

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

In the Matter of)
)
Amendment of Part 97 of the Commission's Rules) WT Docket No. 05-235
To Implement WRC-03 Regulations Applicable to)
Requirements for Operator Licensing in the)
Amateur Radio Service)
)

**Reply To Comments Of Mr. Roland A. Anders, et al Those Desiring
Retention of the Morse Code Test for Amateur Extra**

Submitted electronically on 30 October 2005 by:

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General

1. This Reply to Comments concerns itself with the retention of the morse code test for the Amateur Extra class license examination. It should be recognized that Mr. Anders' original Comment of 11 August 2005 is in good format and he states his opinions in logical order with excellent phrasing. However, I must take issue with his opinions and those of the other 507 filings made in the Electronic Comment Filing System (ECFS) expressing the same desire.¹ Attached as Appendix 1 is my tally sheet of all filings as of 2 PM EDT on 29 October 2005 on WT Docket 05-235 as visible in the Commission's ECFS. That Appendix also includes a separate tally listing of all those filings made between 31 August and 28 October, 31 August being the date of the notice in the Federal Register on Notice of Proposed Rulemaking (NPRM) 05-143. The attached tally is an informal one done solely by myself in the interests of observing some insight into the prevailing opinions on morse code testing in the United States amateur community.

NPRM 05-143

2. Nothing has been seen in the NPRM that takes away any operating privileges of *already-licensed* United States radio amateurs, nor does it remove any existing license class title of Amateur Extra. The NPRM is devoted to the elimination of the International Morse Code *Test*, not for the removal of morse code *use*.

¹ As of 2 PM EDT on 29 October 2005 there were a total of 508 filings on WT Docket 05-235 desiring retention of the morse code test for the *highest class* (Amateur Extra) United States Amateur Radio Service license.

However, the implication in many Comments is that such *use* is eliminated or degraded for radio amateurs.²

3. While not stated outright in the NPRM, precedent in the Commission's rulemaking procedures has *grandfathered* licensees for license test skills or license class revisions that have been changed by past Reports and Orders. There would be *no* re-testing of any already-licensed United States radio amateurs should the morse code test be eliminated.

4. Nothing has been seen in the NPRM that forbids the formal or informal self-learning of morse code skill *outside of amateur radio license testing* should the morse code test (test element 1) be eliminated. The more likely venue of morse code teaching has been done (by observation) in a classroom environment, class sizes of 1 to many learners.³ The second-most environment is that of using pre-recorded tapes or computer teaching programs.⁴ Radio listening for code practice is a final step for most morse learners, such listening limited to amateur radio bands. None of the United States radio amateur license examinations have been any sort of *learning process* per se.

5. Elimination of the morse code test via the NPRM's transference to a Report and Order cannot be logically assumed to *end* morse code skill or use.⁵ If morse code is as efficacious as its proponents claim, then many newcomers will learn it through any of the traditional ways mentioned, then use it in amateur radio communications.

The Morse Code Test as the *Extra* of the Highest Class License

6. Nearly all proponents of retention of the morse code test refer to that test as denoting the *Extra* in the Amateur Extra class, even if the morse code test were eliminated for all other classes.⁶ That seems to be a

² That is implied, but not stated implicitly. However the language use, as well as spelling, of many makes full understanding difficult, regardless of their opinion on the NPRM..

³ Such a *classroom* varies from a one-on-one, father-son arrangement to an organization such as a local radio club holding a group code teaching session. In the case of much older radio amateurs who had served in the military doing morse code mode communications, the military schools had already taught them high-rate morse code skill.

⁴ Computer programs for morse code training are exclusively used for *Electronic Intercept Operators* at the Military Intelligence School, Fort Huachuca, AZ. That part of the M.I. school also trains others in the United States government in what is considered necessary for those agencies' use. *Intercept Operators* work solely on reception. The United States military does not use morse code for radio communications.

⁵ As in footnote 2, that is implied in many Comments. That leads to the supposition that many fear morse code use will diminish or disappear. Indeed, that will be a profound *change* in the history of United States radio amateur license testing; morse code testing has never left the regulations of any United States civil radio regulating agency since 1912.

