rapidity with which the main committee completes its review of the document depends upon a number of factors: the complexity of the subject matter, the clarity and completeness of the draft, etc. Usually parts of the document are returned to the subcommittee one or more times for suggested improvements. When the final review by the main committee has been completed, a letter ballot is taken.

The main committee then submits the proposed standards document to the IEEE Standards Committee together with the results of the letter ballot. Owing to the close interaction between main committee and subcommittee over a period of months, the letter ballot not infrequently registers an approval of the document without a dissenting vote. However, the IEEE Standards Committee puts the document through another careful review. Before the document can receive formal consideration at a meeting of the IEEE Standards Committee, another letter ballot is taken. In the event the document meets the unanimous approval of the IEEE Standards Committee, it is published without further review. If there are one or more negative votes, or affirmative votes with conditions, it is necessary for the subcommittee chairman and the chairman of the main committee to work together to make modifications to the proposed document and, hopefully, to overcome the opposition expressed by one or more members of the IEEE Standards Committee.

Following approval by the IEEE Standards Committee, the document is published by the IEEE. It may appear as a standard, a test procedure, a recommended practice, a guide, a list of definitions, or a technical report. Upon its publication, the subcommittee is recognized for the contributions it has made to the cause of acoustical standardization.

It is hoped that this discussion has given the reader an understanding of the process that resulted in the publication of the document on the following pages.

WILLIAM W. LANG, *Chairman*
G-AE Standards Committee

IEEE Standard on Definitions of Terms for Audio and Electroacoustics

NO. 151, FEBRUARY 10, 1965

INTRODUCTION

This Standard is issued to supersede 58 IRE 3. S1, "IRE Standards on Audio Techniques: Definitions of Terms, 1958," to include the definitions of the 1958 Standards and to add definitions of terms for which it was felt a need exists for establishment of precise and concise meanings. Some of the previous standard definitions have been modified to accommodate changes in usage.

The definitions included in this Standard all refer specifically to the use of the terms in audio techniques. Many of these terms are used in other fields with different meanings, and it is assumed that definitions for these terms in those fields are or will be included in Standards issued by other committees. Therefore, in general, the modifying phrase "In Audio Techniques" has been omitted except in certain cases where it appears to be particularly necessary to avoid confusion.

ACKNOWLEDGMENT

The Institute wishes to acknowledge its indebtedness to those who have so freely given of their time and knowledge, and have conducted experimental work on which many of the IEEE publications are based.

This publication was prepared by the Audio Definitions Subcommittee of the IEEE Audio and Electroacoustics Committee, whose membership during the period of preparing this document was:

A. A. McGee, *Chairman 1959–1960*

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DEFINITIONS OF TERMS

Amplification

An increase in signal magnitude from one point to another, or the process causing this increase.

Amplification, Current

Either

(1) an increase in signal current magnitude in transmission from one point to another, or the process thereof, or

(2) of a transducer, the scalar ratio of the signal output current to the signal input current.

Note: The ratio in (2) is sometimes expressed in decibels by multiplying its common logarithm by 20. This leads to ambiguity if the currents being considered flow into unequal impedances, in which case the numerical result should be qualified by the statement, "dB current amplification." See "Decibel," IEEE No. 145 (48 IRE 2, 11, 15. S1).

Amplification, Voltage

Either

(1) an increase in signal voltage magnitude in transmission from one point to another, or the process thereof, or

(2) of a transducer, the scalar ratio of the signal output voltage to the signal input voltage.

Note: The ratio in (2) is sometimes expressed in decibels by multiplying its common logarithm by 20. This leads to ambiguity if the voltages being considered are across unequal impedances, in which case the numerical result should be qualified by the statement "dB voltage amplification." See "Decibel," IEEE No. 145 (48 IRE 2, 11, 15. S1).

Amplifier

A device which enables an input signal to control power from a source independent of the signal and thus be capable of delivering an output which bears some relationship to, and is generally greater than, the input signal.

Amplifier, Balanced

An amplifier in which there are two identical signal branches connected so as to operate in phase opposition and with input and output connections each balanced to ground.

