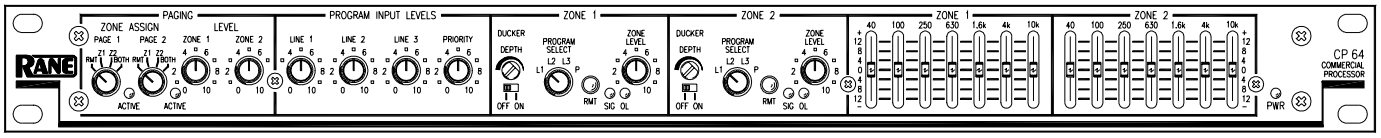


QUICK START

If you were the type that cheated on school book reports by just skimming through the reading assignments, then this section is for you! It gives you not quite enough information to *really* know what you're doing. But, if you follow the recommended set up procedure, you should get at least a "B."

Keep the amplifiers and the CP 64 turned off until all connections are made.

INTERNAL SETTINGS: Access to the following internal controls requires removal of the top cover. All internal settings should be complete before you install the CP 64. The factory default settings work for many applications. However, you may need to change one or more for your system. *See the INTERNAL ADJUSTMENTS description on page Manual-8 for more details*

- Each Page Input has a 15 volt Phantom Power switch. The default is *off*.
- The Page Priority switch assigns priority override to *Page 1, Page 2* or *NO* (none). The default is *Page 1*. If a Page has priority, it overrides the non-priority Page in the Zone(s) it is assigned. The *NO* priority setting allows the Pagers to mix.
- Each Page Input may sum with the Program Pre- or Post-VCA. When set to Pre-VCA, Zone Level, EQ and Limiter circuits act upon the Page. When summed Post-VCA, the Page is not influenced by Zone Level, EQ or Limiter circuits. The default is *Pre-VCA*.
- The Zone 1 Stereo/Mono switch default is *Stereo*.
- There are two internal trim controls for the Program Priority detector. The Program Priority Threshold trim has a range of -∞ to -35 dBu with a default of *-50 dBu*. The Program Priority Release Time has a range of 2 to 20 seconds. The default is *12 seconds*.

PAGE INPUTS: Connect Page Inputs to the Euroblock on the rear panel and select the appropriate **MIC** or **LINE** switch position for each. First, set the gain with the Page **TRIM** control, then set the Page **DETECT THRESHOLD** and finally the Page Zone **LEVEL**.

PR 2 REMOTE: If you use the optional PR 2 remote (sold separately), wire it to the rear **RMT ZONE ASSIGN** Euroblock as indicated. If you require remote control but do not wish to use a PR 2, any simple switch closure to GND will work. These inputs are also TTL compatible (0 to 5 VDC). *See wiring details on pages Manual 9-10*.

PROGRAM INPUTS: Connect Program sources to the RCA **PROGRAM INPUTS** (L1, L2, L3 & P.) If you have a priority program, like a jukebox, connect it to the **PRIORITY** Input. The Program PRIOR**ITY ASSIGN** switch assigns priority override to *Off, Zone 1*, *Zone 2*, or *Both*. In the Zone(s) that it is assigned, the priority program is automatically selected when signal is detected.

EXPAND OUTPUTS: Wire the **EXPAND OUTPUT** Euroblock for each Zone as required. These are cross-coupled line drivers and may be used balanced or unbalanced. Each Expand Output can be *Page*-only, *Program*-only or *Zone* signal. The *Zone* source will *not* include the Page if the Page is summed Post-VCA. Page is always available from the *Page* source.

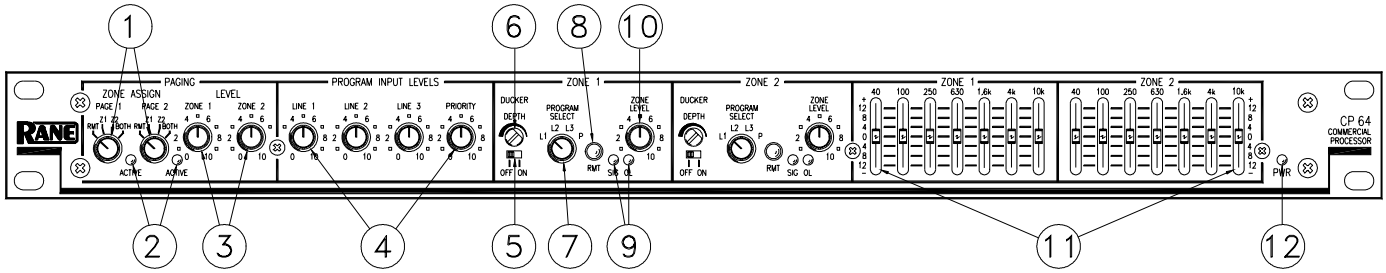
ZONE OUTPUTS: Wire the two **ZONE OUT** Euroblocks as required. These are cross-coupled line drivers and may be used balanced or unbalanced. Set the **LIMIT** threshold as required.

ZR 1 REMOTE: You may use one or two ZR 1 Remotes with each CP 64. If you use the optional ZR 1 remote (sold separately), wire it to the rear **REMOTES** Euroblock as indicated. If a ZR 1 remote is not used, any simple switch closure to GND will work for the D0 and D1 pins. These pins are TTL compatible (0 to 5 VDC). The logic is inverse Gray Code. Any ground referenced 5 volt DC control may be used as the input to V_1 or V_2. Do *not* ground the Vr_1 or Vr_2 pins. *See wiring details on pages Manual 9-10.*

The CP 64 is *very* versatile. While this makes a large number of system applications possible, it also results in complexity. For this reason, it is *important to use an organized approach for setup and calibration.* A *highly* recommended setup procedure appears on *page Manual-11*. By following it you will encounter fewer problems and reduce the need to increase our collective phone bills.

WEAR PARTS: This product contains no wear parts.

CP 64 FRONT PANEL



① **PAGING ZONE ASSIGN** switches select the zone(s) a Page signal is sent to. The RMT position activates the rear panel RMT ZONE ASSIGN port, allowing the optional PR 2 wired remote to assign the active page Zone(s).

② **ACTIVE** indicators light when a Page input signal reaches the Page Detect Threshold. *Note that a Page is always Active when its Page Detect Threshold is set to minimum.*

③ **ZONE 1 AND ZONE 2 PAGING LEVEL** controls adjust the Paging Level in each Zone.

④ **PROGRAM INPUT LEVEL** "stereo"controls allow independent adjustment of level for each Program Input.

