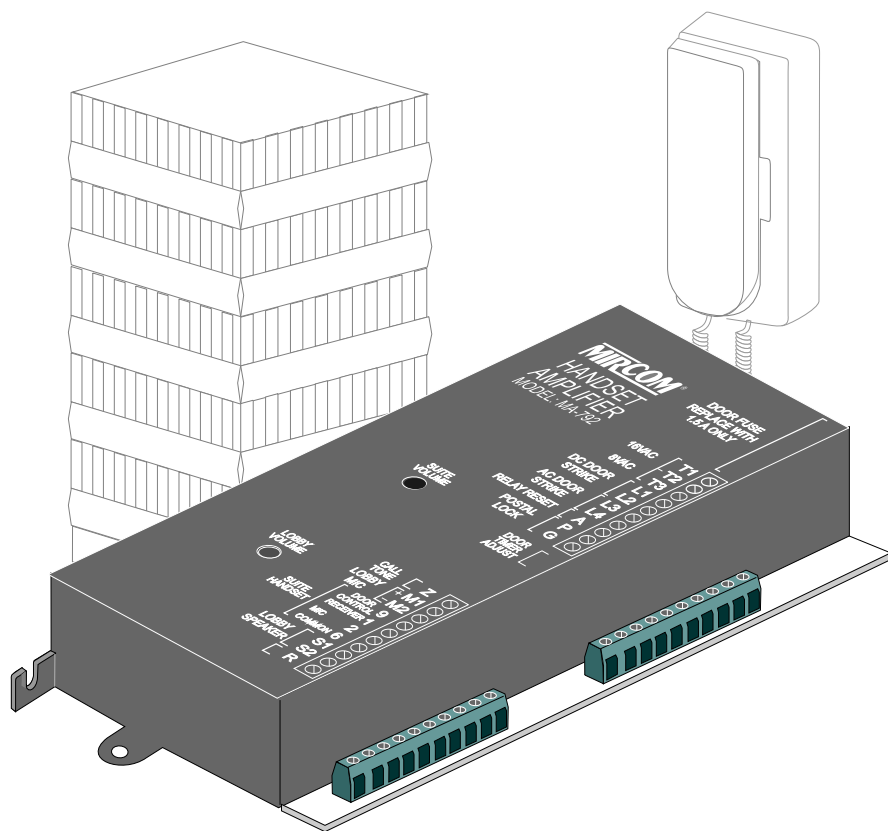




MODEL MA-792

APARTMENT INTERCOM AMPLIFIER

INSTALLATION AND OPERATING INSTRUCTIONS



NOTICE

All information, document, and specifications contained in this manual are subject to change to change without prior notice by the manufacturer.

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INTRODUCTION

The MA-792 is a communications amplifier designed for communication between handset type apartment suite stations and lobby panels incorporating handsets or loudspeakers. It incorporates facilities to control an electric door strike remotely from each suite station. Apartment installations involving more than one entrance can be accommodated with the addition of one or more MIRCOM RL-401B multiple-entrance relay units.

MA-792 SPECIFICATIONS

Power Input, Communication: 16 VAC 0.3 A or 16-28 VDC 0.2 A

Power Input, Door Strike: 3-24 Volts AC or DC, 3 Amps.

Power Output, Communication: 300 mW into 45 Ohms

Power Output, Door Strike: 3-24 Volts AC or DC, 3 Amps. Max.

Door Strike Timing: 3-15 Seconds, Adjustable

WIRING SPECIFICATIONS

1. Twisted-Pair wiring is required from terminals 2 & 6 of MA-792 amplifier to suite stations. The following conductor pairs also require twisted pair wiring for distances up to 1m (3 feet):

M1/M2

M3/M4

M5/M6

For greater distances, Twisted-Shielded pair wiring is recommended.

Connect shields of shielded wires to terminal 'G' of amplifier.

