

Office of Engineering and Technology Federal Communications Commission

# UNDERSTANDING THE FCC REGULATIONS FOR COMPUTERS AND OTHER DIGITAL DEVICES

**OET BULLETIN NO. 62** 

December 1993 (Supersedes October 1992 Issue) (Edited and Reprinted February 1996)

# **Forward**

This bulletin provides a basic understanding of the FCC regulations for digital devices, followed by some answers to commonly-asked questions. To assist readers in locating specific rules, the rule references are displayed in a column to the right of the text.

We welcome comments on improvements that can be made to this bulletin. Please address such comments to:

Federal Communications Commission Office of Engineering and Technology Customer Service Branch, MS 1300F2 7435 Oakland Mills Road Columbia, MD 21046 Fax: (301) 344-2050 E-Mail: labinfo@fcc.gov

Note: Some editorial changes were made in this bulletin for clarity, and to reflect changes in the names, addresses and telephone numbers of information sources and FCC offices.

The information in this bulletin reflects the current rules and regulations governing digital devices. These rules and regulations are expected to change soon as a result of final action to be taken on the Notice of Proposed Rule Making (NPRM) adopted in ET Docket 95-19. In the NPRM, the FCC proposes to amend Parts 2 and 15 of the rules to deregulate the equipment authorization requirements for digital devices.

The fees listed in this bulletin reflect those in effect at the time of printing, but are subject to change. Current fee information can be obtained from The FCC's Public Access Link (PAL) and the Office of Engineering and Technology (OET) Fee Filing Guide. See "*FCC's computer bulletin board*" and "*Obtaining forms and fee filing guides*" under <u>Additional Information</u> on pages 12 and 13 of this bulletin.

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# FEDERAL COMMUNICATIONS COMMISSION Office of Engineering and Technology Washington, DC 20554

# UNDERSTANDING THE FCC REGULATIONS FOR COMPUTERS AND OTHER DIGITAL DEVICES

OET Bulletin 62 December 1993 (Edited and reprinted Feb. 1996)

# **Introduction**

Digital technology is used virtually everywhere. Coffee pots, wrist watches, automobiles, cash registers, personal computers, telephones, and thousands of other types of common electronic equipment rely on digital technology to function. At any time of the day, most people are within a few meters of consumer products that use digital technology.

While digital technology has been used to provide outstanding convenience and benefit to today's society, it also has the potential to interfere with radio communications. Digital technology by its very nature generates radio noise, and that noise can interfere with police, ambulance and fire communications, radio and television broadcasting, and air traffic control operations.

The Federal Communications Commission (FCC) has rules to limit the potential for harmful interference being caused to radio communications by computers and other products using digital technology. In its regulations, the FCC takes into account the fact that different types of products using digital technology have different potentials for causing harmful interference. As a result, the FCC's regulations have the greatest impact on products that are most likely to cause harmful interference, and little impact on those that are least likely to cause interference.

This bulletin is intended to provide a general understanding of the FCC's regulations and policies applying to products using digital technology and, especially, computers. It reflects the current text and interpretations of the FCC's regulations. More detailed information is contained in the regulations themselves, which can be found in Part 15 of Title 47 of the Code of Federal Regulations. This bulletin does not replace or supersede those regulations.

Manufacturers and parties that sell products containing digital technology are strongly encouraged to review the FCC's regulations closely. Recognizing that new uses of digital technology often generate questions that are not directly addressed in the regulations, we welcome inquiries or requests for specific interpretations. Occasionally, the FCC proposes changes to its regulations, generally to address industry concerns and as new uses of digital technology and new communications services appear. See the section titled <u>Additional Information</u> for information on obtaining the FCC regulations, requesting interpretations, and finding out about proposed rule changes.

#### **Digital Devices and Personal Computers**

A *digital device* is a device or system that generates and uses digital timing signals operating at greater than 9,000 cycles per second (9 kHz). Many types of electronic equipment and consumer products are digital devices because they contain circuitry using such digital timing signals. Examples of digital devices include computers, calculators, digital watches and clocks, automotive electronic systems, and most telephones, microwave ovens, video cassette recorders, and security alarm systems.

A *personal computer* is a special type of digital device -- a computer that is marketed for use in the home. Computers that are marketed through retail outlets or through mail order catalogs, and advertised to the general public, are considered to be personal computers.

