

Please note that compliance with NFPA 72:8.6.3.2.1 and 8.6.4 is mandatory. In particular, the following shall be provided:

Transmitter

Equipment shall be connected to the public switched telephone network upstream of any private telephone system at the protected premises.

Equipment Requirement

A failure to complete connection shall not prevent subsequent attempts to transmit an alarm where such alarm is generated from any other initiating device circuit or signaling line circuit, or both. Additional attempts shall be made until the signal transmission sequence has been completed, up to a minimum of 5 and a maximum of 10 attempts.

Transmission Channels

A system employing signaling equipment shall employ one telephone line(number). In addition, one of the following transmission means shall be employed:

1. A second telephone line(number)
2. A cellular telephone connection
3. A one-way radio system
4. A one-way private radio alarm system
5. A private microwave radio system
6. A two-way RF multiplex system
7. A transmission means complying with 8.6.4

Both channels shall be tested at intervals not exceeding 24 hours.

The failure of either channel shall send a trouble signal on the other channel within 4 minutes.

When one transmission channel has failed, all status change signals shall be sent over the other channel.

Failure of telephone lines(numbers) or cellular service shall be annunciated locally.

Transmission Means

The first transmission attempt shall utilize the primary means of transmission.

Other Transmission Technologies

Communications Integrity

Provision shall be made to monitor the integrity of the transmission technology and its communications path. The following requirements shall apply:

1. Any failure shall be annunciated at the supervising station within 5 minutes of the failure.
2. If communications cannot be established with the supervising station, an indication of this failure to communicate shall be annunciated at the protected premises.
3. If a portion of the communications path cannot be monitored for integrity, a redundant communications path shall be provided.
4. Provision shall be made to monitor the integrity of the redundant communications path.
5. Failure of both the primary and redundant communications paths shall be annunciated at the supervising station within not more than 24 hours of failure.
6. System units at the supervising station shall be restored to service within 30 minutes of a failure.
7. The transmission technology shall be designed so that upon failure of a transmission channel serving a system unit at the supervising station, the loss of the ability to monitor shall not affect more than 3000 transmitters.

Throughput Probability

When the supervising station does not regularly communicate with the transmitter at least once every 200 seconds, then the throughout probability of the alarm transmission shall be at least 90 percent in 90 seconds, 99 percent in 180 seconds, or 99,999 percent in 450 seconds.

Unique Flaws Not Covered by this Code

If a communications technology has a unique flaw that could result in the failure to communicate a signal, the implementation of that technology for fire alarm signaling shall compensate for that flaw so as to eliminate the risk of missing a fire alarm signal.