Glossary

- **3-to-1 rule** a recording strategy used to avoid phasing issues during stereo miking. The 3-to-1 rule states that the distance between the first and second microphones should be at least three times the distance between the first microphone and the sound source.
- 50/50 **split** a common type of contract agreement used in the music industry that equally divides royalties between the composer and the publisher.
- **80:20 ratio** a compositional guideline used in media scoring, assigning approximately 80% of the expression to the drama and emotional atmosphere of the scene, while the remaining 20% is used to define the region in which the scene takes place.

A

- **AAX** shorthand for Avid Audio eXtension, this is a more recent plugin type used by Pro Tools software that is available in native and DSP formats.
- **absorption** a category of acoustic treatment that absorbs sound before it has the chance to reflect around the room, which can cause acoustic problems.
- accelerando a score marking that tells the performer(s) to gradually increase the speed of the music.
- **accent mark** a notational symbol that tells the performer to emphasize a note with a sudden increase in volume.
- **accented passing tone** an embellishment that is approached and left by step in the same direction and takes place in an accented metrical position.
- **accidental** a symbol used to alter the pitch of a note in a given direction without changing its letter, typically creating a chromatic alteration.
- *accordatura* a score marking indicating a cancelation of *scordatura* and return to standard tuning, usually in a score for stringed instruments.

acoustic foam – a type of acoustic paneling that absorbs non-bass frequencies within a studio room.

- acoustic treatment the application of physical paneling and other devices to a studio room so that it absorbs and deflects frequencies in a desired way.
- active monitors studio speakers that receive power from a built-in amplifier.
- **add chord** a triad to which a note is added that creates an interval of a major sixth or major second above the chord's root in some octave.
- **additive equalization** a process through which desired frequencies are boosted so that they sound more dominant in a mix.
- ADSR the four stages of an amplitude envelope: attack, decay, sustain, and release.
- **Aeolian mode** a diatonic mode that is equivalent to the natural minor scale, with a step pattern W-H-W-W-H-W-W.
- **Alberti bass** a particular style of bass arpeggiation that is characterized by a pitch contour sequence of low-high-medium-high.
- **aleatoricism** a composition technique involving indeterminacy or chance procedures that was popularized in the twentieth century by composers such as John Cage, Kryzstof Penderecki, and several others.
- **algorithmic reverb** a type of reverb that uses mathematical algorithms to create a series of diminishing delays that simulate a particular acoustic space.
- **aliasing** sonic distortion caused when a frequency is recorded that exists above one half of the sample rate.
- **altered dominant** a dominant triad or seventh chord that possesses either a diminished or, more commonly, an augmented fifth.
- **alto clef** a C clef that assigns middle C (C4) to the third line of the staff.
- **ambient miking** the opposite of close miking, this technique involves placing a microphone a considerable distance from a sound source in order to take advantage of the coloration provided by the environment's reverberation.
- **amplitude** the intensity of energy in a given pressure wave, which is perceived by the human ear as loudness and expressed in dB or decibels (with 0dB representing the lower threshold for human hearing).
- **amplitude envelope** a way of describing how a sound unfolds over time from its first transient to the point at which it fades out. Amplitude envelope is described according to four stages, abbreviated as ADSR: attack, decay, sustain, and release.
- anacrusis an incomplete "pick-up" measure that takes place before the initial downbeat of a section or piece of music.
- antecedent the initial phrase or set of phrases within a multi-phrase structure that ends in a relatively inconclusive manner, leaving space for the more conclusive consequent phrase(s).
- **anticipation** an unaccented embellishment that is approached by stepwise motion and left by common tone.
- appoggiatura a very expressive dissonance that is preceded by leap—typically an ascending leap—and followed by step in the opposite direction.
- **arpeggiating** $_4^6$ an apparent second inversion triad formed when the bass line of a piece arpeggiates up or down between chord tones to embellish a root position harmony.
- arpeggiation a melodic and rhythmic figure involving a succession of leaps between chord tones.
- **articles of organization** a document that legally establishes a limited liability company in the United States.

artificial harmonics – false harmonics that are created when the performer uses one finger to stop a string at some point within its length and then lightly presses a P4 above the stop in pitch with another finger while bowing or plucking. In doing so, the performer generates a harmonic that sounds two octaves above the stopped note.

asymmetrical meter – a meter whose beats are of different lengths. **asymmetrical period** – a period whose phrases are of unequal length.

attack – in acoustics, the point of a waveform's transient initiation. In mixing, a real or virtual knob within a compressor that specifies the speed at which the compressor will react to a signal passing over the threshold amplitude.

attenuate – to decrease the intensity of a certain range within the frequency spectrum during equalization.

AU - shorthand for Audio Units, this is a popular native plugin format created by Apple.

audio continuum – a metaphorical three-dimensional space used to describe the fundamental parameters of a mix, which are volume, width, and depth.

Audio Warp - the audio quantization mode within Cubase software.

augmentation – the lengthening of a motive via a systematic increase in its durational values. **augmented sixth chord** – a chromatic predominant that features an augmented sixth interval between the lowered submediant in the bass and the raised subdominant in an upper voice, along with tonic and potentially one other scale degree ($^{\flat}$ $\hat{3}$ or $\hat{2}$).

automation – a manner of recording modifications to a musical parameter over time by means of fader or knob movements that are generated from a mouse or control surface, either during live playback or via asynchronous manipulations of a graphic display.

aux track – an auxiliary track within a mix to which (and from which) a signal is bussed, typically for the purpose of adding effects and/or grouping tracks.

В

balanced input – a connection point in an audio device that accepts three-wire, noise-cancelling cables such as XLRs.

bandwidth - frequency range, typically adjusted by the Q factor within an equalizer.

bar - a single, complete instance of a metric pattern that is also known as a measure.

bar line – a vertical line serving as the notational boundary of a measure.

bass - the lowest-sounding contrapuntal voice within a musical texture.

bass clef – A clef used for the notation of music for lower-pitched instruments. The bass clef is a stylized F featuring dots placed on either side of the fourth line of the staff that identify it as an F (specifically, F3). As such, the bass clef is also known as the F clef.

bass drop - a sub bass sound that sonically articulates an important hit point in a piece of music.

bass traps – a type of acoustic treatment that prevents the reflection of bass frequencies and room modes within a studio.

beam – a thick, horizontal line used to connect stems in music notation for the purpose of demonstrating rhythmic grouping.

beat - a perceived stress in music that may also be called a pulse, though beats are more specifically considered as the primary, orienting pulses within a metric pattern.

beat division – a pulse that is felt at two or three times the speed of the primary pulse within a meter.

beat subdivision – a pulse below the level of the beat division. There are typically two beat subdivisions per beat division, regardless of whether the meter is simple or compound.

bed - in music for media, a consistent-sounding instrumental background accompaniment for dialogue and/or sound effects that does not draw attention to itself.

bell curve EQ – an equalizer that boosts or attenuates a band of frequencies unevenly in a bell curve pattern around a single peak frequency.

bi-amp – a type of speaker system featuring multiple speakers that are powered by two separate amplifiers, with higher frequencies sent to one amp and lower frequencies sent to the other.

bidirectional/figure 8 – a polar pattern that picks up sound equally from the front and back of a microphone.

binary form – a two-part form, with contrasting sections that are labeled A and B.

bit depth - the number of bits used in each sample of an analog signal, corresponding to sample resolution.

blanket license – a license that a music venue or other user purchases from a PRO that allows it to transmit that specific PRO's entire catalogue of works.

blues scale – a characteristic scale used in blues and jazz styles that can be considered as a minor pentatonic scale with an added half step between scale degrees $\hat{4}$ and $\hat{5}$.

Blumlein stereo miking - a recording technique named after electronics engineer Alan Dower Blumlein that is similar to the X-Y configuration, but uses bi-directional (figure 8) microphones at a 90° angle instead of unidirectional (cardioid) microphones.

boost - to increase the intensity of a certain range within the frequency spectrum during equalization.

borrowed chord - a non-diatonic chord that exists in the parallel key.

bounce - to export a mix from the DAW and convert it into an audio file, such as an AIFF or MP3.

breath mark - a notational symbol that instructs a performer when to breathe while playing. **bridge** - the main contrasting section within a song form.

buffer size - the allocated amount of time dedicated to processing sound as it enters a computer.

bumper – a brief piece of music that is used to transition between sections of programming, such as into and out of commercial breaks.

bus - a pathway within a mixing board through which one routes signal to a particular destination.

button – in music for media, a concluding musical gesture used to wrap up a scene or mark a logo at the end of a commercial.

buy-out - a contract situation in which a client purchases the right to use a composition without owing any further compensation or royalties to the composer, regardless of the extent of usage.

 \mathbf{C}

C **clef** – a clef that assigns middle C (C4) to a specific line on a staff using a distinctive symbol that can appear to be a stylized letter C.

C corporation - a relatively large type of corporation that has more than 100 shareholders and is subject to taxation as an individual legal entity.

C score – a non-transposing score, meaning that all pitches for all instruments are written in concert pitch.

cadence – a point of rest that signals the completion of a musical idea.

cadential § – an apparent I sonority that embellishes the dominant at or near a cadence. **cardioid** – a heart-shaped, unidirectional polar pattern.