In order to prevent the radio noise generated by the digital device from interfering with radio communications, digital devices must be designed to contain the noise. This is accomplished by: 1) designing the digital circuitry in a manner that minimizes radio noise emissions; 2) enclosing the circuitry in a well-grounded case that prevents radio noise from escaping; and, 3) including a well-filtered power supply that keeps the radio noise from leaking onto the electrical power lines.

Most digital devices are subject to FCC technical standards that limit the amount of radio noise that can be radiated from the digital device or conducted by the digital device onto the electrical power lines. Most digital devices must be tested and shown to be compliant with these standards before they can be marketed. In addition, personal computers are required to be authorized by the FCC because they have been found to have the potential for causing interference.

# **Peripherals to a Digital Device**

Any device that feeds data into or receives data from a digital device is a *peripheral* of the digital device. Peripherals include external devices that connect to a digital device by wire or cable, and circuit boards within the digital device that connect it to external peripherals. Also included are circuit boards that increase the operating or processing speed of a digital device. Examples of peripherals are computer printers, monitors, keyboards, printer cards, video cards, local area network cards, modems, and enhancement or accelerator boards.

Peripherals to a digital device are subject to FCC technical standards because they can generate their own radio noise or allow the escape of radio noise generated by the digital devices to which they are connected. Peripherals to a personal computer must be authorized by the FCC.

Section 15.3(k)

Section 15.3(s)

Section 15.107 Section 15.109 Section 2.803 Section 2.805 Section 2.806 Section 15.101(a)

Section 15.3(r)

Section 15.101(a)

## Subassemblies of a Digital Device

Circuit boards, integrated circuit chips, and other components that are completely internal to a digital device are *subassemblies* of the digital device. (Note, however, that circuit boards or cards that are connected to external devices or increase the operating or processing speed of a digital device are considered peripherals.) Examples of subassemblies include internal memory expansion boards, internal disk drives, internal disk drive controller boards, CPU boards, and power supplies.

Subassemblies may be sold to the general public or to manufacturers for incorporation into a final product. While subassemblies are not directly subject to FCC technical standards or equipment authorization requirements, digital devices containing subassemblies must still comply with the FCC's technical requirements. Accordingly, manufacturers of subassemblies should design their products so the digital devices into which they are installed will comply with the technical standards.

# **Class A and Class B Digital Devices**

Digital devices fall into two categories -- *Class A* and *Class B*. Class A digital devices are ones that are marketed exclusively for use in business, industrial and commercial environments. Class B digital devices are ones that are marketed for use anywhere, including residential environments.

Section 15.3(h) Section 15.3(i)

Class A	Class B
Mainframe computers	Personal computers
Sophisticated multiuser computers	Portable computers
Sophisticated engineering workstations	

#### Examples of Digital Devices

The technical standards for Class B equipment are stricter than those for Class A equipment because the Class B equipment may be located closer to radios, TVs, and other receivers that tend to be susceptible to interference. Class A equipment, on the other hand, will generally be located in office buildings and factories where it is likely to be separated from radio and TV receivers by greater distances.

The Class B technical standards are designed to protect against interference being caused to a receiver located about 10 meters away, such as might be found in a neighbor's house or apartment. The standards are not intended to prevent interference at closer distances or within the digital device user's residence. Such interference problems can usually be resolved by the user.

Section 15.107 Section 15.109

Section 15.101(e)

**The Verification Process** 



# **Equipment Authorization**

Digital Device	Authorization Procedure	
Class B personal computers and their peripherals	Certification	
Other Class B digital devices and their peripherals	Verification	
Class A digital devices and their peripherals	Verification	
External switching power supplies	Verification	

A digital device must be tested and authorized before it may be marketed.

Any equipment that connects to the public switched telephone network, such as a modem, is also subject to regulations in Part 68 of the FCC Rules and must be registered by the FCC prior to marketing. The rules in Part 68 are designed to protect against harm to the telephone network.

# Certification

The *certification* procedure requires that tests be performed on the device to be authorized. These tests measure the levels of radio frequency energy that are radiated by the device into the open air or conducted by the device onto the power lines. After these tests are performed, a report must be produced showing the test procedure, the test results, and some additional information about the device including design drawings. The specific information that must be included in a certification report is detailed in Part 2 of the FCC Rules.

