It is further ordered, That respondents, for a period of one (1) year from the effective date of this order, shall provide each advertising agency utilized by respondents and each newspaper publishing company, television or radio station or other advertising media which is utilized by respondents to obtain leads for the sale of carpeting or floor coverings and other merchandise, with a copy of the Commission's News Release setting forth the terms of this order.

It is further ordered, That respondents shall forthwith distribute a copy of this order to each of their operating divisions.

It is further ordered, That the individual respondent named herein promptly notify the Commission of the discontinuance of his present business or employment and of his affiliation with a new business or employment. Such notice shall include respondent's current business address and a statement as to the nature of the business or employment in which he is engaged as well as a description of his duties and responsibilities.

It is further ordered, That respondents notify the Commission at least 30 days prior to any proposed change in the corporate respondent such as dissolution, assignment or sale resulting in the emergence of a successor corporation, the creation or dissolution of subsidiaries or any other change in the corporation which may affect compliance obligations arising out of the order.

It it further ordered, That the respondents herein shall within sixty (60) days after service upon them of this order file with the Commission a report in writing setting forth in detail the manner and form of their compliance with this order.

Issued: March 20, 1974.

By the Commission.

[SEAL] CHARLES A. TOBIN, *Secretary.*

[FR Doc.74-10169 Filed 5-2-74;8:45 am]

[Docket No. C-2497]

PART 13—PROHIBITED TRADE PRACTICES

Dance World, Inc., et al.

Subpart—Advertising falsely or misleadingly: § 13.10 *Advertising falsely or misleadingly;* § 13.155 *Prices;* 13.155–5 Additional charges unmentioned; 13.155–95 Terms and conditions; § 13.205 *Scientific or other relevant facts.* Subpart—Misrepresenting oneself and goods—Goods: § 13.1760 *Terms and conditions;*—Prices: § 131795 *Coverage or extras;* § 13.1778 *Additional costs unmentioned;* § 13.1823 *Terms and conditions.* Subpart—Offering unfair, improper and deceptive inducements to purchase or deal; § 13.2080 *Terms and conditions.*

(Sec. 6, 38 Stat. 721; (15 U.S.C. 46). Interprets or applies sec. 5, 38 Stat. 719, as amended; (15 U.S.C. 45) [Cease and desist order, Dance World, Inc. et al., Dallas and Richardson, Texas, Docket C-2497, Mar. 20, 1974])

In the Matter of Dance World, Inc., a Corporation, Dance World Richardson, Inc., a Corporation, and Ms. Phyllis Francis Klein, Individually and as an Officer of Said Corporations

Consent order requiring sellers of memberships in dance and recreation clubs located in Dallas and Richardson, Texas, among other things to cease misrepresenting the prices and terms and conditions of their memberships.

The order to cease and desist, including further order requiring report of compliance therewith, is as follows:

It is ordered, That respondents Dance World, Inc. and Dance World Richardson, Inc., corporations, their successors and assigns, and its officers and Phyllis Francis Klein, individually and as an officer, and respondents' agents, representatives and employees directly or through any corporation, subsidiary, division or other device, in connection with the advertising, offering for sale, and sale of dance club or social club memberships or services or any other services or products in commerce as "commerce" is defined in Federal Trade Commission Act, do forthwith cease and desist from:

1. Representing, directly or by implication that any memberships may be purchased in respondents' dance clubs without clearly and conspicuously disclosing the period of time to which the membership relates and,

2. Advertising any price without also clearly and conspicuously disclosing the terms and conditions of continuing a membership beyond the initial advertised period of membership.

It is further ordered, That the individual respondent named herein promptly notify the Commission of the discontinuance of her present business or employment and of her affiliation with a new business or employment. Such notice shall include respondent's current business address and a statement as to the nature of the business or employment in which she is engaged as well as a description of her duties and responsibilities.

It is further ordered, That in the event that respondent merges with another corporation or transfers all or a substantial part of its business or assets to any other corporation or to any other person, respondent shall require said successor or transferee to file promptly with the Commission a written agreement to be bound by the terms of this order; provided that if respondent wishes to present to the Commission any reasons why said order should not apply in its present form to said successor or transferee, it shall submit to the Commission a written statement setting forth said reasons prior to the consummation of said succession or transfer.

It is further ordered, That the respondent corporation shall forthwith distribute a copy of this order to each officer of the corporation, member of the board, organization manager, and each employee, now and in the future, involved in the writing or placement of advertising or sales.

It is further ordered, That respondents notify the Commission at least 30 days prior to any proposed change in the corporate respondent such as dissolution, assignment or sale resulting in the emergence of a successor corporation, the creation or dissolution of subsidiaries or any other change in the corporation which may affect compliance obligations arising out of the order.

It is further ordered, That the respondents herein shall within sixty (60) days after service upon them of this order, file with the Commission a report, in writing, setting forth in detail the manner and form in which they have complied with this order.

Issued: March 20, 1974.

By the Commission.

[SEAL] CHARLES A. TOBIN, *Secretary.*

[FR Doc.74-10168 Filed 5-2-74;8:45 am]

[Docket No. C-2509]

PART 13—PROHIBITED TRADE PRACTICES

Metro Passbook, Inc., and Richard Natow

Subpart—Advertising falsely or misleadingly: § 13.75 *Free goods or services;* § 13.155 *Prices;* 13.155–15 Comparative; 13.155–40 Exaggerated as regular and customary; 13.155–70 Percentage savings; 13.155–100 Usual as reduced, special, etc.; § 13.160 *Promotional sales plans;* § 13.240 *Special or limited offers;* § 13.260 *Terms and conditions.* Subpart—Failing to maintain records; § 13.1051 Failing to maintain records; 13.1051–20 Adequate; Subpart—Misrepresenting oneself and goods—Goods: § 13.1625 *Free goods or services;* § 13.1760 *Terms and conditions.* —Prices: § 13.1785 *Comparative;* § 13.1805 *Exaggerated as regular and customary;* § 13.1823 *Terms and conditions;* § 13.1825 *Usual as reduced or to be increased.* —Promotional sales plans: § 13.1830 *Promotional sales plans.* Subpart—Offering unfair, improper and deceptive inducements to purchase or deal: § 13.1925 *Coupon, certificate, check voucher, etc., deductions in price;* § 13.1955 *Free goods;* § 13.2000 *Limited offers or supply;* § 13.2080 *Terms and conditions.*

(Sec. 6, 38 Stat. 721; (15 U.S.C. 46). Interprets or applies sec. 5, 38 Stat. 719, as amended; (15 U.S.C. 45 [Cease and desist order, Metro Passbook, Inc., et al., Philadelphia, Pa., Docket C-2509, Mar. 28, 1974]

In the Matter of Metro Passbook, Inc. a Corporation, and Richard Natow, individually and as an Officer of Said Corporation

Consent order requiring a Philadelphia, Pa., seller of promotional coupons, among other things to cease misrepresenting the terms and conditions regarding the use of its coupons; misrepresenting the prices of its coupons as sale prices; failing to maintain adequate records substantiating its claims; and misrepresenting savings afforded to purchasers or that merchandise or services are "free."

The order to cease and desist, including further order requiring report of compliance therewith, is as follows:

It is ordered, That respondents Metro Passbook, Inc., a corporation, its successors and assigns, its officers and Richard Natow, individually and as an officer of said corporation and respondents' agents, representatives, and employees, directly or through any corporation, subsidiary, division, or other device, in connection with the advertising, offering for sale or sale of promotional coupons, or any other merchandise or service, in "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

1. Representing, directly or by implication, that through the use of respondents' promotional coupons the purchase of any item at participating restaurants entitles the buyer to any second item free of charge.

2. Representing, directly or by implication, that through the use of respondents' promotional coupons the purchase of any ticket at participating sport exhibitors entitles the buyer to any second ticket free of charge.

3. Representing, directly or by implication, that respondents' promotional coupons are accepted by participating theaters and other places of entertainment for any and all performances.

4. Representing, directly or by implication, that respondents' promotional coupons may be used at any and all times.

5. Representing, directly or by implication, that the number of restaurants or establishments that honor respondents' promotional coupons is greater than those that do in fact honor respondents' promotional coupons.

6. Using the word "Sale", or any other word or words of similar import or meaning not set forth specifically herein unless the price of such merchandise being offered for sale constitutes a reduction, in an amount not so insignificant as to be meaningless, from the actual bona fide price at which such merchandise was sold or offered for sale to the public on a regular basis by respondents for a reasonably substantial period of time in the recent, regular course of their business.

7. (a) Representing, directly or indirectly, orally or in writing, that by purchasing any of said merchandise or services, customers are afforded savings amounting to the difference between respondents' stated price and respondents' former price unless such merchandise or services have been sold or offered for sale in good faith at the former price by respondents for a reasonably substantial period of time in the recent, regular course of their business.

(b) Representing, directly or indirectly, orally or in writing, that by purchasing any of said merchandise or services, customers are afforded savings amounting to the difference between respondents' stated price and a compared price for said merchandise or services in respondents' trade area unless a substantial number of the principal retail outlets in the trade area regularly sell said merchandise or services at the compared price or some higher price.

