



VH30ANC Series (B&W Apartment Type) 'NoCoax' Video-Intercom Installation and Use Instructions, used with the VCU309 System Power Supply Unit(s)



**VH30ANC 'NoCoax' Video
Monitor Station (shown)**

APPLICATION

The VH30ANC series 'NoCoax' video-intercom system allows any number of VH30ANC series inside monitor+handset stations to communicate with a single door entry station with (or without) a built-in B&W camera. When used as an apartment video-intercom system, the VH30ANC can view the caller, speak with the caller, and activate an electric door release (if required).

PROCEDURE

1. Read installation instructions for each unit to determine equipment location and installation method.
2. Install housings and wiring.
3. Install equipment.
4. Check wiring and connect. Observe all local and national electrical and building codes.
5. Apply power and check system operation.

HOUSING INSTALLATION AND EQUIPMENT LOCATION

INSIDE MONITOR+HANDSET STATION(s)

Locate stations where needed at convenient speaking and viewing height, about 4.5 feet (137 cm) from the finished floor. Unit can be secured directly to the finished wall surface or can be mounted over a single gang electrical 'gem' box or single gang electrical plaster ring.

DOOR ENTRY STATION

Locate the door entry station at a convenient speaking location at the building entry location. **NOTE: For best picture (video) quality DO NOT POINT CAMERA INTO DIRECT SUNLIGHT!!!**

SYSTEM TRANSFORMER(s)

The T2440 24VAC system transformer(s) may be plugged into an accessible source of 117 VAC, preferably within 50' (15 meters) of the VCU309 system power supply unit(s), but no closer than 3 feet (1 meter).

ELECTRIC DOOR OPENER (OPTIONAL)

The DO-001A (or equivalent 12-16VAC type) electric door release is installed in the door jamb in place of the regular door strike plate. It can be electrically operated by the VH30ANC video monitor+handset station(s).

WIRING

INSIDE MONITOR+HANDSET STATION(s)

Run 4 conductor #22AWG (common) and 1 conductor #22AWG (selective) cable from video monitor+handset to video monitor+handset to the central equipment location (where the VCU309 unit is found). Additional cables may be used to serve other monitors on other risers (lines). Cables may be straight or twisted pair type and may be solid or stranded conductors. Depending upon additional system options and/or functions you may need to run additional wires. Please consult the factory for more information. As with all systems, we recommend running some spare wires, for future use.

Route cable (and all central equipment) away from AC power wiring, transformers, fluorescent lights, light dimmers or other electrical devices. Protect cable from damage. Shielded cable should be used if AC interference is a concern, or if cables cannot be run adequately spaced away from any source of electrical interference.

DOOR RELEASE

Run 2 cond. #18 from the door release location to the NH209TTA speaker/microphone assembly. Route away from any station wiring. Note: if wire run is longer than 50 feet (15m), use #16AWG cable.

CONNECTIONS

Before connecting, make certain wires are free from shorts or grounds. Make connections as shown on the enclosed system diagrams, and as indicated below.

NOTE: Please keep in mind that all wiring terminals shown may not be in the actual order in which they appear on the equipment. This is done for clarity of wiring diagram purposes.

TRANSFORMER

1. Connect the 24VAC (T2440) transformer to the VCU309 power supply, where indicated. Do not use transformer(s) to power any other device(s).
2. Connect the 12VAC (T1240) transformer to the NH209TTA speaker/microphone assembly, where indicated. Do not use transformer(s) to power any other device(s).
3. Do not connect transformer primary to 117 VAC until entire installation is complete and all wiring is checked.

DOOR RELEASE

1. Connect the 12-16 VAC electric door opener using 2 conductor #18AWG (polarity not important). Route away from any station wiring. Note: if wire run is longer than 50 feet (15m), use #16AWG cable.

FINISH INSTALLATION

1. Install all components. Do not overtighten screws.
2. Connect primary of all transformers to 117 VAC. Observe all local and national electrical codes.

TEST AND CHECKOUT

1. At all remote monitor+handset stations, make certain the handsets are completely hung-up on the handset cradle.
2. Check each monitor+handset unit in the system for operation in accordance with the operating instructions.
3. Check for proper door release function (on systems with door release capability).

