4200 RESCUE ASSISTANCE INSTALLATION GUIDE-OVERVIEW

IMPORTANT: THE FOLLOWING FIELD MODIFICATIONS MUST BE COMPLETED AT THE TIME OF INSTALLATION.

THE 4200 RESCUE ASSISTANCE SYSTEM REQUIRES THE FOLLOWING SETTINGS FOR PROPER OPERATION. ADDITIONAL INFO & DIAGRAMS ARE AVAILABLE IN THE INSTALL PACKET AT WWW.CORNELL.COM

1. RECOMMENDED CALL STATION WIRING - HOME-RUN BETWEEN EACH STATION & ANNUNCIATOR:

(1) CORNELL CB-4200 CABLE    - OR-  THE FOLLOWING:
TWO SEPARATE CABLES TO EACH STATION:
(1) 4-CONDUCTOR 22 GAUGE CABLE [+24V, SWITCH, LED, & GROUND]
(1) 22 GAUGE SHIELDED PAIR [AUDIO]

2. ADJUST THE POWER SUPPLY VOLTAGE (SEE FIGURE 1)

3. SET "USED / NOT-USED" ZONE JUMPERS (SEE FIGURE 2)
8010-300 CONTROL BOARDS ARE LOCATED ON THE REAR OF THE ANNUNCIATOR FACEPLATE. EACH CONTAINS (4) JUMPERS (ONE PER ZONE). THE "USED" POSITION ENABLES SUPERVISION, SUCH THAT A USED ZONE WILL REPORT A LINE FAULT IF THE CALL STATION BECOMES DISCONNECTED, OR IF NO STATION IS CONNECTED. THE "NOT USED" POSITION DISABLES THIS SUPERVISION.

4. ADJUST THE VOLUME CONTROLS (SEE FIGURE 3)
VOLUME CONTROLS ARE LOCATED ON THE AMPLIFIER BOARD, WHICH MOUNTS IN THE ANNUNCIATOR BACK BOX.
START WITH THE CONTROLS FOR THE "OUTGOING" (TALK) AND "INCOMING" (LISTEN) VOLUME SET AT NO GREATER THAN 3/4 TURN FROM THE FULLY CLOKCIWSE POSITION. ANY HIGHER INITIAL SETTING MAY CAUSE FEEDBACK. ADJUST THE VOLUME LEVELS WHILE COMMUNICATING WITH THE CALL STATION THAT IS THE FARthest AWAY FROM THE ANNUNCIATOR. ADJUST BOTH IN-COMING AND OUT-GOING LEVELS, IN SMALL INCREMENTS, FOR CLEAR AUDIO / THE BEST PERFORMANCE.
THE CALL STATION PRE-TONE ("BEEPS" PRODUCED AT THE CALL STATIONS) SHOULD INITIALLY BE SET TO APPROXIMATELY HALFWAY - THEN ADJUST AS NEEDED, TO COMPENSATE FOR AMBIENT NOISE.

5. AUDIO SHIELD (DRAIN WIRE) MUST ONLY BE GROUNDED AT THE ANNUNCIATOR END.
AT THE ANNUNCIATOR, CONNECT THE SHIELD (DRAIN WIRE) TO THE SPEAKER MOUNTING STUD, AS SHOWN ON DRAWING # 90022-12.
AT THE CALL STATION, CONNECT THE WHITE CALL STATION LEAD WIRES TO THE SUPPLIED TWISTED PAIR. THE AUDIO SHIELD SHOULD BE TRIMMED-OFF FLUSH WITH THE CABLE JACKET AND/OR TAPED BACK TO THE CABLE, SUCH THAT THE SHIELD CAN NOT TOUCH ANY GROUNDED METAL AT THIS END.

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FIGURE 1 - POWER SUPPLY
FIGURE 2 - 8010-300 BOARD
FIGURE 3 - 2009 AMPLIFIER BOARD
FIGURE 4 - TYPICAL CALL STATION
TYPICAL 4200 SERIES ANNUNCIATOR
(A-4204 SHOWN HERE)

NOTE:
NO CONDUIT OR WIRE INTO BOTTOM OF CABINET, BECAUSE OF BATTERIES.

