USER   MANUAL

KNEx Series VoIP Phone user manual

Ver : A0

KNEx7   KNEx8

目录

Foreword

Our KNEx7 and KNEx8 is explosion-proof Voip phone. it is a rugged telephone. It can be configured in the Web interface and is the best choice under harsh conditions.It is made up of 15-bit stainless steel keyboard and aluminum shell so that users can configured freely.They are full-featured digital phones that provide voice calls in a data network.Designed for use in harsh, dusty, wet and noisy environments such as mining, subway, tunneling, shipping, distribution, industrial and outdoor locations, this guide will help you use your phone with ease. Please read carefully the user manual below before connecting the power supply.

1. Characteristic

- Explosion proof mark and grade
  Explosion proof mark : ⟨Ɛx⟩ II 2G Ex db ib IIB T5 Gb   -20℃≤Ta≤ +55℃
  Grade : IP 66
- Explosion proof Mode table :

  <u>KN</u>   <u>EX</u>   7
  ①   ②   ③

  ① : KOON
  ② : Explosion proof
  ③ : Product serial number
    7------ Voip telephone,POE power supply and external safety
         D20 ringtone and LED DC5V/0.75W.
    8------ Voip telephone,AC power supply,explosion proof horn
          8 Ohm 30W connector and D20 ringtone and
          LED DC5V/0.75W.

Model Number	POE Power over Ethernet	AC Power Supply (AC 110 or 220V)	Explosion-proof horn 8 Ohm 30W Connector	D20 8Ω 0.5W and LED DC5V 0.75W
KNEx7	√	×	×	√
KNEx8	×	√	√	√

2. Greneral Operation Instructions

2.1 Answer the call

- Handset answering

    When the phone rings,Just pick up the microphone and talk to the other party. After the call is finish, put back the microphone to disconnect the call.

- Automaticlly answering

    Receive a broadcast when the phone is automatically connected. After the broadcast is finish, the phone can automatically cut off the broadcast status.Return to standby.

2.2 Dialing a call

- Handset mode diali, pick up the handset, you will hear the dial tone, enter the phone number + "#", you can dial quickly. After the call is finish, put back the handset and end the call.

- One click speed dial

    Pick up the handle and press the quick dial on the panel to call . After the call is finish,put back the handset and end the call.

2.3 Call hang up

    When the call is finish,put it back to the handle and hang up.

2.4 User programming

    Users can log on to the Web interface configuration, modify parameters and functions.

3. Specification

- VoIP SIP2.0 phone
- DTMF: dialing
- Free dialing (maximum length of each number is 32 bits)
- Communication: full duplex two-way hands-free communication
- Auxiliary interface: 1 auxiliary output, dry contact ,Load: resistive load Rated load: 0.3A at 125VAC, 1A at 30VDC
- External Loudspeaker,MAX 30W@8Ω(option)
- Speech coding: G.711, G.726, G.729
- Echo cancellation standard: G.167/G.168
- IP protocol: IPv4, UDP, RTP, DHCP, SIP
- DTMF signal mode: VOIP SIP Info (DTMF), RFC 2833 (DTMF)
- Programming: non-volatile flash memory Programming and configuring through the GUI graphical interface.

- Network: 10/100M adaptive, RJ45 interface, Cat5 level cable or better.
- Power:
  a. power supply AC110V/AC220V;(option)
  b. PoE power supply (PoE, 802.3af), LAN (IEEE 802.3af),
     network access control (IEEE 802.1x);(option)
- Management and operation: Support DHCP mode to obtain IP
  or static IP mode to work, support remote automatic software
  upgrade, centralized monitoring, and LED status indicator.
- Explosion-proof standard of the product : EN IEC 60079-0:2018,
  EN 60079-1:2014,
  EN 60079-11:2012

4. Interface Connection Schematic Diagram
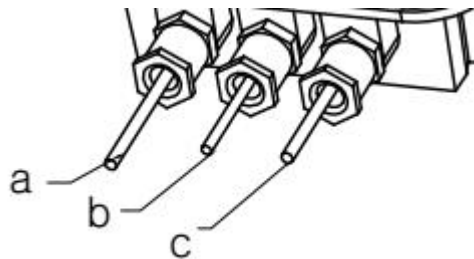
a : AC power cord (option : 3-core wire)

b : LAN Network cable above cat 5.
     LAN Interface 10/100 Base-tx according to iEEE802.3
     $U_n = \pm 2.5$ V(10 BASE-TX)
     $U_n = \pm 1$ V (100 BASE-TX)
     U_m = DC57 V

 c :   Headset and D20 **8Ω 0.5W and LED DC5V 0.75W**

       and explosion proof horn connection cable.(option : 8-core wire)

 d: the cable entries shall be secured
      with suitable cable entry devices which are ATEX-certified.

 e: Handset
       receiver : L = 2.42mH , C = 10.5uF;
       microphonc   L = 4.6mH , C = 5.6uF;

 f : Speaker
      8 OHM 0.5W speaker   L = 0.33mH, C = 77.63uF.

