



Thursday
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Part VI

**Federal Trade
Commission**

**16 CFR Part 432
Trade Regulation Rule Relating to Power
Output Claims for Amplifiers Utilized in
Home Entertainment Products; Proposed
Rule**

FEDERAL TRADE COMMISSION

16 CFR Part 432

Trade Regulation Rule Relating to Power Output Claims for Amplifiers Utilized in Home Entertainment Products

AGENCY: Federal Trade Commission.
ACTION: Advance Notice of Proposed Rulemaking.

SUMMARY: The Federal Trade Commission ("Commission" or "FTC"), has completed its regulatory review of the Rule relating to Power Output Claims for Amplifiers Utilized in Home Entertainment Products (the "Amplifier Rule" or the "Rule"). Pursuant to that review, the Commission concludes that the Amplifier Rule continues to provide benefits to consumers and firms. The regulatory review record also suggests that certain substantive amendments to the Rule may be appropriate, and could reduce compliance obligations without lessening the protection provided by the Rule. Accordingly, the Commission seeks comment on whether it should initiate a rulemaking proceeding to amend the Rule to: reduce the preconditioning power output requirement from one-third of rated power to a lower figure, such as one-eighth of rated power; exempt sellers who make power output claims in media advertising from the requirement to disclose total rated harmonic distortion and the associated power bandwidth and impedance ratings; and clarify the manner in which the Rule's testing procedures apply to self-powered subwoofer-satellite combination speaker systems. The regulatory review record also suggests that a non-substantive technical amendment be made to the Rule to clarify the Rule's applicability to self-powered loudspeakers for use in the home. A Notice of Final Action announcing such amendment is published elsewhere in this **Federal Register**.

DATES: Written comments will be accepted until September 8, 1998.

ADDRESSES: Comments should be directed to: Secretary, Federal Trade Commission, Room H-159, Sixth and Pennsylvania Ave., NW., Washington, DC 20580. Comments about the Amplifier Rule should be identified "16 CFR Part 432—Comment."

FOR FURTHER INFORMATION CONTACT: Dennis Murphy, Economist, Division of Consumer Protection, Bureau of Economics, (202) 326-3524 or Robert E. Easton, Esq., Special Assistant, Division of Enforcement, Bureau of Consumer

Protection, (202) 326-3029, Federal Trade Commission, Washington, DC 20580.

SUPPLEMENTARY INFORMATION:

Part A—General Background Information

The Commission is publishing this notice pursuant to Section 18 of the FTC Act, 15 U.S.C. 57a *et seq.*, the provisions of Part 1, Subpart B of the Commission's Rules of Practice, 16 CFR 1.7, and 5 U.S.C. 551 *et seq.* This authority permits the Commission to promulgate, modify, and repeal trade regulation rules that define with specificity acts or practices that are unfair or deceptive in or affecting commerce within the meaning of Section 5(a)(1) of the FTC Act, 15 U.S.C. 45(a)(1).

The Amplifier Rule was promulgated on May 3, 1974 (39 FR 15387), to assist consumers in purchasing power amplification equipment for home entertainment purposes by standardizing the measurement and disclosure of various performance characteristics of the equipment. On April 7, 1997, the Commission published a **Federal Register** Notice ("FRN") seeking comment on the Rule as part of an ongoing project to review all Commission rules and guides to determine their current effectiveness and impact (62 FR 16500). This FRN sought comment on the costs and benefits of the Rule, what changes in the Rule would increase its benefits to purchasers and how those changes would affect compliance costs, and whether technological or marketplace changes have affected the Rule. The FRN also sought comment on issues related to the Rule's product coverage, test procedures, and disclosure requirements.