NOTE: System warranty is void if this system is installed or used in any manner other than described in this manual.

OPERATING INSTRUCTIONS

TO PLACE A CALL TO THE REMOTE MONITOR+HANDSET UNITS:

At the remote door entrance station, depress button (for a few seconds) for apartment you wish to call. This will signal the Alphonetone™ signal at the apartment monitor handset, and will cause the video screen to light and display the visitor. The tenant may choose to ignore the caller, or to lift the intercom handset to answer. Tenant may speak to the visitor by simultaneous 2-way (DUPLEX) voice. If tenant is satisfied with identity of caller and wishes to let visitor into the building, tenant shall momentarily depress the door release (KEY) button on the handset, which will electrically activate the door release mechanism.

Monitor will time-out automatically after approx. 40 seconds (unless the time-out duration has been changed by the installer/user).

TROUBLESHOOTING

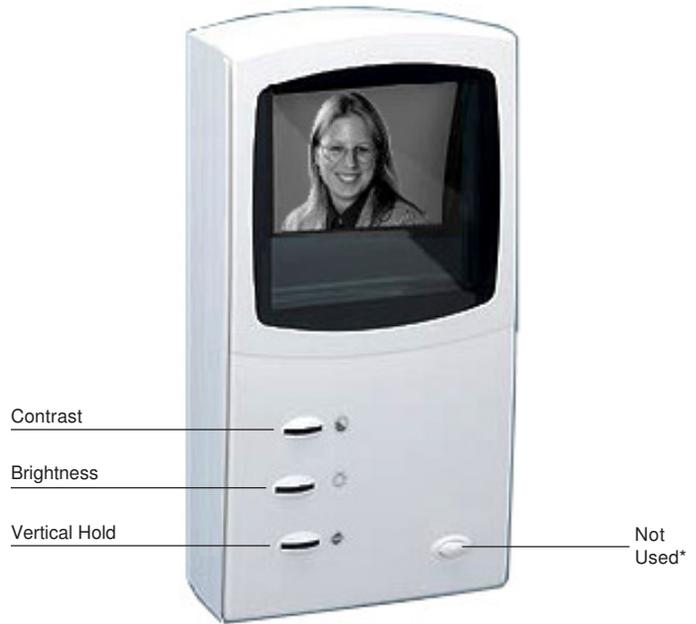
If the system fails to operate as required, review operating instructions again. If the equipment fails to operate as indicated in the instructions, check the following points:

1. **ENTIRE SYSTEM DEAD:** Check for 24VAC at the T2440 secondary and 12VAC at the T1240 secondary; wiring between transformer(s) and power supply unit(s); connections at main power supply units, 117VAC at transformer primaries. Check for 20VDC (output) across terminals (+) and (-) on the VCU309 power supply.
2. **NO CALL UP TONE AT HANDSET:** Check that the 50-ohm speaker in the handset base is functioning. Temporarily switch handset with one from a functioning location. Check wiring connections at remote handset. Check that entry station pushbutton is making contact, by shorting out the two (2) wires on the back of the button.
3. **NO PICTURE AT MONITOR:** If screen is NOT LIGHTING UP, check for approximately 20VDC at (+) and (-) terminals on monitor PC board (VH309B). Check Brightness and Contrast controls on front of monitor. If screen IS LIGHTING UP but there is no picture, you probably are not getting a video signal from the camera to the KBS-1 converter. Starting at camera, check for video signal through coax cable. Check for approx. 15VDC input power at each VBV-4 video data distributor (if used). Check coax connector at entry camera to make sure it is not shorted or open. Temporarily switch monitor PC board (VH309B) with one from a functioning location. Make sure input voltage on the KBS-1 is 15VDC and not 12VDC.