Amplifier, Bridging

An amplifier with an input impedance sufficiently high so that its input may be bridged across a circuit without substantially affecting the signal level of the circuit across which it is bridged.

Amplifier, Clipper

An amplifier designed to limit the instantaneous value of its output to a predetermined maximum.

Amplifier, Distribution

A power amplifier designed to energize a speech or music distribution system and having sufficiently low output impedance so that changes in load do not appreciably affect the output voltage.

Amplifier, Isolation

An amplifier employed to minimize the effects of a following circuit on the preceding circuit.

Amplifier, Line

An amplifier which supplies a transmission line or system with a signal at a stipulated level.

Amplifier, Monitoring

A power amplifier used primarily for evaluation and supervision of a program.

Amplifier, Peak Limiting

See Peak Limiter.

Amplifier, Power

An amplifier which drives a utilization device such as a loudspeaker.

Amplifier, Program

See Amplifier, Line.

Amplitude Distortion

See Distortion, Harmonic and Distortion, Intermodulation.

Amplitude-Frequency Distortion

See Distortion Amplitude-Frequency.

Amplitude-Frequency Response

The variation of gain, loss, amplification, or attenuation as a function of frequency.

Note: This response is usually measured in the region of operation in which the transfer characteristic of the system or transducer is essentially linear.

Amplitude Range

The ratio, usually expressed in decibels, of the upper and lower limits of program amplitudes which contain all significant energy contributions.

Attack Time

The interval required, after a sudden increase in input signal amplitude to a system or transducer, to attain a stated percentage (usually 63 percent) of the ultimate change in amplification or attenuation due to this increase.

Attenuation

A decrease in signal magnitude from one point to another, or the process causing this decrease.

Attenuation, Current

Either

(1) a decrease in signal current magnitude, in transmission from one point to another, or the process thereof, or

(2) of a transducer, the scalar ratio of the signal input current to the signal output current.

Note: The ratio in (2) is sometimes expressed in decibels by multiplying its common logarithm by 20. This leads to ambiguity if the currents being considered flow into unequal impedances, in which case the numerical result should be qualified by the statement, "dB current attenuation." See "Decibel," IEEE No. 145 (48 IRE 2, 11, 15. S1).

Attenuation, Voltage

Either

(1) a decrease in signal voltage magnitude in transmission from one point to another, or the process thereof, or

(2) of a transducer, the scalar ratio of the signal input voltage to the signal output voltage.

Note: The ratio in (2) is sometimes expressed in decibels by multiplying its common logarithm by 20. This leads to ambiguity if the voltages being considered are across unequal impedances, in which case the numerical result should be qualified by the statement, "dB voltage attenuation." See "Decibel," IEEE No. 145, (48 IRE 2, 11, 15. S1).

Attenuator

An adjustable passive network which reduces the power level of a signal without introducing appreciable distortion.

Audio Frequency

Any frequency corresponding to a normally audible sound wave.

Note: Audio frequencies range roughly from 15 to 20 000 cycles per second.

Audio-Frequency Noise

See Noise, Audio-Frequency.

Audio-Frequency Oscillator

(Audio Oscillator)

A nonrotating device for producing an audio-frequency sinusoidal electric wave, whose frequency is determined by the characteristics of the device.

Audio-Frequency Response

See Amplitude-Frequency Response.

Audio-Frequency Spectrum

(Audio Spectrum)

The continuous range of frequencies extending from the lowest to the highest audio frequency.

Automatic Gain Control (AGC)

A process or means by which gain is automatically adjusted as a function of input or other parameter.

Automatic Volume Control (AVC)

A process or means by which a substantially constant output volume is automatically maintained in a system or transducer.

Available Power

The maximum power obtainable from a given source by suitable adjustment of the load.

Note: For a source that is equivalent to a constant sinusoidal electromotive force in series with an impedance independent of amplitude, the available power is the mean square value of the electromotive force divided by four times the resistive part of the impedance of the source.

