

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of )  
 )  
AMERICAN RADIO RELAY LEAGUE )  
 )  
Emergency Request for a Temporary Waiver of )  
Section 97.307(f) of the Commission's Rules )

**ORDER**

**Adopted: August 27, 2020**

**Released: August 27, 2020**

By the Deputy Chief, Mobility Division, Wireless Telecommunications Bureau:

1. *Introduction.* We have before us a request filed by the American Radio Relay League (ARRL) for a temporary waiver to permit amateur data transmissions at a higher symbol rate than currently is permitted by section 97.307(f) of the Commission's rules, in order to facilitate hurricane relief communications within the continental United States.<sup>1</sup> For the reasons set forth below, we grant the waiver request.

2. *Background.* Section 97.307(f) limits the symbol rate (also known as the baud rate) – the rate at which the carrier waveform amplitude, frequency, and/or phase is varied to transmit information<sup>2</sup> – for high frequency (HF) amateur radioteletype (RTTY)/data transmissions as follows to 300 bauds for frequencies below 28 MHz (except the 60 meter band), and 1200 bauds in the 10 meter (28-29.7 MHz) band.<sup>3</sup> The digital code used to encode the signal being transmitted must be one of the codes specified in section 97.309(a) of the Commission's rules, but an amateur station transmitting a RTTY or data emission using one of the specified digital codes may use any technique whose technical characteristics have been publicly documented, such as CLOVER, G-TOR, or PACTOR.<sup>4</sup>

3. In 2016, in response to an ARRL petition for rulemaking, the Commission proposed to remove the symbol rate limitations, which it tentatively concluded had become unnecessary due to advances in modulation techniques and no longer served a useful purpose.<sup>5</sup> That proceeding is currently pending.

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<sup>1</sup> E-mail from Dan Henderson, Call Sign N1ND on behalf of the ARRL to Thomas Derenge, Laura Smith and Joshua Smith, FCC (August 26, 2020 14:02 EDT) (Waiver Request); *see* 47 CFR § 97.307(f).

<sup>2</sup> *Amendment of Part 97 of the Commission's Amateur Radio Service Rules to Permit Greater Flexibility in Data Communications*, Notice of Proposed Rulemaking, 31 FCC Rcd 8485, 8485, para. 1 (2016) (*Baud Rate NPRM*).

<sup>3</sup> 47 C.F.R. § 97.307(f)(3), (4). In the 60 meter (5.3305-5.4064 MHz) band, there is no maximum symbol rate, but bandwidth is limited to 2.8 kilohertz for data and 60 hertz for RTTY. *See* 47 CFR § 97.307(f)(14).

<sup>4</sup> 47 C.F.R. §§ 97.307(f)(3), (4), 97.309(a)(4). CLOVER, G-TOR, and PACTOR are different techniques used to increase the efficiency of digital communications. *Baud Rate NPRM*, 31 FCC Rcd at 8486, n.18.

<sup>5</sup> *See Baud Rate NPRM*, 31 FCC Rcd at 8458, para. 8.

4. ARRL seeks this waiver for those licensed radio amateurs who are directly involved with hurricane relief via High Frequency Amateur Radio using PACTOR 4 modems in communications within the Continental United States relative to impending Hurricane Laura.<sup>6</sup> ARRL states that Section 97.307(f) of the Commission's Rules prevents the use of PACTOR 4 emissions, which is a data protocol that permits relatively high-speed data transmission in the High Frequency (HF) bands and many Amateur stations active in emergency communications preparedness are capable of using. They also point out that the past FCC temporary waivers have allowed this protocol in similar events including Hurricane Maria, Typhoon relief communications in Hawaii and Hurricane Dorian.

5. ARRL also states that trained amateur radio operators with communications equipment in the southeastern United States are actively preparing to assist radio amateurs involved with the Amateur Radio Emergency Service (ARES) working with federal, state and local emergency management officials to assist with disaster relief communications in anticipation of the arrival on the Gulf Coast of Hurricane Laura.<sup>7</sup> This equipment includes PACTOR radio modems that are capable of both PACTOR 3 and PACTOR 4 emissions and the higher data rates offered by PACTOR 4 emissions are critical to sending hurricane relief communications including lists of needed and distributed supplies.

6. *Discussion.* To obtain a waiver of the Commission's rules, a petitioner must demonstrate either that (i) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the present case, and that a grant of the waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.<sup>8</sup> We conclude that ARRL's request should be granted.

7. ARRL stands ready to assist the area potentially impacted by Hurricane Laura to conduct disaster relief communications.<sup>9</sup> While PACTOR 3 and PACTOR 4 modems are downward-compatible with slower speed versions of PACTOR, ARRL asserts that the higher data rates offered by PACTOR 3 and PACTOR 4 emissions are critical to sending hurricane relief communications.<sup>10</sup>

8. We conclude that granting the requested waiver is in the public interest. Hurricane Laura has the potential to cause massive destruction states along the Gulf of Mexico, and communications services will likely be disrupted. Thus, to accommodate amateur radio operators assisting in the recovery efforts, we grant the ARRL's waiver request for the period of 30 days from the date of this *Order*. The waiver is limited to amateur radio operators in the continental United States using PACTOR 3 and PACTOR 4 emissions who are directly involved with HF hurricane relief communications.

9. Accordingly, IT IS ORDERED that pursuant to section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and section 1.925 of the Commission's rules, 47 CFR § 1.925, the Emergency Request for a Temporary Waiver of Section 97.307(f) of the Commission's Rules filed by the American Radio Relay League on August 26, 2020, IS GRANTED as set forth above.

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<sup>6</sup> See Waiver Request.

<sup>7</sup> See Waiver Request.

<sup>8</sup> 47 CFR §§ 1.925(b)(3).

<sup>9</sup> See Waiver Request.

<sup>10</sup> See *id.*

10. This action is taken under delegated authority pursuant to sections 0.131 and 0.331 of the Commission's rules, 47 CFR §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Thomas Derenge  
Deputy Chief, Mobility Division  
Wireless Telecommunications Bureau