Both Logic Express 7 and Logic Pro 7 include effects that rival those produced by expensive hardware units. As a quick look at the 500+ page Plug-In Reference manuals that come with Logic indicates, there’s no way that we could explore each effect in this book. This appendix, however, is designed to give you a taste of the breadth of the effects and instruments included with Logic.

Each effect is described briefly to give you an idea of when you might want to use it. Remember that each effect has a number of presets—factory programmed settings—that you can try out to get a feel for how to use each effect.
Delay Plug-Ins

Delay effects delay the playback of the audio material in either simple or musically complex ways.

**Sample Delay:** With this effect, the user can delay playback of audio by 0 to 4,000 samples.

**Stereo Delay:** This is a musical delay that enables users to delay audio using swing patterns, notes, and so on. Stereo Delay offers a full complement of controls to shape the sound and pattern of the effect. It can sync either to Logic’s song tempo or to its own internal clock. You can adjust the delay of each stereo channel separately.

**Tape Delay:** Tape delay is a unique, complex effect that not only offers a musical delay with many user adjustable parameters but also attempts to capture the sound and vibe of analog-style, tape-based delay units.

Distortion Plug-Ins

Technically, distortion plug-ins increase the level of audio material until they “clip,” or break up and distort. Musically, distortion plug-ins can be one of the most dynamic tools for adding color and energy to audio material. All distortion effects include a drive parameter for how hard to drive your audio into clipping and an output parameter to enable you to adjust the signal so you don’t overload your audio interface.

**Bitcrusher:** This effect distorts your audio by reducing the bit-depth and downsampling of your audio. It includes a number of different clip-level shapes. This plug-in can do anything from adding subtle energy to causing total sonic destruction.

**Clip Distortion:** This plug-in offers a plethora of parameters for you to adjust the sound and shape of how the distortion will clip your audio. It includes filter and tone adjustments in addition to the standard distortion parameters.

**Distortion:** This is a basic distortion, with drive and output parameters as well as a parameter to shape the tone of the distortion. This is similar to the old guitar distortion pedals in both operation and sound.
**Distortion II (Logic Pro only):** This distortion is based on the distortion section of the EVB3 and has a vintage character.

**Guitar Amp Pro (Logic Pro only):** Far more than a simple distortion effect, Guitar Amp Pro is a guitar amplifier simulator that picks up where GarageBand’s Guitar Amp leaves off. It offers many different amplifier models, EQ models, speaker simulations, tremolo, and reverb effects.

**Guitar Amp (Logic Express only):** This is the same guitar amplifier simulator available with GarageBand, with an updated interface and presets for Logic Express.

**Overdrive:** A slightly more subtle and “vintage” sounding version of the Distortion plug-in.

**Phase Distortion:** A distortion effect that adds modulation, allowing for some very unique coloring of the distorted material.

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**Dynamics Plug-Ins**

These plug-ins affect the dynamics, or amplitude, of the audio material. These effects are useful for controlling audio that has wild variations in volume and for mastering when you are trying to get a consistent level for your material.

**Adaptive Limiter (Logic Pro only):** The Adaptive Limiter is an excellent, world-class “look-ahead” limiter that delays your audio by a number of milliseconds so that it can determine where the upcoming peaks are. It then reduces those peaks in real-time. Keep in mind that this effect introduces a significant, obvious delay, unlike most of Logic’s other plug-ins.

**Compressor:** This is a basic compressor. It reduces the level of peaks and brings up the level of passages under a threshold so as to compress your audio material into a desired frequency range.

**DeEsser (Logic Pro only):** A very specialized form of dynamics processor, a DeEsser focuses on specific frequencies that may have loud sibilant or plosive syllables (loud “s” or “k” sounds, for example) and removes the extra noise.

**Enveloper (Logic Pro only):** The Enveloper places a dynamic envelope, like that of a synthesizer envelope, over your audio. This not only
can affect the dynamics of your audio, but also can be used to create numerous special effects!

**Expander (Logic Pro only):** An expander does the opposite of what a compressor does—it’s a compressor that increases the dynamic range of the material above a user-defined threshold.

**Limiter:** This is a basic limiter that attempts to find peaks in your audio and bring them down to a predetermined level, enabling you to turn up your audio material without the signal overloading the audio mixer.

**Multipressor (Logic Pro only):** The Multipressor is a multiband compressor, meaning that you can compress different frequency ranges by different amounts or compress only a certain frequency range and not others. This is useful for tightening up one frequency range with compression and leaving others untouched.

