

2-Wire Video Intercom System

Technical Manual

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LOOK-C DOOR SURVEILLANCE

Door Entry Security

2 WIRE DOOR VIDEO INTERCOM SYSTEM

Latest in home door intercom innovation. Intelligent twin wire system that helps in creating a quick, simple and economical installation. System setup is easy via the comprehensive yet simple menu system. With design and style to suit today's modern home decors.

- No Polarity, twisted pair, easily to wire solution. Use CAT5 or twin core drop cable.
- One common power supply to all type solution. PC6 will run 6 units, more use PS524.
- Supports from 1 to a Max. of 16 Monitors connected in one system (Use DBC4S)
- Expanding a system to multiple door station cameras with DBC4S (Up to 4 max.)
- Each door camera can control 2 locks. Door locks are an optional extra (EL971)
- All 2-Wire H2 products are compatible. All operate on the same twisted pair wire.



2 Wire - 1 Door - 1 Monitor

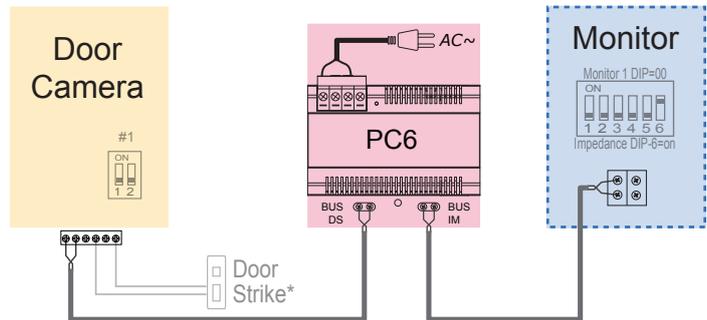
MINIMUM SYSTEM WITH PC6

The simplest setup involves a Monitor, a Door Station Camera and a Bus Power Supply (PC6). Two wire setup as follows:

- No Polarity, twisted pair, easily to wire solution
- Use CAT5 or twin core drop cable or equivalent
- Cable distances can be up to 100M Total (CAT5)
- One common power supply to all type solution (PC6)
- PC6 is a Mains 240Vac power to 24Vdc injector 1.2A
- The door camera can control a door strike*
- Door Strike connections may vary to that shown*
- System is expandable with additional components

*Further information available, see Door Strike Info

- Monitors: 1
- Door Camera: 1
- Power Source: PC6
- Dip Switches: Default
- Menu Settings: Default



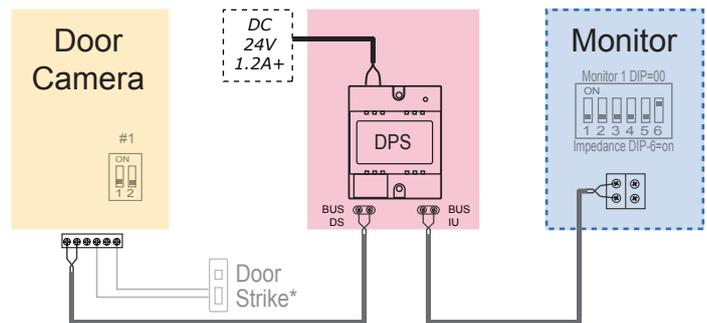
MINIMUM SYSTEM WITH DPS

The simplest setup involves a Monitor, a Door Station Camera and a Bus Power INJECTOR (DPS) and Requires 24-28Vdc.

- No Polarity, twisted pair, easily to wire solution
- Use CAT5 or twin core drop cable or equivalent
- Cable distances can be up to 100M Total (CAT5)
- One common power supply to all type solution (DPS)
- DPS is an injector that requires an external power source
- Requires 24Vdc to 28Vdc with 1A for this minimal system
- Each door camera can control a door strike*
- Door Strike connections may vary to that shown*
- System is expandable with additional components

*Further information available, see Door Strike Info

- Monitors: 1
- Door Camera: 1
- Power Source: DPS
- Dip Switches: Default
- Menu Settings: Default