CC messages - shorthand for continuous controller messages, which are the pieces of musical information that are sent via MIDI. All CC messages fall into one of two main categories: channel messages and system messages. Channel messages have to do with an

instrument's patch, timbre, and velocity, whereas system messages have to do with information and synchronization between multiple devices. There are 128 different types of CC messages, numbered 0 through 127.

- **cents** divisions of a semitone in equal temperament, of which there are 100.
- **changing meter** a type of meter whose cardinality (number of beats) and/or beat division type (simple or compound) is not consistent.
- **channel strip** one of several units within a mixing console that typically consists of input jacks, a gain control, aux sends, dynamic control, panning control, solo/mute control, and level control.
- **chord extensions** chord members that create compound intervals above the root.
- chorus a section in a pop song that returns several times throughout the form, usually with the same lyrics and music each time; the chorus often includes the song's main hook. In jazz, however, a chorus describes one complete instance of the tune's form. Additionally, in audio engineering, chorus is a type of modulation effect that features a constant delay duration between an original signal and a copy of that signal that is between 10 and 20ms.
- **chromatic alteration** a colorful modification to a melodic line that is created by the addition of an accidental and results in a non-diatonic pitch.
- **chromatic mediant** any non-diatonic harmony or key area whose root or tonic is a third interval away from the original tonal center, such as the major mediant in a major key.
- **chromatic modulation** a change of key (often to a distantly related key) that makes use of a chord or voice leading pattern that is not diatonic in both the home and the target keys. **chromatic scale** an ordered series of half step intervals encompassing an octave.
- **clef** a notational symbol used to orient the reader or performer to a specific note on the staff as a point of reference.
- **clipping** digital overload distortion.
- **close miking** a technique in which a microphone is placed as close to a sound source as possible.
- **close position** a voicing that involves chord tones placed as close as possible to one another in pitch space.
- **closing area** a subsection within a sonata that takes place after the secondary theme and remains in the secondary key area.
- **closing theme** a new theme introduced within the closing area of a sonata, after the secondary theme yet within the secondary key area.
- coda a substantial, post-cadential subsection within a musical form that clearly and emphatically terminates the larger formal section while often introducing new thematic material or developing earlier themes.
- **codetta** a short, post-cadential subsection within a musical form that clearly and emphatically terminates the larger formal section without introducing any new, substantial thematic material.
- **coincident X-Y stereo miking** a recording technique that uses two matched, unidirectional (cardioid) microphones facing one another and positioned as close together as possible.
- **commercial release** a selection of music that is released for commercial consumption as a single, EP, or LP. Commercial releases are often printed to vinyl or compact disc, and they are typically released on popular streaming platforms as well.
- **common tone** a repeated note within a single contrapuntal voice.
- **comping** short for composite recording, a term used to describe the act of recording multiple takes of a single part across different tracks, followed by combining the best parts of the individual takes into a single, final track.

complimentary equalization – a complex method of equalization used when multiple signals share the same general frequency range; this technique combines additive and subtractive processes to create a unique segment within a larger, shared frequency region that is dedicated to each signal.

- composite recording a term used to describe the act of recording multiple takes of a single part across different tracks, followed by combining the best parts of the individual takes into a single, final track.
- composite ternary form a three-part form whose constituent sections are complete binary forms.
- **compound intervals** intervals that are larger than an octave.
- **compound meter** a pattern of stress in which each beat possesses three equal beat divisions. **compression** in acoustics, a region within a sound wave wherein air molecules are closest together, creating positive pressure. In mixing, a process that involves lowering the volume of a waveform's maximum amplitude peaks while simultaneously amplifying the waveform's amplitude troughs in order to decrease the perceived dynamic range.
- con sordino a score marking used to indicate that a passage is to be played with a mute.
- **concert score** a non-transposing score, meaning that all pitches for all instruments are written in concert pitch.
- condenser microphone a highly sensitive type of microphone that captures sound and creates an audio signal via a capacitor and voltage supplied by a battery or power supply.
 conjunct melodic motion by step.
- **consequent** the final phrase or set of phrases within a multi-phrase structure that ends in a relatively conclusive manner.
- **consonance** the perceptual sensation of stability engendered by certain intervals, notably those whose frequency ratios are relatively simple.
- **contrafact** a piece whose harmonic structure is similar to another well-known work, despite its melody being unique.
- **contrapuntal motion** a description of the manner in which two melodies progress with respect to one another.
- **contrapuntal voices** melodically independent layers in a piece of music that combine in a coherent fashion.
- **contrary motion** a type of contrapuntal motion that exists when two parts progress in opposite directions.
- **contrasting period** a period whose antecedent and consequent differ significantly.
- **control surface** a piece of hardware that connects to a computer—usually by MIDI or USB cable—to control various software functions.
- convolution reverb a type of reverb whose signal copy delay times are based on actual impulse responses from real spaces.
- corporation a type of business that is owned by shareholders and operates as an individual legal entity, apart from its owners.
- counterpoint a technique that involves combining two or more melodies such that both harmonic unity and melodic independence are achieved.
- *crescendo* a dynamic marking signifying the need for a gradual increase in volume.
- **cross relation** an objectionable contrapuntal situation that takes place when different pitch classes sharing the same note letter (e.g., C and C^{\sharp}) are used in adjacent temporal positions within different voices.
- **crossfade** an editing process that smoothly transitions between two adjacent or overlapping waveforms by simultaneously fading out the initial waveform while fading in the subsequent waveform.

cue sheet – a list of the music included in a televised broadcast that is used by a PRO for usage tracking, royalty calculation, and royalty distribution purposes. A cue sheet includes the program title, episode title, episode length, and specific details about each composition used, including its usage type (background music, theme music, etc.) and usage duration.

- **custom scoring** a type of composition for media that involves pieces that are created "from scratch" and based on the specific requests of a director, producer, or other client for the purpose of filling the needs of a specific project. This is the area of the industry most commonly associated with the term "film scoring." Spotting notes and conversations about long-form development separate this field from ready-made composition.
- **cycle recording** or loop recording, a recording process that involves setting up a section within which a recording will continually capture new takes every time it cycles or loops through its programmed start and end points.

D

- **DAW** an acronym for digital audio workstation, which is a piece of recording software designed to consolidate the workflows related to the many stages of production into a single location.
- **dBFS** shorthand for decibels relative to full scale, this relative scale orients the producer to the maximum output level, OdBFS, at which clipping may occur.
- **deceptive cadence** a cadence that involves a harmonic move from V to vi (or VI in minor keys) at the end of a phrase, wherein the submediant chord serves as a tonic substitute.
- **deceptive resolution** harmonic motion from V to vi (or VI in minor keys), wherein the submediant chord serves as a tonic substitute (but not at the very end of a phrase).
- **decibels (dB)** units of measure for amplitude, with 0dB representing the lower threshold for human hearing. In the relative dBFS context (decibels relative to full scale), 0dB represents the maximum output threshold of an audio device.
- **delay** an effect that involves copying a signal and repeating it a certain amount of times at a given durational interval from the original.
- **development** the B section in a sonata form that often features the extensive motivic manipulation of earlier themes (though some developmental sections develop new material that is not necessarily associated with any previous theme).
- **DI** (**direct box**) a device used in recording studios that receives unbalanced signal (usually from a guitar or bass) and converts it to balanced signal before it enters a mixing console.
- **diatonic collection** a collection of seven different notes (plus a repeated note, creating an octave interval above the first) arranged in such a way that five of the adjacent notes are separated by whole steps while two are separated by half steps; these half step intervals are additionally spread apart from one another as evenly as possible within the collection.
- **diatonic modes** the seven intervallically unique scales that represent individual rotations of the diatonic system.
- **diffusion** a category of acoustic treatment that is used to scatter reflecting frequencies within a studio room.
- diminuendo a dynamic marking signifying the need for a gradual decrease in volume.
- **diminution** the reduction of a motive's length via a systematic decrease in its durational values.
- **direct fifths/octaves** an objectionable contrapuntal situation that involves a leap in the soprano creating a perfect fifth or octave above the bass that is approached by similar motion.

direct modulation - an abrupt, unprepared key change.

disjunct - melodic motion by leap.

dissonance - the perceptual sensation of tension engendered by certain intervals, notably those whose frequency ratios are relatively complex.

dithering - a technique used to mitigate the loss of audio quality caused by downsampling. Dithering is accomplished by displacing the difference in frequencies between sampling rates by adding and spreading the information in musical ways.

divisi – a score marking that divides the total number of players within a single string section into two or more distinct parts.

dominant – the very stable fifth degree within a major or minor scale; also, a primary harmonic function that lends an opposing force to tonic function and represents the fundamental source of harmonic tension or instability within a piece of tonal music.