The FRN elicited six written comments.¹ Two commenters expressed continuing support for the Rule because it has given consumers a standardized method of comparing the power output of audio amplifiers.² One commenter noted that industry use of this standardized testing method has created a level playing field among

¹ The commenters were: Phillips Sound Labs [Phillips](1); Fultron Car Audio [Fultron](2); Klipsch Audio and Home Theater Products [Klipsch](3); Miller & Kreisel Sound Corporation [MK](4); Consumer Electronics Manufacturers Association [CEMA](5); and Labtec Multimedia Speakers [Labtec](6). The comments are cited as "[name of commenter], Comment (designated number), p. ..." All Rule review comments are on the public record and are available for public inspection in the Public Reference Room, Room 130, Federal Trade Commission, 6th and Pennsylvania Ave., NW., Washington, DC, from 8:30 a.m. to 5:00 p.m., Monday through Friday, except federal holidays.

² CEMA, (5), p. 2; Fultron, (2), p. 1.

competitors.³ Another commenter stated that the rule may initially have caused an increase in product prices, but ultimately manufacturers have responded by making better products at more affordable prices.⁴ None of the four remaining commenters stated that the costs of the Rule exceeded its benefits, or that there were any other reasons why the Rule should be rescinded. On the basis of this review, the Commission has decided that the Rule provides benefits to consumers and industry and that there is a continuing need for the Rule.

The record also suggests that there have been technological and marketplace changes that may warrant modifications to the Rule. Accordingly, the Commission is publishing this ANPR seeking public comment on whether it should initiate a rulemaking by publishing a notice of proposed rulemaking ("NPR") under section 18 of the FTC Act, 15 U.S.C. 57a. The proceeding would address whether the Commission should (1) Amend certain required test procedures that may impose unnecessary costs on manufacturers; (2) eliminate certain disclosure requirements in media advertising; and (3) clarify testing procedures for self-powered speakers.

Part B—Objectives the Commission Seeks To Achieve and Possible Regulatory Alternatives*1. Modifications to the Amplifier Rule Preconditioning Requirements*

a. Background

Section 432.3(c) of the Rule specifies that an amplifier must be preconditioned by simultaneously operating all channels at one-third of rated power output for one hour using a sinusoidal wave at a frequency of 1,000 Hz. The prior FRN questioned whether this preconditioning requirement should be modified. One comment stated that the Rule's preconditioning requirements do not reflect normal use conditions in the home and are leading some manufacturers to design amplifiers with excessively large and costly heat sinks, or to publish overly conservative power ratings.⁵ Specifically, the commenter maintained that operating a typical amplifier at one-third of rated power for an hour represents a worst-case condition in terms of heat dissipation—one that exceeds the thermal stress that would be placed on the amplifier when operating at full rated power. The

³ CEMA, (5), p. 3.

⁴ Fultron, (2), p. 1.

⁵ CEMA, (5), p. 3.

commenter states that § 432.3(c) is particularly burdensome for high power solid-state amplifiers during performance tests into 4 ohm loads. The commenter maintained that, as a result, many manufacturers must either refrain from publishing 4-ohm power specifications, publish 4-ohm power specifications that are lower than those the consumer could achieve in typical home use, or provide otherwise unnecessary heat sink capacity sufficient to protect the amplifier during preconditioning for ratings at higher and more realistic power output levels.⁶ The commenter also noted that existing industry standard test methods, such as UL (Underwriters Laboratories) Standards 1492 and 6500, specify that amplifiers be preconditioned at one-eighth of rated power.⁷

b. Objectives and Regulatory Alternatives

The record suggests that § 432.3(c) should be amended to reflect more realistically the maximum thermal stress that amplifiers are likely to encounter during actual in-home use. Accordingly, the Commission seeks comment on whether the Commission should amend the rule to reduce the preconditioning power output requirement from one-third of rated power to a lower figure, such as one-eighth of rated power.