2 Wire - 1 Door - 4 Monitors

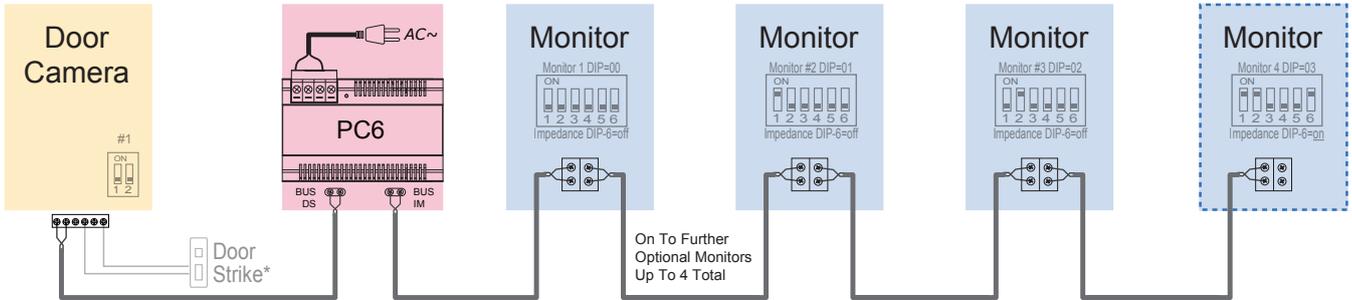
EXPANDED SYSTEM WITH DAISY CHAIN

System can be simply expanded to include 1 to up to 4 monitors using the existing PC6 power solution and extending the cable in a daisy chain, up to a maximum of 100 metres cable (CAT5).

- No Polarity, twisted pair, easily to wire solution. Use CAT5 or twin core drop cable or equivalent
- Cable distance can be up to 100M total when using CAT5 cable (from camera to last monitor)
- One common power supply to all type solution (Use PC6 Mains Power or DPS Power Injector)
- Connect multiple monitors from 2 to 4 on the one Bus with PC6 Power and a Door Camera
- Monitor DIP Switches need setting. Monitor Menu needs setting for Master/Slave (See manual)

Multiple monitors need to be identified for the system to operate. This is done by changing DIP Switch settings (1-16). See DIP settings.

In this configuration, all monitors impedance switches need to be set to OFF, except the end (last) monitor's impedance is set to ON.



*Further information available, see Door Strike Info

EXPANDED SYSTEM WITH STAR WIRING

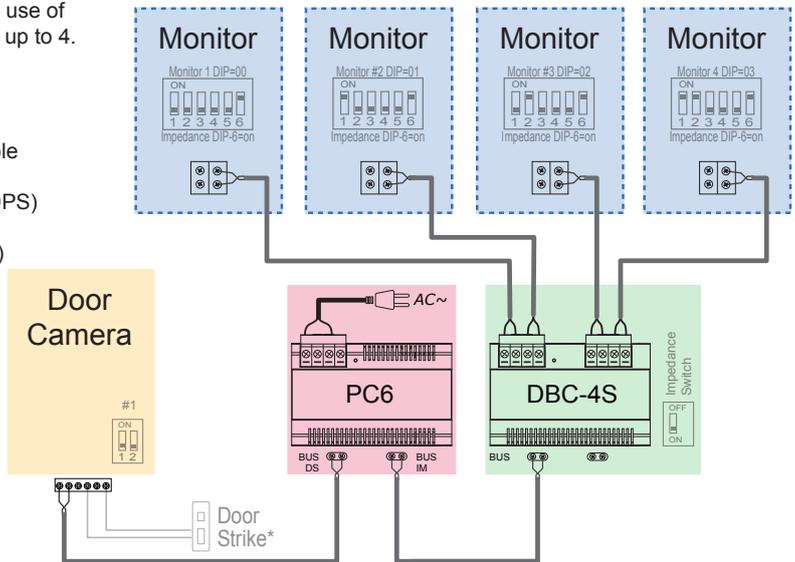
An alternative wiring system radiating from a single point by use of the DBC-4S Bus Splitter. Allows adding additional monitors, up to 4.

- DBC-4S Splitter for a Star Wiring alternative
- No Polarity, twisted pair, easily to wire solution.
- Use CAT5 or twin core drop cable or equivalent
- Cable distance can be up to 100M when using CAT5 cable from the Door Camera to the furthest of the monitors
- One common power supply to all type solution (PC6 or DPS)
- Monitor DIP Switches need setting. Monitor Menu needs setting for Master/Slave (See Monitor Instruction Manual)

*Further information available, see Door Strike Info

Multiple monitors need to be identified for the system to operate. This is done by changing DIP Switch settings (1-16). See DIP settings.

In this configuration, all the monitors are at the end of each Bus so their impedance switches need to be set to ON