2. Use adequate wire sizes in order to minimize resistance of each conductor. Refer to the following wire chart.

WIRE CHART

Power Wires: Terminals - T1, T2, T3; L1, L2, L3, L4, L5, L6

Communication Wires: Terminals - 1, 2, 6; S1, S2, S3, S4, S5, S6; X1, X2, X3, X4; Z, Z1, Z2

Function Wires: Terminals - 9, P, A, R

DISTANCE (meters)	POWER (feet)	COMMUNICATION WIRES	FUNCTION WIRES
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50	164	#18 (AWG)	#22(AWG)	#22 (AWG)
75	246	#16	#22	#22
100	328	#14	#20	#22
150	492	#14	#18	#22
200	656	#12	#18	#22

ENCLOSURES AND HOUSINGS

1.The amplifier and relay unit are normally mounted within the lobby enclosure. When the enclosures are located outdoors, the amplifier and relay unit must be installed in a dry location where the ambient temperature is maintained between 0 °C and 40 °C (32 °F to 104 °F).

2.For installation of lobby enclosures refer to instructions supplied with enclosures.

3.PS-3B transformers may be mounted within the enclosures or at the main fuse panel. Care must be taken to locate transformers at least 12 inches away from the amplifier and the lobby microphone.

Observe local electrical codes regarding the installation of Class-2 transformers.

4.Suite station handsets can be mounted on single gang electrical boxes.

SYSTEM WIRING

Refer to fig. 1 for system wiring required for single entrance application.

Figures 2 & 3 show optional dual entrance applications.

AC Door Strike Operation

For AC (buzzing) door strike operation, refer to fig. 4 for wire connections. Select transformer "B" to suit the power requirement of the AC door strike. MIRCOM M-10 door strike requires the 8 VAC output of a PS-3B transformer for operation and transformer "B" is not required. Adjust door timing control for desired door open delay time.

DC Door Strike Operation

For DC (silent) door strike operation other than with MIRCOM M-10 door strikes, connect 16 VAC to terminals T1, T2 of the amplifier and the required door strike supply voltage as shown in fig. 4. The door fuse on amplifier will burn if the door strike current exceeds 3 A. Use of a higher capacity fuse voids warranty.

OPTIONAL CONFIGURATIONS

Lobby Handset

Refer to fig. 5 for the required connections when using IS-92 handset in the lobby enclosure.

Dual Entrance Connections

1.See figures 2 & 3 for dual entrance wiring.

2.Connections marked 'V' are common conductors to all suite stations, wire as per basic connection diagram, fig. 1.

3.Connections marked 'X' are wired as per basic connection diagram or optionally as shown in fig.4.

4.Busy lamp outputs at terminals X1, X2, X3, X4 are solid-state drivers. Connecting inductive loads or lamps rated in excess of 24 Volts / 50 mA may cause damage.

CONTROL ADJUSTMENTS

The MA-792 amplifier has three field adjustable controls located on the front:

Suite Volume- Controls the audio level from the entrance panel to the suite station.

Lobby Volume- Controls the audio level from the suite station to the entrance panel.

Door Timer- Controls the 'door-open' delay time from 3 to 15 seconds.

OPERATING INSTRUCTIONS

1. Depressing a call button at the entrance panel sounds a CALL TONE in the corresponding suite.
2. Resident replies by lifting the handset off the hook and speaking into the microphone, this allows both the resident and visitor to speak and listen simultaneously.
3. Resident may admit a visitor by depressing door button on the Suite Station, this will activate the electric door strike for a pre-set time.
4. In dual entrance installations, communication and door strike operation is automatically directed to the entrance from which the call originated.
5. Operating the optional post office lock activates the door strike at the main entrance.