⑤ **DUCKER OFF/ON** switches turn the Ducker ON or OFF for each Zone.

⑥ **DUCKER DEPTH** controls allow setting Ducker Depth (the amount of Program attenuation during a Page) from 50 dB (ccw) to 6 dB (cw) for each Zone.

⑦ **ZONE PROGRAM SELECT** switches assign one of four Program Inputs in each Zone.

⑧ **ZONE RMT** switches, when pushed *in*, enable the Remotes port for a Zone. This turns control of Zone Level and Zone Program Select over to the Remotes port. Front panel Zone LEVEL and Zone PROGRAM SELECT controls are *inactive* when RMT is selected. Two optional wired ZR 1 remotes may be connected to the Remotes port. *An object smaller in diameter than the switch button is required to engage the RMT switches.*

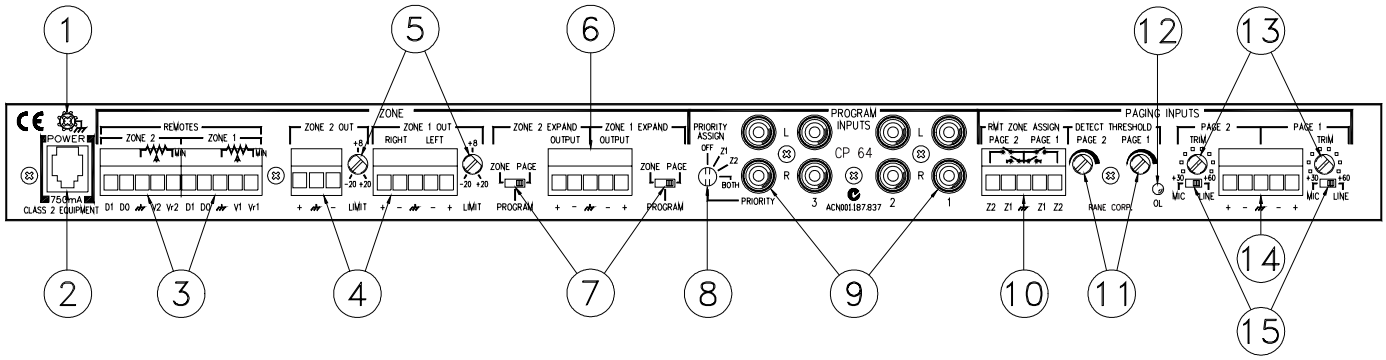
⑨ **ZONE SIG/OL** indicators show SIGnal present at –20 dBu and OverLoad at +16 dBu (4 dB before clipping) respectively. Signal indicators are located *pre-EQ and pre-VCA*.

⑩ **ZONE LEVEL** controls adjust the overall Level for a given Zone.

⑪ **GRAPHIC EQ** controls are provided for each Zone. Zone 1 controls are "stereo," with each slider controlling the response of both Left and Right channels. These controls allow ±12 dB adjustment of seven ISO center frequencies on two octave centers.

⑫ **PWR** indicator lights when the CP 64 is connected to a powered RS 1 power supply.

CP 64 REAR PANEL



① **CHASSIS GROUND SCREW** provides a convenient earth (technical) ground connection point. The CP 64 does *not* ground the chassis through the power cord. *It is important that the unit be grounded.*

② **POWER** jack accepts the cable from a Rane RS 1 remote power supply (included) or an available Rane RAP 10 power supply. *This is not a telephone jack.* Use of a supply not approved by Rane may damage your unit and void the warranty.

③ **REMOTES** port provides the wiring interface for two optional ZR 1 wired remotes. Each ZR 1 remote provides remote control of Zone Level and Zone Program Select functions. *Refer to page Manual-9 for details.*

④ **ZONE OUTPUT** ports feature balanced, cross-coupled line drivers with Euroblock connectors. These Outputs may be operated balanced or unbalanced. Zone 1 is stereo. Zone 2 is mono.

⑤ **ZONE LIMIT** threshold controls set the maximum output level for a Zone. These Limiter circuits are true voltage limiters with a ratio of 15:1. The threshold range is –20 dBu to +20 dBu

⑥ **ZONE EXPAND OUTPUT** ports feature balanced, cross-coupled line drivers with Euroblock connectors. These outputs may be operated balanced or unbalanced. Zone Expand Outputs are mono.

⑦ **ZONE EXPAND** switches assign *Page*-only, *Program*-only or full *Zone* as the source for each Zone's Expand Output.

⑧ **PROGRAM PRIORITY ASSIGN** switch determines in which Zone(s) the automatic priority override is enabled. *Off* (none), *Zone 1*, *Zone 2* or *Both* are the possible settings. If you do not intend to use the Priority ("P") Input as an *automatic override* Input, do *not* assign it with this switch. Use the Zone PROGRAM SELECT switch on the front panel.

⑨ Four **PROGRAM INPUTS** are provided. Three are non-priority Inputs. The fourth is a Program Priority Input. When signal is present at the Program Priority Input, it is *automatically* selected as the Input source in the Zone(s) it is assigned with the Program PRIORITY ASSIGN switch.

⑩ **RMT ZONE ASSIGN** port provides the interface for the PR 2 wired remote. The PR 2 remote is used for Zone assignment of Page Inputs. *Refer to page Manual-9 for details.*

⑪ **PAGING DETECT THRESHOLD** sets the Page signal level required to gate a Page *on* and light the ACTIVE indicator. The range is –∞ (on) to +4 dBu.

⑫ The **PAGING OVERLOAD** indicator lights when either of the Page Input preamplifiers comes within 3 dB of clipping.

⑬ **PAGING INPUT TRIM** controls adjust Page Input preamplifier gain to match the microphone/source in use, *not* to set the page level in the Zones. The range is 30 dB to 60 dB.