2 Wire - 4 Doors - 1 Monitor

EXPANDED SYSTEM WITH STAR WIRING

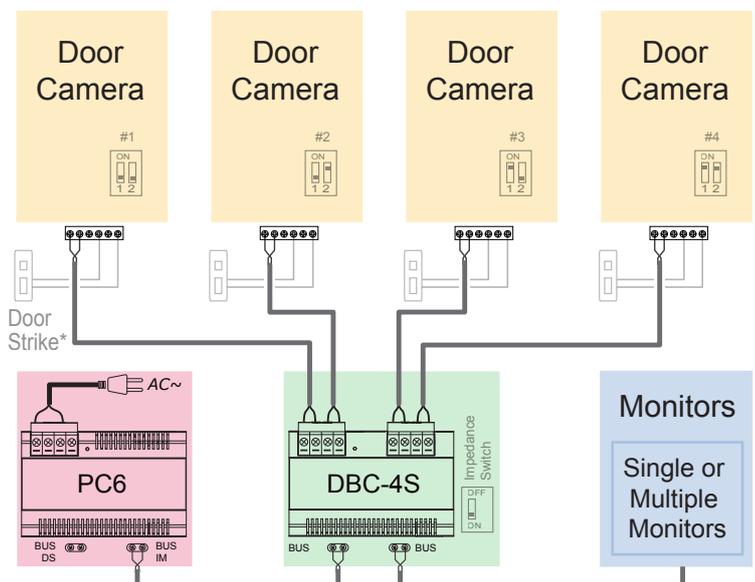
Up to four cameras can be connected to a system with the addition of a DBC-4S Bus Splitter. Each Camera Station can control a door by use of a Door strike. PC6 Power Injector is sufficient to run ALL Door Cameras plus up to four monitors.

- DBC-4S Splitter for expanding to extra Door Cameras
- DBC-4S Supports Two to Four Door Camera Stations
- Allows view and control of each Door Camera & Door strike
- Auto switches the monitor to the appropriate camera
- Cameras are internally terminated, so no Impedance switch to set and Daisy-chain wiring is not available for cameras.
- Cable distance can be up to 100M from Camera to Monitor
- PC6 has enough power to supply more Monitors in a further expanded system (See above) †
- Each door camera can control a door strike*
- Door Strike connections may vary to that shown*

*Further information available, see Door Strike Info

Multiple cameras need to be identified for the system to operate. This is done by changing DIP Switch settings (1-4). See DIP settings.

In this configuration, only one monitor is shown. Further monitors can be added, see multi-monitor configurations for further information.



LOOK-C DOOR SURVEILLANCE

2 Wire - 4 Doors - 16 Monitors

EXPANDED SYSTEM MAXIMUM

An example of the maximum expansion of a system.

This layout demonstrates the best configuration for low noise pictures, dependable operation with good distance of cable runs using CAT5 or drop cable.

When designing a large layout of a Look-C Door Intercom, you can use this topology of a full system and then remove any camera or monitor not required.

The Master Bus (dotted line) is Daisy-Chain wired to each of the DBC-4S Bus Splitters, which in turn are Star-Wired to each unit on a branch Bus.

Up to sixteen Monitors can be added to a system. This is the maximum amount of monitors identified on a system by the monitor ID (See DIP Switches).

A maximum of four cameras can be connected to a system with the addition of a DBC-4S Bus Splitter. Each Camera Station can control a Door strike.

To power this system requires an external 24V 5 Amp High Current Power supply and DPS Power Injector.

See each units instruction manual for further details.

- DBC-4S Splitter for expanding to extra Monitors
- Supports up to a maximum of 16 Monitors
- Each Monitor can intercom with any other Monitor
- DBC-4S Splitter for expanding to extra Door Cameras
- Supports Two to Four Door Camera Stations
- Allows view and control of each Door Camera
- Auto switches the monitor to the appropriate camera
- Each door camera can control a door strike*
- Door Strike connections may vary to that shown*
- No Polarity, twisted pair, easily to wire solution.
- Use CAT5 or twin core drop cable or equivalent
- Cable distance can be up to 100M from the Camera
- DPS Injector requires a 24V 5 Amp Power Pack