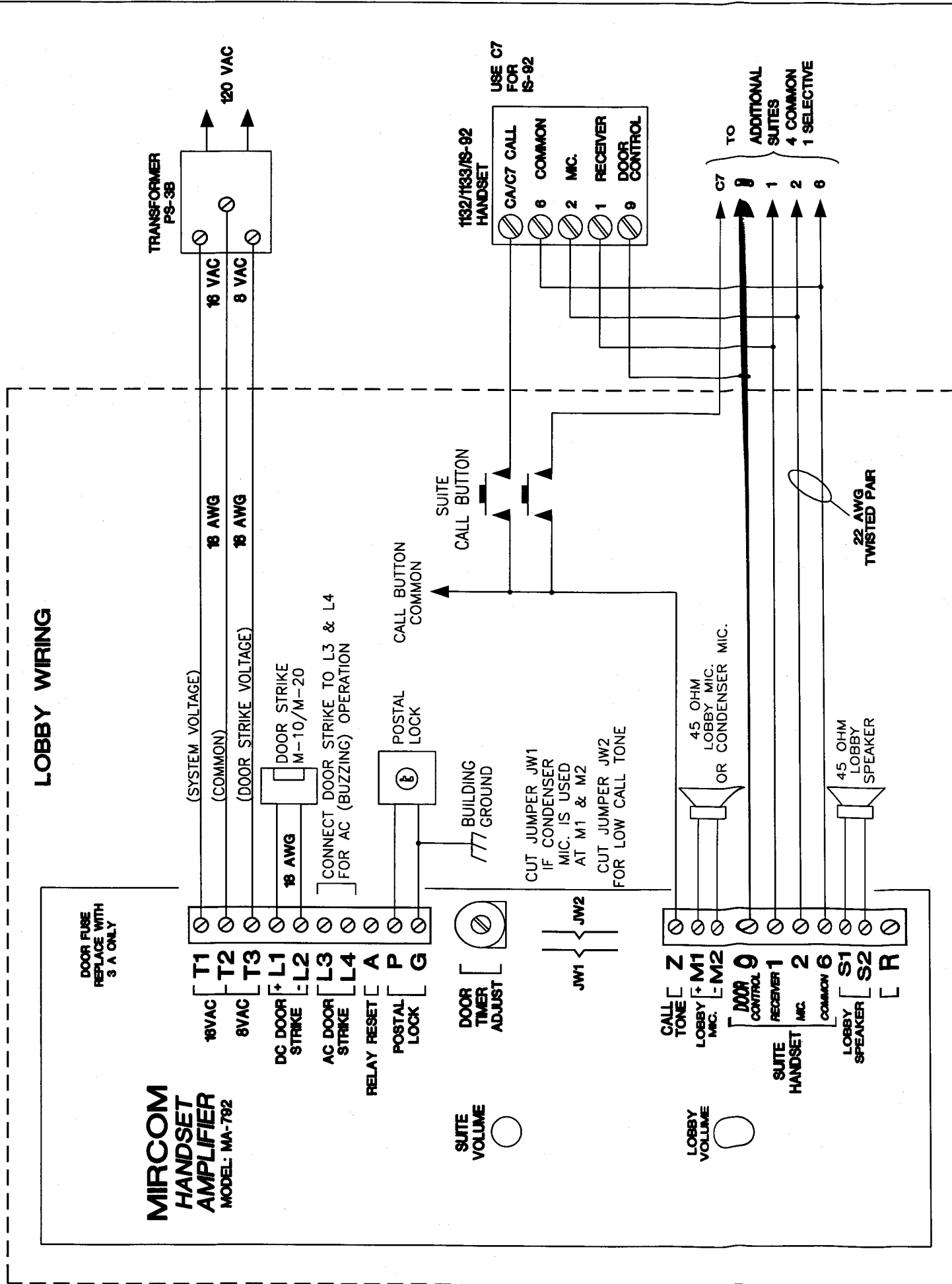
TROUBLESHOOTING HINTS

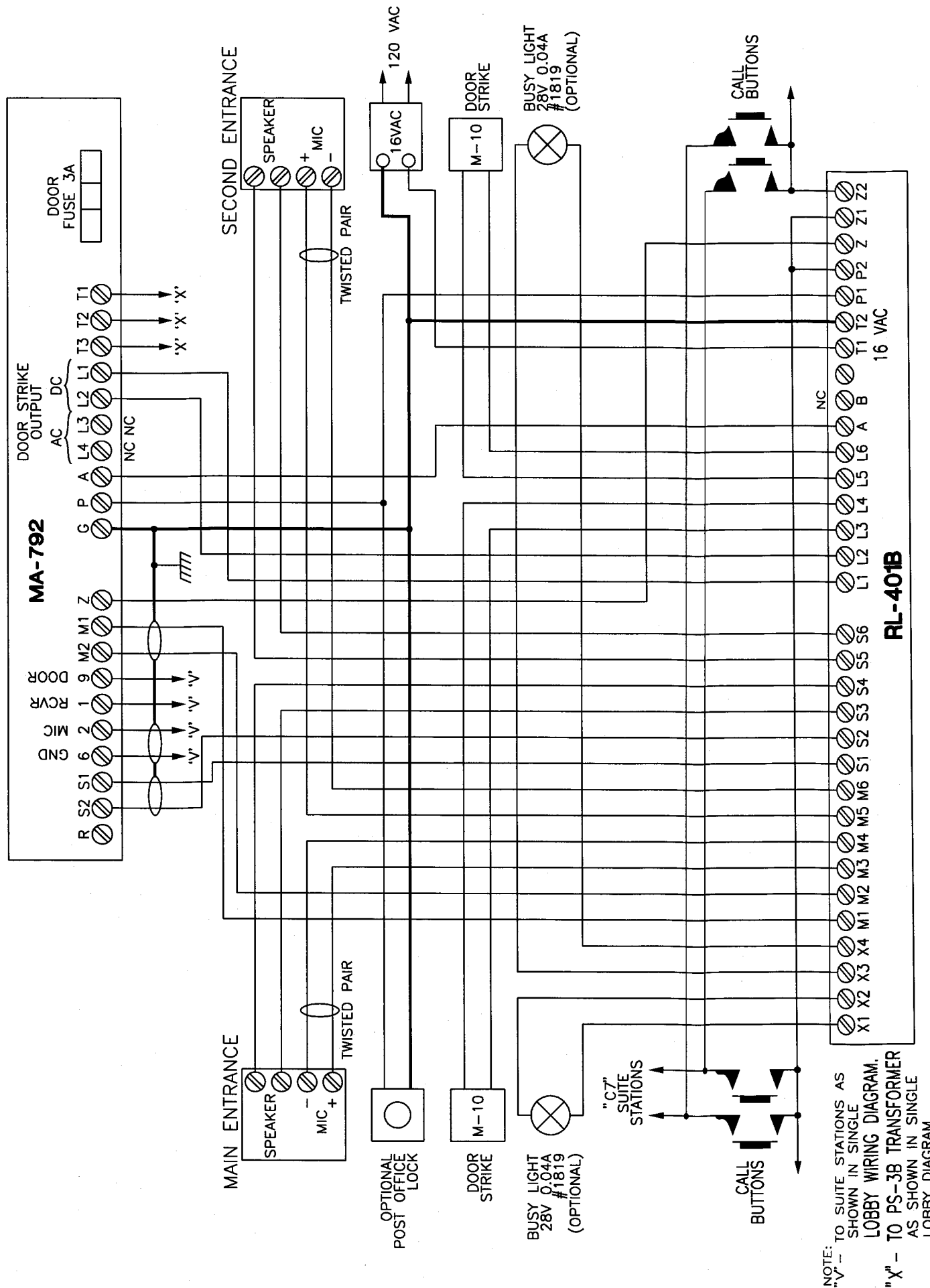
1. No Communication from Lobby to suite handsets:
 - a) Check Volume control settings on amplifier.
 - b) Check wiring from terminals 1, 2, & 6 of amplifier to suite stations.
 - c) Check Speaker and Microphone connections from entrance panel to amplifier.
 - d) Check for 16 VAC supply at terminals T1 & T2 of amplifier.
2. Low Volume from Lobby area and from suite:
 - a) Check Volume control settings on amplifier.
 - b) Check that additional handsets are not 'off-hook'. Red lamp on amplifier will illuminate whenever a suite handset is lifted. If more than one handset is 'off-hook', volume will be reduced.
3. No Door Strike operation:
 - a) Adjust door timer control on Amplifier.
 - b) Ensure that voltage at T2 & T3 is the specified door strike voltage.
 - c) Check door fuse on amplifier. If necessary, replace only 3 Amp., 3AG type fuse.

