1830 Series VoIP / RS-232 Control Box

DoorKing Part Number
2334-080

DO NOT use this VoIP device to make 911 calls.

Destructive Attack:	Level I
Line Security:	Level I
Endurance:	Level IV
Standby Power:	Level I
Single Point Locking Device:	Level I

The **VoIP/RS-232** Control Box is **fee based** and operates on DoorKing's network website. The control box provides voice communication and data communication plan selected at DoorKing's Server website.

The **VoIP/RS-232 Control Box** is designed to be used with: **1833**, **1834**, **1835**, **1837**, and **1838** entry systems.

Installation Options:

The **VoIP/RS-232** control box **MUST** be wired to the telephone entry system's **phone line** (voice) and **RS 232 connection** (data). See page 2.

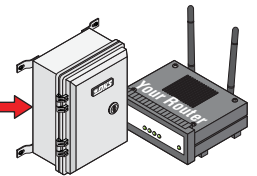The **VoIP/RS-232** control box will work with **TWO** 1830 entry systems connected to it. These are designated as **System A** and **System B**. See next page to wire 1 or 2 1830 entry systems to the box.

IMPORTANT: The 1830 circuit board MUST be Revision "Z" or higher to work.
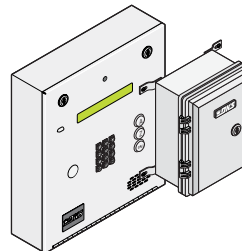
Box Installed at Router

500 Ft Max
Phone Line and RS-232

NOTE: Your router **MUST** be connected to the internet.

325 Ft Max
Ethernet Line - Cat5

Box Installed at Phone Entry System

Registration

The VoIP adapter and DKS TCP/IP adapter **WILL NOT** function until registered with the **DoorKing VoIP/Data server**.

The registration page may be reached at:

https://dksdb.dksoftware.com/UserLogin.aspx

Before starting the registration process, be sure to have the **VoIP ID number** written down. This number is printed on a label on the VoIP adapter. Also the **Master Code** of the phone entry system will be needed for the registration process.

Click the **IM/VoIP DKS button** on the first screen. Enter your personal information, then click the **entry systems tab**. Add an entry system by selecting the **DKS VoIP/Data** service.

NOTE: VoIP/Data uses the VoIP adapter **AND** the DoorKing client mode **DKS TCP/IP** adapter. (**DO NOT** select the **DKS VoIP only.** This is for voice ONLY and data will not function with this selection.)

Enter the **VoIP ID number** on the decal on VoIP adapter, the optional name of the system A entry system if desired, and your **postal area code** which will be used for control box phone number selection. Finally, enter the **Master Code** of the System A entry system, then Click **ADD**. The entry system will be added to the table above. Click the **billing tab** and enter billing information. When completed, the VoIP and **DKS TCP/IP** adapters will be turned **ON** and a phone number will be **automatically assigned** to the control box.

Record the phone number assigned to the control box for your records and also needed when programming the 1830 on page 3.

Installation Steps:

1. Install and wire control box to 1830(s) and your router (page 2).

2. Power up control box (page 2).

3. Register control box and System A 1830 online (see above).

4. Setup Phone Number/Data over IP on 1830(s) system(s) (page 3).

5. Test control box (page 4).

6. Troubleshoot control box if necessary (page 4).

Note: Installation steps assume that the 1830 system has already been setup for the **master code** (section 3.2.1 in manual) and **multiple system programming** (section 3.2.9 (∗04) in manual) if 2 1830s are being used.
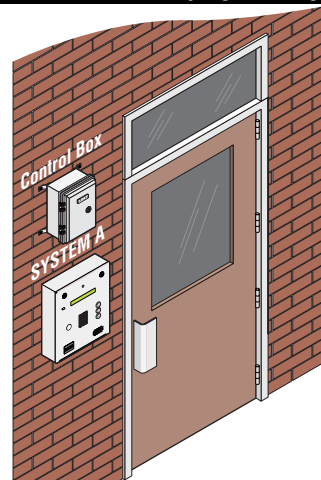
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2334-065-G-10-20

Wiring

The **EARTH GROUND** must be connected to a proper ground close by (ground rod, cold water pipe in the ground, existing electrical ground, etc).