**Preset Multipressor (Logic Express only):** This is a preset-only simple multi-band compressor that uses the same algorithm as the Logic Pro Multipressor.

**Noise Gate:** A noise gate closes down the audio playback at a certain threshold to avoid unwanted quiet material on the track from playing. Logic’s Noise Gate offers a number of unique parameters that enable it to be used not only as a standard noise gate, but also as a real musical tool. Check it out!

**Silver Compressor:** A very basic compressor plug-in with no GUI and extremely low CPU requirements. This plug-in is the compressor included with Logic Audio (formerly Logic Silver) and up.

**Silver Gate:** A very basic noise gate plug-in with no GUI and extremely low CPU requirements. This plug-in is the noise gate included with Logic Audio (formerly Logic Silver) and up.

### EQ Plug-Ins

Equalizer (EQ) plug-ins are the bread and butter of signal processing. These plug-ins enable you to adjust various frequencies in your audio material specifically. Logic includes a number of EQ plug-ins.

**Channel EQ:** The Channel EQ offers eight bands of EQ (only four bands in Logic Express) with various types of cutoff, shelving, and parametric filters. The Channel EQ is one of the highest quality, most
professional native EQs available on the market today—and Apple includes it for free!

**DJ EQ**: A simple, single-band parametric EQ plug-in with the addition of a low shelf filter.

**Fat EQ (Logic Pro only)**: The Fat EQ is not as advanced or high quality as the Channel EQ, but this EQ still offers five EQ filters with very good sound quality and a low CPU requirement.

**High Shelving EQ**: A basic high frequency shelving EQ. This enables you to boost or cut a single high frequency you select.

**Linear Phase EQ (Logic Pro only)**: The Linear Phase EQ looks and functions like the Channel EQ, but it is a far more CPU intensive effect that ensures that the phase of the EQ’d audio never changes.

**Low Shelving EQ**: A basic low frequency shelving EQ. This enables you to boost or cut a single low frequency you select.

**Match EQ (Logic Pro only)**: The Match EQ allows you to learn the EQ curve of one audio file and apply it to another target audio file.

**Parametric EQ**: A basic single parametric EQ filter.

**Silver EQ**: A very basic multiband EQ with several filters. This effect is the EQ included with Logic Audio (formerly Logic Silver) and up.

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**Filter Plug-Ins**

Filter plug-ins filter out frequencies of the audio signal in order to either equalize the audio or create special effects.

**AutoFilter (Logic Pro only)**: This effect is somewhat like the resonant filter and modulation section of a synthesizer—you can create unique moving and modulating filters with this effect. If you want to create one-of-a-kind moving sweeps and rhythms with audio, this effect can help!

**EVOC 20 Filterbank (Logic Pro only)**: This is the filter bank from the EVOC 20 vocoder. It offers up to 20 filters along with modulation, allowing for some very creative special effects.

**EVOC 20 TrackOscillator (Logic Pro only)**: This is the oscillator from the EVOC 20. For more than a simple oscillator, it also offers complex modulations and filters for some creative special effects.
Fuzz-Wah: The fuzz wah from the EVD6. This allows for some vintage sounding wah-wah effects.

High Cut: A very basic high cut filter. This cuts off frequencies above the cutoff frequency.

High Pass Filter: A basic high pass filter. This filters out frequencies below the high pass filter.

Low Cut: A very basic low cut filter. This cuts off frequencies below the cutoff frequency.

Low Pass Filter: A basic low pass filter. This filters out frequencies above the low pass filter.

Helper Plug-Ins

These are handy utility effects when mixing your song. They aren’t as sexy as some of the more creative plug-ins, but they come in handy when you need them!

Correlation Meter (Logic Pro only): This plug-in shows you the correlation of both channels in a stereo pair to each other.

Direction Mixer (Logic Pro only): This stereo plug-in enables you to vary the pan positioning and adjust the center point of a stereo recording. It also enables you to decode MS (middle side) stereo channels. MS mic positioning is a subject for a book on recording techniques, not Logic, but if you need an MS decoder, this plug-in will do it.

Gain (Logic Pro only): This simple plug-in enables you to add or subtract gain from a track that is too loud or too soft. It also enables you to invert the phase of a track. The stereo version includes a balance control and can swap the left and right channels or convert to mono.

