

# FCC AND ELECTRICAL INTERFERENCE

## INTRODUCTION

The Federal Communications Commission has been controlling the generation of electrical interference which interfered with communications, for many years. As communications equipment became more complex and utilized larger segments of the spectrum, and the spectrum became more crowded with radiation from electronic, industrial, commercial and consumer equipment, the FCC has increased the scope and effectiveness of its regulations. On October 1, 1970, the rules requiring manufacturers, vendors, and shippers of electronic devices to meet FCC electromagnetic interference regulations have become effective.

The new rules implemented a 1968 law empowering the FCC to make reasonable regulations governing the interference potential of certain devices. The purpose of the new rules is to require compliance with equipment standards by manufacturers, importers and distributors of RF devices, as well as by users.

RF devices subject to FCC authority and included under the amended rules range from the many kinds of radio transmitters used in the broadcasting, common carrier, marine, aviation and land mobile services to restricted radiation devices such as radio receivers, CATV systems, and low power communication devices such as wireless microphones, phonograph oscillators, radio controlled garage door openers, radio controlled models and toys. Also included are industrial, scientific and medical equipment such as ultrasonic industrial heating, medical diathermy, radio frequency stabilized arc welders and miscellaneous equipment.

Exempted from the 1968 law are carriers transporting radio frequency devices but not trading in them, devices manufactured solely for export, and devices to be used by the U.S. Government.

At the time of this publication, a number of rule makings are pending, but it cannot be anticipated when the final rules will be adopted. Thus, attention is called to the following rule-making proceedings:

DOCKET NO. 19722: In the Matter of Comparable Television Tuning. Adopted: October, 1973

DOCKET NO. 19846: RM 1945 - Amendment of Part 15 of the Commission's Rules and Regulations to permit Biomedical Radio Telemetering in the Band 38-41 MHz. Adopted: October 17, 1973

DOCKET NO. 19183: Inquiry into performance of television broadcast receivers and location of FM transmitters to alleviate interference to television reception. Adopted: March 24, 1971 (No Change)

DOCKET NO. 19185: Amendment of the Commission's Rules and Regulations to provide for the licensing of auditory training devices for the partially deaf in the bands 72-73 and 75.4-76 MHz. Adopted: July 6, 1972

(These rules were adopted as Subpart G, Sections 15.331 to 15.375 inclusive. A petition for reconsideration is pending.)

DOCKET NO. 19231: Amendment of Part 15 of the Commission's Rules to exclude from the duty cycle requirement biomedical radio telemetry systems operating above 70 MHz. Adopted: May 5, 1972

(These rules were adopted as Subpart G, Sections 15.216 to 15.218 inclusive.)

DOCKET NO. 19268: Comparable Television Tuning Regulation. Adopted: September 7, 1972

(These rules were adopted as Subpart G, Section 15.68(d).)

DOCKET NO. 19281: Amendment of Part 15 of the Commission's Rules to regulate the operation of a Class I TV device—a new restricted radiation device which produces an RF carrier modulated by a TV signal, and Amendment of Part 1 to provide a fee schedule for type approval of such devices. Adopted: September 8, 1971 (No Change)

(Rules expected to be released by the end of December, 1972)

DOCKET NO. 19092: Carrier-Current Radio Systems Operating Pursuant to Section 15.7 of the Commission's Rules and Low Power Communications Devices Operating Pursuant to Subpart E of Part 15 of the Commission's Rules. Adopted: March 24, 1971 (No Change)

DOCKET NO. 19356: Amendment of Parts 0 and 2 of the rules relating to equipment authorization of RF devices. Adopted: November 24, 1971.

(Proposes to revise the procedural rules for obtaining a grant of type approval, type acceptance or certification).

DOCKET NO. 19357: Amendment of Part 2 of the Commission's Rules to prescribe regulations governing the identification of RF devices being marked. Adopted: December 27, 1971.

(Proposes to require marking of the shipping containers in order to readily determine whether the equipment complies with FCC requirements.)

The following information consists of bulletins (condensed) issued by the FCC to help industry to understand the regulations.

## ACTION IN DOCKET CASE NEW COMPARABLE TV TUNING RULES ADOPTED BY FCC

Report No. 8915—October 17, 1973

The comparable tuning rules for television receivers (Section 15.68) have been amended by the FCC to require that, effective July 1, 1975, 70-position non-memory UHF detent tuning systems must be capable of positioning the tuner to receive each UHF channel at its designated detent position with maximum deviation from correct frequency not exceeding  $\pm 2$  MHz, and that effective July 1, 1976, the standard must be  $\pm 1$  MHz for monochrome receivers and eliminating the need for routine fine tuning of color receivers (Docket 19722).