⁶ Amateur Extra is also referred to as *the highest class* due to the most written test questions as well as the maximum operating privileges under existing United States amateur regulations. Prior to the Restructuring in mid-2000 from Report and Order 99-412, all Amateur Extras had to pass a 20 word per minute morse code test, a supposed mark of distinction among many radio amateurs. FCC 99-412 made all morse code test rates the same at 5 words per minute.

psychological *extra* due to the traditional aspects of prior United States morse code testing.⁷ A definite and deep *class distinction* resulted with the advent of the United States amateur radio *Incentive Plan* with its many and varied classes reaching *six* classes before the Restructuring went into effect in 2000.⁸

7. Many of the existing United States Amateur Extra class achieved their rank-status-privilege under the pre-Restructuring 20 word per minute test rate.⁹ Many of those have become upset by the Restructuring code test rate to 5 words per minute, a personal distress at not being able to retain their previous rank-status-privilege through the old morse code testing. Those same Amateur Extras indicate a perception that the Commission's regulations exist for *them* over and above *any newcomers* to the Amateur Extra class. The Commission is bound by law to serve the *public*, not just one group.

8. The Commission is not bound by law to maintain *tradition* in the Amateur Radio Service. That should be the task of private membership organizations. The *tradition* of retention of morse code testing for radio amateurs is not tradition per se but the *appearance* of one based on the fact that no civil radio regulating agency of the United States has ever eliminated the morse code test for amateur radio license classes having below-30-MHz operating privileges.¹⁰ To date that appearance has existed for 93 years.

Existing Amateur Extra License Holders Should be Favored Over Newcomers

9. Many of the filings on WT Docket 05-235 rather explicitly denounce the Commission for removing their self-perceived *status* as *code-tested Extras*. That is egregious, petulant, and self-serving by those individuals. Any United States amateur radio license class grants permission from the United States government to transmit RF energy according to regulations of Part 97, Title 47 Code of Federal Regulations. The Commission is not chartered by any law of Congress to be an academic institution giving academic credit for meeting certain regulations within Part 97.

10. Nothing in Part 97, Title 47 C.F.R., nor in NPRM 05-143 indicates that the *highest class* or Amateur Extra license is the *leader* or *mentor* of all other *lower classes*, somehow maintaining a nebulous *tradition*, keeping any particular skill, craft, or procedure *alive for future generations*. Given that there are over 700 thousand United States amateur radio licensees granted to date, two major publishers of texts and amateur radio periodicals in the United States, plus several more worldwide in the English language, plus hundreds of texts on history, practices, and technology available for purchase or in libraries, the knowledge is *kept alive*

⁷ Another reason can be *conditioned thinking* due to the amateur radio press use of superlatives for the United States Amateur Extra class license holders from 1961 to the present time. That same amateur press coined the terms *upgrading* for the *next higher class* license, as if so-called *lower classes* were somehow inferior.

⁸ Class distinction in a large group can lead to widespread dissatisfaction that is counterproductive to the supposed *good will* that is said to be in the United States amateur radio hobby pursuit. Some of that is evident in the filings on WT Docket 05-235 begun five years after the advent of Restructuring with its reduction of new amateur radio license classes to only three..

⁹ The exact number of pre-Restructuring Amateur Extras is not accurately known or observable by the public. Websites and publications of private *call book* firms may be inaccurate or do not contain data past mid-2000. The Commission has such exact records as the only grantor of United States amateur radio licenses.

¹⁰ That radio transmission below 30 MHz *requires* morse code skill testing is an absurd artificiality imposed by the International Telecommunications Union - Radio in their Radio Regulations. Such testing was made optional to every member administration during the 2003 World Radiocommunication Conference by a revision of nearly all of Radio Regulation S25. There is *no technical condition* requiring morse code ability to operate any radio transmitter properly below 30 MHz.

quite well. That is reinforced by the same information *kept* in other languages of worldwide amateur radio organizations and publishers.