Babble

The aggregate crosstalk from a large number of interfering channels.

Balanced

In communication practice, the term usually signifies

(1) electrically alike and symmetrical with respect to a common reference point, usually ground, or

(2) arranged to provide conjugacy between certain sets of terminals.

Note: The term balanced may also be employed to signify a proper relationship between two or more entities, such as stereophonic channels.

Balanced Amplifier

See Amplifier, Balanced.

Band-Elimination Filter

See Filter, Band-Elimination.

Band-Pass Filter

See Filter, Band-Pass.

Bass Boost

An accentuation of the lower audio frequencies in the amplitude-frequency response of a system or transducer.

Bridging

The shunting of one signal circuit by one or more circuits usually for the purpose of deriving one or more circuit branches.

Note: A bridging circuit often has an input impedance of such a high value that it does not substantially affect the circuit bridged.

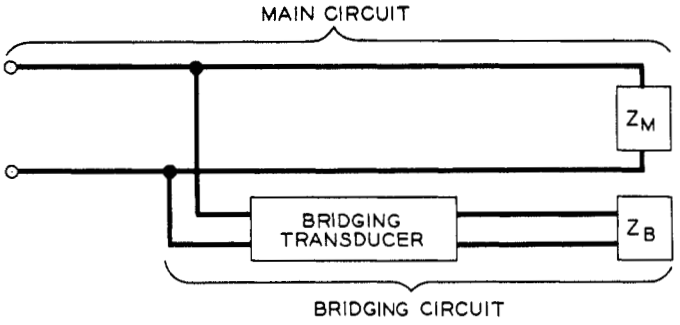
Bridging Amplifier

See Amplifier, Bridging.

Bridging Gain

The ratio of the signal power a transducer delivers to its load (Z_B) to the signal power dissipated in the main circuit load (Z_M) across which the input of the transducer is bridged.

Note: Bridging gain is usually expressed in decibels.



Bridging Loss

(1) The ratio of the signal power dissipated in the main circuit load (Z_M) across which the input of a transducer is bridged, to the signal power the transducer delivers to its load (Z_B).

(2) The ratio of the signal power delivered to that part of the system following the bridging point before the connection of the bridging element, to the signal power delivered to the same part after the connection of the bridging element.

Note 1: Bridging loss is usually expressed in decibels.

Note 2: In (2), bridging loss may be considered as a special case of insertion loss.

Clipper Amplifier

See Amplifier, Clipper.

Compandor

A combination of a compressor at one point in a communication path for reducing the amplitude range of signals, followed by an expander at another point for a complementary increase in amplitude range.

Note: The purpose of a compandor is to improve the ratio of the signal to the interference entering the path between the compressor and the expander.

Compressor

A transducer which, for a given input amplitude range, produces a smaller output range.

Conjugate Branches

Of a network, any two branches such that an electromotive force inserted in one branch produces no current in the other branch.

Conjugate Impedances

See Impedances, Conjugate.

Crosstalk

Undesired energy appearing in one signal path as a result of coupling from other signal paths.

Note: Path implies wires or other localized or constrained transmission systems.

Cue Circuit

A one-way communication circuit used to convey program control information.

Cutoff Frequency

The frequency that is identified with the transition between a pass band and an adjacent attenuation band of a system or transducer.

dBm

A unit for expression of power level in decibels with reference to a power of one milliwatt (0.001 watt).

Decade

The interval between any two quantities having the ratio of 10:1.

De-Emphasis

In a system, a process which has an amplitude-frequency characteristic complementary to that used for pre-emphasis.

Delay Distortion

See Distortion, Delay.

Delay, Envelope

The slope of the phase-versus-frequency characteristic, $d\phi/d\omega$ of a system or transducer.

Delay, Phase

The ratio of the total phase shift (radians) experienced by a sinusoidal signal in transmission through a system or transducer, to the frequency (radians/second) of the signal.

Note: The unit of phase delay is the second.

Distortion

Of a signal, an undesired change in waveform.

Distortion, Amplitude

See Distortion, Harmonic; and Distortion, Intermodulation.

