FIRE PREVENTION STANDARDS

ADOPTION

Adopted by the Sacramento County Board of Supervisors on May 25th 1999 as part of the Sacramento County Fire Code.

OBJECTIVE

The purpose of this requirement is to provide emergency service personnel (fire, medical, and law enforcement) the ability to operate hand held portable radios inside buildings and structures that effect transmission and reception of radio communications.

PROCEDURES

A. General

Except as otherwise provided, no person shall, erect, construct, change the use of or provide an addition of more than 20 % to, any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for Sacramento Regional Radio Communications System, including but not limited to firefighters and police officers. For purposes of this section, adequate radio coverage shall include all of the following: 1) a minimum signal strength of –95 dbm available in 90% of the area of each floor of the building when transmitted from the closest Sacramento Regional Radio Communications System site; 2) a minimum signal strength of –95 dbm received at the closest Sacramento Regional Radio Communications site when transmitted from 90% of the area of each floor of the building; 3) the frequency range which must be supported shall be 821 - 824MHz and 866-869MHz; and 4) a 100% reliability factor.

B. Amplification Systems Allowed

Buildings and structures which cannot support the required level of radio coverage shall be equipped with any of the following in order to achieve the required adequate radio coverage: a radiating cable system or an internal multiple antenna system with or without FCC type accepted bi-directional 800 MHZ amplifiers as needed. If any part of the installed system or systems contains an electrically powered component, the system shall be capable of operating on an independent battery and/or generator system for a period of at least twelve (12) hours without external power input. The battery system shall automatically charge in the presence of an external power input.

C. Testing Procedures

1. Acceptance Test Procedure

When an in-building radio system is required, and upon completion of installation, it will be the building owner's responsibility to have, the radio system tested to ensure that two-way coverage on each floor of the building is a minimum of 90%. Each floor of the building shall be divided into a grid of approximately 20 equal areas. A maximum of 2 nonadjacent areas will be allowed to fail the test. In the event that three of the areas fail the test, in order to be more statistically accurate, the floor may be divided into 40 equal areas. A maximum of 4 nonadjacent areas will be allowed to fail the test. After the 40-area test, If the system

continues to fail, it will be the building owner's responsibility to have the system altered to meet the 90% coverage requirement. The test shall be conducted using a Motorola MTS 2000, or equivalent, portable radio, talking through the Sacramento Regional Radio Communications System (SRRCS) as specified by the Authority Having Jurisdiction. A spot located approximately in the center of a grid area will be selected for the test, then the radio will be keyed to verify 2-way communications to and from the outside of the building through the SRRCS. Once the spot has been selected, prospecting for a better spot within the grid area will not be permitted.

The gain values of all amplifiers shall be measured and the test measurement results shall be kept on file with the building owner so that the measurements can be verified each year during the annual tests. In the event that the measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values

2. Annual Tests

When an in-building radio system is required, it shall be the building owner's responsibility to have all active components of the system, such as amplifiers and power supplies and backup batteries tested a minimum of once every 12 months. Amplifiers shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance. Backup batteries and power supplies shall be tested under load for a period of 1 hour to verify that they will properly operate during an actual power outage. If within the 1hour test period, and in the opinion of the testing technician, the battery exhibits symptoms of failure, the test shall be extended for additional 1hour periods until the integrity of the battery can be determined. All other active components shall be checked to determine that they are operating within the manufacturers specifications for the intended purpose.

3. Five Year Tests

In addition to the annual test, it shall be the building owner's responsibility to perform a radio coverage test a minimum of once every 5 years to ensure that the radio system continues to meet the requirements of the original acceptance test.

4. Qualifications of Testing Personnel

Personnel conducting radio system tests shall be qualified to perform the work. All tests shall be documented and signed by a person in possession of a current FCC license, or a current technician certification issued by the Associated Public-Safety Communications Officials International (APCO) or the National Association of Business and Education Radio (NABER). All test records shall be retained on the inspected premises by the building owner and a copy submitted to the Fire Department Officials.

D. Field Testing

Police and Fire Personnel, after providing reasonable notice to the owner or his representative, shall have the right to enter onto the property to conduct field testing to be certain that the required level of radio coverage is present.

E. Exemptions

This section shall not apply to: Buildings less than 5000 square feet or any R-3 occupancy.

PUBLIC SAFETY 800 Mhz RADIO BUILDING AMPLIFICATION SYSTEM VENDORS

TESTING AND INSTALLATION COMPANIES

Com Tech
110 Main Avenue
Sacramento, CA 95834
916-568-7800
fax: 916-568-2280

Delta Wireless
1143 North Market Blvd.
Sacramento, CA 95834
916-928-1200
fax: 916-928-6062

Telecomm Engineering
3435 Mission Avenue
Sacramento, CA 95608
916-485-5166
fax: 916-485-4789

INSTALLERS

Advanced Electronics
18220 S. Broadway
Gardena, CA 90248
Attn: Mr. Gene Friese
310-532-3211
fax: 310-532-8411

Amelco-Union Installers
225 S. Lake Avenue, Suite 300
Pasadena, CA 91101
Attn: Mr. Mark Fischbach
818-440-1194
fax: 818-440-1196

Andrew Corportaion
3535 Inland Empire Blvd.
Ontario, CA 91764
Attn: Mr. Ron Ammeraal
909-941-2544
fax 909-941-2565

Jack Daniel Co.
Representing TXRX
P.O. Box 1544
Rancho Cucamonga, CA 91729
Attn: Mr. Jack Daniel
800-666-8655
fax: 909-980-5226

GVT Marketing
EMR Representatives
P.O. Box 8711
Roland Heights, CA 91748
Attn: Mr. Gene Johnson
818-912-9234

Motorola
Janice Warren
9580 Oak Avenue Parkway #7-275
Folsom, CA 95630
916-988-1225
fax: 916-988-9277

Raycom-non Union
15330 Vermont Ave.
Paramount, CA 90723
Attn: Mr. Mark Abrams
213-774-3500
fax: 310-408-4851

Talley Communications
Representing Cellwave
P.O. Box 3123
Santa Fe Springs, CA 90670
Attn: Mr. Jeff Talley
800-949-7099
fax: 310-948-3126

Frank Thatcher Assoc., Inc.
Telecommunications Consulting
Engineers
564 Market St., Suite 612
San Francisco, CA 94104
415-956-6118
fax: 415-956-3228

Radio Lab Communications
Non Union
810 S. Central Avenue
Glendale, CA 90206
Attn: Mr. Paul Northrop
818-246-1604

Carrier Communications
Non-union
42326 10th Street West
Lancaster, CA 93534
Attn: Mr. Chris Killian or
Mr. Alan McCullough
805-945-5548
fax: 805-949-7790

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Mike Dobson, Fire Marshal