

Diplomatic skills. You've got a director sitting next to you, you're in a recording booth, the composer's out there, the music is being recorded, and the director says "What the hell is this music that I'm hearing?" Well, what do you say to that? Good luck! You hope that it's a long music cue so it will give you time to think of how to respond. —Eric Reasoner, Music Editor

The two people assisting the composer on a daily basis are the orchestrator (see chapter 11) and the *music editor*. The music editor is often an under-recognized member of the production team. He must have excellent music skills, thorough knowledge of various advanced software programs (Auricle, Cue, Digital Performer, and Pro Tools are common), and be a cool, calm, and collected diplomat in the service of both the composer and the director. The music editor is responsible for making spotting notes from the spotting session, creating timing notes, and preparing the film or software for synchronization of the music with the final version of the film.

Music editor Eric Reasoner:

As a music editor, the more you know about music the better off you are. However, there are still a lot of music editors that have an instinctive sense—not that they studied music, but they really know and have quick instincts about cutting music. They are also good at dealing with pressure and handling a lot of different kinds of individuals, which is a big, big part of it.

In today's modern world of film making, most of the music editor's tasks are accomplished using computer software. However, there are still some physical tools and pieces of equipment that are used:

A *reel* is the carousel that the film is loaded onto when it goes through the camera during shooting and through a projector. Every reel used during production and post-production contains about 8 to 12 minutes of film, making about 10 to 14 reels for the average movie. However, when a film is delivered to the theater, every two reels are combined so that the theater receives 5 to 7 reels. The projectionist then makes *reel changes* at the appropriate points. At some of the more modern theaters, they can splice and load the film onto one giant reel, called a *platter*, which turns parallel to the floor, making reel changes unnecessary.

Magnetic sound film, also known as *mag film*, is film that is specially coated with a magnetic substance similar to audiotape. This is the kind of film that is used to record and edit sound to sync to picture. Film is used so that the music, dialogue, sound effects, and picture can run on similar machines, and the motors can be easily synchronized. *Mag film* is being used less and less as digital technology replaces it.

The *optical soundtrack* is the stripe on the edges of a finished film that contains the sound for the movie. Until recently, with the arrival of digital technology, this track was read by a light cell that converted the light-sensitive images into sound. Hence, it is called an optical sound-track. This technology has changed very little from the inception of sound films to the 1990s, and is still used in many theaters today as the digital technology that will replace it is still being implemented. (See Fig. 10.1. 35mm Composite)

SMPTE is the time code that enables different computers, synthesizers, and video machines to talk to each other and synchronize music to video, or music to music. The letters stand for "Society of Motion Picture and Television Engineers," which developed this time code in the sixties.

Temp Tracks

Often, the first real involvement the music editor has in a film is towards the middle of post-production. At this time, as the work-print of the film is solidified, the director asks the music editor to prepare a *temp track*. This is a temporary track of music laid into the work-print

35mm Composite



Fig. 10.1. 35mm Composite

of the film in order to give studio executives and test audiences an idea of what the film will be like once the final score is completed. Without any music at all, this work-print can be dry and lifeless, especially in action scenes. So the director gives the music editor some guidelines as to what kind of music to use (if not specific pieces), and the music editor snips and cuts these pieces to fit, not only dramatically, but also rhythmically and harmonically. In the old days, magnetic tape and film had to be spliced in order to accomplish this; today, Pro Tools or other digital audio software is employed. The music for the temp track can come from anywhere—from other soundtracks, from classical, pop, or jazz CDs—anything the music editor can find is fair game. No royalties need to be paid and no sync licenses agreed to because this temporary music will not be used in a version of the film that is shown to the public. It is only used in-house to show the producers, studio executives and test audiences to get their reaction.

Most contemporary films have temp tracks until the final scoring is completed. If one listens closely, often it can be discerned what the temp track was if the composer had to closely imitate it in order to please the director. For example, the temp track for *Titanic* was built from music recorded by the Irish singer Enya. Composer James Horner then had to adapt this kind of flowing, ethereal, New Age style to fit the action. Another good example is the temp track for *Star Wars*. This was Gustav Holst's 1917 classical piece *The Planets*. If the movie is a sequel, it's an easy call. For example, the temp track for *Lethal Weapon IV* was taken from *Lethal Weapon I*, *II*, and *III*. But no matter what the source of the temp track, music editors must work hard and long to edit a temp track to fit a picture, and they must have command of a huge selection of music from which to choose.

