Z.600

COMMUNICATIONS CONTROLLER

Installation Manual

ELAN
HOME SYSTEMS

⚡ WARNING ⚠

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the device or component.

WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT SAFETY INFORMATION

Read Information—All the safety and operating information should be read before the unit is operated.

Follow Information—All operating and use information should be followed.

Retain Information—The safety and operating information should be retained for future reference.

Heed Warnings—All warnings on the unit and in the operating instructions should be heeded.

Carts and Stands—This unit should be used with a stationary shelf. Do not use any mobile carts.

Wall Mounting—Mounting of this unit should be done only by an authorized installer.

Ventilation—This unit should be situated so that its location or position does not interfere with proper ventilation. This unit should never be placed near or over a radiator or heat register. This unit should not be placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

Non-Use Periods—Units that are left unattended and unused for long periods of time should be unplugged from the wall outlet.

Power Sources—This unit should be connected to a power supply only of the type described in the operating instructions or as marked on each unit. If you are not sure of the type of power supply to your home, consult your authorized ELAN dealer or local power company.

Grounding or Polarization—These audio products are equipped with a grounding-type alternating-current line plug. This plug will fit only into a grounding-type power receptacle. This is a safety feature. If the plug receptacle does not fit, contact an electrician to replace your obsolete receptacle. Do not defeat the safety purpose of the grounding-type plugs.

Water and Moisture—To reduce the risk of electric shock or fire, this unit should not be used near water——for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

Power Cord Protection—Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the units. Do not damage or deform the power supply cord. If it is damaged or deformed, it may cause electric shock or fire when used. When removing from the wall outlet, be sure to remove by holding the plug attachment and not by pulling the cord.

Telephones—Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning. Do not use a telephone to report a gas leak if the leak is in the vicinity of the ELAN electronic equipment because of risk of fire or explosion.

Cleaning—Unplug this audio product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

Power Lines—An outdoor antenna should be located away from power lines. When installing an outside antenna system, extreme care should be taken to avoid touching power lines or circuits, as contact with them may be fatal.

Outdoor Antenna Grounding—If an outside antenna or cable system is connected to these audio products, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the U.S. National Electrical Code, and Section 54 of the Canadian Electrical Code, provide information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See the grounding diagram (right).

Overloading—Do not overload wall outlets and extension cords, as this could result in fire or electric shock. Do not use speakers with a rating of less than 4 ohms when in "nonbridged" mode or less than 8 ohms in "bridged" mode.

Object and Liquid Entry—Never insert objects of any kind through the openings of this unit, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Care should be taken so that objects do not fall and liquids are not spilled into the unit through openings in the enclosure.

Grounding Diagram

ANTENNA LEAD-IN WIRE

GROUND CLAMPS

ANTENNA LEAD-IN WIRE
(CEC SECTION 54-200)
(NEC SECTION 810-20)

ELECTRIC SERVICE EQUIPMENT

GROUNDING CONDUCTORS
(CEC SECTION 54-200)
(NEC SECTION 810-21)

GROUND CLAMPS

POWER SERVICE GROUNDING ELECTRODE SYSTEM
(CEC SECTION 10-700)
(NEC ARTICLE 250, PART H)

NEC - NATIONAL ELECTRICAL CODE
CEC - CANADIAN ELECTRICAL CODE

Servicing—Do not attempt to service this unit yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring Service—This unit should be serviced by qualified service personnel when:
- A power supply cord or a plug has been damaged or
- If liquid has been spilled into the unit or objects have fallen into the unit or
- The unit has been exposed to water or moisture or
- The unit does not appear to operate normally or exhibits a marked change in performance or
- The unit has been dropped or the enclosure damaged.

Replacement Parts—When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Safety Check—Upon completion of any service or repairs to this audio product, ask the service technician to perform safety checks to determine that the audio product is in proper operating condition.

Lightning—For added protection for these audio products during an electrical storm, or when they are left unattended and unused for long periods of time, unplug them from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the audio products due to lightning and power-line surges.
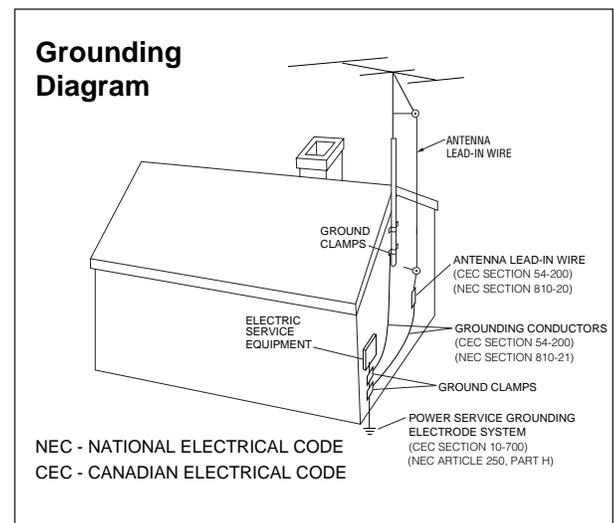
IMPORTANT USER INFORMATION

The ELAN Home Systems Z•600 Comm Controller has been registered with the Federal Communications Commission (FCC) in accordance with Parts 68 of its rules. On the bottom of the Z•600 Series Comm Controller is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this number must be given to the telephone company.

FCC Registration Number:	**5J7USA-23107-MA-T**
Ringer Equivalence Number (REN):	**1.1B**
Load Number (LN):	**12B**

The REN is useful in determining the quantity of devices you may connect to your telephone line and still have all those devices ring when your number is called. In most, but not all areas, the sum of all RENs of all devices connected to one line should not exceed five (5.0). To find out the number of devices you may connect to your line, as determined by the REN, contact your local telephone company for the maximum REN for your calling area.

If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But, if advance notice isn't practical, you will be notified as soon as possible. You will be notified of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service. If you experience trouble with this telephone equipment, please contact **ELAN TECHNICAL SUPPORT at 1-606-269-7760** for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure the equipment is not malfunctioning.

If the telephone features are not functioning or are malfunctioning, switch off the Z•600 Comm Controller (located on the rear panel). This will directly connect the telephone line with all the telephones connected to the package. Contact your dealer for repairs.

This equipment may not be used on coin service provided by the telephone company. Connection of party lines is subject to state tariffs. (Contact your state public utility commission for information).

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

DISCLAIMER:

The ELAN Z•600 Comm Controller is an advanced design capable of interfacing with most telecommunication devices and central office switches. It has been thoroughly tested and should work satisfactorily with most telephone equipment. However, ELAN in no way represents, guarantees, or claims that the ELAN Z•600 Comm Controller will achieve 100% functionality with every manufacturer's telephone equipment or with every central office feature.

ELAN Home Systems *strongly* recommends the use of a quality in-line Telephone Surge Suppressor, as the Z•600 is the hub of your telephone wiring network. This device should be installed between the incoming telephone service line and the Z•600's TELCO IN jack. If your installer has not installed such a device, please insist that they do so. For additional protection on large wiring networks, surge suppression can also be added in series with the Z•600's PHONE OUT jack, protecting your house network and Z•600 from surge in both directions.

Although the installation of telephone line surge suppression is an important precautionary measure to take in protecting your Z•600 from surge-related damage, it does not completely eliminate the possibility of surges entering into the system through the telco line due to near or direct lightning strikes. ELAN Home Systems does not warranty this, or any product against surge-related damage; nor does this warning imply that, if surge protection is installed and the unit is subsequently damaged by surge, ELAN Home Systems would repair or replace the unit under warranty. Please consult the warranty policy of the surge protection device you are installing for information on product repair/replacement in the event of surge-related damage.

CONGRATULATIONS AND THANK YOU

You have purchased the highest quality integrated communications controller on the market today—the Z•600 Comm Controller. We at ELAN Home Systems are proud of this precision component and are pleased you have chosen this ELAN product as the cornerstone to your audio system. Crafted to be the de facto standard in its class, the Z•600's circuit design, small footprint and robust peformance are the latest in technology and should provide you with years of superior audio performance. The Z•600 is also available in a rack mount version— **the Z•601.**

As a manufacturer, ELAN strives to provide you with excellent service **after the sale.** If you have any questions or comments concerning the performance, installation or features of the Z•600 Comm Controller, please call the ELAN Service and Technical Support Department at 1 859 269-7760. We are at your service.

Please take a few minutes to read this manual thoroughly. It will help you fully understand and successfully integrate the capabilities and features of your Z•600 Comm Controller with your existing telephones, audio system, and speakers.

ELAN Home Systems designs and manufactures the industry's most complete line of multi-room audio/video systems and components. For free product information write us at:

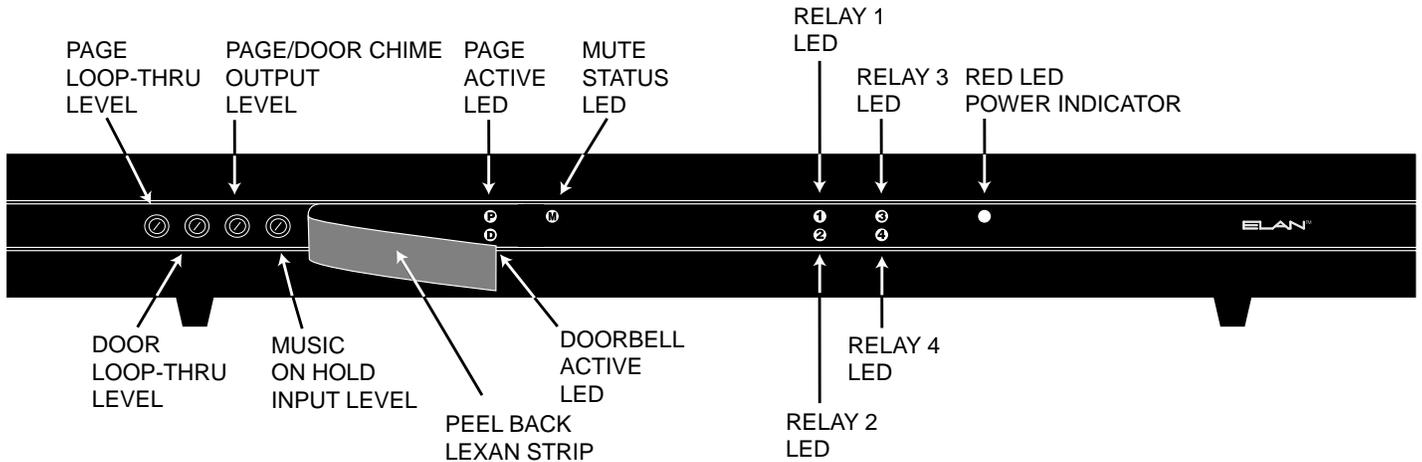> ELAN Home Systems
> Product Information
> 2428 Palumbo Drive
> Lexington, Kentucky 40509

Look for these other New Z•Series Products:

> Z•630/631 Pre-Amp Controller
> Z•660/661 Multi-Channel Power Amplifier
> Z•100 and Z•150 Intelligent Keypads
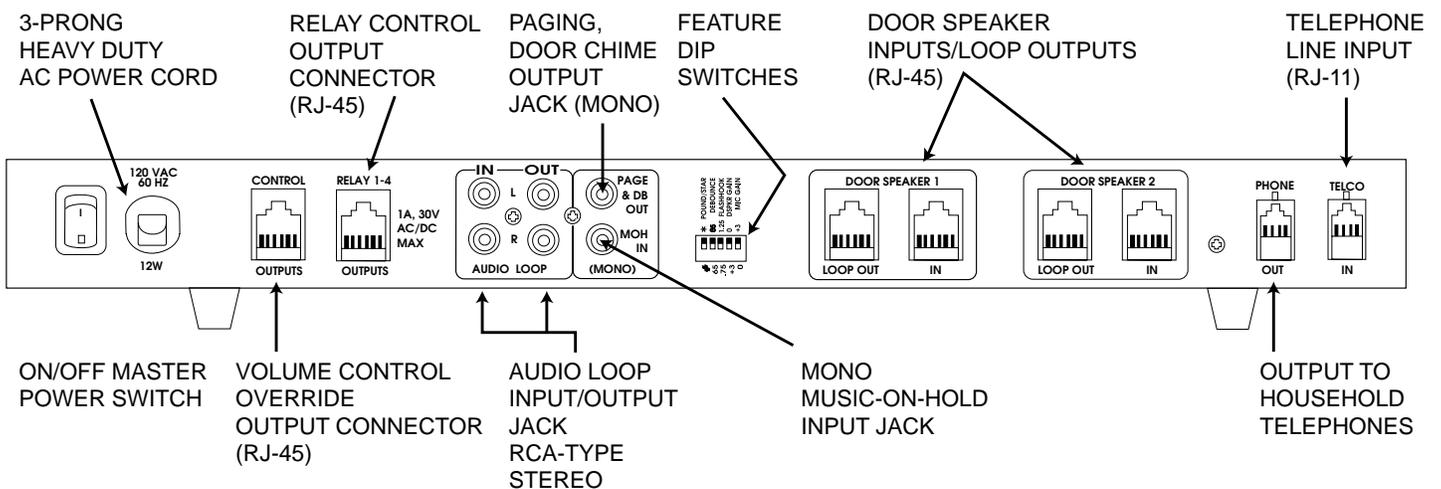
FEATURES OVERVIEW

Z600 **FRONT VIEW**

PAGE
LOOP-THRU
LEVEL

PAGE/DOOR CHIME
OUTPUT
LEVEL

PAGE
ACTIVE
LED

MUTE
STATUS
LED

RELAY 1
LED

RELAY 3
LED

RED LED
POWER INDICATOR

DOOR
LOOP-THRU
LEVEL

MUSIC
ON HOLD
INPUT LEVEL

PEEL BACK
LEXAN STRIP

DOORBELL
ACTIVE
LED

RELAY 2
LED

RELAY 4
LED

Z600 **BACK VIEW**

3-PRONG
HEAVY DUTY
AC POWER CORD

RELAY CONTROL
OUTPUT
CONNECTOR
(RJ-45)

PAGING,
DOOR CHIME
OUTPUT
JACK (MONO)

FEATURE
DIP
SWITCHES

DOOR SPEAKER
INPUTS/LOOP OUTPUTS
(RJ-45)

TELEPHONE
LINE INPUT
(RJ-11)

ON/OFF MASTER
POWER SWITCH

VOLUME CONTROL
OVERRIDE
OUTPUT CONNECTOR
(RJ-45)

AUDIO LOOP
INPUT/OUTPUT
JACK
RCA-TYPE
STEREO

MONO
MUSIC-ON-HOLD
INPUT JACK

OUTPUT TO
HOUSEHOLD
TELEPHONES

TABLE OF CONTENTS

INTRODUCTION

With the Z•600 Comm Controller, your multi-room audio system will be transformed into a wholehouse communications network. This stand-alone component integrates intercom, telephone and home automation features with your existing audio system to seamlessly create an environment of wholehouse communication and control.

A Better Intercom....

With the Z•600 Comm Controller, your audio system becomes a high-fidelity intercom system that is simple to use. Page family members from any phone in your home. Hear clean, clear voice communications via the ELAN in-wall speakers as the music mutes automatically. To answer a page, simply pick up the nearest phone. No unsightly wall units to contend with your interior design—just reliable, hi-fi voice and music. You'll use it everyday and wonder... "how did I live without this before?".

A Great Door System

In larger homes, hearing a doorbell and then answering it is no easy task. The Z•600 is designed to distribute two different door chimes through in-wall speakers, alerting you to a visitor at any door entrance. With the Z•Series Doorspeaker packages (optional), two-way communications and door latch control to any two dwelling entrances is a "touch-tone" away. Simply pick up the phone to query a visitor or unlock a door.

Step-Saving Convenience

Park an incoming call while you take it on another phone. When you page, callers are automatically put on hold and entertained with the Z•600's "Music-On-Hold" feature. If you take a call in a room where music from the in-wall speakers is too loud—simply mute the speaker audio from your phone. The Z•600 will alert you with "beeps" through the audio system if you inadvertantly leave a caller on hold too long or if the phone receiver is left off hook.

Intuitive Operation

Phone feature commands are simple and intuitive. Press the pound sign (#), followed by simple, easy to remember feature keys like "P" (7) for **P**age, "H" (4) for placing a caller on **H**old, "D" (3) for talking through the **D**oorspeaker or "M" (6) for **M**uting the audio system music for that call.

Automation In Mind

With its relay control circuitry, the Z•600 can also provide control of home automation amenities such as lighting, drapes, outside gates, even security systems. Home automation commands, such as the opening of drapes and turning

lights on or off are easily executed via the telephone keypad. Nothing could be more simple or more elegant.

Bulletproof Design

Enhanced ESD protection, transient voltage surge protection, and phone-line conditioning circuitry guarantee years of enjoyment from your Z•600. A Pro audio compressor/limiter circuit provides clean, clear page and door chime audio with superior voice intelligibility. A high-output door speaker amplifier and sensitive door mic amplifier ensure superior two-way door communications.