5. Warning and Safety Notices

- Before using, please confirm whether the temperature and humidity of the environment meet the temperature and humidity required for the work of the product. (Moving the product from The air-conditioned room to natural temperature may cause condensation on the surface or internal components of the product. Please wait until the product is naturally dry before turning on the power.)
- Non-technical service personnel should not disassemble or repair the phone themselves. Otherwise, improper repair or malfunction may cause electric shock, fire, etc., which may lead to injury accidents and invalidate your product warranty.
- Do not put metal objects such as pins, wires, fingers or other foreign objects into the vents and gaps. It may cause current to pass through metal or foreign matter, which may cause electric shock and cause injury. If the foreign objects or similar Objects fall into the phone, it should be stopped to use.
- Do not discard or store the packaging in a place where the young child can get it. If the child uses it to cover the head, the nasal and mouth blockage may occur, resulting in suffocation.
- Please operate this product in normal use and posture. Using the product in a bad posture for a long time may affect your health.
- The telephone is suitable for use in Group II,Category 2G or Non-hazardous Locations .
- Do not disconnect the telephone unless it is in a non-dangerous area and the power has been cut off.
- Substitution of andy components may impair suitability for Grou II, Category 2G .
- For During installation or removal, the joint of the upper protective Cover and the bottom shell shall not be damaged or scratched.
- Ambient temperature: -20°C to +55°C
- Repair of the flamepaths is not intended. Repair in compliance with the values in EN 60079-1 is not accepted.
- The installation must be installed according the

requirementsOf EN 60079-14: latest version (or its National equivalent standard).

- The cable entry holes have to be connected by means of suitable cable entry device and which are covered by a separate conformity certificate.

6. Network Connection

Connect the IP machine to the company's IP telephony network system. Before connecting to the network, check whether the network system is working properly.Direct network connection - In this way, you need at least one Ethernet port in your work place.Connect the LAN port to the Ethernet port of your workspace using the Ethernet cable on the back of the phone.

Cat 5 or more network cable

Explosion proof VoIP Telephone
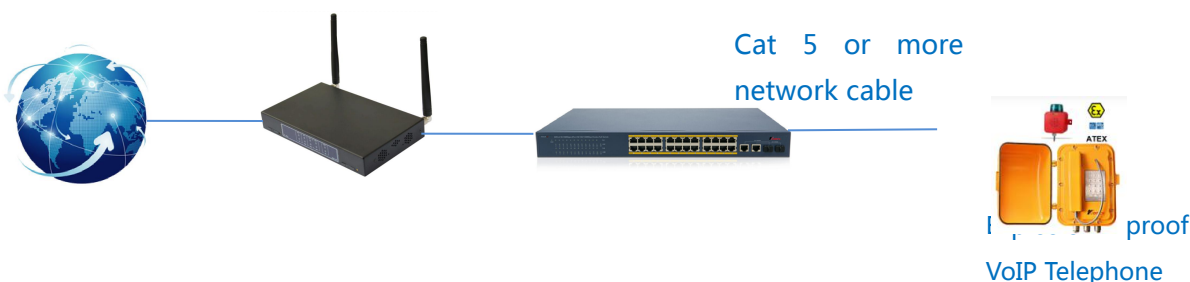
7. Web Log

9.1 Log

Set the computer and phone in the same LAN. When you connect to the network successfully, enter the IP address of the LAN port of the phone on Internet Explorer, http://xxx.xxx.xxx.xxx/,

you can see the login of the web management interface. (as pictures shown below).Enter the user name and password and click the Login button to enter the settings screen.

Device Configuration

User: admin

Password: •••••

Language: English ▼

Login

User : admin /password : admin

9.2 Get the Phone IP address and Factory setting

- If your phone has an LCD display, check the IP address displayed

on the LCD display.
- The default IP address, please see the lable sticker of the phone.
- Press and hold any key for 5 seconds to play the ip address.
- When you pick up the handle and dial "9*9*200" with the keyboard, you can play the ip address;

 When you pick up the handle and use the keyboard to dial "9*9*100", the factory settings can be restored, but all the setting data will be cleared.