I/O Plug-In (Logic Pro only): This is basically an insert for external hardware. You can set which audio input and output to use, and whatever audio device you have connected to your audio interface will then be able to process the audio from your track and return it to Logic’s Mixer. If you have a studio filled with expensive high-end hardware, this plug-in will quickly become your best friend!

Level Meter: This plug-in offers a simple level meter with double the range of Logic’s channel strip level meters, and a few more options.
MultiMeter (Logic Pro only): For users with more advanced metering requirements, this plug-in includes a Goniometer and more detailed analysis of stereo signals.
Test Oscillator (Logic Pro only): This plug-in can generate noise or a steady waveform. You can use this for audio calibration or any creative use for which you want an oscillator to generate a signal.
Tuner: This is a standard instrument tuner.

Modulation Plug-Ins

Modulation effects modulate the signal in order to create the effect of a wider stereo image, different phase effects, or motion.

Chorus: This is a very basic chorus effect that modulates an audio signal to create anything from a slight lushness to a pulsating detuned effect.

Ensemble (Logic Pro only): This stereo effect consists of eight separate pitch shifters and three low-frequency oscillators designed to help you create the effect of a huge ensemble of voices or instruments from your source audio.

Flanger: This is a very basic flanger effect that modulates an audio signal to create anything from a slight “sweeping” effect to a wildly detuned “jet engine through a tunnel” metallic sound.

Modulation Delay: This effect combines the Stereo Delay effect with a chorus/flanger modulation section to create a delay effect that moves and modulates.

Phaser: This plug-in modulates the phase of the audio material to create anything from mild to wild sweeping pitch and phase effects.

Ringshifter (Logic Pro only): Ringshifter is a unique and truly excellent plug-in that features a ring modulator, frequency shifter, delay, envelope, and LFO. Trust us, you must experience it for yourself!

Rotor Cabinet (Logic Pro only): This is the rotor cabinet from the EVB3 virtual organ.

Scanner Vibrato (Logic Pro only): This is the vibrato effect from the EVB3 virtual organ.
Tremolo: This effect enables you to modulate the volume of your track to create tremolo effects with your audio. The plug-in offers many unique parameters and can be synchronized to Logic’s tempo if you want.

Spreader: This stereo effect can be used to make the stereo field of your audio seem wider or narrower.

Reverb Plug-Ins

Reverb effects create the sensation of ambiance and space by adding artificial “reverberations” to your audio material. These plug-ins are useful for creating the sensation of the recording being in a place where it actually wasn’t recorded or to create a lush ambiance.

AVerb: The AVerb is a very simple reverb with no GUI and a very low CPU requirement.

EnVerb (Logic Pro only): EnVerb is a unique reverb that gives you total control over the shape of the reverb envelope, enabling gated and reverse reverb effects. It has a large CPU requirement, but the sound quality is excellent!

GoldVerb (Logic Pro only): GoldVerb is so named because it was the stereo reverb that came with the old Logic Gold packages. GoldVerb is a very good sounding reverb with a modest CPU requirement.

PlatinumVerb (Logic Pro only): PlatinumVerb is so named because it was the reverb that came with the old Logic Platinum packages. It sounds lusher and includes more parameters for fine-tuning than GoldVerb, SilverVerb, AVerb, or EnVerb. It also has a larger CPU requirement.

SilverVerb: SilverVerb ships with Logic Audio (formerly Logic Silver) and up. It does not have the breadth of controls or lushness of GoldVerb or PlatinumVerb, but what it does, it does very well. It has a lower CPU requirement than either GoldVerb or PlatinumVerb.

Space Designer (Logic Pro only): This is a “convolution” reverb that allows you to record an impulse response (IR) from a real space and then use that recorded space to generate a synthetic reverb you can use to process audio. It’s an amazingly powerful and complex process that can create everything from realistic cathedral spaces to simulations of guitar amplifier speaker cabinets and garages! Space Designer is one of the best convolution reverbs available, so have fun!
Special Plug-Ins

The special subcategory is sort of a catchall for effects that don’t fit in any of the other subcategories.

**Denoiser**: This plug-in attempts to remove noise from audio material. It is basically a noise gate that can be focused on a very narrow and specific frequency band.

**Exciter (Logic Pro only)**: An exciter attempts to “excite” the audio by adding high frequency harmonics.

**Groove Shifter (Logic Pro only)**: Groove Shifter allows you to alter the rhythmic pattern of an audio file.

**Pitch Correction (Logic Pro only)**: Pitch Correction lets you correct the pitch of off-pitch audio. This is often used to fix a quality vocal that has only a few sour notes and the like.

