JK Series

Video Intercom and
Access Control System

Architectural and Engineering
Specifications

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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction
Specifications Institute (CSI) 3-Part Format, including *MasterFormat, SectionFormat,* and
PageFormat, as described in *The Project Resource Manual—CSI Manual of Practice, Fifth Edition.*

The section must be carefully reviewed and edited by the Architect or Engineer to meet the
requirements of the project and local building code. Coordinate this section with other specification
sections and the Drawings. Delete all "Specifier Notes" after editing this section.

Section numbers are from *MasterFormat 1995 Edition*, with numbers from *MasterFormat 2004
Edition* in parentheses. Delete version not required.

SECTION 13710 (28 13 00)

VIDEO INTERCOM AND ACCESS CONTROL SYSTEM

Specifier Notes: This section covers Aiphone Corporation "JK Series" hands-free color video
system with pan, tilt, and zoom. Consult Aiphone Corporation for assistance in editing this section
for the specific application.

PART 1   GENERAL

1.1   SECTION INCLUDES

  A.   Hands-free color video system with pan, tilt, and zoom.

1.2   RELATED SECTIONS

Specifier Notes: List numbers and titles of sections with work directly related to this section.

  A.

1.3   REFERENCES

A.   ISO 9001:2008 – Quality Management Systems – Requirements.

1.4   SYSTEM DESCRIPTION – HANDS-FREE COLOR VIDEO INTERCOM MASTER MONITOR STATION

A.   Answering Door Call in Hands-Free Mode:
1.   Press CALL button.
2.   Chime tone sounds, caller is seen on video monitor, and outside sound is heard.
3.   Audio and video turn off after approximately 45 seconds if not answered.
4.   Press TALK button momentarily, and after beep, communicate hands free. Red transmit LED lights when you talk, and goes off as you listen to caller or hear outside sounds.
5.   After finishing communication, press OFF button and communication will end after beep.

B.   Answering Door Call in Press-to-Talk (PTT) Mode:
1.   Press CALL button.
2.   Chime tone sounds, caller is seen on video monitor, and outside sound is heard.
3.   Audio and video turn off after approximately 45 seconds if not answered.
4.   Press and hold TALK button for minimum of 1 second. Beep sounds, and after approximately 1 second another beep sounds, which indicates PTT mode is engaged. If TALK button is pressed less than 0.5 seconds, PTT mode is not engaged.
5.   When communicating, keep TALK button pressed. To hear caller's voice, release TALK button.
6.   After finishing communication, press OFF button and communication will end after beep.

C.   Instant-Voice-Call Function:
1.   Press CALL button.
2.   Even without answering, door area can be seen and heard with video and audio for approximately 45 seconds. Inside sound is not heard outside.

D.   Activating Door Release:
1.   Press DOOR RELEASE button.
2.   Open door while release mechanism is activated. During release, red DOOR RELEASE LED flashes.

E.   Entrance Monitoring:
1.   Press MONITOR button in standby mode.
2.   Video monitor displays image from door station and incoming audio is heard. If you do not press TALK button, caller will not hear sounds from inside station.
3.   Press OFF button to end communication.

F.   Room-to-Room Communication:

1. Press CALL button to talk with other person.
2. Call-in is sent to sub master station.
3. Reply of other person is not heard.
4. If other person presses TALK button, hands-free communication is possible.
5. Press and release OFF button to end communication.

G. Wide/Zoom Switching:
1. Press ZOOM/WIDE button when picture is displayed.
2. Switching between wide and zoom occurs each time button is pressed.

H. Pan/Tilt Operation:
1. When zoom picture is displayed, press UP, DOWN, LEFT, and RIGHT buttons.
2. Moving diagonally is also possible.

I. Zoom Picture Preset:
1. Picture can be set to display using set zoom picture position for when call is received from door station.
2. When switching from wide picture to zoom picture, zoom picture displays at preset position.
3. When zoom picture is displayed, press UP, DOWN, LEFT, and RIGHT buttons.
4. While viewing picture, set desired picture position.
5. Press ZOOM/WIDE button for minimum of 2 seconds.
6. Beep will sound and position setting will be completed.