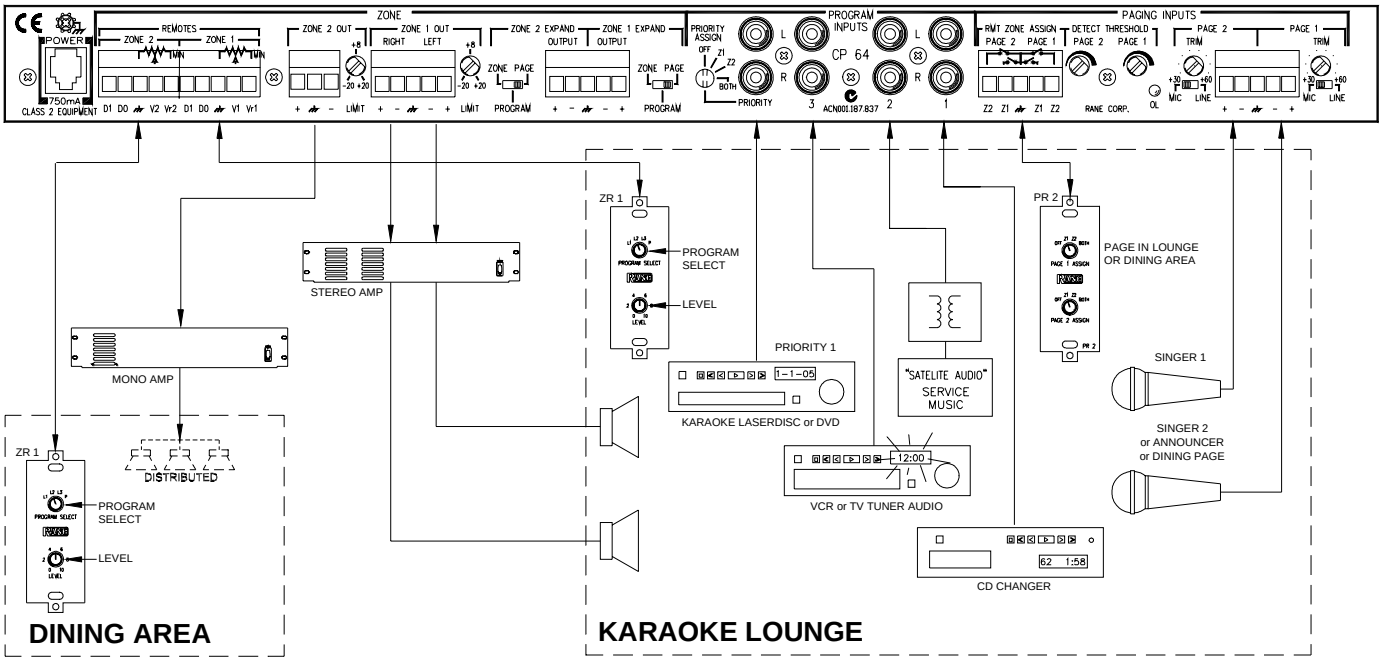
⑭ **PAGING INPUT** Euroblock connector provides access to the two balanced instrumentation Paging amplifiers. These Inputs may be operated balanced or unbalanced.

⑮ **PAGING INPUT MIC/LINE** switches select 30 dB Input Pads when set to LINE. *Phantom Power is disabled when LINE is selected.*

SYSTEM APPLICATIONS

The following applications outline four unique system configurations. It is not practical to show every possibility, but the following examples may provide some ideas for your own applications.

