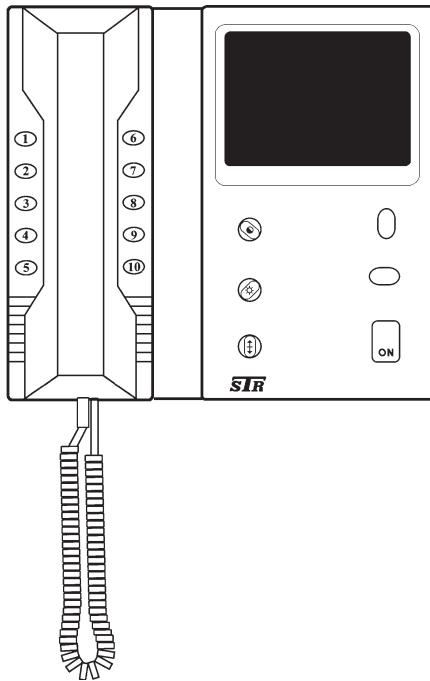




VM25WH Series (Residential Type) Video-Intercom Installation and Use Instructions, used with the NH208TVU System Intercom Amplifier Unit



**VM25WH Video Monitor
Station (shown with
HT2006/10 10-Button Handset)**

APPLICATION

The VMH25 series video-intercom system allows a number of VMH25 series inside monitors, with HT2006 series handset stations, to communicate with one or more door entry stations with (or without) a built-in camera, and with each other. When used as a door entry video-intercom system, the VM25WH 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 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(s)

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

SYSTEM TRANSFORMER(s)

The SS146 and SS106 system transformers should be connected to accessible sources of 117 VAC, preferably within 50' (15 meters) of the VRU system power supply and NH208TVU amplifier, but no closer than 3 feet (1 meter).

ELECTRIC DOOR OPENER (OPTIONAL)

The DO-001 (or equivalent 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 VM25WH video monitor with HT2006 handset station(s).

WIRING

INSIDE MONITOR+HANDSET STATION(s)

Between HT2006 master handsets, run 5 conductor #22AWG (common) plus 1-conductor (selective) #22AWG cable from handset to handset (equal to no. of total handsets on system). Add 1 additional #22AWG common wire for any of the following options; 1 wire for each call button at the door station; 1 wire for each button to be used for electric door release; 1 wire for each paging zone; etc. to the central equipment location (where the VRU and NH208TVU units are found). Run a 6 conductor #22AWG cable from any of the HT2006 master handsets to the NH208TVU at the central equipment location. Run 2 conductor #18AWG from each video monitor directly to the corresponding VRU power supply unit. Cables may be straight or twisted pair type and may be solid or stranded conductors. Run an RG59/U coaxial cable as required, either in a looped fashion (from one monitor to the next) or

home-run directly from each monitor to its corresponding VDU-4 video distributor unit. Additional cables may be used to serve other monitors on other risers (lines). Depending upon additional system options and/or functions you may need to run additional wires. Please consult the factory for more information. RG59/U coax cable must be good quality, ALL COPPER, with minimum 95% copper braiding. As with all systems, we recommend running some spare wires, for future use.

Route cable 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 ENTRY STATION

Run 3 conductor #22AWG cable from each speaker/microphone to the NH208TVU amplifier. We recommend using shielded cable from the speaker/microphone wires to the NH208TVU amplifier/power supply. Run the #22AWG pushbutton wiring as well. Route cable away from inside station cable, AC power wiring, transformers, fluorescent lights, light dimmers and other electrical devices. Protect cable from damage. Shielded cable should be used if AC interference is a concern.

DOOR RELEASE

Run 2 conductor #18 from each door release location to the central equipment location and NH208TVU amplifier unit. 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 SS146 and SS106 (16VAC) transformers to the VRU power supply and NH208TVU amplifier unit(s), respectively, where indicated. Do not use these transformer(s) to power any other device(s).
2. Do not connect transformer primary to 117 VAC until entire installation is complete and all wiring is checked.

DOOR RELEASE

1. Connect 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).
4. On systems with multiples entrances, check for proper operation from each calling entrance station.

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 video monitor+handset you wish to call. This will signal the buzzer (or optional AlphonetTM) signal at the monitor handset, and will cause the video screen to light and display the visitor. The resident may choose to ignore the caller, or to lift the intercom handset to answer. Resident may speak to the visitor by simultaneous 2-way (DUPLEX) voice. If resident is satisfied with identity of caller and wishes to let visitor into the building, resident 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). ***NOTE:*** in the lower right hand corner of each monitor unit is a button marked 'ON'. Momentarily depressing this button will cause the monitor to activate again, and will time out after the pre-programmed delay time.

In systems with multiple door entry stations, the system will automatically switch the voice, video and door release functions to the last entry station that placed a call (when used with the appropriate multiple entrance adaptors).

