

PROMETHEUS RADIO PROJECT

FLAME FILCHING, WAVE SNATCHING, PEOPLE-POWERED RADIO!
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LPFM Self-Inspection Checklist *Explained*

The Federal Communications Commission (FCC), the government agency that regulates broadcast media in the United States, publishes a self-inspection checklist that explains how to follow the most important broadcast regulations in order to keep your station operating legally. You can find the checklist at fcc.gov/eb/bc-chklsts. Below, we will give a brief explanation of each item in the checklist. This document is *not meant as a substitute for the FCC checklist* but, rather, as a supplement providing explanations of the rules and regulations your station needs to follow.

Section I: Administrative and Non-Technical

A. AUTHORIZATIONS: The station license, any construction permits, and any other important documents from the FCC should be posted where you consider to be the primary control point for your transmitter (the place where you turn the transmitter on or off). Make sure to read any documents you receive from the FCC carefully to see if they need to be posted. In general, it cannot hurt to have too much information posted at your studio. You could receive a hefty fine for missing information if the FCC makes an unannounced visit to your station.

B. STATION LOGS: You are required to keep a station log where you record the operation of your station's broadcast. Station logs are one of the most important FCC regulations for radio stations. You must make a log entry anytime the transmitter is turned on or off. You must also record any outages due to equipment repair or replacement and anytime your transmission is operating outside of the requirements in your license. You must also record all required tests and activations of your Emergency Alert System (EAS)--more on this in Section III.

Station logs and records need to be available for inspection and duplication at the station's primary control point. If you don't have a copy machine or scanner, you should make a plan for how you will duplicate your station logs if needed. Each log entry needs to have the time, date, and full name of the person making the entry. You must keep station logs for a period of 2 years.

You can keep station logs in an electronic database, on paper, or both. Your DJs, hosts, or the operator on duty will need to be trained in your logging system.

C. OPERATING SCHEDULE: LPFM stations are required to broadcast for at least 36 hours per week, on at least 6 days of the week, for at least 5 hours per day.

D. STATION IDENTIFICATION: You must identify your station on-air hourly as close to the beginning of the hour as possible. A station identification must include your station's call letters followed by the community of license (where you are located). You can also give your station's

frequency and a short station slogan.

You must also give a station identification at the beginning and ending of each period of operation (after you go on the air and before you go off the air). In addition to your standard station identification, you must also include your mailing address, phone number, and other contact information.

E. NON-COMMERCIAL STATUS: Your LPFM station is considered a noncommercial educational service and it can only be licensed to non-profit companies. You cannot run commercials or ask your listeners to buy a product or service, or make value judgment comparisons between products or companies. You can, however, allow individuals and companies to sponsor your station or programs that you run. There is a fine line between sponsorship announcements and commercials.

Sponsorship announcements should be short and to the point. The announcement can include the name of the sponsor, a non-promotional description of the product or service they provide, and their location and contact information. The announcement *cannot* include a “call to action” to buy their product (“come on down”), a provocative company slogan, a claim about a product’s quality, an incentive to buy a product, or any reference to price or savings.

You must also keep diligent records of all sponsorship announcements in your station logs.

F. RETRANSMISSION: Your LPFM station cannot retransmit the signal of a full-power radio station. You may, however, run syndicated programming like Free Speech Radio or Democracy NOW!

G. STATION INSPECTIONS: You must make your station available for inspection by the FCC during your business hours and at any time you are broadcasting. Station records and logs must also be available.

H. POLITICAL FILE: Your station needs to keep a complete record of all requests for broadcast time and appearances made by candidates for public office.

I. TELEPHONE CONVERSATIONS: All callers must be told in advance if their call will be put on the air or recorded for future broadcast. If you are planning to have a caller live on the air, you could also explain FCC rules about obscene and indecent content and ask them not to use profanity.

Section II: Antenna Structures

A. ANTENNA REGISTRATION: The owner of the structure where your antenna is mounted must register the structure through the FCC. The registration number must be posted at the base of the tower.

B. ANTENNA SPECIFICS: The height and location of the antenna must match your station license precisely.

C. TOWER LIGHT OBSERVATIONS: If your tower is required to have warning lights, the lights must be observed once every 24 hours.

D. PAINTING/LIGHTING: Your station license will specify whether or not you will need specific kinds of painting or lighting on your tower.

E. FAA NOTIFICATIONS: If your tower is required to have lights, you must notify the FAA to any malfunctions within 30 minutes.

F. STATION LOGS: If your tower is required to have lights, you must thoroughly log any malfunctions or extinguished lights in your station logs.

Section III: Emergency Alert System (EAS)

A. HANDBOOK: You must keep a copy of the official EAS Operating Handbook at your EAS unit and any other EAS control point. You can find the handbook at fcc.gov/pshs/services/eas/handbooks.html.

B. EAS DECODER/MONITOR: Your EAS equipment must be certified by the FCC and be able to receive and decode the digital EAS signal adopted in 2003. When your station receives a EAS test or alert, your broadcast must be briefly interrupted to play the EAS audio message. Most EAS units will automatically interrupt your broadcast, but if yours doesn't have this function, station staff must be immediately notified by your EAS system of an incoming alert. You must make sure your EAS system is correctly installed and that it is tuned to receive activations from the correct stations. EAS messages should be broadcast in the primary language of your station.

C. EAS TESTS: After receiving a required weekly test or required monthly test, your LPFM station must transmit the EAS test script.