J. Night Illumination:
1. At night, door station illuminator LED lights up during calling or communication.
2. When Call is Made from Door Station:
   a. If CALL button of door station is pressed, illuminator LED lights up.
   b. When communication ends, illuminator LED will go out.
3. Light Up Illuminator LED During Entrance Monitoring:
   a. When TALK button is pressed during entrance monitoring, communications starts and illuminator LED will light up.
   b. Inside sound can be heard at entrance.
   c. When communication ends, illuminator LED will go out.

K. Backlight Adjustment, Night Sensitivity Adjustment:
1. To perform adjustment, press ADJUST button when image is difficult to see. Automatic adjustment to more visible screen is performed.
2. To cancel adjustment, press ADJUST button during adjustment.

Specifier Notes: Include the following **paragraph** when specifying Master Monitor Station Model JK-1MD.

L. If Optional Units Installed:
1. When separately installed sensor detects malfunction or CALL button is pressed, alarm sound occurs and red transmit LED flashes.
2. Press OFF button to stop alarm sound.

    M.   Automatic Recording:
1. If a call is received from video door station, unit starts recording automatically.
2. Red record LED flashes during recording.
3. Recording starts approximately 2 seconds after CALL button of video door station is pressed.
4. Maximum length of approximately 6 seconds (6 shots) can be recorded, with 1 picture and 1 shot for each second.
5. Maximum of 40 images can be recorded (combined total of automatic recording and manual recording images).
6. If 40 images are exceeded, images are overwritten starting from image with oldest recording date.
7. Initial setting is for recording to be done with first 3 pictures as zoom pictures at a preset position, and next 3 pictures as wide pictures.

    N.   Manual Recording:
1. Display video image with operation such as entrance monitoring.
2. Press REC button. Red record LED flashes 6 times and recording starts.
3. Maximum length of approximately 6 seconds (6 shots) can be recorded, with 1 image and 1 shot for each second.
4. Maximum of 40 images can be recorded (combined total of automatic recording and manual recording images).
5. When 40 images are exceeded, new images overwrite old images starting from oldest recorded date.

    O.   Play Recorded Picture:
1. Press PLAY button in standby mode to display picture with most recent date.
2. Press PLAY button on play-waiting screen. Recorded image is played. When play of 1 image ends, next image is displayed.
3. To advance play screen frame-by-frame, press PLAY button during playback to pause. Play moves forward frame-by-frame each time DOOR RELEASE button is pressed. When frames of 1 image end, next picture is displayed.
4. Press OFF button to end.

    P.   Save Recorded Picture:
1. Display picture that you want to save in play-waiting screen. Press MENU button to display save/erase selection screen.
2. Press PLAY button. If image is saved, key symbol is displayed. If image has already been saved, save is cancelled. Each time PLAY button is pressed, operation switches between save and cancel.

    Q.   Erase Recorded Picture:
1. Display picture that you want to erase in play screen. Press MENU/MEMO button to display save/erase selection screen.
2. Press MENU button to erase.
3. Press REC button to stop erasing.
4. Once picture is erased, it cannot be restored.

1.5   SYSTEM DESCRIPTION – HANDS-FREE COLOR VIDEO INTERCOM SUB MONITOR STATION

Specifier Notes: Edit the system description as required for the project. Consult Aiphone Corporation for more information.

A.   Answering Door Call in Hands-Free Mode:
1.   Press CALL button.
2.   Chime tone sounds, caller is seen on video monitor, and outside sound is heard.
3.   Audio and video turn off after approximately 45 seconds if not answered.
4.   Press TALK button momentarily, and after beep, communicate hands free. Red transmit LED lights when you talk, and goes off as you listen to caller or hear outside sounds.
5.   After finishing communication, press OFF button and communication will end after beep.