CALLING FROM ONE HANDSET STATION TO ANOTHER HANDSET STATION:

Lift the calling handset off of its cradle and depress the button corresponding to the handset you wish to call, for a few seconds. The electric buzzer inside the handset being called will sound as long as the button is depressed. Wait for the other party to lift his/her handset to reply. Speak in a normal voice. Conversation is full duplex type (simultaneous talk and listen). When conversation is completed, hang-up both handsets on their cradles.

Special Note About CALLING HANDSET TO HANDSET: It is important to lift the calling handset off of its cradle, BEFORE depressing the push button to call the other handset station. If you depress the push button first, and then lift the calling handset cradle, the door station(s) will not be disconnected and the inside conversation may be heard at the door station(s). This is due to the fact that when the handsets are hung-up, the relay that disconnects the door station is dis-engaged and re-enables conversation at the door station(s).

TROUBLESHOOTING

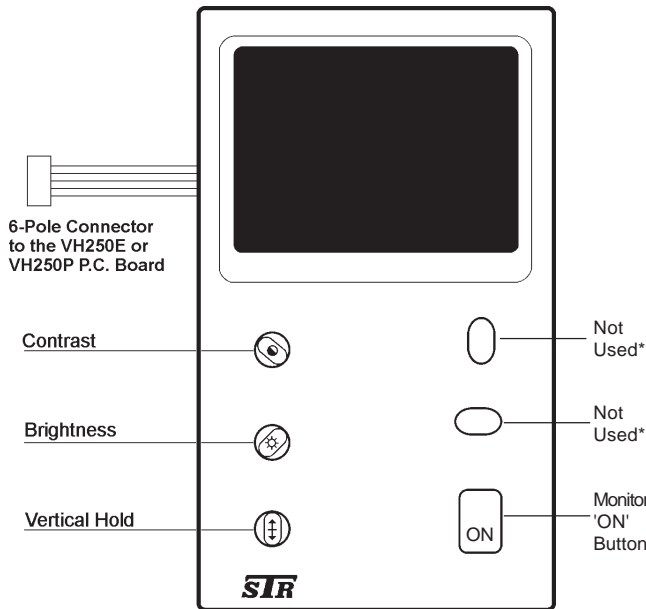
If the system fails to operate as required, review operating instructions again. If the equipment fails to operate as indicated in the instructions, check the following points:

- 1. ENTIRE SYSTEM DEAD:** Check for 16VAC at the two (2) transformer secondaries; wiring between transformer and amplifier/power supply unit(s); connections at main power supply units, 117VAC at transformer primary, and check the (3 amp slo-blo European size) fuse in the VRU power supply. If fuse is blown, replace with our model #50T-3A.
- 2. NO CALL UP CHIME AT HANDSET:** Check for approx. 16VAC at terminals 'O' and 'R' on HT2006 handset, when entry station pushbutton is depressed. Temporarily switch handset with one from a functioning location. Check wiring connections at handset. Temporarily switch handset to another location that is functioning, and try again. Check that entry station pushbutton is making contact, by shorting out the two (2) wires on the back of the button. Check that the R2006 AlphaTone™ chime module is seated properly on the multi-pin connector or replace with one from a functioning handset location.
- 3. NO BUZZER BETWEEN HANDSETS:** Check for approx. 16VAC at terminals 'Z' and 'S' (on HT2006 handset), when called from another handset. Temporarily switch handset with one from a functioning location. Check wiring connections at handsets. Temporarily switch handset to another location that is functioning, and try again. Check that wiring inside handset base is not restricting movement of buzzer clapper. Replace handset or buzzer with one from a functioning handset location.
- 4. NO PICTURE AT MONITOR:** If screen is NOT LIGHTING UP, check for approximately 16VDC at(+) and (-) terminals on monitor PC board (VH250E or VH250P). 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 monitor. Starting at camera, check for video signal through coax cable, and through (VDU-4) video distributors (if used). Check for approx. 12VDC power at each VDU-4 video distributor (if used). Check coax connector at camera(s) to make sure it is not shorted or open. Temporarily switch monitor PC board (VH250E or VH250P) with one from a functioning location.
- 5. NO VOICE ON SYSTEM:** Check volume control potentiometer on NH208TVU amplifier. Check terminals 'T', 'O', and 'M' to handsets. Check speaker/microphone connections at each entry station. Disconnect terminals 'T', 'O' and 'M' to system amplifier, and connect a single handset to those terminals. 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.
- 6. UNABLE TO RELEASE DOOR STRIKE:** Check wiring to handset terminals 'E' and '(1-5 or 1-10 depending upon which one you are using for door release)'. Temporarily remove door opener wire going to handset terminals '(1-5 or 1-10)' and touch to terminal '8V' on NH208TVU. Check operating voltage of door opener matches output from 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 lock, you should use a reversing relay, such as our model# PK407A for each entrance.
- 7. 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.
- 8. SQUEALING OR HOWLING:** Check wiring for pinching, crimping, crushing, shorting, or being too close to another source of audio interference. Make sure correct voltage transformer is being used to power the NH208TVU amplifier.
- 9. MONITORS TIMING OUT TOO QUICKLY:** Check adjusting control potentiometer on VH250E (or VH250P) PC board and adjust as needed from approx. 0 to 180 seconds. Calibration is not exact, so please check timing after re-adjusting.
- 10. 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 (VH250E or VH250P) with one from a functioning location.