2. Amendment to Required Disclosures Section of the Amplifier Rule

a. Background

Section 432.2 of the Rule requires disclosure of maximum harmonic distortion, power bandwidth, and impedance whenever a power claim is made in any advertising, including advertising by retail stores, direct mail merchants, and manufacturers. In the FRN, the Commission solicited comment on whether there was a continuing need for the Rule to require disclosure of maximum harmonic distortion in media advertising, or whether such disclosure would be required only when maximum rated harmonic distortion exceeds a specified threshold level, such as one percent. In addition, the Commission solicited comment on whether certain types of advertising, such as that commonly used by retail stores to present basic price and feature information in a limited amount of space, should be exempted from some or all of the power bandwidth, distortion, and impedance disclosures.

The one comment that addressed this issue stated that total harmonic distortion below one percent has little meaning to consumers because it is inaudible, and it recommended that the Commission consider an exemption from disclosure of maximum rated harmonic distortion when rated distortion is at or below one percent.⁸

The Commission's own review of published specifications for currently marketed power amplification equipment for use in the home indicates that total harmonic distortion ratings in excess of one percent are very rare. The few exceptions are associated primarily with expensive vacuum tube power amplifiers occupying a highly specialized segment of the high fidelity market.⁹

b. Objectives and Regulatory Alternatives

It appears that improvements in amplifier technology since the Rule's promulgation in 1974 have reduced the benefits to consumers of disclosure in media advertising of total rated harmonic distortion. It also appears that an insufficient number of consumers would understand the meaning and significance of the remaining triggered disclosures concerning power bandwidth and impedance to justify their publication in media advertising. Accordingly, the Commission seeks comment on whether the Commission should initiate a rulemaking to amend the Rule to exempt media advertising, including advertising on the Internet, from disclosure of total rated harmonic distortion and the associated power bandwidth and impedance ratings when a power output claim is made.¹⁰

In order to ensure that consumers would not be misled by noncomparable power output claims that were based on differing impedance ratings, the

⁸*Id.* at 6.

⁹ Commission staff consulted the October, 1997 issue of *Audio* magazine to obtain the manufacturer's rating of total harmonic distortion for all receivers and separate power amplifiers included in the magazine's annual equipment directory. The published ratings show no receivers with total harmonic distortion exceeding one percent. Among separate power amplifiers, 11 models from 5 manufacturers, out of approximately 1000 models from nearly 200 manufacturers, carry total harmonic distortion ratings exceeding one percent. These 11 models range in price from \$550 to \$12,345. The average price of the 11 models is about \$3,700.

¹⁰ The record indicates, however, that maximum harmonic distortion ratings in excess of one percent are not sufficiently prevalent that the use of this figure as a threshold to govern disclosure requirements in media advertising would be meaningful. Thus, the suggested amendment does not limit the exemption to a maximum harmonic distortion rating of one percent or less, as previously proposed.

exemption for media advertising would be conditioned on the requirement that the primary power output specification disclosed in any media advertising be the manufacturer's rated minimum sine wave continuous average power output, per channel (such as might be true for certain amplifiers used in self-powered speaker systems), at an impedance of 8 ohms, or, if the amplifier is not designed for an 8-ohm load impedance, at the impedance for which the amplifier is primarily designed.

All other power output claims currently subject to the Rule, however, including those appearing in manufacturer specification sheets that are either in print or reproduced on the Internet, would continue to trigger the requirement that the seller provide the full complement of disclosures concerning power bandwidth, maximum harmonic distortion, and impedance, so that interested consumers could obtain this information prior to purchase.

3. Rule Coverage of Self-Powered Loudspeakers for Use in the Home

a. Background

When the FRN was published, the Rule did not specifically mention self-powered speakers as an example of sound amplification equipment manufactured or sold for home entertainment purposes. In the FRN, the Commission solicited comment on its tentative conclusion that the Rule covers: (A) self-powered speakers for use with (i) home computers, (ii) home sound systems, (iii) home multimedia systems; and (B) other sound power amplification equipment for home computers. The Commission also solicited comment on additional issues related to coverage of self-powered speakers under the Rule, including whether the standard test conditions set out in the Rule are appropriate for such equipment.