(c) Representing, directly or indirectly, orally or in writing, that by purchasing any of said merchandise or services, customers are afforded savings amounting to the difference between respondents' stated price and a compared value price for comparable merchandise or services, unless substantial sales of merchandise of like grade and quality are being made in the trade area at the compared price or a higher price and unless respondents have in good faith conducted a market survey or obtained a similar representative sample of prices in their trade area which establishes the validity of said compared price and it is clearly and conspicuously disclosed that the comparison is with merchandise or services of like grade and quality.

8. Representing, directly or by implication, orally or in writing, that purchasers of respondents' merchandise will save any stated dollar or percentage amount without fully and conspicuously disclosing in immediate conjunction therewith, the basis for such savings representations.

9. Failing to maintain and produce for inspection or copying for a period of three (3) years, adequate records (a) which disclose the facts upon which any savings claims, sale claims and other similar representations as set forth in Paragraphs Six, Seven, and Eight of this order are based, and (b) from which the validity of any savings claims, sale claims and similar representations can be determined.

10. Representing, directly or indirectly, orally or in writing, that any price amount is respondents' regular price for any article of merchandise or services unless said amount is the price at which such merchandise or services have been sold or offered for sale by respondents for a reasonably substantial period of time in the recent, regular course of their business and not for the purpose of establishing fictitious higher prices upon which a deceptive comparison or a "free" or similar offer might be based.

11. Representing, directly or indirectly, orally or in writing, that a purchaser of respondents' merchandise or services will receive "free" bonuses, passes or values of any other "free" merchandise, services, gifts, prizes or awards unless all conditions, obligations, or other prerequisites to the receipt and retention of such merchandise, services, gifts, prizes or awards are clearly and conspicuously disclosed at the outset in close conjunction with the word "free" wherever it first appears in each advertisement or offer.

12. Representing, directly or indirectly, orally or in writing, that any merchandise or services is furnished "free" or at no cost to the purchaser of advertised merchandise or services, when, in fact, the cost of such merchandise or services is regularly included in the selling price of the advertised merchandise or services.

13. Representing, directly or indirectly, orally or in writing, that a "free" offer is being made in connection with the introduction of new merchandise or services offered for sale at a specified price unless the respondents expect, in good faith, to discontinue the offer after a limited time and commence selling such merchandise or services, separately, at the same price at which it was sold with a "free" offer.

14. Representing, directly or indirectly, orally or in writing, that merchandise or services are being offered "free" with the sale of merchandise or services which are usually sold at a price arrived at through bargaining, rather than at a regular price, or where there may be a regular price, but where other material factors such as quantity, quality, or size are arrived at through bargaining.

15. Representing, directly or indirectly, orally or in writing, that a "free" offer is available in a trade area for more than six (6) months in any twelve (12) month period. At least thirty (30) days shall elapse before another such "free" offer is made in the same trade area. No more than three such "free" offers shall be made in the same area in any twelve (12) month period. In such period, respondents' sale in that area of merchandise or services in the amount, size or quality promoted with the "free" offer shall not exceed 50 percent of the total volume of its sales of merchandise or services, in the same amount, size or quality, in the area.

16. Representing, directly or indirectly, orally or in writing, that merchandise or services are being offered as a "gift", "without charge", "bonus", or by other words or terms which tend to convey the impression to the consuming public that merchandise or services are free, when the use of the term "free" in relation thereto is prohibited by the provisions of this order.

It is further ordered, That respondents shall forthwith deliver a copy of this order to cease and desist, and a copy of the Commission's news release setting forth the terms of the order, to each advertising agency and advertising medium, such as newspaper publishing companies, radio stations or television stations, presently utilized in the course of their business, and that respondents shall, immediately upon opening an account, deliver a copy of such order and news release to any such agency or medium with which they subsequently open an account.

It is further ordered, That respondents shall forthwith deliver a copy of this order to cease and desist to each of their agents, representatives and employees engaged in the offering for sale or sale of respondents' merchandise or services, or in any aspect of the creation, preparation or placing of respondents' advertisements and that respondents shall deliver a copy of such order to each such person whom they subsequently employ, immediately upon employing each such person and that respondents shall secure from each such person a signed state-

ment acknowledging receipt of said order.

It is further ordered, That respondent corporation shall forthwith deliver a copy of this order to each of its operating divisions.

It is further ordered, That respondents shall notify the Commission at least thirty (30) days prior to any proposed change in the corporate respondent, such as dissolution, assignment or sale resulting in the emergence of a successor corporation, the creation or dissolution of subsidiaries or any other change in the corporation which may affect compliance obligations arising out of the order.

It is further ordered, That the individual respondent named herein promptly notify the Commission of the discontinuance of his present business or employment and of his affiliation with any new business or employment. Such notice shall include respondent's current business address and a statement as to the nature of the business or employment in which he is engaged as well as a description of his duties and responsibilities.

It is further ordered, That the respondents herein shall within sixty (60) days after service upon them of this order, file with the Commission a report, in writing, setting forth in detail the manner and form in which they have complied with this order.

Issued: March 28, 1974.

By the Commission.

[SEAL] CHARLES A. TOBIN, *Secretary.*

[FR Doc.74-10167 Filed 5-2-74;8:45 am]

Title 16—Commercial Practices

CHAPTER I—FEDERAL TRADE COMMISSION

SUBCHAPTER D—TRADE REGULATION RULES

PART 432—POWER OUTPUT CLAIMS FOR AMPLIFIERS UTILIZED IN HOME ENTERTAINMENT PRODUCTS

The Federal Trade Commission, pursuant to the Federal Trade Commission Act, as amended, 15 U.S.C. 41, et seq., and the provisions of Part 1, Subpart B of the Commission's procedures and rules of practice, 16 CFR 1.11, et seq., has conducted a proceeding for the promulgation of a Trade Regulation Rule concerning power output claims for amplifiers utilized in home entertainment products.

The Commission has now considered all matters of fact, law, policy and discretion, including the data, views and arguments presented on the record by interested parties in response to the notices, as prescribed by law, and has determined that the adoption of the Trade Regulation rule and statement of its basis and purpose set forth herein is in the public interest.

Sec.

432.1 Scope.
432.2 Required disclosures.
432.3 Standard test conditions.
432.4 Optional disclosures.
432.5 Prohibited disclosures.
432.6 Liability for violation.

AUTHORITY: The provisions of this Part 432 issued under 38 Stat. 717, as amended; (15 U.S.C. 41–58).

§ 432.1 Scope.

(a) Except as provided in paragraph (b) of this section, this part shall apply whenever any power output (in watts or otherwise), power band or power frequency response, or distortion capability or characteristic is represented, either expressly or by implication, in connection with the advertising, sale, or offering for sale, in commerce as "commerce" is defined in the Federal Trade Commission Act, of sound power amplification equipment manufactured or sold for home entertainment purposes, such as for example, radios, record and tape players, radio-phonograph and/or tape combinations, component audio amplifiers and the like.

(b) Representations shall be exempt from this part if all representations of performance characteristics referred to in paragraph (a) of this section clearly and conspicuously disclose a manufacturer's rated power output and that rated output does not exceed two (2) watts (per channel or total).

(c) It is an unfair method of competition and an unfair or deceptive act or practice within the meaning of section 5 (a)(1) of the Federal Trade Commission Act (15 U.S.C. 45(a)(1)) to violate any applicable provision of this part.

§ 432.2 Required disclosures.

Whenever any direct or indirect representation is made of the power output, power band or power frequency response, or distortion characteristics of sound power amplification equipment, the following disclosures shall be made clearly, conspicuously, and more prominently than any other representations or disclosures permitted under this part:

(a) The manufacturer's rated minimum sine wave continuous average power output, in watts, per channel (if the equipment is designed to amplify two or more channels simultaneously)—

(1) For each load impedance required to be disclosed in paragraph (b) of this section, when measured with resistive load or loads equal to such (nominal) load impedance or impedances, and

(2) Measured with all associated channels fully driven to rated per channel power;

(b) The load impedance or impedances, in Ohms, for which the manufacturer designs the equipment to be used by the consumer;

(c) The manufacturer's rated power band or power frequency response, in Hertz (Hz), for each rated power output required to be disclosed in paragraph (a)(1) of this section; and

(d) The manufacturer's rated percentage of maximum total harmonic distortion at any power level from 250 mW to the rated power output, for each such rated power output and its corresponding rated power band or power frequency response.

§ 432.3 Standard test conditions.

For purposes of performing the tests necessary to make the disclosures required under § 432.2:

(a) The power line voltage shall be 120 volts AC (230 volts when the equipment is made for foreign sale or use, unless a different nameplate rating is permanently affixed to the product by the manufacturer in which event the latter figure would control), RMS, using a sinusoidal wave containing less than 2 percent total harmonic content. In the case of equipment designed for battery operation only, tests shall be made with the battery power supply for which the particular equipment is designed and such test voltage must be disclosed under the required disclosures of § 432.2. If capable of both AC and DC battery operation, testing shall be with AC line operation:

(b) The AC power line frequency for domestic equipment shall be 60 Hz and 50 Hz for equipment made for foreign sale or use;

(c) The amplifier shall 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;

(d) The preconditioning and testing shall be in still air and an ambient temperature of at least 77° F (25° C);

(e) Rated power shall be obtainable at all frequencies within the rated power band without exceeding the rated maximum percentage of total harmonic distortion after input signals at said frequencies have been continuously applied at full rated power for not less than five (5) minutes at the amplifier's auxiliary input, or if not provided, at the phono input.