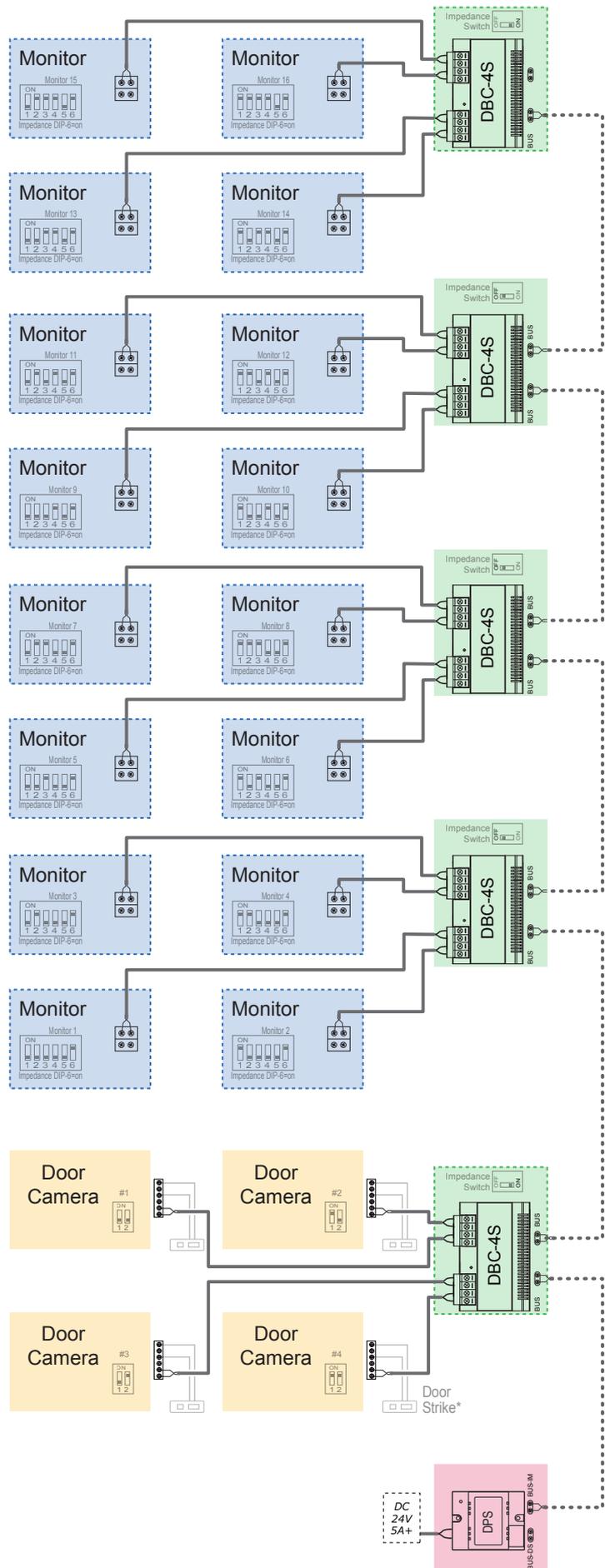
Multiple monitors need to be identified for the system to operate. This is done by changing DIP Switch settings (1-16). See DIP settings.

In this configuration, all the monitors are at the end of each Bus so their impedance switches need to be set to ON

Multiple cameras need to be identified for the system to operate. This is done by changing DIP Switch settings (1-4). See DIP settings.

The master Bus needs to be terminated at end-of-line. This is done by selecting the DBC-4S Impedance Switch to ON.

*Further information available, see Door Strike Info



2 Wire - CCTV Controller

GENERAL SETUP DCU

Multi-function device designed to connect one or two Standard CCTV Analogue Video Cameras into the Look-C Two Wire Video Intercom System.

Also enables a zone control point for door actuator or Light with programmable automatic features.

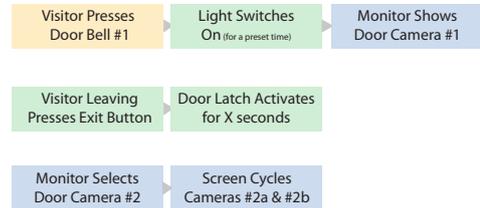
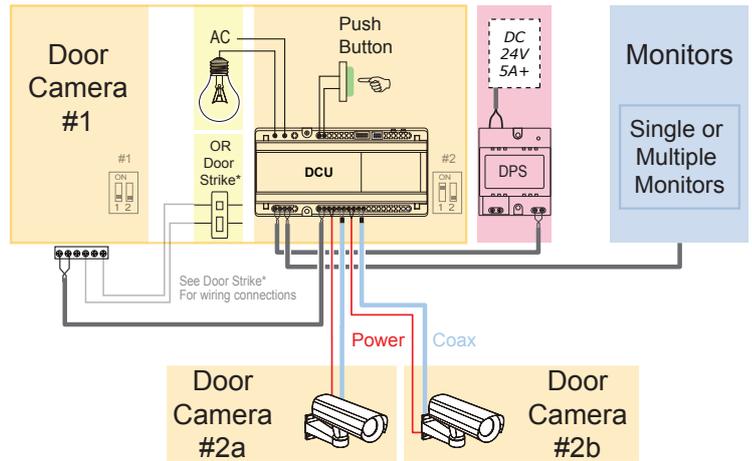
- Connects CCTV vision into the Look-C System
- One or Two analogue video camera inputs
- Includes 12Vdc power source for the cameras
- If two cameras are connected, then on-screen viewing is cycled between the two cameras
- Requires at least one Door Camera in system
- Connect Optional Door Actuator or a Light

OPTIONAL DOOR ACTUATOR

- See "Examples of Door Strike Connections"
- "Exit Button" with time delay for door actuator
- Requires external power for door actuator
- Wiring connection depends on Door Strike
- DCU Contacts programmed for NO/NC*