In a Notice of Final Action published separately in this **Federal Register**, the Commission discusses the comments relating to the threshold question of Rule coverage of self-powered speakers, and issues a non-substantive amendment clarifying that the Rule applies to self-powered loudspeakers for use in the home.

The Commission received two comments that addressed the additional issue of whether or not the Rule's standard test conditions are appropriate for self-powered speakers. The principal trade association of the U.S. electronics industry (CEMA) supported applying the Rule to self-powered speakers. CEMA recommended, however, that the

⁶ *Id.* at 4-5.

⁷ *Id.* at 4.

Rule be amended at a future date to incorporate a standard for measuring the volume of sound that a powered speaker can deliver into the listening environment, rather than the power that the amplifier can deliver to the speaker. This commenter stated that a voluntary industry standard for measuring the loudness of powered speakers was currently under development and could be incorporated into the Rule.¹¹

The second commenter (Labtec) expressed concern that the Rule's current testing protocol is not compatible with combination speaker systems consisting of two or more amplifiers. For this reason, the commenter proposed that the Commission amend the Rule to specify a separate testing protocol and disclosure format for three-piece multimedia speaker systems comprised of a subwoofer and two or more satellite speakers that are powered by separate amplifiers that share a common power supply.¹²

According to this commenter, the subwoofer and satellite amplifiers in such combination systems are usually of different wattage per channel and are dedicated to different frequency bandwidths. The commenter stated further that if the Rule were interpreted to mean that power tests for these systems be conducted over the entire frequency bandwidth from 20Hz to 20kHz, with all channels of all amplifiers driven simultaneously, limitations in the common power supply would lower the maximum power output of the subwoofer and satellite amplifiers at test frequencies near the crossover frequency, where both sets of amplifiers would be operating near full capacity.¹³

The commenter also stated that the most conservative industry practice today is to measure the subwoofer and satellite amplifiers separately, and to disclose the maximum per-channel continuous power output of each amplifier over the bandwidth for which it was designed to operate. In this test protocol, the commenter stated, the two channels of the satellite amplifier are driven simultaneously, but without the subwoofer amplifier in operation. Similarly, the test for the subwoofer amplifier are conducted alone, with the satellite amplifier at idle. These ratings are then disclosed in a format such as: "20 watts RMS subwoofer, 10 watts RMS satellite (5w + 5w)." According to the commenter, such power ratings overstate somewhat the maximum per-

channel power capability of each amplifier when all channels of both amplifiers are driven simultaneously at the crossover frequency.¹⁴

The commenter recommended that the Rule be amended to specify that power rating tests for combination subwoofer-satellite power speaker systems be conducted at the crossover frequency with all channels of all amplifiers operating simultaneously. The comment also suggested that manufacturers be allowed to publish the combined power output of the subwoofer and satellite amplifiers at this frequency, together with the individual per-channel output of each amplifier, e.g., "25 watts total RMS power (17w+4w+4w) into 4 ohms @ 150 Hz with less than 1% THD."¹⁵

b. Objectives and Regulatory Alternatives

As discussed in the Notice of Final Action published separately in this **Federal Register**, the Commission has concluded that Rule coverage of self-powered speaker equipment for use in the home should not be delayed until an industry standard is developed for measuring and disclosing the volume of sound that such speaker systems can produce in the listening environment.

The Commission has also tentatively determined on the basis of the Rule review record that § 432.2(a)(2) of the Rule does not currently provide adequate guidance concerning the manner in which power ratings for combination subwoofer and satellite self-powered speaker systems should be conducted. Specifically, it may be insufficiently clear whether the Rule's stipulation that power measurements be made "with all associated channels fully driven to rated per channel power" requires manufacturers to conduct power ratings with all channels of both the subwoofer and satellite amplifiers driven simultaneously, or whether the Rule allows manufacturers of such equipment to test the subwoofer and satellite amplifiers separately.