Music editors often use the term *tracking* to describe either the process of creating the temp-track, or to the task of laying-in preexisting music to a finished film. Tracking can refer to the process of creating the temp track for the work print, or to the use of preexisting music in the final version of the film. So, the use of music that is not written by the composer specifically for a scene, where it is taken from another source, is usually called tracking. Eric Reasoner discusses the process of creating temp tracks: It depends on the relationship between the director, picture editors, and you [the music editor]. You may set up a traditional spotting session where you look at the film and discuss ideas for the temp track. Or you may just screen the film on your own and then converse with the director about styles and things like that, and then just begin searching for music. Sometimes, you have a real wide creative range to pick music that's appropriate, and you can just go your own way.

On The Three Musketeers, when [music editor] Michael Ryan and I were tracking that film, we had a two or three hour meeting with Steve Herek, the director, where we looked at different parts of the film, talking about style. He had already laid up some music against some scenes as examples, and from that session Michael and I went back to the office and just started searching through tons and tons of existing scores, soundtracks, and CDs, picking out music that fit within those guidelines.

Spotting Notes

The music editor's next responsibility, after cutting the temp track, is usually to go to the spotting session, take spotting notes, and then prepare the timing notes. *Spotting notes* are a generalized description of where the music begins and ends for each cue. Spotting notes also contain any special instructions discussed between the composer and director for a certain cue like bringing in a theme at a certain point, or hitting a specific piece of action. From the more general spotting notes, the music editor then prepares timing notes, which are very detailed descriptions of each scene with corresponding timings. (See Fig. 10.2. Spotting Notes from *The Simpsons*.)

Composer Alf	PSONS #5F02 "In Clausen / Music Edit	ar: Chris Lodesma	r VIII ^{n -} Music Sp I	potting Notes Page 1 9/29/97
CUE #	<u>START</u>	<u>STOP</u>	<u>LENGTH</u>	DESCRIPTION
імі	01:00:35:17	01:01:04:03	:29	Main Title starts as sword appears; low, change on stabs; play thru title and couch gag to out
IM2	01:01 19:03	01:01:22:14	:03	Open Act 1 - Homega Man - Sci-Fi; tail under Brockman dia
M3	01:02:12 25	01:02:15:05	:02	Start on cut to military antique store; Homer goes to buy a bomb shelter; tail under next dia.
M4	01:02:40 11	01:02:44:25	:04	On cut to estab shot of Paris; musette; happy until settle on military compound, then dark on settle; tail under next dia.
IM5	01:02:59 09	01:03:07:28	:09	On cut to Eiffel Tower splitting open; launch missile; ominous and threatening; out on cut to outer space
IM6	01:03:11 08	01:03:23:00	:12	On EOL "What the hell was that?"; through snickering aliens; out on out to missile headed for earth
M7	01:03:24:17	01:03:42:10	:18	on cut to missile flying over Springfield; G.P. on comic book guy; resume on POV missile and out on explosion
1 M8	01:03:55:14	01-03: 59:00	-04	Spooky and creepy on overhead shot of car in traffic, out on cut to back of Homer head leaning out of car
M9	01-04-20:28	01:04:23:27	03	Sting the push-in on newspaper, out on cut to Homer
M10	01:04:27:13	01:04:46:21	19	Eerie as Bart ghost appears: thru entire family until Maggie and others are out of frame; then sed as Homer cries; out just before "No, no, no!"
IMII	01:05:02:20	01:0 5:05:02	02	On cut to estab movie theater, happy Homer; tail on cut to int.
IM12	01:05:23:25	01:05:35:12	12	<u>SOURCE</u> Homer sings along with a boom box; "War" CD master
IM13	01:05:38:19	01-05-40:10	02	Start on cam settle on mutants; scary/dark; out as Homer shrieks
M14	01-06-08-19	01:0 6.28:09	20	As Burns: "And now you must die"; dark and scary; then chase as they run after him; tail on cut to dead chauffeur; thru reveal of coffin and out
IMI5	01:06:35 13	01:07:03:13	38	On cut to ext. on car: Car chase: tail on cut to int. house on relieved Homer
1M16	01 07 09 27	01:07 10:14	01	Sting on push-in on mutants: out on cut to reverse angle on Homer
IM17	01 07 22 04	01:07:24:26	03	Start on cut to back of Homer going to hug kids; tail under the mutants: "Awww."
1M18	01:07:56:23	01-08:00:03	03	Sincere Marge as cam pushes in on her during her speech; out to clear "NOW!"