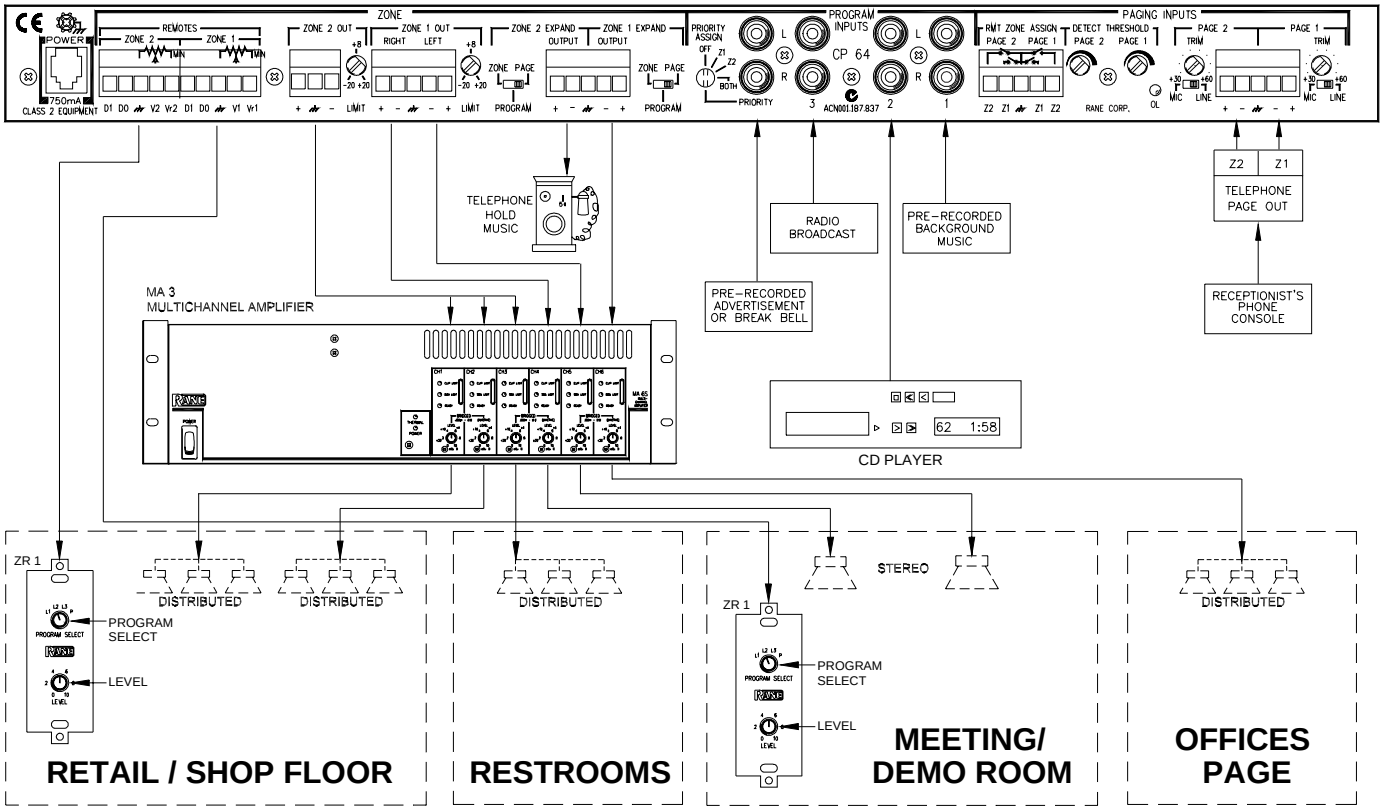
SYSTEM 1: KARAOKE



- For one singer and a master Page, set the internal Page Priority switch to *P1*. This allows the "Announcer" to Page any area with the PR 2 remote.
- For two singers, set the internal Page Priority switch to *NO*. This allows the two mics to mix.
- Set both front panel Paging ZONE ASSIGNs to *RMT*.
- On the PR 2 Remote:
  Set Page 2 Assign to *Z1* (karaoke area only)
  Set Page 1 Assign to *Z1* for karaoke -or- *Z2* for dining area page -or- *BOTH* for all-page.
- Zone 1 (karaoke) ZR 1 Remote: Set PROGRAM SELECT to *L1*; Adjust LEVEL as needed.
- Set both front panel Zone RMT switches *in* to enable the Zone Remotes
- When a priority program (jukebox) is desired in dining area, set the Program PRIORITY ASSIGN switch to *Zone 2* only.
- Expand Outputs are still available (shown unused).
- For karaoke applications, set the internal Z1 Page and Z2 Page switches to *Pre-VCA*. This allows the ZR 1 remote Level to control both Page and Program signal levels.

Notice: Rane does not endorse the use of Karaoke to inflict pain and suffering upon others.

SYSTEM 2 : SMALL MANUFACTURING / SMALL OFFICE / RETAIL STORE



- If the phone system selects Zone(s), set the PAGE 1 ZONE ASSIGN to *Zone 1* and PAGE 2 ZONE ASSIGN to *Zone 2*. This allows the telephone paging system to page Zone 1, Zone 2 or BOTH. The setting of the internal Page Priority switch does not matter.

- Set the internal Zone 1 and Zone 2 Page switches to *Post-VCA*. This allows independent control of Zone level and Page level.

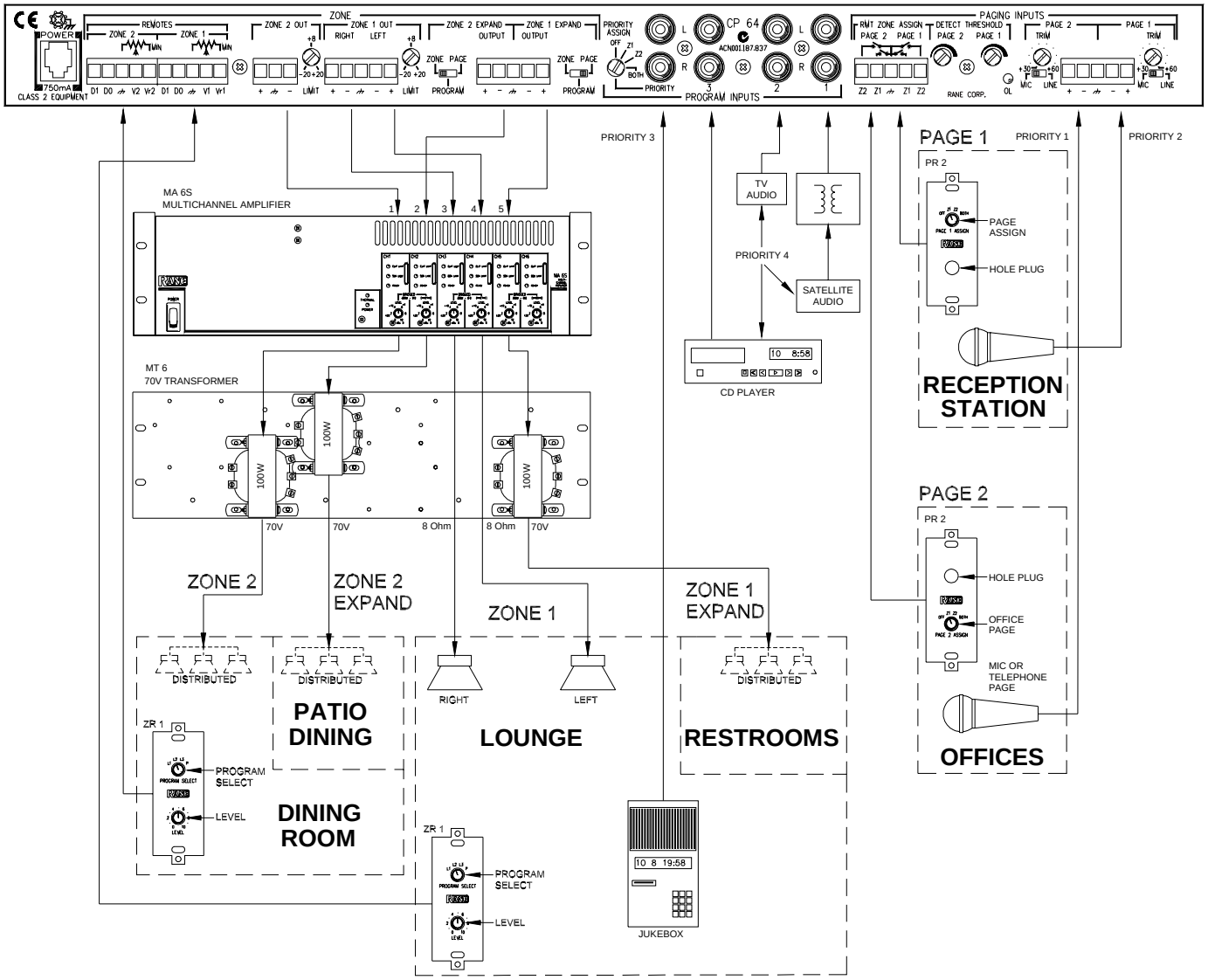
- Set the Program PRIORITY ASSIGN switch to *Zone 2*. This sends pre-recorded advertisements or break-bell tones to the retail space or shop floor, respectively. You may wish to shorten the internally set Priority Release Time.

- Set the Zone 1 Expand source switch to *PAGE* for Office Page.

- Set the Zone 2 Expand source switch to *PROGRAM* for Telephone music-on-hold.

- Set both Zone PROGRAM SELECT switches to *RMT* to enable the ZR 1 remotes.