4. **NO VOICE ON SYSTEM:** Check volume control potentiometer(s) on NH209TTA speaker/microphone (in both directions; up and down). Check speaker/microphone connections at entry station. Connect a single handset to system wiring only, to test voice operation. If voice is working, amplifier and entry speaker/microphone are O.K., so check riser wiring. If not, amplifier or speaker/microphone could be faulty. Check by replacement.
5. **UNABLE TO RELEASE DOOR STRIKE:** Check operating voltage of door opener so it matches 12VAC output from NH209TTA system amplifier. Check wiring (and gauge) to door opener, from amplifier/power supply. When using a magnetic type lock or other 'fail-safe' type door strike, or other voltage door strike, you should use a reversing/specialty relay, such as our model #PK407A for each entrance door strike or door lock.
6. **HUM OR BUZZ:** Check system wiring installed too close to power wiring or electrical devices or transformers; check transformer(s) installed too close to control equipment (should be at least three (3) feet away). Wiring is being run next to wiring for other systems and/or devices.
7. **MONITORS TIMING OUT TOO QUICKLY:** Check adjusting control potentiometer on VH309B PC board and adjust as needed from approx. 0 to 180 seconds. Calibration is not exact, so please check timing after re-adjusting.
8. **MONITORS DO NOT TIME OUT AT ALL:** Check for shorts and/or grounds on system. Temporarily switch monitor with one from a functioning location. Check that entry station pushbutton is not stuck or shorted. Temporarily switch monitor PC board (VH309B) with one from a functioning location.
9. **VIDEO PICTURE POOR QUALITY:** Make sure KBS-1 is installed as close to entry camera as possible. Make sure there is a 100 ohm (model RC0100/4) end-of-line resistor across terminals 'Y' and 'Z' at the end of each video/data riser/line.

PLEASE NOTE: It is normal for the KBS-1 unit to get very warm, when operating. Please take care not to touch any warm or hot components with your bare hands! If these checkpoints fail to indicate the problem, there may be an equipment or wiring fault. Please contact the factory or a qualified service representative for additional assistance.

VH30ANC 'NOCOAX' TYPE MONITOR COMPONENT LISTING



* This button is used on other systems and does not apply to this multi-resident type configuration.

TYPICAL REPLACEMENT PARTS and COMPONENTS

Model# VCU309: Power Supply unit. One (1) required for each 30 (or less) monitors. Requires 1- model T2440(24VAC/40VA)plug-in transformer.

Model# VBV-4: Four (4) output Video Distributor. One (1) required for each four (4) (or less) video data outputs to monitor risers/lines. Requires 1- model NG20 (15VDC) DC power supply unit for each VBV-4.

Model# NH209TTA: Entry Speaker/Microphone unit. One (1) required for the building entry. Requires 1- model T1240(12VAC/40VA)plug-in transformer.

Model# KBS-1: Coaxial to digital video converter. Converts standard NTSC format coaxial video signal to data, to send on conventional wiring. Requires 1- model NGC20 (15VDC) DC power supply unit. **NOTE:** on STR™ type video door stations the camera is also powered by this same NGC20 power supply on terminal 'B' and 'O' (+ and - respectively). On other types of video door stations, the cameras are provided with a separate camera power supply (see page 8).

General Monitor Mounting and Wiring Information

3 STEPS TO DISASSEMBLE VH30

STEP 1 : Taking off the handset



Remove screw a, then you are able to take off the plastic cover of the handset.



Remove screws b, in order to take off the bottom part of the handset.

STEP 2 : Taking off the middle covering



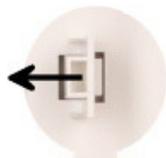
Unscrew screw c and remove middle cover.



