



142 Series Switchboard Installation and Use Instructions Used with the HT2009/2 or HT3009/2 Remote Handset Intercom Stations

HOUSING INSTALLATION AND EQUIPMENT LOCATION



**142/20 (20-station)
MASTER (shown)**

APPLICATION

The 142 series intercom system allows any number of HT2009/2 and/or HT3009/2 series inside handset stations to communicate with the master/concierge switchboard unit, and to signal using lamp annunciation. Each 142 series intercom system can have one (1) master station. The master station's flexible design allows it to be mounted flush, surface or in a desk configuration.

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.

INSIDE HANDSET STATIONS

Locate stations where needed at convenient speaking height, about 4.5 feet (137cm) from the finished floor. Handset 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.

142 SERIES MASTER STATION

Locate desk master station at a convenient speaking location at the management office, security guard, concierge or main communication area.

SYSTEM POWER SUPPLY

The 836 (or 936) power supply may be installed by an accessible source of 117-120 VAC power, preferably within 50' (15 meters) of the 142 master station, but no closer than 3 feet (1 meter) from the 142 master station. We recommend using a 'zip' cord and molded plug to connect the input power terminals to an electrical outlet. Observe all local and national electrical codes!

WIRING

INSIDE HANDSET STATIONS

Run 1 conductor (common) and 1-conductor (selective) #22AWG cable from handset to handset and to the 142 master station. Additional cables may be used to serve other stations on other risers (lines). Cables may be straight or twisted pair type and may be solid or stranded conductors. Optionally, you may home-run a separate 2 conductor #22AWG from each handset to the 142 master station.

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.

CONNECTIONS

Before connecting, make certain wires are free from shorts or grounds. Make connections as shown on Fig. 6 and as detailed in the following instructions.

REMOTE HANDSET STATIONS

1. Connect terminal (I) on all of the remote handset stations in common with all of the other remote handsets on the system. These wires will connect to the 142 master station terminal (3).
2. Connect terminal (II) on each of the remote handset stations individually and selectively. These wires will connect to the 142 master station lamp selective terminals (F1-F10 etc.).

142 MASTER STATION

1. Connect master terminal (-) to the power supply terminal (-) and place a jumper to the power supply terminal '0' as well.
2. Connect master terminal (+) to the power supply terminal (+).
3. Connect master terminal (10) to the power supply terminal (15).
4. Connect master terminal (3) to the common wire (terminal I) on all of the remote handset stations.

TRANSFORMER

1. Do not connect power supply primary to 117-120 VAC until entire installation is complete and all wiring is checked.

FINISH INSTALLATION

1. Install handsets on housings or directly onto walls. Do not overtighten screws.
2. Make sure back of master station is secured properly.
3. Connect transformer primary to 117-120 VAC. Observe all local and national electrical codes.

TEST AND CHECKOUT

1. At all remote handset stations, make certain the handsets are completely hung-up on the handset cradle.
2. Check each handset unit in the system for operation in accordance with the operating instructions.

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

OPERATING INSTRUCTIONS

NOTE: Operating instructions are shown based upon a system with a concierge and remote apartment handsets. These instructions are applicable to other applications as well.

IMPORTANT NOTE: The 142 series master stations come in two (2) configurations. They are 'non-multiplier' type (10 to 60 lights) and 'multiplier' type (80 lights and larger). This is done to make the larger capacity master stations as small as possible. By using a 'multiplier' feature each lamp/switch

assembly is doubled by having a 'left' and a 'right' lamp indicator on each lamp/switch. This enables twice as many remote handsets to be used on a master 1/2 the size it would normally be.

AT 142 MASTER STATION

TO ANSWER A CALL FROM THE REMOTE HANDSET: When a tenant lifts his/her handset, a tone is heard at the concierge's master station, and a light will indicate which apartment is calling.

To answer the call (on 'non-multiplier' masters), the concierge should lift his/her handset, and depress the lighted lamp/switch for that apartment. Conversation may now take place between the concierge and only the apartment whose button is depressed.

To answer the call (on 'multiplier' masters), the concierge should lift his/her handset, and select the 'left or right' side of the lamp/switch by depressing or releasing the 'multiplier' switch labelled '= X', and then depressing the lighted lamp/switch for that apartment. Conversation may now take place between the concierge and only the apartment whose button is depressed.

When conversation is done, depress apartment lamp/switch once again, restoring it to its original (UP) position. Reset master handset into its cradle. **NOTE:** if master handset is not fully hung-up you will not hear a tone when any remote handset calls.

TO PLACE A CALL TO THE REMOTE HANDSET: (On 'non-multiplier' masters), the concierge should lift the master handset and depress the lamp/switch for the apartment you wish to call.

