Page	loc	Sound		
I-1-4	3.1	Distant church bells strike 4 AM		
I-1-5	3.2	smack		
I-1-8		whistle four times (imitation) (live)		
I-1-10	3.4	1920's vintage laundry truck arrives, horn beeps		
I-2-13	3.5	street sounds of New York City in December 1933		
I-2-13	3.6	barking street dogs, already caught		
I-3-16	4.1	police siren, vintage 1933 New York		
I-4-22	4.2	Orphan barfing, cue is Tessie about to exit		
I-4-24	4.4	announcer when radio is turned on: Ma Perkins		
I-4-24		Knock (live)		
I-4-25		radio off		
I-4-26		Knock (live)		
I-4-29	4.6	horn, car drives away, cue is music starts		
I-5-38	4.7	1933 telephone rings		
I-5-39	5.1	street sounds of New York City in December 1933		
	Fade	Duck under Warbucks' speech, then out before song starts		
I-6-43	5.2	window slams open (loudest sound)		
I-6-43	5.1	Street sounds, cue is Usherette's speech		
I-6-43	5.3	Carriage, as Warbucks enters with park bench		
I-7-44	5.4	singing Jello commercial		
I-7-44	Follow	announcer, Helen Trent theme		
I-7-44		radio off		
		intermission		
II-1-1		soundman holds applause sign		
II-1-2		applause sign again		
II-1-2		Stage hand opens Miss Hannigan's door		
II-1-2		Sound of man walking into studio, done by soundman		
II-1-2		applause sign again		
II-1-3		soundman hands script to Warbucks		
II-1-3		applause sign again		

Page	loc	Sound		
II-1-4		soundman cues orchestra		
II-1-5		six bars of tap dance: soundman holds microphone to floor for dancer.		
II-3-10	6.1	radio news		
II-3-11		radio off		

The Broadway CD

Loc	cut	page	title
1.1	1	I-1-1	Overture
1.2	2	I-1-3	Maybe
1.3	3	I-1-7	It's the Hard-Knock Life
1.4	4	I-2-14	Tomorrow
1.5	5	I-3-17	We'd Like to Thank You Herbert Hoover
1.6	6	I-4-23	Little Girls
1.7	7	I-5-31	I Think I'm Gonna Like It Here
1.8	8	I-6-40	N. Y. C.
2.1	9	I-7-47	Easy Street
2.2	10	I-8-54	You Won't Be an Orphan for Long
2.3	11	II-1-4	You're Never Fully Dressed Without a Smile
2.4	12	II-3-14	Tomorrow (Reprise)
2.5	13	II-4-20	Something Was Missing
2.6	14	II-5-23	I Don't Need Anything but You
2.7	15	II-5-25	Annie
2.8	16	II-6-39	A New Deal for Christmas

There are some additional cuts on the CD from the 1972 backer's audition.

Microphones: First priority for microphones goes to people who must sing solo over the orchestra, second to those whose voices are too weak to fill the hall even when they are speaking without interference. Annie, Warbucks, Grace, Molly and July need microphones in both Act I and Act II. Also in Act I Miss Hannigan, Pepper, Kate, Fred, Sophie, Star-to-be, Rooster and Ira need microphones. Also in Act II the three Boylan sisters, Tessie, Ickes, Roosevelt, Healy and Drake need microphones. We can tie the wireless microphones to the 1933 microphone mockups in the radio station. The Boylan

sisters are always near one of these microphones when they sing, as is Bert Healy. There is an occasional spoken line from a servant while the music is playing, but they are close to Annie, Warbucks or Grace when they deliver the line, so we will be able to pick it up. Ira delivers his one line close to Sophie. Wacky has a weak voice, as does Rooster when he is playing Mudge. Jim has promised to play the underscore softly so we don't have to mike the whole cast. The main mixing board is limited to 16 inputs, and there are 16 working channels in the snake. We consume one of those channels for the keyboard, and two more for the pit microphone, Jim's rehearsal microphone and the bass, leaving 13 for microphones. I tried to avoid changing microphones except during intermission, but that left too many people unmiked, so at Tom's request there are microphone swaps during Act I and Act II as well as during intermission.