(f) At all times during warm-up and testing, tone loudness-contour and other controls shall be preset for the flattest response.

§ 432.4 Optional disclosures.

Other operating characteristics and technical specifications not required in § 432.2 may be disclosed: *Provided:*

(a) That any other power output is rated by the manufacturer, is expressed in minimum watts per channel, and such power output representation(s) complies with the provisions of § 432.2; except that if a peak or other instantaneous power rating, such as music power or peak power, is represented under this section, the maximum percentage of total harmonic distortion (see § 432.2(d)) may be disclosed only at such rated output: *And provided further,*

(b) That all disclosures or representations made under this section are less conspicuously, and prominently made than the disclosures required in § 432.2; and

(c) The rating and testing methods or standards used in determining such representations are disclosed, and well known and generally recognized by the industry at the time the representations or disclosures are made, are neither intended nor likely to deceive or confuse

the consumers and are not otherwise likely to frustrate the purpose of this part.

NOTE.—For the purpose of paragraph (b) of this section, optional disclosures will not be considered less prominent if they are either bold faced or are more than two-thirds the height of the disclosures required by § 432.2.

NOTE 2: Use of the asterisk in effecting any of the disclosures required by § 432.2 and permitted by § 432.4 shall not be deemed conspicuous disclosure.

§ 432.5 Prohibited disclosures.

No performance characteristics to which this part applies shall be represented or disclosed if they are not obtainable as represented or disclosed when the equipment is operated by the consumer in the usual and normal manner without the use of extraneous aids.

§ 432.6 Liability for violation.

If the manufacturer or, in the case of foreign made products, the importer or domestic sales representative of a foreign manufacturer, of any product covered by this part furnishes the information required or permitted under this part, then any other seller of the product shall not be deemed to be in violation of § 432.5 due to his reliance upon or transmittal of the written representations of the manufacturer or importer if such seller has been furnished by the manufacturer, importer, or sales representative a written certification attesting to the accuracy of the representations to which this part applies: *And provided further,* That such seller is without actual knowledge of the violation contained in said written certification.

Effective: November 4, 1974.

Promulgated: May 3, 1974.

By the Commission.

[SEAL] CHARLES A. TOBIN,
Secretary.

STATEMENT OF BASIS AND PURPOSE [1]

CHAPTER I.—BACKGROUND

With the advent of stereophonic and/or two-channel sound, manufacturers of sound power equipment began describing the performance capability of their products in terms of power output expressed as "X number of Watts". Watts in this context refers to the output capability of the amplification unit.

The industry, generally speaking, is divided into two parts; the packaged or console systems manufacturers and the component systems manufacturers. Traditionally, manufacturers of packaged systems have rated their products according to the EIA Standard Methods of Measurement [2] while manufacturers of component systems have rated their equipment according to the IHF Standard.[3]

Since the mid-50's the industry has received much criticism by the trade press for failing to agree upon a single industry standard which is meaningful to the consumer. To date no single standard has been agreed upon. It has been asserted that there are no less than seven commonly used methods of determining amplifier wattage ratings,[4] all of which will yield substantially different results.

As a result, with the proliferation of output claims for stereophonic equipment, we find mediocre products advertised as, for example, "500 watts" with no indication as to what standard or method of rating is being followed. Many times, especially in the case of low quality packaged units, output is grossly exaggerated by rating according to the "peak power", an instantaneous power rating made without regard to the level of distortion. Further, such output figure is usually expressed in terms of the total power rather than the per channel power thereby permitting a doubling of the output figure.

In the absence of any specific disclosure as to whether the so-called "RMS power" [5] or the less regorous "music power" [6] is being represented, under either the EIA or IHF standard, generally music power is followed. To arrive at the RMS power rating, it is necessary to deduct 10 to 25 percent of the music power rating and divide by 2 to arrive at the per channel figure for 2-channel stereo systems. Unless the power of an amplifier is rated at a specific level of distortion and such distortion is disclosed, it cannot realistically be compared to any other amplifier rating.[7]

Still other manufacturers have shown a tolerance in rating the output of their products by use of the symbol "±1dB" (plus or minus 1 decibel). In the case of a rating of this sort, the minimum output may be as much as 20 percent below as the nominal power stated or as much as 25 percent above. Thus, a rating of 100 watts (±1dB) would indicate a power output range of from 80 to 125 watts.[8]

It has been asserted that one of the best known and most respected manufacturers of stereo components and consoles produces a stereo component the literature for which states the power output in three rating systems, ±1dB, IHF power and RMS power, all at a total harmonic distortion level of 1 percent. When sold as a console with a different model number and a modified faceplate, this same amplifier is rated at EIA peak power with 5 percent distortion.[9]

The trade press has aptly described this situation as the "Wattage War", noting that the consumer, who normally equates watts with quality, is often deceived because he believes the higher the watts the better the quality.[10]

A technical advisor for Campbell Music Store, Washington, D.C., has submitted for the record the following statement which best illustrates the extent of the problem: "———Armed with a moderate engineering background and all published specifications available, I cannot determine, without bench testing, which of a number of amplifiers on the market is more powerful or of better quality. With the thought of literature containing meaningless values and technical doubletalk, my sympathy goes out to the average consumer who is poorly equipped to deal with this numbers game." [11]

Mr. Julian Hirsch of Stereo Hi-Fi Review states: "The widespread abuse, or disregard, of current measurement standards has resulted in the present chaotic situation, in which advertised power ratings of high fidelity amplifiers may have little relationship to their actual performance.

"As a result, manufacturers who adhere to ethical rating systems are at a competitive disadvantage, and consumers are often misled by exaggerated claims and are unable to make fair comparisons between products." [12]

In all fairness to certain members of the industry, however, there are a few manufacturers of high quality component systems who follow neither EIA nor IHF standards but conservatively rate their amplifiers according to their average continuous power output, per channel. These manufacturers disclose the maximum level of distortion across the entire audio spectrum,[13] the frequency bandwidth at which this power is available and the speaker load or load impedance in ohms at which such power is available.

Under both the EIA and IHF standards,

[1] Footnote references to the transcript of the public hearings are preceded by the prefix "Tr." and references to the written comments in the public record are preceded by the prefix "R.".

[2] EIA refers to the Consumer Electronics Group, Electronic Industries Association, with a membership composed of approximately 65 domestic manufacturers and assemblers and about 175 manufacturers and importers. Retail sales by American manufacturers total some $2.3 billion annually, Tr. 9, 10 and R. 285; See also EIA Standard, RS-234C, R. 286-300.

[3] IHF refers to the Institute of High Fidelity, with a membership composed of some 37 domestic and non-domestic member companies, Tr. 53-53B; see also IHF Standard A-201 (1966), R. 331-341.

[4] R. 183.

[5] RMS, meaning root mean square, is an engineering concept which has been defined as the average continuous power. This designation was objected to as being inaccurate and the designation "RMS" has been changed to "average" in the Final Rule.

[6] Music power, currently referred to as monetary power in the EIA Standard, is an instantaneous power rating at a given level of distortion. EIA permits a distortion level of 5 percent while IHF recommends a level of distortion not to exceed 1 percent.

[7] See article from The Stereo Review entitled, "Hi Fi Questions and Answers", R. 59; see also statement submitted by Walter Goodman, President of IHF, R. 126.

[8] See article from Audio Times Magazine, "What's a Watt?", R. 20; also trade press comments, R. 43a.

[9] R. 609-610.

[10] Home Furnishings Daily, R. 25-26.

[11] R. 609.

[12] Tr. 189-190. See Consumer Reports (June 1969) "What's What With Watts?", R. 30; consumer letters R. 553-555.

[13] EIA and IHF rate their products only at a frequency signal of 1000 cycles per second (1000 hertz) which is a center point in the frequency range or power band.

even what they term "continuous power" is measured at a point on the power curve only 30 seconds after the input signal has been applied.[14] Under such procedure, the power

CHAPTER II.—THE PROPOSED RULE AND ITS EFFECTS

Public Notice of this proceeding was issued by the Commission on January 12, 1971, wherein the following Trade Regulation Rule was proposed:

Section 1. Scope. a. This rule shall apply whenever any power output (in watts or otherwise), power band or power frequency response, or distortion capability or characteristic is represented, either expressly or by implication, in connection with the advertising, sale, or offering for sale, in commerce as "commerce" is defined in the Federal Trade Commission Act, of sound power amplification equipment manufactured or sold for home entertainment purposes, such as for example, radios, record and tape players, radio-phonograph and/or tape combinations, component audio amplifiers and the like.

b. It is an unfair method of competition and an unfair or deceptive act or practice within the meaning of section 5(a)(1) of the Federal Trade Commission Act (15 U.S.C. § 45(a)(1)) to violate any applicable provision of this rule.