(On 'multiplier' masters), the concierge should lift the master handset and select the 'left or right' side of the lamp/switch desired, by depressing or releasing the 'multiplier' switch labelled '= X', and then depressing the lighted lamp/switch for the apartment you wish to call.

Momentarily depress the master switch labelled 'C H' (Call Handset) to signal the apartment handset. When tenant answers, you may communicate. When finished, restore system to standby as in previous step.

TO PLACE A CALL ON HOLD: When the concierge wishes to place one call on HOLD, to take another call, he/she shall restore the push-button to the (UP) position, for the apartment he/she wishes to place on hold. The concierge may depress the button for the other tenant, and speak to the other tenant by following the directions as indicated in 'answering a call from a remote handset'.

AT REMOTE HANDSET STATION

TO PLACE A CALL TO THE MASTER STATION:

Just lift your handset, and wait for reply by concierge. If concierge doesn't answer right away, hang up and try again later.

TO ANSWER A CALL: When your handset is called, you will hear an electric buzzing sound. Lift your handset, and speak in a normal voice. When your conversation is completed, simply hang up the handset on its cradle.

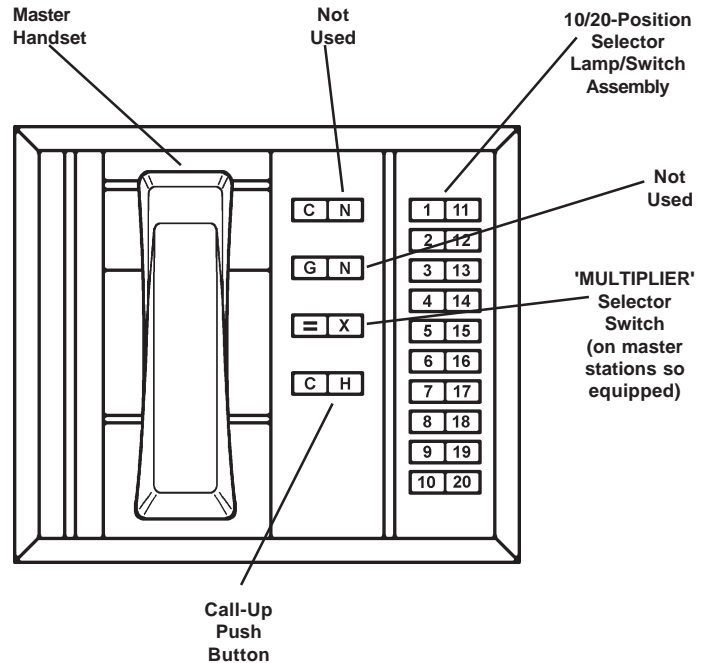
TROUBLESHOOTING

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 15VAC at power supply secondary (between terminal '0' and '15'); wiring between power supply and master station; connections at 142 master station terminals; 117-120 VAC at power supply primary. Check fuse(s) in power supply.
2. **NO CALL DOWN TONE AT MASTER:** Check that the handset at the master station is fully hung-up; check master handset cradle switch is operating properly and not sticking.
3. **NO CALL UP BUZZER AT HANDSET:** Temporarily switch handset with one from a functioning location; check wiring connections at remote handset and at master selector terminals; check that wiring inside handset base is not restricting movement of buzzer clapper; temporarily switch handset to another master switch that is functioning and try again.
4. **NO CALL DOWN LAMP INDICATION FROM A HANDSET:** Temporarily switch handset with one from a functioning location; check wiring connections at remote handset and at master selector terminals; temporarily switch bulb at master with one from a functioning switch; check that bulb is seated firmly in it socket.
5. **HUM OR BUZZ:** Check system wiring installed too close to power wiring or electrical devices; check transformer installed too close to master station; check master station not installed too close to source of electrical interference.

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

142 MASTER COMPONENT LISTING



TYPICAL REPLACEMENT PARTS

Model# 1241: Main 142 master 'mother' board. Used for masters without the 'multiplier' feature.

Model# 1243: Main 142 master 'mother' board. Used for masters with the 'multiplier' feature.

Model# 1769: 'Ring' board for 142 master (either type). Controls the ring-down circuitry and tone signal device.

Model# CEN.142000: Handset and Control Switches assembly. Used for masters without the 'multiplier' feature. No caps or bulbs included.

Model# CEN.142MOL: Handset and Control Switches assembly. Used for masters with the 'multiplier' feature. No caps or bulbs included.

Model# MIC.CEN870: Replacement master Handset and Coiled Cord only. Beige Color (for older 142 master stations).

Model# MIC.CEN874: Replacement master Handset and Coiled Cord only. Black Color.

