

LEXICON MC-1 - EFFECT AND PARAMETERS CROSS REFERENCE

PCM

5 SPEAKER ENHANCE

Music Surround..... 5 SPEAKER ENHANCE simulates 7 speaker playback through a 5 speaker system, providing a heightened sense of spaciousness and envelopment without extra speakers. This enhancement is most noticeable if the surround speakers are positioned directly to the side of the listening position, or if the listening position is located against the rear wall.

Music Logic.....

Logic 7.....

Note: that although this provides very convincing improvement to a 5 speaker system, it is not a substitute for a properly set up and calibrated 7 speaker system. The difference is most noticeable when the listener is seated to one side or the other of the calibration position.

AC-3

AC-3 STATUS

All AC-3 Modes AC-3 STATUS displays the current status of incoming AC-3 data. The displayed items are not user adjustable.

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ACADEMY FILTER

Mono Logic..... ACADEMY FILTER is provided to recreate the proper tonal balance of older monaural films that were recorded with much narrower and duller frequency response than current films.

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AUTO AZIMUTH

Logic 7 AUTO AZIMUTH is short for auto azimuth error correction/automatic input balance. Auto Azimuth should be set to ON for films, and OFF for music. When ON, special patented algorithms continually monitor the input signal and adjust both the relative level and time offset of the two channels to keep the dialog properly centered and special effects properly localized. This automatic feature is the reason the unit does not need an input balance control for Dolby Surround decoding.

.TV Matrix.....

Pro Logic.....

.TV Matrix.....

PCM, AC-3, DTS

BASE ENHANCE

Music Surround..... BASS ENHANCE derives stereo bass to provide low frequencies that are noticeably less localizable and more spacious in the playback.

Music Logic.....

Logic 7..... **Note:** that results will vary depending on room acoustics and the low frequency capacity of the surround speakers. As side and/or rear speakers are used for bass enhancement, the effectiveness is improved with speakers capable of reproducing low frequencies (LARGE). Using speakers that are not capable of producing low frequencies (<80Hz) may cause damage to them.

.TV Matrix.....

DTS Film.....

5.1 Music.....

5.1 Logic 7.....

Dolby Digital.....

DTS Music.....

DTS Logic 7.....

DTS Film.....

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BASS CONTENT

Panorama.....

BASS CONTENT allows you to modify the bass content for Mono, Stereo or Binaural recordings. The BINAURAL setting turns the rear level parameter off and activates special low-frequency compensation. This feature is offered specifically for true binaural recordings made with a dummy head.

PCM

BASS RT

Church.....

Cathedral.....

BASS RT (low frequency reverberation time) depends on MID RT and is expressed as a multiplier. BASS RT should be set to 1.0 x MID RT for a more natural effect in smaller spaces.

AC-3, DTS

CENTER DLY SAMPLES

5.1.2- Channel.....

DTS 2 - Channel

CENTER DLY SAMPLES adjusts the time offset of the center channel. The appropriate value is +0 unless you know that the center channel is not properly timed, as well as the amount by which it is off.

PCM

CENTER LEVEL

Panorama

Nightclub.....

Concert Hall.....

Church

Cathedral.....

Party.....

Music Surround.....

Music Logic.....

CENTER LEVEL adjusts the output level from the center speaker.

AC-3, DTS

CENTER MIX

5.1.2- Channel.....

DTS 2 - Channel.....

CENTER MIX adjusts the level of the center channel applied to the two channel downmix. The appropriate value for film is 16. The appropriate value for music is 11.

AC-3

COMPRESSION

All AC-3 Modes.....

COMPRESSION enhances the intelligibility of Dolby Digital material at low volume levels (-6dB or lower). When set to AUTO, this control automatically limits peak signals and boosts low level signals. The amount of compression increases proportionately as volume is decreased. This is quite useful when listening to Dolby Digital soundtracks at low output levels. When set to ON, full compression is applied, regardless of volume.