 The factory default IP address is: 192.168.100.155
- Shortly press the toggle switch button "PLAYIP" on the main board to play the IP address.
- Longly press the tact switch button "RESET" on the main board for 5 seconds to restore the factory settings, but all the setting data will be cleared. The factory default IP address is: 192.168.100.155

8. Web Setting
10.1 Status

Satus	
Menu Name	Description
system message	Shows the phone model, current network time, network status, and current IP address
network status	Display the mode and detailed information of the network connection
Account status	The phone number and status corresponding to the current SIP LINE 1-6 registration of the phone are displayed. The version number is displayed at the bottom of the page.

Software version number	1.0.0.39b4c1

10.2   Setting
10.2.1   NetWork Setting

Setting	
Menu Name	**Description**
Network setting	Connection type: manual (static) / automatic acquisition (DHCP).
	Ipv4 address: Displays the current IP address.
	Subnet Mask: Displays the current subnet mask.
	Gateway: Displays the current gateway address.
	Preferred DNS Server: Displays the current preferred DNS.
	Alternate DNS Server: Displays the current alternate DNS.
	Interface 0: RJ45 interface 0 adaptive / rate / mode / settings
	Interface 1: RJ45 interface 1 adaptive / rate / mode / settings
	Network port number: local port setting / Telnet port / http mode / http port
	Save: After the above configuration is complete, click the "Save" button to save the settings.
SNMP Settting	SNMPEnable / SNMPServer / SNMPPort / SNMPZone / SNMPDeviceName

10.2.2 Phone Seting

Setting	
Meun Name	**Description**
Phone setting	Auto Answer : On / Off, On State Auto Answer Time Setting
	On-hook wait time: On-hook wait time setting.
	Ringtone settings: ringtone type settings / ringtone volume settings
	Secondary dialing: Secondary dialing mode 2833 setting.
	Volume setting: MIC input volume size / SPK output volume size setting
	Hotline settings: On/Off Phone settings: Hotline number Sip1---sip6 line selection
	Codecs settings: G.711, G.723, G7.26, G7.29

10.2.3 Speed Dialing Seting

Setting	
Menu Name	**Description**
Speed dial setting	Support for six speed keys or six multicast or 6 sets rolling number settings
	Button type: Multicast / Speed Dial
	Enable: When selected, the rollover function is enabled. (Only available if the button is in the speed dial mode optional)
	Line configuration: line selection, sip1------sip6 six lines are optional.
	Network address: This item can be configured only when the button type is multicast mode.
	Port: This item can be configured only when the button type is multicast mode.。
	Voice priority: 0-----11 (large number is high priority, Voice call do priority switching with only multicast)
	Enabled: When not selected, priority is enabled.

10.2.4 Security Setting

Setting	
Menu Name	Description
Security setting	Sealed condition : Sealed well / unsealed (option)
	Output port settings: idle / dry contact / door control
	Dry contact 1 setting: (The same setting method for dry contact 2)
	Dry contact output level: high / low selection
	Dry contact output duration: hold/custom time sec (0---599)
	Dry contact output trigger mode: incoming call ringing / off-hook / calling
	Door control 1 setting: (the same setting method for access control 2)
	Door control output level: high / low level selection
	Door Control Output Duration: Hold/Custom Time sec (0---599)
	The calling party remote DTMF password: 123, when the phone is called, the other party is connected, The other party enters the password "123". Dry contact output high or low level action
	Local unlock password: 456, the phone is in IDLE state, the local keyboard input the password"456", and the dry contact outputs high or low level action.

	Maximum calling time: 20---600 sec
	The called remote DTMF password: 789 (password "789" needs to be set in the left column door control menu), when the phone is called automatically, the other party enters the password "789", the dry contact output high or low level action.

10.2.5 Time Setting

10.2.6 Language Setting

Setting	
Menu Name	Description
Language setting	Language selection: language settings.

10.3 Sip Config Setting

Setting	
Menu Name	Description
Time setting	Manual time input: Set the current time manually when NTP is off or there is no external network.
	NTP switch: On (YES) / OFF (NO), when NTP is turned on, and can be connected to the external network, the phone automatically synchronizes the current time.
	Preferred NTP server address: keep the default
	Preferred NTP server address: keep the default
	Preferred NTP server address: keep the default
	Preferred NTP server address: keep the default
	Check interval: interval time setting, unit sec.
	Time zone: time zone selection.