NOTE: If these checkpoints fail to indicate the problem, there may be an equipment fault. Contact the factory or qualified service representative.

NOTE: Each HT2006 handset comes with a loose push button cap with a 'Key Symbol' on it. If you are using one of the 5 or 10 push buttons to activate an electric door release, you may (carefully) 'pop-out' the numbered cap and 'pop-in' the 'Key Symbol' cap, to make it easier to identify the door release push button. You do not need to do this to make the push button activate the electric door release.

VMH25 COMPONENT LISTING



* These buttons and cap blanks are used on other systems and do not apply to this configuration

TYPICAL REPLACEMENT PARTS

Model# NH208TVU: Intercom amplifier unit. One (1) required for system for call, intercom and door release functions. Requires SS106 transformer for power.

Model# VRU: Video Monitor Power Supply unit. One (1) required for each four (4) (or less) monitors. Requires SS146 transformer for power.

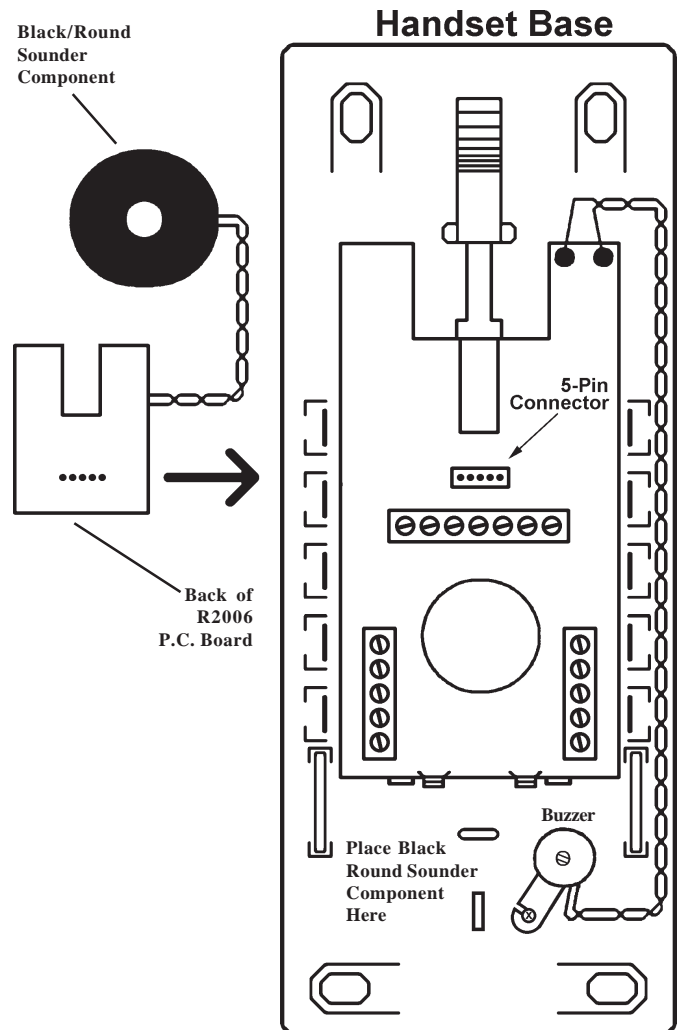
Model# VDU-4: Four (4) output Video Distributor. One (1) required for each four (4) (or less) video outputs to monitor risers/lines. Requires 12VDC power (from SS12C or equivalent supply).

Model# TU1007A: Multiple Entrance audio switching adaptor. Used to switch the voice (and door release) to the calling entrance. One (1) required for 2 entrances, two (2) required for 3-4 entrances, three (3) required for 5-6 entrances, and four (4) required for 7-8 entrances. Used on systems with more than one (1) entrance station.

Model# DPS-2 (TUV2): Multiple Entrance video switching adaptor. Used (in addition to the TU1007A) to switch the video to the calling entrance. One (1) required for 2 entrances, two (2) required for 3-4 entrances, three (3) required for 5-6 entrances, and four (4) required for 7-8 entrances. Used on systems with more than one (1) entrance station, where video switching is required.