As of March 30, 2004, the microphone assignments are as follows:

Microphone	Used by	snake
1	Annie	15
2	Warbucks	14
3	Grace	16
4	Molly	18
5	July	17
6	Miss Hannigan	6
7	Pepper / Radio microphone center / Ickes	7
8	Kate / Radio microphone right	8
9	Fred / Lilly	5
10	Sophie / Tessie	10
11	Star-to-be / Radio microphone left Roosevelt	1
12	Rooster	12
13	Drake / Radio microphone Wacky / Drake	3

The microphone swapping schedule is as follows:

Time	Swap
Act I scene 4	9 from Fred to Lilly
Intermission	7 from Pepper to Radio microphone left
	8 from Kate to Radio microphone right
	10 from Sophie to Tessie

Time	Swap
	11 from Star-to-Be to Radio microphone left
	13 from Drake to Radio microphone Wacky
Act II scene 2	7 from Radio microphone center to Ickes
	11 from Radio microphone left to Roosevelt
Act II scene 3	13 from Radio microphone Wacky to Drake

The mixer wiring is as follows: Microphones 1 to 13 are on inputs 1 to 13. Inputs 14 and 15 are from the small mixer in the pit. Input 16 is from the keyboard in the pit. Stereo aux return 1 is the Roland VS-1680, used for sound effects. Tape In is the CD player in the rack, used for music while the audience is entering. The pit mixer has a stereo microphone on inputs 1 and 2 for picking up the acoustic instruments. Input 3 is the music director's rehearsal microphone. Input 6 is from the bass.

I built the church bells from a synthesized bell and the tune played by Big Ben, transposed up and faster. Acknowledgment to Bill Hibbert, Great Bookham, Surrey. The laundry truck is constructed from a Ford Model T engine with pitch bent to slow it to a stop. The New York City street sounds are actually from Munich.

I recorded David White as the news commentator for II-3-10. I recorded some thermal noise by listening to an amplifier turned up, then filtered both the voice and the noise through a one kilohertz notch filter to simulate 1933 radio reception. The noise starts out soft but then cross-fades with the voice at the point where the radio is supposed to be shut off. I had David record a few extra seconds of voice in case there is a problem turning off the radio. The original of David's voice is at loc 8.1.

I took the window opening from Opens and Closes.

Tom asked me to put together about half an hour of period music. I will use the Bix & Bing CD, since it is period and contains a nice mix of songs.

On January 29, 2004, I recorded Bob Shaumann as the radio announcer for Helen Trent and Ma Perkins. The script calls for the Helen Trent theme music, but that music is not in the score. I learned that Helen Trent was a real radio show that ran from October 30, 1933 to June 24, 1960. The theme music is called Juanita, but I found a copy of a broadcast on the Internet, so I will use that instead of Bob Shaumann's voice, since it includes the theme music. I also found the Ma Perkins show, and I will use it also, since its theme music is inseparable from the narration. Acknowledgment to Frank and Anne Hummert for "Ma Perkins" and "The Romance of Helen Trent."

On February 12, 2004, I recorded Bob Schaumann as the newscaster, since Tom wants his voice in the show. Dave White is in the scene that is led off by the newscaster, so it is better to use a different voice. I processed Bob's voice the same way I did Dave's except I used a low-pass filter at 1 KHz. I retained Dave's rendition at loc 6.6, and Bob's original is at loc 8.4.

Oliver Warbucks will get only his own section of the script for Act II scene 1.

The score has no music for the singing commercial at I-7-44 so I asked Sandra Ierardi to put something together for me. On March 14, 2004, I recorded the Ierardi family for the Jello commercial at Act 1 scene 7. Thanks to Alexis, Ryan, Sandra and Peter Ierardi. The Ierardi's needed seven takes to get a recording that they liked. The originals are at loc 7.1 to 7.7. I filtered the recording to eliminate the high frequencies, as I did for the newscaster at II-3-10, and then added radio hum from the beginning of the recording of The Romance of Helen Trent. I combined it with the Helen Trent recording to make a single sound effect which starts with the Jello commercial and then cross-fades into the Helen Trent introduction. The hum sounded so good that I went back and re-did the newscaster using the hum instead of thermal noise, but keeping the thermal noise when the signal fades out. I saved the previous newscaster at loc 6.8 in case Tom likes it better.

During the March 21, 2004, rehearsal Tom told me he thought the limousine at I-4-29 sounded like a truck. I went back to a 1998 field recording I had made of Rita Harden's station wagon for "I'll Be Back Before Midnight" and used a take of her car departing that we hadn't used in the production of Midnight. I combined it with an auto horn. I saved the previous sound at loc 8.6. Tom first heard the new limousine during the March 23, 2004, rehearsal, and wanted the horn softer. I decreased the horn and saved the previous sound at loc 8.7.

While researching the appearance of an upper-class 1933 telephone instrument on the Internet, I came across the sound of a 200-series telephone. The quality was poor, but I did some noise gating and substitution of the ringout, and got a respectable sound. I used it for the telephone ring at I-5-38, with the old one saved at loc 8.5.