B.   Answering Door Call in Press-to-Talk (PTT) Mode:
1.   Press CALL button.
2.   Chime tone sounds, caller is seen on video monitor, and outside sound is heard.
3.   Audio and video turn off after approximately 45 seconds if not answered.
4.   Press and hold TALK button for minimum of 1 second. Beep sounds, and after approximately 1 second another beep sounds, which indicates PTT mode is engaged. If TALK button is pressed less than 0.5 seconds, PTT mode is not engaged.
5.   When communicating, keep TALK button pressed. To hear caller's voice, release TALK button.
6.   After finishing communication, press OFF button and communication will end after beep.

C.   Instant-Voice-Call Function:
1.   Press CALL button.
2.   Even without answering, door area can be seen and heard with video and audio for approximately 45 seconds. Inside sound is not heard outside.

D.   Activating Door Release:
1.   Press DOOR RELEASE button.
2.   Open door while release mechanism is activated. During release, red DOOR RELEASE LED flashes.

E.   Entrance Monitoring:
1.   Press MONITOR button in standby mode.
2.   Video monitor displays image from door station and incoming audio is heard. If you do not press TALK button, caller will not hear sounds from inside station.
3.   Press OFF button to end communication.

F.   Room-to-Room Communication:
1.   Press CALL button to talk with other person.
2.   Call-in is sent to master monitor station.
3.   Reply of other person is not heard.
4.   If other person presses TALK button, hands-free communication is possible.
5.   Press and release OFF button to end communication.

G.   Wide/Zoom Switching:
1.   Press ZOOM/WIDE button when picture is displayed.
2.   Switching between wide and zoom occurs each time button is pressed.

H.   Pan/Tilt Operation:
1.   When zoom picture is displayed, press UP, DOWN, LEFT, and RIGHT buttons.
2.   Moving diagonally is also possible.

I.   Night Illumination:
1.   At night, door station illuminator LED lights up during calling or communication.
2.   When Call is Made from Door Station:
     a.   If CALL button of door station is pressed, illuminator LED lights up.
     b.   When communication ends, illuminator LED will go out.
3.   Light Up Illuminator LED During Entrance Monitoring:
     a.   When TALK button is pressed during entrance monitoring, communications starts and illuminator LED will light up.
     b.   Inside sound can be heard at entrance.
     c.   When communication ends, illuminator LED will go out.

J.   Backlight Adjustment, Night Sensitivity Adjustment:
1.   To perform adjustment, press ADJUST button when image is difficult to see. Automatic adjustment to more visible screen is performed.
2.   To cancel adjustment, press ADJUST button during adjustment.

K.   If Optional Units Installed:
1.   When separately installed sensor detects malfunction or CALL button is pressed, alarm sound occurs and red transmit LED flashes.
2.   Press OFF button to stop alarm sound.

1.6   SYSTEM DESCRIPTION – AUDIO-ONLY SUB MASTER STATION

Specifier Notes: Edit the system description as required for the project. Consult Aiphone Corporation for more information.

A.   Answering Door Call in Hands-Free Mode:
1.   Press CALL button.
2.   Chime tone sounds and incoming audio will be heard.
3.   Audio turns off after approximately 45 seconds if not answered.
4.   Press TALK button momentarily, and after beep, communicate hands free. Red transmit LED lights when you talk, and goes off as you listen to caller or hear outside sounds.
5.   After finishing communication, press OFF button and communication will end after beep.

B.   Answering Door Call in Press-to-Talk (PTT) Mode:
1.   Press CALL button.
2.   Chime tone sounds and incoming audio will be heard.
3.   Audio turns off after approximately 45 seconds if not answered.
4.   Press and hold TALK button for minimum of 1 second. Beep sounds, and after approximately 1 second another beep sounds, which indicates PTT mode is entered.

If TALK button is pressed less than 0.5 seconds, switching to PTT mode is not performed.