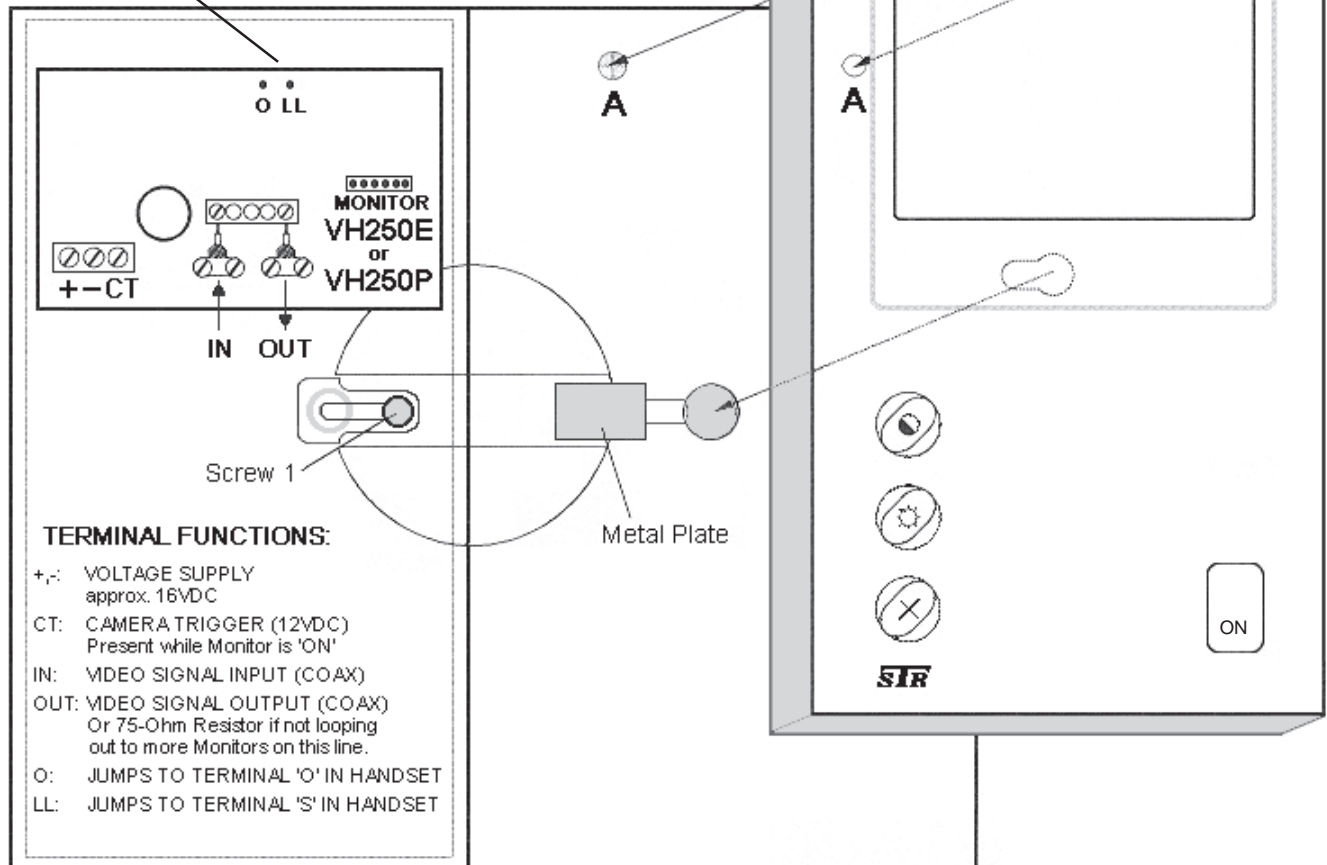
INSTALLING THE R2006 AlphaTone™: For each HT2006 series handset that needs to be signaled (called) from the door entry station(s), you need to install the model R2006 AlphaTone™ unit. Please follow these instructions:

1. Turn off the power to the system by disconnecting the 120VAC primary power switch of disconnecting 1 side of the 16VAC transformer from the NH208TVU.
2. Locate the 5-pin male connector found under the handset cradle switch, on the handset's p.c. board.
3. Gently slide the female 5-pin connector on the R2006 p.c. board onto the 5-pin male connector on the handset's p.c. board, with the component side of the R2006 p.c. board facing downwards. Make sure the 5 pins align properly and are not bent or shorting and the p.c. board cut-out clears the cradle switch mechanism.
4. Peel the self-stick backing from the round black sounder component and stick to the handset base. The best location would be to the left of the (silver) electric buzzer.
5. Position the wires inside the handset base, so they will not get 'pinched' when the cover is placed over the base.
6. Re-connect the power to the NH208TVU amplifier.



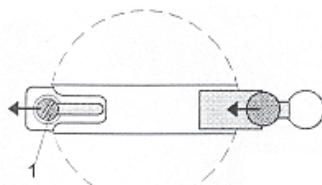
General Monitor Mounting and Wiring Information

Note: There are Black and Red pigtail wires coming from terminals 'O' and 'LL' on the VH250E (or VH250P) P.C. Board. The Black 'O' wire must jump to terminal 'O' on the handset and the Red 'LL' wire must jump to terminal 'S' on the handset or the monitor will not activate when the handset is signalled from the entrance station(s).