THE Z•600 AND YOUR PHONE LINE...

Where Do You Install It?

The Z•600 Comm Controller installs on your phone line before all your telephones. This installation assures that you will be able to utilize the Z•600's telephone/intercom features from any phone in your home.

More Than One Phone Line?

The Z•600 is designed to support and operate with a single phone line. If you have two or more phone lines and wish to have the Z•600 features and operability on all lines, the solution is a very simple one... get a Z•600 for each phone line!

No Special Phone Equipment Needed!

The best thing about the Z•600 Comm Controller is that it does not require special or proprietary phones. A touch-tone phone (you can even use a cordless) is all that is required for convenient and easy to use intercom and call features!

THE FEATURES...

Paging

The Z•600's "Page" feature makes communicating to any room in your home as easy as picking up a phone. The Z•600's page audio is heard through the same speakers that provide music throughout your home, giving you high-quality audio that is light years ahead of standard intercom systems.

Phone-to-Phone Intercom

After paging a family member, a room-to-room phone conversation can be conducted without being heard over the in-wall speakers.

Music-On-Hold

Callers who are placed on hold enjoy music via the Z•600's "music-on-hold" feature (dedicated Music-On-Hold source required).

Doorspeaker Communication & Chimes

The Z•600 Comm Controller provides two-way communication and door chimes for two dwelling entrances. With the addition of an ELAN DS1500 Doorspeaker Assembly, you can conduct two-way conversations with either door via your telephone. When someone presses the ELAN doorbell button, a two or three note chime will sound over the speakers in every room.

In addition to two-way communications, the ELAN DS1550 Doorspeaker Assembly gives you the ability to operate up to two electronic door/gate latches.

Home Automation

From your telephone, you can activate up to four relays that can be configured to trigger home automation controls such as lighting, draperies, security systems or garage door openers.

Telemute

The Z•600's "Telemute" feature automatically mutes the music throughout your home whenever a page or doorchime is activated or whenever the phone rings. The music will come back on once the page or doorchime has ended or when you pick up the phone to answer it.

Music Mute

The Z•600 gives you the ability to mute the music from your telephone while you're on the phone. When you hang up the phone, the music will automatically come back on.

On Hold Alert

When you place a caller on hold using any telephone feature, one minute after the phone is placed "on-hook" , the Z•600 will transmit a single beep alerting you that the caller is still on hold.

Off Hook Alert

If any of your phones are inadvertantly left "off-hook", the Z•600 will transmit a double beep after two minutes, alerting you that a phone is off-hook somewhere in your home.

System Bypass

This feature allows you to override all Z•600 phone features and enjoy call services provided by your local phone company, bank or credit card company, etc.

THE "QUICK REFERENCE" TELEPHONE FEATURES GUIDE

Included with your Z•600 Comm Controller, you will find two "Quick Reference" Telephone Feature Cards.

Z SERIES TELEPHONE FEATURES
QUICK REFERENCE GUIDE

PAGE	#, 7ᴾᴿˢ	**"P"** for *PAGE.* Speak into the phone receiver and your voice will be heard throughout the house over the ELAN speakers. (Pressing #, 7ᴾᴿˢ automatically places a caller on hold; to return to the caller after the page, press any key.)
HOLD	#, 4ᴳᴴᴵ	**"H"** for *HOLD.* Allows you to place caller on hold (with music), hang up, and take the call on another phone in the house.
PHONE-TO-PHONE INTERCOM	#, 7ᴾᴿˢ, then press 0ᴼᵖᵉʳ	This allows you to talk with someone at another phone in the house after a page, without the conversation being heard over the ELAN speakers.
DOOR SPEAKER 1	# 3ᴰᴱᶠ 1	**"D"** for *DOOR.* Allows you to use a telephone to speak with someone
DOOR SPEAKER 2	# 3ᴰᴱᶠ 2ᴬᴮᶜ	over the door speaker.
DOOR LATCH 1 *(OPTIONAL)*	#, 3ᴰᴱᶠ, 0ᴼᵖᵉʳ	Activates the door latch 1, relay. The relay operates as long as you hold the 0ᴼᵖᵉʳ.
DOOR LATCH 2 *(OPTIONAL)*	#, 3ᴰᴱᶠ, 2ᴬᴮᶜ, 0ᴼᵖᵉʳ	
SYSTEM BYPASS	#, 9ᵂˣʸ	The System Bypass allows you to use outside phone services that require use of the # key.
MUSIC MUTE	#, 6ᴹᴺᴼ	This command allows you to mute the music coming through your ELAN speakers for the duration of an incoming or outgoing call.

Note: If you have a caller on the line and you activate any of the ELAN features, the caller is automatically placed on hold.

STANDARD FEATURES

Off Hook Alert - If phone is left off hook, after two minutes a "double beep" is heard over all the speakers.

Tele Mute - Music mutes for the duration of the telephone ring or door chime.

On Hold Alert - When you place a caller on hold using any telephone feature, after one minute of the phone being placed on hook the music will mute and a single "on hold" status tone will broadcast over the speakers.

_____	#, 1, 1	These commands allow you to control automation functions that are connected to relays 1-4 on the Z•600. Write each function beside the command for quick reference.
_____	#, 1, 2ᴬᴮᶜ	
_____	#, 1, 3ᴰᴱᶠ	
_____	#, 1, 4ᴳᴴᴵ	

ORDER NO. ZREF9705   P/N 40615-114-09

The Z•600's phone features are easy to remember and use, but these guides will come in handy for those who are unfamiliar with the system.

The Z•600 Comm Controller also gives you the capability of activating up to four low voltage relays from your telephone keypad. These relays can be assigned to any home automation device of your choosing. We have left you a labeling space beside each relay command on the bottom of the Quick Reference Card.

A Quick Explanation......

All telephone feature commands are initiated from the keypad of your touch tone phone. They are simple to use and easy to remember! All telephone feature commands begin with the # (pound) symbol (factory preset).

Note: You have the option of choosing the * (star) symbol as the beginning command. This is selectable via DIP switch number 1 on the rear of the Z•600. You may wish to select the star (*) command if the pound symbol is not compatible with any telephone/home office equipment or security system that you are currently using in your home. See page 26 for instructions on how to change this feature.

The second key press in each command coincides with the first letter of that feature—for instance to place a caller on Hold, press #, then 4 (the H key on your telephone keypad).

The Z•600 feature key press sequences can also be programmed to your telephones' Speed Dial buttons, should your phones have this feature. For example: #,P can be programmed to Speed Dial Number 1 for Paging throughout the home; #,D and #,D,2 can be programmed to Speed Dial Numbers 2 & 3 for instant doorspeaker communication; #1,1 (activate relay #1) can be programmed to Speed Dial Number 4 to turn the lights on throughout the house at the press of a single digit (X-10 lighting control module or similar device required).

How To...

PAGE—To Page throughout the house, simply press # , then 7 (the P key on your keypad). Speak into the phone receiver and your voice will be heard throughout the house over the in-wall speakers. If music is present over the in-wall speakers, it will automatically mute allowing your page to be heard. If you have a caller on the phone, they will automatically be put on hold. You can get the caller back by simply pressing any key (except "0") on the telephone keypad.

PLACE A CALLER ON HOLD—To place a caller on hold, simply press #, then 4 (the H key on your keypad) and hang up. The call can then be taken on another phone elsewhere in your home. Music-On-Hold is available to the outside caller while on hold.

PHONE-TO-PHONE INTERCOM—This feature allows you to first, Page a family member over the in-wall speakers, then speak with them over the phone without the conversation being heard over the in-wall speakers. To perform this function, simply press #, then 7 (the P key on your keypad) followed by the numeric 0 key.

COMMUNICATE VIA A DOOR SPEAKER—To speak with visitors at your dwelling entrances, simply press #, then 3 (the D key on your keypad) for the front door, or #3,2 for the back or side door. (Requires the ELAN Door Speaker Assembly DS1500). Should you need to communicate with both doorspeakers, you can toggle between Doorspeaker 1 and

Doorspeaker 2 by pressing #,3 (speak with Door 1), then 2 (speak with Door 2), then 1 (speak with Door 1 again), and so on.

ACTIVATE A DOOR LATCH —If you wish to activate a door latch, simply press #, then 3 (the D key on your keypad) followed by a 0 (front door) or #,3,2,0 (back or side door). The door latch relay will remain open as long as you hold the 0 key. (Requires ELAN Door Speaker Assembly DS1550.)

MUTE MUSIC—When your phone rings, music through the in-wall speakers will mute automatically for the duration of the rings or until the phone is answered. If you want to mute the audio after you answer the call, simply press #, then 6 (the M key on your keypad). The music will mute for the duration of the call.

ACTIVATE A RELAY —Up to four relay-controlled devices can be connected to the Z•600. To activate Relay 1, press #,1,1. To activate Relay 2, press #,1,2. To activate Relay 3, press #,1,3. To activate Relay 4, press #,1,4.

Z•600 TELEPHONE USAGE TIPS

What's That Sound?!?

Familiarize yourself with the Z•600 Comm Controller's dial tone. It is different from the dial tone provided by the phone company and there are two reasons for that:
1. The Z•600 dial tone lets you know it is operational.
2. The FCC says it has to be there!

System Bypass (#9)

When you want to call someone, simply pick up the phone and start dialing! It's that simple. It is not necessary to dial #, 9 before dialing out. There are, however, certain instances where this feature will come in handy:

* When dialing out to an automated service that requires the use of "#" to access services and enter information (i.e., banking by phone or credit card company).

* If you are using your telephone company's answering service, use the system bypass feature to access the phone company's "stutter" dial tone which indicates that you have messages.

* The Z•600 can be bypassed at any time before or during a call and will reset itself when you hang up the phone.

Fax Machines, Modems, and Caller ID Boxes

Generally, these types of telephone equipment work well with the Z•600's dial tone, but to guarantee avoidance of any potential problems we suggest that these

devices be installed on the phone line before the Z•600 Comm Controller or placed on a dedicated phone line.

Paging

- Pick up any phone and press #, 7 (**P**). Your page will be heard through all the speakers in the house. If there was music playing when you initiated the page, the music will mute for the duration of the page and come back on when you hang up the phone or press the numeric 0 key on your phone.
- Following a #,7 command with a numeric 0 will mute the page audio coming over the speakers and connect you directly to every other telephone in the house for private phone-to-phone conversations. The "0" can be initiated either by the person performing the page or by a person picking up another extension.

Incoming Calls While Paging

- While in page mode, if there is an incoming call you will hear the phone ring over the speakers every fourth ring. To access the caller, press any digit (except the "0") or the flash-hook button.
- While on a phone-to-phone intercom (#,7,0 —speakers muted), if there is an incoming call, you will hear the phone ring over the handset every fourth ring. To access the caller press any digit or the flash-hook button.

Paging With A Caller On Line

- Pressing #, 7 (**P**) puts the caller on hold while you page. Pressing any digit (except "0") will bring the caller back on line. If you hang up the phone after paging, the person you paged need just pick up any phone in the house and the caller will be there.
- If you followed a #,7 command with a numeric "0" to initiate a phone-to-phone intercom, press any digit, or the flash-hook button to get the caller back.

Incoming Calls While Using the Door Speaker Assembly

- Press #,3 (**D**) to initiate two-way communications to your ELAN Door Speaker Assembly (music from in-wall speakers will not mute automatically).
- If, while communicating via a door speaker assembly, there is an incoming call, you will hear the phone ring over the handset every fourth ring. To access the caller, press # or the flash-hook button. To re-access the door speaker assembly you must press the #,3 (**D**) keys again.

Z•600 SYSTEM CONNECTIONS OVERVIEW
STAND-ALONE STEREO SYSTEM APPLICATION

PAGE AUDIO, DOOR CHIME AUDIO,
ON-HOLD ALERT, OFF-HOOK ALERT
TELEMUTE

INCOMING
PHONE SERVICE

DEDICATED
MODEM
LINE

DEDICATED
FAX LINE

ELAN DOOR SPEAKERS
DS1500/DS1550

IN-LINE TELEPHONE
SURGE PROTECTION
(NOT SUPPLIED)

ELAN
VOLUME
CONTROLS
W/OVERRIDE
FEATURE
SVC/MVC7550

LOW VOLTAGE RELAYS
FOR LIGHTING, SPRINKLERS,
GARAGE DOOR, ETC

120 VAC
60 HZ

12W

CONTROL   RELAY 1-4
1A, 30V
AC/DC
MAX

OUTPUTS   OUTPUTS

IN   OUT
L
R
AUDIO LOOP

PAGE
& DB
OUT
MOH
IN
(MONO)

DOOR SPEAKER 1
LOOP OUT   IN

DOOR SPEAKER 2
LOOP OUT   IN

PHONE   TELCO
OUT   IN

STEREO SYSTEM
(RECEIVER, PRE-AMP, POWER AMP)

DEDICATED TUNER FOR MUSIC-ON-HOLD

ELAN TELEPHONE
PUNCHDOWN
BLOCK
TBK2000

ELAN WIRE MANAGEMENT CENTER
BINT2000

KEY TO WIRES

———————— 22-24 GAUGE, 4 TWISTED-PAIR (8 CONDUCTOR) TELEPHONE WIRE, CAT. 5

••••••••••• 22-24 GAUGE, 4 TWISTED-PAIR (8 CONDUCTOR) SHIELDED WIRE WITH DRAIN

---------------- 14-18 GAUGE, 2 OR 4 TWISTED-PAIR SPEAKER WIRE

▬▬▬▬ ELAN HCD1070 RJ-45 INTERFACE CABLE

———————— RCA PATCH CABLE

The ELAN Z•600 is compatible with most Touch-Tone telephones and multi-line telephone systems. Certain telephones that use the # or * buttons for other functions may not be compatible.

The ELAN Z•600 has a Ringer Equivalency Number (REN) of 1.1B (see Page 3). The maximum number of telephones that may be connected in a home is dependent on the Ringer Equivalency Voltage being provided to the home by the phone company and the Ringer Equivalency Number of each

telephone in the home. When added together, the REN of all the house phones plus the Z•600 should not exceed 5 per telephone line. Exceeding the Ringer Equivalency Voltage provided by the telephone company may result in intermittent or no ring-in or a call from your local carrier. Ring boosters are available from your phone company for a nominal fee.

ELAN strongly recommends the use of telephone line surge protection between the incoming phone line and the Z•600 Phone Input (TELCO IN). SEE PAGE 12.