OPTIONAL LIGHT CONTROL

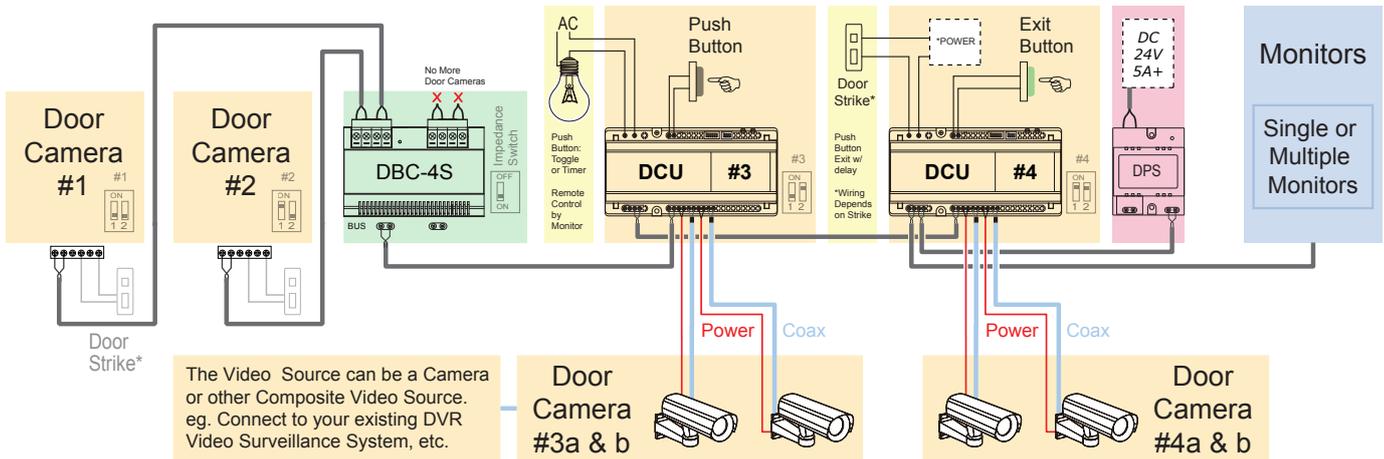
- or alternatively you can connect a light
- Light is triggered by push button ON with timer or Light is toggled on/off by the push-button or by Door Camera Station #1 call button or by any monitor viewing the DCU
- DCU uses dry contact relay (Normally Open)
- Relay Contacts up to 240Vac 7A max



EXPANDED SETUP DCU

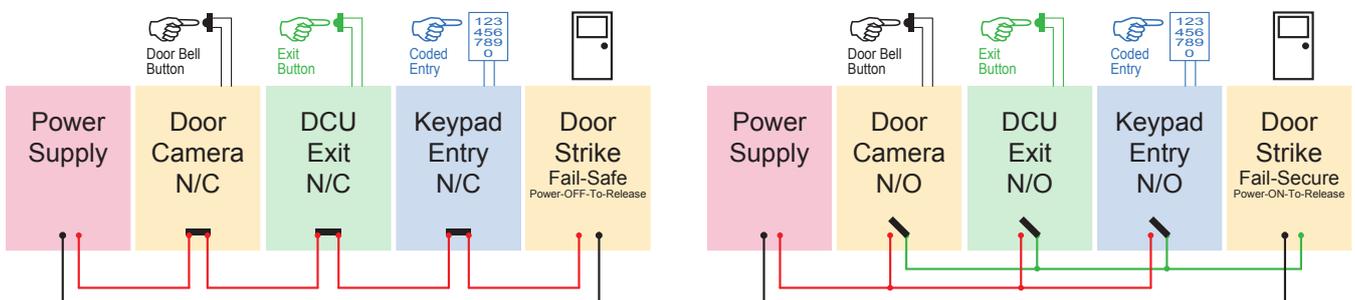
The diagram below shows an example of multiple DCU unit setup. The DCU is identified as also the Door Cameras with a maximum of four units. Thus you can have a combination of one door station and three DCUs, or three door cameras and one DCU. See manual for more information.

- Door Bell Pressed on Door Camera #1 or #2 both activate the Light
- Push Button Pressed will activate/de-activate the light (toggle)
- In Auto Mode, the light will stay on for a pre-set delay, then switch off
- In manual mode, light is switched Off by the push button only (Not the Monitor)



- Fail-Safe / Power-OFF-To-Release type Door Strike Connections
- DCU allows a programmable Time Delay Activation for Exiting
- Shown with optional Keypad or RFID entry module

- Fail-Secure / Power-ON-To-Release type Door Strike Connections
- DCU allows a programmable Time Delay Activation for Exiting
- Shown with optional Keypad or RFID entry module



