, and line interruption. Speakers is allowed navigation through the intuitive user interface. The user is be able to define settings and make changes using the integrated web interface.

Advanced Features:
- VoIP SIP 2.0
- IP amplifier Self-diagnosis.
- Line Monitoring between amplifier and intercom server and speakers
- Display and function keys at the front of the unit
- Up to 4 simultaneous and independent audio channels per unit
- Up to 8 integrated, selectively addressable speaker circuits
- Integrated speaker line monitoring
- Integrated web interface
- Intelligent N+1 backup control
- Freely programmable
- Integrated monitoring functions (short circuit, excess temperature, voltage failure, function monitoring)
- Distortion factor < 0.5% at rated power
- Optimized according to the EN 60849 standard "Sound systems for emergency purposes" Upon special requirement.

ON/OFF

RJ45 connector

2 LS Pairs cable

2 LS Pairs cable

Model	IPMG-80	IPMG-130	IPMG-260	IPMG-260	IPMG-260	IPMG-260
Rated Power output	80W	130W	260W	360W	460W	640W
Network Interface	RJ45					
Operating voltage	100 to 276 VAC					
Transmission Speed	100Mbps					
Communication Protocol	TCP/IP, UDP, IGMP					
Speaker out puts	70V,100V & 4-16 Ω					
Sampling Rate	8K~48KHz					
Bit Rate	8K-512Kbps					
EMC Input Sensitivity	775mV (Unbalance)					
AUX Input Sensitivity	350mV (Unbalance)					
MIC Input Sensitivity	5mV (Unbalance)					
Treble	±10.5dB					
Bass	±10.5dB					
S/N Ratio	≥90dB					
THD	≤1%					
Speaker Output	70V, 100V & 4-16ohm					
Protection	Short, over-heat, overload, etc					
Working Temp.	5℃~40℃					
Standby Power	<3W					
Cooling	Fan automatically start up when temp reaches 55℃					
Humidity	20%~80%					
Frequency Response	60HZ-18KHZ +1/-3dB					
Power Supply	~110V/60Hz or ~230V/50Hz					
Dimension	484 x 359 x 132mm mount in 19" Rack 3U type or On-site					
Weight	17kg, Enclosure Rugged body in Stainless steel 304					

RJ45 connector

(5)   T-Speaker with self-diagnosis

Each zone with IP amplifier directly connect the speakers. All speaker circuit/amplifier fault or operating status data can be monitored and displayed by the PAGA-G3 system manager over network. Each speaker have independent address code. Day and night self-diagnosis and real-time fault reporting functions.

	SIP SPEAKER	T-Speaker Speaker with self-test function	Ordinary speaker
Cable	CAT 6	Pairs Cable	Pairs Cable
Transmission distance	100 Metter	More than 7 km	More than 7 km
Self-check method	24-hour heartbeat self-diagnosis is online, uploaded to the control center through SIP protocol, GUI display interface shows the health status of all speakers	24-hour heartbeat diagnosis, uploaded to the control center through pair cable, GUI display interface displays the health status of all speakers	× don't have this function
Self-check Unit: each specific horn	Each speaker has a separate IP address (192.168.0.0) Note: Each power amplifier has an audio pass-through output. This pass-through can be divided into 1-6 areas to control the volume and switch respectively. Each area can be connected to one or more speakers. Each speaker has a built-in detection module	Each speaker has an independent ID number. (eg: 001) Note: Each power amplifier has an audio pass-through output. This pass-through can be divided into 1-6 areas to control the volume and switch respectively. Each area can be connected to one or more speakers. Each speaker has a built-in detection module	× don't have this function
System stability	If any one speaker is broken, it will not affect the normal operation of other speakers	If any one speaker is broken, it will not affect the normal operation of other speakers	not affect other speakers