11. The Commission grants Amateur Extra license classes on the passing of the four test elements, three written and one listen-only morse code cognition aural test. Nothing in current Part 97 regulations, the NPRM being commented upon, states that Amateur Extra class licensees are either *better* than the so-called *lower classes other* than those four test elements.¹¹ There is no archival skill test to insure that some practice is *kept alive*. No amateur radio license class passing denotes some academic ability on learning *higher knowledge*. Amateur Extra class licensees are granted the widest range of operating privileges of all United States amateur radio license grantees.

12. There are a great number of RF transmission-communication modes *optional for use* permitted to *all* United States amateur radio license class grantees. On-off keying by morse code is just one of those *optional use* modes. Retention of the morse code test solely for the Amateur Extra serves only as emotional sustenance to those who feel their *past accomplishments* are somehow more important than the *future* of amateur radio. That is a selfish disservice to the uncountable number of newcomers of that future.

Morse Code Skill Must Be Kept Alive for the Future by Federal License Testing

13. Since morse code skill is learned and practiced and improved *away* from any federal testing venue, it beggars the rationality of those paranoid assumptions that *morse skill will die out if the federal test for it is eliminated*. If morse code skill is as efficacious as claimed, as favored as claimed, it will be kept alive due to its popularity. If it is not popular, then it will not survive. Such is the stark, though draconian *survival of the fittest* evolutionary development of all living things.

14. The morse code mode (through on-off keying of a transmitter) was only the *first* communications mode in all of radio.¹² Given the primitive technology of the first radios, on-off keying was the *only practical means* of communication. In 1896 morse code was an on-off land-line mode mature at 52 years of use.¹³ Radio as a communications means is now 109 years old and a great number of modes of communication by radio have been developed, many of them allocated as permissible for use United States radio amateurs: Voice telephony using amplitude, frequency, or phase modulation; radioteleprinter (now called *data*); various forms of pulse modulation by rate, width, amplitude, or time-position; television, both slow and fast scan; facsimile by various standards; spread-spectrum by direct sequence or frequency-hopping; combinatorial modulations such as those carrying geographic position derived from Global Positioning System data input. By an earlier, over-repeated ARRL poll, single sideband amplitude modulation is the *most used mode* on the HF amateur bands with on-off keying morse code mode a distant second. The most used mode at VHF and above amateur bands is FM

¹¹ Volunteer Examiner Coordinator examiners would normally be required to hold some form of credentials certifying their ability to give written tests. Examiners at any academic institution are required to do so. This has not been required by the Commission since the advent of privatized license testing. Neither are the Volunteer Examiner Coordinator Question Pool Committee, yet that Committee originates all the written test questions and answers for United States amateur radio license testing. Ergo, there is no rational basis for the common assumption that a *higher class* license is somehow an indicator of academic or intellectual expertise. The same is true of archival skills such as the so-called preservation of morse code skill.

¹² First demonstration of radio as a communications means was in 1896, in Italy by Guglielmo Marconi and in Russia by Aleksander Popov. Both demonstrations used on-off keying of the transmitter.

¹³ The first telegraph messages sent in the United States were by means of the first morse code using the Morse-Vail Telegraph System between Baltimore, MD, and Washington, DC, in 1844.

voice, often through FM repeaters and controlled by sub-audible *tones*.¹⁴ Various forms of multi-channel information transmission is being experimented with by several groups of radio amateurs. As far as on-off keying radiotelegraphy development, that exists only in non-transmitting electronic code keys plus several models of receive-only electronic morse keying decoders available for purchase.