Z•SERIES SYSTEM CONNECTIONS OVERVIEW

Z•600, Z•630, Z•660, Z•PAD INTERCONNECTS

Z•100 KEYPADS

ZONE 1   ZONE 2   ZONE 3

Z•660 MULTI-CHANNEL POWER AMPLIFIER

120 VAC 60 HZ   440W   SPEAKERS 8Ω MIN.   IR IN   IR OUT REMOTE ALL   +V GND IN   STEREO   BRIDGED   1+2   3+4   5+6   AMP MODE   LINE OUTPUTS   BRIDGE   LINE INPUTS

Z•630 PRE-AMP CONTROLLER

120 VAC 60 HZ   12W   IR INPUTS   IR OUTPUTS   ALL   IN OUT   IN   OUT   ZONE OUTPUTS

Z•600 COMM CONTROLLER

120 VAC 60 HZ   12W   CONTROL OUTPUTS   RELAY 1-4 OUTPUTS   1A, 30V AC/DC MAX   AUDIO LOOP   L   R   PAGE & DB OUT   MOH IN (MONO)   DOOR SPEAKER 1   LOOP OUT   IN   DOOR SPEAKER 2   LOOP OUT   IN   PHONE OUT   TELCO IN

MINIATURE INFRARED EMITTER **IR2040**

LOW VOLTAGE RELAYS FOR LIGHTING, SPRINKLERS, GARAGE DOOR, ETC

ELAN DOOR SPEAKER #1

ELAN DOOR SPEAKER #2

SOURCE COMPONENT #1 (UP TO 6 SOURCES CAN BE CONNECTED TO THE Z•630)

INCOMING PHONE SERVICE

DEDICATED MODEM LINE

DEDICATED FAX LINE

IN-LINE TELEPHONE SURGE PROTECTION **(NOT SUPPLIED)**

ELAN TELEPHONE PUNCHDOWN BLOCK **TBK2000L**

ELAN WIRE MANAGEMENT CENTER **BINT2000**

KEY TO WIRES

————	22-24 GAUGE, 4 TWISTED-PAIR (8 CONDUCTOR) TELEPHONE WIRE, CAT. 5
••••••••••	22-24 GAUGE, 4 TWISTED-PAIR (8 CONDUCTOR) SHIELDED WIRE WITH DRAIN
- - - - - - -	14-18 GAUGE, 2 OR 4 TWISTED-PAIR SPEAKER WIRE
▬▬▬▬	ELAN HCD1070 RJ-45 INTERFACE CABLE
▬▬▬▬	RCA PATCH CABLE

TYPICAL TELEPHONE SERVICE CONNECTIONS

NEW CONSTRUCTION: ELAN recommends a "Home-Run" wiring network using Category-5 twisted-pair telephone wire from each telephone wall jack location to the ELAN Category-5 Telephone Punchdown Block **(TBK2000).**

Z•600

4-CONDUCTOR
RJ11 CONNECTION
CABLE

4-CONDUCTOR
RJ11 TO PIGTAILS
CONNECTION CABLE

IN-LINE TELEPHONE
SURGE PROTECTION

MAIN TELEPHONE
SERVICE IN

ELAN TELEPHONE
PUNCHDOWN
BLOCK
TBK2000

DUAL
TELEPHONE
WALLPLATES

4-TWISTED PAIR TELEPHONE WIRE (CAT 5)
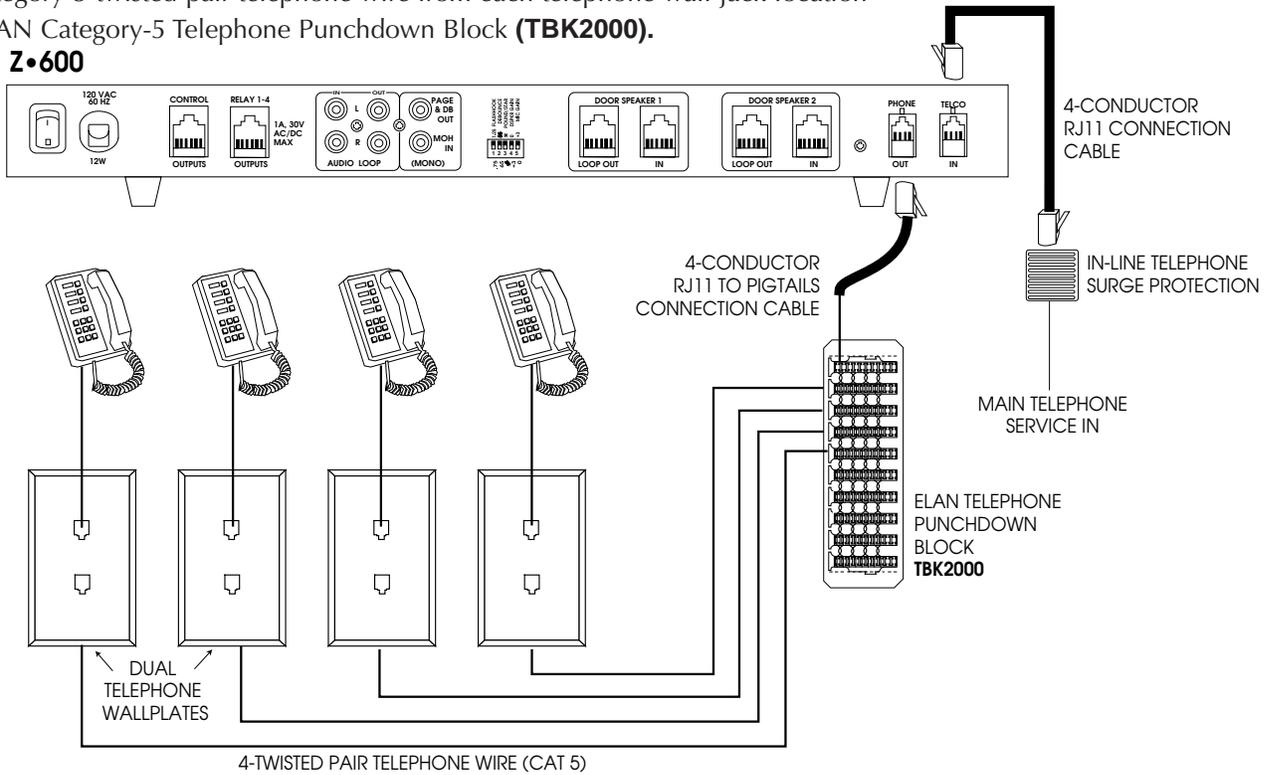
RETROFIT: Pre-existing "Daisy-Chained" wiring networks are perfectly compatible with the ELAN Z•600.

Z•600

4-CONDUCTOR
RJ-11 TO PIGTAILS
CONNECTION
CABLE

4-CONDUCTOR
RJ11 CONNECTION
CABLE

IN-LINE TELEPHONE
SURGE PROTECTION

MAIN TELEPHONE
SERVICE IN
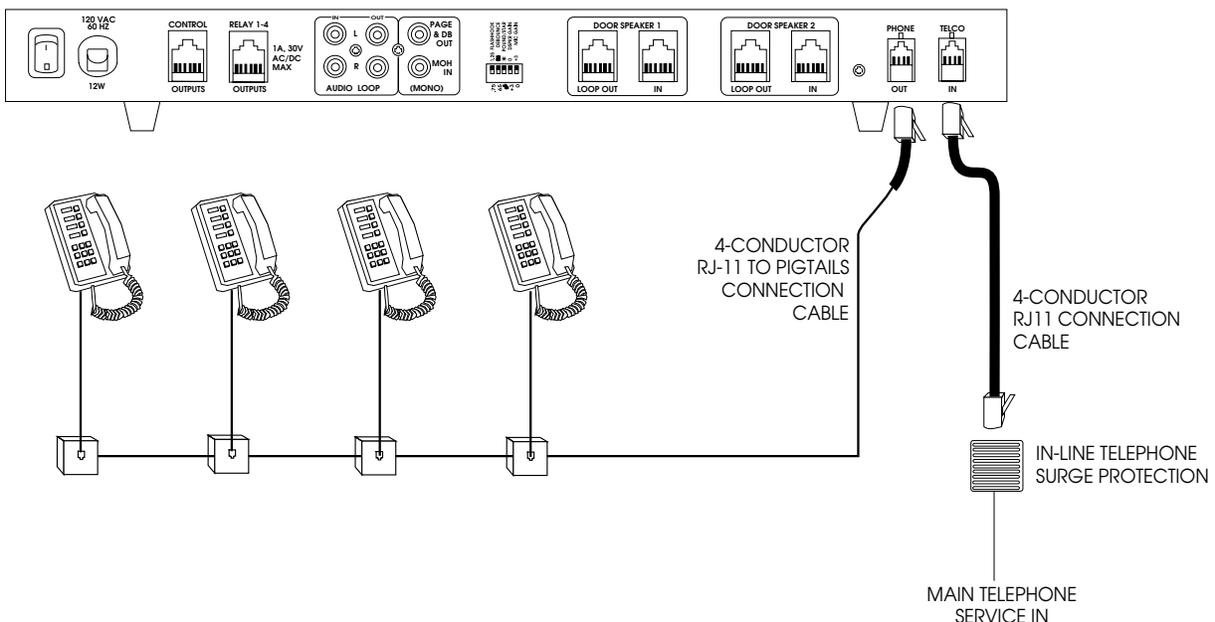
CONNECTING TELEPHONE SERVICE TO THE TBK2000L

1. Connect the Z•600 Phone Out to the extreme left pair (blue) of the top KATT connector as shown.
2. Connect any other C.O. lines to the next four color-code positions on the top KATT connections.

CONNECTING TELEPHONE EXTENSIONS TO THE TBK2000L

1. Starting at the extreme left, place the color-coded pairs of wires coming from your telephone jacks into the corresponding color-coded slots of the KATT connectors, and punch them down using a standard 110 style punchdown tool. Carefully trim any excess wire. Repeat for each extension.
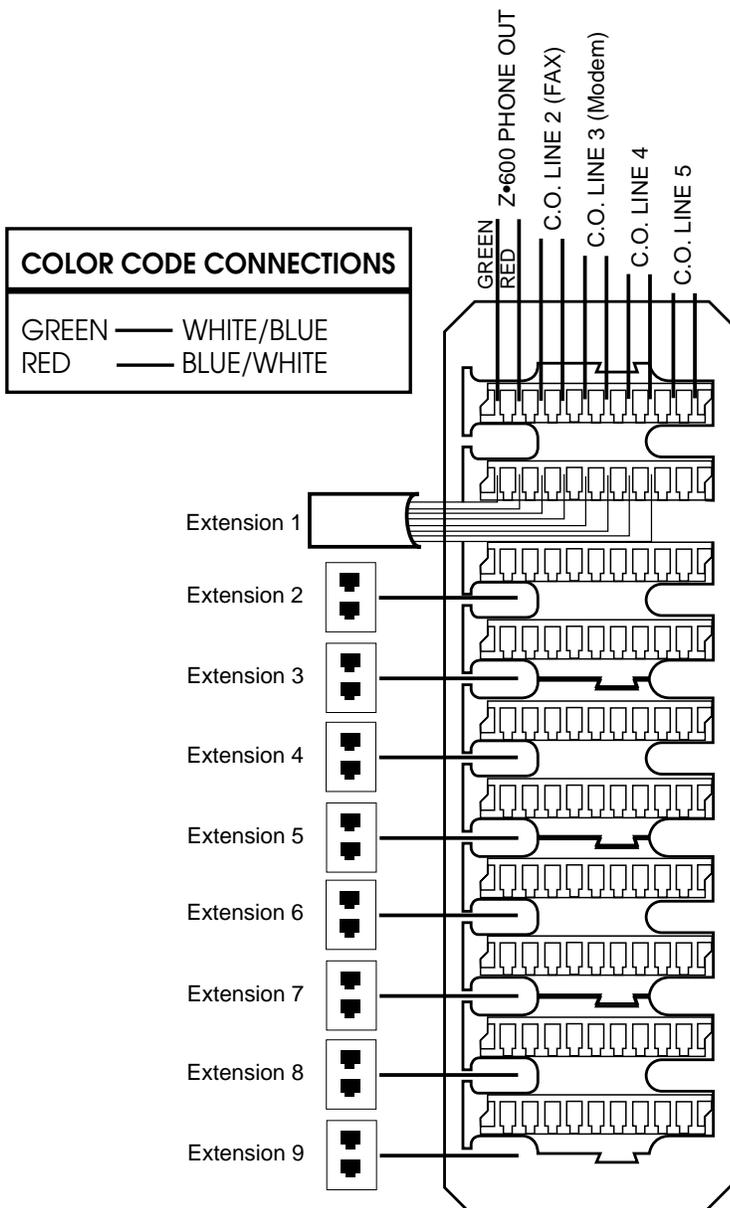
COLOR CODE CONNECTIONS

GREEN ——— WHITE/BLUE
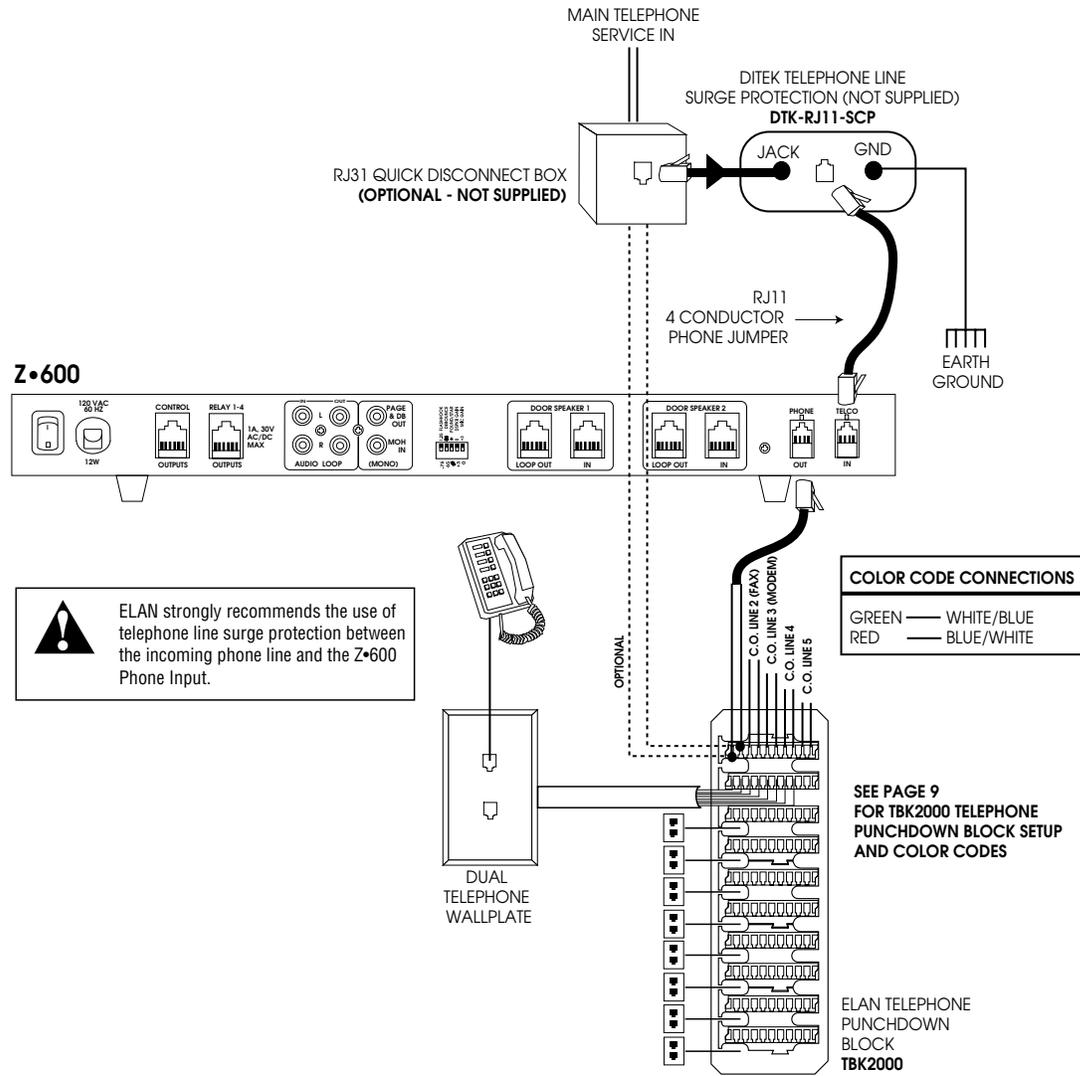RED ——— BLUE/WHITE

INSTALLATION TIP:
The flared end of the TBK2000L base block may be used to label the incoming cable. Use any fine-tipped permanent marker.
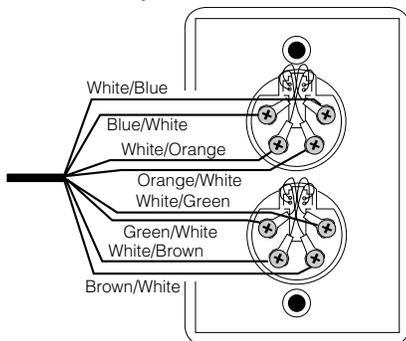
INSTALLATION TIP:
The KATT connectors on the TBK2000L will accept up to two 22- or 24-gauge conductors. Should you have more than ten telephone extensions, additional extensions can be doubled-up on each KATT connector.

CONNECTING TELEPHONE SERVICE AND TELEPHONE SURGE PROTECTION TO THE SYSTEM

MAIN TELEPHONE
SERVICE IN

DITEK TELEPHONE LINE
SURGE PROTECTION (NOT SUPPLIED)
DTK-RJ11-SCP

JACK   GND

RJ31 QUICK DISCONNECT BOX
(OPTIONAL - NOT SUPPLIED)

RJ11
4 CONDUCTOR
PHONE JUMPER

EARTH
GROUND

Z•600

120 VAC 60 HZ	
12W	CONTROL
	RELAY 1-4 1A, 30V AC/DC MAX

OUTPUTS   OUTPUTS   AUDIO LOOP (MONO)   LOOP OUT IN   LOOP OUT IN   OUT IN

IN   OUT   L   R   PAGE & DB OUT   MOH IN   DOOR SPEAKER 1   DOOR SPEAKER 2   PHONE   TELCO

ELAN strongly recommends the use of telephone line surge protection between the incoming phone line and the Z•600 Phone Input.