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Master Cue List

From these spotting notes the music editor creates a *master cue list*, or *music summary*—a list of all the cues and the corresponding places they appear in the film. Eventually, the composer gives every cue a verbal title, like "Billy Splits Quick," or "The Big Kiss." But at this stage, which is before the composer has begun writing, the music editor assigns every cue an alphanumerical designation, like "4M3," which indicates the reel and its location within that reel. The first number is the reel, "M" stands for music, and the last number is a sequential number indicating where that cue is placed in the reel. In this instance, 4M3 means the 4th reel, music cue number 3. Some reels might have several music cues, some might have none. But if a music editor sees 11M2, he knows that piece of music is the second cue in reel eleven.

Note that in television there are variations of this system. Because the shows are divided into "acts," instead of reels, the first number often corresponds to the act number. (An *act* is each segment of the show, divided by commercials.) So 3M2 means Act 3, music cue number 2. And sometimes, in television, the first number refers to the episode number for that particular season, and the second number is simply where the cue falls in the entire show. For example, 14M7 means the seventh cue in the fourteenth show of the year.

The master cue list shows every cue, assigns it an appropriate number, indicates how long it is, and gives the SMPTE time for when it begins. Cues are also called *starts*, meaning that the orchestra has to start a recording for each cue. It is often said, therefore, that the master cue list shows every start. (See Fig. 10.3. Master Cue Sheet from *The Simpsons*.)

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1m4	9.7	00:02	Conton Bleu	10	9	3	æ	8	8	8	3	•	2	F	Syn Syn	-	ð	-	-	đ
1m5	16 - 1	00:00	Rocket In The Pocket	10	0	-	E	8	٥	8		~	2	Ĥ	Sm Sm	-	•	ŀ	~	đ
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1 m8	13 - 2	00:08	A Disarming Discourse	10	0	9 1	AF.	8	R	æ	2	•	2	F	Syn Syn	-	ŀ	.	E.	E
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2m5	10.1	00:11	Oh Dog, A New Look	°		<u>.</u>	•	•	·	Ī	-	-			Syn Syn	-	•	•	~	8
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3m5	17.3	90:08	Which is Which	2		÷	ž	₽	0	æ			-	60	Syn Syn	-	•	·	₽‡	8
3m6		00:21	Bate Enterteinment	2		-	2	8	0	ð	•	~	2	4	Pro 8m	1	•	•	~	æ
3m7	12 - 4	00:00	Freme Spotting	-	•	Ļ	¥	ዋ		E			-	Η	- Sm	•	•	·	~	Ş
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3m 9	13 - 4	00:01	Crossed-Witch	·	-	Ę	æ	8	8	æ			_	æ	Pho Syn	-	•	ŀ	~	8
3m10	15 - 6	00:08	Thet's Owl, Folics	2	-	÷	·	•	0	,				٩	Pro Sm	-	·	•	~	8
3m11	16 - O	00:26	The Story Of Caramel Cod	-		-	•	8	σ	8	•	~	~	4	Pho 8m	-	•	•	~	Б
3m12	3m12	00:11	Which Witch is Which?	2		-	•	8	0	8	•	~	~	<u>م</u>	Pro Sm	-		·	2	z
3m13	8-2	04:00		·	+	÷	·	·	·	,	╉	+	╉	-	8 m 8 m	·	·	•		8
3m14	9-9	80:03	00:03 Gracie Logo	1	+	4	·	·	·	•	-	+	-	4	5	·	·		-	থ

Fig. 10.3. Master Cue Sheet and Orchestra Breakdown from The Simpsons.