The Commission is not prepared at this time to recommend that the Rule be amended to specify that per-channel power ratings for self-powered combination subwoofer and satellite speaker systems be conducted at the crossover frequency with all channels of all amplifiers operating simultaneously, as proposed by Labtec. The Commission does not have sufficient evidence to conclude that in-home use, under even strenuous conditions, typically would place maximum continuous power

demands simultaneously on both the subwoofer and satellite amplifiers at the crossover frequency. Rather, such demands are more likely to occur in portions of the audio spectrum that would be assigned primarily either to the subwoofer amplifier or the satellite amplifier.

The Commission therefore believes that the most appropriate application of the Rule to self-powered subwoofer-satellite combinations would be to require simultaneous operation only of those channels dedicated to the same portion of the audio frequency spectrum. Accordingly, the Commission seeks comment on whether to initiate a rulemaking proceeding to clarify the Amplifier Rule by amending § 432.2 to include a note stating that, for self-powered combination speaker systems that employ two or more amplifiers dedicated to different portions of the audio frequency spectrum, only those channels dedicated to the same audio frequency spectrum need be fully driven to rated per channel power under paragraph 432.2(a)(2).

4. Rule Coverage of Automotive Sound Amplification Products

a. Background

The scope of the Amplifier Rule currently is limited to sound power amplification equipment intended for home entertainment purposes. The Rule does not apply to automotive sound amplification products. The Commission noted that promotional materials for these products appear to contain power output claims based on a variety of rating procedures. The Commission requested comment on the types of power rating and disclosure protocols currently used by manufacturers of automotive sound amplification products, and whether any of the sound power claims being made in connection with the sale and advertising of such equipment inhibit meaningful comparisons of performance attributes by consumers. The Commission also solicited examples of such claims and information establishing the scope and seriousness of the problem. Finally, the Commission asked for comment on what, if any, form of action was needed to increase the ability of consumers to make meaningful product comparisons in this industry.

The Commission received three comments on these issues. The commenters stated that power claims made for automotive sound amplification equipment frequently are higher than the corresponding RMS continuous power rating specified in the

¹¹ CEMA, (5), p. 7.

¹² Labtec, (6), p. 4.

¹³ *Id.*

¹⁴ *Id.* at 3.

¹⁵ *Id.* at 4.

Rule. The commenters recommended that the Rule be extended to cover automotive sound amplification equipment.¹⁶ None of the commenters, however, provided any specific examples of claims that might mislead consumers and lead to poor purchase decisions. Nor was any information provided on the prevalence or technical basis for claims that differ from the corresponding continuous power output rating used in the Rule. Finally, no evidence was provided indicating that the various power ratings currently in use are inhibiting meaningful comparisons by consumers.

Commission staff, prior to the issuance of the FRN, conducted a brief examination of current power output claims for automotive stereo equipment.¹⁷ This examination suggests that manufacturers of original equipment and aftermarket dashboard radio-cassette or radio-CD players generally employ a rating system that yields a "peak" power output specification approximately twice as high as the continuous rating. Staff found no evidence, however, that this rating system misrepresents the relative power output of competing amplifiers, or that any confusion resulting from the system has led to a breakdown in the correspondence between the prices charged for competing amplifiers and their power output capabilities. Staff's inquiry also indicates that the FTC continuous rating protocol is the most common method of measuring the power output of specialized and generally more expensive aftermarket automotive sound reproduction equipment, such as separate power amplifiers and powered subwoofers.

b. Objectives and Regulatory Alternatives

The Rule review record suggests that certain power output ratings for automotive sound amplification equipment may differ from the ratings that would be obtained using a continuous power testing procedure similar to that specified in the Rule. As indicated, the record contains no evidence regarding whether such power output claims could impede the ability of consumers to make meaningful comparisons, or that the various ratings systems currently in use have significantly reduced the

correspondence between the prices charged for competing auto sound amplification equipment and the power output of this equipment. In addition, staff's inquiry did not indicate that consumers may currently pay more for amplification equipment that is actually less powerful, or no more powerful, than competing equipment advertised with power disclosures that are derived using more rigorous test procedures. Thus, the record and Commission staff's inquiry uncovered no basis for concluding that consumers currently are unable to make meaningful comparisons in the automotive sound reproduction market. The Commission has concluded, therefore, that the existence of dissimilar power output rating methods by itself does not provide a sufficient showing of probable consumer injury to justify again seeking comment on this issue in this APNR.