Dorian mode – a diatonic mode that is similar to a natural minor scale with a raised sixth degree and features a step pattern of W-H-W-W-H-W.

dot – a notational symbol also known as an augmentation dot that increases the duration of a note by 50%.

double flat sign – an accidental that lowers a note by two half steps (or a whole step).

double neighbor - a melodic embellishment figure featuring consonance between the two parts in the first and fourth metric positions and dissonance between the two parts in the second and third positions. The melody featuring the embellishment proceeds by step, leap of a third in the opposite direction, and finally step in the original direction.

double period – a period composed of a two-phrase antecedent and two-phrase consequent. **double sharp sign** – an accidental that lowers a note by two half steps (or a whole step).

double stop – a string technique that involves plucking or bowing two pitches simultaneously on two different strings.

double tongue – a technique that wind players use to perform passages featuring quicker rhythms that demand faster tongue movement than a series of repeating silent "tees" could produce; this is accomplished by tonguing the letters "d-k" or "t-k" in alternation.

downbeat - the first beat in a metric pattern, which receives the most accentual weight.

drop frame – one type of SMPTE timecode that involves the periodic skipping of timecode seconds in order to address the disparity between the timecode (which runs at 30 FPS) and NTSC video (which runs at 29.97 FPS).

drum bus – a commonly used bus scenario that transports and combines the separately recorded signals of each discrete drum set element (hi-hats, toms, snare drum, kick drum, etc.) into a single, more manageable track.

dry signal - signal that does not have added effects.

DSP – shorthand for Digital Signal Processor, a plugin that requires the use of a separate outboard interface for processing. Also shorthand for Digital Service Provider, which, in the field of music, is an online store or streaming platform that provides digital audio to consumers. Smaller DSPs in this context often create partnerships with the largest streaming services to market burgeoning producers' music to a wider audience for a fee.

duophonic – a synthesizer that allows for one note to be performed and held while a second note is played simultaneously. Both notes will share the same envelope, though the second note joins the envelope generated by the initial note.

duple meter - a meter possessing two beats.

dynamic equalization – a type of processing that is similar to compression in that specified frequencies become attenuated when they pass a volume threshold set by the user.

dynamic microphone – a durable type of microphone that captures sound and creates voltage via a coil-fixed diaphragm that is wrapped around a magnet.

E

earworm - a colloquialism used in music for media that describes an extraordinarily memorable segment of music.

echo – an effect that repeats a copied version of an audio signal in a manner similar to delay; however, echo specifically involves repeating the signal at ever-lower amplitudes until the sound completely fades out.

eighth note/rest- a note or rest that lasts for half of one quarter note in common time.

Elastic Audio - the audio quantization mode within Pro Tools software.

embellishment - a melodic ornament used to decorate a structurally significant tone.

enhancer – a psychoacoustic processor that adds brightness—sometimes referred to as "spar-kle"—to an audio signal, often by way of frequency-specific distortion.

enharmonically equivalent intervals – intervals that sound the same and possess the same number of half steps but are labeled differently (and function differently), as their constituent pitches are spelled differently.

enharmonic equivalents – notes that sound the same but are spelled differently.

EQ slope - the curvature of a shelf EQ, which can be steep and aggressive when frequency elimination is required or gradual and conservative when milder frequency taming is desired.

EQ sweeping – a technique used to troubleshoot problematic frequencies within an audio signal, which involves passing a narrow, boosted band throughout the entire frequency spectrum in order to locate specific issues.

equalization – the act of shaping a signal by attenuating and/or boosting specific frequencies. **escape tone** – an incomplete neighbor embellishment that is preceded by step and left by leap in the opposite direction into a chord tone.

event (MIDI) – a unit of information housed within a region (typically experienced as a musical "note").

evolution mixing – a strategy in which the rudimentary elements of a mix evolve alongside the musical components of a project, as opposed to starting the mixing process after all recording and editing has been completed.

exciter - a psychoacoustic processor that adds brightness—sometimes referred to as "spar-kle"—to an audio signal, often by way of frequency-specific distortion.

expression controller (MIDI CC11) – a commonly automated CC message that works as a sub-volume, allowing for volume adjustments to be made within the boundaries set by CC7 (volume controller) at any given moment.

extended chord – a seventh chord with one or more compound intervals added above the root to create a large tertian sonority of four or more consecutive thirds.

F

fade in – a measured increase of volume from silence to a signal's original amplitude.

fade out - a progressive decrease of an audio signal's level from its original amplitude to silence.

far-field monitors – speakers that are designed to be placed a large distance away from the producer within a studio.

figured bass symbols - Arabic numerals added below a staff that indicate the intervals above the notated bass line that are to be added (typically to form chords in various inversions).

filter envelope – a timbral adjustment setting on a synthesizer that allows for some frequencies to be attenuated, while others to pass through unaffected.

first inversion – a chord position featuring the chordal third in the bass.

fixed EQ – a basic equalizer that typically features three knobs adjusting high, mid, and low frequencies, with the high and low ranges controlled by low-pass and high-pass shelving EQs, respectively.

flag - a notational symbol that is added to a stem to indicate a note of relatively short length (when beams are not used).

flanger – a modulation effects processor that features a very short delay (1–10ms) between the original and copied signals that gradually changes over time, creating a "swooshing" effect.

flat mix - a mix of a track without any mastering applied; a pre-mastered track.

flat sign - an accidental that lowers a note by a half step.

Flex mode - the audio quantization mode within Logic Pro.

fluctuating capacity – the mechanism of audio signal generation within a condenser microphone, which is created when a sound wave causes a diaphragm to move relative to a back plate when voltage is between them.

flutter echo – a ringing effect that is caused by sonic reflections between two hard, parallel surfaces.

foldover – a type of aliasing or sonic distortion that is caused when a frequency is recorded that exists above one half of the sample rate.

Follow Tempo - the tempo matching functionality within Logic Pro.

form – a primary musical parameter related to the overall "shape" of a composition that is created by the combination of individual sections (which, in turn, are forged by thematic design and harmonic structure).

Form PA (Performing Arts) – a form used to register a composition, including any lyrics, with the U.S. copyright office for the purposes of infringement protection.

Form SR (Sound Recordings) – a form used to register a particular recording of a composition with the U.S. copyright office for the purposes of infringement protection. This form may be used to protect both a recording and a composition in instances where the composer also serves as the recording artist.

forte - a dynamic marking signifying the need for a strong or loud performance.

fortissimo - a dynamic marking signifying the need for a very strong or loud performance.

FPS - short for Frames Per Second, a frame rate that indicates the number of still images that are presented within the space of a second in a video.

fragmentation – the truncation of a motive through subtraction/deletion, the inclusion of rests, or other means.

frequency - the number of times per second that air molecules involved in a pressure wave vibrate back and forth in one complete cycle, which is, in turn, based on how quickly the source is vibrating. Frequency is perceived as a sound's highness or lowness, similar to pitch in music.

frequency response chart – a technical readout that demonstrates a microphone's capacity to respond to certain frequencies within a typical range from 20Hz to 20kHz.

fundamental - the base frequency or lowest-sounding tone resulting from a sound wave, which is also the first harmonic in the overtone series.

G

gain knob – a volume control for each channel of a mixing console, which specifically adjusts the level at which an input signal will proceed into a channel.

gain matching – a software functionality that allows the user to bypass any processing while boosting the signal to a level equal to that of the processed mix for comparison purposes.

gain staging – the management of the output level of any audio signal throughout all phases of its journey within a session, which requires an understanding of all the locations or "gain stages" within the signal's path wherein gain can be applied.

gating - the use of a noise gate to eliminate unwanted sonic elements within a signal that are present at levels below a user-defined threshold volume.

glide – a sonic adjustment setting on a synthesizer that creates a *glissando*—a smooth, sliding effect that passes through all of the notes between the specified starting and ending pitches.

glissando – a smooth, gliding pitch transition from one note to another that proceeds through all of the intermediate microtones.

Gong – the principal scale used in traditional Chinese music, which has an intervallic structure of W, W, W+H, W, W+H.

grand staff – a combination staff that covers a very large pitch range by joining the treble clef and bass clef staves together with a bar line and a brace. The grand staff is also known as the great staff.

graphic EQ – an equalizer displaying several sliders that control the boosting or attenuation of specific frequency bands, arranged from lowest to highest in frequency in a left-to-right format.

grid - the visual demarcation system for duration used within a DAW's main tracks view window or piano roll editor, which can be calibrated by the user to show specific rhythmic durations as vertical slices for editing purposes.

Н

half cadence – a cadence characterized by resting on the dominant triad at the end of a phrase.

half note/rest- a note or rest that lasts for two beats in common time.

half step – the smallest distance between two different pitches in equal temperament. Also known as a semitone, a half step is the interval between adjacent keys on the keyboard.

harmonic minor - the minor scale that is similar to a natural minor scale but possesses a raised seventh degree, creating a leading tone. The harmonic minor scale has the interval pattern W-H-W-H-W+H-H, with "W+H" corresponding to the interval of an augmented second.

harmonic rhythm - the rate of harmonic change per unit of musical time.

harmonic sequence – a series of non-functional chords that are bonded together by repeated voice leading patterns.

harmonics – also known as overtones, these are frequencies heard along with a fundamental that are multiples of the fundamental pitch's frequency.

harmony – a primary component of music relating to pitch combinations such as chords.

head - the composed melody of a jazz composition.

head out - the final performance of the head in a jazz form.

headphone mix – a customizable mix that is typically delivered from the recording interface through a headphone amplifier into headphones that are worn by the performing musicians in a session; a headphone mix is used instead of speakers for the purposes of real-time monitoring to prevent the microphones in the recording room from picking up sound that would be emitted by the studio monitors.

headroom - the range between an audio signal's peak level and the maximum output level of an audio device (such as a DAW).

hemiola – a rhythmic phenomenon that takes place when the established accentual pattern of a piece of music that is in two groups of three temporarily becomes regrouped into

three groups of two or vice versa, typically at the end of a section leading into a point of conclusion.