Distortion, Amplitude-Frequency

Distortion due to an undesired amplitude-frequency characteristic.

Distortion, Envelope Delay

Of a system or transducer, the difference between the envelope delay at one frequency and the envelope delay at a reference frequency.

Distortion Frequency

See Distortion, Amplitude-Frequency.

Distortion, Harmonic

Nonlinear distortion of a system or transducer characterized by the appearance in the output of harmonics other than fundamental component when the input wave is sinusoidal.

Note: Subharmonic distortion may also occur.

Distortion, Intermodulation

Nonlinear distortion of a system or transducer characterized by the appearance in the output of frequencies equal to the sums and differences of integral multiples of the two or more component frequencies present in the input wave.

Note: Harmonic components also present in the output are usually not included as part of the intermodulation distortion. When harmonics are included, a statement to that effect should be made.

Distortion, Nonlinear

Distortion caused by a deviation from a linear relationship between specified measures of the input and output of a system or transducer.

Note: The specified characteristics may be, for example, the modulation of an input carrier and the resultant detected signal.

Distortion, Percent Harmonic

A measure of the harmonic distortion in a system or transducer, numerically equal to 100 times the ratio of the square root of the sum of the squares of the root-mean-square voltages (or currents) of each of the individual harmonic frequencies, to the root-mean-square voltage (or current) of the fundamental.

Note: It is practical to measure the ratio of the root-mean-square amplitude of the residual harmonic voltages (or currents), after the elimination of the fundamental, to the root-mean-square amplitude of the fundamental and harmonic voltages (or currents) combined. This measurement will indicate percent harmonic distortion with an error of less than 5 percent if the magnitude of the distortion does not exceed 30 percent.

Distortion, Phase Delay

Of a system or transducer, the difference between the phase delay at one frequency and the phase delay at a reference frequency.

Distortion, Phase-Frequency

See Distortion, Phase Delay.

Distribution Amplifier

See Amplifier, Distribution.

Dividing Network

(Crossover Network)

A frequency selective network which divides the spectrum into two or more frequency bands for distribution to different loads.

Dynamic Range

The difference, in decibels, between the overload level and the minimum acceptable signal level in a system or transducer.

Note: The minimum acceptable signal level of a system or transducer is ordinarily fixed by one or more of the following: noise level, low-level distortion, or interference.

Echo

A wave which has been reflected or otherwise returned with sufficient magnitude and delay to be perceived in some manner as a wave distinct from that directly transmitted.

Envelope Delay Distortion

See Distortion, Envelope Delay.

Equalizer

A device designed to compensate for an undesired amplitude-frequency or phase-frequency characteristic, or both, of a system or transducer.

Expander

A transducer which, for a given input amplitude range produces a larger output range.

Filter

(Wave Filter)

A transducer for separating waves on the basis of their frequency.

Note: A filter introduces relatively small insertion loss to waves in one or more frequency bands and relatively large insertion loss to waves of other frequencies.

Filter, Band-Elimination

A filter which has a single attenuation band, neither of the cutoff frequencies being zero or infinite.

Filter, Band-Pass

A filter which has a single transmission band, neither of the cutoff frequencies being zero or infinite.

Filter, High-Pass

A filter having a single transmission band extending from some cutoff frequency, not zero, up to infinite frequency.

Filter, Low-Pass

A filter having a single transmission band extending from zero to some cutoff frequency, not infinite.

Filter, Sound Effects

A filter used to adjust the frequency response of a system for the purpose of achieving special aural effects.

Frequency Distortion

See Distortion Amplitude-Frequency.

Frequency Response

See Amplitude-Frequency Response.

Gain

(Transmission Gain)

The increase in signal power in transmission from one point to another.

Note: Gain is usually expressed in decibels.

Gain Control

A device for adjusting the gain of a system or transducer.

Harmonic Distortion

See Distortion, Harmonic.

High-Pass Filter

See Filter, High-Pass.

Hiss

Audio-frequency noise having subjective characteristics analogous to prolonged sibilant sounds.