MA-792 TERMINAL DESCRIPTIONS

The following is a description for each of the field terminals, along with expected voltage readings under specified conditions. Voltages are read with a 20,000 OHMS/Volt DC, 10,000 OHMS/Volt AC meter, with reference to terminal T2, except where noted otherwise:

- T1 16 VAC power input for amplifier and control circuits, this terminal must be positive when powering with DC.
- T2 Power Supply common & 0 volt reference.
- T3 Door strike transformer input.
- L1 Positive output terminal for door strike.
- L2 Negative output terminal for door strike.
- L3, L4 AC output for door strike: output voltage across L3, L4 is identical to input between T3, T2 when door strike is activated.
- P Postal lock door control input, carries approximately +11 VDC when not in use, door strike is activated by shorting terminal P to G.
- A Door strike control output, used for multiple-entrance systems, normally at 0 Vdc, +12Vdc when door circuit is activated.
- S1 Output for 45 Ohm entry panel loudspeaker, carries 0-5 VAC voice signals when operating.
- S2 Return path for signal on terminal S1, internally connected to common terminal T2.
- R Output for optional handset receiver on entry panel, carries ~0.5 Vac voice signals when operating.
- M1 Microphone input, for use with entry panel microphone, signal from microphone is 0-2 mV AC.
- M2 Return path for microphone signal on terminal M1, internally connected to terminal T2.
- 1 Suite station receiver line, carries 0 ~ 1 VAC voice signals when in operation.
- 2 Suite station microphone line, carries +12 VDC when all handsets are on their bases, ~ +6 VDC when one handset is lifted.
- 6 Return for audio paths of terminals 1 & 2, internally connected to terminal T2.
- 9 Door control input from suite stations, normally at +11 Vdc, 0 Volts when door button on suite station is depressed.
- Z Call tone generator output, normally at +22 Vdc, supplies ~ 10 Vac call tone signal when a call button is depressed.





NOTE: TO SUITE STATIONS AS SHOWN IN SINGLE LOBBY WIRING DIAGRAM.

"V" - TO PS-3B TRANSFORMER AS SHOWN IN SINGLE LOBBY DIAGRAM.

"X" - TO SUITE STATIONS AS SHOWN IN SINGLE LOBBY WIRING DIAGRAM.