Battery Back-Up
Call DoorKing

Reset VoIP

Supplied Power Transformer
16.5VAC 40 VA

Reset Timer Selector
OFF-OFF = No reset
OFF-ON = 1 day
ON-OFF = 2 days
ON-ON = 3 days

Reset Links

Do Not Use Line

Power

VoIP Adapter

Do Not Use PC

2334-010

RS-232 "A"
VoIP ID Number
RS 232

RS-232 "B"
RS 232

DATA OUT
DATA IN
BUSY OUT
BUSY IN
GROUND

DKS TCP/IP Adapter

DATA

LINK

Cat5 Cable

TCP/IP Camera

RS 232 Connection

System A Terminal	1830 Terminal
DATA OUT-Red	1
DATA IN-Black	2
BUSY OUT-White	3
BUSY IN-Brown	4
GROUND-Green	5

Data

500 ft RS-232 MAX

②ONLY

Earth Ground

RS 232 Connection

System B Terminal	1830 Terminal
DATA OUT-Red	1
DATA IN-Black	2
BUSY OUT-White	3
BUSY IN-Brown	4
GROUND-Green	5

Data

500 ft RS-232 MAX

Box Installation

Mounting Bracket and Hardware

Mounting Bracket and Hardware

Wire Run

Wire Run

Wire Run

The plastic enclosure comes with mounting brackets and hardware to mount on enclosure. Mount enclosure on surface using appropriate hardware (not included). **IT IS NOT RECOMMENDED DRILLING HOLES IN THE PLASTIC ENCLOSURE!**

If holes must be drilled, remove the circuit board before drilling and be sure that mounting bolts/screws do not touch the back of the circuit board. Holes must be sealed to prevent water intrusion.

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RS 232

SYSTEM A 1830
Voice/Data system should be as close as possible to **SYSTEM A.**

Aux Terminal

5 & 6

1816 Jumper MUST be Moved

Main Terminal

PHONE CGND

18 AWG Min. Power Wire

①ONLY

1 & 2

Voice

Twisted Pair MUST be used.

Do Not Connect Power To A Receptacle Controlled By A ON/OFF Switch.

Existing Power
16.5VAC 20 VA

Supplied Power Transformer
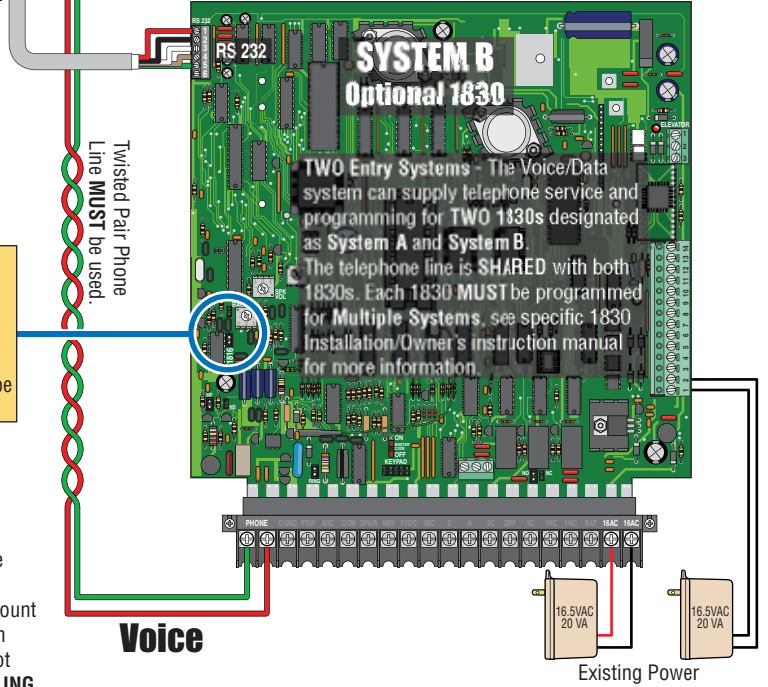16.5VAC 40 VA

①ONLY

Choose How to Power VoIP/RS-232 Board:

① Wire supplied power transformer (16.5 VAC, **40 VA)** to Aux terminal 1 & 2, wire VoIP/RS-232 power terminal to Aux terminal 5 & 6. This powers VoIP/RS-232 board **AND** DoorKing phone entry system's Aux terminal. If Aux terminal 1 & 2 is already being powered by a 16.5 VAC, **20 VA** transformer, **REPLACE IT** with the 16.5 VAC, **40 VA** transformer that is supplied to power **BOTH** devices. **NOT** available on the 1834. - **OR** -

② Wire supplied power transformer (16.5 VAC, **40 VA)** **DIRECTLY** to VoIP/RS-232 power terminal. **DO NOT** wire to Aux terminal 5 & 6.

