

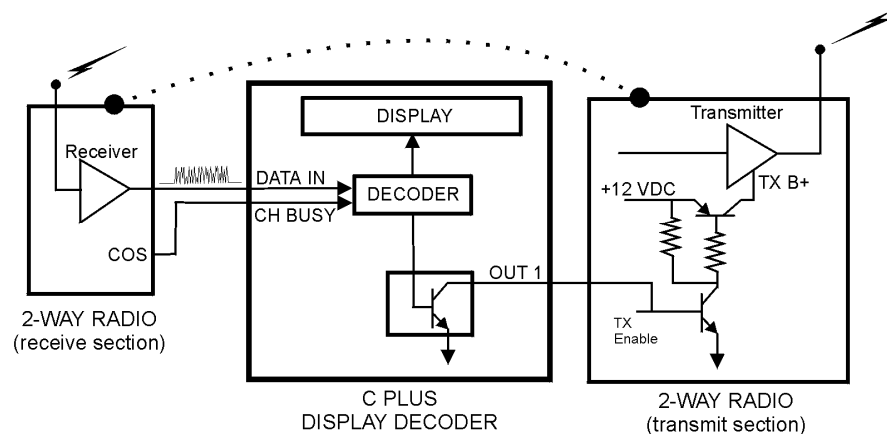
## Authorize Feature used for Repeater Access Control

The C Plus can be programmed to filter out unauthorized users of repeater systems. In this mode, the C Plus monitors channel busy for activity and looks for ANI. If the ANI ID is present and is in the authorized users list (alias table) then the C Plus will toggle Out1 and/or Out 2 to unlock the repeater transmitter stage. The lock out will return when the channel busy line shows lost activity.

### Enabling the Feature

To enable authorize mode the following steps must be taken:

1. The Channel Busy line of the C Plus must be attached to a point in the radio that changes state with carrier detect. This could be at the radio squelch gate, the audio amplifier mute line, or an accessory port with CSQ (carrier squelch) connectivity.
2. The Channel Busy line must be activated.
3. Authorize mode must be selected in the main programming menu of the C Plus. In Program mode, at the main menu, select *Enable "Authorize Mode"*.
4. OUT1 or OUT2 must be attached to a point in the repeater that when active, the transmitter will not transmit. This could be a logic gate or the enable for the TX B+.



### Special Requirements:

The optional feature "Alias" must be purchased and activated. Contact Cimarron Technologies for information.

A valid Alias table must be loaded into the C Plus

### Why it Works:

When the C Plus is in the "Authorize mode" the previously programmed functions of OUT1 and OUT2 are superseded and they perform as follows:

1. Open collector OUT1 goes to within 0.7v of signal ground (capable of sinking up to 500mA), while OUT2 remains inactive, providing a high impedance.
2. The C Plus begins monitoring channel busy for activity.

3. If activity is detected on channel busy, the C Plus listens for ANI.
4. If ANI data is detected, and the ID is present in the ALIAS table, OUT1 and OUT2 reverse states, bringing OUT1 to high impedance and OUT2 to within 0.7V of signal ground.
5. This reversal remains in effect until channel busy becomes inactive, then OUT1 and OUT2 reverse to their original states.
6. If no ANI data is detected or the decoded ANI ID is not present in the ALIAS table, OUT1 and OUT2 remain in their original states.

**Additional Information:**

This form of repeater control will allow only those users with the correct PTT ANI to use the repeater. If this is too restrictive, you can use the C Plus to allow anyone with ANI to use the repeater. This form of repeater control is covered under Repeater Control using COS Qualified Mute.

**See Also:**

Alias

COS Qualified Mute

Mute Feature

Channel Busy

Repeater Control using COS Qualified Mute