Timing Notes

Once the master cue list is done, the music editor makes timing notes for every cue. *Timing notes* (also sometimes called *cue sheets*) are extremely detailed descriptions of every shot, every cut, and every line of dialogue in a scene, with timings to the hundredth of a second. The composer uses these notes to find exact moments to synchronize the music, and also to choose appropriate tempos for the cues. Timing notes are usually prepared on software such as Cue or any word-processing software. (See Fig. 10.4. Timing Notes from *Hearts on Fire*.)

The sequence of the music editor's tasks just described—creating temp tracks, attending the spotting session, music summary, and creating timing notes—are considered the traditional order of events. However, this sequence is changing in today's world as more and more composers begin to digitally sequence their scores by playing along to the video. For these composers, timing notes that describe every single visual event and line of dialogue are not necessary. More common in this situation would be an abbreviated form of timing notes, with a list of any sync points (see chapter 15) the composer wishes to make. A music summary will always be necessary to keep track of the many cues in a score, but it is important to understand that the music editor's job responsibilities change from composer to composer and from director to director.

Syncing and Recording

The next job for the music editor is assisting the composer in synchronizing the music to the film. He prepares click tracks and punches and streamers (see chapter 15, "Syncing the Music to Picture") for the recording session, and makes sure that the music and the picture—either video or film—are locked. Also, at the session, the music editor keeps a log for every take of each cue. If a cue needs to be moved either by a few frames or even by a few seconds, the music editor assists the composer in making the timing changes. This can involve changing tempos, moving bar-lines, or changing the placement of punches and streamers.

In addition, if after the recording session the director asks for significant changes in the music, or wants to place a cue originally

10/6/97 2:00 Pm O'Henry

Mon

Simpsons 5F02

Production: <u>HEARTS_ON_FIRE</u> Production #: <u>R#3_Ver.4</u> Episode: <u>Video_Date: 4/1/98</u> Cue: <u>3m2</u> "DOWNTOWN_CHASE"

Begins at c3:01:44:17 in Reel/Act 3

985. SMPTE #(29):	REL. TIME:		
			Cops FRANK, BILL and JOEY are leaving restaurant. FRANK sees 2 bad guys and:"Hey that's them, hold it!"
c3:01:44:17	0.00		MUSIC STARTS over CLOSE "SHOOTER" (1st bad guy) as he STARTS to RUN
c3:01:44:23	0.20	СИТ	CLOSE FRANK and JOEY thru window
c3:01:45:02	0.50		FRANK RUNS
c3:01:45:05	0.60	сит	CLOSE 2nd bad guy TURNS to RUN
c3:01:45:20	1.10		FRANK CROSSES in FG as bad guy runs away
c3:01:46:02	1.50	CUT	WIDE STREET as BAD GUYS RUN toward CAM
c3:01:47:16	2.97	сит	MED FRANK RUNS out Restaurant DOORWAY
c3:01:47:27	3.34		OS BILL:"Hey FRANK!"
c3:01:48:12	3.84	сит	MED WIDE STOREFRONT as FRANK RUNS and BILL follows
c3:01:4 9:09	4.74	CUT	MED CLOSE FRANK as CAM PANS and BILL:" <u>GET 'EM.</u> HE'S THE SHOOTER"
c3:01:50:22	6.17	CUT	WIDE STREET as bad guys run down sidewalk
c3:01:51:07	6.67		FRANK into view in BG
c3:01:52:25	8.27		SHOOTER STARTS TOWARD CAM behind VOLVO
63:01:53:15	8.94	CUT	LONG SHOT STREET as bad guys RUN ACROSS between cars
c3:01:54:24	10.24		FRANK and JOEY START ACROSS as tires SCREACH
c3:01:55:03	10.54	CUT	MED BAD GUYS as they weave thru cars
c3:01:56:02	11.51		CAR SCREACHES as SHOOTER DARTS RIGHT
c3:01:56:10	11.78	сит	WIDE STREET as FRANK and JOEY run thru cars
c3:01:56:28	12.38		FRANK JUMPS UP ON HOOD of car
c3:01:57:03	12.55	CUT	MED WIDE FRANK FLIPS OVER HOOD as Guys Run in FG
c3:01:57:20	13.11	CUT	MED FRANK lands on street as BILL appears in BG
			TOTAL TIME - 13.11

Fig. 10.4. Timing Notes from Hearts on Fire.

slated for an early reel into a later one, it will fall to the music editor to accomplish this task. Although this usually happens at the dubbing stage (see fig. 12.2), sometimes the music editor will move, edit, or rebuild a cue to have it ready for dubbing. This is a time when the music editor's job gets interesting and creative. Taking material meant for one scene and reworking it to fit another requires both technical and musical skill. In addition, this is where the music editor's diplomatic skills come in handy, because at this point he is answering to the director, who may or may not have the ability to communicate musically.