LOOK-C DOOR SURVEILLANCE

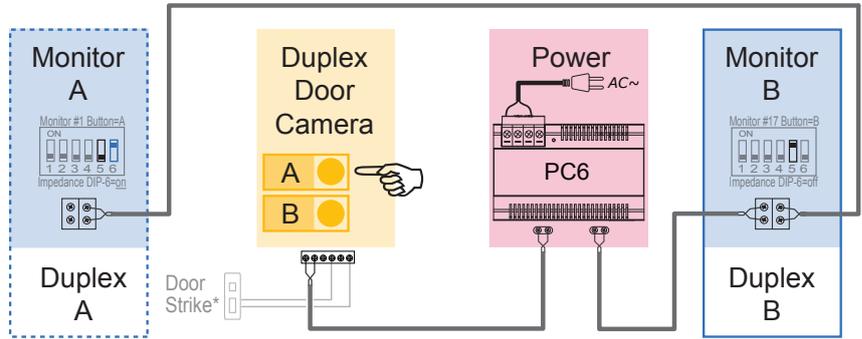
2 Wire - Duplex

H292RH DUAL BUTTON SYSTEM

The H292RH Door Camera Station is a single camera with two door-bell buttons A & B. Monitors are pre-set to ring on either one of the button presses A or B. The door strike is shared and monitors can intercom between each other. This makes the H292RH suitable for Duplex Units with a common door, or share situations in a common dwelling, Dual occupancy, Grannie Flats, Teenagers, Private/Office, Business A or B, etc. Two door strikes can be attached, however, both camera systems A & B can control both door strikes.

- Two separated systems share a single camera
- Door Camera has two Door-Bell Buttons A or B
- Requires a minimum of two Monitors (A & B)
- DIP Switch 5 selects as Monitor for Button A or B
- Monitors control common door strike*
- Door Strike connections may vary to that shown*
- System can expand to a maximum of 16 Monitors
- Monitor at the end of a chain must be terminated

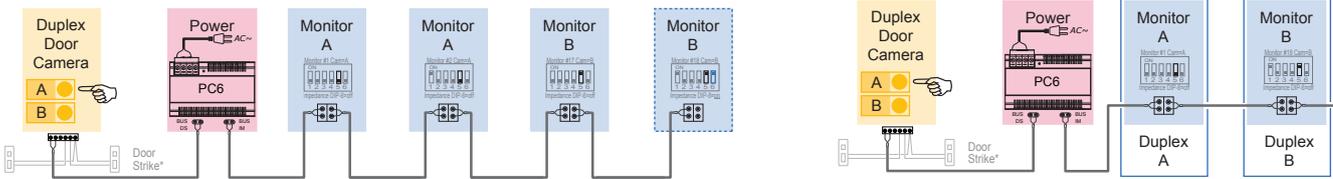
Button A rings Monitor A. Button B rings Monitor B.
Monitor A and B control the common door strike.
Monitor A can intercom with B (and vice-versa).



H292RH MULTI-MONITORS

Look-C 2-Wire System is shown here with monitors in Daisy-Chain or a combination of Splitter and Daisy-Chain with the PS6 Power Injector. The system can be further expanded to more monitors and cameras with the DPS Power Injector. See other 2-Wire diagrams for other extended system examples.

- Door Camera has two Door-Bell Buttons A or B
- DIP Switch 5 selects as Monitor for Button A or B
- Monitors control common door strike*
- Monitor at the end of a chain must be terminated