Part C—Request for Comments

Members of the public are invited to comment on any issues or concerns they believe are relevant or appropriate to the Commission's consideration of whether to publish an NPR initiating a rulemaking proceeding to consider the previously discussed proposed amendments to the Amplifier Rule. The Commission requests that factual data upon which the comments are based be submitted with the comments. In addition to the issues raised above, the Commission solicits public comment on the specific questions identified below. These questions are designed to assist the public and should not be construed as a limitation on the issues on which public comment may be submitted. After considering the responses to this ANPR, if the Commission decides to commence a rulemaking proceeding, it must, under the Regulatory Flexibility Act, 5 U.S.C. 601-12, determine whether the proposed amendments would have a significant impact on a substantial number of small businesses. The Commission includes in this ANPR questions that will assist it in making such analysis.

The written comments submitted will be available for public inspection in accordance with the Freedom of Information Act, 5 U.S.C. 552, and Commission regulations on normal business days from 8:30 a.m. to 5:00 p.m. at the Federal Trade Commission, 6th St. and Pennsylvania Ave., N.W., Room 130, Washington, D.C. 20580.

Questions

A. Section 432.3(c) Preconditioning Requirement

(1) Should the Commission amend the Rule to reduce the preconditioning power output requirement from one-third of rated power to a lower figure, such as one-eighth of rated power?

B. Exemption From Required Disclosures

(2) Have post-1974 improvements in amplifier design and consequent reductions in typical levels of total harmonic distortion reduced the benefit to consumers of disclosure of rated total harmonic distortion in media advertising that contains a power output claim?

(3) Should the Commission amend the Rule to exempt disclosure of total rated harmonic distortion and the associated power bandwidth and impedance ratings when a power output claim is made in media advertising?

(4) If the Commission amends the rule to allow the above exemption, should this exemption be conditioned on the requirement that the primary power output specification disclosed in any media advertising be the manufacturer's rated minimum sine wave continuous average power output, per channel, at an impedance of 8 ohms, or, if the amplifier is not designed primarily for an 8-ohm impedance, at the impedance for which the amplifier is primarily designed?

C. Rule Coverage of Self-Powered Loudspeakers for Use in the Home

(5) Should the Commission clarify the Rule to specify that, for self-powered combination speaker systems that employ two or more amplifiers dedicated to different portions of the audio frequency spectrum, only those channels dedicated to the same audio frequency spectrum need be fully driven to rated per channel power under § 432.2(a)(2)? If not, should the Commission amend the Rule to specify that per-channel power ratings for such combination speaker systems be conducted at the crossover frequency with all channels of all amplifiers operating simultaneously?

D. Economic Effect, If Any, of the Proposed Amendments

(6) What costs and benefits to consumers and businesses, including manufacturers, retailers, or other sellers, would accrue from each of the three proposed Rule amendments?

(7) Would any of the proposed Rule amendments have a significant

¹⁶ See Fulmer, (2), p. 1; Phillips, (1), p. 1; CEMA, (5), p. 9.

¹⁷ Staff's inquiry included visits to several area auto stereo dealers, an inspection of retailer ads in the Washington Post, and an analysis of power output specifications published in recent catalogues for Crutchfield, a large mail-order retailer of auto stereo equipment.

economic impact on a substantial number of small businesses?

(8) Can that impact be quantified?

List of Subjects in 16 CFR Part 432

Amplifiers, Electronic products, Home entertainment products, Trade practices.

Authority: 15 U.S.C. 41-58.

Benjamin I. Berman,

Acting Secretary.

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