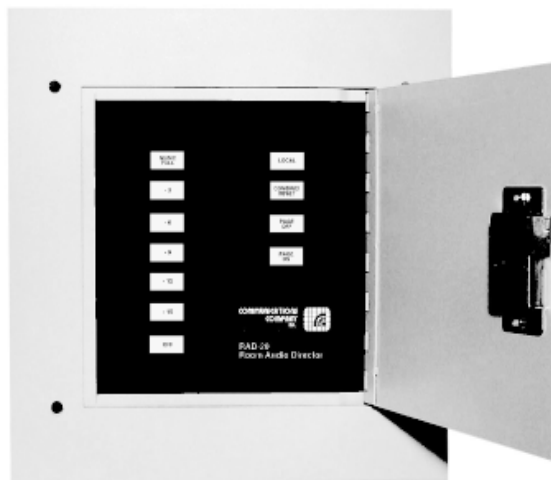
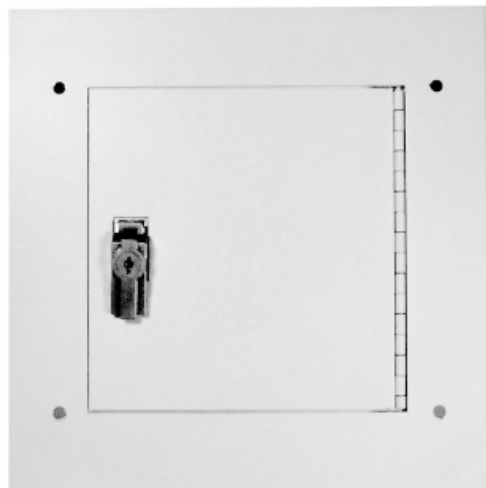


Room Audio Director



The model RAD-20 Room Audio Director provides expandable meeting room facilities (up to three [3] rooms) with the ultimate control for combining these audio areas using local in-wall or rack-mounted amplifiers. See **NOTE 1**.

The Room Audio Director furnishes an audio and visual status control at the touch of a button in each meeting room.

The RAD-20's single combine buss allows control of three (3) meeting rooms in any combination, or, from three (3) individual systems to one large system. (See Figure 1.) Each area has the option of background music or paging as desired.

The RAD-20's user controls and electronics are located in each meeting room with the in-wall amplifier. When a decision is made, immediate results can be observed. The standard user decisions, or options, are:

1. Background Music
2. Local program (1 room)
3. Combine (up to three [3] rooms)
4. Page option (when in the "ON" position provides page precedence over any other choice selected.)

Figure 1: RAD-20 possible operating combinations:

MEETING ROOMS		
<u>A Local</u>	<u>B Local</u>	<u>C Local</u>
A +	B	C Local
A Local	B +	C
A +	C	B Local
A +	B +	C

The RAD-20 control panel is designed with a lockable door and can be flush-mounted in the wall of each room. Power for each panel is by an AC adapter located at each wall amplifier AC outlet. Each control panel requires a RAD-20-PS power supply.

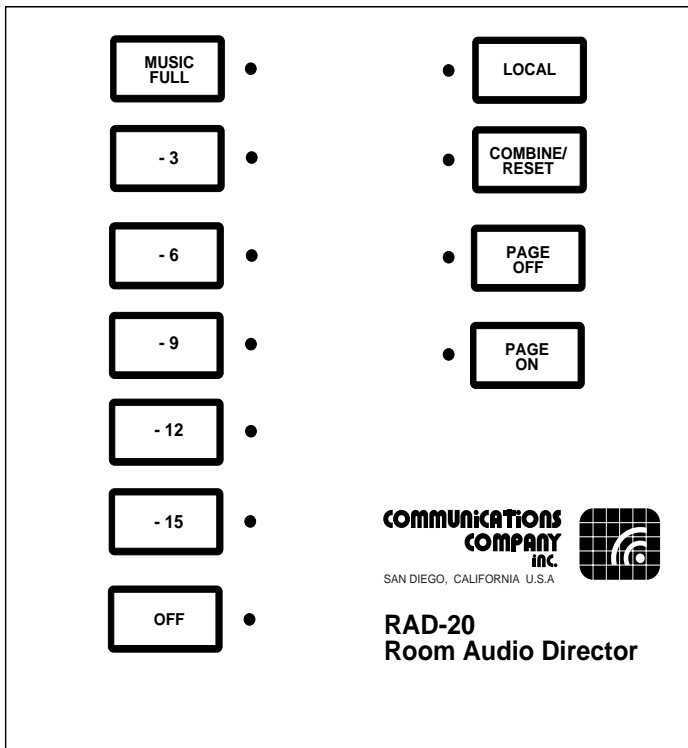
Operation of the system can be better understood by describing the room control panel.