Hertz (Hz) - a measure of frequency, with one Hz equaling one vibration per second.

high-pass shelf – an equalizer that does not affect any frequencies above a designated cutoff point, instead boosting/cutting frequencies below the threshold.

Hirajoshi - a traditional Japanese scale derived from the tuning traditions of the koto instrument that features the intervallic structure of W, H, 2W, H, 2W (2W simply means two whole steps, or an M3).

hit point - a marked location of visual and/or musical emphasis within a production.

hook - a memorable motivic/thematic unit in a popular song.

horizontal re-sequencing – a compositional technique used for video game implementation that consists of multiple loopable sections of music that can alternate back and forth at given points without creating discontinuities.

hypercardioid – an expanded supercardioid polar pattern that captures an even larger area behind the microphone, in addition to the cardioid (heart-shaped) region in front of the microphone.

I

IAC – short for imperfect authentic cadence, a cadence that includes harmonic motion from the dominant to the tonic, but is less conclusive than a PAC. The IAC may feature one or both of the harmonies in inversion, or, more commonly, may have scale degree 3 or 5 in the soprano upon the arrival to the final tonic.

impulse responses - the acoustic parameters that are recorded in a physical environment within which an impulse is introduced (such as a starter pistol); impulse responses are used to calibrate delay times in a convolution reverb.

in phase – a term used to describe identical sound waves that create constructive interference by being perfectly aligned such that their peaks and troughs take place at the same time.

incomplete neighbor – a general type of embellishment that is so named because it features stepwise motion on one side of the dissonance and a leap on the other. Two incomplete neighbor types are the *appoggiatura* and the escape tone.

independent phrases - temporally adjacent phrases that do not relate to one another motivically.

in-line effects - the use of effects plugins that are added to each individual track within a mix.

insert - an external device to which (and from which) signal is routed within a channel strip.
 interlaced - a term that refers to frames within a video that are divided into odd and even partitions of alternating, horizontal segments and are played back to back at a rate that is so fast that the mind perceives the alternating images to be joined into a singular whole.

interlude - a contrasting section within a popular song that is similar to a bridge

interval - a distance between two pitches.

interval inversion - a change in the pitch ordering of an interval's constituent tones, such as when the lower note of an interval becomes the higher note by being placed in a higher octave (or vice versa).

interval quality - a secondary indication of the specific distance between pitches that form more general interval sizes, expressed as a letter.

interval size – an indication of the general distance between pitches expressed as a number reflecting the sheer number of letters within the musical alphabet A–G that are involved in the span from the first note to the second note.

introduction – a formal section that takes place at the outset of a piece, prior to the exposition of the piece's primary themes (or, in the case of pop/rock music, prior to the song's first verse).

- **inversion** a motivic development technique wherein the melodic intervals of a motive are maintained while their directionality is reversed.
- **Ionian mode** a diatonic mode that is equivalent to the major scale, with a step pattern W-W-H-W-W-H.
- **ISRC** shorthand for International Standard Recording Code, a unique code that is generated to function like a digital fingerprint in identifying a specific recording of a piece of music.

J

jingle - a short, catchy song that functions as an expanded version of a sonic brand in tying a memorable piece of music with a product or service.

K

- **key signature** a patterned arrangement of accidentals in music notation that signifies the key of a given section or piece of music (by including the related scale's accidentals).
- **key switching** a MIDI editing process that allows the user to trigger articulation changes by pressing specified keys on a keyboard controller that correspond to pitches outside of an instrument's playing range.

L

- **last note priority** a function of a polyphonic synthesizer in which the last note played remains while the first note will stop sounding; in a sense, the last note "steals" the first note's place within the held sonority.
- latch mode an automation editing mode that overrides automation data in the areas that are changed during playback. Once the user lets go of the fader during playback, the adjusted parameter will "latch on" to the most recent value and remain at that level for the rest of the passage.
- **latency** a noticeable delay between the moment sound is produced and the moment it reemerges through monitors or headphones after being routed through circuitry.
- **lead sheet** a concise, score-based overview of a song that includes a basic representation of the melody on the staff along with chord symbols above the staff that indicate the progression.
- **leap** any melodic distance that is greater than a step. A leap is always indicated by note heads that are more than one position apart on the staff.
- **ledger lines** lines that extend the staff vertically and allow for a range of multiple octaves to be notated using a single clef.
- *legato* a smooth and connected type of articulation that is indicated by a slur in music notation.
- *legato* transitions samples that are added to *legato* patches within virtual instruments in order to create smooth transitions between overlapping MIDI events.
- *leitmotif* a short, distinctive motive or portion of a larger theme that becomes associated with a particular character, place, object, emotion, or idea by consistently recurring along with it in a dramatic setting.

LFO – shorthand for low frequency oscillator, which is a device or plugin used to rhythmically modify a sound's low frequencies in order to generate unique *tremolo* or *vibrato* effects.

- **liability** a term that refers to the responsibility of individuals or businesses for any unpaid debt or legal actions taken against them.
- **Limited Liability Company (LLC)** a flexible business entity that alleviates many liability concerns for the owner(s). An LLC is established via an articles of organization and directed by an operating agreement. It may be taxed as a corporation or via pass-through taxation.
- **limited partners** members of a business partnership who, in exchange for agreeing to restricted control over the business, are released from legal liability.
- **limiter** a processor used in audio engineering that limits the output of a signal's peak level, usually to prevent clipping.
- **link** a short instrumental passage within a popular song that is transitional in nature.
- **Locrian mode** a diatonic mode that is similar to a natural minor scale with a lowered fifth degree and lowered second degree; this mode features a step pattern of H-W-W-H-W-W-W.
- **low-frequency enhancement** a type of psychoacoustic processing that involves adding synthesized harmonics to a signal in order to increase the perceived bass and sub-bass frequencies; the harmonics are added either above an illusory fundamental or below an actual fundamental.
- **low interval limit** the lowest useful register for a given harmonic interval.
- **low latency** a type of DAW functionality that bypasses CPU-heavy plugins to restrict the latency that typically results from high buffer sizes.
- **low-pass shelf** an equalizer that does not affect any frequencies below a designated cutoff point, instead boosting/cutting frequencies above the threshold.
- **LUFS** or Loudness Units (relative to) Full Scale, this is a measurement that addresses perceived loudness as well as audio signal intensity together; it is used in mastering to match standards for various media.
- **Lydian mode** a diatonic mode that is similar to a major scale with a raised fourth degree and features a step pattern of W–W–H–W–H.

M

- **main title** the portion of the title sequence in a film or other media production that displays the title of the work.
- **major scale** a rotation of the diatonic collection featuring a W-W-H-W-W-H step pattern; the generative seed from which the outgrowths of both melody and harmony in major keys develop.
- **make-up gain** gain applied to a compressed signal to increase its output level (usually to the original volume of the signal prior to the application of compression).
- marker an indicator that is added to a DAW session in order to visually emphasize an important timepoint. In game music, a marker is an embedded prompt used to trigger a change to a different section of music in a horizontal re-sequencing implementation.
- **master chain** a series of plugins that is added to the DAW's master output for the purpose of digital mastering.
- **master fader** the primary summing point within a mixer, where all tracks are combined and may be adjusted en masse.
- **mastering** the final stage of production, which involves making large-scale adjustments to a complete mix or set of tracks (including noise reduction), embedding digital identifiers

to audio files, and meeting established criteria related to the final recording deliverable(s) (e.g., sample rate, bit depth, file format, etc.).

- **mastering suite** a standalone program and/or plugin that is designed to combine all of the processing involved in mastering into a single virtual location.
- **matched microphones** microphones that are of the same make and model and were created at the same time.
- **measure** a single, complete instance of a metric pattern that is also known as a bar.
- mechanical license a license that grants permission to reproduce and distribute copyrighted music on a variety of media. Mechanical licenses are distributed by groups like The Harry Fox Agency in the United States and the Mechanical-Copyright Protection Society (MCPS) in the United Kingdom; these entities, in turn, distribute mechanical royalties at a set rate to registered composers for registered compositions.
- **mechanical royalties** royalties that are paid to musicians when pieces of music are reproduced, distributed, and sold in a variety of recording formats.
- melodic minor the minor scale that is similar to a natural minor scale but with raised sixth and seventh degrees in its ascending form, such that its final ascending tetrachord is the same as that of the major scale. The ascending melodic minor scale has the interval pattern W–H–W–W–W–H. The descending version of the scale is the same as the natural minor scale.
- melodic sequence a patterned repetition of a melodic segment at different pitch levels.
- **melody** a primary musical parameter related to the unfolding of pitches in a linear fashion through time. A melody can also be thought of as a combination of pitches and rhythms that is perceivable as a single musical unit.
- **metadata** digitally encoded information about a piece of music, such as the artist(s) involved in its creation.
- **meter** a perceived grouping of strong and weak stresses in music.
- **meter signature** a fraction-like notational symbol containing numbers that refer to amounts of rhythmic units in order to indicate a meter within a score.
- *mezzo forte* a dynamic marking signifying the need for a moderately strong or loud performance.
- *mezzo piano* a dynamic marking signifying the need for a moderately soft performance.
- microphone a transducer that creates an electrical image based on a detected sound signal. middle C the pitch performed nearest the center of the 88-key keyboard, labeled as C4 according to the Acoustical Society of America standard.
- **mid-field monitors** speakers that are designed to be placed a medium distance from the producer within a studio, farther away than near-field monitors and closer than far-field monitors.
- **MIDI** an acronym for Musical Instrument Digital Interface, which is a protocol that allows two or more devices to connect and communicate with one another.
- **MIDI polyphony** the ability of certain MIDI devices to produce multiple notes or sounds simultaneously.
- Mid-side (MS) stereo miking a recording configuration in which a cardioid mic (or midmic) is aimed directly at an instrument, while a figure 8 mic (or side-mic) is aimed left and right to capture the ambient sounds of a room. The side-mic signal is then copied, phase inverted, and panned during mixing, such that it occupies both the left and the right areas of the stereo field, with the mid-mic signal panned center to create a complete stereo image.
- **mix stem** a group of audio signals that are fed into a single aux track in order to help with the global organization of a project while allowing for simple batch processing.