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PCM

EFFECT LEVEL

Panorama.....
Nightclub.....
Concert Hall.....
Church.....
Cathedral.....
Music Surround.....
Mono Logic.....

EFFECT LEVEL adjusts the loudness of the side and rear speakers. When there are no side speakers, it adjusts the amount of ambient signal mixed into the main loudspeakers. In Panorama, this control changes the apparent width of the front soundstage. 0 = ordinary stereo, 62 provides the widest image.

PCM

FRONT STEERING (FILM, HALL, OFF)

Music Logic.....
TV Matrix.....

FRONT STEERING provides three basic settings which have been developed specifically to optimize center channel signal strength for film and music.

The **FILM** setting has excellent frontal image stability through the whole room during dialog and vocals, while preserving the full width of the front image in the spaces between dialog, and for music without vocals. The front image during vocals is noticeably narrower than with the **MUSIC** setting, but highly satisfactory nonetheless.

The **MUSIC** setting reproduces sound in all three front speakers when a strongly centered, or mono signal is present. This is an excellent choice for heavily centered pop music such as metal and sounds more natural for broadcast material with a single announcer. **OFF** sets the center channel level to 4.5dB less than the front left and right speakers, and then leaves the level unchanged as the steering varies. This setting is equivalent to conventional stereo with a slight center fill.

PCM

HALL SIZE

Concert Hall.....
Church.....
Cathedral.....

HALL SIZE allows you to select room sizes of lengths ranging from 4-38 meters, depending on the effect selected.

PCM

INPUT BALANCE

Panorama.....

INPUT BALANCE allows you to compensate for the occasional source with audible channel imbalance. When selected, screen graphics indicate the relative left/right position.

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AC-3, DTS

LFE MIX LEVEL

5.1 Music.....
5.1 Logic 7.....
Dolby Digital.....
DTS 2 - Channel.....
DTS Music.....
DTS Film.....

LFE MIX LEVEL allows separate level attenuation of the LFE channel, which is ultimately mixed to the subwoofer output. As the bass from as many as five other channels is added to the LFE, it can significantly raise subwoofer output levels—and create the risk of damage to a system. Careful adjustment of this parameter will allow you to achieve proper tonal balance and reduce the risk of damage.

PCM

LIVNESS

Nightclub.....
Concert Hall.....

LIVENESS adjusts the amount of recirculation within the effect. Higher values mimic more reflective surfaces in the simulated space and increase the amount of time it takes the sound to decay. At very high values, the decay is audibly less smooth than in the Church and Cathedral Effects, which are more effective at simulating very live spaces.

PCM

LOW FREQ WIDTH

Panorama.....

LOW FREQ WIDTH allows you to apply low-frequency spatial correction to the signal. Positive values of LOW FREQ Width indicate that the difference signal t(L-R) has additional energy below 500Hz, while the sum (L+R) has correspondingly less. Negative settings of LOW FREQ WIDTH can compensate for recordings with too much of this property. This control can add needed spaciousness and warmth to classical recordings made with coincident or near-coincident microphones.

PCM

MAIN LEVEL

Mono Logic.....

MAIN LEVEL controls the level of the mono signal that is reproduced by the main speakers. When a center speaker is part of the configuration many films may sound better when this control is set between 6-12. This spreads the film sound out around the screen and can be more pleasant than restricting the dialog and much of the other film sound to the center speaker.

AC-3, DTS

MASTER LEVEL

5.1.2- Channel.....
DTS 2 - Channel.....

MASTER LEVEL adjusts the output level of the two-channel downmix. This control should be set to +5dB unless the LFE is very heavy, in which case the level should be reduced.

PCM

MID RT

Church.....
Cathedral.....

MID RT (midrange reverberation time) is the time required for midrange sounds to decay 60dB in level.

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PRE DELAY

Church.....
Cathedral.....

PRE-DELAY increases the delay between the direct sound and the onset of reverberation. Because some pre-delay is inherent in the program material, a value of 0 is usually a good starting point. Increasing the pre-delay value will make the hall sound larger.