There are four (4) momentary control buttons on the right side of the panel. Their functions are as labeled:

- Local** (not combined)
- Combine/Reset** (available for combining on Audio Buss)

Page ON
Page OFF





Music volume is controlled by the seven (7) push buttons located on the left side of the panel. When any push button is selected, the LED adjacent to that push button is lit, indicating the mode selected.

The Room Audio Director places the “combine” decision in the room where used, eliminating the possibility of hotel personnel error when setting up the meeting rooms.

A unique feature of the RAD-20 is the use of the “Combine/Reset” button to create a “master” control panel. For example: All three (3) rooms are in the combine mode and the meeting attendees wish to take a break. Room A pushes the “Combine/Reset” push button and then adjusts the music volume level. When the meeting is ready to restart, Room B or C can become the “master” control by simply pushing the “Combine/Reset” and making the desired selection. This eliminates the problem of resetting each panel or having to return to Room A to reset the panel for the desired mode.

Each room section is controlled by its own, dedicated RAD-20 room panel. To combine rooms, the “combine/reset” button must be selected in each room to be combined.

Another feature of the RAD-20 is that all microphone inputs follow the room program assignments automatically.

For example: If each of three (3) meeting rooms have four (4) microphone outlets, when the local program option is selected, any of the four (4) microphone outlets can be used within that room. When the Combine “buss” is selected, any room that is on the Combine buss will receive program from any other room that is on the buss, as well as program from its own four (4) microphone inputs for a new total of eight (8) microphone inputs. The process continues for a total of twelve (12) inputs in the fully combined system.

RAD-20 Specifications

Type: Room Combining Amplifier Control Panel to be located in each room.

Frequency response: 40 Hz to 15kHz \pm 1dB

Gain: Unity

Inputs: One balanced transformer input from mixer/amplifier;

One music balanced differential input;

One page balanced differential input.

Input impedance: 15k Ohm bridging

Input level controls: Continuously variable potentiometers for music and page input level.

Input level: -10 dBv nominal

Outputs: One balanced output to mixer/amplifier.

Output source impedance: 600 Ohms

Maximum output: +14 dBm into 600 Ohms

Total harmonic distortion: .01% THD @1kHz '0' dBm

Signal to noise: 72 dB

Logic circuitry: Solid state CMOS logic

Connectors: Barrier type screw terminals

Power required: \pm 15 Vdc, unregulated 200 mA

Switching: Membrane type

Switching logic: Solid state CMOS logic

Dimensions: 12" x 12" front panel.

Wall mounting requirements:

H 10 1/2", W 10", D 4"

Color: Textured off-white flush mount lockable panel

Weight: 4.5 lb.

Wiring Information

The RAD-20 will require the following wiring:

- a) Three (3) pair individually shielded between RAD-20 units: One (1) pair shielded for music, one (1) pair shielded for page, and one (1) pair shielded combine buss.
- b) Two (2) pair individually shielded to each mixer/amplifier either located at the rack or in the wall.
- c) One (1) pair shielded to the bipolar power supply located at the rack or at each wall amplifier.

Refer to Figures 2 and 3 for wiring examples.

Note 1:

Most in-wall amplifiers have low mixer output to power amplifier input levels, typically -20dB. The RAD-20 is offered two ways: 1.) The RAD-20-20 (-20dB input/output) for most wall amplifiers; and 2.) the RAD-20-0 (0dB input/output) for use with rack-mounted commercial mixers and amplifiers at remote locations. Please denote the proper operating level desired when ordering.