RS 232

SYSTEM B Optional 1830

TWO Entry Systems - The Voice/Data system can supply telephone service and programming for **TWO 1830s** designated as **System A** and **System B.** The telephone line is **SHARED** with both 1830s. Each 1830 **MUST** be programmed for **Multiple Systems**, see specific 1830 Installation/Owner's instruction manual for more information.

Twisted Pair Phone Line **MUST** be used.

1816 Jumper MUST be Moved

PHONE

16.5VAC 20 VA

16.5VAC 20 VA

Voice

Existing Power

System B Phone Line Alternate Use - If system B is not being used for a second phone entry system, a phone can be installed and used. **It shares the phone line with the System A phone entry system.** The phone cannot be used while a transaction is taking place on System A.

1830(s) Setup Phone # / Data over IP

EACH 1830 MUST be setup after the VoIP/RS-232 control box has been Registered.
The 1830 phone entry system(s) will **NOT** function until this is accomplished.

The 1830(s) circuit board(s) MUST be Revision "Z" or higher to work with Data over IP.

Program next information using the keypad on the 1830 system.
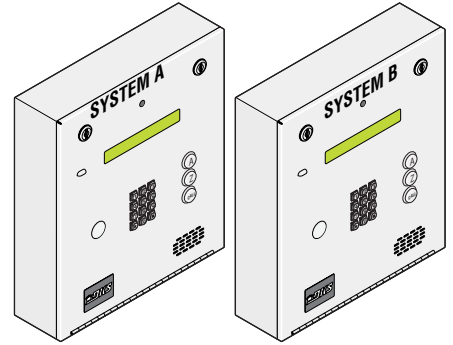
3.2.10 Program in DKS Data over IP Phone Number

The following programming sequence is necessary **when using DoorKing DKS Data over IP**. After installing the Remote Account Manager Software, Version 6.5.a or higher, there is an option to use the DoorKing **DKS Data over IP** service type on the System Information screen.

When registering an entry system online with the DKS Data over IP requires the 10-digit phone number of the entry system which DKS Data over IP WILL ASSIGN when registering your VoIP control box.

This phone number **MUST** be programmed into the entry system to use the **DKS Data over IP**.
Factory setting = No number in system

1. Press [✳] [5 JKL] [9 WXYZ] and enter your four-digit MASTER CODE [?] [?] [?] [?] (**beep**).

2. Enter the **10-digit phone number - assigned during registration**, then press [✳] (**beep**).

3. Press [0 OPER] [#] TOGETHER to end this programming sequence (**beeeeeep**).

6.1.9 Turn DKS Data over IP ON

Use the following sequence to turn **DKS Data over IP ON**.

The **DKS Data over IP** must be **ON** to use the entry system with **DKS Data over IP**. **Note:** When section 3.2.10 (DKS Data over IP Phone Number is programmed, the **DKS Data over IP** is **automatically** turned **ON**.
If there is **NOT** a valid 10 digit system phone number in memory, the system will emit three (3) short beeps. **Beep … Beep … Beep**
Factory setting = Data over IP is OFF

1. Press [✳] [5 JKL] [5 JKL] and enter your four-digit MASTER CODE [?] [?] [?] [?] (**beep**).

2. Press [0 OPER] [✳] (**beep**) to turn **OFF**, OR [1 SP] [✳] (**beep**) to turn **ON.**

3. Press [0 OPER] [#] together to end this programming sequence (**beeeeeep**).

6.1.8 Test Connection to DKS Data over IP

This will allow you to test the connection to the **DKS Data over IP** or display problems that may have occurred.

1. Press [✳] [2 ABC] [9 WXYZ] and enter your four-digit MASTER CODE [?] [?] [?] [?] (**beep**).

The LCD display will show one of the following and the entry system will BEEP accordingly:

System is Registered - **(beep)** one beep
- System is registered and communication to **DKS Data over IP** is good.

Check Registration - **(beep-beep)** two beeps
- Make sure your registration is current and this system is set to **DKS Data over IP** on the registration screen.
Also, be sure that the system phone number or ID number and the master code are set the same on
DKS Data over IP and the entry system.

Program 10 Digit ID - **(beep-beep-beep)** three beeps
- There is not a valid 10-digit ID in the entry system memory.

Turn DKS Data over IP On - **(beep-beep-beep-beep)** four beeps
- There is a valid 10-digit ID, but **DKS Data over IP** is turned OFF.