PCM, AC-3, DTS

RE-EQUALIZER

TV Matrix.....
THX Cinema.....
5.1 Music.....
5.1 Logic 7.....
THX 5.1.....
DTS Logic 7.....
DTS Music.....
DTS THX 5.1.....

RE-EQUALIZER equalizes the left, center, and right channel outputs to match the overall frequency balance of the original recording. Without this re-equalization, many films and some television programs will sound too bright.

PCM

REAR DELAY

Panorama

REAR DELAY adjusts the amount of time between the appearance of a signal in the front channels and its emergence from the rear. Generally, the correct delay is about 16 milliseconds, but the setting depends on speaker set-up and source material. In general, the delay should be low enough so that the rear sound does not become identifiable as a distinct source. The settings also affect the side outputs.

PCM, AC-3, DTS

REAR DELAY OFFSET

Music Surround.....
Music Logic.....
Logic 7.....
5.1 Music.....
5.1 Logic 7.....
DTS Music.....
DTS Logic 7.....

In PCM: REAR DELAY OFFSET is an additional delay added to the rear channels. This delay increases the apparent size of the listening space by increasing the rear delay time. Feel free to experiment to find the setting that works best.

In AC-3: REAR DELAY OFFSET is an additional delay added to the rear channels when listening to LOGIC 7 and MUSIC SURROUND. This delay increases the apparent size of the listening space by increasing the rear delay time. Feel free to experiment to find the setting that works best.

In DTS: REAR DELAY OFFSET is an additional delay added to the rear channels when listening to LOGIC 7 and MUSIC SURROUND. This delay increases the apparent size of the listening space by increasing the rear delay time. Feel free to experiment to find the setting that works best. **SUBWOOFER LVL** boosts or cuts the subwoofer output level. Although the normal subwoofer level is set during the calibration procedure, with some recordings it may be desirable to increase or decrease this deep bass level.

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PCM, AC-3, DTS

REAR LEVEL

Party.....
Music Surround.....
Music Logic.....
Logic 7.....
TV Matrix.....
5.1 Music.....
5.1 Logic 7.....
Dolby Digital.....
DTS Music.....
DTS Logic 7.....
DTS Film.....

REAR LEVEL controls the volume level of the rear speakers. Although we have selected a default value, the correct setting will vary with each recording, the room, and your personal taste.

PCM

REAR ROLLOFF

Panorama.....

REAR ROLLOFF sets the frequency above which the rear-channel sound is attenuated. The appropriate setting will vary with the program material. It should be set high enough to give presence and airiness to the rear sound without placing distracting instrumental overtones or other sounds behind you. The settings also affect the side outputs.

PCM

ROLLOFF

Nightclub.....
Concert Hall.....
Church.....
Cathedral.....
Mono Logic.....

ROLLOFF mimics the absorption of the air in the hall and, typically, should begin with a low frequency to simulate large spaces.

PCM, AC-3, DTS

SIDE LEVEL

Party.....
Music Surround.....
Music Logic.....
Logic 7.....
TV Matrix.....
5.1 Music.....
5.1 Logic 7.....
Dolby Digital.....
THX 5.1.....
DTS Music.....
DTS Film.....
DTS THX 5.1.....
DTS Logic 7.....

In PCM & DTS: SIDE LEVEL controls the volume level of the side speakers. Although we have selected a default value, the correct setting will vary with each recording, the room, and your personal taste.

In AC-3: SIDE LEVEL controls the output level of the side speakers. Use this control in conjunction with SURROUND LEVEL to achieve the optimum balance between the side and rear speakers.

LEXICON MC-1 - EFFECT AND PARAMETERS CROSS REFERENCE

PCM

SIDE ROLLOF

Music Surround..... SIDE ROLLOFF provides a high frequency cutoff for the side speakers. The optimal setting for this control will vary widely with the source material.