**Pitch Shifter II**: This effect enables you to shift the pitch of your audio.

**Spectral Gate (Logic Pro only)**: This is one of the most unique effects included with Logic Platinum, and it’s the hardest to explain. Basically, it modulates frequencies above and below a threshold, enabling some amazing filtering effects. This is one of those effects you really need to play with to get a feel for what it can do.

**SubBass (Logic Pro only)**: This plug-in adds a synthesized bass sound at a lower register than your original signal.

**Stereo Spread (Logic Pro only)**: This stereo effect enables you to manipulate the stereo base far more than the Spreader plug-in.

**Vocal Transformer (Logic Pro only)**: As its name implies, this plug-in is designed to transform audio by adjusting the pitch and formants of the initial audio.

Logic Audio Instruments

Logic includes not only high-quality plug-in effects, but some of the most spectacular audio instruments available as well. In fact, many users choose Logic as their platform on the basis of how spectacular the instruments are! That goes for Logic Express, too—to be honest, some of our favorite Logic instruments are the simple ones!
Most of these instruments come with a selection of factory presets; give them a listen to get a feel for what each synthesizer can do.

**EFM1**: The EFM1 (Emagic FM 1) is a simple but completely professional quality FM synthesizer. This synth can create rich, crystalline, “digital” sounding basslines, pads, melodies, and special effects.

**ES1**: Emagic’s first audio instrument, the ES1 (Emagic Synthesizer 1), is still known for generating very punchy bass and melody sounds.

**ES2**: Emagic’s far more fully featured ES2 (Emagic Synthesizer 2) offers far more complex wavetables and oscillations than the ES1. It’s more complex to program but can generate spectacular electronic leads, melodies, pads, and basslines.

**ES M**: The ES M (Emagic Synthesizer Monophonic) is a monophonic instrument designed to be used as a bass synthesizer. Far from a throwaway freebie instrument, this synthesizer can create impressively rich and “phat” bass sounds, as well as other resonant mono synth timbres.

**ES P**: The ES P (Emagic Synthesizer Polyphonic) can play up to eight voices at a time and is far more flexible than the ES M, although not quite as “phat” when it comes to bass sounds. It is geared toward reproducing many of the synth timbres of classic 1980s, mass-produced digital synthesizers.

**ES E**: The ES E (Emagic Synthesizer Ensemble) was designed to create lush ambient pad and ensemble sounds, but it can also be used for more traditional sounds. This software instrument is excellent for creating glassy and textured ambiences.

**EVB3 (Logic Pro only)**: Emagic’s virtual organ, the EVB3 (Emagic Virtual B3), is a physical modeling synthesizer designed to recreate the classic sounds of the Hammond B3 organ.

**EVD6 (Logic Pro only)**: Emagic’s virtual clavinet, the EVD6 (Emagic Virtual D6), is a physical modeling synthesizer designed to recreate the classic sounds of the electric clavinet.

**EVP88 (Logic Pro only)**: The EVP88 (Emagic Virtual Piano 88) models the sounds of classic electric pianos such as the Rhodes, Wurlitzer, Electra, and other great 70s instruments.

**EXS24mkII (Logic Pro only)**: This is Emagic’s venerable sampler. The EXS24mkII is not as fully featured as many software samplers out there, but it offers amazing CPU efficiency and integration into Logic Pro.
EXSP24 (Logic Express only): This is a playback-only version of the EXS24mkII; in other words, it doesn’t let you build your own sampler instruments, but you can play back any sampler instrument in EXS format.

External (Logic Pro only): As discussed earlier in the book, this plug-in allows you to use external MIDI instruments on an Audio Instrument Track.

GarageBand Instruments: Your GarageBand instruments will all appear here, ensuring that any GarageBand songs you open in Logic will play correctly.

Sculpture (Logic Pro only): Sculpture is perhaps the most advanced physical modeling synthesizer available! It allows you to take physically modeled elements of real sounds (glass, bows, wind, and so on) and create absolutely unique sounds and instruments. You need to try it out to believe it!

UltraBeat (Logic Pro only): UltraBeat is simply the most advanced software drum synthesizer available. It takes a while to get the hang of its interface, but its sound quality is unmatched. Check out the presets to see for yourself!