C.O. LINE 2 (FAX)
C.O. LINE 3 (MODEM)
C.O. LINE 4
C.O. LINE 5

OPTIONAL

COLOR CODE CONNECTIONS

GREEN ——— WHITE/BLUE
RED ——— BLUE/WHITE

**SEE PAGE 9
FOR TBK2000 TELEPHONE
PUNCHDOWN BLOCK SETUP
AND COLOR CODES**

DUAL
TELEPHONE
WALLPLATE

ELAN TELEPHONE
PUNCHDOWN
BLOCK
TBK2000

CONNECTING A DUAL TELEPHONE WALL PLATE

Dual Telephone Wall Plate, rear view

White/Blue
Blue/White
White/Orange
Orange/White
White/Green
Green/White
White/Brown
Brown/White

Pair	Screw Color	+/-	Wire color
1	Green	+	White/Blue
	Red	-	Blue/White
2	Black	+	White/Orange
	Yellow	-	Orange/White
3	Green	+	White/Green
	Red	-	Green/White
4	Black	+	White/Brown
	Yellow	-	Brown/White

CONNECTING THE Z•600 TO A MULTI-LINE TELEPHONE SYSTEM

Z•600

LINE 1   C.O. LINE 1
LINE 2   C.O. LINE 2
LINE 3   C.O. LINE 3
LINE 4   C.O. LINE 4
LINE 5   C.O. LINE 5
LINE 6   C.O. LINE 6

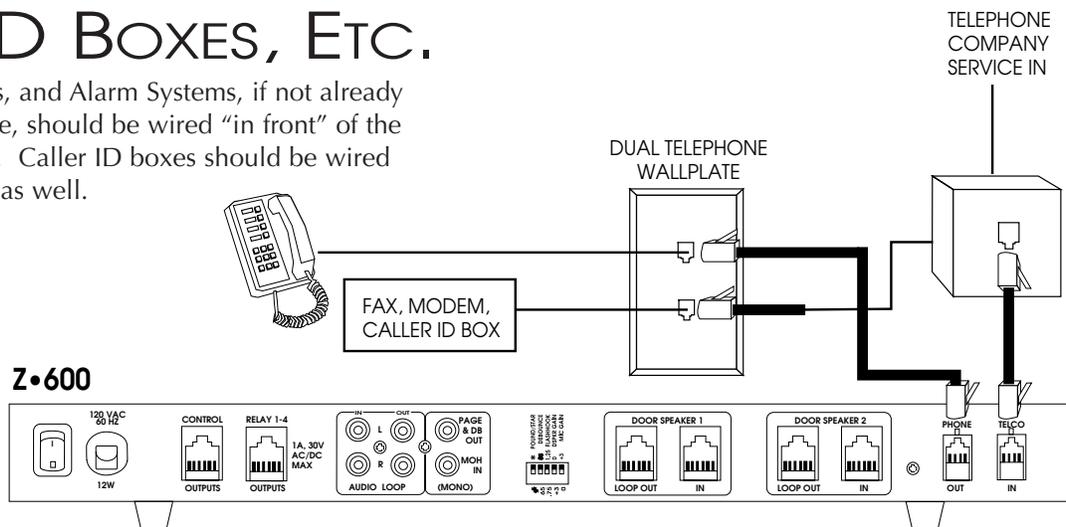MULTI-LINE TELEPHONES

MULTI-LINE TELEPHONE SYSTEM
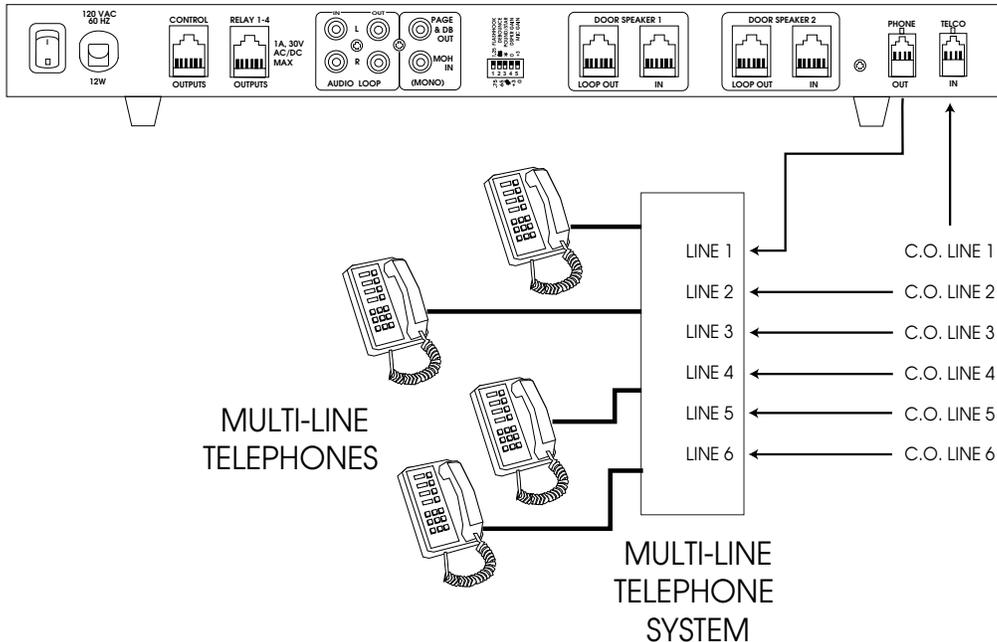
In the above scenario, Z•600 communication features (paging, door speaker communications, relay activation, etc.) would be accessed from Line 1 only. The Z•600 can be assigned to whatever line you desire. Multiple Z•600's can give you communications features on up to four different lines. As the TELEMUTE feature will only be available on the Z•600 line, we recommend that you put the Z•600 on the most often used voice line.

If desired, a dedicated ELAN feature line can be easily set up without an incoming C.O. line. Simply decide which line of your system you want to carry the ELAN features and take the Z•600 PHONE OUT to that input. In this scenario the TELMUTE feature will not be operative.

CONNECTING FAX MACHINES, MODEMS, CALLER ID BOXES, ETC.

FAX machines, Modems, and Alarm Systems, if not already on a separate phone line, should be wired "in front" of the Z•600 as shown below. Caller ID boxes should be wired "in front" of the Z•600 as well.

TELEPHONE COMPANY SERVICE IN

DUAL TELEPHONE WALLPLATE

FAX, MODEM, CALLER ID BOX

NOTE: A single telephone wall jack can also be wired for use with Fax Machines, etc. Simply wire the outer pair of the 4 conductors coming to the wall jack "in front" of the Z•600. The Z•600 uses inner pair of wires.

Z•600

CONNECTING A DOOR SPEAKER ASSEMBLY

Door SPEAKER ASSEMBLY
DS1500/1550
PC Board

DS1550 ONLY!

ELECTRONIC DOOR LATCH
RELEASE MECHANISM

DB–
DB+
M –
M +
DS –
DS +

L +
L –

LATCH DEVICE NO
LATCH DEVICE COM

22/24AWG
4-twisted pair
shielded
wire

To 110V AC

LOW VOLTAGE
OUTPUT

DOOR LATCH
POWER SUPPLY

Cut drain
wire flush

22/24AWG 4-twisted pair
shielded wire with drain

RJ-45
INTERFACE CABLE
C45P

DOORSPEAKER #2
OR DOOR BELL #2

Drain wire

DB –	ORANGE
DB +	WHITE/GREEN
M –	WHITE/BLUE
M +	BLUE
DS –	WHITE/BROWN
DS +	BROWN
L –	GREEN
L +	WHITE/ORANGE

ORANGE
WHITE/GREEN

LIGHTED
DOORBELL
BUTTON

Z¥600

120 VAC
60 HZ

12W

CONTROL

OUTPUTS

RELAY 1-4

1A, 30V
AC/DC
MAX

OUTPUTS

IN   OUT
L
R
AUDIO   LOOP

PAGE
& DB
OUT

MOH
IN

(MONO)

DOOR SPEAKER 1

LOOP OUT   IN

DOOR SPEAKER 2

LOOP OUT   IN

PHONE

OUT

TELCO

IN

WIRE CONNECTING KEY			Quick Test	
Device	**Connection**	**RJ-45 Interface Cable Wire Color**	**Spkr Assembly Impedance**	**Z•600 Voltage from + to –**
Doorbell	DB – , Drain DB +	ORANGE WHITE/GREEN	80 Ohm	12 VDC
Microphone	M – M +	WHITE/BLUE BLUE	2.5 K Ohm	6 VDC
Door Speaker	DS – DS +	WHITE/BROWN BROWN	8 Ohm	0 VDC
Door Latch (DS1550 only)	L – L +	GREEN WHITE/ORANGE	365 Ohm	12 VDC*

*+12 VDC is present in the latch only when you dial #, 3, 0 or #, 3, 2, 0 on the phone (latch-activated).
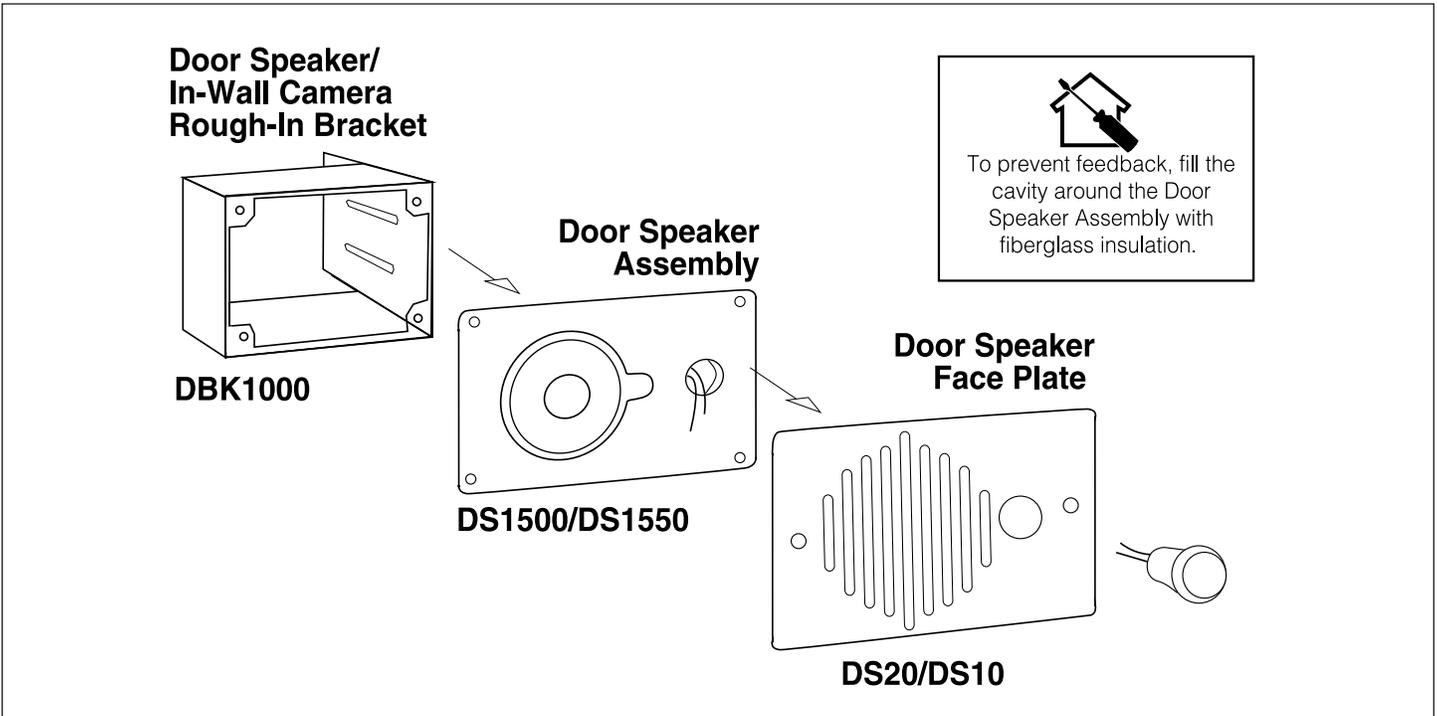
INSTALLATION TIP:
Quick test table indicates the approximate resistances for the doorbell, door microphone, speaker, and latch, as well as voltages present from the Z•600. Measure resistances at the Z•600 with an RJ-45 pigtail, and voltages at the door speaker assembly with everything plugged in.

⚠ Door microphone polarity (M+ and M–) and door latch polarity (L+ and L–) must be maintained for proper microphone and latch functions.
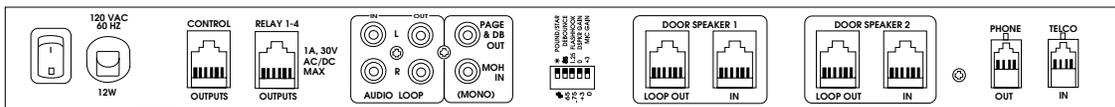
NOTE:
Maintain pairing for each signal type in the audio cable for best noise immunity.

DOOR SPEAKER ASSEMBLY AND FACE PLATE INSTALLATION

**Door Speaker/
In-Wall Camera
Rough-In Bracket**

**Door Speaker
Assembly**

To prevent feedback, fill the cavity around the Door Speaker Assembly with fiberglass insulation.

DBK1000

**Door Speaker
Face Plate**

DS1500/DS1550

DS20/DS10

ADDING A Z•600 DOORCHIME TO EXISTING DOORBELL CIRCUITRY

Z•600

| 120 VAC 60 HZ | CONTROL | RELAY 1-4 | IN OUT | PAGE & DB OUT | DOOR SPEAKER 1 | DOOR SPEAKER 2 | PHONE | TELCO |

1A, 30V AC/DC MAX

12W

OUTPUTS OUTPUTS AUDIO LOOP (MONO) LOOP OUT IN LOOP OUT IN OUT IN

L R MOH IN

RJ-45
INTERFACE
CABLE
HDC1070

SPST
12 VAC
RELAY

C — YELLOW (DB-)

N.O. — BLACK (DB+)

NOTE:
Relay coil voltage should be rated to the power transformer output voltage.

EXISTING
LIGHTED
DOORBELL

CHIME

NEW CIRCUITRY

EXISTING CIRCUITRY

POWER
TRANSFORMER

110 VAC
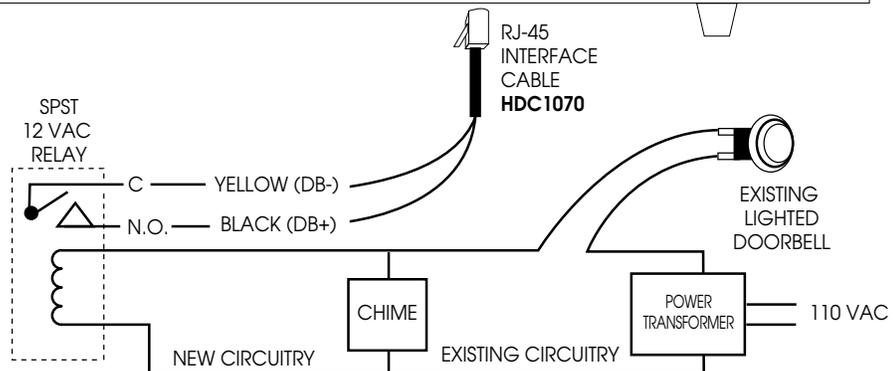
CONNECTING THE Z•600 TO EXISTING STEREO SYSTEMS

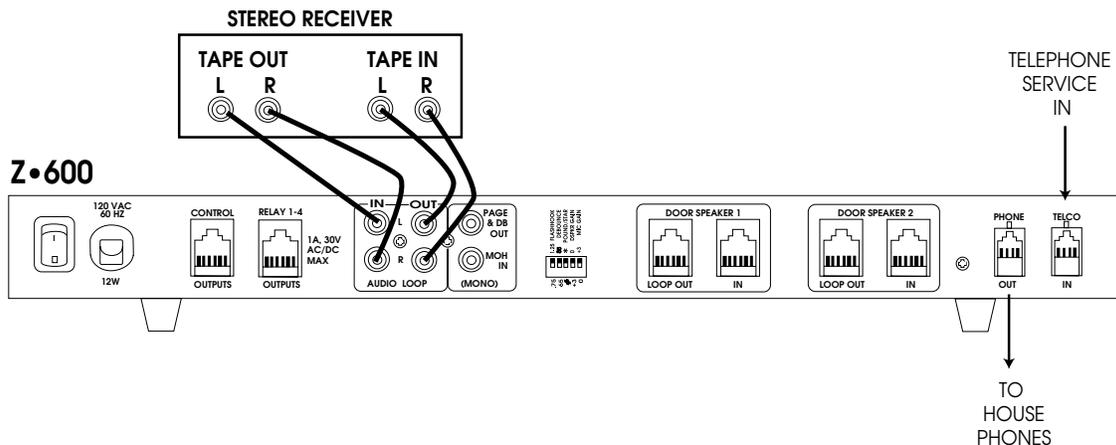## Connecting a Z•600 to a Pre-Amp/Power Amp Stereo System

PRE-AMP MAIN OUTPUTS
L   R

TELEPHONE
SERVICE
IN

Z•600

120 VAC 60 HZ   CONTROL   RELAY 1-4   1A, 30V AC/DC MAX   IN—OUT   PAGE & DB OUT   DOOR SPEAKER 1   DOOR SPEAKER 2   PHONE   TELCO