Mixolydian mode – a diatonic mode that is similar to a major scale with a lowered seventh degree and features a step pattern of W-W-H-W-W-H-W.

- **mode mixture** the practice of using borrowed chords from the parallel key to enliven the harmonic landscape of a piece.
- modular composition creating full pieces of music with memorable beginnings, middle sections, and endings that are designed such that editors can easily take out certain sections, rearrange sections, or otherwise edit as they see fit to appropriately match the situation for which they need music. Sections of a modular composition therefore need to be strong enough to exist on their own—and they must each end convincingly, given that any section may need to function as the final segment of the work.
- **modular synthesis** a type of sound design wherein multiple sound modules (oscillators) are connected to create patches.
- **modulating period** a period that features a change of key within its duration.
- **modulation** a change of key within a composition.
- **modulation effects** effects (flanging, phasing, and chorus effects) that operate by creating a copy of a signal and combining it with the original signal at a small interval of delay. In doing so, the peaks and troughs of the original waveform meet with the peaks and troughs of the delayed copy at different points, creating a "comb filtering" effect as the combined signal goes in and out of phase.
- **momentary configuration** a MIDI controller configuration that will send an *on* message when a certain apparatus is depressed and an *off* message when the apparatus is released.
- **monitor referencing** a term used to describe the process of mix comparisons made on multiple speakers and headphone systems.
- **mono** short for monaural, this term describes audio that is heard from one channel or position (as opposed to stereo, which incorporates two channels and creates a field of perceived sonic positions).
- **monophonic** a synthesizer that is only capable of producing one envelope at a time, as it includes signal flow moving through a single filter, amplifier, and ADSR module.
- **motive** a salient, identifiable combination of pitch and rhythm that is shorter than a theme yet still represents a musical idea. Also known as a motif or melodic cell.
- motivic development the process of repeating and altering an initial idea throughout a phrase or piece of music, which simultaneously engenders the traditionally desired aesthetic attributes of unity and variety.
- **multiband compressor** a compressor often used in mastering that divides the frequency range into adjustable bands, which allows for specific types of compression to be applied to certain regions within the spectrum.
- **multi-sample** a combination patch that itself consists of multiple samples, often from different instruments to re-create full sections or ensembles within a single patch.
- **multitimbral device** a MIDI device such as a sampler or synthesizer that is able to create sounds using up to 16 or 32 different instruments simultaneously.
- **musical form** the term used to describe the overall shape of a piece, which is created via the combination of sections that contrast one another due to changes in thematic design, harmonic structure, and/or other parameters.
- **mute** a button within a mixing board's channel strip that when pressed, silences the signal such that no sound within that specific channel strip is heard. A mute is also a device placed on or inside an instrument to change its timbre, usually creating a muffled sound or wah-wah effect.

N

- **native plugin** a plugin that uses the processor within a host computer.
- **natural harmonics** flute-like tones that are produced when performers lightly press on various locations that divide an open string's length and correspond to points within the overtone series above the open string's fundamental.
- **natural minor** the minor scale that is generated by a traditional key signature, sharing all of its pitches with a relative major scale. The natural minor scale has the interval pattern W-H-W-W-H-W-W.
- **natural sign** an accidental that typically directs the performer to perform one of the "natural" notes (A, B, C, D, E, F, or G).
- **Neapolitan sixth chord** a non-diatonic major triad in first inversion that is built on the lowered supertonic.
- **near-coincident stereo miking** a recording technique that uses two matched, unidirectional (cardioid) microphones facing in opposite directions yet positioned relatively close to one another (within twelve inches).
- **near-field monitors** speakers that are designed to be placed a short distance from the producer within a studio.
- **negative impact** a termination of a rise that never delivers the full impact that was implied or expected. Often, this lack of a sonic "payoff" results in a stronger effect than the powerful climax that was anticipated.
- **neighbor tone** a melodic embellishment that is approached by step and left by step in the opposite direction, returning to the original note that preceded it.
- **neighboring** ${}_{4}^{6}$ an apparent second inversion triad that is created when a harmony is expanded with a ${}_{3-4-3}^{5-6-5}$ interval pattern taking place over a static bass.
- **noise floor** the base level of unavoidable background noise that is created by the various electronics participating in a mix environment.
- **noise reduction** the process of eliminating clicks, hums, clips, and other unwanted noises from a mix, typically during the final mastering phase.
- **non-functional IV/iv** A IV chord that does not possess predominant function, instead moving directly to tonic.
- nota cambiata a melodic embellishment figure featuring consonance on the downbeat, followed by a dissonance that is a step above or below that consonance, a leap of a third out of the dissonance in the same direction as the previous step, and finally two steps in the opposite direction into consonant pitches.
- note allocation The manner in which polyphony is manifested using a polyphonic synthesizer. The allocation determines which voices get priority and which are replaced by newly articulated notes. Examples include: first note priority, last note priority, highest note priority, and lowest note priority.
- note head- the ovular part of a note in music notation, which is placed on the staff to indicate pitch. The note head may be open or filled in, which aids in the specification of the note's duration.
- NTSC short for the National Television Standards Committee, which was established in the United States to standardize frame rates in television broadcasts and ensure that broadcasts did not suffer from interference.
- **Nyquist theorem** a principle related to sampling stating that a sample rate should be set to at least two times the value of the highest frequency one wants to capture in order to create an accurate reproduction of an analog signal.

0

oblique motion – a type of contrapuntal motion that occurs when one voice changes pitch and the other repeats the same note.

octatonic scale – an eight-note scale that features a consistent, symmetrical pattern of alternating half and whole steps.

octave – the interval from one pitch of a given letter name to another with the same letter name that is heard in a different register.

octave designations – labels applied to pitch letter names that relate to the specific octave in which they reside.

octave-down doubling – an orchestration technique that involves doubling lower register melodies an octave lower, usually with the double basses, to add weight and depth to the bottom of the ensemble.

octave equivalence - the musical principle related to the consideration of pitches separated by one or more octaves as equals in many musical contexts, due to their very similar sounds.

offbeat - a traditionally unaccented pulse within a meter, such as the second and fourth divisions within simple duple meter.

omnidirectional/boundary – a polar pattern that is characterized by equal sound absorption from all directions.

open position - a voicing that involves chord tones placed relatively far apart in pitch space, such that the chord spans more than an octave.

operating agreement – a legal document that identifies the governing members of a business entity (such as an LLC) and describes their financial and managerial responsibilities.

organic sound design – a process that involves recording live sounds and manipulating them by way of computer processing (e.g., time-stretching, adding effects, editing waveforms, etc.) to generate new sounds.

oscillator - a sound wave generator within a synthesizer.

oscilloscope - a device used to graphically represent the frequency of an electronic signal over time.

out of phase – a term used to describe identical sound waves that create destructive interference by being misaligned by 180 degrees such that one wave's peaks take place at the same time as another's troughs and vice versa.

outro – an instrumental section that serves as a popular song's conclusion.

overtone series – a succession of simultaneously sounding harmonics stemming from a fundamental pitch.

P

PAC - short for perfect authentic cadence, a cadence that features root position dominant and tonic chords, specifically, and stepwise motion into tonic in the soprano.

pan – a section of a channel strip that allows the producer to place an audio signal left or right within the stereo field. Placing a signal within the stereo field is called "panning."

parallel fifths/octaves - an objectionable contrapuntal situation involving consecutive perfect intervals of the same type that are connected by parallel motion.

parallel keys – keys that share the same tonic but possess different key signatures and different modes.

parallel motion – a type of contrapuntal motion that exists when two voices move in the same direction and in the same way, preserving the interval size that is created harmonically between the parts.

parallel period – a period whose antecedent and consequent begin in the same way or in a similar manner.