STEP 3 : Taking off the monitor

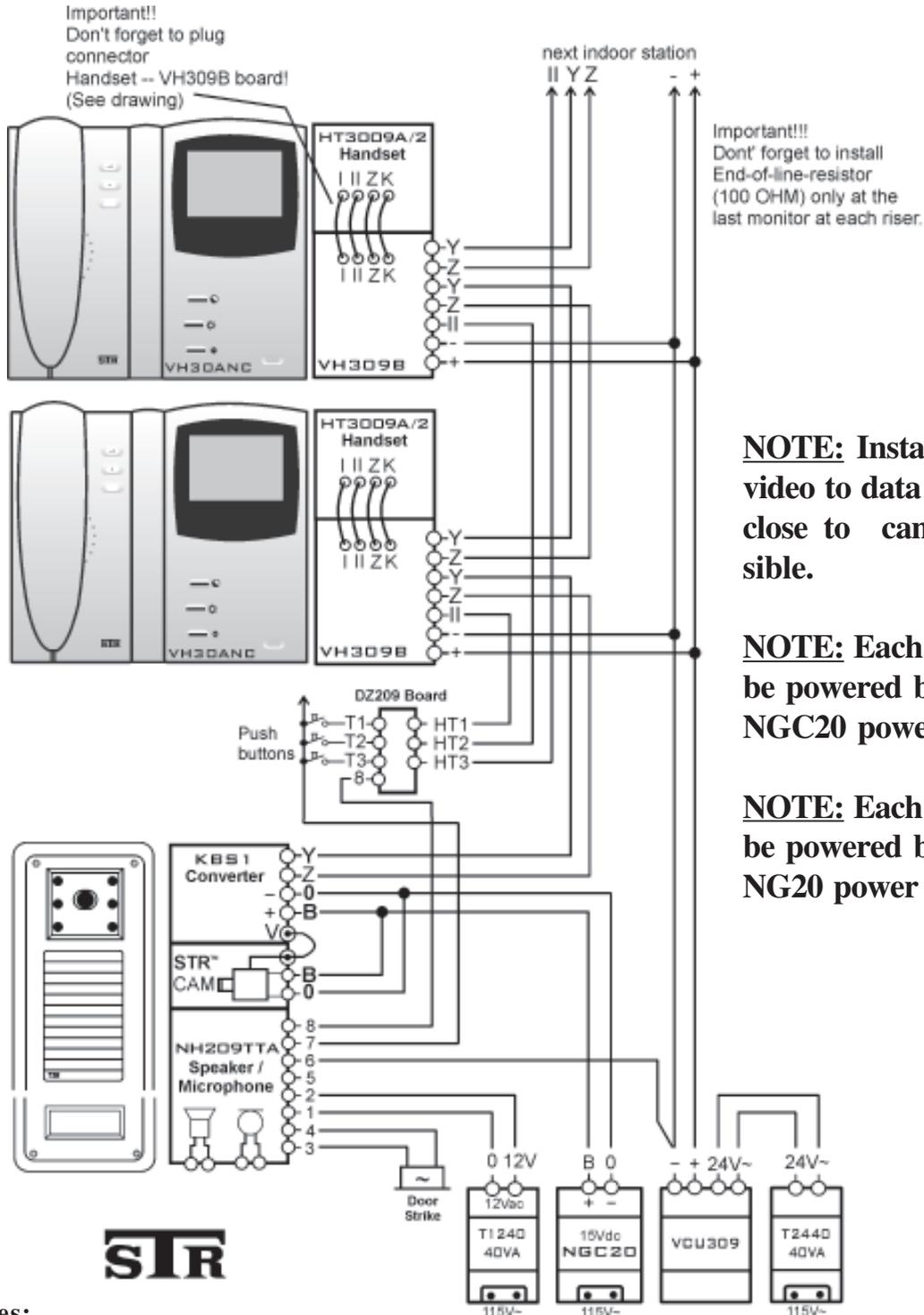


-Unplug the monitor connector.
-By a screwdriver push both plastic hooks d simultaneously to the left, in order to be able to take off the monitor module.



Note: The internal PC/Component board and other internal components shown on this illustration is not the same as the VH309B board used in the VH30ANC 'NoCoax' type video-intercom monitor+handset. It is being shown for illustrative purposes only. Thank you.