12W   OUTPUTS   OUTPUTS   AUDIO LOOP   MOH IN (MONO)   LOOP OUT   IN   LOOP OUT   IN   OUT   IN

L   R
POWER AMP INPUTS

TO
HOUSE
PHONES
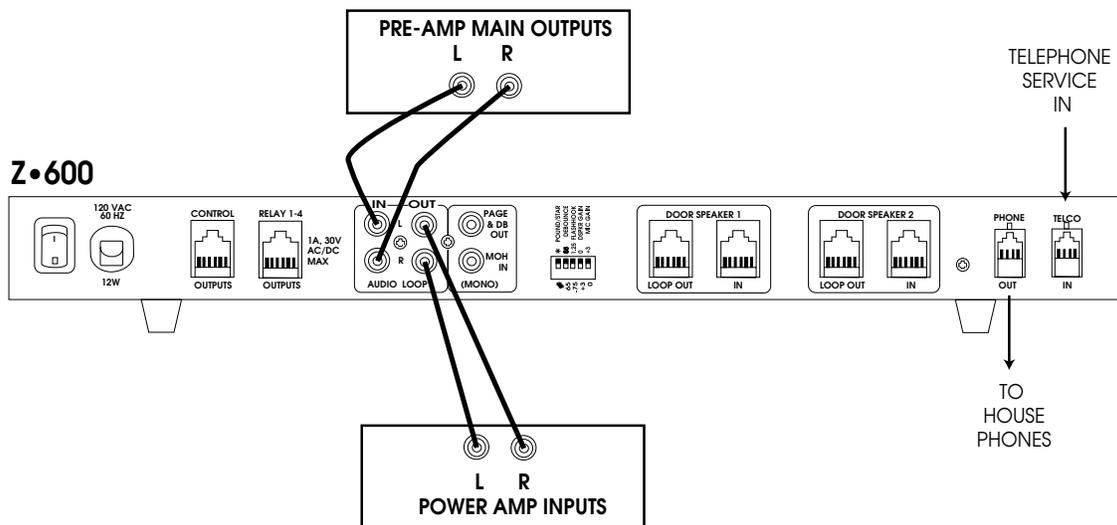
Connecting a Z•600 to a Stereo Receiver with Pre-Out Main-In Jacks

STEREO RECEIVER

PRE-OUT   **MAIN IN**
L   R   L   R

TELEPHONE
SERVICE
IN

Z•600

120 VAC 60 HZ   CONTROL   RELAY 1-4   1A, 30V AC/DC MAX   IN—OUT   PAGE & DB OUT   DOOR SPEAKER 1   DOOR SPEAKER 2   PHONE   TELCO

12W   OUTPUTS   OUTPUTS   AUDIO LOOP   MOH IN (MONO)   LOOP OUT   IN   LOOP OUT   IN   OUT   IN

TO
HOUSE
PHONES
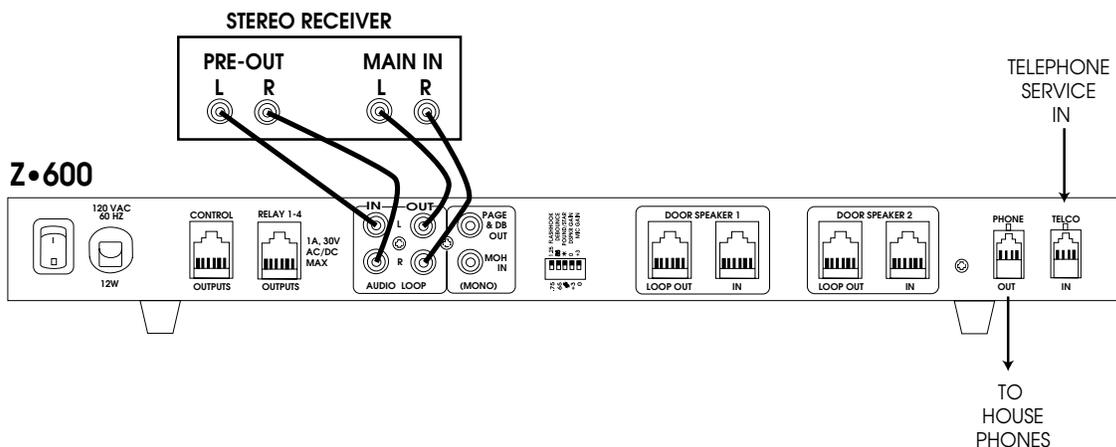
Connecting a Z•600 to a Stereo Receiver Through the Tape In/Out Jacks

(NOTE: In this scenario, the Receiver must be left in *tape monitor* at all times.)

STEREO RECEIVER

TAPE OUT   **TAPE IN**
L   R   L   R

TELEPHONE
SERVICE
IN

Z•600

120 VAC 60 HZ   CONTROL   RELAY 1-4   1A, 30V AC/DC MAX   IN—OUT   PAGE & DB OUT   DOOR SPEAKER 1   DOOR SPEAKER 2   PHONE   TELCO

12W   OUTPUTS   OUTPUTS   AUDIO LOOP   MOH IN (MONO)   LOOP OUT   IN   LOOP OUT   IN   OUT   IN

TO
HOUSE
PHONES

USING ONE Z•600 FOR PAGING & DOORCHIME THROUGH TWO INDEPENDENT STEREO SYSTEMS

These connections apply to both Pre-Amp/PowerAmp Systems and Stereo Receivers with Pre-Out/Main-In jacks. This scenario requires the use of an automatic (signal-sensing) line level A/B switch such as the Sonance AL-1 or the Niles SAS-1. Depending on the A/B switch, a slight time lag between the activation/deactiviation of the page and doorbell signals between System #1 and System #2 may occur. Consult the manufacturer of the A/B switch for time lag specifications.
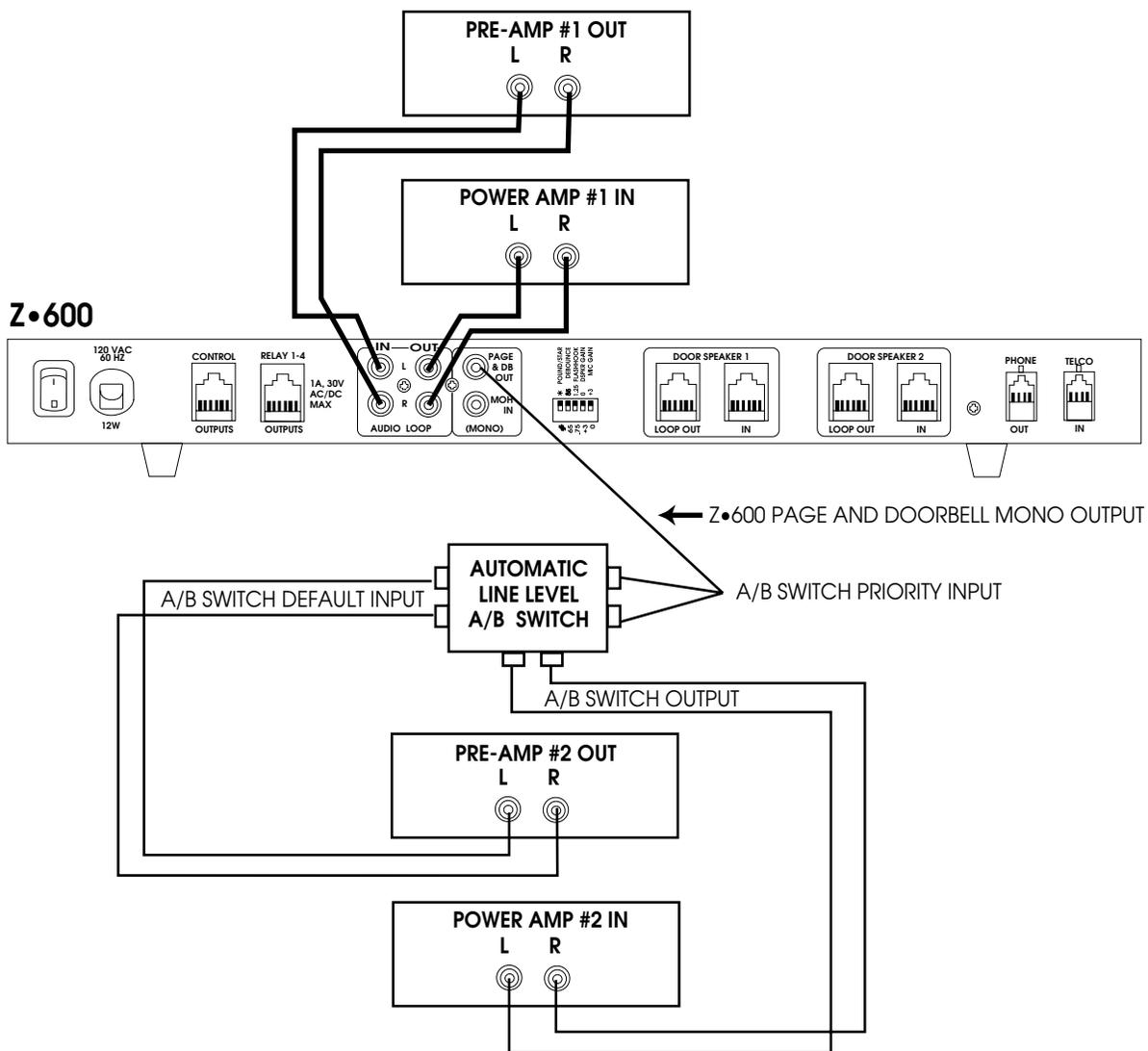
MUSIC-ON-HOLD CONNECTIONS

The Z•600 is equipped with a Music-On-Hold (MOH) input jack. By adding a dedicated Music-On-Hold source (i.e. Tuner), the audio from the dedicated source will be heard over the telephones whenever a call is placed on HOLD.

A call is automatically placed on HOLD whenever the # (or *) key, followed by a second command (3, 4, 7), is pressed.

The Music-On-Hold input accepts a monaural signal only. If your tuner has a "MONO" button, make sure it is pressed and connect as shown below. If your tuner does not have a "MONO" button, use either the LEFT or RIGHT output to send to the Music-On-Hold input. **Do not "Y" together the Left and Right Outputs from your source as this can cause damage to the component.** *

DEDICATED MUSIC-ON-HOLD SOURCE

TUNER OUT
L   R

TO SECOND Z•600 (IF APPLICABLE)
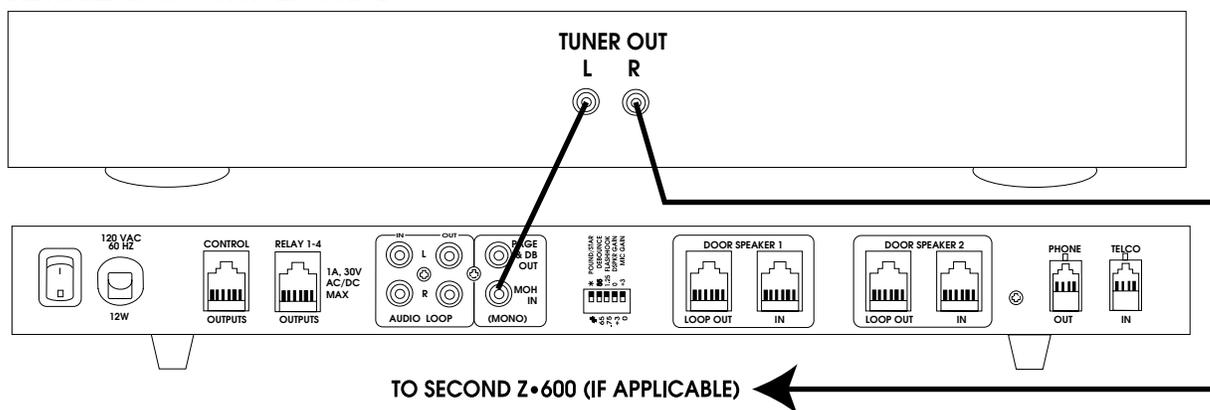
* A standard RCA-type "Y" cable can be modified to send both left and right signals to the MOH mono input. This modification would involve inserting a 1 K Ohm resistor into both the left and right wires of the "Y" as shown below.
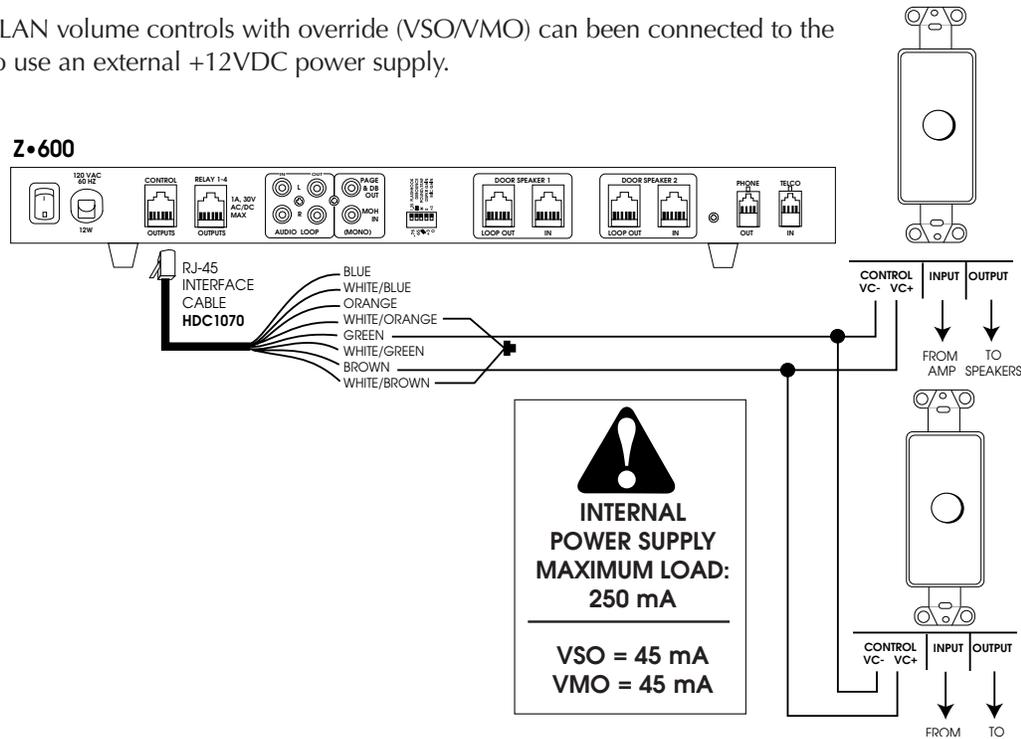
Do not "Y" together the Left and Right Outputs from your source without this modification to the cable as this can cause damage to the component.

CENTER
CONDUCTOR

SHIELD
WIRE

1 K OHM RESISTOR
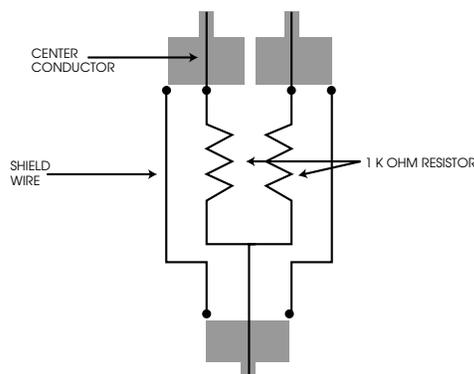
CONNECTING ELAN VOLUME CONTROLS WITH OVERRIDE TO THE Z•600

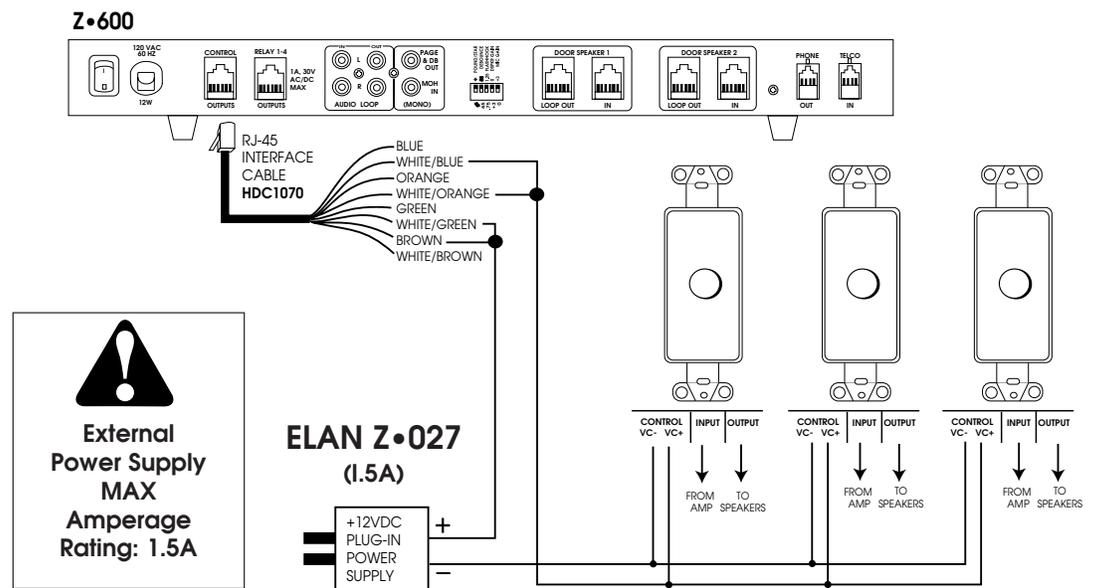## USING THE INTERNAL POWER SUPPLY FOR OVERRIDE CONTROL

A maximum of five (5) ELAN volume controls with override (VSO/VMO) can been connected to the Z•600 without having to use an external +12VDC power supply.