    5.   When communicating, keep TALK button pressed. To hear caller's voice, release TALK button.

    6.   After finishing communication, press OFF button and communication will end after beep.

C.   Instant-Voice-Call Function:
    1.   Press CALL button.
    2.   Even without answering, door area can be heard with audio for approximately 45 seconds. Inside sound is not heard outside.

D.   Activating Door Release:
    1.   Press DOOR RELEASE button.
    2.   Open door while release mechanism is activated.

E.   Room-to-Room Communication:
    1.   Press CALL button to talk with other person.
    2.   Call-in is sent to master monitor station.
    3.   Reply of other person is not heard.
    4.   If other person presses TALK button, hands-free communication is possible.
    5.   Press and release OFF button to end communication.

F.   If Optional Units Installed:
    1.   When separately installed sensor detects malfunction or CALL button is pressed, alarm sound occurs and red transmit LED flashes.
    2.   Press OFF button to stop alarm sound.

1.7   SUBMITTALS

A.   Comply with Section 01330 (01 33 00) – Submittal Procedures.

B.   Product Data: Submit manufacturer's product data, including installation instructions.

C.   Shop Drawings: Submit the following:
    1.   Wiring Diagrams: Indicate wiring for each item of equipment and interconnections between items of equipment.
    2.   Include manufacturer's names, model numbers, ratings, power requirements, equipment layout, device arrangement, complete wiring point-to-point diagrams, and conduit layouts.

D.   Installation and Operation Manuals:
    1.   Submit manufacturer's installation and operation manual, including operation instructions and component wiring diagrams.
    2.   Provide detailed information required for Owner to properly operate equipment.

E.   Warranty: Submit manufacturer's standard warranty.

1.8   QUALITY ASSURANCE

A.   Manufacturer's Qualifications: ISO 9001:2008 certified company.

1.9   DELIVERY, STORAGE, AND HANDLING

A.   Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B.   Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.

C.   Handling: Protect materials during handling and installation to prevent damage.

1.10   WARRANTY

A.   Warranty Period: Two years from date of Substantial Completion.

PART 2   PRODUCTS

2.1   MANUFACTURER

A.   Aiphone Corporation, 1700 130th Avenue NE, Bellevue, Washington 98005. Toll Free (800) 692-0200. Phone (425) 455-0510. Fax (425) 455-0071. Website www.aiphone.com. E-mail info@aiphone.com.

2.2   VIDEO INTERCOM AND ACCESS CONTROL SYSTEM

A.   Hands-Free Color Video System with Pan, Tilt, and Zoom: Aiphone JK Series.

Specifier Notes: Specify required stations for JK Series system. Delete stations not required.

B.   Hands-Free Color Video Intercom Master Monitor Station: Model JK-1MD.
    1.   Power: 18 V DC.
    2.   Current Consumption: 400 mA maximum.
    3.   Calling: Chime and image, approximately 45 seconds.
    4.   Communication:
        a.   Hands-Free Mode: Hands free 60 seconds.
        b.   PTT Mode: Press-to-talk, release-to-listen 60 seconds.
    5.   Video Monitor:
        a.   3.5-inch direct-view TFT color LCD.
        b.   Scanning Lines: 525.
    6.   Door Release Contact: 24 V AC/DC, 500 mA (N/O dry closure contact L, L).
        a.   Minimum Contact: 100 mV DC, 0.1 mA.
    7.   Operating Temperature: 32 degrees F to 104 degrees F (0 degrees C to 40 degrees C).
    8.   Microphone.
    9.   Red door release LED.
    10.   DOOR RELEASE button.
    11.   ZOOM/WIDE button.
    12.   ADJUST button.
    13.   PAN/TILT button.
    14.   CALL button.
    15.   Option button.

16. Red transmit LED.
17. TALK button.
18. OFF button.
19. MONITOR button.
20. POWER switch.
21. Speaker.
22. Screen brightness control.
23. Receive volume control.
24. Chime tone volume.