In addition, the Commission amended Section 15.68(b)(3) to accommodate the use of a 36-position tuning system developed by Standard Components, in which VHF and UHF tuners are coupled to a common detented channel selection mechanism with a common knob. Reset accuracy is sufficient to eliminate routine fine tuning, and in remote control operation, the tuners are driven by a single motor.

Rules authorizing the use of 70-position non-memory UHF detent tuning systems were adopted by the Commission on November 24, 1971. The regulations specified that all receivers using 70-position UHF tuning systems must be equipped with automatic frequency control (AFC) circuitry and with a channel selector mechanism capable of positioning the tuner within the "pull-in-range" of AFC. The requirements, originally effective July 1, 1974, were later extended to July 1, 1975.

On April 18, 1973, in response to statements by General Instrument Corporation (GI) that it had developed a 70-position non-memory UHF tuner accurate to  $\pm 1$  MHz, the Commission adopted a rulemaking notice proposing two alternative methods to meet the comparable TV tuning requirements. The first method, proposed elimination of routine fine tuning in all TV sets; the second method applied to black and white receivers only and proposed  $\pm 1$  MHz accuracy, elimination of the AFC requirement, and addition of a fine tuning speed requirement.

The Commission said that the regulations were designed to stimulate development and production of superior equipment not in common use, but within the state of the art, in order to create or expand the market for such equipment. The Commission said that the requirement must be reasonably achievable if it is to be effective, and that is why it granted waivers to respond to problems faced by individual firms. It said that the requirement for 100 percent compliance by July 1, 1974, was well on its way to being met, and that the great bulk of tuners being produced now are considerably more accurate than the presently required  $\pm 3$  MHz.

The Commission said that while the purpose of tuning regulation was to stimulate development of a superior product to meet a statutory objective, it was not prepared to impose a requirement which would have to be waived on a large scale. It said that its compromise solution ( $\pm 2$  MHz by July 1, 1975;  $\pm 1$  MHz for black and white sets effective July 1, 1976) should provide incentive for improvement without fostering monopoly or large scale waiver requests. The Commission said that well before 1976, data from manufacturing quality control programs would disclose whether a tuner will meet the  $\pm 1$  MHz standard. If the capability does not exist, the Commission said, it would be replaced by a feasible requirement.

4. On or after July 1, 1976, a 70-position nonmemory UHF detent tuning system may be used to meet the requirements of this section, providing either of the following two conditions is met:

- i *For any television receiver (monochrome or color).* The need for routine fine tuning of UHF channels is eliminated.

NOTE: This requirement will be considered met in each of the following circumstances:

- The receiver is provided with AFC and a channel selection mechanism that is capable of positioning the tuner to receive each UHF channel at its designated detent position with a maximum deviation from correct frequency on any detent setting not exceeding  $\pm 1$  MHz, when approached from either direction of rotation.
- The receiver is provided with AFC and a channel selection mechanism that is capable of positioning the tuner to receive each UHF channel at its designated detent position within the pull in range of the AFC, when approached from either direction of rotation.
- The receiver is provided with any other tuning system that produces and maintains detented tuning accuracy of the same order as the above specified systems.

- ii *For monochrome receivers only.* The UHF channel selection mechanism is capable of positioning the tuner to receiver each UHF channel at its designated detent position, with maximum deviation from correct frequency on any detent setting not exceeding  $\pm 1$  MHz, when approached from either direction of rotation.

The Commission said that since fine tuning speed has little or no bearing on the cost or size of the tuning equipment and a manufacturer will select a tuning speed for a given tuner which he considers will best meet the needs and preferences of the viewer, the proposal to require the same tuning speeds for UHF and VHF was unnecessary and "would be counter-productive."

The Commission said that some of the comments expressed concern about the meaning of the phrase that the "need for routine fine tuning\*\*\* is eliminated." It said that since the term is dependent on the demands of the viewer and therefore presents problems for the manufacturer in certificating compliance, it would specify that the use of tuning equipment meeting given specifications and tuning equipment producing the same accuracy, would be sufficient to eliminate the need for routine fine tuning. The Commission said that where routine fine tuning is eliminated by the use of AFC, the occasional need to deactivate AFC and tune manually, due to special circumstances, "does not constitute routine fine tuning."