Certified digital devices are required to have a compliance label affixed to them. They also must have an information statement regarding the interference potential of the device and information about any special accessories needed to ensure FCC compliance included in their instruction manuals. The applicant for a grant of certification is responsible for having the compliance label produced, and for having it affixed to each device that is marketed or imported. However, the compliance label and FCC ID label (see below) may not be attached to any devices until a grant of certification has been obtained for the devices. The wording for the compliance label and the information statement is included in Part 15.

Certified devices are also required to have an FCC ID label attached to them. The FCC ID label must be permanently marked (etched, engraved, indelibly printed, etc.) either directly on the device, or on a tag that is permanently affixed (riveted, welded, etc.) to the device. The FCC ID label must be readily visible to the purchaser at the time of purchase.

Section 2.909 Section 15.19 Section 15.21

Sections 2.1031

through 2.1045

Section 15.27 Section 15.105

Section 2.925 Section 2.926 Section 15.19 The FCC ID is a string of characters that may be from 4 to 17 characters long. It may contain any combination of capital letters, numbers, or the dash/hyphen character. Characters 4 through 17 are completely up to the applicant. The first three characters, however, are the "grantee code," a 3-character code assigned by the FCC to a particular applicant (grantee). Any application filed with the FCC must have an FCC ID that commences with an assigned grantee code. To receive one of these codes, new applicants must send in a letter stating the applicant's name and address and requesting a grantee code. This letter must be accompanied by a completed "Fee Advice Form" (FCC Form 159), and a \$45 processing fee. See <u>Obtaining...filing packets</u> on page 12.

Once the report demonstrating compliance with the technical standards has been completed, and the compliance label and FCC ID label have been designed, the party wishing to get the device certified (it can be anyone) must file a copy of the report, along with an "Application for Equipment Authorization" (FCC Form 731), and an \$845 application fee, with the FCC. See <u>Obtaining...filing packets</u> on page 12.

After the application is submitted, the FCC's lab will review the report and may or may not request a sample of the device to test. If the application is complete and accurate, and any tests performed by the FCC's lab confirm that the device is compliant, the FCC will then issue a grant of certification for the device. Marketing of the device may begin after the applicant has received a copy of this grant.

Typically, 90% of the applications for certification that the FCC receives are processed within 35 calendar days. This time frame may increase due to incomplete applications and pre-grant testing of a sample, if determined to be necessary.

## Verification

The *verification* procedure requires that tests be performed on the device to be authorized. These tests measure the levels of radio frequency energy that are radiated by the device into the open air or conducted by the device onto the power lines. After these tests are performed, a report must be produced showing the test procedure, the test results, and some additional information about the device including design drawings. The specific information that must be included in a verification report is detailed in Part 2 of the FCC Rules.

Once the report is completed, the manufacturer (or importer for an imported device) is required to keep a copy of it on file as evidence that the device meets the technical standards in Part 15. The manufacturer (importer) must be able to produce this report on short notice should the FCC ever request it.

Once the report is on file, a compliance label must be affixed to the device. Also, an information statement regarding the interference potential of the device and information about any special accessories needed to ensure FCC compliance must be included in its instruction manual. The manufacturer (or importer) is responsible for having the compliance label produced, and for having it affixed to each device that is marketed or imported. The wording for the compliance label and the information statement regarding interference problems is included in Part 15. Verified devices must be uniquely identified. However, they may not be labelled with an FCC ID or in a manner that could be confused with an FCC ID.

Section 2.907 Section 2.909 Section 2.1033 Section 1.1103 Section 1.1107

Section 2.803 Section 2.943

Sections 2.951 through 2.957

Section 2.902 Section 2.953 Section 2.955

Section 2.909 Section 2.954 Section 15.19 Section 15.21 Section 15.27 Section 15.105

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Once the report showing compliance is in the manufacturer's (importer's) files, the compliance label has been attached to the device, and the information statement has been included in the instructions, marketing of the device may begin. There is no filing with the FCC required for verified equipment.