SYSTEM 3: BOB'S STEAK YOUR HEART OUT RESTAURANT



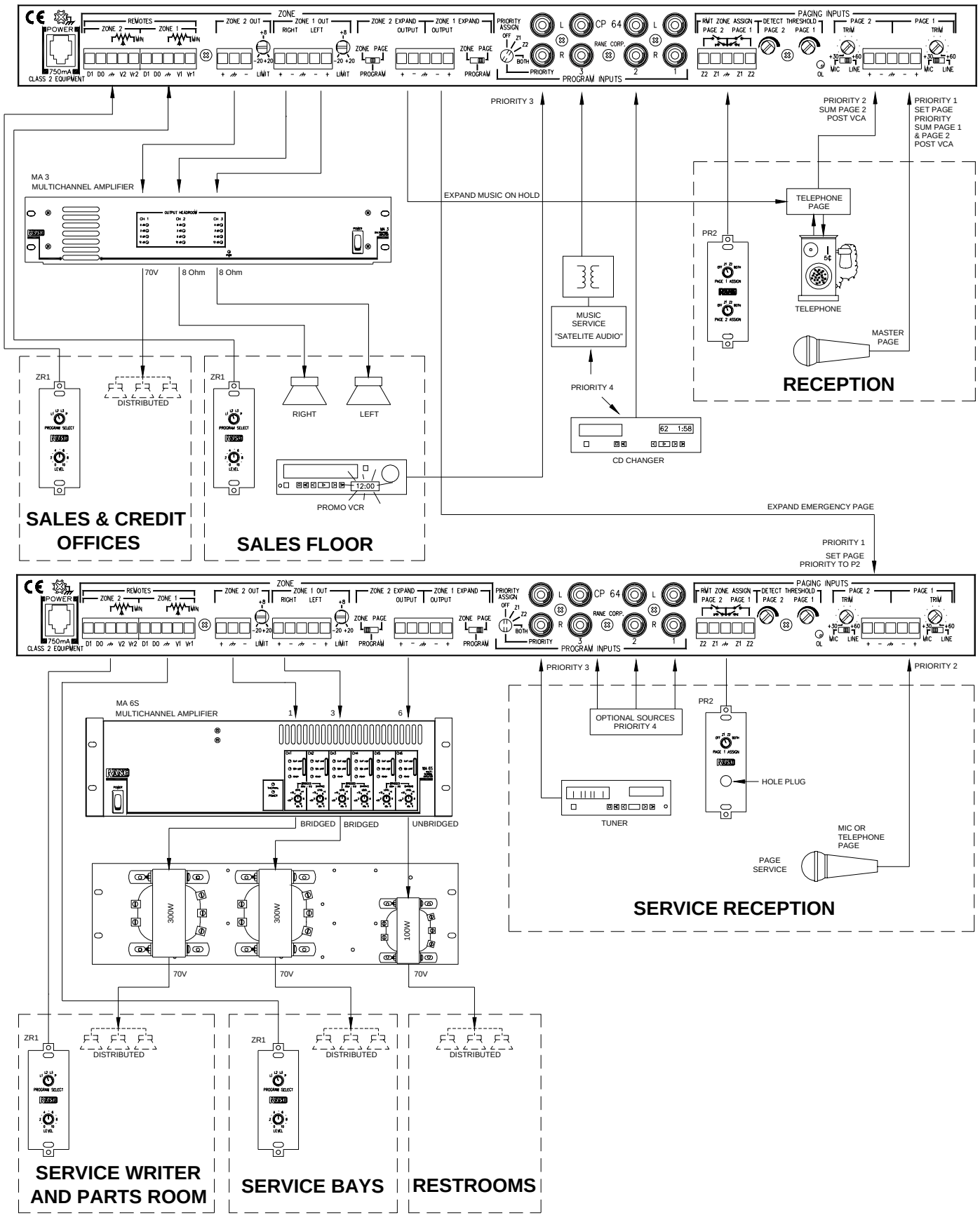
Internal Settings: Page Priority to P2 *(see page Manual-8).*
Both P1 and P2 to Post-VCA summing.
Zone 1 Mode set to Stereo.

Front Panel Settings: PAGING ZONE ASSIGNS to RMT.
DUCKER DEPTH ON, set to 2:00.
ZONE REMOTE engaged.
PROGRAM SELECT switches to *RMT* to enable ZR 1 remotes.

Rear Panel Settings: ZONE LIMIT set to 10:00 (~0 dBu).
Program PRIORITY ASSIGN switch to *Zone 1* (jukebox in lounge only.)
Both Zone 1 & 2 Expand source switches to *ZONE* for Page and Program in the restroom and patio.

*Use of an isolation transformer is **highly** recommended with Program audio inputs driven from long cable lines. This is also true for audio sources fed from satellite systems like DSS, DMX, Primestar, AEI, TV Cable, etc. Cable systems are generally earth grounded down the street from the installation. This can generate quite a large ground loop with your in-house fuse box and the rest of the audio system.*

SYSTEM 4: EXPAND TO OTHER CP 64s: AUTO DEALERSHIP



INTERNAL ADJUSTMENTS

There are a number of controls inside the CP 64 used to configure the system for specific applications. Access to these controls is only required during initial system setup. Set up all internal controls *before* the CP 64 is installed in a rack or wired into a system. Make sure the power is *off* before removing the top cover to gain access. Refer to the diagram below for control locations.