No DKS Data over IP Contact - **(beep-beep-beep-beep-beep)** five beeps
- Communication to **DKS Data over IP** could not be made.

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Testing

Final Testing after the VoIP/RS-232 board has been Registered - All systems should be tested and final adjustments done. Connect a telephone butt set to the VoIP/RS-232 circuit board **Phone Line** and make sure the line is active and that phone calls may be made and received. If the phone line is not active, something went wrong during the registration which must be corrected. If still having problems, call DoorKing tech support. Attach a label to the inside of the control box listing the local phone number that was assigned during registration.
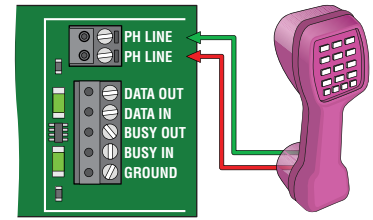
Voice Testing - On the 1830 circuit board lower left corner is a jumper for phone line matching. Remove the jumper from the **UPPER position** and place it on the **LOWER position** labeled **1816**. This allows the 1830 speakerphone **OPTIMUM performance and MUST be done**.
Program a phone number into the memory of the 1830 using the 1830 keypad. Then call that programmed number on the 1830. Have the call recipient press "9" on their phone to open the door. Verify the 9 tone is detected (door will open). Adjust the feedback on 1830 as necessary. This adjustment is **VERY** important for DTMF detection. See specific 1830 Installation/Owner's instruction manual for programming and adjustment information.
IMPORTANT Note: Factory set **Tone Open** numbers: **"9"** TONE activates Relay 1. **"0"** TONE activates Relay 0. **"5"** TONE activates Relay 2.
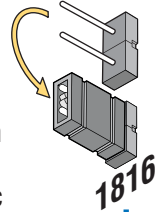
Remote Program Testing - Use the DKS Cloud **OR** Remote Account Manager Software version 6.5.a or later on an internet connected PC for 1830 programming and management. Create an account and open the system Info screen. Enter **System A's** master code, **phone number that has been assigned**, and pick **DKS VoIP/Data** for the service type. If a second 1830 is connected, create a second account with the same settings as above except System B's master code **MUST** be different. Refer to the Remote account manager software manual for additional settings which **MUST** be made. Enter some test data into the resident screen and then attempt to send the data to the 1830.

1830 Board
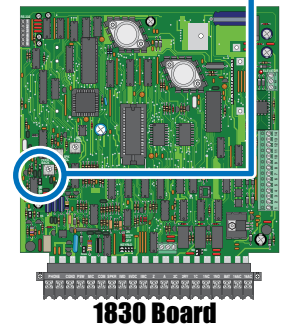
Troubleshooting

IMPORTANT: The Master Code can only be programmed using numbers and not the "*" or "# " keys.

Voice Not working:
• Are the lights on the VoIP adapter ON? If not, look for circuit board power LED. If ON. Power transformer MUST NOT be connected to a receptacle controlled by a ON/OFF switch.
• Registration is not complete OR DATA ONLY has been selected. Service suspended because of past due bill. Contact DoorKing for support.

Data Transfer Not Working:
• Are the lights on the VoIP adapter ON? Is the board power LED ON? If yes, press **Reset Links** button or cycle power to board.
• Registration is not complete OR VOICE ONLY has been selected. Service suspended because of past due bill. Contact DoorKing for support.
• Wiring error to the entry system. Check RS 232 wiring.
• Master code mismatch. Master code for the 1830, PC software, and DKS VoIP website **MUST** match each other.
• Check for remote account manager error messages for failure reasons such as memory size, anti passback mismatch, etc, and correct errors.
• 1830 wiegand/RS 232 power is missing. Check for 16.5VAC at 1830 auxiliary terminals 1,2.
• Try connecting a laptop directly to the 1830 and see if possible to transfer data.
• Check the LED lights on the circuit board. During a data transfer the yellow Ethernet data LED should be flashing. The data LED near the TCP/IP should be flashing. • • The RS 232 LEDs should be flashing for the proper system either A or B indicating attempted data transfer. If the wrong RS 232 LEDs are flashing, A and B systems are mixed up.
• Check the 1830 baud rate setting. It should be 19200bps. See specific 1830 Installation/Owner's manual. Older 1830s only run at 9600bps (Rev L and earlier) (K and earlier 1838 boards). Call DoorKing tech support for help.
• Network cable (RJ45 cable) loose or unplugged on the VoIP adapter or circuit board.
• Cycle power to the TCP/RS 232 adapter.

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