- **parametric EQ** a flexible equalizer that features several customizable bands whose Q factor can be adjusted by the user.
- **paraphonic** a synthesizer that allows up to four notes to be performed simultaneously, though they still only follow one architectural path; that is, they all follow the same signal flow through a single filter, amplifier, and ADSR module.
- part writing a very common manner of working with harmonies on the staff in composition training that traditionally involves composing individual parts for each member of a choir, which combine on a single grand staff to create chordal textures in the manner of a chorale.
- **partnership** a business entity that is similar to a sole proprietorship, with the primary difference being that liability is shared between multiple partners equally.
- **passing** $_{4}^{6}$ a second inversion triad that harmonizes a passing tone in the bass between more structurally significant chords.
- **passing tone** a melodic embellishment that is approached by step and left by step in the same direction, filling in the melodic interval of a third.
- passive monitors studio speakers that receive power from a separate amplifier.
- **pass-through** a type of taxation applicable to certain business entities that "passes through" to the business owner such that the business's taxes are filed via the owner's individual tax return.
- patch a term used when referring to a specific sound within a synthesizer, as oscillators were traditionally connected via quarter-inch patch cables to create new sounds during modular synthesis.
- **pedal point** a type of embellishment featuring a dissonance (usually in the bass voice) that is preceded and followed by a common tone, resolving only when other voices in the texture move.
- **pencil tool** an editing function within a DAW that has the ability to add MIDI events to a region. In certain DAWs, the pencil tool may also be used to "draw in" other items, such as velocity curves, fades, and more.
- **pentatonic scale** a five-tone pitch collection that can be considered as a rotation of the diatonic system without the two tones that form a tritone interval.
- **Performing Rights Organization (PROs)** an organization that serves to protect musicians' interests by monitoring the usage of members' compositions, collecting performing rights fees and royalties from music venues and other users, and distributing these earnings to musicians and their publishers.
- **performing rights royalties** royalties that musicians are paid for a live or recorded performance of a composition, either in concert or in conjunction with another media format.
- **period** a multi-phrase structure that features related ideas structured such that the final cadence is the most conclusive.
- **phase cancellation** or phasing, this is the destructive interference caused by identical sound waves that are misaligned.
- **phase shifting** a term used to describe the interference pattern that takes place when the same sound enters multiple microphones at varying points over the cycle of a waveform, resulting in a weaker—but not completely canceled— sound.
- **phaser** a modulation effects processor possessing "all-pass" filters that are set to filter certain frequencies of a signal copy before combining it with the original signal at varying intervals of delay.
- **phasing** or phase cancellation, this is the destructive interference caused by identical sound waves that are misaligned.

phrase - a complete musical idea that terminates with a cadence.

phrase elision – or phrase overlap, a unique hypermetrical phenomenon that occurs when the end of one phrase takes place simultaneously with the beginning of another. A phrase elision is additionally known as an elided cadence.

phrase group – a set of phrases that cohere in a manner similar to a period, yet do not conclude with a relatively strong cadence.

Phrygian half cadence – or Phrygian cadence, a cadence that features descending half step motion from ${}^{\flat}\hat{6}$ to $\hat{5}$ in the bass and harmonic progression from a first inversion iv chord to a root position V triad.

Phrygian mode – a diatonic mode that is similar to a natural minor scale with a lowered second degree and features a step pattern of H–W–W–H–W–W.

pianissimo – a dynamic marking signifying the need for a very soft performance.

piano – a dynamic marking signifying the need for a soft performance.

piano roll editor - a MIDI sequencing window that presents a piano keyboard (located on the left side of the window) rotated 90° such that the bottoms of the keys are facing right. Immediately to the right of the keyboard image is a graph made up of vertical and horizontal lines. The horizontal lines aid in the representation of pitch and run parallel to the keys of the keyboard. The lines running vertically across the graph relate to duration or rhythm and are divided into time segments that can be calibrated by the user.

Picardy third – a type of mode mixture wherein the chordal third of the final tonic harmony in a minor key piece is raised by a half step to create a major I chord, lending an uplifting sound to an otherwise dark harmonic landscape.

pitch – a musical sound occurring at a point along the continuum of audible frequencies from low to high.

pitch class – a group of pitches possessing the same letter name and similar sounds that are separated by octaves.

pivot modulation – or common chord modulation, a seamless key change that is made using a chord that exists diatonically in both the original and the target keys.

plagal cadence/plagal motion – harmonic motion from the subdominant to the tonic, such as in the traditional plagal "Amen" cadence (I–IV–I).

planing – the process of transposing a sonority to a different pitch level with all voices moving in parallel motion.

pointer tool – a DAW function with the ability to move MIDI events up or down (changing pitch) as well as left or right (altering their rhythmic positions) in the piano roll editor, among other applications.

polar pattern - a microphone's directional span of sound absorption.

polyphonic – a synthesizer capable of producing multiple notes simultaneously, regardless of whether any other notes are being sustained; they will all follow the same articulation path, but at their own unique timings.

pop filter – a circular, screen-like device placed in front of a microphone that filters out unwanted popping sounds.

post-fader aux send – a mixing scenario that involves a signal being sent to an aux track after it is routed through the channel's fader, such that the channel volume is directly linked to the output of the bus send, eliminating the need to recalibrate wet/dry ratios each time the channel volume is altered.

power chord – an open fifth sonority characteristic of hard rock and metal styles, typically consisting of the root, fifth, and octave played in the lowest possible register of a distorted guitar.

pre-chorus – a transitional section that is formally positioned before the chorus in a popular song.

- **predominant** a harmonic function that is so named because the chords possessing this function tend to be followed by dominant function chords. Predominants signal a move away from the tonic area and into the dominant area, initiating the building of tension that ultimately resolves at the end of an idea or piece.
- pre-fader aux send a mixing scenario that involves a signal being sent to an aux track before it is routed through the channel's fader, such that the channel volume is not linked to the output of the bus send, resulting in the need to recalibrate wet/dry ratios each time the channel volume is altered.
- **pre-mix leveling** establishing a basic set of track volume levels before processing and volume automation are applied to a mix.
- **preset** a preprogrammed factory setting, usually accessible via a drop-down menu within a plugin, that allows for quick, generic sound manipulations.
- **primary theme** in a sonata form, the initial theme or group of themes that exists within the tonic key area.
- **production track** ready-made compositions for television, radio, and live events that feature a consistent sonic atmosphere and are used to support specific emotions or situations. Production tracks are curated by production houses to generate production libraries that are used by directors and other media executives.
- **progressive-scan** a standard format for film, which involves non-interlaced still images that are typically presented at a rate of 24 frames per second or higher.
- **proximity effect** an audio phenomenon that takes place when a microphone is placed too close to a sound source, boosting frequencies under 100Hz by as much as 16dB.
- **psychoacoustic processing** a technique used to "excite" or "enhance" an audio signal by adding synthesized harmonics.
- **pulses per quarter** a measure of durational resolution within a DAW in terms of the number of ticks or segments within a single quarter note.
- **pumping** an effect common in electronic dance music that involves sidechain compression that is triggered by a kick drum track.
- **punch-in** a term used to describe the point at which recording begins when destructively re-recording or comping a segment within a track.
- **punch-out** a term used to describe the point at which recording ends when destructively re-recording or comping a segment within a track.

Q

- **Q factor** or quality factor, this is the ratio of the core frequency to bandwidth. By lowering the Q factor, a producer expands the bandwidth of affected frequencies during equalization. Raising the Q factor does the opposite.
- **quadruple meter** a meter possessing four beats.
- **quantization** a MIDI editing process that snaps (or pulls) the starting points of selected events to the closest user-defined rhythmic value.
- **quarter note/rest** a note or rest that lasts for one beat in common time.
- **quick swipe comping** a type of composite recording that places each take within an organized, easy-to-view take folder below the initial take in a DAW. The user may then swipe the mouse to highlight a particular section within a particular take, which places it within the composite track that is heard upon playback.

R

ragas - intervallic combinations in Indian classical music (and other musics) that are designed to color an atmosphere and create specific moods.

rarefaction – a region within a sound wave wherein air molecules are farthest apart, creating negative pressure.

ratio – a real or virtual knob within a compressor that specifies the amount that a signal will be reduced in dB when it exceeds the given threshold amplitude.

RCA connector – shorthand for Radio Corporation of America, a connector used in a type of unbalanced speaker cable that is common in consumer grade speaker systems.

read mode – an automation playback mode that simply follows any previously recorded automation without creating new parameter adjustments.

ready-made composition – a type of scoring that involves creating music that needs to generically fit a multitude of situations. A publisher working for a production house typically contracts ready-made music; the production house then curates a library of this type of music in order to fill a variety of needs for its clients.

reamping - the process of routing a recorded signal (usually from a guitar or bass) out of the editing environment and into an amplifier for further sonic manipulation.

recapitulation – an altered restatement of a piece's exposition section (such as in a sonata or fugue) in the tonic key.

reference tracks – mixes in the same desired style as a producer's project—often provided by the client—that are used as artistic guidelines.

referencing – the practice of comparing one's mix to other completed, professional mixes in related genres.

region – a unit within a track that contains either audio or MIDI information.

register - a pitch region within the continuum of audible sound.

relative keys - keys that share the same key signature but possess different tonics.

release - a real or virtual knob within a compressor that specifies the duration that a signal will remain compressed after it falls back below the threshold amplitude.

rest – a notational symbol signifying a duration of silence in music.

retardation – an embellishment that is essentially an inverted suspension, in that it is an accented dissonance that is prepared by the same pitch (often featuring a tie) and resolves by ascending stepwise motion instead of descending stepwise motion.

retransition – a subsection within a musical form that sets up the return of the tonic key, often via a dominant pedal.

retrograde – a motivic development technique that refers to the recurrence of a motive in reverse, such that the first note becomes the last note, the second note becomes the penultimate note, and so on.

reverb – short for reverberation, an effect that involves creating a series of delayed copies of a signal that reach the ear at slightly different instants, creating the perception that the signal is reflecting off of a room or space's surfaces.

rhythm - a general term used to describe the time-based or temporal organization of music. Rhythms can also be defined more specifically as musical durations of sound and silence.

rhythm clef – a clef also known as the percussion clef that is used to notate non-pitched music such as percussion parts.

ribbon microphone – an expensive, delicate type of microphone that captures sound and creates signal via a metallic ribbon that vibrates within a magnetic field.

riser - a synthesized sound or composed instrumental passage that builds tension leading up to a hit point.

ritardando – a score marking that tells the performer(s) to gradually slow the music down.