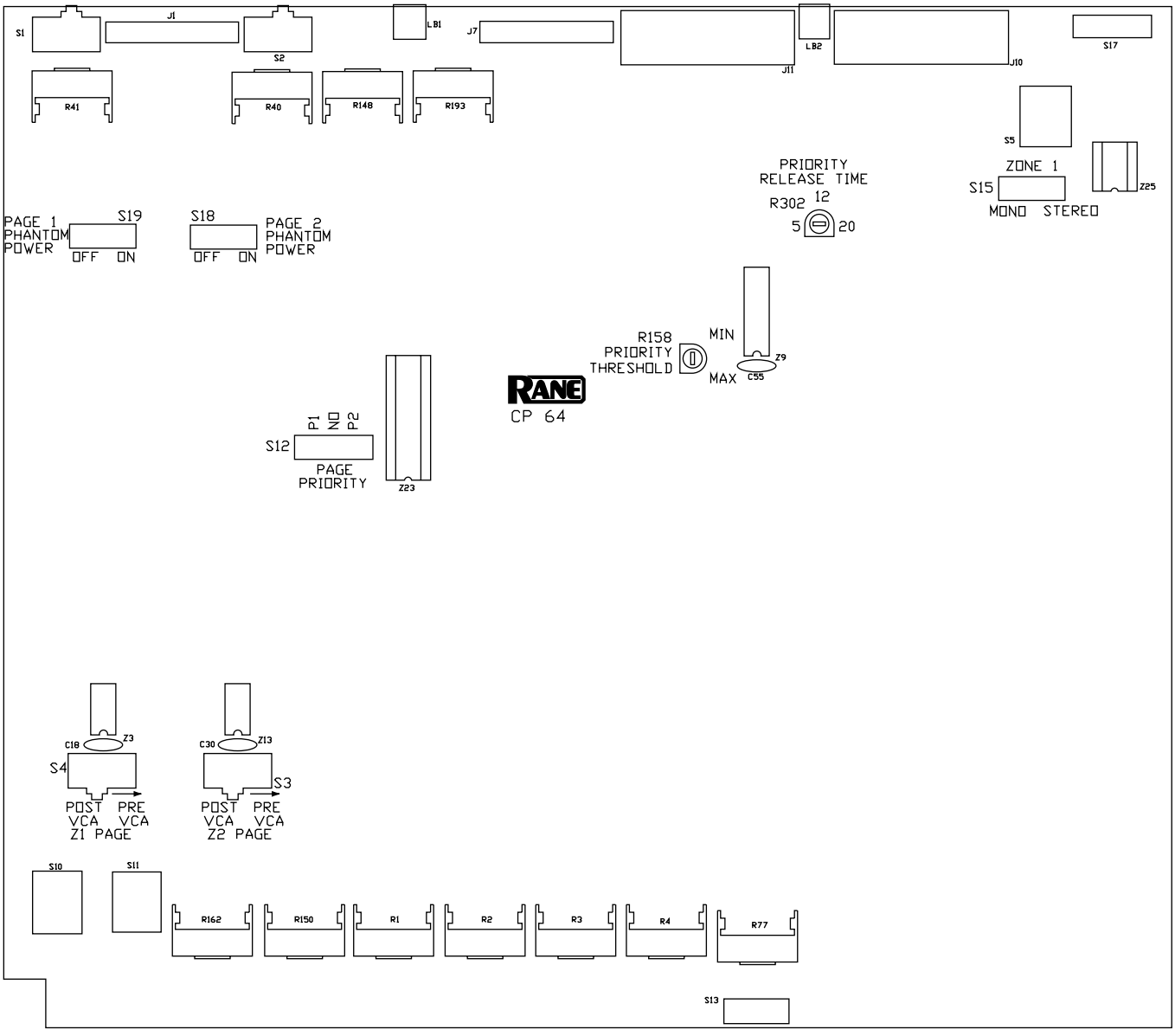
There are five internal switches related to the two Page Inputs:

- Page 1 Phantom Power 15VDC Default: OFF
- Page 2 Phantom Power 15VDC Default: OFF
- Page Priority P1, NO, P2 Default: P1
- Z1 Page Sum Pre- or Post-VCA Default: Pre-VCA
- Z2 Page Sum Pre- or Post-VCA Default: Pre-VCA

Phantom Power is available for both Page Inputs. If phantom power is required for the intended microphone, then set the appropriate switch to *ON. If a Page Input Mic/Line pad switch is set to LINE, phantom power is automatically defeated.*

The **Page Priority** switch allows you to select one of the Page Inputs as a Priority Page Input. The Priority Pager overrides the non-priority Pager in the Zone(s) it is assigned. It is important to note that the non-priority Pager may still broadcast in any Zone that the Priority Pager is *not* assigned to *or* not currently broadcasting in. Set the switch to P1 if you wish Page 1 to have priority over Page 2. If you wish Page 2 to have priority over Page 1, set the switch to P2. If NO is selected, neither Page Input has priority and both Pagers may be active at the same time. This allows the Page Inputs to mix for applications like karaoke or PA. If a Page Input is used for emergency paging, set it as the Priority Pager.

The **Z1 Page** and **Z2 Page** switches allow you to sum Page signals with Program signals “Pre” (before) or “Post” (after) the VCA. The VCA is used for Zone Level control and Limiting. Therefore, if you require the Page Level to be controlled *independent* of the Program Level, set the switch for that Zone to “Post.” This is the desired setting for emergency paging. If “Pre” is selected, Paging signals sum with Program signals before the VCA. In this instance both Page and Program signal levels *are* affected by the ZONE



LEVEL control. Note the following:

- Zone Level, EQ and Limiter circuits *do not* affect Page signals summed Post-VCA.
- Zone Level, EQ and Limiter circuits *do* affect Page signals summed Pre-VCA.
- Page signals are *not* available on the Expand Zone output when summed Post-VCA.
- Page signals are *always* available for the Expand Page output.

There are two internal controls related to the **Program Priority** detector:

- **Priority Release Time** 2 sec to 20 sec (trim pot) Default: *12 seconds*
- **Priority Threshold** -∞ to -35 dBu (trim pot) Default: *-50 dBu*

The default settings for the Program Priority detector are chosen for most applications. Detector Threshold settings lower than the default setting of -50 dBu are prone to false triggering unless the source is very quiet. If a source is noisy, you may wish to set the threshold higher to prevent false triggering. The default Release Time is 12 seconds. You may wish to decrease the Release Time if the source is a TV, radio, tape machine or any other relatively constant signal source. If you have a source like a jukebox, with relatively long search times, you may wish to extend the Release Time.

There is one internal control related to **Zone 1**:

- **Zone 1 Mode** Mono/Stereo Default: *Stereo*

CP 64 CONNECTIONS

Power to the CP 64 should be OFF until all connections are made.

EUROBLOCK CONNECTIONS

All Input and Output connections are made with Euroblock connectors except for the RCA PROGRAM INPUTS. When wiring to Euroblocks, a minimum wire gauge of 22 is preferred for reliability. If the ground or shield wire is left shorter, it acts as a strain relief for the other wires. Cable with a flexible jacket is easier to use and less likely to damage the connections. Avoid stripping excess insulation. Inspect wires for nicks that may lead to wire breakage. Fully insert each wire in the appropriate socket and tighten the screw.

Page Input circuits are true instrumentation amplifier inputs and operate balanced or unbalanced. Expand and Zone Outputs are driven by high quality cross-coupled line drivers and operate balanced or unbalanced. For both Inputs and Outputs, wiring is basically the same. Balanced operation is recommended. Balanced wiring is straight forward, (+) to (+), (–) to (–) and shield to shield.