Z•600

RJ-45
INTERFACE
CABLE
HDC1070

BLUE
WHITE/BLUE
ORANGE
WHITE/ORANGE
GREEN
WHITE/GREEN
BROWN
WHITE/BROWN

CONTROL   INPUT   OUTPUT
VC-   VC+

FROM   TO
AMP   SPEAKERS

**INTERNAL
POWER SUPPLY
MAXIMUM LOAD:
250 mA**

**VSO = 45 mA
VMO = 45 mA**

CONTROL   INPUT   OUTPUT
VC-   VC+

FROM   TO

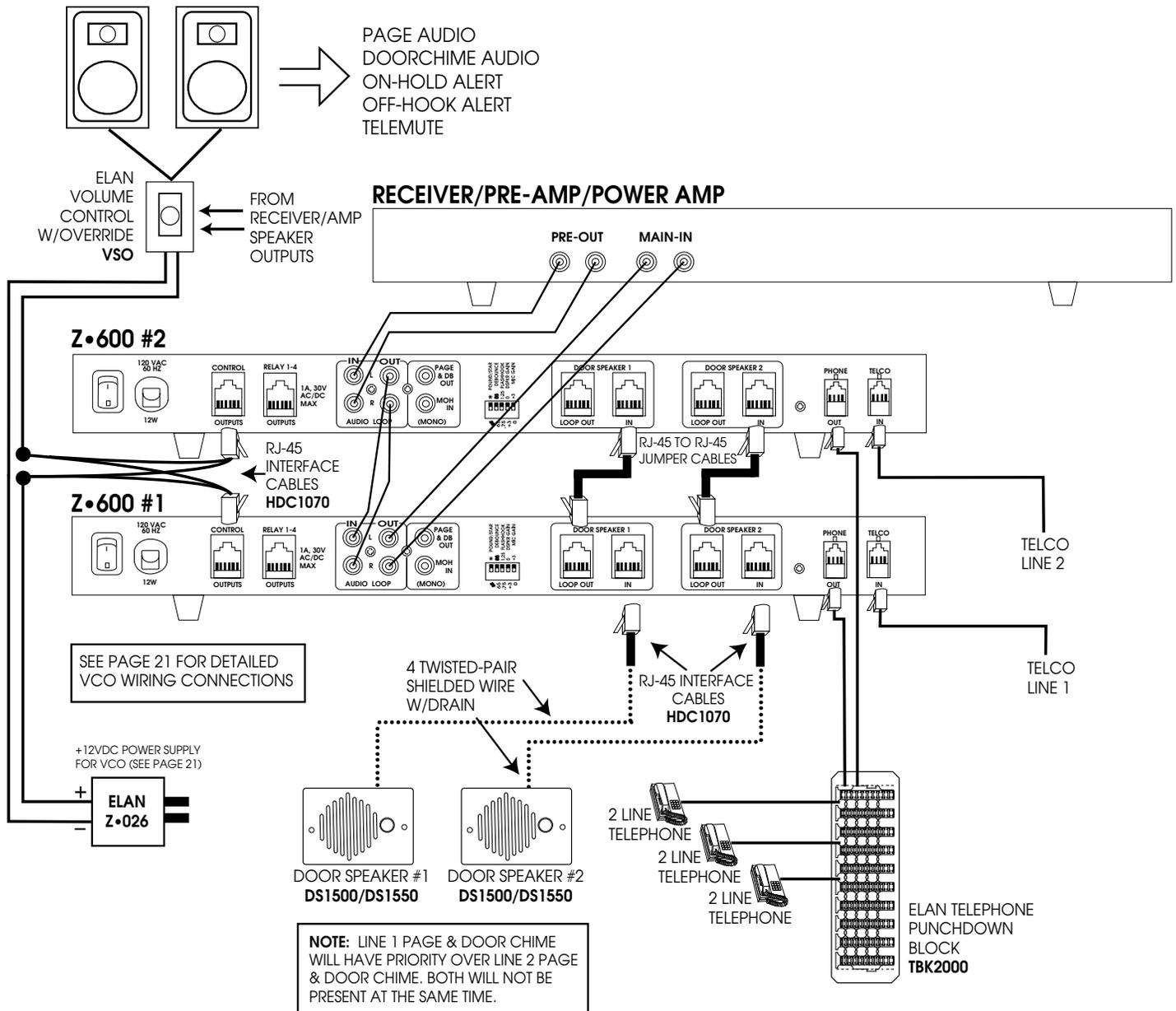# CONNECTING ADDITIONAL ELAN VOLUME CONTROLS WITH OVERRIDE

USING AN EXTERNAL +12VDC PLUG-IN POWER SUPPLY

The Z•027 1.5A +12VDC power supply can accommodate up to 30 VSO or VMO override volume controls.

Z•600

RJ-45
INTERFACE
CABLE
HDC1070

BLUE
WHITE/BLUE
ORANGE
WHITE/ORANGE
GREEN
WHITE/GREEN
BROWN
WHITE/BROWN

**External
Power Supply
MAX
Amperage
Rating: 1.5A**

**ELAN Z•027
(I.5A)**

+12VDC
PLUG-IN
POWER
SUPPLY

+

—

CONTROL   INPUT   OUTPUT
VC-   VC+

CONTROL   INPUT   OUTPUT
VC-   VC+

CONTROL   INPUT   OUTPUT
VC-   VC+

FROM   TO
AMP   SPEAKERS

FROM   TO
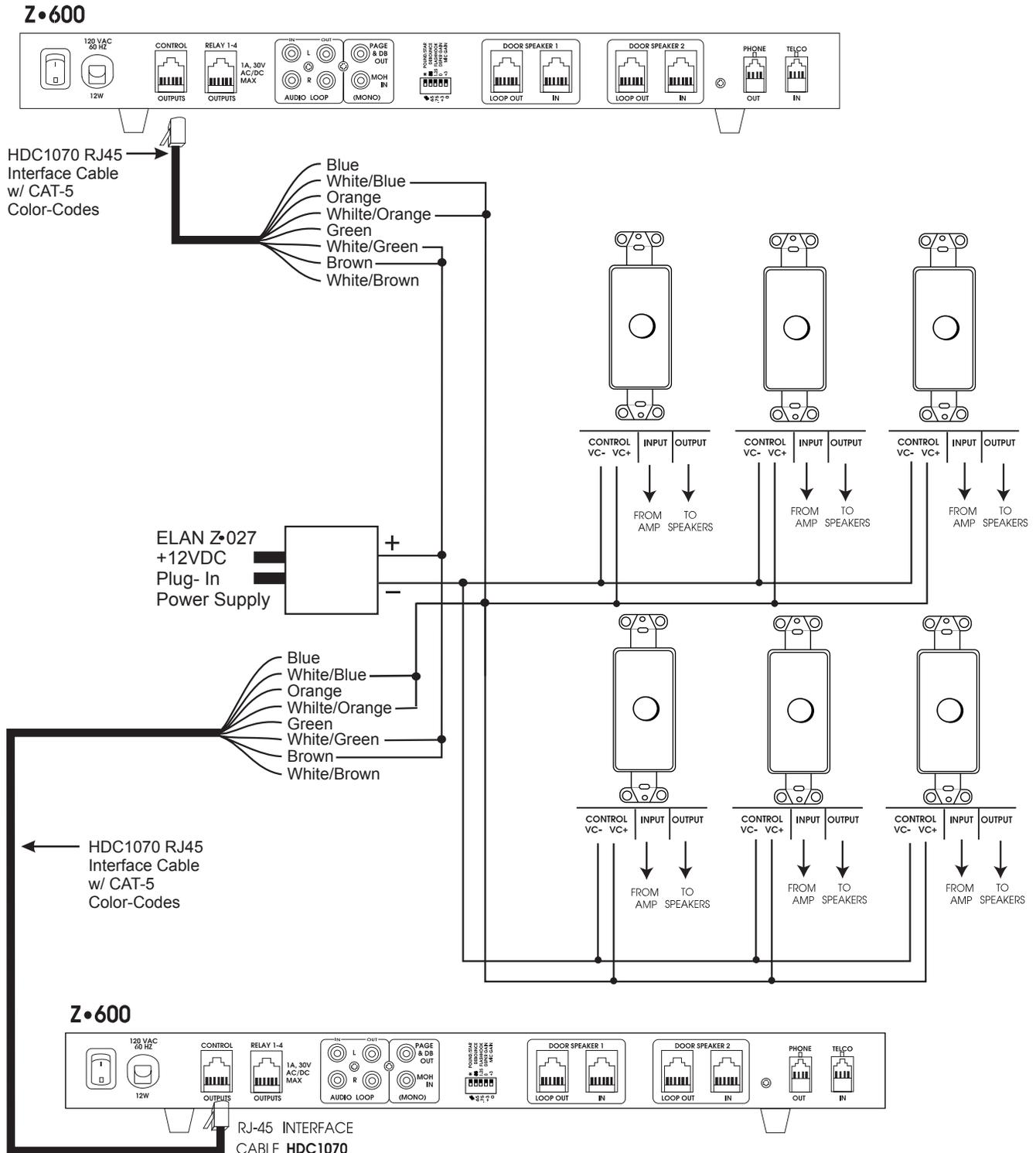AMP   SPEAKERS

FROM   TO
AMP   SPEAKERS

CONNECTING MULTIPLE Z•600'S

Up to four Z•600's can be linked together, providing you with ELAN communication features on four different telephone lines.
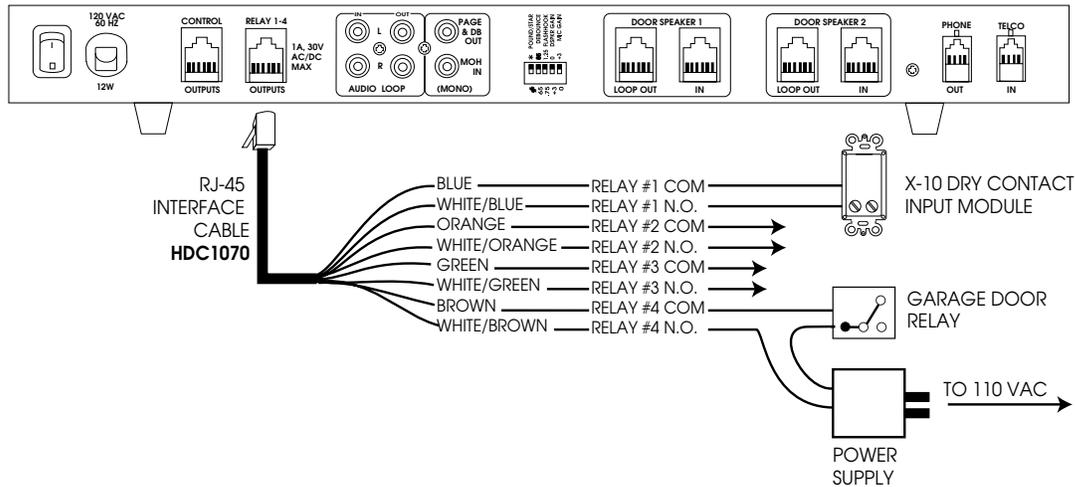

PAGE AUDIO
DOORCHIME AUDIO
ON-HOLD ALERT
OFF-HOOK ALERT
TELEMUTE

ELAN VOLUME CONTROL W/OVERRIDE **VSO**

FROM RECEIVER/AMP SPEAKER OUTPUTS

RECEIVER/PRE-AMP/POWER AMP

PRE-OUT   MAIN-IN

Z•600 #2

RJ-45 INTERFACE CABLES **HDC1070**

RJ-45 TO RJ-45 JUMPER CABLES

Z•600 #1

TELCO LINE 2

TELCO LINE 1

SEE PAGE 21 FOR DETAILED VCO WIRING CONNECTIONS

4 TWISTED-PAIR SHIELDED WIRE W/DRAIN

RJ-45 INTERFACE CABLES **HDC1070**

+12VDC POWER SUPPLY FOR VCO (SEE PAGE 21)

ELAN Z•026

DOOR SPEAKER #1 **DS1500/DS1550**

DOOR SPEAKER #2 **DS1500/DS1550**

2 LINE TELEPHONE
2 LINE TELEPHONE
2 LINE TELEPHONE

ELAN TELEPHONE PUNCHDOWN BLOCK **TBK2000**

NOTE: LINE 1 PAGE & DOOR CHIME WILL HAVE PRIORITY OVER LINE 2 PAGE & DOOR CHIME. BOTH WILL NOT BE PRESENT AT THE SAME TIME.

CONNECTING ELAN VOLUME CONTROLS WITH OVERRIDE TO MULTIPLE Z•600'S

USING AN EXTERNAL +VCD PLUG-IN POWER SUPPLY (ELAN Z•027)
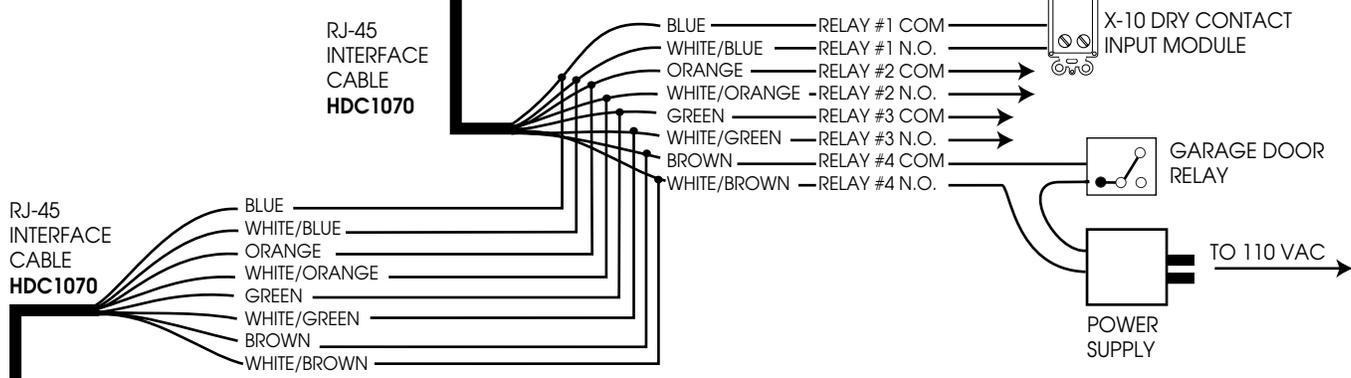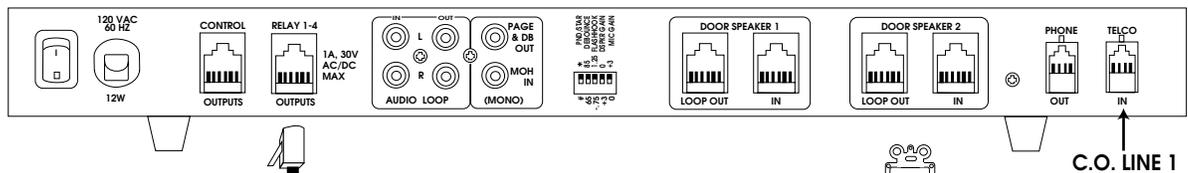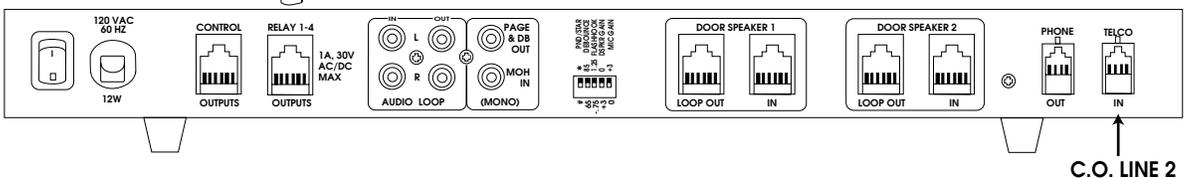
CONNECTING LOW-VOLTAGE RELAYS TO THE Z•600

Z•600

RJ-45 INTERFACE CABLE **HDC1070**

BLUE — RELAY #1 COM
WHITE/BLUE — RELAY #1 N.O.
ORANGE — RELAY #2 COM
WHITE/ORANGE — RELAY #2 N.O.
GREEN — RELAY #3 COM
WHITE/GREEN — RELAY #3 N.O.
BROWN — RELAY #4 COM
WHITE/BROWN — RELAY #4 N.O.