# Digital devices that are exempt from FCC technical standards.

There are a number of digital devices that are exempt from the technical standards in Part 15. These are:

0	Digital devices used EXCLUSIVELY in any transportation vehicle including motor vehicles, aircraft and watercraft.	Section 15.103(a)
0	Digital devices used EXCLUSIVELY as electronic control systems by public utilities or in industrial plants. Also, digital devices used EXCLUSIVELY as power systems (such as switching power supplies) in public utilities or industrial plants. The term "industrial plant" in this case means a large scale production facility such as a dedicated building or factory. The term "public utility" means a dedicated building or large room owned or leased by the utility and does not extend to equipment installed in a subscriber's facility. To be eligible for the control system exemption, a digital device may not perform non-control functions such as the printing of billing information or the running of MS-DOS, OS/2 or UNIX software.	Section 15.103(b)
0	Digital devices used EXCLUSIVELY as industrial, commercial or medical test equipment. "Test equipment" includes devices used for maintenance, research, evaluation, simulation and other analytical or scientific applications in areas such as industrial plants, public utilities, hospitals, universities, laboratories, automotive service centers and electronic repair shops. Devices designed for home use, such as consumer blood pressure meters, bathroom scales and digital thermometers, do not fall under this exemption.	Section 15.103(c)
0	Digital devices used EXCLUSIVELY in appliances. "Appliances" are devices that are designed to heat, cool or move something by converting electrical energy into heat or motion. Examples of appliances include vacuum cleaners, toasters, air conditioners and clothes dryers. Examples of things that are NOT appliances include lights, telephones, home security systems, exercise bicycles and clock radios. Devices that use <u>radio frequency</u> energy to do the actual heating, cooling or moving, such as microwave ovens, are subject to technical standards in Part 18 of the FCC rules.	Section 15.103(d)
0	Specialized medical digital devices (generally used at the direction of or under the supervision of a licensed health care practitioner) whether used in a patient's home or a health care facility. Non-specialized medical devices marketed through retail channels for use by the general public do not fall under this exemption, nor do	Section 15.103(e)

Section 15.19 Section 15.21 Section 15.27 Section 15.105 Section 2.805 digital devices used for record keeping or any purpose not directly connected with medical treatment. Examples of devices that are exempted by this provision include computerized cameras used in surgery, CAT scanners, X-ray equipment, and kidney dialysis machines. Non-exempt devices include over-the-counter blood pressure gauges and digital thermometers. Medical diathermy equipment and ultrasonic equipment, while exempt from the Part 15 digital device standards, are subject to the regulations in Part 18.

- o Digital devices that have a power consumption of 6 nanowatts or less, Section 15.103(f) such as digital watches and solar calculators.
- Joystick or mouse controllers, or similar devices, used with digital devices but that contain only non-digital circuitry or a simple circuit to convert a signal to the format required, such as an integrated circuit for A/D conversion. These are viewed as passive add-on devices and are not themselves directly subject to the technical standards in Part 15.
- Digital devices that do not generate or use frequencies above
  1.705 MHz and that do not operate while connected to the AC power
  lines, such as certain electronic calculators. Digital devices that
  include, or make provision for the use of, battery eliminators, AC
  adapters or battery chargers that permit operation while charging or
  that connect to the AC power lines indirectly, obtaining their power
  through another device that is connected to the AC power lines, do
  not fall under this exemption.

Digital devices that are exempt from the technical standards in Part 15 are still not permitted to cause harmful interference to any authorized radio communications. Accordingly, it is strongly recommended that the manufacturer of an exempt digital device endeavor to have the device meet the technical standards anyhow.

# **Commonly Asked Questions**

# What is the difference between a Class A and Class B digital device?

If a digital device will be sold to anyone who is likely to use it in a residential environment then it is a Class B digital device. When determining whether a particular device should be classified as Class A or Class B, the Commission normally considers the following three questions, in this order:

> Is the marketing of the device restricted in such a manner that it is not sold to residential users?

If a digital device is sold or offered for sale to <u>any</u> residential users (including commercial or industrial companies that could employ the equipment in a residential environment) then it is a Class B digital device regardless of its price or application. Marketing through a general retail outlet or by mail order to the general public with a

simple disclaimer, such as "For Business Use Only," is not sufficient to qualify as Class A. Instead, all marketing (advertising, sale and distribution) must be restricted by the marketer to users in a commercial, industrial, or business environment.

> Does the application for which the device is designed generally preclude operation in residential areas?

For example, mainframe computer systems have generally been considered Class A digital devices because it is highly unlikely that they would be used in residential environments.

> Is the price of the device high enough that there is little likelihood that it would be used in a residential environment. including a home business?