BATTERY BACK-UP
POWER SUPPLY
24VDC @ 3.5A

115 VAC, 60 Hz
@ 1.15 AMP
(DEDICATED CIRCUIT RECOMMENDED)

OPTIONAL WIRING TO
TAM-SERIES VOICE DIALER
OR TO FIRE ALARM SYSTEM
FOR MONITORING
(1) PAIR #22 AWG PER POINT
OR AS RECOMMENDED BY Dialer / 
FIRE ALARM SYSTEM PROVIDER

PRESS ZONE BUTTON TO ANSWER CALL AND ACTIVATE INTERCOM
PRESS ZONE BUTTON AGAIN TO TURN INTERCOM OFF
IF LINE FAULT LIGHT IS ON CONTACT SERVICE PERSONNEL

ZONE 1
INTERCOM ON
LINE FAULT ZONE CALL

ZONE 2
INTERCOM ON
LINE FAULT ZONE CALL

ZONE 3
INTERCOM ON
LINE FAULT ZONE CALL

ZONE 4
INTERCOM ON
LINE FAULT ZONE CALL

RESET ALL ZONES

PUSH TO TALK
RELEASE TO LISTEN

HOME-SUN WIRING:
(1) CORNELL PART NUMBER CB-4200 CABLE
-OR- (2) SEPARATE CABLES
(1) #22 AWG SHIELDED PR (AUDIBLE)
(1) #22 AWG 4-COND (POWER/SWITCH/LED)

CORNELL RESCUE ASSISTANCE

90021-12
D4200W-A
"AUX" TERMINALS, ON THE POWER BOARD, PROVIDE 2 AMP NORMALLY OPEN CONTACTS THAT CLOSE DURING ANY CALL FOR ASSISTANCE.

BE SURE TO SET THIS SWITCH FOR 24 VDC

TYPICAL A-42NN MASTER PANEL:
( NN = TOTAL NUMBER OF ZONES)

SYSTEM:
DRAWING #
DATE:
TITLE:

4200 RESCUE ASSISTANCE
90022-13
MAY 22, 2013
SYSTEM WIRE DIAGRAM

NOTES:

AUX1, AUX2, AUX3 AND AUX4 ARE OPEN COLLECTOR OUTPUTS FOR ZONES 1 THROUGH 4, RESPECTIVELY. EACH CAN SINK UP TO 100 mA AND IS ACTIVE DURING BOTH ALARM AND ACKNOWLEDGE CONDITIONS.

IF A ZONE ON AN 8010-300 CONTROL BOARD IS NOT BEING USED (SEE ZONES 1 THRU 3), THE JUMPER FOR EACH SUCH ZONE MUST BE SET TO THE "NOT USED" POSITION. IF THIS IS NOT DONE, A FAULT WILL BE INDICATED.

OLD STYLE 8010-300 BOARDS HAVE SCREW TERMINALS IN PLACE OF THE PIN-HEADER SHOWN HERE. WHEN ORDERING REPLACEMENT BOARDS, BE SURE TO SPECIFY "OLD STYLE / SCREW TERMINALS" IN THIS CASE.

JUMPER BETWEEN "GND" AND "S-COM" (PART OF FACTORY WIRE HARNESS) ENABLES ZONE SWITCHES ON PANEL FACEPLATE TO ENABLE / DISABLE THE SWITCHES FROM AN EXTERNAL SOURCE (FIRE ALARM PANEL, ETC.). DISCONNECT THIS WIRING, AND REPLACE WITH CONTACTS THAT FAIL TO A NORMALLY-CLOSED POSITION.

TYPICAL CALL STATION

DC POWER SUPPLY:
MODEL B-5243A SHOWN
24 VDC @ 3.5 AMPS

24VDC OUTPUT

AL400ULXB

24VDC OPEN

(LGREEN GROUND PIGTAILS)

120 VAC CIRCUIT

3-COND #18 AWG (MIN.)

GROUND LUG

BOND TO PANEL BACK BOX

FACIALPATE SPEAKER

INSULATED WIRE

TERMINATE SHIELDS TO SPEAKER MOUNTING STUD

FIELD WIRING

2-GANG BACK BOX

PIG-TAIL TO 1 BACK BOX VIA GROUND-CLIP

TERMINATE NOT TERMINATED AT THIS END (TAPED-UP)

STATION LEAD WIRING

4201A
4201B
4201B/V
4201B/VM

BRN
GRY
WHT
RD
GRN

WEB: www.cornell.com 414-351-4657(fax)

CORNELL Communications, Inc.
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DATE: MAY 22, 2013
SYSTEM: 4200 RESCUE ASSISTANCE
DRAWING #: 90022-13
D4200W-D
SYSTEM:
DRAWING #
DATE: JANUARY 14, 2010
TITLE: REMOTE ANNUNCIATOR LAYOUT
SYSTEM: 4200 RESCUE ASSISTANCE
DRAWING #: 90023-10  D4200W-B

RESCUE ASSISTANCE

4200-SERIES ANNUNCIATOR
(A-4204 SHOWN HERE)