C. Hands-Free Color Video Intercom Master Monitor Station: Model JK-1MED.
   1. Power: 18 V DC.
   2. Current Consumption: 400 mA maximum.
   3. Calling: Chime and image, approximately 45 seconds.
   4. Communication:
      a. Hands-Free Mode: Hands free 60 seconds.
      b. PTT Mode: Press-to-talk, release-to-listen 60 seconds.
   5. Video Monitor:
      a. 3.5-inch direct-view TFT color LCD.
      b. Scanning Lines: 525.
   6. Door Release Contact: 24 V AC/DC, 500 mA (N/O dry closure contact L, L).
      a. Minimum Contact: 100 mV DC, 0.1 mA.
   7. Operating Temperature: 32 degrees F to 104 degrees F (0 degrees C to 40 degrees C).
   8. Microphone.
   9. Red door release LED.
   10. DOOR RELEASE button.
   11. Red menu LED.
   12. MENU button.
   13. PAN/TILT button.
   14. ZOOM/WIDE button.
   15. ADJUST button.
   16. CALL button.
   17. Option button.
   18. Red transmit LED.
   19. TALK button.
   20. OFF button.
   21. MONITOR button.
   22. Red play LED.
   23. PLAY button.
   24. Red record LED.
   25. RECORD button.
   26. POWER switch.
   27. Speaker.
   28. Screen brightness control.
   29. Receive volume control.
   30. Chime tone volume.

D. Hands-Free Color Video Intercom Sub Monitor Station: Model JK-1HD.
   1. Power: 18 V DC.
   2. Current Consumption: 200 mA maximum.
   3. Calling: Chime and image, approximately 45 seconds.

4. Communication:
   a. Hands-Free Mode: Hands free.
   b. PTT Mode: Press-to-talk, release-to-listen. Communication time based on connected monitor station.
5. Video Monitor:
   a. 3.5-inch direct-view TFT color LCD.
   b. Scanning Lines: 525.
6. Operating Temperature: 32 degrees F to 104 degrees F (0 degrees C to 40 degrees C).
7. Microphone.
8. Red door release LED.
9. DOOR RELEASE button.
10. ZOOM/WIDE button.
11. ADJUST button.
12. PAN/TILT button.
13. CALL button.
14. Option button.
15. Red transmit LED.
16. TALK button.
17. OFF button.
18. MONITOR button.
19. POWER switch.
20. Speaker.
21. Screen brightness control.
22. Receive volume control.
23. Chime tone volume.

E. Audio-Only Sub Master Station: Model JK-1SD.
   1. Power: 18 V DC.
   2. Current Consumption: 120 mA maximum.
   3. Calling: Chime, approximately 45 seconds.
   4. Communication:
      a. Hands-Free Mode: Hands free approximately 60 seconds.
      b. PTT Mode: Press-to-talk, release-to-listen approximately 60 seconds.
   5. Operating Temperature: 32 degrees F to 104 degrees F (0 degrees C to 40 degrees C).
   6. Microphone.
   7. Option button.
   8. CALL button.
   9. DOOR RELEASE button.
   10. Speaker.
   11. OFF button.
   12. TALK button.
   13. Red transmit LED.
   14. POWER switch.
   15. Receive volume control.
   16. Chime tone volume.

Specifier Notes: Specify required video door station models. Delete video door station models not required.

F. Video Door Station: Model JK-DA.
 1. Cover: Plastic.
 2. Surface mount.
 3. Microphone.
 4. Speaker.
 5. Camera:
   a. Complementary metal oxide semiconductor (CMOS).
   b. Scanning Lines: 525.
   c. Minimum Subject Illumination: 5 Lux at 50-cm (1'-6") distance.
 6. Weather resistant.
 7. Operating Temperature: 14 degrees F to 140 degrees F (minus 10 degrees C to 60 degrees C).