For unbalanced operation, we recommend using *two conductor cable with shield*. The cable is wired to the CP 64 the same as for balanced operation. At the *other* end of the cable, connect the (+) wire to signal "hot" and both the (–) *and* shield wires to ground *(important.)*

If you use *single conductor cable with shield*, connect the shield/gnd wire to both the (–) and shield pins at the CP 64. At the *other* end of the cable connect the (+) wire to the signal "hot" and the shield/gnd wire to ground. When unbalanced wiring is used, it is very important for the CP 64 and any other unit in the system to have good earth or technical grounds. If a unit is located far from the CP 64 or is of a type that might create grounding problems, isolation transformers should be used.

When operating cross-coupled line drivers unbalanced (i.e., any CP 64 Output)*, it is* ***essential*** *to ground the (–) pin.*

PROGRAM INPUTS

The four stereo Program Inputs connect to RCA jacks. These Inputs are unbalanced. The same guidelines given above for unbalanced operation apply to these Inputs.

Refer to Rane Note 110, "Sound System Interconnection" for additional wiring information.

REMOTE INSTALLATION

The CP 64 supports wired remotes for *Page Assign*, *Zone Level* and *Zone Source* selection. Wire lengths of up to 1000 feet are possible. A brief list of suitable wire types is provided in the WIRE TYPES section on the next page.

The **PR 2** remote provides Page Zone Assign for Page 1 and Page 2 signals and is usually located at the Page source. If your application requires one of the two PAGE ASSIGN switches to control both Page 1 and Page 2 Assign, simply wire all Page 1 and Page 2 control bits in parallel. You may wish to leave the knob off the unused control and cover it with one of the hole plugs provided in the kit. If your installation requires Page 1 and Page 2 remote control at two different locations, only three wires are required for each PR 2 remote (Z1, Z2 & GND). As above, you may wish to leave the knob off the unused control and cover it with a hole plug.

The **ZR 1** remote provides Zone Level and Source Selection, allowing local control from inside the Zone. Two ZR 1 remotes may be used (only use *one* in each Zone). If only one of the two controls is used, you may wish to cover the unused control with one of the hole plugs provided in the kit. If you require one ZR 1 remote to control both Zones, simply wire the ports in parallel. This may be done with Program Select only, Level only or both. If only one of the two controls is wired in parallel, the other is still available for a second remote.

When paralleling one remote across multiple CP 64s, *all three* control pins *must* be wired, including the shields.

Power to the CP 64 should be *off* until all connections are made. It is important to ensure that the CP 64 Remote Ports are not subjected to sustained voltages outside the range of 0 to 5 volts DC or high levels of static. Inputs are protected, however, caution is the better part of… you know. It is a good idea to install the wiring, connect it to the remote assemblies and then make the final connections at the CP 64. Do *not* short Vr1 or Vr2 pins to ground. These pins *are* current limited, however, excess heat is generated in the 5 volt supply if a short occurs. *Never subject the Vr1 or Vr2 pins to voltages above 5 volts.*

REMOTE MOUNTING

The ZR 1 and PR 2 remote assemblies mount in a standard U.S. electrical box with a minimum depth of 2.25". Be sure to note the wire color of each input in order to facilitate correct wiring to the CP 64. Connect each wire to the 5-pin connector by fully inserting it in the correct socket and tightening the screw. Make sure wires are free of nicks and that the cable jacket is stripped back sufficiently to allow it to lie in the electrical box with the remote assembly inserted. Use the flat head #6 screws supplied with the kit to mount the remote assembly and silk-screened front panel to the electrical box (see above diagram). Note the "UP" arrow screened on the printed circuit board of each remote (it should mount pointing *up*).

The silk-screened front panel metal is painted on both sides. This allows you to custom silk-screen the panel or add your own custom decals. Simply install the modified front panel with your art facing out, and you are in business!

Install each knob so that the line on the knob is properly aligned with the silk-screening on the front panel of the remote assembly. Install any Decora plate of your choice. For a secured installation, you may wish to leave the knobs off and use a blank Decora plate to cover the remote after adjustment.

WIRE TYPES

Variations in wire type do not greatly affect the performance of the remote controls. However, 22-gauge stranded wire with a flexible jacket is recommended. You may use 5-conductor unshielded remote control signal cable for shorter runs (less than 200 ft.) or 4-conductor (2 pair) shielded remote control signal cable (use the shield as the GND return) for longer runs (200 to 1000 ft.). The type of wire required is influenced by your installation and local electrical codes.

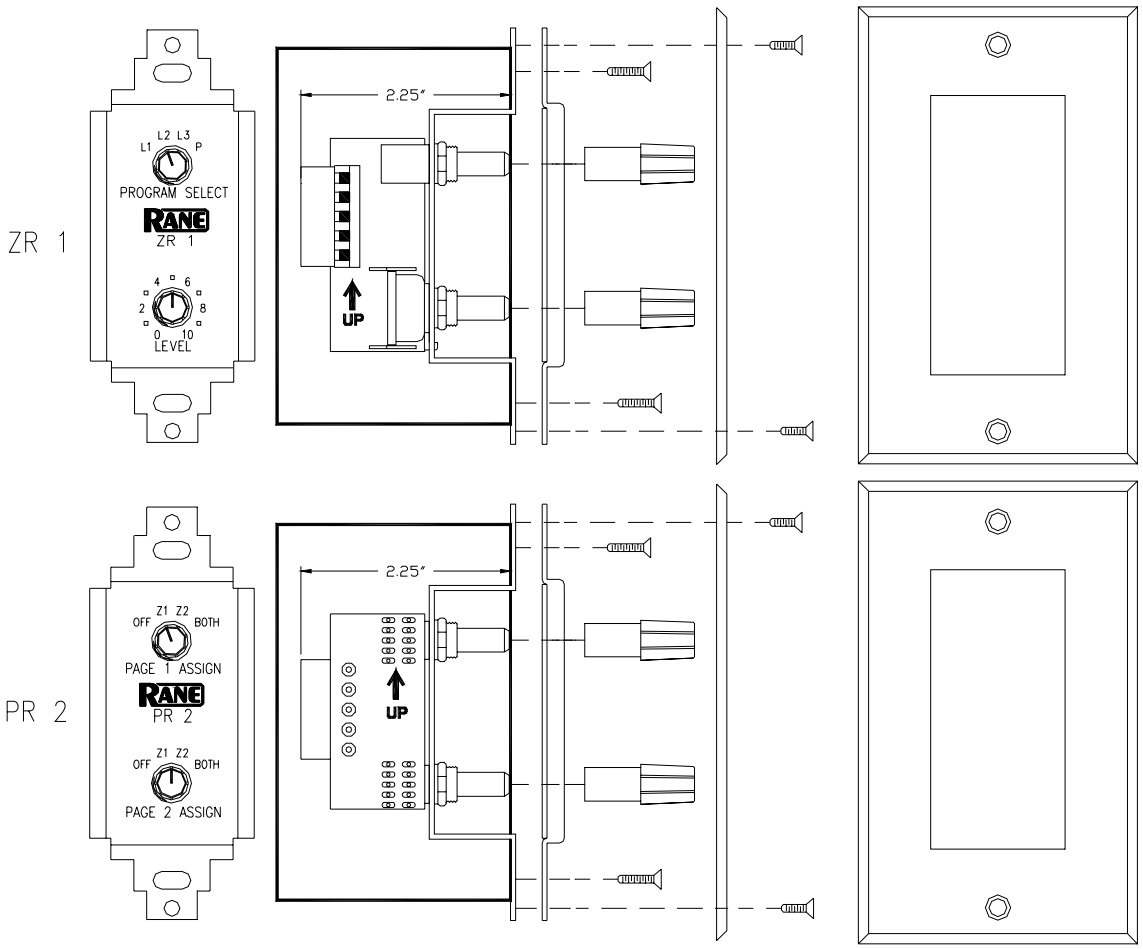
Rane Corporation does *not* provide or source cable. Please contact your local retail or wholesale outlet, *not* the factory. The following is a short list of suitable cable types:

