

Are VarAC Email Gateways Legal?

Mark KB0US
August 6, 2025

When considering whether VarAC email gateways are legal in the United States, it is our responsibility to comply with:

Part 97.103(a):**(Station licensee responsibilities)**(a) The station licensee is responsible for the proper operation of the station in accordance with the FCC Rules.

Part 97.101(a):**(General standards)**(a) In all respects not specifically covered by FCC Rules each amateur station must be operated in accordance with good engineering and good amateur

Part 97.3(a)(6):(Definitions)(6) Automatic control. The use of devices and procedures for control of a station when it is transmitting so that compliance with the FCC Rules is achieved without the control operator being present at a control point.



Part 97.109(d):(Station control)(d) When a station is being automatically controlled, the control operator need not be at the control point. Only stations specifically designated elsewhere in this part may be automatically controlled. Automatic control must cease upon notification by an FCC District Director that the station is transmitting improperly or causing harmful interference to other stations. Automatic control must not be resumed without prior approval of the FCC District Director.



Part 97.221(b):(Automatically controlled digital station)(b) A station may be automatically controlled while transmitting a RTTY or [data emission](#) on the 6 m or shorter wavelength bands, and on the 28.120-28.189 MHz, 24.925-24.930 MHz, 21.090-21.100 MHz, 18.105-18.110 MHz, 14.0950-14.0995 MHz, 14.1005-14.112 MHz, 10.140-10.150 MHz, 7.100-7.105 MHz, or 3.585-3.600 MHz segments.



Part 97.111 - Authorized transmissions(a) An amateur station may transmit the following types of two-way communications:

- (1) Transmissions necessary to exchange messages with other stations in the amateur service, except those in any country whose administration has notified the ITU that it objects to such communications. The FCC will issue public notices of such objections.
- (2) Transmissions necessary to meet essential communication need



97.115 - Third party communications No station may transmit third party communications while being automatically controlled except a station transmitting a RTTY or [data emission](#). All messages that are retransmitted must originate at a station that is being locally or remotely controlled.



Key Regulations for Beacon Stations

Part 97.3(a)(9) - Definition of a Beacon:(Definitions)(9) Beacon. An amateur station transmitting communications for the purposes of observation of propagation and reception or other related experimental activities.



Part 97.203 - Beacon Station Rules:(Beacon station) g) The provisions of this section do not apply to beacons that are operated by stations transmitting for very short periods to indicate the presence of the station for purposes other than propagation observation, such as stations that transmit brief identification signals.



However, beacons must adhere to the power limit of 100 W PEP (d) and operate from a fixed location (e)



Part 97.203(d) - Avoidance: Operators must ensure beacons do not cause harmful interference, per Part 97.101(b), using listen-before-transmit protocols where possible. VarAC beacons employ a listen-before-transmit protocol, where the station monitors the frequency for activity before sending a beacon signal. If the frequency is busy (e.g., another station is transmitting), the beacon delays its transmission until the channel is clear.



Part 97.113(a)(4) - Profanity and Content Violations Transmitting profane or obscene content is explicitly prohibited. If such an email is transmitted, the licensee/control operator could be held accountable if the FCC determines they failed to exercise due diligence in preventing the violation.



Potential risk of operating a beacon



Prohibited