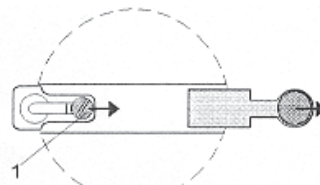


Taking the monitor off of the base:

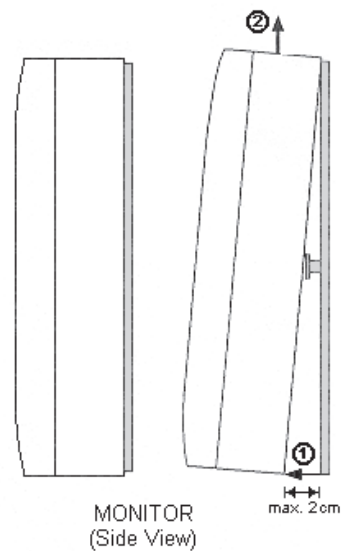
1. Carefully remove the 6-pole plug-in connector from the VH250E / VH250P board making sure not to dislodge wires.
2. Loosen "Screw 1" and slide it to the Right.
3. Pull the lower part of the monitor about 1-2cm away from the main base ①
4. Slide the Monitor 'up' until it comes free ②



Slide "Screw 1" to the left and tighten screw down:
MONITOR IS LOCKED DOWN



Loosen "Screw 1" and slide it to the right. MONITOR CAN NOW BE REMOVED FROM HOUSING



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

Notes:

All Model HT2006/5 (5-button) Master Handsets shown. You may also use HT2006/10 (10-button) Master Handsets which basically wire the same as the 5-button handsets, except they also have terminals '6' thru '10' as well as '1' thru '5'.

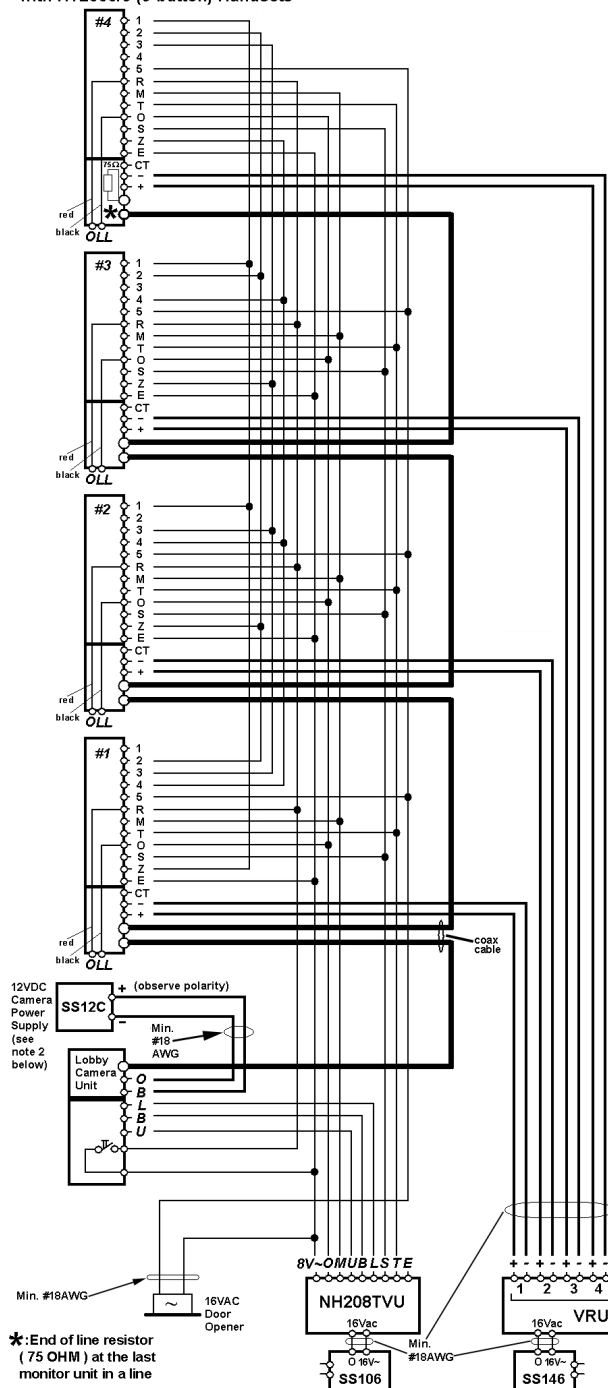
Terminals '1' thru '5' (on the HT2006/5) and terminals '1' thru '10' (on the HT2006/10) are the calling out terminals and terminal 'Z' is the terminal that determines the handset number that is called.