CONSOLIDATED ELECTRONIC WIRE AND CABLE
Plenum cable:
Unshielded remote control signal cable CAT. # 9896
Shielded remote control signal cable CAT. #9877, CAT. #9852

WEICO WIRE & CABLE INC.
Communication and control cable:
Multiconductor, unshielded CAT. #7606

ALPHA
Communication and control cable:
Multiconductor, unshielded CAT. #1175C

BELDEN
Unshielded remote control signal cable CAT. # 88741
Shielded remote control signal cable CAT. # 88723



RECOMMENDED CALIBRATION PROCEDURE

The CP 64 is a very versatile instrument. While this allows it to conform to the requirements of a large number of system applications, it also results in complexity. For this reason, it is very important to use an organized approach to system calibration. Once the internal switches are set and the system is connected, take the time for proper calibration. The following is an ordered list of system adjustments that should make calibration easy and result in optimum performance. Most important:

- Program Priority Assign is set to *Off*
- Ducker is *Off*
- Zone Limit Threshold is set to *+20 dBu*
- Page Zone Levels are set to *minimum*
- Remote Control is *not* selected
- Page Zone Assign is set to *Both*

The following procedure assumes that microphones are used for Page sources. The procedure (except for the exact wording) is the same for other Page sources.

Make sure the POWER is off!

Control Presets:

Page settings (repeat for second page input):

• Input Pad	Mic/Line as required
• Input gain trim	Center (12:00)
• Detector Threshold	Min (ccw, Active)
• Paging assign	Both
• Paging Level, Zone 1	Min
• Paging Level, Zone 2	Min
• Phantom Power	As required. Default Off (internal)
• Pre/Post summing	As required. Default Pre-VCA (internal)
• Page Priority	As required. Default Page 1 (internal)

Program Input settings:

• Input Level controls	Min
• Program Priority Input Threshold	Set to −50 at factory (internal adjust −∞ to −35 dBu)
• Program Priority Input Release Time	Set to 12 sec. at factory (internal adjust 2 to 20 sec.)
• Program Priority Assign	Off

Zone Settings (repeat for second zone):

• Zone Level	Max
• Program Select	L1 (if your input is on L1).
• Ducker	OFF
• Ducker Depth	Center (about 15 dB)
• RMT (Remote)	Out (front panel)
• EQ	Flat (center detent position)
• Stereo/Mono switch	As required (internal - zone 1 only, *default:stereo*)
• Expand Source	As required (Zone/Program/Page)
• Limiter Threshold	+20 dBu

System Connections:

- Connect Page Microphones or Line Level paging source
- Connect Program Sources
- Connect Outputs to Amps
- Connect Remote Controls

You are now ready to calibrate the CP 64…

…CP 64 Calibration (continued)

1. Connect the Power Supply and verify the **PWR** indicator lights.

2. Verify **Zone Level** controls are set to Maximum and that you have an active source for each of the Program Inputs you intend to use. Select each **Program Input** and adjust its **Input Level** control to be the very loudest you would *ever* desire.

3. Adjust the rear panel **Zone Limit** thresholds so that they just start to audibly reduce the output level. This ensures that the level in a Zone will never be louder than the maximum level you just set. If you wish one of the Zones to have a lower maximum loudness, lower the **Zone Limit** threshold accordingly.

4. Turn the **Zone Level** controls down to a comfortable listening level.

5. Note that with the **Paging Zone Level** set to minimum, you will not hear the following Page. Speak very loudly (bark) into the Paging Mic. Set the proper preamplifier gain by adjusting the **Page Trim** control (rear panel) so that the **Page OverLoad** Indicator (rear panel) just lights. It is important to set the *gain* of the pre-amp *before* setting the **Page Detect Threshold**. Repeat for second Mic if used.

6. Speak into the Page Mic in a normal voice and adjust the **Page Detect Threshold** (rear panel) so the **Active** indicator (front panel) lights only when you speak. If the **Page Detect Threshold** is set too low, the Pager may gate *on* due to background sound. Repeat for second Mic if used.

7. With an active Program source playing in both Zones, speak into the Page Mic. Adjust the **Zone 1** and **Zone 2 Page Level** controls (front panel) to provide the correct Page-to-Program mix in each zone. If the **Page Detect Threshold** is set too high, there may be a delay when you start to speak. To correct, lower the **Page Detect Threshold** setting. If a second Page source is used, verify that it has the same level as the first Page source (it should be close). If not, use the **Page Trim** control of the second Page source to adjust its *gain* to match. If you change the gain of the second Page source substantially, be sure to reset the **Page Detect Threshold**.

8. Set the **Ducker** switch to **ON**. With an active Program source playing, speak into the Page Mic and adjust the **Ducker Depth** as required. Repeat for both Zones.

9. Set the **Program Priority Assign** switch as required (on rear panel). If you do *not* require *automatic* priority program override in a zone, ***do not*** assign it. Instead, use the front panel **Program Select** switch to select the "**P**" program Input as you would any other non-priority input.

10. If remote control is used, select the appropriate **RMT** switch settings on the front panel and verify that the remotes function correctly.

11. Adjust the Equalizers as required.

…You're all set. Enjoy.