15. It is a repeated *morse myth* that on-off keying radiotelegraphy enables the *simplest* transmitter and is therefore some kind of *initial transmitter for beginning radio amateurs*. That may have been true four decades ago when the solid-state active components were first arriving in radio designs. Today that is technically untrue since a voice modulated FM transmitter built with all solid-state components needs only the addition of a microphone; the on-off keying switch would be retained to serve as a PTT or *push-to-talk* switch. In either modulation mode the receiver would retain the same complexity of system and components. This is the year 2005, not 1965.¹⁵

16. To reiterate, on-off keying radiotelegraphy using morse code mode is just one of many *options* for *any* class of United States radio amateur. There has *never* been any test for *any other mode or modulation use* other than morse code for any amateur radio license test in the 71-year history of the Commission. Given that *tradition* can be maintained by private organizations, it is irrational to assume that pandering to a minority group of license holders *already licensed* to preserve their self-esteem is worthy of keeping a barrier to uncounted newcomers of the future. The Commission is not chartered to provide emotional needs of a minority group who once met old standards and practices in United States amateur radio.

Morse Code Skill as a Necessity to Maintain High Standards of Homeland Security or of Providing Response During Times of Natural Disaster

17. That reason is one of the original *morse myths* born during ancient times when radio was new and embraced by the maritime world as a life saving tool. Morse code, by itself, cannot save lives; it once did but few are alive today when it enable such life saving. During the Attack on America of 11 September 2001, there is *no media report* of any case of morse code saving lives over and above any other mode of radio, any radio service.¹⁶ The international maritime world adopted the Global Marine Distress and Safety System (GMDSS) using automated message transmission to communications satellites several years ago. The United States Coast Guard has stopped monitoring the old 500 KHz radiotelegraph distress and safety system also several years ago.

¹⁴ These *tones* have repetition frequencies below 100 Hz and can be sent simultaneously with voice information. The entire Condor Net of California-Nevada, an early pioneer in repeater networking is controlled by such sub-audible tones, stretches from mid- to southern California and on into parts of Nevada, has been in operation for years.

¹⁵ This commenter began HF radio operation in the United States Army Signal Corps in early 1953. A personal narrative of that assignment is at <http://kauko.hallikainen.org/history/equipment/stations/My3Years.pdf>.

¹⁶ One reason was that the attack happened so quickly that the slowness of morse code communications would have been way overloaded for throughput. In New York City, the first responders continued to use their voice radios in and around the World Trade Center. In Washington, DC, the military used various voice and data modes to direct both inside and outside rescue at the Pentagon. Across the nation, voice, data, and imagery was used to stop all air carrier flights as soon as the attacks had happened. Regardless of the skill of expert telegraphers, on-off manual morse keying is still *slow* in conveying communication. Some hurriedly put-in-place amateur radio networks did aid in *some* health and welfare messaging for victims but did not directly save any lives from that attack.

18. During the 2005 hurricane Katrina and Rita events attacking the Gulf States of the United States, there was ***no media report*** of any case of morse code saving lives over and above any other mode of radio, any radio service.¹⁷ That has been the usual case of every preceding natural disaster in the United States. In actual emergencies, the existing infrastructure has survived extreme winds and continued to operate. That infrastructure is designed and built to withstand high winds and other storm effects. They have design standards that must be accepted. Amateur radio equipment, regardless of the mode employed is ***not required to meet professional standards for surviving extreme storm conditions***. Assuming that amateur radio hobby installations survive and that robust commercial-government radio installations do not survive is irrational. Very little, if any, amateur radio equipment is submersible or can operate, complete with functional antennas, in 150 K winds.

19. An oft-cited myth is that *morse code* (on-off keying mode) has greater signal strength efficiency and therefore can reach out farther (in radio distance) than other modulations. Therefore, the morse proponents claim, say such mode ability is *needed*. This is egregious and misleading since the necessary distances normally required to *call for help* are usually less than a hundred miles.¹⁸ In urban areas the distances required for communications involves a few miles for First Responders; those are better handled by handheld or pack-strapped VHF/UHF transceivers. There is no rational reason to *work DX* thousands of miles distant in order to call for help from a couple hundred miles away.