X-10 DRY CONTACT INPUT MODULE

GARAGE DOOR RELAY

TO 110 VAC

POWER SUPPLY

MULTI-LINE Z•600 RELAY CONTROL CONNECTIONS

SCENARIO #1   PARALLEL—In this scenario, the same four relays can be activated from either C.O. Line 1 or C.O. Line 2.

Z•600 #1

C.O. LINE 1

RJ-45 INTERFACE CABLE **HDC1070**

BLUE — RELAY #1 COM
WHITE/BLUE — RELAY #1 N.O.
ORANGE — RELAY #2 COM
WHITE/ORANGE - RELAY #2 N.O.
GREEN — RELAY #3 COM
WHITE/GREEN — RELAY #3 N.O.
BROWN — RELAY #4 COM
WHITE/BROWN — RELAY #4 N.O.

X-10 DRY CONTACT INPUT MODULE

GARAGE DOOR RELAY

TO 110 VAC

POWER SUPPLY

RJ-45 INTERFACE CABLE **HDC1070**

BLUE
WHITE/BLUE
ORANGE
WHITE/ORANGE
GREEN
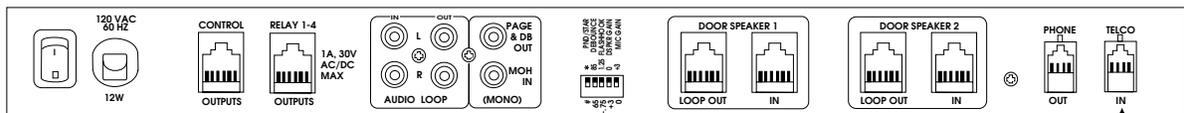WHITE/GREEN
BROWN
WHITE/BROWN
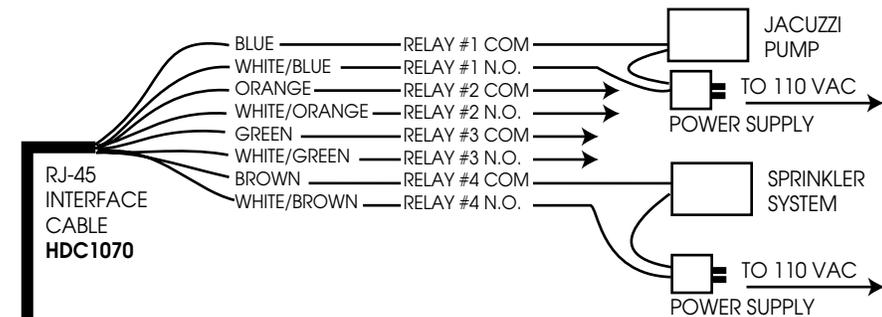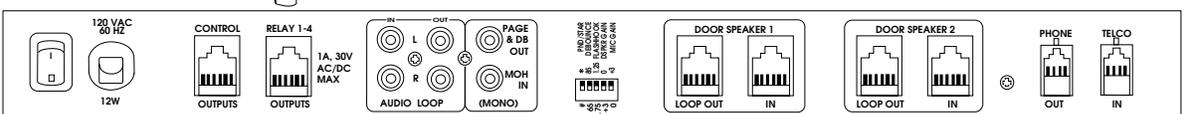
Z•600 #2

C.O. LINE 2

MULTI-LINE Z•600 RELAY CONTROL CONNECTIONS

SCENARIO #2 INDEPENDENT—In this scenario, the four relays connected to Z•600 #1 are accessed when on C.O. Line 1 only, and an additional four relays, connected to Z•600 #2, can be accessed when on C.O. line 2.
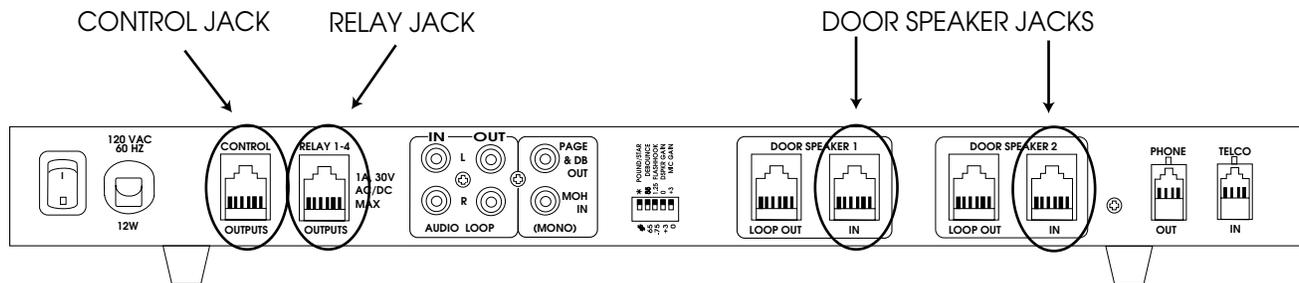
Z•600 #1

C.O. LINE 1

BLUE ——— RELAY #1 COM
WHITE/BLUE ——— RELAY #1 N.O.
ORANGE ——— RELAY #2 COM
WHITE/ORANGE ——— RELAY #2 N.O.
GREEN ——— RELAY #3 COM
WHITE/GREEN ——— RELAY #3 N.O.
BROWN ——— RELAY #4 COM
WHITE/BROWN ——— RELAY #4 N.O.

X-10 DRY CONTACT INPUT MODULE

GARAGE DOOR RELAY

TO 110 VAC
POWER SUPPLY

RJ-45 INTERFACE CABLE **HDC1070**

BLUE ——— RELAY #1 COM
WHITE/BLUE ——— RELAY #1 N.O.
ORANGE ——— RELAY #2 COM
WHITE/ORANGE ——— RELAY #2 N.O.
GREEN ——— RELAY #3 COM
WHITE/GREEN ——— RELAY #3 N.O.
BROWN ——— RELAY #4 COM
WHITE/BROWN ——— RELAY #4 N.O.

JACUZZI PUMP

TO 110 VAC
POWER SUPPLY

SPRINKLER SYSTEM

TO 110 VAC
POWER SUPPLY

RJ-45 INTERFACE CABLE **HDC1070**

Z•600 #2

C.O. LINE 2

CONTROL, RELAY & DOOR SPEAKER RJ45 PIN-OUTS

CONTROL JACK   RELAY JACK   DOOR SPEAKER JACKS

CONTROL JACK

RJ45 PIN #	COLOR	FUNCTION
1	BLUE	Page control logic signal (to Z•630)
2	WHITE/BLUE	VCO relay normally open
3	ORANGE	Ground
4	WHITE/ORANGE	VCO relay normally open
5	GREEN	Ground
6	WHITE/GREEN	VCO relay common
7	BROWN	VCO relay common
8	WHITE/BROWN	+12VDC @ 220 mA

RELAY JACK

RJ45 PIN #	COLOR	FUNCTION
1	BLUE	Relay #1 common
2	WHITE/BLUE	Relay #1 normally open
3	ORANGE	Relay #2 common
4	WHITE/ORANGE	Relay #2 normally open
5	GREEN	Relay #3 common
6	WHITE/GREEN	Relay #3 normally open
7	BROWN	Relay #4 common
8	WHITE/BROWN	Relay #4 normally open

DOOR SPEAKER JACKS

RJ45 PIN #	COLOR	FUNCTION
1	BLUE	Mic +
2	WHITE/BLUE	Mic -
3	ORANGE	Door Bell -
4	WHITE/ORANGE	Latch +
5	GREEN	Latch -
6	WHITE/GREEN	Door Bell +
7	BROWN	Door Speaker +
8	WHITE/BROWN	Door Speaker -

RJ-45 Connector

HDC1070
Top View Color Code

WHITE/BROWN	8
BROWN	7
WHITE/GREEN	6
GREEN	5
WHITE/ORANGE	4
ORANGE	3
WHITE/BLUE	2
BLUE	1
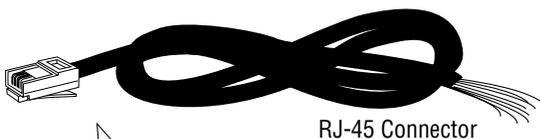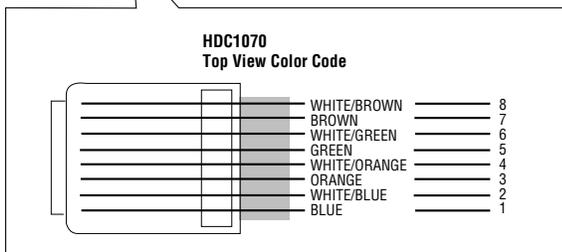
Z•600 FRONT PANEL ADJUSTMENTS

```
PAGE
LOOP-THRU        PAGE/DOOR CHIME
LEVEL            OUTPUT LEVEL

   ⊘  ⊘  ⊘  ⊘                    P   M
                                 D

DOOR         MUSIC
LOOP-THRU    ON HOLD
LEVEL        INPUT LEVEL
                            PEEL BACK
                            LEXAN STRIP
```
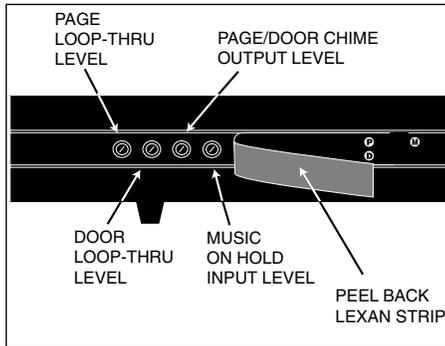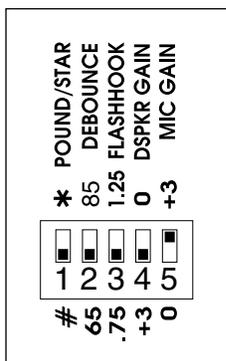
PAGE LOOP-THRU LEVEL: Adjusts the PAGE level presented to the Audio Loop Output.

DOOR LOOP-OUT LEVEL: Adjusts DOOR CHIME level presented to the Audio Loop Output

PAGE/DOOR CHIME OUTPUT LEVEL: Adjusts both Page and Door Chime level coming from the Page & DB output jack (used when connecting the Z•600 to the ELAN Z•630 Pre-Amp Controller). Also, see Page 17 in this manual, "Using One Z•600 for Paging & Door Chim Through Two Independent Stereo Systems").

MUSIC-ON-HOLD INPUT LEVEL: Adjusts the input level to the MOH input jack.

Z•600 REAR PANEL DIP SWITCH SETTINGS

```
    POUND/STAR
        DEBOUNCE
          FLASHHOOK
            DSPKR GAIN
              MIC GAIN

  *  85  1.25  0  +3

  ▮  ▮  ▮  ▮  ▮
  1  2  3  4  5

  #  65  .75  +3  0
```

**FACTORY DEFAULT
SWITCH SETTINGS**

FACTORY SWITCH SETTING	1	2	3	4	5
	Down	Down	Down	Down	Up

1. POUND/STAR

Selectable Settings: **Pound (#) (factory default), Star (*)**

Purpose: Select the telephone button press (# or *) you would like to use as the initiator for all ELAN telephone communication/relay features (i.e. #P for PAGE, or *,P for PAGE.

2. DEBOUNCE

Selectable Settings: **65 milliseconds (factory default), 85 milliseconds**

Purpose: To eliminate intermittent "drop-outs" during a phone conversation. These "drop-outs"(usually 3 seconds in duration) are caused when certain speaking voices, usually female, produce frequencies similar to those produced when a "#" or "*" button is pressed on a touch-tone phone. Should you experience this symptom, move the dip switch from 65 ms to 85 ms.

3. FLASHHOOK

Selectable Settings: **.75 seconds (factory default), 1.25 seconds**

Purpose: In homes with CALL WAITING, increase FLASHHOOK time from .75 seconds to 1.25 seconds if you experience either of the following symptoms:

    1.) Trouble accessing a second call while on the line with the first call.

    2.) Losing the first call after accessing a second call.

4. DSPKR GAIN

Selectable Settings: **+3dB (factory default), 0dB**

Purpose: To adjust the level of the speaker in the ELAN Door Speaker Assembly. Should the level be too loud, or if you experience any feedback during door speaker communications, it may be necessary to move the dip switch from +3 to 0.

5. MIC GAIN

Selectable Settings: **+3dB (factory default), 0dB**

Purpose: To adjust the level of the microphone in the ELAN Door Speaker Assembly. Should the level be too loud, or if you experience any feedback during door speaker communications, it may be necessary to move the dip switch from +3 to 0.

Z•600 TROUBLESHOOTING GUIDE

ELAN 'On-Site' Technical Support 1-800-622-ELAN (3526)

SYMPTOM	POSSIBLE CAUSE	WHAT THE HOMEOWNER CAN CHECK FOR	WHAT AN AUTHORIZED ELAN INSTALLER CAN CHECK FOR
No ELAN dial tone (only Telco dial tone is heard)	● The Z•600 is not powered up	● Check if the RED LED POWER INDICATOR on the front of the Z•600 is lit. If not, make sure the Z•600 is plugged into an active AC outlet. If the Z•600 is plugged into a surge protector, check to see if the surge protector is on or if its fuse has been tripped. If ok, check to see if the main power switch on the back of the Z•600 is on (up). Upon power up, all front panel LED's should flash once, then turn off.	1. Confirm symptom and AC connections described at left. 2. Confirm that the phone connections on the back of the Z•600 are correct (C.O. line to TELCO IN, PHONE OUT to house phones or KSU). 3. With a 'butt set' or a single line, corded, touch-tone telephone plugged directly into the PHONE OUT jack, see if you now have the ELAN dial tone. If you don't , there may be a problem with the Z•600. Contact ELAN Technical Support from the job site. If you do, the problem lies 'after' the Z•600. Check all connections at the punch-down block and wall jacks for a possible mis-wire or short.
Cannot access any of the ELAN Phone features/ Cannot break ELAN dial tone	● Non Touch-Tone phone ■ Using incorrect key sequence	Confirm that the ELAN dial tone is present. If it is not, call your authorized ELAN installer. ● Make sure the phone you are using is a Touch-Tone telephone, or that the 'PULSE/TONE' selector switch on the phone is set to 'TONE'. ■ Confirm which key (# or *) your system uses to initiate the ELAN phone features.	1. Confirm symptom. See if it occurs on all phones. Confirm initiator key (# or *). 2. With a 'butt set' or a single line, corded, touch-tone telephone connected directly to the PHONE OUT jack on the back of the Z•600, confirm that the problem still exists. If it does, there may be a problem with the unit. Contact ELAN Technical Support from the job site.
No ring-in	● REN too high (see pages iii and 8 for Ringer Equivalency Number information) ■ C.O. line not working **NOTE:** The TELEMUTE LED on the front of the Z•600 should begin to flash whenever the phones ring.	Confirm that the ELAN dial tone is present. If it is not, call your authorized ELAN installer. ● Unplug or turn off the ringers on a number of phones in the house. See if the remaining phones now ring. If they do, you will need to either keep some of your phone ringers turned off, or replace some of your phones with phone that have lower REN's. If your phones still do not ring in, try the trouble-shooting procedure below. ■ Turn off the Z•600 from the rear panel Power switch. Have someone call your home. If the phones still do not ring, contact your local phone company as there is probably a problem with your service. If the phones now ring in, there may be a problem with the Z•600. Contact your authorized ELAN installer.	1. Confirm symptom and homeowner's findings regarding REN at left. 2. With a 'butt set' or a single line, corded, touch-tone telephone connected directly to the outside line, have someone call to confirm that you have ring-in. 3. After confirming C.O. line ring-in, connect your 'butt set' or a single line, corded, touch-tone telephone directly to the PHONE OUT jack on the back of the Z•600. Have someone dial into the home. If the phone still does not ring in, there may be a problem with the Z•600. Contact ELAN Technical Support from the job site. If the phone now rings, the problem lies 'after' the Z•600. Check all connections at the punchdown block and wall jacks for a possible mis-whire or short.

