Overview

The S 4457 has two independant sets of inputs which are fed to normally open (N/O) and normally closed (N/C) terminals via internal relays. A closing contact or a 24V DC input can be used to trigger a change of state of both sets of output terminals.

The relay contacts are rated at 8 amps and an LED illuminates when the relays are activated.

Although this product has a multitude of uses, it has been designed primarily for PA speaker line installations with two PA systems active in a building.

It is particularly useful for applications where a dedicated Evac speaker system is running alongside a dedicated background music system in the same building. The Evac override relay box can be used to disconnect the background music system when the Evac system is active. An example is shown in figure 3.

It can also be useful for applications where two different PA systems are in use in an install with only one output speaker line. An example is shown in figure 4.

Triggering the Unit

Figure 1 demonstrates a typical example of how to use the relay box with the (voltage free) trigger input. A simple switch or closing contact from the likes of a fire board could be used as the trigger. In this screnario a 24V DC supply is required at the 24V DC In terminals to power the unit.

Figure 2 demonstrates a typical example of how to use the relay box with the 24V DC trigger input. The 24V DC trigger is connected to the Evac 24V DC switched output from an A 4565B Evacuation Controller. When the Evac mode is activated on the A 4565B, 24V DC will be applied at the trigger terminals and activate the internal relays. In this screnario a 24V DC supply is NOT required to power the unit, as power is derived from the 24V DC trigger input.
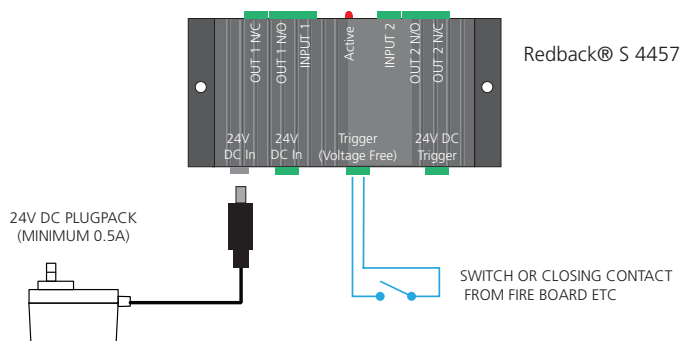

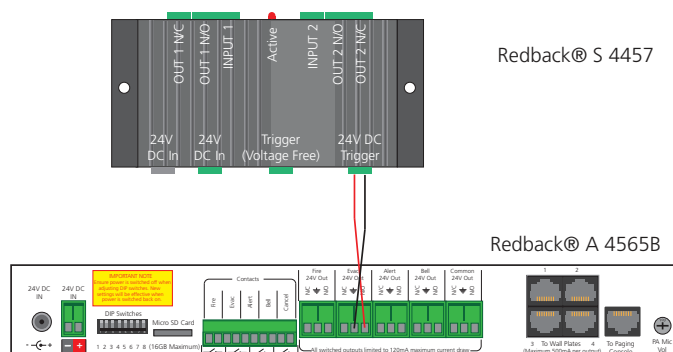**Fig 1.** Voltage Free trigger activation

Fig 2. 24V DC trigger activation

Typical Applications

The illustration shown in figure 3 provides an example where a dedicated Evac speaker system is running alongside a dedicated background music system in the same building. The S 4457 Evac override relay box can be used to disconnect the background music system when the Evac system is active.