This configuration shows a 1-button door entry station that signals all four (4) HT2006 handsets simultaneously. You may use a multi-button door entry station, by connecting the selective button wire(s) to terminal 'R' on the corresponding HT2006 handset(s) being called by that button.

Each handset that is called by a door station must have the model R2006 Alphonet[™] signaling module installed (see page 4).

The Electric Door Opener shown in this illustration is activated by depressing button #5 on each of the HT2006 handsets. Each HT2006 handset comes with a separate plastic 'KEY SYMBOL' button that may be substituted for the numbered door release button used (if desired).

VMH25 Series Monitors - shown with HT2006/5 (5-button) Handsets



Notes:

1. All wiring is #22AWG unless shown otherwise.
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 9, and do not power as shown above.
3. The most recent NH208TVU has two (2) 'O' and '8V' terminals. They are duplicated for ease of wiring. You may use either or both. Both sets are internally connected together inside the NH208TVU on the p.c. board.
4. DO NOT CONNECT MORE THAN 10 MONITORS PER VIDEO RISER/LINE.
5. Observe all local and national electrical and building codes.
6. All terminals 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 RISERS USING A SINGLE VDU-4 VIDEO DISTRIBUTOR UNIT AND 1-4 MONITORS

Notes:

All Model HT2006/5 (5-button) Master Handsets shown. You may also use HT2006/10 (10-button) Master Handsets which basically wire the same as the 5-button handsets, except they also have terminals '6' thru '10' as well as '1' thru '5'.

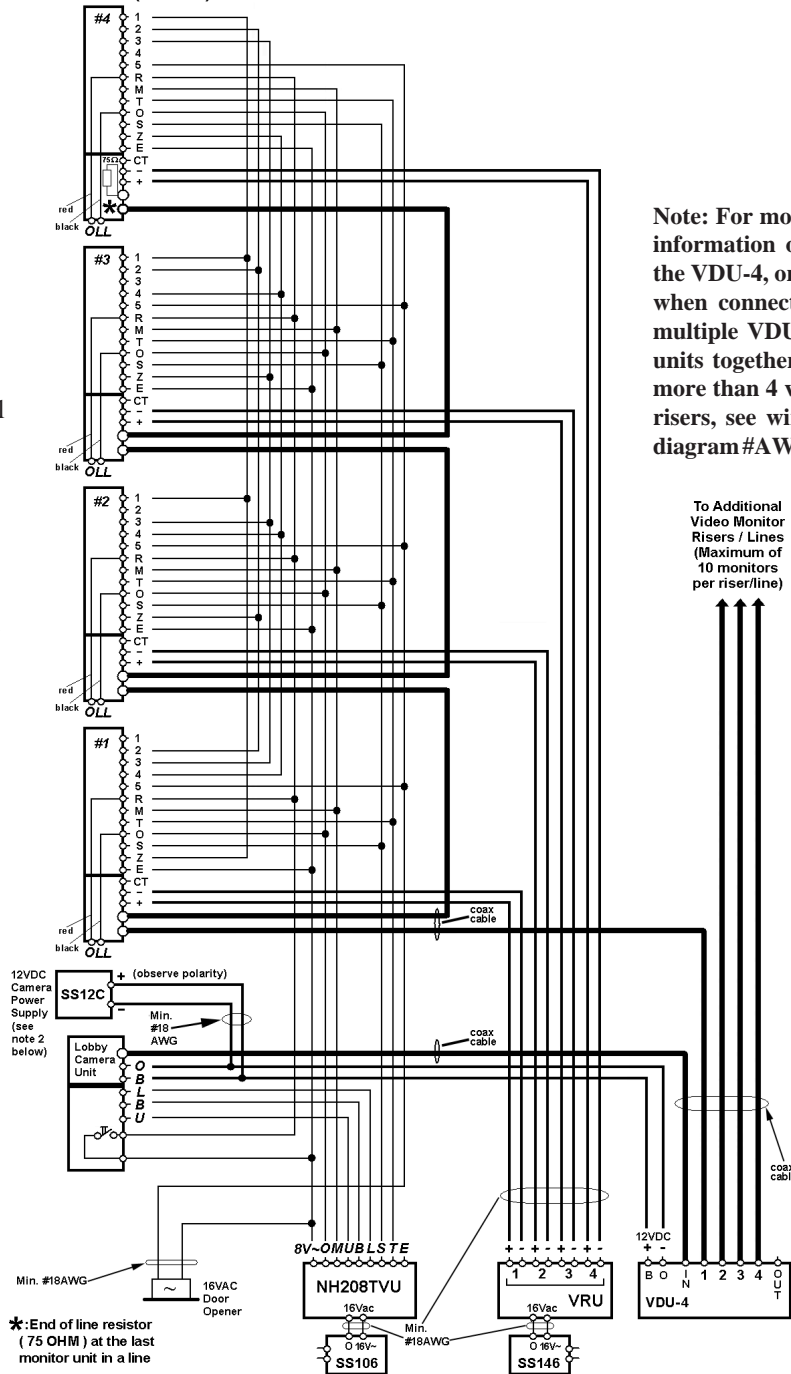
Terminals '1' thru '5' (on the HT2006/5) and terminals '1' thru '10' (on the HT2006/10) are the calling out terminals and terminal 'Z' is the terminal that determines the handset number that is called.