SEC. 2.—*Required disclosures.* Whenever any direct or indirect representation is made of the power output, power band or power frequency response, or distortion characteristics of sound power amplification equipment, the following disclosures shall be made clearly, conspicuously, and more prominently than any other representations or disclosures permitted under this rule:

a. The manufacturer's rated minimum sine wave continuous RMS power output, in watts, per channel (if the equipment is designed to amplify two or more channels simultaneously)—

(i) For each load impedance required to be disclosed in subsection (b) of this section, when measured with resistive load or loads equal to such (nominal) load impedance or impedances, and

(ii) Measured with all associated channels fully driven to rated per channel power;

b. The load impedance or impedances, in Ohms, for which the manufacturer intends the equipment to be used by the consumer;

c. The manufacturer's rated power band or power frequency response, in Hertz (Hz), for each rated power output required to be disclosed in subsection (a)(i) of this section; and

d. The manufacturer's rated percentage of maximum total harmonic distortion at any power level from zero (ϕ) watts to the rated power output, for each such rated power output and its corresponding rated power band or power frequency response.

SEC. 3.—*Optional Disclosures.* Other operating characteristics and technical specifications not required in section 2 of this rule may be disclosed, provided:

a. Any other power output is rated by the manufacturer, is expressed in minimum watts per channel, and such power output representation(s) comply with the provisions of subsections 2(a)(i) through 2(d) of section 2; except that if a peak or other instantaneous power rating, such as music power or peak power, is represented under this section, the maximum percentage of total harmonic distortion (see subsection 2(d)) may be disclosed only at such rated output; and provided further that

b. All disclosures or representations made under this section are less conspicuously and prominently made than the disclosures required in section 2 of this rule; and

c. The rating and testing methods or standards used in determining such representations are disclosed, are well known and generally recognized by the industry at the time the representation or disclosure is made, are neither intended nor likely to deceive or confuse the consumer, and are not otherwise likely to frustrate the purpose of this rule.

NOTE—1. For the purpose of subsection (b) of this section, optional disclosures will not be considered less prominent if they are either bold faced or are more than two-thirds the height of the disclosures required by Section 2.

NOTE—2. Use of the asterisk in effecting any of the disclosures required by Section 2 and permitted by Section 3 of this rule shall not be deemed conspicuous disclosure.

SEC. 4.—*Prohibited Disclosures.* No performance characteristics to which this Rule applies shall be represented or disclosed if they are not obtainable as represented or disclosed when the equipment is operated by the consumer in the usual and normal manner without the use of extraneous aids.

SEC. 5.—*Liability for Violation.* If the manufacturer, or in the case of foreign made products, if the importer or domestic sales representative of a foreign manufacturer of any product covered by this rule furnishes the information required or permitted under this rule, then any other seller of the product shall not be deemed to be in violation of § 4 of this rule due to his reliance upon or transmittal of the written representations of the manufacturer or importer if such seller has been furnished by the manufacturer, importer, or sales representative, a written certification attesting to the accuracy of the representations to which this rule applies, and provided further that such seller is without actual knowledge of the violation contained in said written certification.

Upon issuance of the notice of hearing, consumer interest gained momentum and there was a substantial response to the invitation for comments. Views in support of the proposed rule came from organizations such as the Stanford Research Institute of Menlo Park, California;[15] Audiomation Laboratories of Upper Darby, Pennsylvania;[16] The Commonwealth of Massachusetts Consumers' Council[17] and KLH Research and Development Corp.,[18] both of Cambridge, Massachusetts.

Public hearings were held on April 13 and 14, 1971, on the proposed rule which, in essence, required affirmative disclosure in all advertising, where power output, power band, frequency response or distortion capability is represented, of the manufacturer's rated minimum[19] continuous power output in watts per channel and, in addition, three parameters:

1. the speaker load for which the manufacturer intends the equipment to be used,[20]

2. the manufacturer's rated power band or frequency response,[21] and

3. the percentage of maximum total harmonic distortion at any power level from zero watts to rated power output.

Since these parameters directly affect the output rating of an amplifier, it was believed that the consumer should have the benefit of such information in order to enable him to make an intelligent comparison among the various competing products.[22]

Section 3 of the proposed rule provided for optional disclosures provided they were less prominently disclosed and further, provided the above three parameters were disclosed and were determined in accordance with generally recognized testing methods or standards and such standards were likewise disclosed.

Although there was general agreement that where power output is represented it should be stated in terms of continuous power, differences of opinion were expressed at the hearing as to the following provisions of the proposed rule and as to the methods used to measure the various parameters.

CHAPTER III.—ARGUMENTS ADVANCED BY INDUSTRY REGARDING PROPOSED RULE

A. *Section 1(a)—Scope.* The proposed rule embraced sound power amplification equipment manufactured or sold for home entertainment purposes as, for example, radios, record and tape players, radio-phonographs and tape combinations and component audio amplifiers.

The representative of Electronic Industries Association of Japan (EIA–J) urged that the Final Rule exclude all such named sound power amplification equipment having a power level of two watts or less per channel, suggesting that it is unlikely that any consumer deception might result from any representation on equipment with a power output falling within this range.[23] No one took issue with this point.

This exception, which was included in the notice of revision and amendment hereinafter discussed, would cover a large number of low cost items where power is normally of little consequence to the consumer.

B. *Section 1(b)—Consequences of Violation.* EIA voiced concern that under section 1(b) a violation of the Rule would be automatically a violation of Section 5(a)(1) of the Federal Trade Commission Act. It contended that this represents a change in the Commission's present procedure of filing a formal complaint upon violation of section 5 and granting a respondent a hearing on the applicability of the rule to the particular case as provided in § 1.12(d) of the Commission's rules of practice.[24]

Section 1(b) of the rule does not represent a change in procedure but merely incorporates in the rule the Commission's con-

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[14] See R. 294 (section 3.1.1 EIA Standard) and R. 334 (section 3.1.1 IHF Standard). output for such equipment will register higher because the power curve tends to fall with thermal (heat) build-up.

[15] R. 599.

[16] R. 558.

[17] R. 556–557.

[18] R. 551.

[19] The proposed rule required the minimum power disclosure since there is a drop in the power level at each end of the power curve. The maximum power permitted by the rule then would reflect the minimum power attainable at any point along the frequency bandwidth.

[20] Most speakers on the market are rated at 8 ohms. Some manufacturers have rated their equipment at 4 ohms load which normally results in a slightly higher output figure.

[21] The frequency range or response from the lowest to the highest tones is measured in cycles per second or Hertz (Hz). As pointed out, EIA and IHF permit a maximum power rating at a mid-point in the frequency range (1000 Hz). The proposed rule, on the other hand, required disclosure of the minimum output obtainable at any point along the audio range, from the lowest to the highest rated frequency, taking into account the outer extremes.

[22] See consumer letter, R. 72–73.

[23] Tr. 48.

[24] R. 282–4; Tr. 26–28.

clusion that practices in violation of said rule are violative of Section 5 of the Federal Trade Commission Act; the respondent still would be given the right of a hearing on the applicability of the rule to the particular case as provided in § 1.12(d) of the Commission's rules of practice.

C. *Section 2(a)—Required Disclosures.* EIA, while supporting the RMS disclosure provision of the proposed rule, argues that in requiring disclosure of additional specifications the rule as designed would accommodate a small segment of the industry and their consumers who desire the maximum information about their products; that the great majority of purchasers neither need nor desire these specifications and in fact would tend to be confused by such information.[25]

EIA's argument loses sight of the fact established by the record that the consumer has been conditioned, by the advertising of more and greater power output figures, to equate power output with quality.

The Commission believes that, even assuming that the great majority of purchasers neither need nor desire the information which the proposed rule would require be disclosed, if without disclosure of these additional parameters the purchaser is led to believe that a low-priced amplifier of inferior quality has the performance capability of a high-priced amplifier of superior quality, the purchaser is being unknowingly deceived and induced to purchase inferior equipment.[26] This is true even though a represented quality of the superior product may not lie in the range of human audibility.

(1) *Output in terms of minimum watts.* Both section 2(a) and the optional disclosure section 3(a), provided for disclosure of the per channel power output in terms of "minimum watts" so as to reflect the maximum capability of the amplifier across the entire frequency range.

Both EIA and IHF, who take the position that all measurements of power output, power band, frequency response and distortion should be measured in accordance with their own standards, state that power output should be rated at a single frequency signal of 1000 Hz.[27] They are supported in this position by H. H. Scott, Inc.,[28] Sony Corporation,[29] J. C. Penney Company[30] and Julian Hirsch, editor of Stereo Hi-Fi Review Magazine.[31] Their argument is that engineers understand this measurement technique[32] and no one would be deceived if all companies were required to measure the power output of their amplifiers at this frequency.