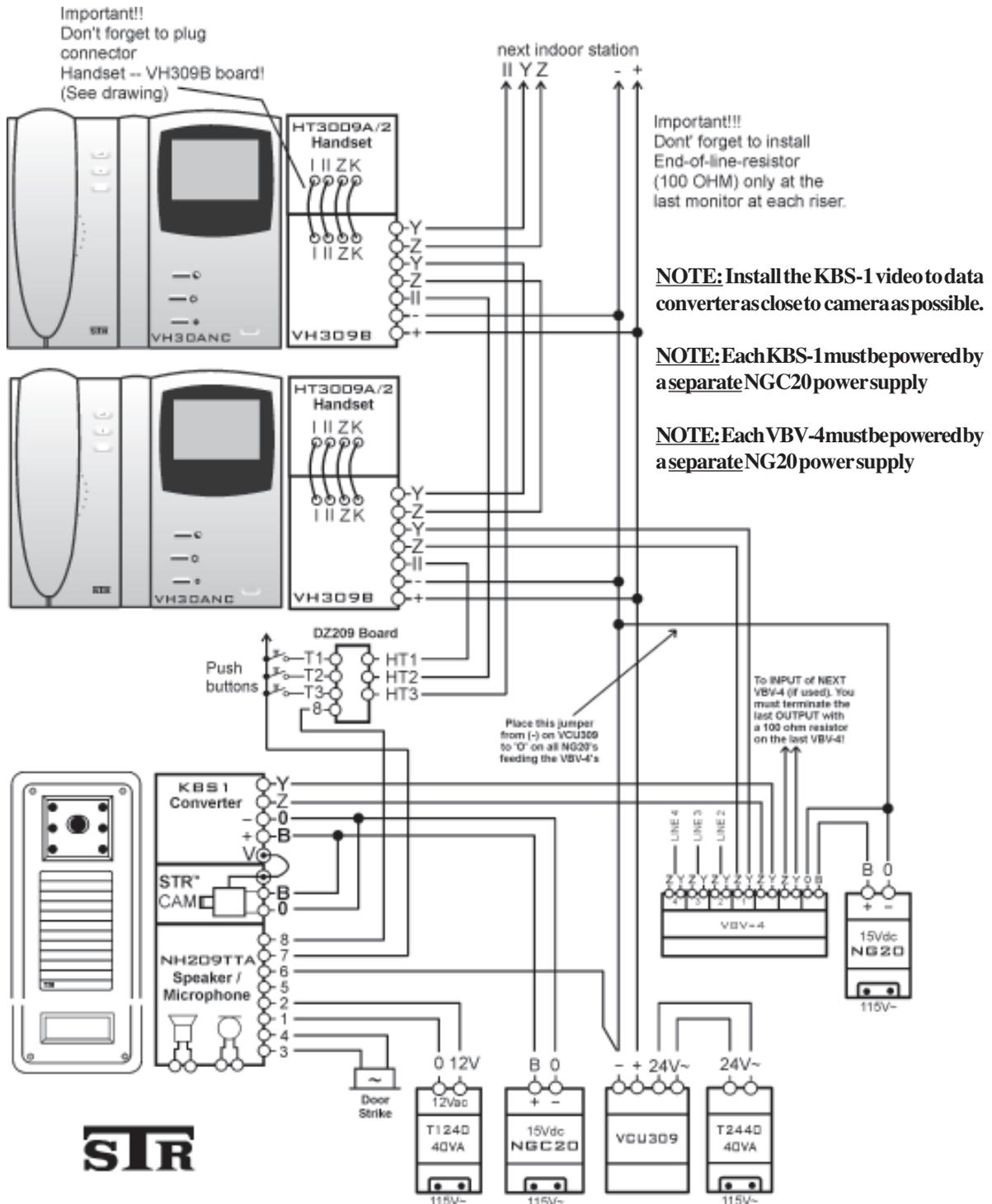
**TYPICAL WIRING DIAGRAM FOR SINGLE ENTRANCE SYSTEM
WITH S.T.R.™ STYLE CAMERA AND ONE (1) VIDEO RISER
(NO VBV-4 VIDEO DATA DISTRIBUTORS)**



Notes:

1. All wiring is #22AWG unless shown otherwise, up to a maximum of 300 feet per wire run.
2. When using a PINHOLE type camera, instead of the standard S.T.R.™ type camera, see the special camera installation and connection instructions found on page 8, and do not power as shown above.
3. DO NOT CONNECT MORE THAN 10 MONITORS PER RISER/LINE.
4. Observe all local and national electrical and building codes.
5. All terminals and connections shown may not be in the order that they appear on the equipment.