The GUI shows the status of all the IP Amplifier/speakers/telephones

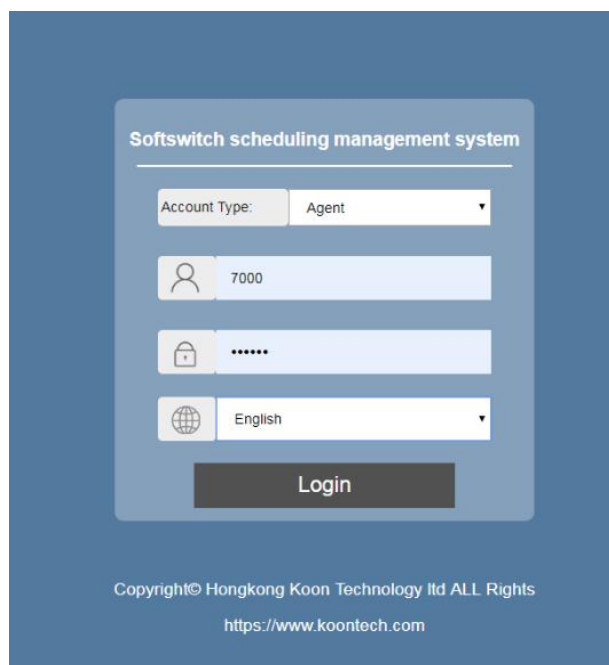Health status information and test result status.   Both Pairs Cable connected T-Speakers and SIP Speakers

(6)   Voice recording

The Central Unit server KNTD-50 with a voice recording system . You can log in to dispatcher console through the browser with user name and password to record and store all call and broadcast records in the system in real time. You can directly perform the recording file on the webpage interface. Play, query, batch management and batch download. The recording system has self-space management and system diagnostics and alarm functions.
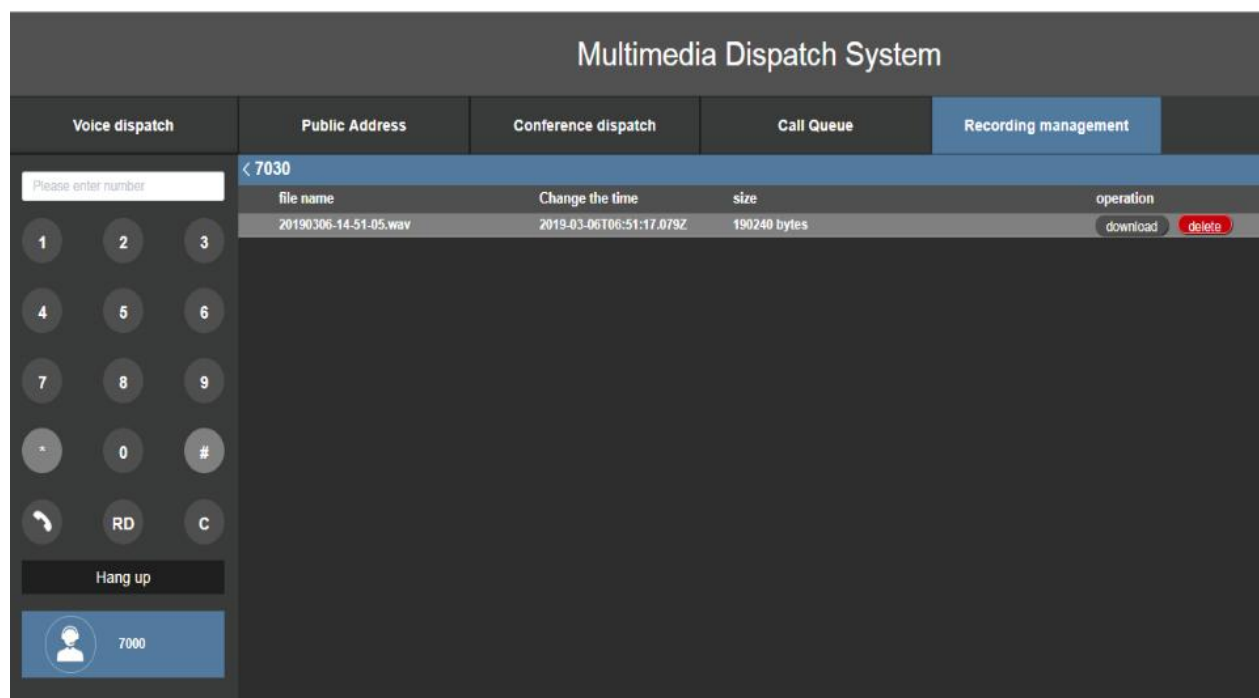
(7) Explosion proof speaker