Pointing out that the modified rule does not specify the use of AFC as the means for eliminating the need for routine fine tuning of color receivers, the Commission stressed that the change is not designed to accommodate the manufacture of a lower cost non-comparable color receiver, but rather "is simply a statement of the rule as a performance requirement." The need for routine fine tuning has not been eliminated if the receiver does not hold a satisfactory color picture, the Commission said, and the modified rule permits means, other than AFC, which may be used in achieving the tuning results now achievable on a non-memory UHF tuner combining AFC with an accurate channel selection mechanism.

The amendments become effective November 30, 1973. For general information, call (202) 632-7260.

#### LOW-POWER BIOMEDICAL TELEMETERING IN 40-42 MHz BAND PROPOSED BY FCC

Report No. 4394—October 17, 1973

In response to a petition by Cardiac Electronics, Inc., amendment of Part 15 of the rules to permit the use of low-power biomedical telemetering systems in the 38-41 MHz frequency band, has been proposed in a rulemaking notice by the FCC (RM-1945).

Cardiac said that its proposed system cannot operate satisfactorily in the higher VHF bands provided for low-power biomedical telemetering in Docket 19231 (FCC Report and Order adopted March 8, 1972).

Cardiac suggested the 40-42 MHz band in its petition. They claimed that tests of heart monitoring systems indicated that the 40-42 MHz band was acceptably free of interference, and at 200 kHz per channel, the band would provide up to 10 channels.

Because the 40-42 MHz band is allocated for use by agencies of the federal government, the Cardiac petition was coordinated with the Office of Telecommunications Policy (OTP). The Commission said that while the Interdepartment Radio Advisory Committee (IRAC), which advises OTP on such matters, concurred in the proposal, it recommended the 38-41 MHz band because it would be more compatible with Government requirements and would provide additional channel capacity in certain areas.

The Commission said that the 39-40 MHz non-Government portion of the band suggested by IRAC is heavily used by land mobile stations in many areas, and that there are significant numbers of Government stations (some of high power) operating in other segments of the band. The Commission said that the 38-38.25 MHz segment is also used for radio astronomy observations, but since the interference from Cardiac's proposed device would be negligible, it would not propose any special geographical limitation on the use of the Cardiac system.

Noting that IRAC has expressed concern regarding the risk to a patient from interference by regularly authorized stations on the band, the Commission said that Cardiac had indicated that its system was specifically designed to reduce susceptibility to interfering signals and that a normal reading caused by interference, when a patient is actually experiencing an abnormal heart condition was very remote.

#### AMENDMENTS TO PART 15 of CHAPTER I

Part 15 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

15.201 is amended by adding a new paragraph (e) to read as follows:

##### 15.201 Frequencies of operation.

e. Biomedical telemetering devices may be operated on the frequencies and under the conditions set out in 15.216.

15.216 is amended by deleting the present text of paragraphs (a), (b) and (c) and inserting the following new text:

##### 15.216 Biomedical telemetering devices

a. Biomedical telemetering devices may be operated in the following frequency bands:

38-41 MHz

174-216 MHz

Operation in these bands is not subject to the duty cycle limitation in 15.211 (a)(3).

NOTE: Section 15.3 requires that a biomedical telemetering device operating under the provisions of this section must accept harmful interference. Adequate safeguards shall be incorporated into any such biomedical telemetry system (as a cardiac monitoring system) to minimize the risk of harm to the patient as a result of interference received by such a system from any authorized radio service.

b. Biomedical telemetry devices may operated with a bandwidth of 200 kHz subject to the conditions in paragraph c of this section.

c. The emissions from a biomedical telemetering device shall not exceed the field strength limits given below.

Operating Frequency MHz	Field Strength	
	on the operating frequency	on harmonics and other spurious emissions on frequencies outside the authorized bandwidth
38-41	10 uv/m @50'	10 uv/m @10'
174-216	150 uv/m @100'	15 uv/m @100'

15.68(b)(3) & subparagraph (d)(3) are revised, and subparagraph (d)(4) is added to read as follows:

15.68 All-channel television broadcast reception; receivers manufactured on or after July 1, 1971.

(b) \*\*\*

(3) *Tuning controls and channel read-out.* UHF tuning controls and channel read-out on a given receiver shall be comparable in size, location, accessibility and legibility to VHF tuning controls and readout on that receiver. If any television receiver utilizes continuous UHF tuning for any function (e.g., as the basic tuning mode, for presetting a detent mechanism for repeated access at discrete tuning positions, or for tuning a channel which cannot be assigned a discrete tuning position), that receiver shall be equipped to display the approximate UHF television channel the tuner has been positioned to receive. If any television receiver is equipped to provide repeated access to UHF television channels at discrete tuning positions, the manufacturer shall provide for the display of the precise UHF channel selected or shall provide to the user a means of identifying the precise channel selected without the use of tools: Provided, however, that the 70 UHF channel numbers may be displayed in groups of three or less at each of 24 settings, if