G. Vandal-Resistant Video Door Station: Model JK-DV.
 1. Faceplate: Die-cast zinc.
 2. Surface mount.
 3. Microphone.
 4. Speaker.
 5. Camera:
   a. Complementary metal oxide semiconductor (CMOS).
   b. Scanning Lines: 525.
   c. Minimum Subject Illumination: 5 Lux at 50-cm (1'-6") distance.
 6. CALL button.
 7. Vandal resistant.
 8. Weather resistant.
 9. Operating Temperature: 14 degrees F to 140 degrees F (minus 10 degrees C to 60 degrees C).

H. Vandal-Resistant Video Door Station: Model JK-DVF.
 1. Faceplate: Stainless steel.
 2. Flush mount.
 3. Microphone.
 4. Speaker.
 5. Camera:
   a. Complementary metal oxide semiconductor (CMOS).
   b. Scanning Lines: 525.
   c. Minimum Subject Illumination: 5 Lux at 50-cm (1-foot 6-inch) distance.
 6. CALL button.
 7. Vandal resistant.
 8. Weather resistant.
 9. Operating Temperature: 14 degrees F to 140 degrees F (minus 10 degrees C to 60 degrees C).

2.3   ACCESSORIES

Specifier Notes: Specify required accessories. Delete accessories not required. Consult Aiphone Corporation for more information.

A. Access Control Keypad: Model AC-10S.
 1. Faceplate: Die-cast zinc to match fixed video door station Model JK-DV.

B. 30-Degree Angle Box: Model KAW-D.
   1.   For fixed video door station Model JK-DA.

C. 1-Gang Mounting Plate: Model MKW-P.
   1.   For fixed video door station Model JK-DV.

D. Mullion Mounting Bracket: Model KMB-45.
   1.   For fixed video door station Model JK-DA.

E. Security Lock Box: Model SBX-LSE.
   1.   For fixed video door station Models JK-DV or JK-DVF.
   2.   Lock not included.

F. Surface Mount Box: Model SBX-DVF.
   1.   For fixed video door station Model JK-DVF.

G. Surface Mount Box: Model SBX-ACE.
   1.   For fixed video door station Model JK-DA.

H. Long-Distance Door Station Adaptor: Model JKW-BA.

Specifier Notes: When using electric door strikes not manufactured by Aiphone, specify selective door release adaptor Model RY-3DL or Form C door release relay Model RY-18L.

I. Electric Door Strike: Model EL-12S or door strike suitable for door being released.
   1.   12 V AC, 125 mA.
   2.   12 V DC, 200 mA.

J. Form C Door Release Relay: Model RY-18L.
   1.   For 1 door.

K. Call Extension Speaker: Model IER-2.

L. External Signaling Relay: Model TAR-3 with Model SKK-620 power supply.

PART 3   EXECUTION

3.1   EXAMINATION

A. Examine areas to receive hands-free color video system with pan, tilt, and zoom.

B. Notify Architect of conditions that would adversely affect installation or subsequent use.

C. Do not begin installation until unacceptable conditions are corrected.

3.2   INSTALLATION

A. Install hands-free color video system with pan, tilt, and zoom in accordance with manufacturer's instructions at locations indicated on the Drawings.

B.   Mount equipment plumb, level, square, and secure.

3.3   ADJUSTING

A.   Adjust hands-free color video system with pan, tilt, and zoom for proper operation in accordance with manufacturer's instructions.

3.4   DEMONSTRATION AND TRAINING

A.   Demonstration:
   1.   Demonstrate that hands-free color video system with pan, tilt, and zoom functions properly.
   2.   Perform demonstration at final system inspection by qualified representative of manufacturer.

B.   Instruction and Training:
   1.   Provide instruction and training of Owner's personnel as required for operation of hands-free color video system with pan, tilt, and zoom.
   2.   Provide hands-on demonstration of operation of system components and complete system, including user-level program changes and functions.
   3.   Provide instruction and training by qualified representative of manufacturer.

3.5   PROTECTION

A.   Protect installed hands-free color video system with pan, tilt, and zoom from damage during construction.

END OF SECTION