Roman numerals – analytical symbols used to identify chords' root scale degrees, qualities, and functions within a key.

room modes – resonance frequencies that are created within a room and typically congregate in its corners; room modes are usually between 20Hz and 200Hz.

root position – a chord position featuring the root as the lowest sounding note.

rounded binary – a two-part form featuring a return of the initial theme at the end of the second reprise.

royalties - the umbrella term used to describe usage-based payments for music compositions, performances, and recordings.

RTAS – shorthand for Real Time Audio Suite, this is the native version of Pro Tools's Time Division Multiplexing format.

the Rule of Threes – a compositional guideline stating that one should deviate from the literal repetition of a motive upon its third iteration in order to create interest and avoid monotony.

S

S corporation – a relatively small type of corporation that has fewer than 100 shareholders and is subject to pass-through taxation.

sample rate – the rate at which an analog-to-digital convertor takes samples or digital snapshots of an analog signal, measured in Hertz.

sampler - a virtual instrument that plays back recordings of actual sounds.

scale – an ordered series of notes arranged in a specific pattern of intervals that encompasses an octave.

scale degree – a member of a scale that is indicated by a caret-topped number reflecting its position relative to tonic.

scordatura – a score marking indicating that a passage is to be played in an alternate tuning. **second inversion** – a chord position featuring the chordal fifth in the bass.

secondary dominant – a $V^{(7)}$ chord from a non-tonic key that is used to tonicize a target harmony.

secondary leading tone chord – a diminished, half-diminished, or fully-diminished chord built on the leading tone of a non-tonic key that is used to tonicize a target harmony.

secondary theme – in a sonata form, the theme or group of themes representing a non-tonic key within the exposition.

semitone – the smallest distance between two different pitches in equal temperament. Also known as a half step, a semitone is the interval between adjacent keys on the keyboard.

sentence – a phrase that is dedicated to the development of a motive in a specific pattern of presentation and continuation.

senza sordino – a score marking used to indicate that a passage is to be played without a mute, thereby canceling any previous *con sordino* marking.

sequencing – the process of entering and editing MIDI information in a DAW or sequencer. **seventh chord** – a tertian harmony composed of four pitch classes.

sforzando - a score marking indicating the need for a sudden, forceful accent on a specific note.

sidechaining – a type of effects processing (typically used with compressors) that involves sending a signal from one channel so that it can be used to trigger sonic alterations to the signal on another channel.

signal flow - an audio signal's pathway from a sound source through various circuits.

similar motion – a type of contrapuntal motion that takes place when two voices move in the same direction, but in different ways (e.g., one voice moves by step and the other moves by leap in the same direction).

- simple binary a two-part form whose second reprise consists entirely of new material.
- **simple meter** a pattern of stress in which each beat possesses two equal beat divisions.
- **simple ternary form** a three-part form whose constituent sections (ABA) are composed of phrases and periods that do not represent complete forms themselves.
- single-amp a type of speaker system featuring multiple speakers that are powered by a single amplifier.
- **sixteenth note/rest** a note or rest that lasts for one quarter of a beat in common time.
- **sharp sign** an accidental that raises a note by a half step.
- slur a notational symbol that is typically used to indicate that a passage is to be performed with a *legato* articulation. Slurs are similar in appearance to ties, but connect two or more different pitches as opposed to connecting equal pitches.
- **SMPTE timecode** a standard timecode used in audio and video production that was developed by the Society of Motion Picture and Television Engineers in the 1960s to allow producers, editors, and engineers to reference extremely specific timepoints within a project.
- **snap** to displace a MIDI event to a user-defined temporal location, as in quantization.
- **sole proprietorship** an easily established business entity without liability protection that is subject to pass-through taxation.
- solo a button within a mixing board's channel strip that, when pressed, silences the other channels such that no sound except that specific channel strip is heard (although any other soloed channels' signals will also be present).
- solos a term used in jazz to describe the main body of the common head/solos/head out form, wherein individual instrumentalists take turns improvising over one or more choruses apiece.
- **sonata** a musical form featuring the exposition of contrasting themes and key areas, the development of themes, and the recapitulation of themes (typically within a single key area).
- **sonic brand** an audible counterpart to a visual branding, which helps a company conjoin a memorable soundbite with a product or service.
- **sound barriers** devices designed to limit the amount of outside noise that is captured during recording.
- **sound design** the act of modifying a sound source in some way to create a new sound. Sound design is a term that is often used to describe the creation of sound effects (or SFX) used in a film, but it can also be used to describe a compositional approach that entails creating innovative sounds for musical purposes.
- **spaced pair stereo miking** a recording technique in which two cardioid microphones are used to capture a sound source; these mics are spaced according to the 3-to-1 rule to avoid phasing issues.
- **species counterpoint** A centuries-old training regimen in counterpoint that is graduated in nature, proceeding incrementally by level or species.
- **spectral processing** another term for equalization, which involves processing or filtering specific regions within the frequency spectrum.
- **spectrum analyzer** a DAW plugin that shows the exact frequencies that are excited during playback, along with the decibel levels for each frequency within the spectrum.
- **spotting notes** spreadsheets or other documents that are used in commercial scoring scenarios in order to provide specific start and stop times for individual cues, along with the precise length and brief description of each scene.

spotting session – a collective viewing of a video project by the director, composer, and potentially other individuals involved in the production with the purpose of generating spotting notes for the composer to use while scoring the project.

- **staccato** a short and detached type of articulation that is indicated by a small dot above or below a note head (usually on the opposite side of the stem).
- **stacked voicing** a chord voicing for multiple instruments that features pitches being distributed among instruments such that one group is exclusively given the relatively higher pitches while another group is given the lower pitches.
- **staff** a graph-like notational tool for music that is composed of five parallel, horizontal lines that are equally spaced.
- **staggered voicing** a chord voicing for multiple instruments that features pitches being distributed among instruments such that instruments of the same type do not play adjacent chord tones.
- **static motion** a lack of true contrapuntal motion, wherein neither voice changes pitch.
- stem the thin, vertical line connected to the note head in music notation, which may point upward or downward depending on the note head's positioning within the staff. A stem also refers to a sub-collection of tracks within a mix sharing similar instrumentation or function; stems are typically combined for a final mix within a stemmed session (or "stem session").
- **stemmed session** or "stem session," an organized version of a larger session that records similar sounds (and/or those related by instrument family) into groups to create a more manageable session that can be easily re-created by other producers in different DAWs, often for the purpose of a final mix.
- step a relatively small interval that is indicated either with note heads that are on adjacent lines and spaces or with note heads on the same line or space with one or more chromatic alterations.
- step progression a large-scale melodic motion between adjacent, structural scale degrees.
 step sequencing also called step entry, a type of asynchronous MIDI sequencing that allows the user to input one note at a time.
- **stereo image enhancement** a form of psychoacoustic processing that incorporates phase shifting and MS processing to generate a sound field that is perceived to be wider than it actually is.
- **stereo miking** the involvement of two or more microphones in a recording of a single sound source, which offers the potential of creating a stereo image by blending and positioning multiple mono signals.
- **stereo separation** the level of audibly perceived individuality from among multiple signals that combine to form a stereo image.
- **stinger** in music for media, a sudden burst of musical emphasis that is designed to surprise the audience.
- **streaming bots** artificial profiles within streaming services that generate plays for artists to boost their perceived market share.
- *subito* a score marking signifying a sudden change in dynamic level.
- **sub-publishing agreement** a type of agreement in the music industry in which one publisher allows another publisher to represent its body of work, typically in exchange for a portion of the publisher's royalty share.
- **subtonic** the seventh degree of a scale that is positioned a whole step below tonic.
- **subtractive equalization** a process through which undesired frequencies are attenuated so that they do not dominate a mix.
- **supercardioid** an expanded cardioid polar pattern that additionally captures a small area behind the microphone.

surrounded voicing – a chord voicing for multiple instruments that features pitches being distributed among instruments such that the inner chord tones are given to one instrument type, while the outer chord tones are given to others, which "surround" the timbre of the inner-voice instruments.

- **sus chord** a quartal harmony featuring both a perfect fourth and a perfect fifth above the bass, and no chordal third.
- **suspension** an accented melodic embellishment that is approached or "prepared" by a consonant common tone and resolves down by step into another consonance.
- **swing quantization** a MIDI editing process that works by quantizing every other instance of a selected rhythmic value ahead or behind its position in a standard duple division by a fixed amount, giving a performance a loose quality that can emulate the swing feel.

symmetrical period - a period whose phrases are of equal length.

- **sync fee** a payment made to a composer—sometimes in addition to synchronization royalties—in exchange for the limited use of a composition that is synchronized to some form of media.
- **synchronization royalty** a specific type of performing rights royalty that applies to situations in which a composition is synchronized to some form of media, as is the case with background music for a television show, movie, or commercial.
- **syncopation** a rhythmic phenomenon that takes place when an accent (or group of accents) conflicts with the underlying meter's expected pattern of stress.
- **synthesizer** a piece of hardware or software that generates one of four types of sound waves using oscillators: sine waves, square waves, saw-tooth waves, and triangle waves.