The merits of classifying a digital device as Class A based on its price are reviewed on a case-by-case basis. This is because, for example, the price threshold for an I/O card will be different than the price threshold for a computer system configuration.

Portable computers, because they are designed to be used anywhere, are considered Class B devices regardless of their price or restrictions placed on marketing. Only in those cases where the designed application precludes the possibility of operation in a residential environment may portable computers be gualified as Class A devices.

# What happens if one sells or imports non-compliant digital devices?

As explained earlier, the form of authorization that is required for a digital device depends on how the device will be marketed. The FCC rules are designed to control the marketing of digital devices and, to a lesser extent, their use. If someone purchases a non-compliant digital device, uses it, causes interference to authorized radio communications, and is the subject of an FCC interference investigation, the user will be told to stop operating the device until the interference problem is corrected. However, the person (or company) that sold this non-compliant digital device to the user has violated the FCC marketing rules in Part 2 as well as federal law and may be subject to an enforcement action by the Commission's Field Operations Bureau that could result in one or more of the following:

- o forfeiture of all non-compliant equipment
- o \$100,000/\$200,000 criminal penalty for an individual/organization
- o a criminal fine totalling twice the gross gain obtained from sales of the non-compliant equipment
- o an administrative fine totalling \$10,000/day per violation

It is the act of selling or leasing, offering to sell or lease, or importing a digital device that has not gone through the appropriate FCC equipment authorization procedure that is a violation of the Commission's rules and federal law.

Can someone assemble and sell a computer without getting FCC authorization?

Section 15.5 Section 2.803 Section 2.805 Section 2.806 Section 2.1203 47 U.S.C. 501 and 503 18 U.S.C. 3571

47 U.S.C. 302(b)

Yes, as long as they start with an FCC-authorized system and add to it only FCC-authorized peripherals (or certain subassemblies that don't affect the authorization of the system such as internal disk drives and internal memory expansion units).

Assemblers, however, must follow any special instructions for the peripherals or subassemblies, such as the use of shielded cables, and may not change the identification of any peripheral or personal computer without the consent of the person or company that obtained FCC authorization.

The FCC does NOT currently authorize motherboards, cases and internal power supplies. Vendor claims that they are selling "FCC-certified cases," "FCC-certified motherboards" or "FCC-certified internal power supplies" are false.

What changes can be made to an FCC-authorized device without requiring a new FCC authorization?

The person or company that obtained FCC authorization for a digital device is permitted to make the following types of changes:

For **certified equipment** (personal computers and their peripherals) the holder of the grant of certification can make modifications to the circuitry, appearance or other design aspects of the device *provided that* no change is made to its main clock circuitry or its FCC ID.

If such a change <u>does not affect</u>, or reduces the radio frequency <u>emissions</u> from the device then the grantee is not required to file any information with the FCC. These are called *Class I permissive changes*.

If such a change <u>increases the radio frequency emissions</u> from the device, the grantee must file an application on FCC Form 731, along with complete information about the change, and results of tests showing that the equipment continues to comply with FCC technical standards. In this case, the modified equipment may not be marketed under the existing grant of certification prior to acknowledgement by the Commission that the change is acceptable. These are called *Class II permissive changes*.

If the change is a major change (e.g., it results in a new product), then a new application along with complete test results must be submitted and a new grant must be obtained. A change to the clock circuitry of any digital device requires a new equipment authorization.

For <u>verified equipment</u> (digital devices that are not personal computers or peripherals to personal computers) any changes may be made to the circuitry, appearance or other design aspects of the device as long as the manufacturer (importer, if the equipment is imported) has on file updated circuit drawings and test data showing that the equipment continues to comply with the FCC rules.

How does the FCC regulate a digital device that is part of another radio frequency device?

Section 15.101(c)

Section 2.1043

Section 2.952 Section 2.953 Section 2.955 A digital device that is part of a radio frequency transmitter is not subject to the Part 15 rules for digital devices. This is because the transmitter itself is subject to other FCC technical standards, and these standards will ensure that the transmitter's digital circuitry does not cause harmful interference. The same is true for a digital device that is part of a radio frequency device subject to the technical standards in Part 18 of the FCC rules. (Part 18 applies to devices where radio frequency energy is used to do work. Microwave ovens and radio frequency lighting devices are examples of Part 18 equipment.)