PCM

SOUNDSTAGE

Music Logic..... SOUNDSTAGE controls the level of the surround speakers relative to the front speakers in a dynamic way. The MC-1 attempts to detect whether or not the sound source was originally encoded from a surround source by looking for occasional bursts of rear-steered material, and by identifying the directional orientation of the background sound between strong sounds. Whenever there is an indication that the source was originally surround encoded, the Soundstage control automatically reverts to the REAR setting—which gives the rear speakers full level. The NEUTRAL position attenuates the rear speakers 3dB. The FRONT position attenuates the rear speakers 6dB. The effect is to move the listening position forward in the listening space.

PCM

SPEECH DETECT

Nightclub..... SPEECH DETECT activates a circuit that distinguishes monaural speech from other inputs. Essentially, this control turns down the effect to make speech clearer. Whenever stereo signals are present, the right and left input channels are used independently as inputs to the ambience synthesis. If there is a strong monaural speaking voice present at the same time, this component of the input to the effect is reduced while the stereo component is increased.

If the input signal is pure monaural speech the reverb is almost entirely attenuated. SPEECH DETECT is a real benefit to some popular music (where spoken voice, such as rap, occurs along with the music), stereo television and early stereo movies. Any stereo material which was not carefully mixed for Surround is a good candidate for playing through the Nightclub, Concert Hall, Church or Cathedral Effect with speech detect on.

PCM, AC-3, DTS

SUBWOOFER LVL

All Listening..... SUBWOOFER LVL boosts or cuts the subwoofer output level. Although the normal subwoofer level is set during the calibration procedure, with some recordings it may be desirable to increase or decrease this deep bass level.

PCM

SURROUND LEVEL

Panorama..... SURROUND LEVEL adjusts the loudness of the signals sent to the rear channels. This control should be set so that the rear is audible without calling attention to itself. Numerical values and screen graphics are displayed during adjustment. The settings also affect the level of the side outputs.

LEXICON MC-1 - EFFECT AND PARAMETERS CROSS REFERENCE

AC-3, DTS

SURROUND MIX

5.1 2- Channel.....
DTS 2 - Channel.....

AC-3: SURROUND MIX allows independent adjustment of the level of the surround channels. Many AC-3 encoded soundtracks sound better when down-mixed to two channels with the surround level increased by approximately 2-3dB.

DTS: SURROUND MIX allows independent adjustment of the level of the surround channels. Many multichannel-encoded soundtracks sound better when down-mixed to two channels with the surround level increased by approximately 2-3dB.

PCM

SURROUND ROLLOFF

Music Logic.....
Logic 7.....
TV Matrix.....
Pro Logic.....

SURROUND ROLLOFF allows the high frequencies of the rear channels to be attenuated with the same detection circuitry as that described for the Soundstage control. The attenuation is quite attractive on many music and broadcast sources which were not mixed for surround. When a surround source is detected, these filters are removed, so the rear speakers can reproduce surround events with full bandwidth. This control should be set high enough to give presence and airiness to the rear sound without placing distracting instrumental overtones or other sounds behind you. The settings also affect the side outputs.

PCM

SURROUNDS

THX Cinema

SURROUNDS selects the type of surround decoding used by the MC-1. **STEREOPHONIC** provides extraction of five channels of surround information from a standard 4-2-4 matrix-encoded soundtrack (Dolby Surround, Ultra*Stereo, etc.) The drama of this effect is dependent on the source material and is most noticeable with strong stereo music soundtracks. The **DECORRELATED** setting electronically alters the monaural surround channel to provide added spaciousness and envelopment.

PCM, AC-3, DTS

VOCAL ENHANCE

Music Logic.....
Logic 7.....
TV Matrix.....
Pro Logic.....
5.1 Logic 7.....
Dolby Digital.....
DTS Logic 7.....
DTS Film.....

VOCAL ENHANCE boosts vocals in the center channel. By targeting specific frequencies, it can boost only vocals, without raising the entire center channel level (which would alter the output balance achieved during calibration).
