

**Broadcast signal intrusion** a term given to the act of hijacking broadcast signals of radio, television stations, cable television broadcast feeds or satellite signals.

There are several techniques for disrupting or pirating broadcast signals, most of which have been made very difficult, or obsolete, by the move to digital television.

## Analog Techniques:

### Relay hijack

Many analog relay transmitters would "listen" to a more powerful main transmitter and relay the signal verbatim. If the main transmitter ceased to broadcast (for example, when a channel closed down overnight) then a pirate signal on the same frequency as the main transmitter could cause the relay to "wake up" and relay unauthorized programming instead. Typically this would be done by outputting a very weak RF signal within the immediate vicinity of the relay; for example, a video cassette recorder (such as a 12v system designed for use in trucks) sending its signal to a home-made antenna pointed at the relay. As the pirate signal is relatively weak, the source can be difficult to locate if it is well hidden. Unsecured analogue satellite transponders have also been reported to have been hijacked in a similar manner.

### Unauthorized transmitter

Reasonably powerful VHF/UHF transmitters can be built relatively easily by any electronics hobbyist, or imported from a less strict country. The primary challenge to this technique is finding a suitable yet inconspicuous vantage point for the transmission antenna.

## Analog or Digital

### Source hijack

A "man-in-the-middle attack" is performed upon the source material, so that authorized official transmissions are fed with unauthorized programming from the central studio or play-out facility. For example, a link feed (ex. outside broadcast) is hijacked by a stronger pirate signal, or pre-recorded media (ex. videotapes or hard drives) are swapped over for unauthorized content. This attack would generally have to be performed by an insider or by gaining access to studio facilities by social engineering.

### Live Interruption

Suitable for disrupting both analog and digital signals, individuals only have to wait for the right moment to take over or disrupt a live broadcast. Try hanging around news cameras out on the street. Stand behind them with signs relaying your message. Wait for an opportune moment to interrupt their report with unexpected sounds...or...glitter bombs!

## Digital

### Unauthorized multiplex

Digital television makes pirate television broadcasting more difficult. Since channels are broadcast as part of a multiplex carrying several channels in one signal, it is difficult, but not impossible, to insert an unauthorized channel into an authorized multiplex, or to re-activate an off-air channel. To broadcast an unauthorized digital TV channel: build or obtain a VHF/UHF transmitter; and build (or obtain) and configure, the equipment and software to digitally encode the signal; then, create a stand-alone multiplex to carry it.

### information culled from various sources on the internet ###