FIG. 2: DUAL ENTRANCE CONNECTION FOR USE WITH SPEAKER/MICROPHONE PANELS IN LOBBY

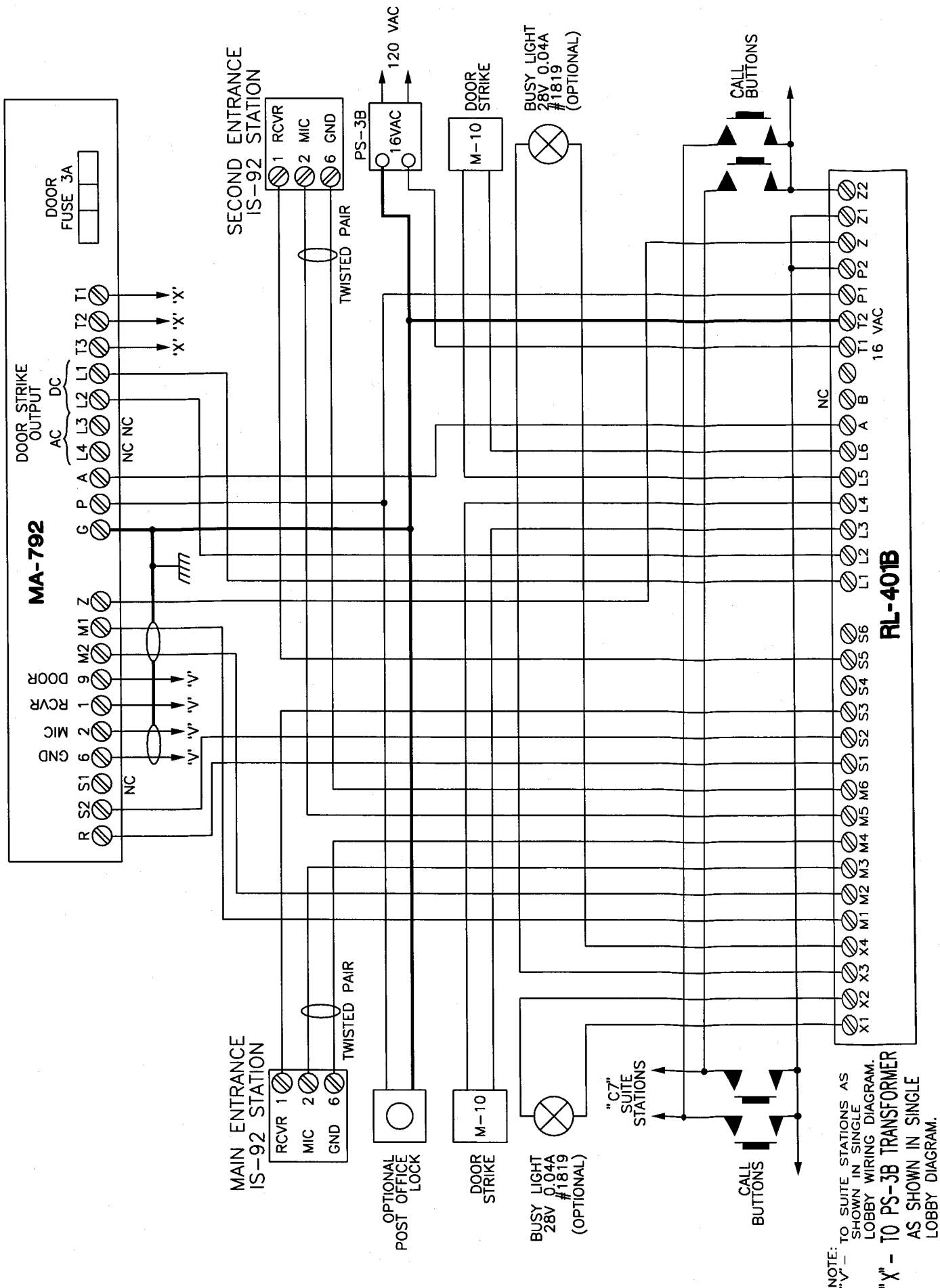


FIG. 3: DUAL ENTRANCE CONNECTION FOR USE WITH HANDSET PANELS IN LOBBY

USING A DOOR STRIKE OTHER THAN MIRCOM'S M-10/20, SELECT TRANSFORMER "B" TO SUIT THE POWER REQUIREMENTS OF THE DOOR STRIKE. CONNECT TRANSFORMER "B" TO T2 AND T3. SEE FIG. 4