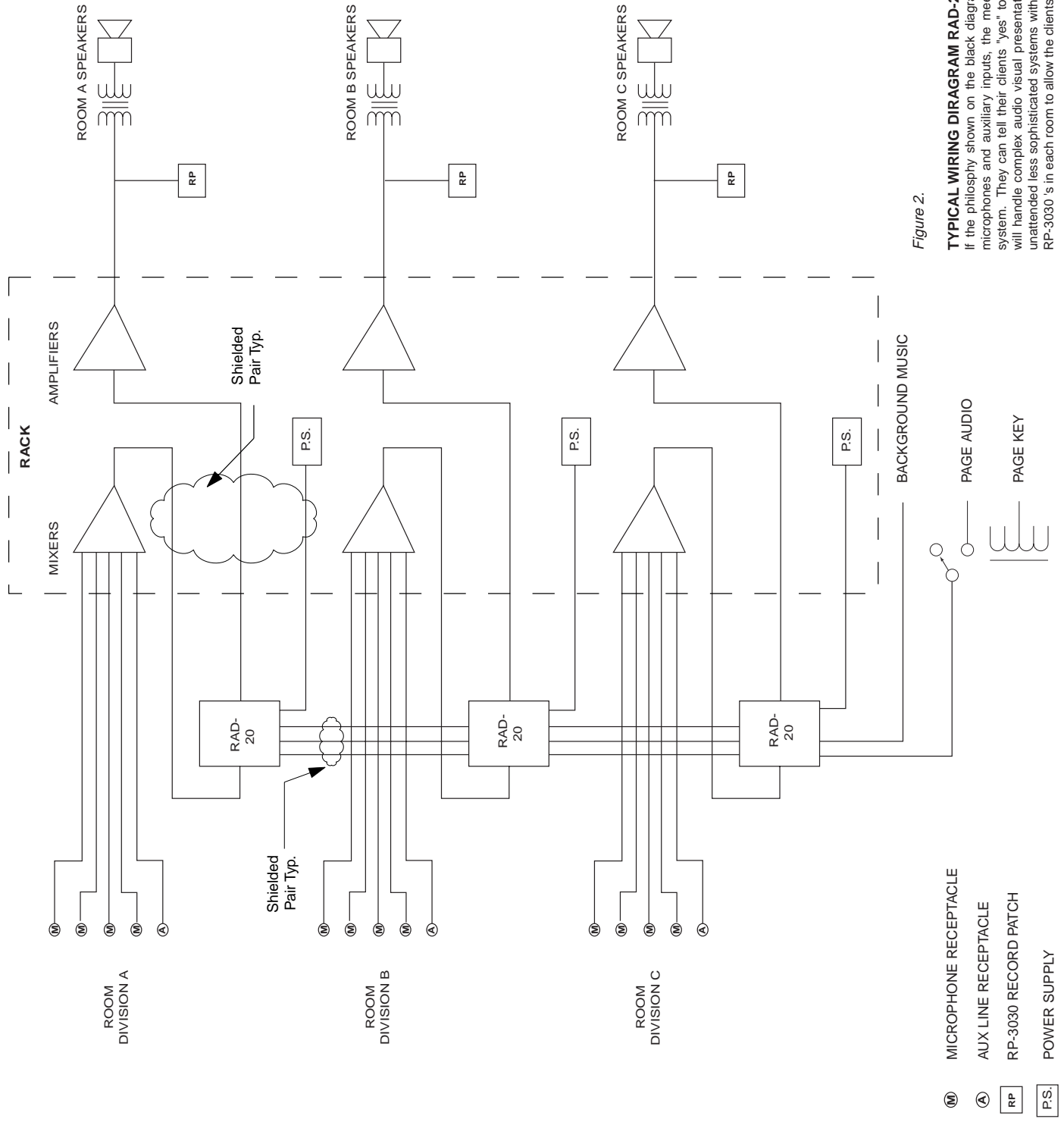


Figure 2.

TYPICAL WIRING DIAGRAM RAD-20 WITH RACK MOUNTED AMPLIFIERS
 If the philosophy shown on the block diagram is followed concerning the location of both microphones and auxiliary inputs, the meeting planners and catering staff will love your system. They can tell their clients "yes" to almost anything with confidence. This system will handle complex audio visual presentations using outside vendors with operators and unattended less sophisticated systems with equal success. We recommend the installation of RP-3030's in each room to allow the clients recording capability.