It is noteworthy that a representative of EIA conceded at the hearings that under the EIA and IHF method of rating at 1000 Hz, two pieces of equipment with the same rating may have entirely different performance capabilities. Mr. von Recklinghausen, speaking on behalf of H. H. Scott, Inc., stated in this connection, that an amplifier is capable of providing power outside of that band, but at a reduced capability, and, of course, having its maximum in the center.[33]

Opposing the EIA and IHF method of determining output was Dr. Amar Bose of The Bose Corporation[34] and the representative of Marantz Company. The latter stated that in speaking to dealers and consumers regarding this question, he found that the consumers believe that where equipment is rated at a certain power the product will deliver that rated power through its entire audio range.[35]

The Commission recognizes that it is standard engineering practice under both EIA and IHF standards to rate an amplifier at the single frequency signal of 1000 Hz, but believes that such a measurement is inherently deceptive to the consumer who expects that a piece of equipment represented as being capable of a stated power output will deliver that power output across its full audio range. The whole thrust of the rule is to limit the practice of disclosing power output ratings which have no relation to rating across the power bandwidth.

To do anything less would be to sanction a standard tending to favor lower quality equipment on a comparative basis, for the Record clearly establishes that higher quality equipment will perform relatively better outside the 1000 Hz mid-point. Thus it is not accurate to conclude that consumer deception will be eliminated if all sets are measured at the same point on the frequency range, for this would tend to conceal the fact that the better quality equipment will maintain a higher power output as the extremes of the power band are approached.

(2) *Per channel disclosure.* EIA, EIA–J, IHF and Lafayette Radio Electronics Corporation opposed per channel disclosure in favor of total power ratings. Support for per channel disclosure came from The Bose Corporation, Marantz Company and Julian Hirsch. The record also contains views of consumers[36] and independent experts[37] supporting per channel disclosure, as required by the rule.

This provision is amply supported by the record. The Commission has been advised that, from a technical standpoint, a stereo having, for example, 20-watts per channel, both channels driven, will give less total power output than a single channel 40-watt amplifier. So, to speak of the stereo in terms of its total power (40 watts) is, the Commission believes, misleading and deceptive. Additionally, audio speakers are rated in terms of number of watts per channel. Further, 4-channel sound systems have been introduced which, if rated according to their total power output, would, in the Commission's view, have an even greater tendency to deceive the average consumer.[38]

D. *Section 2(b)—Disclosure of Load or Working Impedance.* Some manufacturers have rated their amplifiers at a 4 ohm speaker load impedance but have supplied 8 ohm speakers with their systems. Generally, the lower the load impedance utilized in testing transistorized equipment, the higher the output of the amplifier.

Various views were expressed with respect to this provision.

EIA and IHF urged that ratings should be based on 8 ohms load with disclosure only where a different impedance is used.[39]

Lafayette Radio Electronics Corporation[40] and Marantz Company[41] favored disclosure of both 4 and 8 ohms pointing out that certain amplifiers are designed for more than one set of speakers, e.g., main and remote speakers.

Sony Corporation of America, on the other hand, would rate power output at 8 ohms load and permit optional disclosure of power output ratings at other load impedances.[42]

The Commission believes that it would be to the benefit of the consumer not to require disclosure of power output at any one or more specific load impedances but rather to require the manufacturer to state the power output in terms of the load impedance or impedances for which he designs[43] the equipment to be used by the consumer. Of course, this would not preclude the manufacturer from representing the power output in terms of other load impedances as an optional disclosure under Section 3 of the rule.

Thus, this provision would be maintained in a manner consistent with the rest of the rule in that the Commission is not undertaking to require as a matter of law that any one impedance be used, but is instead requiring the manufacturer to disclose that factor along with the other factors which must also be set forth. This then leaves the consumer, armed with the facts, free to judge for himself whether or not he is impressed with the specifications.

E. *Section 2(c)—Rated Power Band or Frequency Response.* Power bandwidth has been traditionally defined as the response range between the lowest and the highest frequencies at which the amplifier can deliver half its rated power at rated distortion or —3 dB down from the mid-frequency point (1000 Hz).[44]

As aforestated, both EIA and IHF use this method in measuring output. Under such test method, if the amplifier is capable of, for example, 50 watts output at 1000 Hz, it would be rated a "50 watt" amplifier even though the minimum power output across the frequency range or rated power bandwidth would be —3 dB or only 25 watts, i.e., 50 percent down at each extreme from the center point of 1000 Hz.

Neither EIA nor IHF favored disclosure of the power band as provided by Section 2(c) of the proposed rule. EIA contended that such information is unnecessary in advertising and could lead to a meaningless numbers game.[45] It further contended that some may promote their products by advertising a very wide bandwidth which may include sound waves out of the range of human audibility.[46]

In support of the IHF method of measurement, Mr. von Recklinghausen of H. H. Scott, Inc., explained that by using 3 points in the power band, a mid-frequency point and two

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[25] Tr. 10 and 52; R. 269.

[26] See admission by Mr. Owen on behalf of EIA, Tr. 47.

[27] Tr. 25, 55–56; R. 631.

[28] Tr. 91.

[29] R. 597.

[30] Tr. 132.

[31] Tr. 192.

[32] Simply stated, under this method of measurement, power bandwidth is defined as that point where the frequency response is 3 dB down (or 50 percent) from the middle or center point; the center point being 1000 Hz. For example, if an amplifier's output is 50 watts at the center point (1000 Hz) the frequency range (from the lowest to the highest frequency) will be established at that point where the power drops 50 percent at either end of the spectrum. At this point, the minimum watts output would be 25. Since the amplifier is capable of maintaining only 25 watts at the extremes, the rule would require that such rating be in terms of the minimum power or 25 watts.

[33] Tr. 92. Better quality equipment will perform better.

[34] Tr. 115.

[35] Tr. 119–120.

[36] R. 43, 190, 211–212, 218, 221, 228, 231, 234, 242, 248, 548, 559, 597.

[37] R. 163, 239.

[38] See R. 715.

[39] See EIA, R. 275 and 635; IHF, Tr. 55.

[40] Tr. 74.

[41] R. 600.

[42] R. 597.

[43] This term, for the sake of accuracy, has been inserted in the final rule in place of the term "intends" as used in section 2(b) of the proposed rule.

[44] IHF Standard, R. 334; EIA Standard, R. 297. See testimony of Mr. von Recklinghausen Tr. 83, 87.

[45] Tr. 18.

[46] *Ibid.*

at the extremes, "—— you have very closely tied down the capability of that amplifier, meaning that the amplifier is capable of providing power outside of that band, *but at a reduced capability, and, of course, having its maximum in the center*". [emphasis supplied.] [47]

Again, although engineers understand this method of measurement, the Commission is of the opinion that the consuming public itself is unaware of such method of rating and, even if it were, would not understand it. As noted, the record indicates the consumer believes that a set will perform as represented across the audio spectrum when, in truth and in fact, the equipment when rated according to the EIA or IHF rating technique, will perform as represented only at 1000 Hz.[48]

The Commission is of the opinion that power bandwidth is another of the significant parameters which must be disclosed in order to enable the consumer to make a meaningful comparison of quality among competing products. Further, the product must be capable of providing the rated or advertised power output over the represented power band. If this result is achieved the consumer would again have the facts from which he can judge for himself whether or not a particular piece of equipment will satisfy his requirements. Requiring disclosure of the power band should also serve to discourage an artificial narrowing of the bandwidth in order to increase the rated power output. The consumer would then be able to see for himself under what limited circumstances the rated power was achieved and it is only by considering all of these parameters that an intelligent choice can be made.

F. *Section 2(d)—Harmonic Distortion.* Section 2(d) of the proposed rule would require disclosure of the rated percentage of maximum total harmonic distortion at any power level across the power band (not just at rated output) from zero to rated output.

At the hearings, EIA urged that distortion be rated according to its standard, which permits a distortion level of 5 percent at rated output, and that the percentage of total harmonic distortion not be a required disclosure unless it is greater than 5 percent.[49] The argument was made that good sound is reproduced if distortion is not greater than 5 percent and that many consumers can perceive little, if any, difference in sound quality when the distortion is reduced from 5 percent to 1 percent.[50]

IHF urged that measurement of total harmonic distortion be made in accordance with its standard which recommends a distortion level of no greater than 1 percent at rated power level. Unlike EIA, IHF would, in accordance with the Rule, require disclosure of the level of distortion because, as Mr. Goodman of IHF put it "—the THD (total harmonic distortion) selected for any wattage rating affects the meaningfulness of that power rating—." [51]

Mr. Horowitz of IHF added: "I think the response of the human ear to distortion is a controversial subject, and I think it is a feeling of most discriminating persons that there would be a substantial distortion of quality, if you go from one percent to five percent, and we also feel there would be a big gradation in tone quality if you go say from a half percent to five percent. "It is our feeling that unless you accompany the power rating with a total amount of distortion rating, you would be getting misleading information." [52]

Mr. Robert Angus of Audio Times noted that a provision requiring distortion to be specified only if it exceeds 5 percent as proposed by EIA would permit a manufacturer almost as much latitude within the framework of an RMS rating as he now enjoys with no FTC rule at all. He emphasized that an amplifier with an output of 20 watts and total harmonic distortion of 0.5 percent, the normal tolerance for better high fidelity components, might wind up as a 30-watt amplifier if the FTC were to permit a tolerance of up to 5 percent total harmonic distortion.[53]

Dr. Bose of Bose Corporation, who has made several studies in Audio-Accoustics, proposed 2 percent as a standard reference for distortion. He stated that all indications are that a person is not able to detect any form of audible distortion on music or speech signals below the 2 percent level. He would fix distortion at a 2 percent level and have the manufacturer disclose the bandwidth over which he can achieve his stated power with that distortion.[54]

Mr. Ken Rottner of Marantz Company did not favor pegging the distortion but rather he would require disclosure of the highest percentage measurable of harmonic and intermodulation distortion with the full range of frequencies at and below the rated RMS power output.[55] (The word "pegging" refers to the suggestion that the Commission should fix the percentage of distortion at which all equipment should be evaluated.)