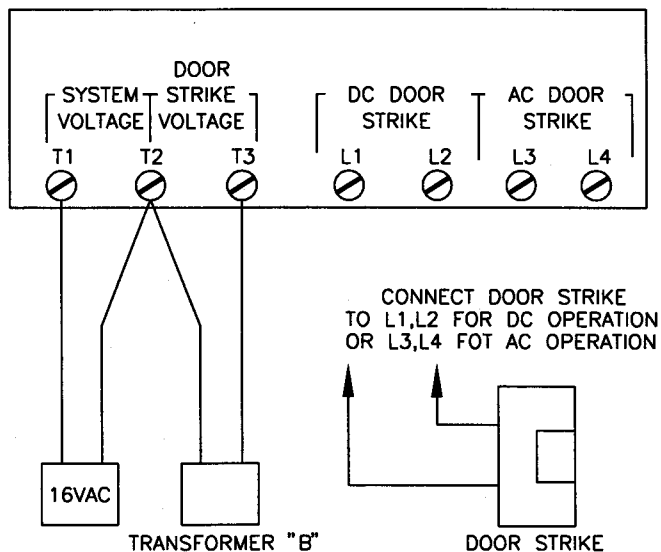


FIG. 4

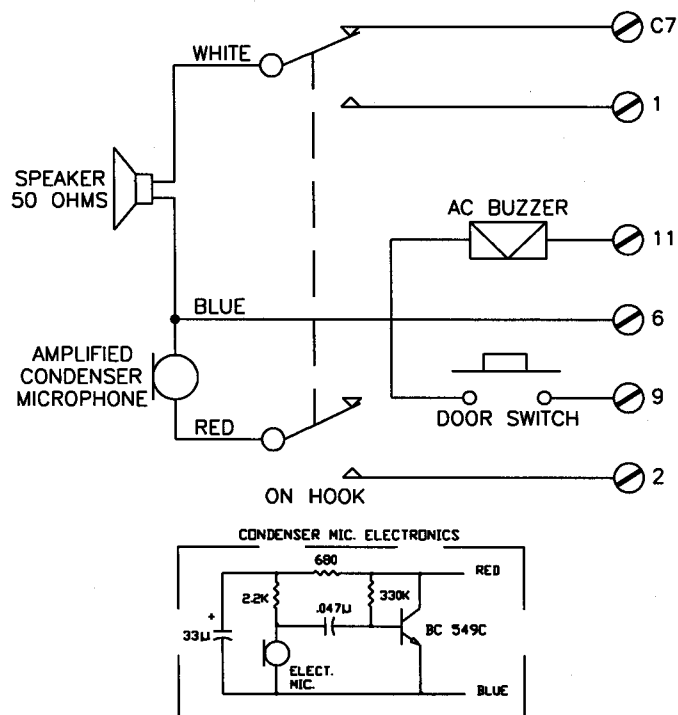


FIG. 5: INTERNAL WIRING

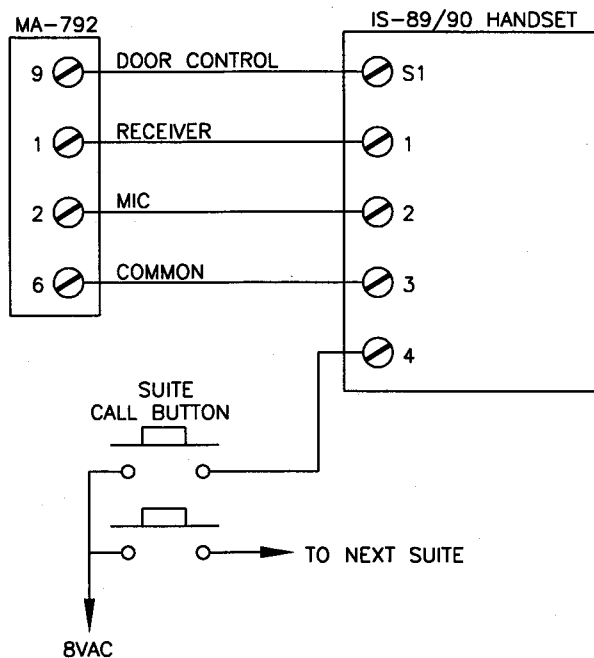


FIG. 6: USING IS-89/90
HANDSET IN SUITE

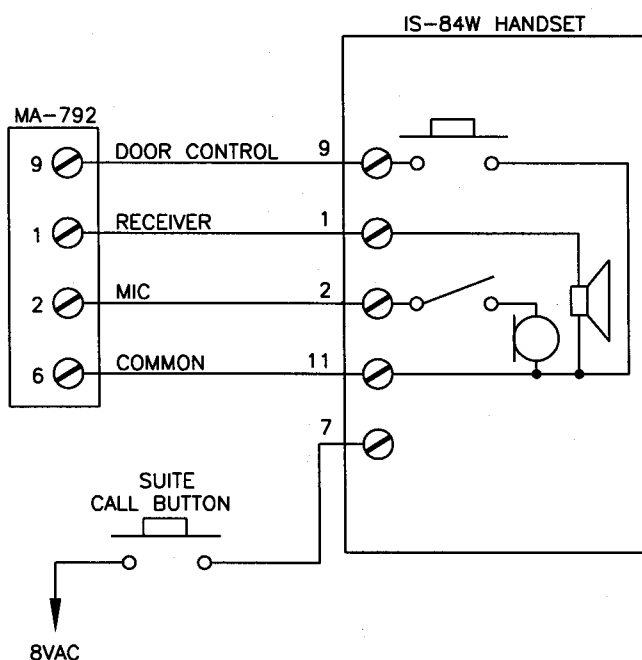


FIG. 7: USING IS-84/IS-84W
HANDSET IN SUITE

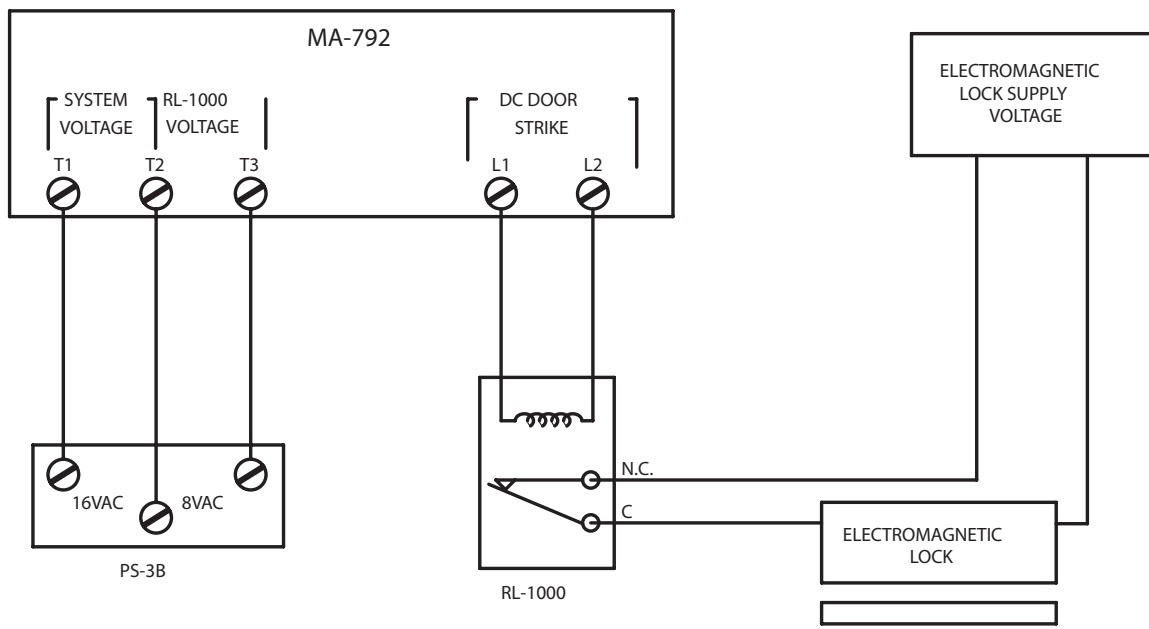


FIG. 8: ELECTROMAGNETIC LOCKS CONNECTIONS

Warranty

Mircom Technologies Ltd., manufactured equipment is guaranteed to be free of defects in material and workmanship for a period of two (2) years from the date of original shipment. Mircom will repair or replace, at its option, any equipment which it determines to contain defective material or workmanship. Said equipment must be shipped to Mircom prepaid. Return freight will be prepaid by Mircom. We shall not be responsible to repair or replace equipment which has been repaired by others, abused, improperly installed, altered or otherwise misused or damaged in any way. Unless previously contracted by Mircom, Mircom will assume no responsibility for determining the defective or operative status at the point of installation, and will accept no liability beyond the repair or replacement of the product at our factory authorized service depot.

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