This configuration shows a 1-button door entry station that signals all four (4) HT2006 handsets simultaneously. You may use a multi-button door entry station, by connecting the selective button wire(s) to terminal 'R' on the corresponding HT2006 handset(s) being called by that button.

Each handset that is called by a door station must have the model R2006 AlphonetTM signaling module installed (see page 4).

The Electric Door Opener shown in this illustration is activated by depressing button #5 on each of the HT2006 handsets. Each HT2006 handset comes with a separate plastic 'KEY SYMBOL' button that may be substituted for the numbered door release button used (if desired).

VMH25 Series Monitors - shown with HT2006/5 (5-button) Handsets



Note: For more information on the VDU-4, or when connecting multiple VDU-4 units together, for more than 4 video risers, see wiring diagram #AWD061

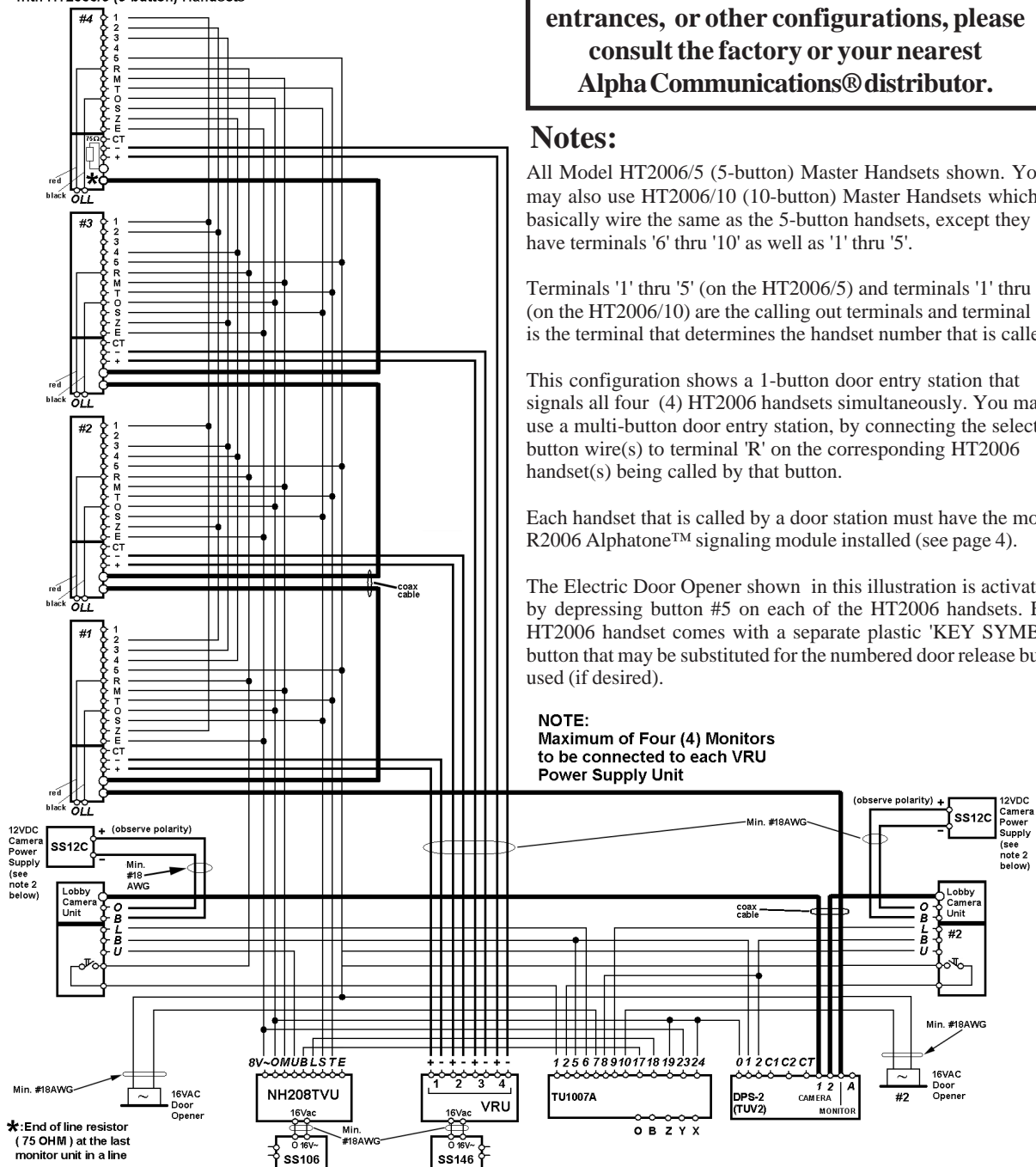
To Additional Video Risers / Lines (Maximum of 10 monitors per riser/line)