A digital device that is part of a receiver, part of a TV interface device, or part of any other radio frequency device must comply with the technical standards for digital devices. While the rules specifically address standards for CB receivers and receivers that tune within the range 30-960 MHz, other receivers are not regulated unless they employ digital circuitry. Consequently, an AM-band receiver that incorporates digital circuitry is subject only to the authorization requirements for a digital device.

#### What happens if a digital device causes interference?

Section 15.5

Digital devices that comply with the FCC technical standards and have been certified and marketed in accordance with the FCC rules may not cause interference and must accept any interference that they receive. This means that the user of a personal computer may be required to shut the computer off if it is found to be causing interference to any authorized radio communications, such as police, fire, TV or radio, even if the computer has been certified and has an FCC ID tag on it to prove it. In the event that this happens, the user will be allowed to resume use of the computer only after the cause of the interference problem has been eliminated.

#### Section 15.3(k)

# **Additional Information**

# **Obtaining rules**

The FCC rules are contained in <u>Title 47 of the Code of Federal Regulations</u> (47 CFR), which is printed in five separate volumes. Parts 2 and 15, located in the volume containing Parts 0 through 19, are applicable to computers and other digital devices. In addition to Part 15 requirements, digital devices that connect to the public switched telephone network are subject to Part 68 registration requirements, which are located in the volume containing Parts 40 through 69. To obtain a copy of these rules contact:

Superintendent of Documents U.S. Government Printing Office P.O. Box 371954 Pittsburgh, PA 15250-7954

Tel: (202) 512-1800 / Fax: (202) 512-2250 (8 AM - 5 PM Eastern Time) (GPO deposit accounts, VISA and MasterCard accepted)

# Obtaining forms and fee filing guides

To obtain copies of FCC Form 159 ("Fee Advice Form"), FCC Form 731 ("Application for Equipment Authorization") FCC Form 730 ("Registration of Telephone and Data Terminal Equipment"), and fee filing guides contact:

Federal Communications Commission Forms Distribution Center 9300 E. Hampton Drive Capitol Heights, MD 20743 Tel: (202) 418-3676 or 1-800 418-3676

## Equipment authorization procedures

Questions regarding equipment authorization procedures for Part 15 digital devices should be addressed to:

Federal Communications Commission Equipment Authorization Division Application Processing Branch, MS 1300F1 7435 Oakland Mills Road Columbia, MD 21046 Tel: (301) 725-1585 / Fax: (301) 344-2050 E-Mail: labinfo@fcc.gov

# Obtaining equipment authorization filing packets

Application packets to assist applicants in applying for certification of digital devices and obtaining a grantee code are available from:

Federal Communications Commission Equipment Authorization Division Customer Service Branch Tel: (301) 725-1585, Ext 639 / Fax: (301) 344-2050 E-Mail: labinfo@fcc.gov

**Rule interpretations** 

Questions regarding interpretations of the Part 2 and Part 15 rules as they apply to low-power transmitters and measurement procedures used to test these transmitters for compliance with the Part 15 technical standards, should be addressed to:

Federal Communications Commission Equipment Authorization Division Customer Service Branch, MS 1300F2 7435 Oakland Mills Road Columbia, MD 21046 Tel: (301) 725-1585 / Fax: (301) 344-2050 E-Mail: labinfo@fcc.gov

# Part 68 registration requirements

Questions regarding the Part 68 rules as they apply to equipment that connects to the public switched telephone network (cordless phones, wireless modems etc.) should be addressed to:

Federal Communications Commission Network Facilities Division, MS 1600B Washington, DC 20554 Tel: (202) 418-2342 / Fax: (202) 418-2345

# FCC's computer bulletin board

The FCC maintains a computer bulletin board, called the Public Access Link (PAL), that contains information about the FCC rules, proposed or recent rule changes, application procedures, fees and equipment authorizations. Applicants may check on the status of their applications, and others may check the validity of an FCC ID on a piece of equipment, by dialing this bulletin board via computer modem at:

(301) 725-1072 Modem set up: 8 bits, no parity, 1 stop bit (parity is ignored on input and system does not send parity on output)

## Status desk

Applicants who do not have access to a computer may check on the status of their applications, and others may check the validity of an FCC ID on a piece of equipment, by calling the Equipment Authorization Division's status desk at:

(301) 725-1585, Ext. 300 Monday-Thursday between 2:00 - 4:30 PM