2 Wire - Cable Information

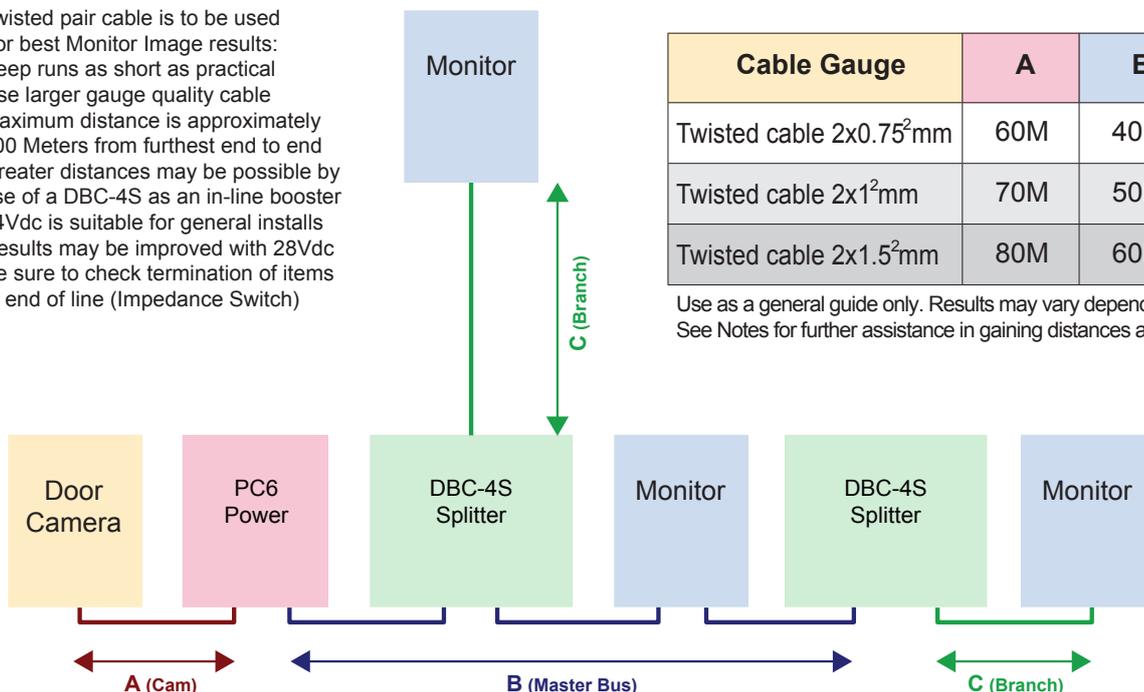
RECOMMENDED WIRE SOLUTIONS

The maximum distance of the wiring is limited on the Look-C 2-Wire system. Using different cables may also affect the maximum distance which the system can reach. The cable carries both video and data plus the power, so It is recommended that you use better quality with larger gauge for best results over longer distances. For relatively short distances, under 20 Meters, the cable choice is less critical.

- Twisted pair cable is to be used
- For best Monitor Image results: Keep runs as short as practical Use larger gauge quality cable
- Maximum distance is approximately 100 Meters from furthest end to end
- Greater distances may be possible by use of a DBC-4S as an in-line booster
- 24Vdc is suitable for general installs Results may be improved with 28Vdc
- Be sure to check termination of items at end of line (Impedance Switch)

Cable Gauge	A	B	C
Twisted cable 2x0.75 ² mm	60M	40M	20M
Twisted cable 2x1 ² mm	70M	50M	30M
Twisted cable 2x1.5 ² mm	80M	60M	40M

Use as a general guide only. Results may vary depending on application. See Notes for further assistance in gaining distances and image quality.



Door Strike

EXAMPLES OF DOOR STRIKE CONNECTION

Look-C 2-Wire System can control two door strikes per door station. These door strikes can be powered by the door station (12Vdc @ 250mA) or for more current or a higher voltage, you can add an external power source and use the door stations internal relay to activate the door strike.

Door strikes are of two types. "Fail Secure" is when power is momentarily applied to the strike to allow the door to open (Power-ON-To Release). "Fail Safe" is when power is always on to hold the door locked, and momentarily switched off to allow the door to open (Power-OFF-To Release). Release activation is programmed at the monitor for Fail-Secure(Default) / Fail-Safe. Activation time is set from 1 to 9 seconds.

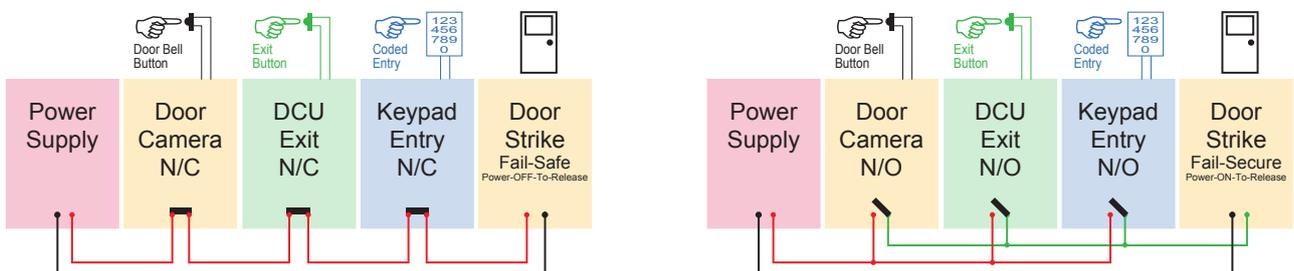
Exit buttons are usually located on the inside of the premises to allow electronic door release so the person can exit the secured area. Exit buttons are not time delayed and not compatible with Fail-Safe door strikes. If these features are required then see the DCU add-on.

- (a) Door Camera Stations can supply power to an electronic lock of Power-On-To-Unlock type with a holding power of no more than 12V 250mA. Connection cable should be less than two metres.
- (b) For higher power door strikes or longer cabling, an external power source (Local) is required. Connection is by dry-contact relay (NO/NC). Removal of the "Jumper Connector" is required.
- (c) The addition of an "Exit Button" is a momentary contact that triggers the door latch for door release.
- (d) External Power with "Exit Button" is available.
- (2a) Dual Door Strike Connection is available for controlling two door strikes. Local power optional (2b) and Exit Button option (2c) or both (2d).
- (e) Power-OFF-To-Release is available and the setting programmed at the monitor. Requires external power.
- (f) Power-OFF-To-Release Door Strikes x2 (Optional).
- (x) Other options are available. See DCU module.