Hum

(Power Supply Hum)

Interference from a power system characterized by the presence of undesired energy at power supply frequency or harmonics thereof.

Hybrid Coil

A single transformer having effectively three windings, which is designed to be connected to four branches of a circuit so as to render these branches conjugate in pairs.

Hybrid Set

Two or more transformers interconnected to form a network having four pairs of accessible terminals to which may be connected four impedances so that the branches containing them may be made conjugate in pairs when the impedances have the proper values but not otherwise.

Ideal Transducer

See Transducer, Ideal.

Ideal Transformer

See Transformer, Ideal.

Image Impedances

See Impedances, Image.

Impedance, Input

The impedance presented by the transducer to the source.

Note: Input impedance is sometimes incorrectly used to designate source impedance.

Impedance, Iterative

That impedance which, when connected to one pair of terminals or a transducer produces an identical impedance at the other pair of terminals.

Note 1: It follows that the iterative impedance of a transducer is the same as the impedance at the input terminals when an infinite number of identical transducers are formed into an iterative or recurrent structure.

Note 2: The iterative impedances of a four-terminal transducer are, in general, not equal to each other, but for any symmetrical transducer the iterative impedances are equal and are the same as the image impedances. The iterative impedance of a uniform line is the same as its characteristic impedance.

Impedance, Load

The impedance presented by the load.

Impedance, Output

Of a device, the impedance presented by the device to the load.

Note: Output impedance is sometimes incorrectly used to designate load impedance.

Impedance, Source

The impedance presented by a source of energy to the input terminals of a device.

Impedances, Conjugate

Impedances having resistance components which are equal, and reactance components which are equal in magnitude but opposite in sign.

Impedances, Image

The impedances which will simultaneously terminate all inputs and outputs of a transducer in such a way that at each of its inputs and outputs the impedance in both directions will be equal.

Note: The image impedances of a four-terminal transducer are, in general, not equal to each other, but for any symmetrical transducer the image impedances are equal and are the same as the iterative impedances.

Input Impedance

See Impedance, Input

Insertion Gain

The ratio of the power delivered to that part of a transmission system following a transducer, to the power delivered to that same part of the system before the insertion of the transducer.

Note 1: The "insertion of a transducer" includes bridging of an impedance across the transmission system.

Note 2: Insertion gain is usually expressed in decibels.

Insertion Loss

The ratio of the power delivered to that part of a transmission system which will follow a transducer, to the power delivered to that same part of the system after the insertion of the transducer.

Note 1: The "insertion of a transducer" includes bridging of an impedance across the transmission system.

Note 2: Insertion loss is usually expressed in decibels.

Intermodulation Distortion

See Distortion, Intermodulation.

Isolation Amplifier

See Amplifier, Isolation.

Isolation Transformer

See Transformer, Isolation.

Iterative Impedance

See Impedance, Iterative.

Level (in audio)

The magnitude of a quantity considered in relation to a reference value.

Note 1: Most frequently, level is proportional to the logarithm of the ratio of the quantity to a specific reference value, expressed in decibels.

Note 2: Level sometimes is stated in units in which the quantity itself is measured (for example, volts, ohms, etc.), but this usage is deprecated.

Line Amplifier

See Amplifier, Line.

Line Transformer

See Transformer, Line.

Load

(1) A device which receives power.
(2) The power delivered to such a device.

Load Impedance

See Impedance, Load.

Loss

(Transmission Loss)

The decrease in signal power in transmission from one point to another.

Note: Loss is usually expressed in decibels.

Low-Pass Filter

See Filter, Low-Pass.

Microphonics

The noise caused by mechanical shock or vibration of elements in a system.

Mixer (in audio techniques)

A device having two or more inputs, usually adjustable, and a common output, which operates to combine linearly in a desired proportion the separate input signals to produce an output signal.

Motorboating

An undesired oscillation in an amplifying system or transducer, usually of a pulse type, occurring at a subaudio or low audio frequency.

Network

A combination of elements.

