Canfield Industries, Inc.
RF Unit (Project #618)
Transmitter (pn 9-2A421-001) and Receiver (pn 9-2A420-001)
Description of Use (including modes of operation/instructions)

The RF unit is used in conjunction with an assisted braking system where a recreational vehicle (RV) is towing another vehicle (the towed). When the driver of the RV brakes, an accelerometer sensor in a braking unit installed in the towed vehicle applies the towed brakes to assist the RV brakes until RV braking action stops. At the same time that the towed brakes are applied, the towed vehicle's battery voltage is fed to a transmitter module mounted on the towed vehicle braking system which sends an rf signal on data path 1. This causes the LED's to light in the receiver module located in the RV informing the driver that the rear brakes are working.

If braking action remains on for more than a maximum period of 10 seconds, a buzzer is activated in the receiver to alert the driver of a problem. The buzzer shuts off when the braking action stops.

If the voltage to the transmitter drops below a certain level, the braking unit itself may not be able to function properly in a short period of time. During the next braking action, data path 2 is activated in the transmitter which causes the buzzer in the receiver to operate at a 5 HZ rate continuously until the receiver is unplugged. This alerts the driver of the RV to stop and charge the battery of the towed.

In summary, RF transmission only occurs when a deceleration (due to braking) is sensed. Data inputs 1 and 2 are used to signal braking action and a low voltage/problem situation, respectively.

Technical data:

Input Voltage Range of Transmitter	7.5 – 12.5 VDC
Input Voltage Range of Receiver	9.0 – 15.0 VDC

Transmission only during braking action

A 6 position switch is located in each transmitter and receiver to set an address for the pair.

Frequency of operation is 418 MHz