Mr. Reff of J. C. Penney Company favored pegging the distortion and thereby eliminating this variable, at a level of 5 percent which he contended is used by the industry and will permit the consumer to shop more wisely.[56]

But Kenneth Nelson of Hi-Fi Trade News was of the opinion that the 5 percent distortion figure is too high; that it represents merchandise which is really sloppily constructed.[57]

Larry Levine, a dealer, argued against the pegging of distortion explaining that it would restrict some manufacturers and would place others at a great advantage. Customers, he stated, realize that a higher rate of distortion means poorer sound. He noted that where a rating is pegged at 5 percent great advantage is given to the manufacturer of packaged systems, while the advantage falls to the component manufacturer under a pegged distortion of 1 percent.[58] Ivan Berger of Saturday Review agreed.[59]

Also agreeing that distortion should not be pegged and that 5 percent is far too high, Julian Hirsch of Stereo Hi-Fi Review expressed the view that as low as 2 percent distortion is relatively high even for moderately priced amplifiers. Mr. Hirsch favored the manufacturer having the option on the setting of distortion, as provided by the proposed rule.[60]

Audibility of distortion. In considering the matter of pegging the distortion at a specific level, there is no general agreement as to that point beyond which distortion becomes inaudible. One reason for this is the fact that the ability to detect distortion varies with the individual's auditory acuity.

At the hearings, Mr. Horowitz (IHF) stated that most discriminating persons would note a substantial distortion of quality if the distortion were increased from 1 to 5 percent and an even larger gradation in tone quality when increased from one-half percent to 5 percent.[61] H. H. Scott's representative agreed that there is a noticeable difference in sound between 1 and 5 percent distortion.[62]

EIA, taking a contrary view, contended that many of their customers can perceive little, if any, difference in sound quality when the distortion is reduced from 5 to 1 percent.[63]

J. C. Penney's representative expressed a similar view asserting that it is the general feeling in the industry that most consumers cannot detect less than 5 percent total harmonic distortion.[64]

Dr. Amar Bose, whose primary interest lies in the psycho-accoustic aspects of sound power equipment, took issue with this contention to a degree when he asserted that there are no audible benefits below 2 percent.[65]

However, Mr. Bose's view was disputed by Mr. Rottner of Marantz who insisted that there are audible benefits to be derived from distortion of 2 percent or less.[66] In Mr. Rottner's opinion, we have not achieved that point beyond which the human ear can no longer detect an improvement.[67]

The Commission believes that Julian Hirsch placed the issue in proper perspective when he registered the following comment: "I have known people who would not complain if they heard ten or twenty percent distortion, but I do not think that that is the normal—I would say a reasonably discerning listener can tell the difference, even if he is not aware of it specifically, he can tell the difference between an amplifier that averages around one and a half percent distortion and one down to one-tenth distortion."[68]

Mr. Hirsch further observed that the listener may not be aware he is hearing less distortion at one-tenth percent but he would be aware of a less satisfactory sound.[69]

In a statement submitted for the record, Mr. Edward Myer of Myer-Emco, Inc., Washington, D.C., comments upon the importance of harmonic distortion: "At these hearings verbal arguments were advanced purporting to show that harmonic distortion in home entertainment amplifiers is not a good measure of amplifier quality because moderate differences in harmonic distortion level have been shown to be undetectable when playing ordinary music through loudspeakers into a normal home environment. While this may or may not be true, it has been shown that listeners using earphones (thereby avoiding the room effects) are able to detect

[47] Tr. 92.
[48] See testimony of Mr. Rottner of Marantz Company, Tr. 120; Mr. Levine, a retailer, Tr. 170. See also R. 365–546 for consumers' and dealers' letters furnished by Mr. Levine, all in support of the rule.
[49] Tr. 19–20 and R. 88, 276–277, 637.
[50] R. 276.
[51] Tr. 55; R. 327.
[52] Tr. 59.
[53] Tr. 100.
[54] Tr. 110–115.
[55] Tr. 119. The Commission sees no reason to require disclosure of intermodulation distortion, because it has been advised that with respect to the latest transistorized equipment, the level of intermodulation distortion runs about the same or sometimes less than the harmonic distortion level.
[56] Tr. 137.
[57] Tr. 163.
[58] Tr. 170, 173.
[59] Tr. 204.
[60] Tr. 194.
[61] Tr. 59.
[62] Tr. 94.
[63] Tr. 19.
[64] Tr. 143.
[65] Tr. 110.
[66] Tr. 118.
[67] Tr. 122.
[68] Tr. 196–197.
[69] *Ibid.*

minute amounts of distortion in sinusoidal waveforms such as are present on single musical instruments and when listening to certain types of electronic music. Sales of earphones at this time are almost equal to the sales of loudspeakers and who can say that modern composers will not make extensive use of pure sine waves in the immediate future. In my opinion the T.H.D. system is the best *simple* measure of amplifier performance." [70]

Considering the entire record, the Commission is of the view that harmonic distortion is the other parameter which must be disclosed in order to enable the consumer to make a meaningful choice among competing products.

The Commission rejects the argument that distortion should be pegged at 5 percent and not be a required disclosure unless it exceeds that amount because 5 percent total harmonic distortion has been shown to be an excessive amount of distortion for good quality sound. A pegging of distortion at 1 percent, on the other hand, might well work to the disadvantage of manufacturers of less expensive equipment with no corresponding benefit to the consumer.

Therefore, the Commission concludes that requiring the manufacturer to disclose the total harmonic distortion and giving him the option of setting the level of harmonic distortion as required by Section 2(d) and permitting optional disclosure in accordance with Section 3(a) of the proposed rule will provide the consumer with sufficient information with which to make an intelligent choice.

G. *Section 3—Optional Disclosures.* This section of the proposed rule provided that other power output or operating specifications may be disclosed provided such power output representations are in terms of minimum watts per channel and comply with the requirements of subsections 2(a)(i) through 2(d), the representations are less conspicuously and prominently made than Section 2 disclosures and the rating and testing methods or standards are disclosed. However, if an instantaneous power rating is represented, such as "peak power", the maximum total harmonic distortion may be disclosed only at such rated output where distortion will register the greatest.

EIA urged that this section be restricted to momentary or music power and measured in accordance with EIA Standard No. 234–C (1971) which provides a standard of measurement only for continuous and momentary power output. [71]

Lafayette Radio Electronics Corporation emphatically opposed optional disclosures on the ground that they will tend to confuse the consumer. [72]

H. H. Scott would restrict optional disclosures to types of power for which standard methods of measurement exist, citing IHF Standard, Section 3.1.2 as the solution. [73]

The Record reveals that some persons feel the Commission should prohibit disclosure of all short-term power, such as music power, peak power, *etc.*, [74] while others feel that only peak power representations should be prohibited. [75]

The Commission believes that the Rule, which requires disclosure of three parameters whenever a power output claim is made, will tend to discourage short-term power representations, especially those in terms of "peak power." Once consumers have been educated to look for the three parameters which this rule requires to be disclosed and to make their purchase decision on that basis alone, they should not be so impressed with subordinated disclosures of other less significant factors and hence there should be less temptation to employ these essentially unmeaningful characteristics in advertising. At the same time, the seller's freedom to make these representations in a nondeceptive manner if he so chooses is preserved, for the intent of this rule is to require adequate product information disclosure and not to establish rigid standards from which no seller may depart.

H. *Asterisk Disclosure.* Note 2 to Section 3 of the proposed rule prohibited asterisk disclosure of information provided by Sections 2 and 3.

The only person to comment on this provision was Mr. Ivan Berger who would permit use of the asterisk for disclosing all parameters except the distortion. [76] In similar cases in the past, the Commission has found that the asterisk is often used to bury the disclosure.

The Commission has been confronted with this kind of problem especially in administering the Trade Regulation Rule relating to TV Picture Sizes (16 CFR 410). The TV Rule was amended to include specifically a provision prohibiting use of the asterisk in effecting disclosure (36 FR 21518, Nov. 10, 1971). The Commission believes it would be remiss, especially in a case involving disclosure of product specifications as here, not to have a specific provision prohibiting the much abused asterisk form of disclosure.

I. *Section 4—Prohibited Disclosures.* This section, as to which no direct issue was taken, was intended to assure that all performance characteristics are based upon conditions of normal use by the consumer, *i.e.*, conditions which are encountered in the home.