SIP Config	
Menu Name	**Description**
SIP线路 SIP 1 　　SIP 2 　　SIP 3 　　SIP 4 　　SIP 5 　　SIP 6	
Choose to configure the first few SIP accounts, there are six to choose from. Configure after selecting an account	
SIP function	Set to enable/disable sip account
Registration switch	Turn this switch on to enable it and dock with the server.
Anti-registration switch	Some servers do not support this feature and must be turned off.
	Configure the SIP registration server signaling port.
Registration cycle	Register sip server time settings
Show the name	Configure to display the name. When the caller can be called, the called party (named without calling the caller) can display this configuration parameter and allow English letters to be entered.
Account number	Server account
Authentication ID	Server ID
Password	Configure the password for the SIP registration account.
SIP heartbeat	Configure the server's detection interval. If the phone turns on the SIP detection server function, the phone detects whether the server responds every configured time.
Sever1	Configure the SIP registration server address to support the address in the form of a domain name.
Server port	Configure the SIP registration server signaling port.
Domain name	Configure the SIP registration server address to support the address in the form of a domain name.
Server 2 (alternate server) Server 3 (alternate server)	Configure the same server 1, if the first server is broken, automatically switch to the second or third standby server, and then automatically switch. Priority is given to the first server. When the first server repairs OK, the system will automatically jump back to using the first server.
Dialing rules	**Dialing Rules>>** Add　Delete Operate　Match Rule　Convert Rule　Server IP　Server Port ☐　. ☐　625　　192.168.80.187　5060 save
	Add one: Click to add one, it will create a new dialing rule.
	Delete: Select the existing rules below and click 'Delete'.
	Matching rule: "." means arbitrary. Add other rules according to requirement
	Transfer rule: no need to fill in
	Server IP: Server IP Address
	Server port: server port number
	Peer-to-peer configuration: for example, the other party number 625, the other party's IP address 192.168.80.187, and the other party's port number 5060. After the configuration is completed, as shown in the figure above.
	After the configuration is complete, click ' Save' and restart to take effect.

10.4   Door Phone Setting

10.4.1   Activate Card setting

Door PHONE	
Menu Name	Description
Activation card (RF card user registration)	Door card number: card number setting
	Phone: The phone number setting of the other party
	Authentication code: password setting
	Department: Identification
	Name: User
	Position: User Information
	Type: Household / Visitor Selection

10.4.2   Activated Card List

Setting	
Menu Name	Description
Activated card List	View the current user registration information, select it and click the delete button to clear it.

10.4.3 Door Phone Open Record List

Setting	
Menu Name	Description
Open the door record List	View the log that the user has opened the door to record

10.5 Maintenance

10.5.1 Reboot divece

Maintenance	
Menu Name	Description
Reboot device	Click to restart the device, the phone restarts

10.5.2 Config

Maintenance	
Menu Name	**Description**
Configuration	Language selection: language settings.
	Save configuration: download the configuration and save it
	Upload configuration: Select the previously saved configuration file, then click Upload to import it.
	Clear configuration information: Clear all data information, and then restore factory settings. (Note: Default IP: 192.168.100.155, username: admin, password: admin)

10.5.3 Upgrades

Maintenance	
Menu Name	Description
Update and upgrade	Select the upgrade file "*.tar", then click and then click the "Update" button. A page will appear, indicating that the upload was successful.

10.5.4 admin

Maintenance	
Menu Name	Description
admin setting	Original username: old username
	Original password: old password
	New username: new username
	New password: new password
	New password confirmation: Enter new password again
	Save: Save changes

10.5.5 Device Monitor

Maintenance	
Menu Name	Description
user setting	Switch: On / Off
	Server IP: Self-test server IP address
	Server port number: self test server port number
	Phone area name: partition name
	Phone Name: Phone Name
	Detection period: 1 minute minimum interval, maximum interval 24hours
	Output control: a total of 7 channels of control
	Pin 1: On/Off Alias: Alphanumeric
	Pin 2: On/Off Alias: Alphanumeric
	Pin 3: On/Off Alias: Alphanumeric
	Pin 4: On/Off Alias: Alphanumeric
	Pin 5: On/Off Alias: Alphanumeric
	Pin 6: On/Off Alias: Alphanumeric
	Pin 7: On/Off Alias: Alphanumeric

10.5.6 Capture

Maintenance	
Menu Name	Description
Network capture	Maximum number of packets captured: keep the default
	Agreement: udp
	IP address: IP address of the captured phone
	Port: The port number of the captured phone
	Custom command: ignore

|	
	Start: Click the button to start capturing. After the capture is over, click the stop button to stop capturing the package.。
	Download the capture data: Click the download button to download the data.