Notes:

1. All wiring is #22AWG unless shown otherwise.
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 9, and do not power as shown above.
3. The most recent NH208TVU has two (2) 'O' and '8V' terminals. They are duplicated for ease of wiring. You may use either or both. Both sets are internally connected together inside the NH208TVU on the p.c. board.
4. DO NOT CONNECT MORE THAN 10 MONITORS PER VIDEO RISER/LINE.
5. Observe all local and national electrical and building codes.
6. All terminals connections shown may not be in the order that they appear on the equipment.

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

VMH25 Series Monitors - shown
with HT2006/5 (5-button) Handsets



NOTE: For systems with more than two (2) entrances, or other configurations, please consult the factory or your nearest Alpha Communications® distributor.

Notes:

All Model HT2006/5 (5-button) Master Handsets shown. You may also use HT2006/10 (10-button) Master Handsets which basically wire the same as the 5-button handsets, except they also have terminals '6' thru '10' as well as '1' thru '5'.

Terminals '1' thru '5' (on the HT2006/5) and terminals '1' thru '10' (on the HT2006/10) are the calling out terminals and terminal 'Z' is the terminal that determines the handset number that is called.

This configuration shows a 1-button door entry station that signals all four (4) HT2006 handsets simultaneously. You may use a multi-button door entry station, by connecting the selective button wire(s) to terminal 'R' on the corresponding HT2006 handset(s) being called by that button.

Each handset that is called by a door station must have the model R2006 AlphonetTM signaling module installed (see page 4).

The Electric Door Opener shown in this illustration is activated by depressing button #5 on each of the HT2006 handsets. Each HT2006 handset comes with a separate plastic 'KEY SYMBOL' button that may be substituted for the numbered door release button used (if desired).

**NOTE:
Maximum of Four (4) Monitors
to be connected to each VRU
Power Supply Unit**

Notes:

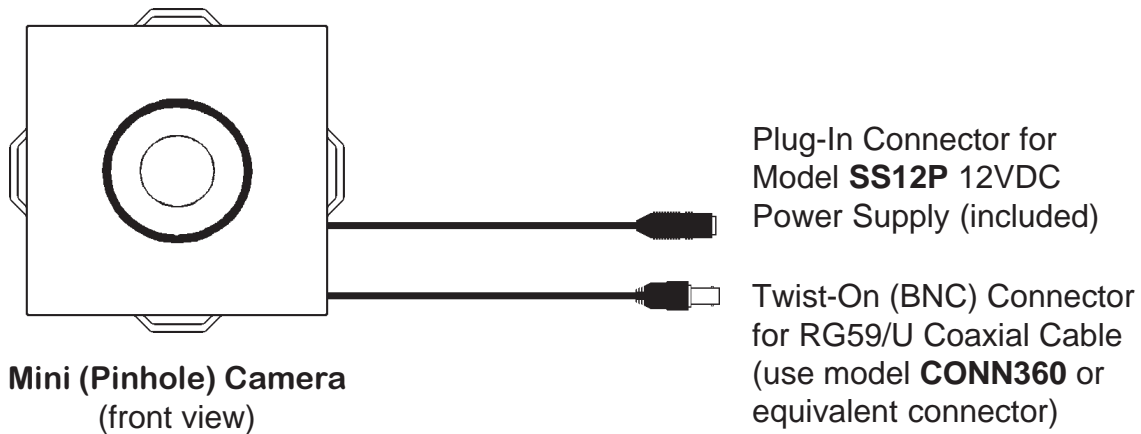
1. All wiring is #22AWG unless shown otherwise.
2. When using a PINHOLE type camera, instead of the standard S.T.R.TM type camera, see the special camera installation and connection instructions found on page 9, and do not power as shown above.
3. The most recent NH208TVU has two (2) 'O' and '8V' terminals. They are duplicated for ease of wiring. You may use either or both. Both sets are internally connected together inside the NH208TVU on the p.c. board.
4. **DO NOT CONNECT MORE THAN 10 MONITORS PER VIDEO RISER/LINE.**
5. Observe all local and national electrical and building codes.
6. All terminals 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!!



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.

ALPHA COMMUNICATIONS® • 42 Central Drive • Farmingdale NY 11735-1202
TOLL-FREE TECHNICAL LINE 1-800-666-4800 • Phone: 631-777-5500 • Fax: 631-777-5599
INTERNET WEBSITE: <http://www.alpha-comm.com> • EMAIL: info@alpha-comm.com