Eric Reasoner:

Changes occur [at the recording session], and they're subject to tastes of producers or directors—whoever's there running the show. It may be multiple people and that's also frustrating for the composer and any of us that are working to make it right. Basically, you're there to help fix problems. If you're in the booth and the composer's out on the stage, a lot of times you hear things said that would never be said if the composer was in the room, and that's a kind of a nerve-racking experience. So it's basically, figure out if there are problems and figure out what the problems are. If they're simple fixes, like subtracting elements of the music-something that the director doesn't like, you have to find out what they don't like. If it's a sound, a color, or a particular instrument, you can just get rid of it. If it's the whole cue, or how it's structured, then you're really in trouble. The composer will make the musical changes for the orchestra from the podium. But moving bars, and changing the form of the piece creates problems for the synchronization, which is the music editor's department. So you assist the composer by restructuring, whether it's in the computer program or whatever you used to line up the streamers or clicks.

Dubbing

Once the music is recorded, it is mixed to whatever format the film requires—stereo, stereo surround-sound, digital, etc. The music editor then prepares the cues for the final stage, the dubbing. *Dubbing* is

when the music, dialogue and sound effects are mixed together for the final version of the film, a process that for an average film takes two to four weeks at the dubbing studio, or dubbing stage.

Until recently, the music editor would prepare reels of mag film with the final music cues that corresponded to reels of picture. Every cue would be placed in order, and if there were a few seconds or minutes of picture in between music cues, the music editor would insert blank film to fill the gaps. The mag film would then run simultaneously with the picture, sound effects, and dialogue at the dubbing stage.

Today, most dubbing is done digitally. The music editor comes to the dubbing stage with a digital file of all the cues, and runs these digital files locked to picture, sound effects, and dialogue via SMPTE time code.

Dubbing happens in two stages. The first is called *pre-dubbing*. At about the same time that the music is being recorded and mixed, the dialogue engineers clean up the dialogue tracks and get them to sound strong and clear, independent of the sound effects and music. (Each voice and each component of a sound effect has its own separate audio "track" that can be controlled independently. Music usually has two to eight tracks depending on the format.) Concurrently, the sound-effects people are doing the same thing in their own studio. One of the reasons pre-dubbing is so important is because of the complexity of some of the tracks; sound effects alone can have over one hundred separate tracks!

When the sound effects, dialogue, and music are all ready (independent of each other), then it is time for the final dubbing sessions when they are all put together. The music editor attends these sessions and assists the dubbing engineers in placing the music at the proper spots. He also has input on the levels and eq of the music.

Also present at the dubbing are the director and sometimes the film editor. This is a critical process because the precise levels of music, dialogue, and sound effects must be found. If one is too loud or soft, it can be distracting or irritating. Also, depending on the format stereo, stereo surround, digital, etc.—the mix is more or less complex. The director has the final say during this process.

It is at the dubbing session where a composer's music is most likely to be moved around. A director might not really like the cue the way it was designed, and will try a different cue in place of the original. Again, this is his prerogative and it is one that many directors utilize. Many cues from the best composers have been moved around on the dubbing stage. In the movie Airplane, during the climactic crash-landing scene, Elmer Bernstein had written a cue with many stops and starts as the picture cut back and forth between the airport gate areas and the plane itself. This was because the humor was in the people waiting, who were running to successively higher gate numbers as the plane came in on its crazy course. Director Jim Abrahams apparently didn't like these stops and starts, so he had the music editor take a lowend ostinato from earlier in the cue and loop it-that is, they repeated the ostinato over and over so there was continuous music throughout the cue instead of the stops and starts Bernstein had written. Incidents like this are not unusual, and the music editor is the one who must accomplish such changes. (The composer does not often attend the dubbing sessions and at this point is usually out of the picture, his job having been completed.)