DOOR LATCH MODE	INTERNAL POWER	EXTERNAL POWER	EXIT BUTTON (Int Pwr)	EXIT BUTTON (Ext Pwr)
DOOR LATCH SECURE Strike is set as Default Power-On-To-Release Note: Exit Button does Not have activation delay. See DCU for time delay.	(a)	(b)	(c)	(d)
DOOR LATCH SECURE Strikes is set as Default Power-On-To-Release Two Door Strikes	(a)	(b)	(c)	(d)
DOOR LATCH SAFE Strike can be set as Power-Off-To-Release This is programmed into the door station via the monitor menu system. See the Instruction Manuals for details.	(x)	(e)	(x)	(f)

- Fail-Safe / Power-OFF-To-Release type Door Strike Connections
- DCU allows a programmable Time Delay Activation for Exiting
- Shown with optional Keypad or RFID entry module

- Fail-Secure / Power-ON-To-Release type Door Strike Connections
- DCU allows a programmable Time Delay Activation for Exiting
- Shown with optional Keypad or RFID entry module



LOOK-C DOOR SURVEILLANCE

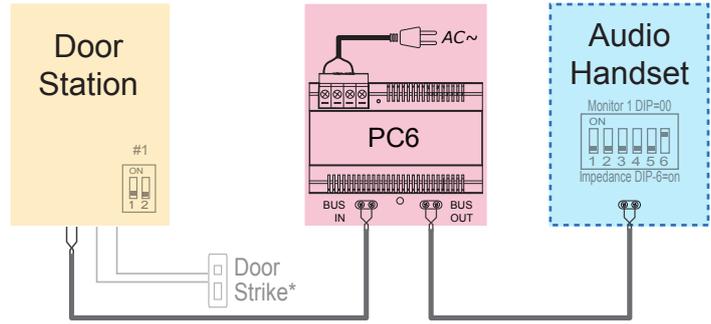
2 Wire - Audio Only

MINIMUM AUDIO SYSTEM

The simplest setup involves a Door Station with a Handset and a Bus Power Supply (PC6). Two wire setup as follows:

- No Polarity, twisted pair, easily to wire solution
- Use CAT5 or twin core drop cable or equivalent
- Cable distances can be up to 100M total (CAT5)
- One common power supply to all type solution (PC6)
- PC6 is a Mains 240Vac power to 26Vdc injector
- Each door camera can control a door strike*
- Door Strike connections may vary to that shown*
- System is expandable with additional components

*Further information available, see Door Strike Info

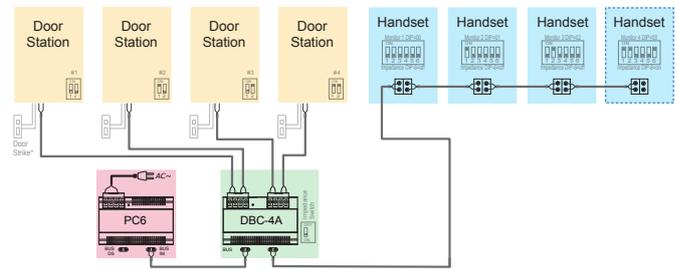


EXPANDED AUDIO SYSTEM

The 2-Wire Audio Intercom has the same connection topology as the Video Intercom 2-Wire system and can be expanded in a similar way.

- A maximum of 32 Handsets can be used in one system
- A combination of Daisy-Chain and Star wiring (DBC-4A)
- Set each Door Station & Handset unique ID using the DIP Switches
- End-Of-Line units require termination. Set the DIP6=ON. Set all other Handsets in a Daisy-Chain to DIP6=OFF
- PC6 has ample power to supply a fully expanded system
- Each Door Station can control a door strike*
- Door Strike connections may vary to that shown*

*Further information available, see Door Strike Info



EXTENDED VIDEO SYSTEM WITH HANDSETS

An Audio Only Handset can be used in place of a Video Monitor for circumstances where audio only communication with the door camera.

- A maximum of 16 Handsets and Monitors can be used in a system
- A combination of Daisy-Chain and Star wiring (DBC-4A) is shown
- Set each Door Station, Monitor & Handset with its own unique ID
- End-Of-Line units require termination. Set the DIP6=ON. Set all other Handsets/Monitors in a Daisy-Chain to DIP6=OFF
- DPC with 24Vdc high power to supply a fully expanded system
- Each Door Station can control a door strike*
- Door Strike connections may vary to that shown*