CHAPTER IV.—PROCEEDING TO AMEND AND REVISE THE PROPOSED RULE

A. *Section 1(a) and (b).* At the hearing, objection was taken to section 1 as being too broad in scope. It was contended that this Section should exempt equipment having a power output capability of two watts or less on the theory that consumer deception is unlikely to result from representations on such equipment. [77]

B. *Section 2(d).* Also questioned was the accuracy of this section which would have required disclosure of the manufacturer's rated percentage of total harmonic distortion at any power level from zero watts to rated power output. One person pointed out that from a purely technical standpoint, in measuring from "zero power" in this context a meter would read 100 percent distortion. [78] Others expressed a similar view. [79]

Accordingly, on February 1, 1972, a notice to amend and revise issued for comment proposing (1) an amendment to Section 1, paragraphs (a) and (b) exempting representations with respect to equipment not having a rated output in excess of 2 watts per channel or total and (2) a revision of Section 2, paragraph (d), requiring that the maximum total harmonic distortion be measured from a minimum power of 250 milliwatts.

CHAPTER V.—RESPONSE TO NOTICE TO AMEND AND REVISE PROPOSED RULE AND FINDINGS

Unanimous support for the Amendment and Revision came from industry and consumers. [80]

The Commission is of the opinion that little consumer deception will result from claims made for equipment having a power output of 2 watts or less. Further, the section 1 exemption will greatly facilitate enforcement of the rule.

CHAPTER VI.—PROCEEDING TO REVISE TO INCLUDE STANDARD TEST CONDITIONS

The argument was made at the hearings and raised again in response to the notice to amend and revise that the rule should contain specific test conditions. EIA urged the Commission to make the measurements required by the rule in accordance with the EIA Standard stating that variations in test conditions under section 2 could result in different output ratings. [81] EIA–J, [82] Somerset Associates [83] and Audio Showcase, Inc., [84] agreed.

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[70] R. 565.

[71] R. 279; Tr. 21–22.

[72] Tr. 75.

[73] Testimony of Mr. von Recklinghausen, Tr. 84.

[74] Accoustic Research, R. 109, New York Audio Society, R 227 and Audio Magazine, R. 594. Morley Kahn, Director of Marketing, Dynaco, Inc., in announcing support for the rule stated, "There is a problem of measuring short-term power on a meaningful and reproducible basis. The use of a momentary signal makes it extremely difficult to measure distortion; and, in fact, there is no standard way to do so—We feel that a rating system which can exaggerate the performance of an amplifier is a dis-service to the consumer and serves no beneficial purpose." Tr. 64–66; R. 348. See also consumers' views, R. 183, 222, 228, 229, 232, 233, 242, 246, 249, 263, 553, 596, 618.

[75] EIA at Tr. 22 and IHF at R. 126; Also Ivan Berger, Tr. 207 and R. 304.

[76] R. 302.

[77] Electronic Industries Association of Japan, Tr. 48.

[78] H. H. Scott, Inc., Tr. 83.

[79] Klipsch and Associates, Inc., R. 2; EIA, R. 103.

[80] Consumers' letters, R. 648–656, 679, 708, 716–719; EIA, R. 662–663 and IHF, R. 714; German Hi-Fi Center, R. 687; Somerset Associates, R. 689; Texas Consumer Association, R. 715 and Marantz, R. 721.

[81] Tr. 664.

[82] Tr. 677.

[83] In speaking of his disappointment in the Commission's failure to include such conditions, Mr. Greenberg stated: "As far as our comment on the omissions in the proposed regulation we consider them obvious. We refer the Commission to *any* audio engineer for verification and submit that without their inclusion, we will again have another meaningless regulation filled with genuine loopholes for clever manufacturers to exploit." Tr. 689, 690.

[84] Tr. 691.

Accordingly, on October 11, 1973, a notice to revise to include minimum test conditions was issued for comment.[85]

CHAPTER VII.—RESPONSE TO NOTICE TO REVISE AND FINDINGS

A. *Section 3* [86]*—Standard Test Conditions.*

(1) *Power line voltage.* Section 3(a) of the revised proposed rule states: "the power line voltage shall be 117 volts AC (230 volts when the equipment is made for foreign sale or use), RMS, using a sinusoidal wave containing less than 2 percent total harmonic content".

EIA contends that a more reasonable power line voltage would be 120 volts because 117 volts is exceeded in approximately 96 percent of customers' homes; [87] that 120 volts is the voltage usually specified for measuring under standard test conditions.[88] As to foreign equipment, EIA would have the Rule provide that the test voltage be within ± 1 percent of the amplifier rating because such equipment may not be rated at 230 volts.[89]

EIA also suggests that the Commission include a testing specification of the power line voltage for AC/DC or DC operated products and that such specification be the manufacturer's rated DC power supply for the particular product.[90]

Pacific Electronics would have the Commission establish line voltage as 120 volts ± 1 percent as provided in the IHF standard.[91]

With respect to the harmonic content of the sinusoidal wave, National Electronics Service Dealers Assocation, Inc., contends the rule requirement that such wave be of less than 2 percent total harmonic content is far too high to protect the consumer and should be changed to "no more than 1 percent and/or less".[92]

Klipsch and Associates, Inc., an electronic research and development firm, states that since few power lines have as little as 2 percent total harmonic content, the rule is unnecessarily stringent. A 10 percent figure, it is stressed, would provide for an essentially sinusoidal wave form without materially affecting the power supply voltage or current levels of equipment under test.[93]

The power line voltage specification has been changed to 120 volts in the Final Rule since there appears to be general agreement on this figure. Moreover 120 volts corresponds with the average voltage in homes across the U.S.A.

With respect to equipment manufactured for foreign sale or use, as noted earlier, the Commission considers it unwise to permit tolerances such as ±1 percent, etc., since this would not permit duplication of the tests. However, this aspect of the Rule has been changed to require testing at 230 volts unless a different voltage is indicated and is permanently affixed to the equipment by the manufacturer.

Only one industry member would make the total harmonic content of the signal stricter. The Commission is of the view that this is insufficient to change what is essentially accepted by most authorities and testing facilities as the standard test for this particular parameter.

The Commission understands that in the case of AC/DC operated products, the AC converts down to 9 volts or whatever battery voltage is recommended and that testing with the battery in such case will yield a very low distortion because the hum and noise factor from the power line has been eliminated. Therefore, a provision has been inserted in the Final Rule requiring testing at AC on such combination power source equipment. The Rule also provides for equipment operating solely on battery power.

(2) *Power line frequency.* Section 3, paragraph (b), of the revised proposed rule reads, "the power line frequency shall be 60 Hz".

Importer Triad-Ultrad, contends that 230 volts for foreign power line voltages is most generally accompanied by a frequency of 50 Hz, and proposes an amendment to this Section to read: "The power line frequency shall be a minimum of 48 Hz thru a maximum of 61 Hz for domestic appplication and/or favored foreign sale or use." [94]

As noted earlier, we have not permitted the use of tolerances because this would not allow for duplication of the tests. Accordingly, section 3(b) has been amended to include a power line frequency of 50 Hz in the case of equipment intended for foreign sale or use.

(3) *Pre-conditioning.* Section 3, paragraph (c) of the revised proposed rule states: "the amplifier shall be pre-conditioned by simultaneously operating all channels at one-third of rated power output for one hour using a sinusoidal wave at a frequency of 1000 Hz".

Only two industry members take issue with this provision. Both EIA [95] and EIA–J [96] contend that since average power is 1/10 of peak power normally, 1/10 is more representative of the condition under which the amplifier will be operated than is ⅓.

The Commission rejects this argument. Experts in the field have advised that preconditioning at 1/10 of rated power is totally insufficient to reveal any reduction in performance due to thermal build-up.

(4) *Temperature for testing.* Section 3, paragraph (d) of the revised proposed rule states: "the pre-conditioning and testing shall be in still air and an ambient temperature of 77°F."

There is general agreement that the temperature specification should be shown in equivalent degrees centigrade. EIA, noting that ambient temperatures in a testing laboratory are often difficult to control, believes that the temperature specification should be stated as "at least 77°F.", since the performance of amplifiers is not improved by higher temperatures.[97] One person would change the temperature specification to 100.5° F.,[98] a temperature not normally found in the average home.

The above suggestions that the temperature be stated as a minimum specification and the equivalent in degrees centigrade be shown are reasonable and have been incorporated in Section 3(d) of the Final Rule.

(5) *Power rating measurement.* Paragraph (e) of Section 2 of the revised proposed rule states: "rated power shall be obtainable at all frequencies within the rated power band without exceeding the rated maximum percentage of total harmonic distortion after input signals at said frequencies have been continuously applied for not less than five (5) minutes at the amplifier's auxiliary input, or if not provided, at the phono input."

Bruce Harvey, a consumer professing to have extensive experience with audio equipment, takes issue with the requirement that the signal be applied through the auxiliary input because, he maintains, auxiliary inputs are loaded with more impedance to protect the initial high amplification gain stages of the amplifier. The most common mode of operation input, he notes, is the phono input through which the tests should be made.[99] He states further that the test signal should be furnished by a standard FM/MPX test signal generator.[100]

Alan Lefkow, Engineer, Consumers Union, states, "* * * it is not clear whether the level of the input signals to be continuously applied for 5 minutes are supposed to drive the amplifier to its rated power output for that same length of time." [101]

As to the propriety of the amplifier input for application of the signal, the Commission understands that the phono input is a very low level type of input, the signal as to which only the McAdam tester is capable of duplicating; that there is no change in power output regardless of which input is used, the auxiliary or the phono. If the phono input is used, a higher distortion will be generated. Also built in equalization curves tend to foul up the input signal for most signal generators.