Eric Reasoner describes the process:

It's extremely tedious. You're going back and forth, back and forth, over the same area of sounds with a different focus each time, and if your area of sound isn't of concern at the moment, it's really tedious and you'd like to get out of that room. You may very well spend a 12- or 16-hour day mixing one reel of film that's a 10-minute segment of film. In action films, when they're really loud, you walk out of there and your ears are just completely fatigued. I can remember going home from the dubbing stage on Die Hard With A Vengeance after an action reel. I got up the next morning, and got in the car to go back to the dubbing stage. I started up the car and the radio came on with the volume up to 11. I was thinking, oh my god, I was listening at this volume last night when I drove home! It just kind of shows you what your ears and your body can do, shutting down after a bit.

Mark Isham tells how his music editor, Tom Carlson, works at the dubbing stage:

Tom understands the process very well, and he actually looks forward to being the knight in shining armor on the dubbing stage. He's got the patience. He knows how to hang with the guys—the mixers and the whole post-production crew. He's willing to put in those hours, and he's willing to wait until that tenth hour and say, "Can I hear it once with the music up?" And when the director says, "No," he'll just say, "Look, you're missing a chance to be more emotional." He fights the good fight and knows how to do it.

Once the dubbing is completed, there is one more task for the music editor: preparing a finalized list of all the music in the film. This is called a *music clearance sheet*, or *cue sheet*. (Note: cue sheet is a term that has several different uses. Some composers refer to timing notes as cue sheets.) This list is submitted to the appropriate organizations for licensing the music so that royalties can be paid. (Fig. 10.5. Music Cue Sheet from *Die Hard with a Vengeance*.)

After the music clearance list is prepared, the music editor's job is finished. As you have seen, the music editor performs an interesting, important, and unheralded role in the making of a film. In addition, although his musical allegiance and bond may be to the composer, ultimately the music editor answers to the director. An ability to work quickly and accurately under pressure, and also to work with grace under people who are not always kind or gracious, is a must. But the role of music editor is an exciting one that is also crucial to the successful completion of the score and the film itself.



TWENTIETH CENTURY FOX FILM CORPORATION

Music Cue Sheet

(Revised July 1998)

PAGE 1

	HARD WITH A VENGEANCE	
RELEASE DATE:	<u>MAY 1995</u>	 WORLDWIDE RIGHTS
1MA COMPOSITION: COMPOSER: ALFI PUBLISHER:	TWENTIETH CENTURY FOX TRADEMARK RED NEWMAN T C F Music Publishing, Inc. (ASCAP)	:21 INSTR BACKGROUND
1MB COMPOSITION: COMPOSER: JER PUBLISHER:		20 INSTR BACKGROUND
1MC COMPOSITION: COMPOSER: STE PUBLISHER:	SUMMER IN THE CITY VE BOONE/MARK SEBASTIAN/JOHN SEBASTIAN TRIO MUSIC CO. INC./ ALLEY MUSIC, INC. (BMI)	:49 VOCAL BACKGROUND
1M1 COMPOSITION: COMPOSER: MIC PUBLISHER:	SIMON SAYS FIND MCCLANE HAEL KAMEN FOX FILM MUSIC CORP. (BMI)	1:21 INSTR BACKGROUND
1MD COMPOSITION: COMPOSER: MAR PUBLISHER:		:14 INSTR BACKGROUND
1ME Composition: Composer: tee Publisher:	GOT IT GOIN ON 9 SILBERT/RICHARD BAKER 9 SILBERT MUSIC/HIC-TOWN UNDERGROUND/(ASCAP)	:38 VOCAL BACKGROUND
1MF Composition: Composer: D. L Publisher:	THE FAT OUTRO .EE/J. OWENS ZOMBA SONGS INC./BACK SLIDING MUSIC/ EIGHTY-SECOND SONGS (BMI)	:38 VOCAL BACKGROUND
2MA Composition: Composer: Ma Publisher:		:13 INSTR BACKGROUND
2MB Composition: Composer: th Publisher:	OFF MINOR ELONIOUS MONK EMBASSY MUSIC CORP. (BMI)	1:29 INSTR BACKGROUND

Fig. 10.5. Music Cue Sheet from Die Hard with a Vengeance. Used by Permission