Noise, Audio-Frequency

Any unwanted disturbance in the audio-frequency range.

Noise Level

(1) The noise power density spectrum in the frequency range of interest,
(2) the average noise power in the frequency range of interest, or
(3) the indication on a specified instrument.

Note 1: In (3), the characteristics of the instrument are determined by the type of noise to be measured and the application of the results thereof.

Note 1: Noise level is usually expressed in decibels relative to a reference value.

Octave

In communication, the interval between two frequencies having a ratio of 2:1.

Output Power

The power delivered by a system or transducer to its load.

Overload Level

Of a system or component, is that level above which operation ceases to be satisfactory as a result of signal distortion, overheating, or damage.

Pad

A nonadjustable passive network which reduces the power level of a signal without introducing appreciable distortion.

Note: A pad may also provide impedance matching.

Passive Transducer

See Transducer, Passive.

Peak Limiter

A device which automatically limits the magnitude of its output signal to approximate a preset maximum value by reducing its amplification when the instantaneous signal magnitude exceeds a preset value.

Note: Normal usage refers to a device whose amplification is quickly reduced when the instantaneous magnitude of the signal exceeds a predetermined value, and is slowly restored when the signal becomes less than that value.

Peak Limiting Amplifier

See Peak Limiter.

Percent Harmonic Distortion

See Distortion, Percent Harmonic.

Phase Distortion

See Distortion, Phase Delay.

Phase-Frequency Distortion

See Distortion, Phase Delay.

Power Amplifier

See Amplifier, Power.

Power Gain

The ratio of the signal power that a transducer delivers to its load to the signal power absorbed by its input circuit.

Note 1: Power gain is usually expressed in decibels.

Note 2: If the output signal power is at a frequency other than the input signal power, the gain is a conversion gain.

Power Level

The magnitude of power averaged over a specified interval of time.

Note: Power level may be expressed in units in which the power itself is measured or in decibels indicating the ratio to a reference power. This ratio is usually expressed either in decibels referred to one milliwatt, abbreviated dBm, or in decibels referred to one watt, abbreviated dBW.

Power Loss

The ratio of the signal power absorbed by the input circuit of a transducer to the signal power delivered to its load.

Note: Power loss is usually expressed in decibels.

Preamplifier

An amplifier connected to a low-level signal source to present suitable input and output impedances and provide gain so that the signal may be further processed without appreciable degradation in the signal-to-noise ratio.

Note: A preamplifier may include provision for equalization and/or mixing.

Pre-Emphasis

In a system, a process which increases the magnitude of some frequency components with respect to the magnitude of others in order to reduce the effects of noise introduced in subsequent parts of the system.

Program

A sequence of signals transmitted for entertainment or information.

Program Amplifier

See Amplifier, Line.

Program Level

The magnitude of program in an audio system expressed in vu.

Push-Pull Amplifier Circuit

See Amplifier, Balanced.

Recovery Time

The time interval required, after a sudden decrease in input signal amplitude to a system or transducer, to attain a stated percentage (usually 63 percent) of the ultimate change in amplification or attenuation due to this decrease.

Reference Volume

The volume which gives a reading of 0 vu on a standard volume indicator.

Remote Line

A program transmission line between a remote-pickup point and the studio or transmitter site.

Roll-Off

A gradually increasing loss or attenuation with increase or decrease of frequency beyond the substantially flat portion of the amplitude-frequency response characteristic of a system or transducer.

Signal

(1) A visual, aural, or other indication used to convey information;
(2) The information to be conveyed over a communication system;
(3) A wave, in a communication system, which conveys information.

Signal Level

The magnitude of a signal, especially when considered in relation to an arbitrary reference magnitude.

Note: Signal level may be expressed in the units in which the quantity itself is measured (for example, volts or watts) or in units expressing a logarithmic function of the ratio of the two magnitudes.

Singing

An undesired self-sustained oscillation in a system or transducer.

Note: Very-low-frequency oscillation is sometimes called "motorboating," which is defined elsewhere in this Standard.