20. The alleged *necessity* to operate morse code when faced with terrorist attack or other on-shore homeland security danger is irrational. International Morse Code is ***not any form of cryptographic technique to keep amateur communications from being intercepted***. It is open, known, and a *code* only in the reference of its representation of characters in the English alphabet. Homeland Security agents are equipped with higher-frequency radio transceivers, some with built-in *communications security* cryptographic sub-systems such as was pioneered in the United States Army SINCGARS family that begin operational life in 1989 in Korea.¹⁹

¹⁷ Hurricane Katrina struck the New Orleans vicinity with Category 4 winds of strength sufficient to damage levees in New Orleans, flooding much of that city. While the commercial infrastructure was damaged and parts of it under water, the First Responders of aid and life-saving were not radio amateurs using morse code mode radio equipment. Those that rode out the storm in the city used whatever they had for communications, some of which were conventional VHF and UHF handheld transceivers or what landline telephone communications survived. Hurricane Rita hit different parts of the Gulf States with only slightly less damage. In no case was there any media report of some morse code mode radio over and above any other radio mode for life-saving operations or aiding rescue workers. Amateur radio networks were put into operation to carry health and welfare messages for victims that survived but none have been reported to date as actual life-saving messaging.

¹⁸ Procedure in United States military land-forces radio is to utilize NVIS or *Near Vertical Incidence Skywave* propagation out to 300 miles on HF and low VHF for direct land location to land location. That technique, known pejoratively to amateurs as *cloud burning*, involves a high-angle bounce off the ionosphere. That has been standard procedure in the United States Army for over two decades. My figure of *100 miles* is an approximation of maximum necessary communications range of the last few years and involves hurricanes, floods, wildfires, earthquakes, and tsunamis affecting United States and its possessions. NVIS techniques were pioneered by the German Army in their 1943 North African desert campaign.

¹⁹ SINCGARS, an acronym for SINgle Channel Ground Air Radio System, is low VHF in frequency range, has optional frequency-hopping selection, has optional voice/data encryption of the digitized voice and digital data being sent. The frequency-hopping and communications security encryption has now become standardized with the latest models made by Harris Corporation for the United States Marine Corps, a handheld transceiver called the *Falcon III*. The combination of frequency hopping and modulation encryption makes it most difficult to intercept, let alone pinpoint for direction finding purposes. There are other communications security methods now in use, both in government and commercial radio services. *Morse code* is ***not*** one of them.

Morse Code Skill Must Be Preserved In Perpetuity By Retaining Morse Tests in Licensing

21. There is no rational reason to retain code testing in license exams in perpetuity because it has *always been in the United States amateur radio regulations*. Neither is it rational to presume that all Amateur Extras are the *keepers* of old, outdated, traditional ways of communicating. There is no requirement in Part 97, Title 47 C.F.R. that such *keeping* is necessary nor are there guarantees that such Amateur Extras will *pass any of it on* to the *lesser classes*. It is both disingenuous and egregious that Amateur Extra license class testing *must retain* that morse code test just because they have always been required to do so in the past. The technology of radio communications has advanced by many orders of magnitude since it was first demonstrated 109 years ago and the United States amateur radio regulations permit only a few of those techniques allocated to radio amateurs. It would be better to allow the spirit of the Commission's definition of *advancing the state of the radio art* to be operative rather than the ultra-conservative viewpoint of steadfastly holding the status quo as desired by the self-styled elite of long-time United States amateur radio licensees.

SUMMARY

Twenty-one separate opinions of the 508 Commenters desiring the retention of the morse code test for the *highest class* (Amateur Extra) have been shown to be false, misleading, or egregious. There is no reason to retain the morse code test in Part 97, Title 47 C.F.R. except possibly to make the already-licensed Amateur Extras feel good about their accomplishments at the expense of uncountable future newcomers. Morse code skill can be optionally learned, practiced, and used on United States amateur radio bands without requiring any morse code test for any class license. All allocated modes for all United States amateur radio licensees are optional to use today. ***Option is not a failure.***

A Thank You

I wish to thank the Commission for permitting a private citizen of the United States, one who holds no amateur radio license, to comment on regulations specifically governing getting into United States amateur radio.