- i The tuning mechanism uses a single control to select the VHF and UHF channels;
- ii any one of the three channels simultaneously displayed can be precisely tuned to the correct frequency; and
- iii the reset accuracy (with AFC, if provided) is sufficient to eliminate the need for routine fine tuning.

d. ....

3. On or after July 1, 1975, a 70-position nonmemory UHF detent tuning system may be used to meet the requirements of this section provided the channel selection mechanism shall be capable of positioning the tuner to receive each UHF channel at its designated detent position, with maximum deviation from correct frequency on any detent setting not exceeding  $\pm 2$ MHz, when approached from either direction of rotation.

## EXTRACTS FROM PART 2 MARKETING RULES

### SUBPART I—MARKETING OF RADIOFREQUENCY DEVICES

#### 2.801 Radiofrequency device defined.

As used in this part, a radiofrequency device is any device which in its operation is capable of emitting radiofrequency energy by radiation, conduction or other means. Radiofrequency devices include, but are not limited to

- (a) The various types of radio communication transmitting devices described throughout this chapter.
- (b) The incidental and restricted radiation devices described in Part 15 of this chapter.
- (c) The industrial, scientific, and medical equipment described in Part 18 of this chapter.
- (d) Any part or component thereof which in use emits radiofrequency energy by radiation, conduction or other means.

#### 2.803 Equipment requiring Commission approval.

In the case of a radiofrequency device, which, in accordance with the rules in this chapter must be type approved, type accepted, or certificated prior to use, no person shall sell or lease, or offer for sale or lease (including advertising for sale or

lease) or import, ship or distribute for the purposes of selling or leasing or offering for sale or lease, any such radiofrequency devices, unless, prior thereto, such device shall have been type approved, type accepted or certificated as the case may be.

#### 2.805 Equipment that does not require Commission approval.

In the case of a radiofrequency device which, in accordance with the rules in this chapter must comply with specific technical standards prior to use, no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease) or import, ship or distribute for the purposes of selling or leasing or offering for sale or lease, any such radiofrequency device, unless prior thereto such device complies with the applicable technical standards specified in the Commission's rules.

#### 2.807 Statutory exceptions.

As provided by section 302(c) of the Communications Act of 1934, as amended, 2.803 and 2.805 shall not be applicable to:

- (a) Carriers transporting radiofrequency devices without trading in them.
- (b) Radiofrequency devices manufactured solely for export.
- (c) The manufacture, assembly, or installation of radiofrequency devices for its own use by a public utility engaged in providing electric service: *Provided, however,* That no such device shall be operated if it causes harmful interference to radio communications.
- (d) Radiofrequency devices for use by the Government of the United States or any agency thereof: *Provided, however,* That this exception shall not be applicable to any device after if has been disposed of by such Government or agency.

#### 2.809 Exception for ISM equipment.

(a) Sections 2.803 and 2.805 shall not apply to the following ISM equipments:

- (1) Ultrasonic equipment as defined in 18.3(e) of this chapter which generates 2 kW or more of radiofrequency energy.
  - (2) Particle accelerators, e.g., cyclotrons, and other similar scientific equipment.
  - (3) Electro-crosion equipment.
  - (4) Sputtering equipment using RF energy.
  - (5) RF stabilized arc welders.
  - (6) Industrial heating equipment as defined in 18.3(c), of this chapter which generates 10 kW or more of RF energy.
- (b) Sections 2.803 and 2.805 shall not apply to industrial heating equipment as defined in 18.3(c) of this chapter which generates less than 10 kW of RF energy: *Provided, However:*
- (1) The vendor of such equipment has notified the purchaser/lessee in writing whether the equipment as delivered will meet the technical standards in Part 18 of this chapter, or whether the equipment must be installed in a screened enclosure before it may be operated.
  - (2) A copy of the notification shall be furnished to the Federal Communications Commission, Washington, D.C. 20554. Attention: Field Engineering Bureau.
  - (3) The copy of the notification furnished to the Commission shall include:

- Name and address of purchaser/lessee,
- Name of manufacturer,
- Type or model of the equipment delivered, and
- Nominal operating frequency and power.