Singing Margin

(Gain Margin)

The ratio of the singing point to the operating gain of a system or transducer.

Note: Singing margin is usually expressed in decibels.

Singing Point

The minimum value of gain of a system or transducer that will cause singing to start.

Single-Ended Amplifier

An amplifier in which each stage normally employs only one active element (tube, transistor, etc.), or, if more than one active element is used, in which they are connected in parallel so that operation is asymmetric with respect to ground.

Single-Edged Push-Pull Amplifier Circuit

An amplifier circuit having two transmission paths designed to operate in a complementary manner and connected so as to provide a single unbalanced output without the use of an output transformer.

Sound-Effects Filter

See Filter, Sound-Effects.

Source

That which supplies signal power to a transducer.

Source Impedance

See Impedance, Source.

Standard Volume Indicator

A standardized instrument having specified electrical and dynamic characteristics and read in a prescribed manner, for indicating the volume of a complex electric wave such as that corresponding to speech or music.

Note: The instrument and its use are described in IEEE No. 152 (53 IRE 3 S2 and ASA C16.5).

Subharmonic

A sinusoidal quantity having a frequency which is an integral submultiple of the fundamental frequency of a periodic quantity from which it is derived.

Note: For example, a wave the frequency of which is half the fundamental frequency of another wave is called the second subharmonic of that wave.

Thump

A low-frequency transient disturbance in a system or transducer characterized audibly by the onomatopoeic connotation of the word.

Transducer

A device capable of being actuated by signals from one or more systems or media and of supplying related signals to one or more other systems or media.

Note: The signals in the input and output may be of the same or different types (e.g., electric, acoustic, or mechanical).

Transducer, Active

A transducer whose output signal is dependent on power that is controlled by one or more actuating signals.

Transducer, Ideal

A hypothetical linear passive transducer that transfers the available power of the source to the load.

Transducer, Passive

A transducer that has no source of power other than the input signal(s), and whose output signal-power cannot exceed that of the input.

Transducer Gain

The ratio of the power the transducer delivers to its load, to the available power of the source.

Note: Transducer gain is usually expressed in decibels.

Transducer Loss

The ratio of the available power of the source, to the power the transducer delivers to its load.

Note: Transducer loss is usually expressed in decibels.

Transformer, Ideal

A hypothetical transformer that neither stores nor dissipates energy and has unity coefficient of coupling.

Note: An ideal transformer has self inductances of finite ratio and its self and mutual impedances are pure inductances of infinite magnitude.

Transformer, Isolation

A transformer inserted in a system to separate one section of the system from undesired influences of other sections.

Note: Isolation transformers are commonly used to isolate system grounds and prevent the transmission of undesired currents.

Transformer, Line

A transformer connecting a transmission line to terminal equipment used for such purposes as isolation, line balance, impedance matching, or additional circuit connections.

Transformer Loss (in communication)

The ratio of the signal power an ideal transformer would deliver to a load, to the power delivered to the same load by the actual transformer, both transformers having the same impedance ratio.

Note: Transformer loss is usually expressed in decibels.

Transition Loss

At a junction between a source and a load, the ratio of the available power to the power delivered to the load.

Note: Transition loss is usually expressed in decibels.

Treble Boost

An accentuation of the higher audio frequencies in the amplitude-frequency response of a system or transducer.

Unbalanced

Not balanced.

Note: Frequently, unbalanced signifies a circuit one side of which is grounded.

Volume

In an electric circuit, the magnitude of a complex audio-frequency wave as measured on a standard volume indicator.

Note 1: Volume is expressed in vu.

Note 2: The term volume is used loosely to signify either the intensity of a sound or the magnitude of an audio-frequency wave.

Volume Control

See Gain Control.

Volume Indicator

See Standard Volume Indicator.

Volume Limiter (Deprecated)

See Peak Limiter.

vu

The unit of volume in which the standard volume indicator is calibrated.

Note: A change of one vu is the same as a change of one decibel for a sine wave but vu should not be used to express results of measurements of complex waves made with devices having characteristics differing from those of the standard volume indicator.