TYPICAL WIRING DIAGRAM FOR SINGLE ENTRANCE SYSTEM WITH S.T.R.TM STYLE CAMERA AND MULTIPLE VIDEO DATA RISERS USING A SINGLE VBV-4 VIDEO DATA DISTRIBUTOR UNIT

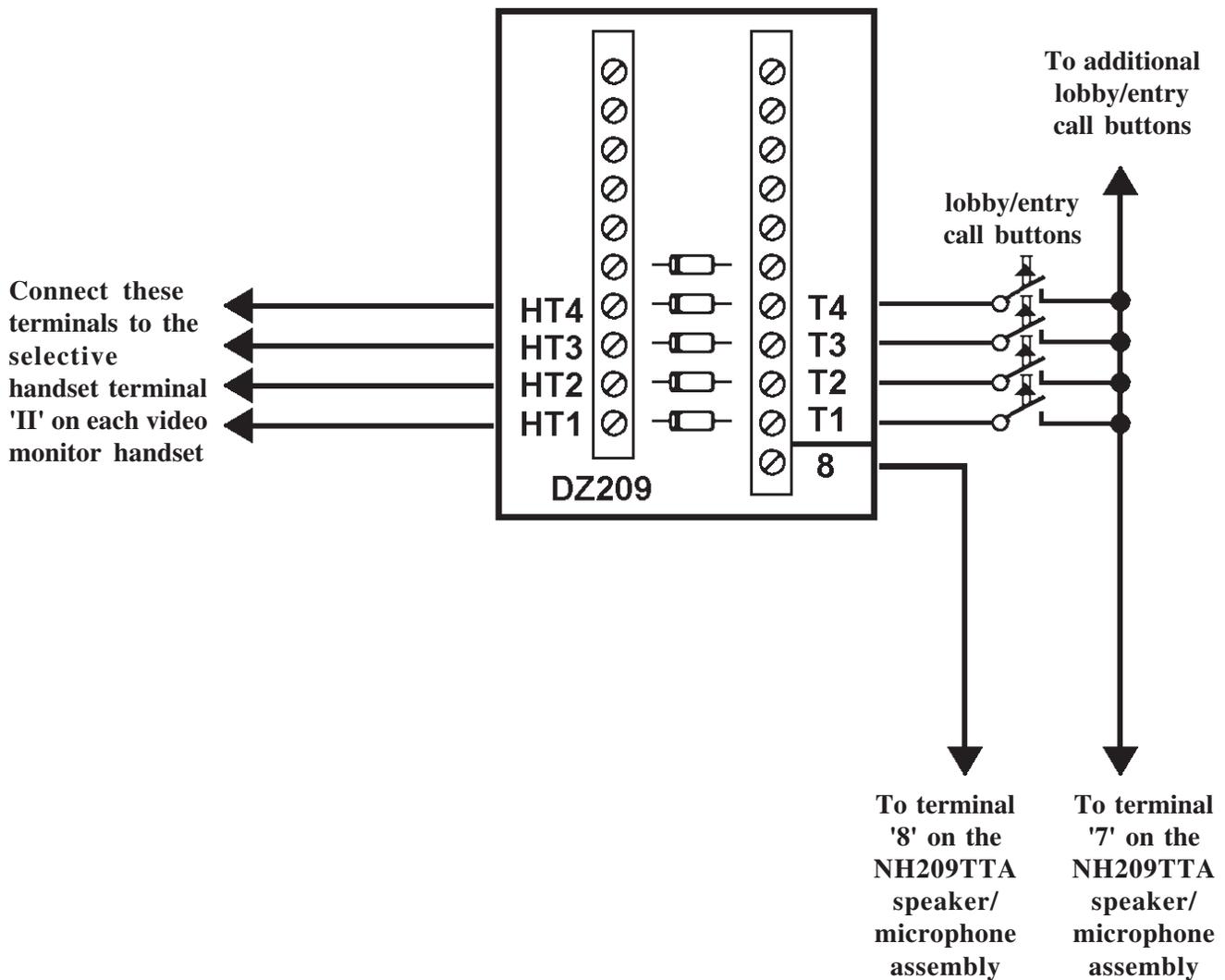


Notes:

1. All wiring is #22AWG unless shown otherwise, up to a maximum of 300 feet per wire run.
2. When using a PINHOLE type camera, instead of the standard S.T.R.TM type camera, see the special camera installation and connection instructions found on page 8, and do not power as shown above.
3. DO NOT CONNECT MORE THAN 10 MONITORS PER RISER/LINE.
4. Observe all local and national electrical and building codes.
5. All terminals and connections shown may not be in the order that they appear on the equipment.