(c) The equipment listed in paragraphs (a) and (b) of this section must meet the applicable certification or type approval requirement of Part 18 of this chapter before such equipment is operated.

#### 2.811 Transmitters operated under Part 73.

Sections 2.803 and 2.805 shall not be applicable to a transmitter operated in any of the Radio Broadcast Services regulated under Part 73 of this chapter, provided the conditions set out in Part 73 of this chapter for the acceptability of such transmitter for use under licensing are met.

#### 2.813 Transmitters operated in the Instructional Television Fixed Service.

Sections 2.803 and 2.805 shall not be applicable to a transmitter operated in the Instructional Television Fixed Service regulated under Part 74 of this chapter provided the conditions in 74.952 of this chapter for the acceptability of such transmitter for licensing are met.

## EXTRACTS FROM PART 18 I S M EQUIPMENT

### 18.3 Definitions.

For purposes of the provisions of this part the following definitions in the industrial, scientific, and medical service shall be applicable:

- a. ....
- b. "Medical diathermy equipment" shall include any apparatus (other than surgical diathermy apparatus designed for intermittent operation with low power) which utilizes a radio frequency oscillator or any other type of radio frequency generator and transmits radio frequency energy used for therapeutic purposes.
- c. "Industrial heating equipment" shall include any apparatus which utilizes a radio frequency oscillator or any other type of radio frequency generator and transmits radio frequency energy used for or in connection with industrial heating operations utilized in a manufacturing or production process.
- d. Miscellaneous equipment shall include apparatus other than that defined in or excepted by paragraphs (b) and (c) of this section in which radio frequency energy is applied to materials to produce physical, biological, or chemical effects such as heating, ionization of gases, mechanical vibrations, hair removal and acceleration of charged particles, which do not involve communications or the use of radio receiving equipment.
- e. Ultrasonic equipment shall include any apparatus which generates radio frequency energy and utilizes that energy to excite or drive an electromechanical transducer for the production of sonic or ultrasonic mechanical energy for industrial, scientific, medical or other noncommunication purposes.
- f. "Industrial, scientific and medical equipment" (ISM equipment). Devices which use radio waves for industrial, scientific, medical or any other purposes including the transfer of energy by radio and which are neither used nor intended to be used for radio-communication.
- g. & h. ....

### 18.13 ISM frequencies and frequency tolerances.

The following frequencies are allocated for use by ISM equipment with the tolerance limits specified:

ISM frequency :	Frequency tolerance
13,560 kHz-----	± 6.78 kHz.
27,120 kHz-----	± 160.0 kHz.
40,680 kHz-----	± 20.0 kHz.
915 MHz-----	± 13 MHz.
2,450 MHz-----	± 50.0 MHz.
5,800 MHz-----	± 75.0 MHz.
22,125 MHz-----	± 125.0 MHz.

### 18.14 Operation on microwave frequencies.

Except for industrial heating equipment which is regulated by 18.101 through 18.122, inclusive, ISM equipment may be operated on the microwave ISM frequencies (915 MHz, 2450 MHz, 5800 MHz and 22,125 MHz) subject to the following conditions:

- a. The emission of radio frequency energy resulting from such operation shall be on the particular frequency and must not exceed tolerance limits associated with each such frequency as set forth in 18.13.
- b. The energy radiated and the bandwidth of emissions shall be reduced to the greatest extent practicable.
- c. No harmful interference shall be caused to authorized communication services from spurious or harmonic radiation. In the event of such harmful interference, operation of the ISM equipment causing such harmful interference shall cease and shall not be resumed until steps necessary to eliminate such interference have been taken.

## SUBPART C—ULTRASONIC EQUIPMENT

### 18.71 Operation without a license

Ultrasonic equipment may be operated without a license: *Provided*, the design and operation complies with the technical limitations for such equipment: *And provided further*, That the equipment has been type approved by the Commission or has been certified pursuant to the requirements of 18.71 to 18.84 and the certificate is attached to the equipment or is promi-

nently posted in the room in which the equipment is being operated; except that ultrasonic equipment operating on frequencies below 90 kHz and generating less than 500 watts of radio frequency power may be operated without license, type approval or certification, if such equipment complies with all other applicable provisions of 18.71 to 18.84.