T

take - a single recording pass.

- **tap tempo** a feature of many delay plugins/pedals that allows the user to sync the timing of the delayed signal copy (or copies) to the tempo of the track by tapping a button or key on a device, creating identifiable rhythmic values within the meter of the song.
- **tape saturation** a type of psychoacoustic processing that involves adding a small amount of digital distortion to a signal, which, in turn, generates high-frequency harmonics that provide a simulation of the "warm" sound that is often attributed to tape recording.
- **TDM** shorthand for Time Division Multiplexing, a DSP plugin in Pro Tools software that requires a separate, dedicated processor.
- **tempo** the speed of a piece of music or rate at which its beats are perceived.
- **tempo matching** a DAW function that alters the tempo of an audio file to match the tempo of a project.
- **tenor clef** a C clef that assigns middle C (C4) to the fourth line of the staff.
- *tenuto* a smooth and connected articulation that is indicated by a horizontal line placed above or below a note head.
- **ternary form** a form that includes three complete, independent sections that each end with a conclusive cadence.
- **text painting** the process of reflecting the meaning of a word or phrase using musical parameters such as harmony.
- **texture** the manner in which the parts or layers of a piece of music relate to one another. Texture is often considered to be synonymous with density, too, which is simply a consideration of the total number of layers within a piece.
- **third inversion** a chord position for seventh chords featuring the chordal seventh in the bass.

three-phrase period – a period that possesses three phrases, typically consisting of a two-phrase antecedent and single consequent phrase.

- three-way configuration or tri-amp configuration; a type of speaker system featuring multiple speakers that are powered by three separate amplifiers, with higher frequencies sent to one amp, mid-range frequencies sent to a second amp, and lower frequencies sent to a third amp.
- **threshold** a real or virtual knob within a compressor that specifies the amplitude at which compression is activated.
- ticks durational segments measured as partitions of a quarter note within a DAW.
- **tie** A notated arc used to link and combine the durations of equally pitched notes, often from one measure to the next.
- **timbre** also known as tone color, this is the unique set of characteristics that differentiates the sound of one instrument from another. Timbre consists of two main components: the sound's amplitude envelope and the array of excited harmonics that are created above each sounding fundamental.
- **title sequence** an opening credits sequence in a film or other media production that includes the main title (the portion of the production that displays the title of the work).
- **toggle configuration** a MIDI controller configuration that will send an *on* message when a mechanism is depressed and remain in the *on* position until it is pressed down again, like a button.
- **tone** see whole step.
- **tonguing** a technique that wind performers use to create a temporary break in the airflow to the instrument in order to place a slight emphasis on each note within a passage and create separation between rhythmic values; tonguing involves temporarily forming a silent "tee" against the roof of the mouth or the reed of the instrument with the tongue.
- tonic a focal note that serves as a key's gravitational center within a piece of tonal music.
- **tonicization** a progression that allows a target harmony to be heard fleetingly as a new tonic, due to the use of a chord or chords with secondary function.
- **touch mode** an automation editing mode that overrides automation data in the areas that are changed during playback. Once the fader is released, the parameter will jump back to its previously recorded value(s), as opposed to "latching" onto the final value and remaining at that level (as in latch mode).
- **tracks** editable lanes of information that are displayed horizontally and stacked on top of one another in a digital audio workstation.
- **trailer track** a piece of music that is used to support a movie or video game trailer.
- **transient** a sudden, temporary interruption in output level that takes place at the beginning of a waveform.
- **transient analysis** a DAW-based examination of an audio file's attack points, which is needed to inform the computer of the specific moments that are to be adjusted during audio quantization.
- **transition** in a sonata, a subsection whose function is to modulate to the secondary key area within the exposition.
- **transition cue** a small audio file—often a short stinger or atmospheric clip—that is used to bridge together the larger looping sections within a horizontal re-sequencing scheme in a game composition.
- **transport control window** a view or toolbar within a DAW that allows the user to view and adjust parameters specifically related to rhythm such as tempo, time signature, and the visualization of rhythmic values on the grid.
- **transposing instruments** instruments that produce pitches at a consistent interval away from those that are written in notation.
- **transposition** the repetition of a musical idea at a different pitch level.

treble clef – A clef used for the notation of music for higher-pitched instruments. The treble clef features a spiral around the second line of the staff that identifies it as a *G* (specifically, G4). As such, the treble clef is also known as the *G* clef, and it looks like a stylized letter *G*.

triad - a tertian harmony composed of three pitch classes.

tri-amp – or three-way configuration; a type of speaker system featuring multiple speakers that are powered by three separate amplifiers, with higher frequencies sent to one amp, mid-range frequencies sent to a second amp, and lower frequencies sent to a third amp.

trill - a score marking that signifies the need for a rapid alternation of pitches.

triple meter – a meter possessing three beats.

triple stop – a string technique that involves bowing or plucking three pitches simultaneously on three different strings.

triplet – a note value that is used to divide into three parts that which is normally divided into two.

tritone – a dissonant interval that spans six half steps (or three tones) and may be spelled as an augmented fourth or diminished fifth.

tritone substitution – a harmonic substitution used in jazz featuring a dominant seventh chord that can be thought of as replacing a more normative dominant seventh chord (whose root is located a tritone away) that would create root motion by falling fifth in a manner similar to a ii–V(–I) progression. The result of a tritone substitution is half-step root motion (e.g., D^{b7}–C).

TRS connector – shorthand for Tip Ring Sleeve, a connector used in a type of balanced instrument cable that is common for guitars, basses, and keyboards.

TS connector – shorthand for Tip Sleeve, a connector used in a type of unbalanced instrument cable that is common for guitars, basses, and keyboards.

tuplet – a rhythmic grouping also known as a "borrowed division" that evenly divides other rhythms in ways that conflict with established metrical patterns.

U

unbalanced input – a connection point in an audio device that accepts two-wire cables such as TSs that are more susceptible to picking up noise.

unison - an interval of zero distance between pitches sharing the exact same sound and letter name.

upbeat – the final beat within a meter, which usually possesses the least accentual weight of any beat.

V

VCA - a Voltage Controlled Amplifier or Attenuator; in other words, a module or part of a synthesizer that allows for the control of volume and articulation of an incoming signal (which is to be further shaped by an ADSR module).

velocity – a MIDI CC message parameter that correlates with intensity or dynamic level on a scale from 0 to 127.

velocity switching - a MIDI editing process that allows the user to trigger articulation changes by assigning sample layers to specified velocity ranges.

verse – a formal section in a pop song that typically features different lyrics each time it recurs, while the music remains the same (or is similar).

verse-chorus form – the standard form in popular music, featuring primary verse and chorus sections that are paired together to form a large, repeated A section that is contrasted by a bridge section (B).

vertical layering – also referred to as vertical remixing or vertical re-orchestration, this is a common approach to interactive game composition that effectively breaks a large composition into autonomous units that can function both individually as well as with any combination of the other parts. Certain parts will join into or drop out of the texture as time progresses according to the intensity of game play, creating a continuous development and re-orchestration of a passage.

virtual instrument – a piece of software that emulates the sound of an instrument and can be accessed as a plugin within a DAW.

voice crossing - an objectionable contrapuntal situation in which a relatively lower voice (e.g., the alto) is written in a higher register than a higher voice (e.g., the soprano) or vice versa.

voice exchange – a melodic scheme in which contrapuntal voices swap pitch classes via contrary stepwise motion.

voice leading - the manner in which contrapuntal voices progress from note to note (individually) and chord to chord (collectively).

voice overlap – an objectionable contrapuntal situation wherein the higher voice (e.g., the soprano) leaps to a lower position than the previously used note in the lower voice (e.g., the alto) or vice versa, despite the voices not technically crossing.

voice stealing – a functionality built into a polyphonic synthesizer that stops the first voice from sounding once the polyphony threshold—the maximum number of simultaneously sounding voices—is exceeded. In this situation, the most recent voice entering the texture gains priority over the least recent voice. Put differently, the last note priority scheme results in voice stealing once the polyphony threshold is crossed.

voicing - the specific arrangement of a harmony in pitch space, pertaining to the spacing, doubling, and/or omission of the chord tones.

volume controller (MIDI CC7) – a commonly automated CC message that controls the overall maximum volume of a track that may or may not include any expression control.

VST – shorthand for Virtual Studio Technology, this is a popular native plugin format created by Steinberg.

W

well-tempered (tuning) – a tuning system that divides each octave into twelve equal semitones, which is slightly out of tune with some of the harmonics present in the overtone series.

wet signal - signal to which effects have been added.

whole note/rest - a note or rest that lasts for four beats in common time.

whole step - the second smallest distance between two different pitches in equal temperament. Also known as a tone, a whole step is equal to two half step intervals.

whole tone scale - an ordered series of whole step intervals encompassing an octave.

write mode – a destructive automation mode that records override-able parameter adjustments in real time.

X

XLR connector – shorthand for Cannon Electric's X series with an added Latch and Rubber compound, a connector used in a type of balanced cable that is common for connecting microphones to devices such as mixing consoles.