- PRESS ZONE BUTTON TO ANSWER CALL AND ACTIVATE INTERCOM
- PRESS ZONE BUTTON AGAIN TO TURN INTERCOM OFF
- IF LINE FAULT LIGHT IS ON, CONTACT SERVICE PERSONNEL

ZONE 1
INTERCOM ON LINE FAULT ZONE CALL

ZONE 2
INTERCOM ON LINE FAULT ZONE CALL

ZONE 3
INTERCOM ON LINE FAULT ZONE CALL

ZONE 4
INTERCOM ON LINE FAULT ZONE CALL

ANNUNCIATOR POWER:
(3) #22 AWG (max) conductors
(2) for 24 VDC + earth ground

ANNUNCIATOR POINT WIRES:
#22 AWG MULTI-CONDUCTOR
(1) CONDUCTOR PER ZONE

A-40XX/TG ANNUNCIATOR
(A-4010M/TG SHOWN)

[XX = QTY OF LEDS,
(1) LED NEEDED PER ZONE
ON A-42XX]

HOME-RUN WIRING:
(1) CORNELL PART NUMBER CB-4200 CABLE
-DR- (2) SEPARATE CABLES:
(1) #22 AWG SHIELDED PR (AUDI)
(1) #22 AWG 4-COND (POWER/SWITCH/LED)

BATTERY BACK-UP
POWER SUPPLY
24VDC @ 3.5A

NOTE:
NO CONDUIT OR WIRE INTO BOTTOM OF CABINET,
BECAUSE OF BATTERIES.

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sales@cornell.com 414-351-4660
Web: www.cornell.com 414-351-4657(fax)
TITLE: FACTORY WIRING HARNESS
DATE: JANUARY 11, 2013
SYSTEM: 4200 RESCUE ASSISTANCE
DRAWING #: 90027-13

THIS DRAWING SHOWS THE TYPICAL INTERNAL WIRING, AS INSTALLED AT THE FACTORY BY CORNELL.
**4200 RESCUE ASSISTANCE TELEPHONE ACCESS KIT**

**DATE:** MAY 22, 2013  
**SYSTEM:** 4200 RESCUE ASSISTANCE  
**DRAWING #:** 90066-13  
**DTAK4200W**

**TYPICAL 8010-300 4-ZONE CONTROL BOARD INSIDE A-4200 SERIES ANNUNCIATOR (STATION TERMINATIONS NOT SHOWN)**

**ADD RELAYS:**
- (1) NEEDED PER ZONE
- 24 VAC COIL @ 30 mA (MAXIMUM)
- (1) CONDUCTOR PER ZONE PLUS (1) COMMON PER EVERY 8 ZONES

**INPUT COMMON TO TAK-4202/4208 INPUTS**

**MULTI-ZONE ALARM CONNECTION:**

**GENERAL ALARM CONNECTION:**

**IMPORTANT:**
- TAK-4202 & TAK-4208 ARE 1-WAY VOICE DIALERS.
- THEY DO NOT SUPPORT 2-WAY TALK PATHS.

**POWER 12VDC ADAPTER (INCLUDED)**

**MODE SWITCH:**
- BE SURE THAT IT IS IN PROPER POSITION:
  - "PHONE" = PROGRAM
  - "LINE" = NORMAL USE

**NOTE:**
- IF BATTERY BACK-UP IS REQUIRED FOR TAK UNIT, USE EITHER OF THE FOLLOWING:
  - PLUG ADAPTER INTO AN UNINTERRUPTABLE POWER SUPPLY (UPS)
  - PROVIDE A SEPARATE 12-VOLT DC POWER SUPPLY / CHARGER, AND USE THE CORD FROM THE INCLUDED ADAPTER.

**INSTALLER WILL NEED TO COORDINATE PHONE NUMBERS / ANSWERING SERVICE NEEDS WITH OWNER PRIOR TO INSTALLATION - THIS OFTEN TAKES SEVERAL WEEKS.**

- GENERAL ALARM = SYSTEM WILL SEND THE SAME MESSAGE FOR ANY ALARM ON THE SYSTEM
- MULTI-ZONE ALARM = DIFFERENT MESSAGE PER TAK INPUT. MESSAGE SENT CORRESPONDS TO THE INPUT THAT IS ACTUATED BY A RELAY

**PC OR MODEM (FOR PROGRAMMING)**

**PROGRAM UTILITY SOFTWARE IS AVAILABLE FROM MFGRS. WEB-SITE.**

**C.O. OR PBX TRUNK LINE (FOR NORMAL OPERATION)**

**REFER TO TAK-4202 / TAK-4208 INSTALLATION INSTRUCTIONS FOR ENTRY OF PHONE NUMBERS, MESSAGES, ETC. - AS REQUIRED FOR OPERATION.**