### 18.72 Technical limitations.

- a. Ultrasonic equipment shall be designed and constructed in accordance with good engineering practice with sufficient shielding and filtering to provide adequate suppression of emissions on frequencies outside the ISM frequency bands.
- b. Except for ultrasonic measurement equipment that operates over a continuous band of frequencies, the fundamental frequency of operation shall fall outside the frequency bands 490-510 kHz, 2170-2194 kHz, and 8354-8374 kHz.
- c. The varying conditions under which Ultrasonic equipment is operated shall not result in radiation exceeding the following limits:

Frequency	Distance <i>Feet</i>	Field $\mu\text{V}/\text{m}$
Up to and including 490 kHz.....	1,000	$\frac{2400}{\text{Frequency in kHz}}$
Over 490 kHz up to and including 1600 kHz.	100	$\frac{24000}{\text{Frequency in kHz}}$
Over 1600 kHz exclusive of frequencies in the ISM frequency bands.	100	15.

d. The operation of ultrasonic equipment on frequencies below 490 kHz using radio frequency power in excess of 500 watts shall be in compliance with the requirements of this section except that the maximum radiated field permitted may be increased as the square root of the ratio of the generated radio frequency power to 500 watts: *Provided*, that the radiated field shall in no case exceed the field permitted industrial heating equipment: *And provided further*, That equipment used in predominantly residential areas shall not be permitted the increase in field with power as indicated in this paragraph.

e. On any frequency above 490 kHz, the radio frequency voltage appearing on each power line shall not exceed 200 microvolts. On any frequency below 490 kHz, the radio frequency voltage appearing on each power line shall not exceed 1000 microvolts. Measurement shall be made from each power line to ground with the equipment itself both grounded and ungrounded.

### 18.73' Type approval.

a. Manufacturers of ultrasonic equipment desiring to obtain type approval for their equipment may request permission to submit such equipment to the Commission for testing by following the procedure set out in Part 2 of this chapter. The request shall include a statement that at least five units of the model to be submitted are scheduled for manufacture.

## SUBPART D—INDUSTRIAL HEATING EQUIPMENT

### 18.101 Operation without a license.

Industrial heating equipment may be operated without a license: *Provided*, The design and operation of the equipment complies with the technical limitations in this part for such equipment: *And provided further*, That the equipment has been certificated pursuant to the requirements of this part.

### 18.102 Technical limitations

- a. Industrial heating equipment shall be designed and constructed in accordance with good engineering practice with sufficient shielding and filtering to meet the requirements of this part.
- b. Industrial heating equipment may be operated on any frequency except frequencies in the bands 490-510 kHz, 2170-2194 kHz, and 8354-8374 kHz. Equipment operating on an ISM frequency may be operated with unlimited radiation on that frequency. Equipment operated on other frequencies must suppress radiation on the fundamental carrier frequency as well as other frequencies as required by this part.
- c. Industrial heating equipment designed for operation on an ISM frequency shall be adjusted to operate as close to that ISM frequency as practicable.

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Send your requirements to the Interference Technology Employment Service, Division of R & B Enterprises, P.O. Box 328, Plymouth Meeting, Pa. 19462.

**LOCATION OF FIELD OFFICES**

District Offices and their suboffices are located at the following addresses:

Radio district	Address of the Engineer in Charge
1	1600 Customhouse, Boston, Mass. 02109.
2	748 Federal Bldg., 641 Washington St., New York, N.Y. 10014.
3	1005 New U.S. Customhouse, Philadelphia, Pa. 19106.
4	Room 819, Federal Building, Baltimore, Md. 21201.
5	Room 400, Federal Building, Norfolk, Va. 23510.
6	1602 Gas Light Tower, 235 Peachtree Street NE., Atlanta, Ga. 30303. Suboffice: Post Office Box 8004, Room 238, Post Office Building, Savannah, Ga. 31402.
7	Room 919, 51 Southwest First Ave., Miami, Fla. 33130.
8	829 Federal Office Bldg., 600 South St., New Orleans, La. 70130. Suboffice: 439 U.S. Courthouse and Customhouse, Mobile, Ala. 36602.
9	New Federal Office Bldg., 515 Rusk Ave., Room 5636, Houston, Tex. 77002. Suboffice: 239 Federal Bldg., 300 Willow St., Beaumont, Tex. 77701.
10	1314 Wood St., Room 707, Dallas, Tex. 75202.
11	Room 1758, U.S. Courthouse, 312 North Spring Street, Los Angeles, Calif. 90012. Suboffice: Fox Theatre Bldg., 1245 Seventh Ave., San Diego, Calif. 92101.
12	323-A Customhouse, 555 Battery St., San Francisco, Calif. 94111.
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