	Explosion proof speaker with ATEX and IECEX certified				
Model Number	KNLB-Ex5	KNLB-Ex10	KNLB-Ex15	KNLB-Ex30	KNLB-Ex30Y
PHOTO					
AC impedance 8Ω	√	√	√	√	
Built-in Audio Transformer					√
Rated Power	5W	10W	15W	30W	5W/10W/15W30W
SOUND PRESSURE LEVEL Iw/m at 1000Hz (dB)	108	110	112	120	120
Application	Explosion-proof telephone: EX6 / EX8	Explosion-proof telephone: EX6 / EX8	Explosion-proof telephone: EX6 / EX8	Explosion-proof telephone: EX6 / EX8	Voltage type power amplifier
IP Grade	IP66	IP66	IP66	IP66	IP66
Gland	2	2	2	2	2
Color	Black	Black	Black	Black	Black
Dimension(WXDXH)MM	250（Ø)*352(L)mm	250（Ø)*352(L)mm	250（Ø)*352(L)mm	250（Ø)*352(L)mm	250（Ø)*352(L)mm
Unit Weight	3.7KG	3.7KG	3.7KG	3.7KG	3.7KG
Box size	270x270x390 mm	270x270x390 mm	270x270x390 mm	270x270x390 mm	270x270x390 mm
Install area	Hazardous area	Hazardous area	Hazardous area	Hazardous area	Hazardous area

![KNTECH logo]

(8)   Explosion proof Telephone

https://www.koontech.com/explosionproofTelephone.html

ATEX Telephone Explosion proof

The best explosion-proof phone in the field of petrochemical and nuclear power, intrinsically safe phone, ATEX certified, with voip and template versions. Welcome to consult!

Model: KNEX5 Analogue

Ex telephone

Model: KNEX6 Analogue

ATEX Telephone

Model: KNEX7 IP

Mining explosion-proof telephone

Model: KNEX8 VoIP

Explosion proof telephones

Model: KNEX1

Intrinsically safe telephone

Model: KNEX2

Industrial explosion-proof

Model: KNZD-41

Fire alarm telephone

Model: KNZD-46

Flameproof telephone

4. The Application field of PAGA-G3 system

The application areas: oil and gas exploration and production platforms, floating storage and offloading (FSO), floating production storage and offloading (FPSO), liquefied natural gas (LNG) and petroleum ships, onshore oil and gas processing plants, including oil and gas terminals, petrochemicals Oil refineries and power companies, ships, offshore drilling platforms, offshore platforms, oil refineries, petroleum, petrochemical, natural gas, military, thermal power, nuclear power, metallurgy, and dangerous places containing flammable and explosive gases, high noise, corrosion, dust, In such places, harsh working environments such as strong electromagnetic radiation and strong interference require the installation of PAGA public address and general alarm systems.

Hong Kong KNTECH Technology products are specially designed for high-risk application scenarios. The products have passed ATEX and IECEX certification. The products are the highest international standard explosion-proof level, allowing users to realize safe voice and alarm and broadcast functions in potentially explosive environments. The system adopts automatic IPPABX telephone system and PAGA system (public address and general alarm system). When an emergency or other special situation occurs, it is necessary to broadcast or alarm in a large area. The telephone is integrated with the PAGA system through the SIP server. Communication, you can implement PAGA (Public Broadcasting and General Alarm System) system for a wide range of areas to broadcast or alarm functions