The Commission is of the opinion, therefore, that the auxiliary input will give an accurate picture of performance when in tape or tuner mode because they both by-pass the preamplifier. This aspect of paragraph (e) is therefore left unchanged.

However, the Commission is persuaded by Mr. Lefkow that paragraph (e) should be clarified by providing that the input signal shall be applied for 5 minutes at full rated power.[102]

Finally, paragraph (f) has been added which provides for the placement of controls during the period of testing.[103]

Other criticisms, addressed to the basic provisions of the rule as initially proposed, have already been considered and rejected.[104]

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[85] EIA also contended that to be technically correct the term "RMS" should be changed to "average". This change was incorporated in the revised rule.

[86] Section 3 of the proposed rule, designated "Optional Disclosures," was changed to Section 4, et. seq.

[87] A survey, "65,000 Service Voltage Tests Across the USA" (1966), reported by J.W. Anderson, R. 802.

[88] R. 797.

[89] Electronic Industries of Japan (EIA–J) substantially agrees with this view, R. 793.

[90] R. 797.

[91] Radio Shack also argues that the power line voltage should be 120 volts, R. 762. For similar views see Herman Sillbiger, Bell Telephone Laboratories, R. 759, and Superscope, R. 768.

[92] R. 778.

[93] R. 757.

[94] R. 752; in agreement is Professor Ashley, R. 775–776. EIA would include a tolerance of ±2 percent for tests made at other frequencies, R. 798.

[95] R. 798–799.

[96] R. 793.

[97] R. 799. See also Ivan Berger, R. 763; Triad–Ultrad, R. 752. EIA would also include a tolerance, R. 799.

[98] Prof. Ashley, R. 776.

[99] R. 743.

[100] *Ibid.*

[101] R. 786.

[102] Julian Hirsch was the only person to object to the 5 minute requirement, R. 766.

[103] See comment of Bruce Harvey, R. 742.

[104] Zenith Radio Corporation maintains that the proposed rule will generate consumer confusion because it permits disclosure of three variables at the option and whim of the manufacturer. The Commission wishes to stress its belief, to the contrary, that permitting the manufacturer the option of disclosing frequency response, distortion and impedance will provide the consumer with the information needed to choose the product which is most suitable to his or her particular needs. Pegging these variables, on the other hand would result in favoring manufacturers at a particular point in the market spectrum.

CHAPTER VIII.—SUMMARY AND CONCLUSION

On the basis of the foregoing considerations and the entire Record of the Trade Regulation Proceeding, including the proceedings to Amend and Revise, the Commission has concluded that the issuance of a Trade Regulation Rule relating to the Advertising of power output of sound power amplification equipment for home entertainment products is required by that Record and is in the public interest and has, therefore, promulgated the Final Rule, herein.

CHAPTER IX.—EFFECTIVE DATE OF FINAL RULE

EIA has noted that advertisements, specification sheets, line folders, catalogs and other promotional materials have different lead times and must be planned and prepared months before they are actually printed and distributed. New product lines are shown between April and June of each year and new models are displayed in late June at the Consumer Electronics Show. Promotional materials for this annual show must be finalized weeks before the products are shown.

At the hearing, EIA–J [105] and IHF [106] urged that the effective date be set at least one year after promulgation of the Rule. Speaking for a major portion of the industry, EIA now urges that if the Rule is not issued until after January 1, 1974, the effective date should be established as six months from the date of its promulgation.[107] The Commission accepts this suggestion as a reasonable solution and, accordingly, directs that the effective date of this Rule shall be six months after the date of promulgation.

[FR Doc.74–10118 Filed 5–2–74;8:45 am]

Title 29—Labor

CHAPTER XVII—OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, DEPARTMENT OF LABOR

PART 1952—APPROVED STATE PLANS FOR ENFORCEMENT OF STATE STANDARDS

Approval of Wyoming Plan

1. *Background.* Part 1902 of Title 29 Code of Federal Regulations prescribes procedures under section 18 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 667) whereby the several States may submit for approval under the requirements of that section, plans for the development and enforcement of State occupational safety and health standards.

On January 30, 1973, the State of Wyoming submitted comprehensive developmental occupational safety and health plan in accordance with these procedures and on February 23, 1973, a notice was published in the FEDERAL REGISTER (38 FR 5018) concerning the submission of the plan to the Assistant Secretary and the fact that the question of approval was in issue before him.

The plan designates the Occupational Health and Safety Commission as the agency to be responsible for administering the plan throughout the State. It defines the covered occupational safety and health issues as defined by the Secretary of Labor in § 1902.2(c)(1) of this chapter. Wyoming plans to adopt all Federal occupational safety and health standards except those found in 29 CFR Parts 1915, 1916, 1917, and 1918 (ship repairing, ship building, ship breaking and longshoring). In addition, the State intends to adopt additional vertical standards relating to oil well drilling and servicing not provided by the Federal program. Thereafter, the Commission shall continue to adopt future Federal standards within six months after their promulgation by the Secretary of Labor.

The plan further includes the Wyoming Occupational Health and Safety Act which became law on March 7, 1969, as well as amendments to this legislation which became effective on January 1, 1974, and which are designed to bring the Wyoming Act into conformity with the requirements of Part 1902.

Interested persons were afforded thirty (30) days from the date of publication to submit written comments concerning the plan. Further, interested persons were given an opportunity to request an informal hearing with respect to the plan or any part thereof, upon the basis of substantial objections to the plan's provisions.

Written comments concerning the plan were submitted on behalf of the United States Steel Corporation. There were no requests for an informal hearing.

2. *Issues.* The public comments and the national office review of the plan raised several significant issues which were addressed by the State in numerous supplementary letters which clarify and modify the plan and which have been incorporated as part of it. These supplements included letters from the Wyoming Occupational Health and Safety Department dated April 23, 1973, May 30, 1973, August 28, 1973, August 30, 1973, September 6, 1973, and December 6, 1973. There are also letters from the Governor of the State which clarify Wyoming's review procedures and which contain proposed amendments to the State's Administrative Procedure Act.

In light of these modifications that have been made to the Wyoming program, it is considered appropriate herein to discuss the significant issues which were raised during the approval process.

a. *Employment discrimination.* The first issue raised was Wyoming's proposed provision for protecting employees from discrimination for exercising their rights under the Wyoming Occupational Health and Safety Act. Under the plan as originally submitted the State failed to provide for the relief provided under the Federal Act in section 11(c) including rehiring or reinstatement of an employee to his former position with back pay. In response to such criticism the State is planning to provide this protection to employees in the following manner: under Wyoming's revised procedures an aggrieved employee may file a complaint with the Administrator who shall then make an appropriate investigation. If the Administrator concludes that a case of discrimination does exist he shall send the employee's case file to the Wyoming Fair Employment Practices Commission for action consistent with the State's Fair Employment Practices Act of 1965. The State has agreed to amend this Act in order to make discrimination under the Wyoming Occupational Health and Safety Act an unfair labor practice. The Wyoming Fair Employment Practices Act does grant employees the same relief as is afforded under the Federal Act. Further, the Wyoming Occupational Health and Safety Commission will represent the aggrieved employee before the Fair Employment Practices Commission.

b. *Review procedures*—(1) *Finality of agency decisions.* A second issue was Wyoming's proposed review procedures. Although the Wyoming Act gives employers the right to administrative review of citations, proposed penalties, and abatement periods and judicial review of such agency action is provided pursuant to, title 9 § 276.321 of Wyoming's General Statutes, the Plan stated that the actual assessment and collection of penalties would be determined by the courts. Such proposed court system for the assessment and collection of administrative penalties raised the following questions: Whether in a contested case, where the Wyoming Review Board and reviewing court upholds the citation, proposed penalty, or abatement period, will the court in a subsequent collection proceeding be free to re-open the case and to re-determine any aspects of the case as well as the agency's proposed penalty; in a case where an employer does not contest a citation, proposed penalty, or abatement period before the Review Board will such employer be given another opportunity to contest the citation, proposed penalty or abatement period when the case is brought to trial for collection. The possibility of a complete court trial on the merits before any penalties were deemed final was viewed as unduly extending the period of time for review of citations, proposed penalties, and abatement requirements, and as unnecessarily duplicating procedures. Moreover, it appeared that any hearing before the Review Board would be rendered superfluous for whether or not an employer contested the citation before the Review Board he would still be given the opportunity for a judicial trial, and, even if an employer wanted to contest the proposed penalty, it would be futile to contest it before the Review Commission, for that body seemingly did not have the authority to assess a final penalty.

In response to such concerns, the State clarified and modified its administrative and court procedures in order to meet Federal requirements. The State has agreed to submit amendments to its Administrative Procedures Act to the 1975 session of its State Legislature which amendments will provide as follows: The failure of any person to contest administrative action within the statutory time permitted for filing contested cases shall preclude the right of further administrative review of such agency action or of judicial review; and further, in a contested case the failure of an individual to appeal an administrative decision within

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[105] R. 677.
[106] R. 328.
[107] R. 800–801.