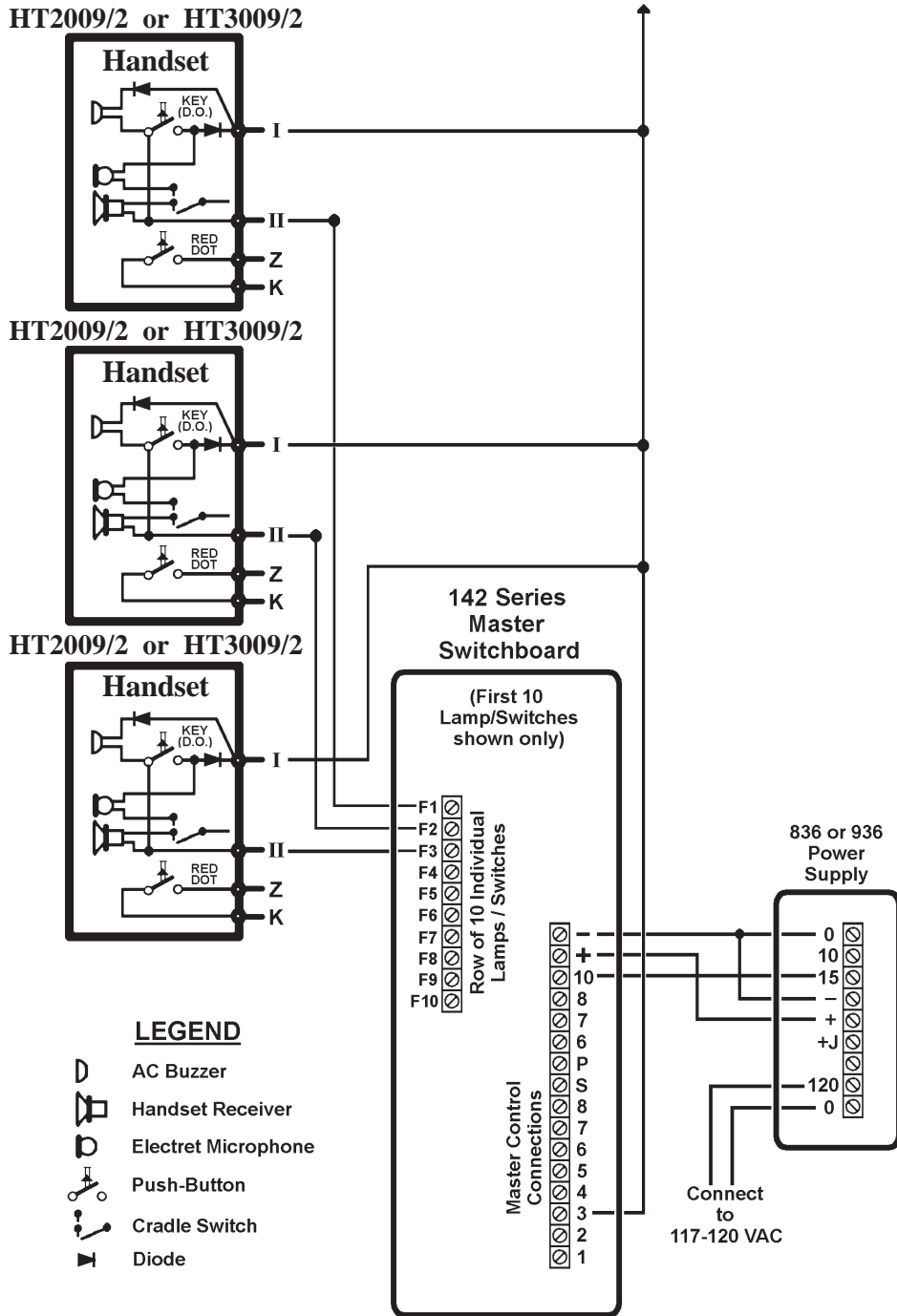
Model# 1030: 10-selector switch assembly. Used for masters without the 'multiplier' feature. No caps or bulbs included.

Model# 1034: 20-selector switch assembly. Used for masters with the 'multiplier' feature. No caps or bulbs included.

Model# T536040: Replacement 6 volt bulb for 142 master station.

Model# T5312040: Replacement 12 volt bulb for 142 master station.

**TYPICAL WIRING LAYOUT DIAGRAM
FOR 142 SERIES SWITCHBOARD SYSTEM USING HT2009/2
OR HT3009/2 (2-WIRE) REMOTE HANDSETS**



Notes:

1. All low voltage wiring is #22AWG unless shown otherwise.
2. Access to master station should be done from the front. Simply loosen the large silver screw all the way on the right side of the master station, and the master will 'hinge' open. The screw is 'captive' and should not fall out.
3. Observe all local and national electrical codes.
4. All terminals connections shown may not be in the order that they appear on the equipment.

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