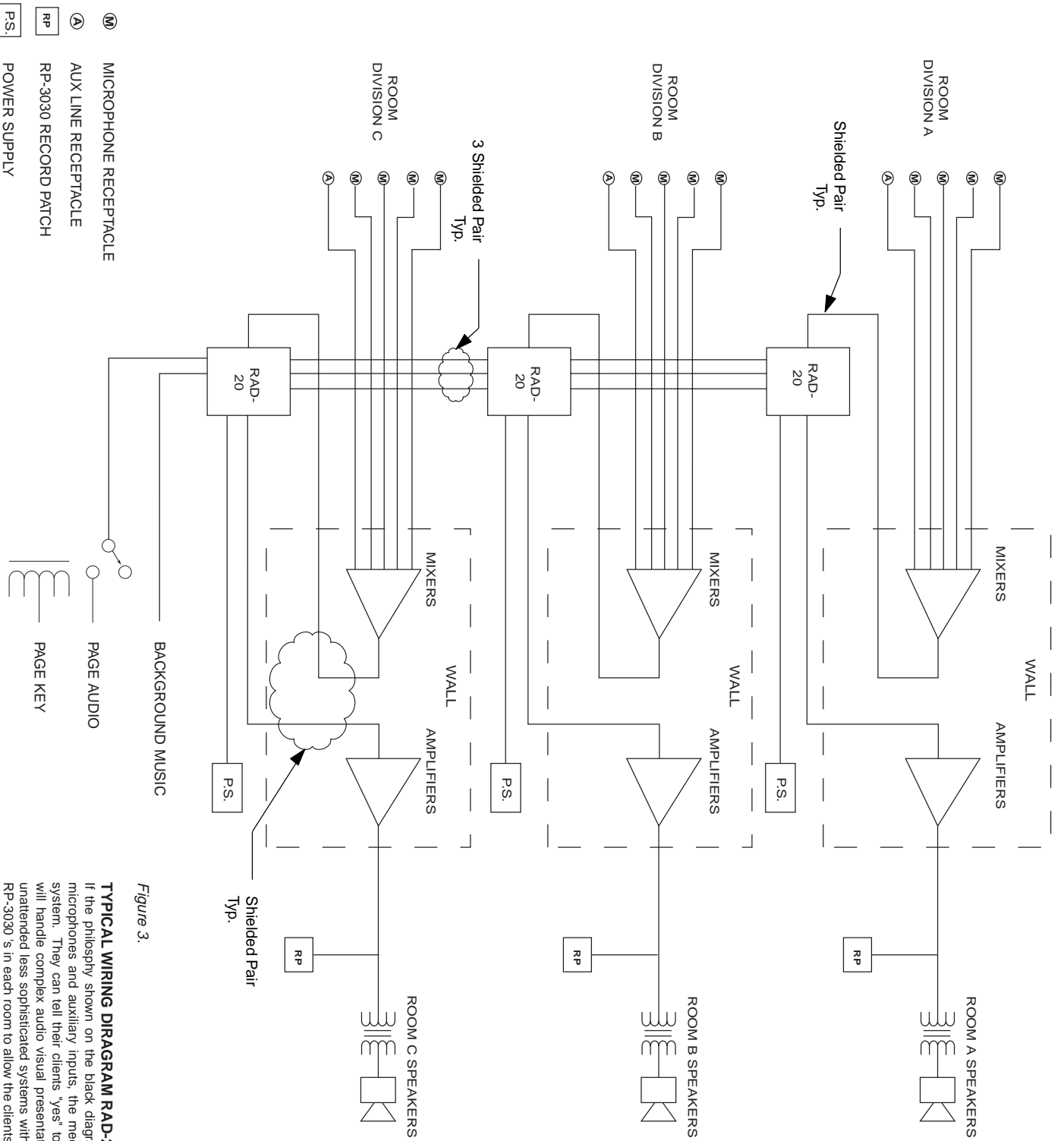


Figure 3.

TYPICAL WIRING DIRAGRAM RAD-20 WITH IN-WALL AMPLIFIERS

If the philosophy shown on the black diagram is followed concerning the location of both microphones and auxiliary inputs, the meeting planners and catering staff will love your system. They can tell their clients "yes" to almost anything with confidence. This system will handle complex audio visual presentations using outside vendors with operators and unattended less sophisticated systems with equal success. We recommend the installation of RP-3030's in each room to allow the clients recording capability.