10.5.7 Debug
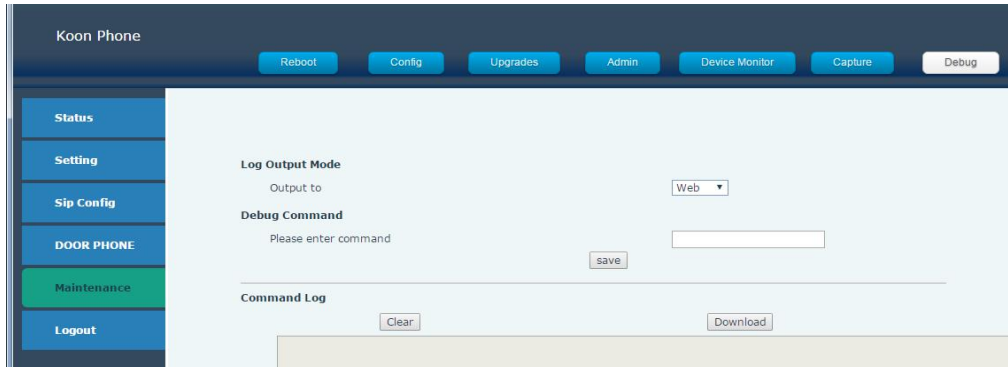
Maintenance	
Menu Name	Description
Debuging	Debugging tools, please consult the manufacturer for details.

9. Product Maintenance

- Avoid inserting water into the phone during rainy days.
- Check the power cord regularly.
- Keep the phone dry and clean.
- Please operate the telephone according to the user manual.

10. Product Lable : (110V & 220V & POE)

KNTECH CE 0575
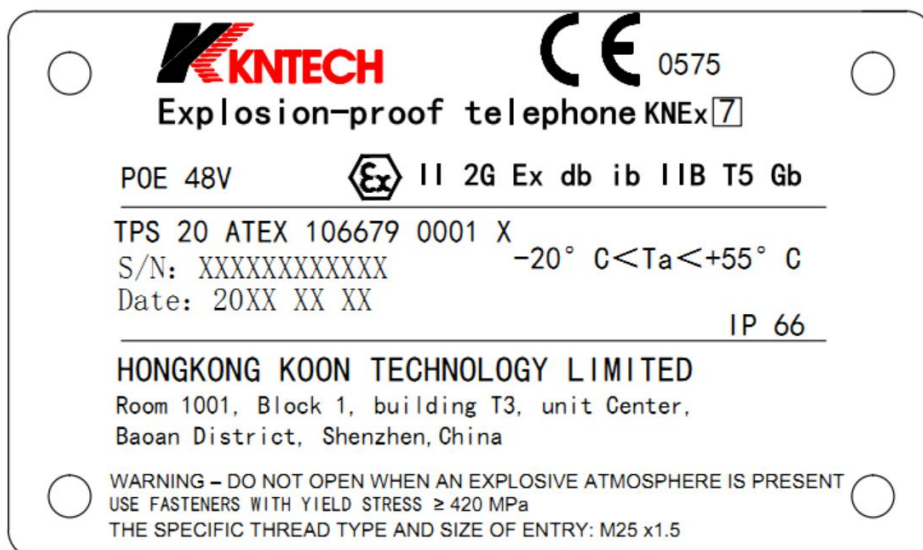
Explosion-proof telephone KNEx 8

AC 110V 50W (Ex) II 2G Ex db ib IIB T5 Gb

TPS 20 ATEX 106679 0001 X

S/N: XXXXXXXXXXX   −20° C＜Ta＜+55° C

Date: 20XX XX XX

IP 66

HONGKONG KOON TECHNOLOGY LIMITED

Room 1001, Block 1, building T3, unit Center,
Baoan District, Shenzhen, China

WARNING – DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
USE FASTENERS WITH YIELD STRESS ≥ 420 MPa
THE SPECIFIC THREAD TYPE AND SIZE OF ENTRY: M25 x1.5

KNTECH CE 0575

Explosion-proof telephone KNEx 8

AC 220V 50W (Ex) II 2G Ex db ib IIB T5 Gb

TPS 20 ATEX 106679 0001 X

S/N: XXXXXXXXXXX   −20° C＜Ta＜+55° C

Date: 20XX XX XX

IP 66

HONGKONG KOON TECHNOLOGY LIMITED

Room 1001, Block 1, building T3, unit Center,
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WARNING – DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
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THE SPECIFIC THREAD TYPE AND SIZE OF ENTRY: M25 x1.5

The Global Leader in Industrial Communication!

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