SYMPTOM	POSSIBLE CAUSE	WHAT THE HOMEOWNER CAN CHECK FOR	WHAT AN AUTHORIZED ELAN INSTALLER CAN CHECK FOR
Cannot dial out	• Non Touch-Tone phone ■ C.O. line not working	Confirm that the ELAN dial tone is present. If it is not, call your authorized ELAN installer. • Make sure the phone you are using is a Touch-Tone telephone, or that the 'PULSE/TONE' selector switch on the phone is set to 'TONE'. ■ Press #,9 (ELAN system bypass) and see if you hear a standard phone company dial tone. If you do not, or if you do, but still can not dial out, contact you local phone company, as there is probably a problem with their service. If after pressing #,9 you find that you can now dial out, there may be a problem with the Z•600. Contact your authorized ELAN installer.	1. Confirm symptom and homeowner's findings. 2. With a 'butt set' or a single line, corded, touch-tone telephone connected directly to the outside line, confirm that you can dial out. 3. After confirming dial-out, connect your 'butt set' or a single line, corded, touch-tone telephone directly to the PHONE OUT jack on the back of the Z•600. Try to dial out. If you can't, there may be a problem with the Z•600. Contact ELAN Technical Support from the job site. If you can, the problem lies 'after' the Z•600. Check all connections at the punchdown block and wall jacks for a possible mis-wire or short.
No Page or Door Chime audio *Page and/or Door Chime audio level is too low/loud*	• Adjust Page/Door Chime levels	Confirm that the PAGE and/or DOOR-BELL LED on the front of the Z•600 flashes when you initiate a Page (#,7 or *,7) or press the Doorbell button. If not, contact your authorized ELAN installer. If they do, try adjusting the Page/Doorbell levels as described below. • If using the Z•600 with a Z•630 Pre-Amp Controller, adjust the PAGE/DOOR CHIME OUTPUT LEVEL until the page level is satisfactory. If using Z•600 in a stand-alone application (i.e. with an A/V receiver), adjust the PAGE and/or DOOR LOOP-OUT LEVEL until the levels are satisfactory. Both adjustments are located beneath the peel-back strip on the front of the Z•600 (see page 26 for details).	1. If using the Z•600 with a Z•630 Pre-Amp Controller: a. Confirm proper connection and integrity of the patch cord between the Z•600 Page & DB Out jack and the Z•630 Page & DB Input jack. b. Adjust the PAGE/DOOR CHIME OUTPUT LEVEL until the page level is satisfactory (see page 26 for details). 2. If using Z•600 in a stand-alone application (i.e. with an A/V receiver): a. Confirm proper connection and integrity of the patch cord between the Z•600 and stereo system (Z•600 Loop Out to system Main or Tape In. Z•600 Loop In to system Pre or Tape Out). If going through a receiver's Tape In/Out loop, confirm that the receiver is in Tape Monitor mode. b. Adjust the PAGE and/or DOOR LOOP-OUT LEVEL until the levels are satisfactory (see page 26 for details). If unable to resolve, contact ELAN Technical Support from the job site.

SYMPTOM	POSSIBLE CAUSE	WHAT THE HOMEOWNER CAN CHECK FOR	WHAT AN AUTHORIZED ELAN INSTALLER CAN CHECK FOR
Cannot hear Page or Door Chime when volume controls are turned down	• Page & Doorbell Override feature is not working	• Contact your authorized ELAN installer.	1. Confirm symptom. 2. Confirm that RJ-45 plug for the over-rides is plugged into the CONTROL jack on the back of the Z•600. 3. With an RJ-45 pigtail plugged into the CONTROL jack on the back of the Z•600, confirm that 12VDC is present between the BROWN (+) and BLACK (-) wires. If voltage is not present, contact ELAN Technical Support from the job site. If voltage is present . . . 4. Disconnect a number of Volume Controls w/ Override. Initiate a Page. If you now have Override capabilities, the power supply for the number of Volume Controls you originally had connected to the system was insufficient (see page 19 details).
Page drops out after a few minutes	• Too many volume controls with override connected to the system/ insufficient power to the volume controls with override	• Call your authorized ELAN dealer	1. Unplug the RJ45 cable from the Control Output Jack on the back of the Z•600. 2. Turn up the volume controls. 3. Initiate a page (#,7) and let the system remain in page for a number of minutes. If the page does not drop out, this confirms that the power supply you are using for override control does not have enough current to keep the override relays activated. If using the Z•600's internal power supply to power the relays in the volume controls with override, make sure you have not exceed the maximum configurations described on page 19. If using an external +12VDC power supply, make sure the current draw of the total number of volume control with override you have connected does not exceed the current rating of the power supply you are using (see page 19 for details). If unable to resolve, call ELAN Technical Support from the job site.

SYMPTOM	POSSIBLE CAUSE	WHAT THE HOMEOWNER CAN CHECK FOR	WHAT AN AUTHORIZED ELAN INSTALLER CAN CHECK FOR
Cannot communicate with door speaker(s)	● Non touch-tone phone ● Using incorrect key sequence Using incorrect key sequence	● Make sure the phone you are using is a Touch-Tone telephone, or that the 'PULSE/TONE' selector switch on the phone is set to 'TONE'. ● Confirm which key (# or *) your system is using to initiate ELAN phone features. See the 'Quick Reference Guide' for Door Speaker access sequence.	1. Confirm the symptom and that the problem exists on all phones. Make sure all other ELAN phone features are working properly. 2. Confirm that the RJ45 plug is in the correct jack on the back of the Z•600. 3. Referring to the chart at the end of this section, check the reference voltages at the Door Speaker Assembly. If the voltages check out, you may have a bad DSA. If they do not . . . 4. With an RJ-45 pigtail plugged directly into the DOOR SPEAKER IN jack on the back of the Z•600, re-check all reference voltages. If the reference voltages are still not present, there may be a problem with the Z•600. Contact ELAN Technical Support from the job site. If the voltages check out okay, you may have a bad wire run between the DSA and the Z•600. To confirm this, connect the DSA directly to the RJ-45 pigtail and confirm operation.

Doorspeaker "squeals"	● Microphone in telephone may be too 'sensitive'.
	
	■ Door Speaker Assembly microphone and/or speaker levels are too high
		● Confirm that problem occurs on all phones. If the problem is specific to only one phone, it is likely that that the mic sensitivity of that phone is incompatible with ELAN (This usually occurs only on very inexpensive telephones).
		
		■ If the problem occurs on all phones, please refer to 3a & 3b at right, or call your authorized ELAN installer. If you decide to reset the dip switches as described in 3b, be very careful not to dislodge or disconnect any of the wires plugged into the back of the Z•600 when accessing the rear panel.
			1. Confirm that problem occurs on all phones.
			
			2. If the problem is specific to only one phone, it is likely that that the mic sensitivity of that phone is incompatible with ELAN (This usually occurs only on very inexpensive telephones).
			
			3. If the problem occurs on all phones, it is probably due to feedback between the Door Speaker Assembly mic and speaker. There are two ways to alleviate this. We suggest that you try (a) first, as it will not result in any loss of DSA mic or speaker levels:
			  a. Stuff the Door Speaker Assembly rough-in bracket with insulation
			  b. On the back of the Z•600, find the dip switch labeled MIC GAIN and move it to the DOWN (0db) position. Test Door Speaker communications. If this did not eliminate the problem completely, locate the dip switch labeled DSPKR GAIN, and move it to the UP position (0db).
			
			If the problem persists, contact ELAN Technical Support from the job site.

SYMPTOM	POSSIBLE CAUSE	WHAT THE HOMEOWNER CAN CHECK FOR	WHAT AN AUTHORIZED ELAN INSTALLER CAN CHECK FOR
No Doorbell		Confirm that the DOORBELL LED on the front of the Z•600 flashes when you press the Doorbell button. If not, contact your authorized ELAN installer. If it does, try adjusting the Doorbell levels as described below.	1. Confirm symptom and pot adjustment levels described at left.
	● Doorbell level is turned down	● If using the Z•600 with a Z•630 Pre-Amp Controller, confirm that the PAGE/DOOR CHIME OUTPUT LEVEL ADJUSTMENT is turned up. If using Z•600 in a stand-alone application (i.e. with an A/V receiver), confirm that the DOOR LOOP-OUT LEVEL adjustment is turned up. Both adjustments are located beneath the peel-back strip on the front of the Z•600 (see your owners manual for details).	2. Make sure the volume controls are turned up. At the Door Speaker Assembly, short together the two wires connected to the doorbell button. If you hear the door chime, you probably have a bad door bell button. If you still do not hear the chime . . . 3. At the Door Speaker Assembly, disconnect the wires connected to DB+ and DB- and short them together. If you hear the chime, you may have a bad Door Speaker Assembly. If you still do not hear the chime . . .
	■ Bad, stuck or mis-wired Doorbell button	■ Contact your authorized ELAN installer	4. With an RJ-45 pig-tail plugged into the DOORSPEAKER IN jack, short together the black and yellow wires. If you hear the chime, you probably have a bad wire run between the Z•600 and the DSA. If you still do not hear the chime there may be a problem with the Z•600. Call ELAN Technical Support at 1-800-622-ELAN.
Relay(s) activation via telephone not working	● Improper key sequence ■ Relay device inoperative or mis-wired	● Confirm that you are using the correct key sequence to activate a specific relay, i.e. #,1,1 activates relay 2; #,1,2 activates relay 3, etc. ■ Confirm that the front panel LED associated with the relay you are trying to activate starts to flash after pressing the correct key sequence. If it does, but there is still no relay response, contact your authorized ELAN installer, as there may be a problem with the relay device or wiring.	1. Confirm that correct key sequence does not activate relay. 2. Confirm that the front panel LED associated with the relay you are trying to activate starts to flash after pressing the correct key sequence. If it does not, try it again with a 'butt-set' or telephone plugged directly into the PHONE OUT jack on the back of the Z•600. If you still do not get a relay activation LED to flash, call ELAN technical support from the job site, as there may be a problem with the unit. 3. If the relay LED flashes when you try to activate it, but there is no response from the relay device, there may be a problem with either the relay device, the relay's power supply or the wire run between the relay and the Z•600.
Modem/Fax Machine will not dial out/ receive transmissions	● Modem/Fax Machines is unable to recognize the ELAN dial tone.	● Modems and Fax Machines, if not on their own dedicated line, should be wired 'in front' of the Z•600. Contact your authorized ELAN installer to see if this was done, or to have the telephone jack rewired.	1. Wire a dedicated phone jack for the Modem and/or Fax Machine 'In Front' of the Z•600. (see page 13 in this manual for details)

SYMPTOM	POSSIBLE CAUSE	WHAT THE HOMEOWNER CAN CHECK FOR	WHAT AN AUTHORIZED ELAN INSTALLER CAN CHECK FOR
Have answering service provided by phone company, but can not hear special "stutter tone" indicating that you have a message	• Telco 'stutter tone' unable to pass thru ELAN dial tone	• Press #,9 to bypass the Z•600. You will now hear the 'stutter tone' indicating that you have a message (see page 6 for details).	
Caller ID box/phone not working properly	• Caller ID box/phone unable to pass information thru ELAN dial tone	• Call your authorized ELAN installer and request that this device be wired 'in front' of the Z•600.	1. Wire a dedicated phone jack for this device 'in front' of the Z•600 (see page 13 for details).
Call Waiting not operating properly	• FLASH HOOK time too short	• On the back of the Z•600, find the dip switch labeled FLASHHOOK and move it to the UP position (1.25) (see page 26 for details).	1. On the back of the Z•600, find the dip switch labeled FLASHHOOK and move it to the UP position (1.25) (see page 26 for details).
Call "drops out" for three seconds during conversation	• DEBOUNCE time too short	• On the back of the Z•600, find the dip switch labeled DEBOUNCE and move it to the UP position (85ms) (see page 26 for details).	1. On the back of the Z•600, find the dip switch labeled DEBOUNCE and move it to the UP position (85ms) (see page 26 for details).
Phone services provided by Banks, Credit Card Companies, etc. are not responding when you are on the Z•600 line	• Not using #,9 system Bypass	• Press #,9 to bypass the Z•600. This can be done either before or after you dial out, and will permit you to use all of these services (see page 6 for details).	
Constant "double beep" through speakers	• The telephone "OFF-HOOK" alert has been activated	• Check to see if any phones are off-hook (see page 3 for details).	
Constant "single beep" through speakers	• The telephone "OFF-HOLD" alert has been activated	• A caller has been left on HOLD for over a minute (see page 3 for details)	
Music-On-Hold level is too low/loud	• Adjust Music-On-Hold Input level	• Adjust the Music-On-Hold Input level until the volume is satisfactory. The adjustment pot is located beneath the peel-back strip on the front of the Z•600 (see page 25 in this manual for details).	1. Adjust the Music-On-Hold Input level until the volume is satisfactory. The adjustment pot is located beneath the peel-back strip on the front of the Z•600 (see page 26 in this manual for details).

REFERENCE VOLTAGES

Z•600 JACK	TAKE READING BETWEEN	VOLTAGE	
PHONE OUT	Center Pair	+/-24VDC	
CONTROL OUT	BROWN (+) and GREEN (-) BROWN (+) and BLACK (-)	+12VDC +12VDC	WHITE/BROWN & GREEN WHITE/BROWN & ORANGE
DOOR SPEAKER OUT	BLACK (DB+) and YELLOW (DB-) GRAY (M+) and ORANGE (M-) BLUE (DS+) and BROWN (DS-) RED (L+) and GREEN (L-)	+12VCD +6VDC 0 VDC +12VDC only when LATCH is activated	ORANGE & WHITE/GREEN BLUE & WHITE/BLUE BROWN & WHITE/BROWN WHITE/ORANGE & GREEN

SPECIFICATIONS

POWER REQUIREMENTS 120V, 60Hz, 12W

RELAY TYPE..4 - Single Pole, Single Throw
CONTACT RATING ....30VAC/DC, 1 A max, 2 seconds

MUSIC-ON-HOLD ADJUSTMENT.....................................Up to 2.5V P-P max

PAGE/DOOR CHIME (MONO, LINE LEVEL)
Adjustment ....Up to 2.5V P-P max
Output Level .... Up to 2.5V P-P max
Control Output .... Open Collector transistor control

VOLUME CONTROL OVERRIDE RELAY
Self-powered via internal 12VDC PS   ....250 mA max
Externally powered via 12 VDC PS ....1.0 A max

CONNECTOR INTERACES
Telephone line (in/out) RJ-11
Doorspeaker Assemblies RJ-45
Audio Inputs/Outputs .... RCA type, line level only

DOOR SPEAKER SELECTABLE LEVELS
Mic gain .... +3dB boost
Speaker gain .... +3dB boost

RECOMMENDED WIRE
Doorspeaker Assembly ....4 twisted pair shielded 24 or 22 AWG
RJ-45 interface   .... ELAN Part No. HDC1070, RJ-45 pigtails
RJ-11 "Telco" interface .... CAT3 or CAT5Communications Wire

DIMENSIONS (HXWXD)
Freestanding Model ....1.75 x 17.0 x 8.0 inches
4.5 x 41.3 x 20.32 cm
Rackmount Model...1.75 x 19.0 x 8.0 inches
4.5 x 46.3 x 20.32 cm

FCC PART 68 APPROVED REN 1.1F

# ASK YOUR AUTHORIZED ELAN DEALER ABOUT THE Z•SERIES FAMILY OF AUDIO/CONTROL PRODUCTS

Z•660
AN EXQUISITE AUDIO PIECE

The Z•660 Power Amplifier provides superb audio throughout the house. Designed for multiple speaker use, it simply outperforms more costly competitors.

Z•630
SIMPLE, INDEPENDENT CONTROL

The Z•630 PreAmp creates three zones in addition to your main stereo room. Enjoy different music in different rooms —at the same time.
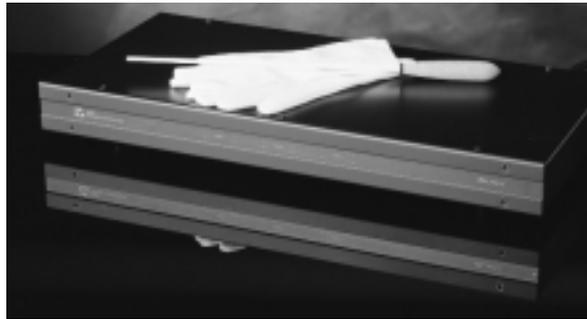
Z•600
PRACTICAL PHONE FEATURES INTEGRATED

The Z•600 turns your standard telephone into an integrated paging, electronic door chime and door answering system. Experience a high-fidelity intercom.

Z•PAD
INTELLIGENT IN-WALL KEYPAD

The Z•100 and Z•150 Keypads combine simplicity with intuitive functionality. One button can initiate your favorite listening scenario.

Z. 600 Com Controller

Limited Warranty

ELAN HOME SYSTEMS, L.L.C. ("ELAN") warrants the Z•600 Com Controller manufactured by it to be free from defects in materials and workmanship for two (2) years from the date of purchase. If within the applicable warranty period above purchaser discovers such item was not as warranted above and promptly notifies ELAN in writing, ELAN shall repair or replace the items at the company's option. This warranty shall not apply (a) to equipment not manufactured by ELAN, (b) to equipment found to have been installed by other than an authorized ELAN installer, (c) to installed equipment which is not installed to ELAN's specifications, (d) to equipment found to have been repaired or altered by others than ELAN, (e) to equipment found to have been subjected to negligence, accident, or damage by circumstances beyond ELAN's control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or any other catastrophic events beyond ELAN's control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by ELAN, the warranty obligations of ELAN shall in all respects conform and be limited to the warranty actually extended to ELAN by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation, or other expenses which may be incurred in connection with repair or replacement.

Except as may be expressly provided and authorized in writing by ELAN, ELAN shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by ELAN or services rendered by ELAN.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES EXCEPT WARRANTIES OF TITLE, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.