TYPICAL WIRING DIAGRAM FOR DZ209 DIODE BOARD
 WHEN USED WITH THE VCU309 POWER SUPPLY AND
 VH30ANC 'NOCOAX' VIDEO-INTERCOM MONITOR(S)

MODEL DZ209/5 (SHOWN)



Notes:

1. All wiring is #22AWG unless shown otherwise, up to a maximum of 300 feet per wire run.
2. When using multiple DZ209 diode boards, terminal '8' must be connected together on all of the DZ209 diode boards.
3. The 'HT' side of the DZ209 diode board(s) connect to the Handset Telephone terminal 'II' in each handset.
4. Observe all local and national electrical and building codes.
5. All terminals and connections shown may not be in the order that they appear on the equipment.

**IF YOU ARE USING A PINHOLE STYLE CAMERA(s)
IN PLACE OF THE STANDARD S.T.R.™ STYLE CAMERA(s)
CONNECT THE CAMERA(s) AS SHOWN ON THIS DIAGRAM,
AND NOT AS SHOWN ON THE PROCEEDING PAGES.**

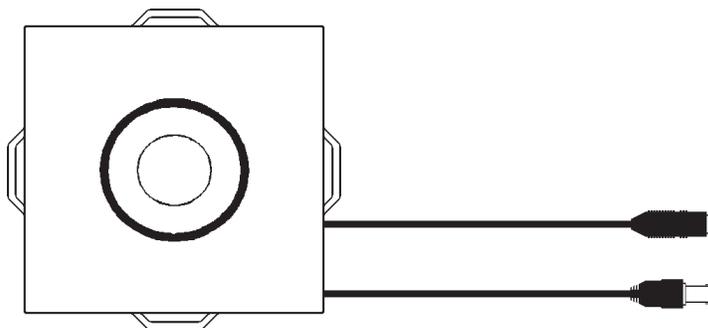
**THESE CAMERAS ARE TYPICALLY USED WITH THE
NATURAL ANODIZED ALUMINUM,
STAINLESS STEEL AND POLISHED BRASS PANELS.**



**THESE CAMERAS ARE POWERED BY THEIR OWN
PLUG-IN POWER SUPPLY, WHICH IS SUPPLIED
WITH EACH CAMERA.**

POLARITY MUST BE OBSERVED!!

**NOTE: When using this type of (non STR™) camera assembly, you must jump
the minus (-) from the separate camera power supply to the (-) on the VCU309
as well as the '0' terminals on any NG20, NGC20 and/or VBV-4 units!!!**



Mini (Pinhole) Camera
(front view)

Plug-In Connector for
Model **SS12P** 12VDC
Power Supply (included)

Twist-On (BNC) Connector
for RG59/U Coaxial Cable
(use model **CONN360** or
equivalent connector)

IMPORTANT INFORMATION AND WARNING:

THESE ARE LOW VOLTAGE DC POWERED CAMERAS AND THEY ARE POLARITY SENSITIVE.

THE POLARITY IS AUTOMATICALLY CORRECT WHEN THE POWER SUPPLY MODULE IS PLUGGED DIRECTLY INTO THE CAMERA USING THE FACTORY INSTALLED CONNECTORS. IF IT IS NECESSARY TO EXTEND THE DISTANCE BETWEEN THE POWER MODULE AND THE CAMERA, CUT AND SPLICE THE WIRE ON THE POWER MODULE ONLY. IF IT IS NECESSARY TO REMOVE THE POWER CONNECTOR OR CUT AND EXTEND THE POWER CABLE, IT IS VERY IMPORTANT TO MAKE SURE THAT THE POLARITY IS CORRECT BEFORE POWER IS SUPPLIED TO THE CAMERA. USE A METER TO CHECK THE POLARITY OF THE NEWLY SPLICED CABLE BEFORE CONNECTING IT TO THE CAMERA.

THE CENTER PIN MUST BE POSITIVE!

USE ONLY THE SUPPLIED POWER SUPPLY! POWER SUPPLY IS FOR INDOOR USE ONLY.

DO NOT REMOVE THE SERIAL NO. STICKER, AS THIS WILL VOID THE WARRANTY.

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