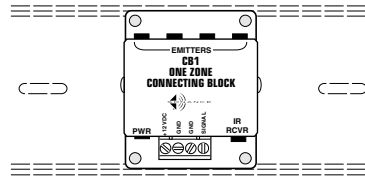


## INSTALLATION INSTRUCTIONS

### CB1

### ONE ZONE CONNECTING BLOCK

The Model **CB1** provides a quick low cost means of connecting all Sonance IR Receivers and Keypads to four single or four dual emitters and a power supply in an infrared repeater system. It can also provide a low cost means of emitter expansion in existing systems, or to connect multiple emitters at the output of other Sonance devices, such as the ACB1 Amplified Connecting Blocks.



**Fig. 1 CB1 One Zone Connecting Block**  
Mounted in 3" SNAPTRACK™  
(SNAPTRACK is a registered trademark of AUGAT)

#### SPECIFICATIONS

- Inputs: 1-Screw type 4-terminal plug-in. 1-IR Receiver "IR RCVR" 3.5 mm stereo mini jack.
- Outputs: 4-Emitter ports (3.5mm mono mini jacks) parallel driven.
- Contains a 470 Ohm resistor in series with each emitter output.
- Sonance **E1**, **VE1**, **E2** & **VE2** Mini Emitters may be used.
- Power requirements: 12 volts DC. Uses **PS1** or **PS2** Power Supplies. **NOTE: A power supply is not connected to the CB1 when it is used as an emitter expander.**
- 2.1 mm coaxial power jack.
- Dimensions: 2-3/8" W x 3" D x 13/16" H.

#### INSTALLATION

Fig. 2, next page, illustrates a typical installation using the **CB1** in an IR repeater system. A variety of Sonance IR Receivers are shown. When configuring a system, please keep the following items in mind:

1. More IR Receivers may be wired in parallel, in the same manner as shown, up to a maximum of twelve. More than twelve is not recommended because IR noise picked up by the many IR receivers may cause erratic operation and reduce remote control range.
2. Be sure to connect the +12V, Output, and GND of each IR Receiver and keypad to the respective +12VDC, SIGNAL, and GND of the connecting block as shown.
3. **Please Note:**
  - a) Each IR receiver draws 10 milliamps.
  - b) The maximum current for proper operation from the **PS1** Power Supply is 200 milliamps.
  - c) The maximum current for proper operation from the **PS2** Power Supply is 1000 milliamps.
  - d) When using combinations of keypads and receivers, do not exceed the maximum current of the power supplies as noted above.

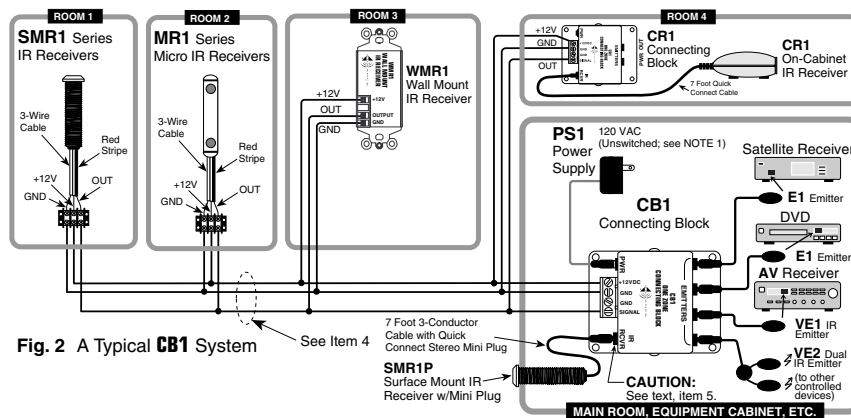
For example, 6 receivers and 8 emitters could be used with one **PS1** Power Supply. If the current capability of the **PS1** will be exceeded, use the **PS2** Power Supply instead.

**CAUTION: Do not use unregulated 12V power supply adapters from other manufacturers. These may deliver excessive voltage to the IR receivers and cause them to "latch-up".** When this occurs, the "talk-back" LEDs and **VE1** Visible emitters (if used) will stay on continuously!

4. For clarity, connections in this illustration are shown going to a 3-conductor bus in a "daisy chain" fashion. In an actual installation, however, it is recommended that 3-conductor "home-runs" be pulled from each room to the **CB1** Connecting Block in the main room. This maintains higher power supply voltage to each IR receiver and keypad for best operation.
5. The "IR RCVR" jack on the **CB1** allows the **SMR1P** and the **CR1** (with a 3.5 mm stereo mini plug) to be plugged directly into the **CB1**. You can do this when the **CB1** Connecting Block is within reach of the 7-foot cable; such as when installing the **SMR1P** in a cabinet where the controlled equipment is behind closed doors. **CAUTION: Plug only Sonance IR Receivers equipped with a stereo mini plug into the IR RCVR jack. Do not plug in emitters or other devices; to do so will destroy emitters and damage power supplies!**
6. The emitter ports are driven in parallel with a 470 Ohm resistor connected in series with each port. The resistors ensure proper current sharing to each emitter. When using less than 4 emitters, you may plug them into any of the 4 emitter ports without regard to order.

**OptiLinQ**

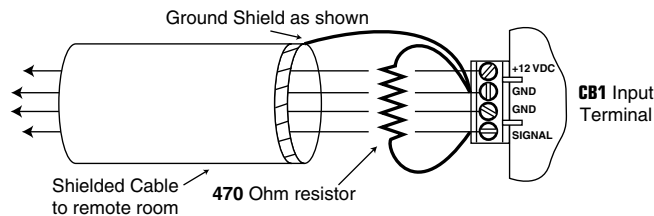
Pg 1



7. Because of this current sharing feature, you may plug in any combination of emitter models **E1**, **VE1**, **E2**, & **VE2** to the **CB1** (up to a maximum of 8 individual emitters) to drive the desired number of devices.  
**NOTE 1: Be sure the PS1 Power Supply is plugged into an un-switched AC outlet. This maintains the system in "standby" operation so that power-on commands can be sent to the controlled equipment.**

**IMPORTANT NOTE: When using long lengths (more than 200 feet) of inter-room shielded cable, it may be necessary to connect a 470 ohm 1/8 watt resistor between input (signal) and GND at the IR input terminals of Sonance Connecting Blocks, Zone Controllers, etc. Refer to Fig. 3. The resistor discharges the cable capacitance more quietly, allowing IR codes of high bit rates to pass without data loss.**

Fig. 3: 470 Ohm Capacitance Discharge Resistor (for shielded cable longer than 200 feet.)



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