Leonard H. Anderson

Retired (from regular hours) Electronics Design Engineer
Life Member, Institute of Electrical and Electronic Engineers
Veteran, United States Army 1952 to 1960 (Signal Corps), Honorable Discharge 1960
General Radiotelephone (Commercial) Radio Operator license transferred from a First Class Radiotelephone
(Commercial) Radio Operator License first obtained in March, 1956, and kept renewed.
Former contributor to and then Associate Editor at *Ham Radio* magazine prior to 1990.

FILINGS on WT Docket 05-235 as of 28 Oct 05, Beginning* 20 Jul 05:

Date	TOTAL	Indeterminate	Against	FOR	Extra Only	
15 Jul	1	-	-	1	-	
20 Jul	3	-	-	3	-	
21 Jul	28	-	10	17	1	
22 Jul	27	4	8	14	1	
	(59)	(4)	(18)	(35)	(2)	sub-total
25 Jul	92	9	20	54	9	
26 Jul	11	-	1	10	-	
27 Jul	7	-	2	2	3	
28 Jul	10	-	2	7	1	
29 Jul	17	2	7	7	1	
	(196)	(15)	(50)	(115)	(16)	sub-total
1 Aug	116	-	31	78	7	
2 Aug	143	6	36	83	18	
3 Aug	129	2	31	73	23	
4 Aug	90	3	27	52	8	
5 Aug	84	3	30	40	11	
	(758)	(29)	(205)	(441)	(83)	sub-total
8 Aug	459	34	136	221	68	
9 Aug	101	3	34	45	19	
10 Aug	51	3	14	29	5	
11 Aug	49	1	9	32	7	
12 Aug	39	5	5	20	9	
	(1457)	(75)	(403)	(788)	(191)	sub-total
15 Aug	158	8	42	81	27	
16 Aug	34	1	9	19	5	
17 Aug	33	3	5	20	6	
18 Aug	46	7	6	27	6	
19 Aug	27	1	9	15	2	
	(1755)	(96)	(474)	(950)	(236)	sub-total
22 Aug	116	11	33	52	20	
23 Aug	20	2	10	6	2	
24 Aug	18	-	9	7	2	
25 Aug	9	-	4	4	1	
26 Aug	11	-	5	3	3	
	(1929)	(108)	(535)	(1022)	(264)	sub-total
29 Aug	45	3	21	12	9	
30 Aug	6	1	2	2	1	
31 Aug	57	4	19	30	4	
1 Sep	82	3	26	33	20	
2 Sep	57	8	12	25	12	
3 Sep	4	-	2	2	-	
4 Sep	3	-	-	3	-	
	(2183)	(127)	(617)	(1129)	(310)	sub-total
6 Sep	64	6	19	29	10	

7 Sep	11	2	3	5	1	
8 Sep	16	2	6	5	3	
9 Sep	15	2	4	6	3	
10 Sep	3	-	1	2	-	
	(2292)	(139)	(650)	(1176)	(327)	sub-total
12 Sep	24	1	7	12	4	
13 Sep	18	-	5	9	4	
14 Sep	11	1	3	5	2	
15 Sep	15	3	3	5	4	
16 Sep	13	1	4	7	1	
17 Sep	1	-	1	-	-	
	(2374)	(145)	(673)	(1214)	(342)	sub-total
19 Sep	30	1	12	16	1	
20 Sep	10	2	4	2	2	
21 Sep	10	-	3	7	-	
22 Sep	12	2	5	4	1	
23 Sep	8	1	2	5	-	
	(2444)	(151)	(699)	(1248)	(346)	sub-total
26 Sep	19	2	3	10	4	
27 Sep	7	-	1	5	1	
28 Sep	3	1	-	1	1	
29 Sep	4	-	2	1	1	
30 Sep	6	1	-	3	2	
	(2483)	(155)	(705)	(1268)	(355)	sub-total
3 Oct	21	2	8	9	2	
4 Oct	11	1	2	7	-	
5 Oct	7	1	1	3	2	
6 Oct	6	-	1	5	-	
7 Oct	4	1	-	3	-	
	(2532)	(160)	(717)	(1295)	(359)	sub-total
11 Oct	31	1	13	13	4	
12 Oct	9	1	3	3	2	
13 Oct	6	-	2	3	1	
14 Oct	10	1	3	5	1	
	(2588)	(164)	(738)	(1319)	(367)	sub-total
17 Oct	24	4	4	11	5	
18 Oct	12	4	4	2	2	
19 Oct	6	1	2	2	1	
20 Oct	15	1	3	7	4	
21 Oct	11	-	5	3	3	
	(2656)	(174)	(756)	(1344)	(382)	sub-total
24 Oct	27	2	7	11	7	
25 Oct	217	6	92	80	40	
26 Oct	204	14	61	76	53	
27 Oct	70	4	22	22	22	
28 Oct	25	3	11	7	4	
Total	3199	202	949	1540	508	
percentage [of 2997]		-	31.66	51.38	16.95	