D. STATION LOGS: Your station needs to keep records of all tests, activations, and transmissions of your EAS equipment. You can keep these log entries in your main station log or you can keep a separate EAS log book that will be considered part of the official log. You should make sure to note the reason any test or activation was not received and the steps you took to correct the problem.

Many new EAS machines will store logs electronically for you to download regularly. Older EAS units will print out an entry after a test or activation. In either case, EAS logs need to be organized and readily available. A working EAS unit and thorough logs are a top priority for the FCC and FCC inspectors will be looking for them if they visit your station.

If your EAS equipment malfunctions, your station can operate without the EAS for up to 60 days while you repair or replace the equipment. Make sure to make note of the date and time the equipment was removed and restored to service in your logs. If you cannot get your EAS equipment working before the 60 day period is over, you can request an extension from the FCC District Director of your area.

Section IV: Technical Requirements

NOTE: You should consider contacting a qualified engineer to help you maintain your equipment. An engineer will help you determine whether your equipment is operating as required by your license.

A. POWER vs HEIGHT: The height of your antenna and the power of your transmitter determine how far your signal will travel. Two types of LPFM licenses are issued by the FCC, LPFM station at 100 watts ERP and LPFM station at 10 watts ERP. ERP stands for effective radiated power, and it refers to the amount of power that is produced by the transmitter and antenna setup of your station. Both of those licenses have a maximum antenna height of 30 meters (100ft). If your antenna is above 30 meters you must reduce your transmitter power to compensate. No LPFM station may operate below 1 watt ERP.

B. POWER DETERMINATION: The transmitter power output (TPO) of your LPFM station is like the effective radiated power (ERP) but without considering the gains and losses that occur through the antenna setup. If you have a license for a LPFM with a TPO of more than 10 watts, your transmitter power may not be more than 105% the maximum allowed by your license or less than 90% of the minimum. If your station has a 10-watt license, you may operate with less than 10 watts but no less than 1 watt, and not more than 105% of the full 10 watts.

C. DIRECT vs INDIRECT METHOD: There are two approved ways to measure your transmitter's operating power. The direct method to measure power uses a meter located at the RF output of the transmitter. However, purchasing and installing an RF meter is often difficult for stations with smaller budgets.

The indirect method to measure your power involves a mathematical formula.

Transmitter output power = $E_p \times I_p \times F$ where:
 E_p = DC input voltage of final radio stage.
 I_p = Total DC input current of final radio stage.
 F = Efficiency factor of the transmitter.

The efficiency factor of the transmitter (F) must be determined before you can use the formula. You might need to seek help from a qualified engineer to determine the efficiency factor. An engineer can also help you set up a system that makes it easy for anyone at your station to determine the output power at any given time. This is important because you will need to record your transmitter's power in your station logs.

D. FREQUENCY: The carrier (center) frequency of your LPFM station may not deviate by more than 3000Hz.

E. MODULATION: FM radio works by embedding an audio signal within a carrier signal that your radio then receives and decodes. The carrier signal, also called the center frequency, is the number we use to identify stations (91.5-FM or 91.5Mhz). The modulation of the carrier signal is a result of adding the audio signal to the carrier signal.

The percentage of modulation should not be less than 85% and should be at as high a level as possible without exceeding 100% on frequently occurring peaks with reference to 75kHz deviation.

F. TRANSMISSION SYSTEM: This section describes the acceptable level of RF emissions a LPFM station may produce that are removed from the carrier signal. See this section in the checklist for the specifications.

G. CERTIFIED TRANSMITTERS: Your transmitter must be certified by the FCC and have an FCC ID attached.

H. BLANKETING INTERFERENCE: Blanketing interference occurs when a radio or other electronic device is close to a strong radio signal. For the first year after your LPFM station begins broadcasting using a new or modified facility, you must attempt to resolve blanketing interference complaints within the immediate area of your antenna site. For an 100-watt LPFM station that area would extend approximately 125 meters (410 ft) and for a 10-watt LPFM about 39 meters (128 ft) from the antenna site. Interference is likely to occur with low-quality electronic equipment. This requirement does not include interference complaints involving malfunctioning or mis-tuned receivers, improperly installed antennas, high-gain antennas, booster amplifiers, mobile receivers and non-RF devices such as tape recorders, Hi-Fi amplifiers, or hard wired telephone devices.

Section V: Unattended Operation

A. ATTENDED VS UNATTENDED: You may operate your LPFM station as either attended or unattended without receiving any prior FCC approval. If you operate your station unattended you will need the appropriate equipment to automatically operate your transmission or to allow you to control the transmitter from a distance if necessary. LPFM stations that operate unattended will need to advise the FCC Media Bureau by mail, providing an address and telephone number where a responsible party can be reached during unattended operation. That letter should be posted with your station records.

Whether your station is operated attended or unattended, you must make sure that the transmitter is shut down within 3 hours of experiencing an out-of-tolerance condition if the condition cannot be fixed within that 3-hour period. Out-of-tolerance conditions include overpower, over-modulation, or a out-of-tolerance frequency condition that could cause interference.

If you operate your station attended, a person must be on duty at a fixed location at all times when the station is on the air. This person, often referred to as the “duty operator,” must be able to monitor and control the transmission themselves. If you have an automated transmitter monitoring system, that system must alert the duty operator within the 3-hour period.

You can find more information on attended versus unattended operation in the corresponding section of the [LPFM Self-Inspection Checklist](#). A qualified engineer can help you design a system that will fit your needs.