

CONTRABAND CELL PHONES IN PRISONS

The 1934 Communications act established the Federal Communications Commission to regulate radio and communications across the United States. Section 302 of the 1934 communications Act makes it illegal to block radio signals which is how cell phones communicate. Cell phones are considered contraband in detention facilities. Since a general jamming device is not allowed by the FCC, several approaches have been developed to deal with cellphones:

1. Localized detectors.
 - a. Handheld device (\$900 ROM)
 - b. Cell Sense (\$10,000 ROM)
 - c. Body Scanners (\$250,000 ROM)
2. Contraband Interdiction System (CIS).
 - a. Active - Establish a dominant amplification system. (\$1,000,000 minimum)
 - b. Passive – Detect and report (new – expected to be less than an active system)

LOCALIZED DETECTORS

Handheld devices: These devices are only effective while a cell call is active. Staff would use the multiple handheld devices and attempt to locate the caller before the call ends.

Cell Sense: Cell Sense is a pole that detects cell phones and parts of cell phones even when the cell phone is off. These devices can be stationary with power from an electrical outlet, or battery powers and mobile. The individual to be tested would stand next to the Cell Sense pole and tun 360 degrees. If a cell phone is present, the normally green lamp on top of the pole turns red.

Body Scanners: A Walkthrough Magnetometer may not detect a cell phone component as small as a SIM card. The larger more expensive body scanners are required.

CONTRABAND INTERDICTION SYSTEM (CIS)

The FCC has issued several rulings affecting the installation for CIS systems in state prisons as recent as December of 2021. Use this link to access information, forms, and regulations:

<https://www.fcc.gov/contraband-wireless-devices>

CIS providers must self-certify and submit appropriate applications to the FCC. Each state prison must submit an application to the FCC for the installation of a CIS identifying the provider. There is a list on the website of State facilities and the CIS systems they have installed.

Active CIS: An Active CIS is a custom designed system that can receive and retransmit cell phone calls. It is also referred to as a Distributed Antennae System (DAS). Most DAS installations are provided to ensure all portions of the building have sufficient signal. An active CIS has the added process of detecting unauthorized cell phone activity and reporting it to staff. A set of receivers and transmitters is required for each cell phone technology. Technologies are:

- 1 G (First Generation) analog cellular system released in 1983
- 2 G (Second Generation) first digital cellular system released in the mid-1990s
- 3 G (Third Generation) next generation digital system released in the mid-2000s
- 4 G (Fourth Generation) better, faster, system released in the 2010s
- 5 G (Fifth Generation) higher bandwidth being rolled out in 2022
- 6 G (Sixth Generation) in the development stage

The hardware required varies, but typically consists of a series of antennae around the facilities. A connection to local carrier networks is required as well as rack mounted amplifiers, receivers, and transmitters. An active CIS is not a plug and play device. The system must be custom designed for the site and balanced during the initial installation.

Communication carriers are in the process of shutting down their 3G and earlier networks to free up spectrum for their 4G and 5G networks. As each new generation is released, a new set of receivers and transmitters must be purchased and installed. This may require additional antenna as well. This makes an active CIS expensive to maintain long term.

Passive CIS: A Passive CIS does not produce RF. It only receives. Sensors are typically located on the ceiling throughout the area of coverage. At least three receivers must receive the cellphone signal so that the software can triangulate a location. The location of the cell phone is then displayed on a computer screen as an icon on a graphic map of the facility. A passive CIS is not a plug and play device. The system must be balanced during the initial installation and may require additional services over the life of the system.

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<https://rnsystemsdesign.com/resources>



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