Separate Filings tally beginning on day of Notice in Federal Register

31 Aug	57	4	19	30	4	
1 Sep	82	3	26	33	20	
2 Sep	57	8	12	25	12	
3 Sep	4	-	2	2	-	
4 Sep	3	-	-	3	-	
6 Sep	63	6	18	29	10	
7 Sep	11	2	3	5	1	
8 Sep	16	2	6	5	3	
9 Sep	15	2	4	6	3	
10 Sep	3	-	1	2	-	
12 Sep	24	1	7	12	4	
13 Sep	18	-	5	9	4	
14 Sep	11	1	3	5	2	
15 Sep	15	3	3	5	4	
16 Sep	13	1	4	7	1	
17 Sep	1	-	1	-	-	
	(393)	(33)	(113)	(178)	(68)	sub-total
19 Sep	30	1	12	16	1	
20 Sep	10	2	4	2	2	
21 Sep	10	-	3	7	-	
22 Sep	12	2	5	4	1	
23 Sep	8	1	2	5	-	
26 Sep	19	2	3	10	4	
27 Sep	7	-	1	5	1	
28 Sep	3	1	-	1	1	
29 Sep	4	-	2	1	1	
30 Sep	6	1	-	3	2	
	(502)	(43)	(146)	(232)	(81)	sub-total
3 Oct	21	2	8	9	2	
4 Oct	11	1	3	7	-	
5 Oct	7	1	1	3	2	
6 Oct	6	-	1	5	-	
7 Oct	4	1	-	3	-	
11 Oct	31	1	13	13	4	
12 Oct	9	1	3	3	2	
13 Oct	6	-	2	3	1	
14 Oct	10	1	3	5	1	
	(607)	(51)	(180)	(283)	(93)	sub-total
17 Oct	24	4	4	11	5	
18 Oct	12	4	4	2	2	
19 Oct	6	1	2	2	1	
20 Oct	15	1	3	7	4	
21 Oct	10	-	4	3	3	
24 Oct	27	2	7	11	7	
25 Oct	217	5	92	80	40	
26 Oct	204	14	61	76	53	
27 Oct	70	4	22	22	22	
28 Oct	25	3	11	7	4	
Total	1217	89	390	504	234	

percentage [of 1128] - 34.57 44.68 20.74

NEW are those from 31 Aug 05 and following, from the Notice date of 31 Aug in the Federal Register, official end of Comments to be 31 Oct 05 with official end of Replies to Comments 14 Nov 05.

* NPRM FCC 05-143 is in the ECFS on 15 Jul 05, counted as "For."

Notes:

Indeterminate column has duplicates by same individual, joke entries, comments not having anything to do with NPRM, two foreign citizens, or those who were suggestion some form of new petition not part of the NPRM.

Against column are those who are unambiguously against removing any form of code testing.

FOR column are those who are unambiguously for the NPRM and removal of code testing, all classes.

Extra-Only column has those who wish to retain code test for "highest class" (Amateur Extra) but allow deletion of code test for "lower" classes.

Percentages are calculated based on Totals minus Indeterminate filings.

This tabulation correct and corresponds (on totals) with ECFS as of 2 PM EDT on Oct 29.

Calendar days are those ending at midnight, eastern time zone on day given.

29 Oct 05