In this example the output of the Evac amplifier is connected to Input 1, and the BGM amplifier output is connected to Input 2. The Evac speaker line is connected to the normally open terminals of Out 1 and the BGM speaker line is connected to the normally closed terminals of Out 2. In normal use the audio from the BGM amplifier is active, but once the S 4457 is activated the Evac audio becomes active and the BGM audio is disconnected.
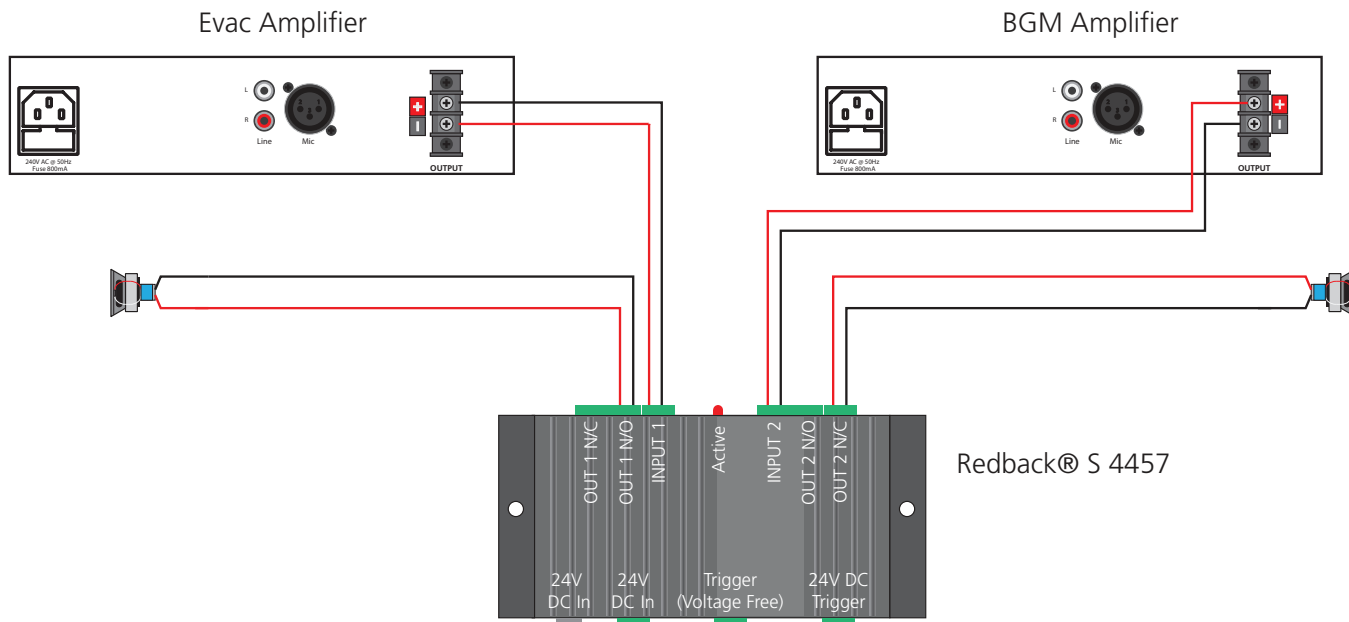

Fig 3. Evac audio system running alongside a BGM audio system

The illustration shown in figure 4 provides an example where two different PA systems are in use in an install with only one output speaker line. In this instance the outputs of the S 4457 are actually used as inputs and the inputs used as outputs.
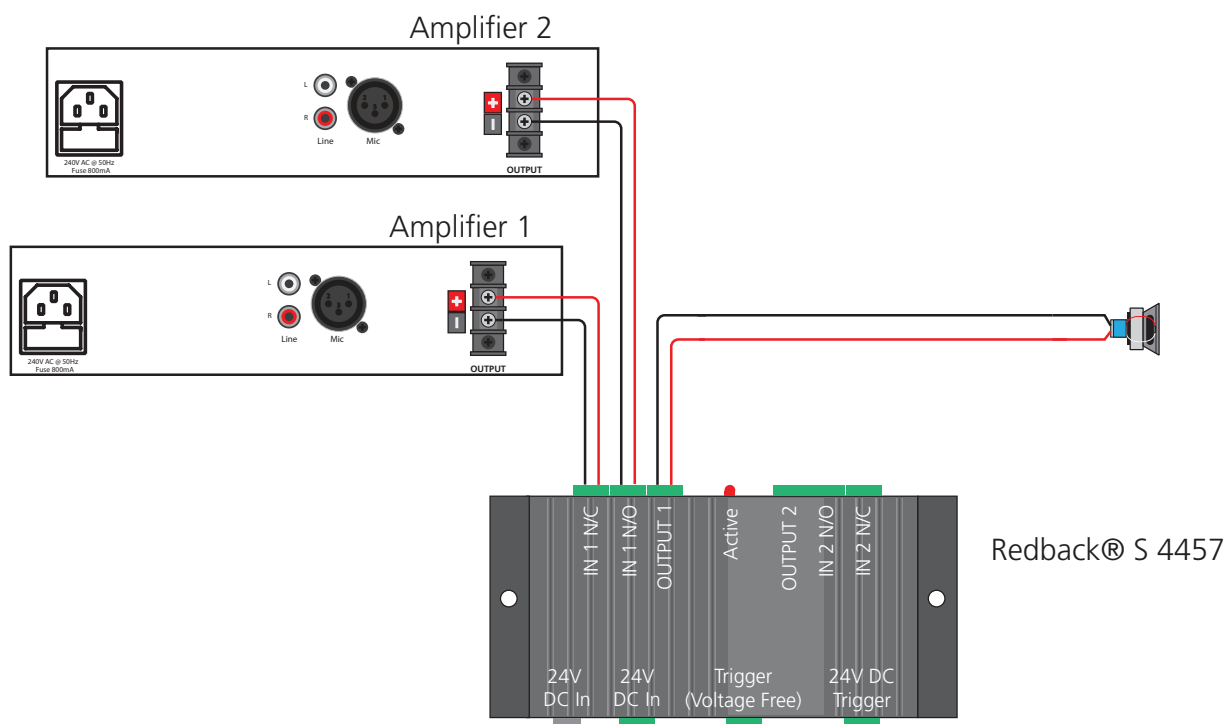

Fig 4. Two PA systems using one output speaker line.