

A LIGHTING DESIGN FOR
THE THREEPENNY OPERA

by

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CHAPTER I

INTRODUCTION

The Department of Theatre and Dance at Texas Tech University allows for a production thesis in lighting design. This thesis's purpose is to demonstrate a theoretical and practical knowledge of theatre and lighting design. This policy is based on The National Association of Schools of Theatre's requirement for a Masters of Fine Arts degree listed in their handbook that states

The M.F.A. candidate should be required to present a final project showing professional competence in a specific area of work. While such presentation may be supported by a written document, such a document (except for programs in playwriting) in itself may not be considered the final project. (National Association of Schools of Theatre 75)

This thesis will serve as a report of the Texas Tech University's production of *The Threepenny Opera*. The demonstration of the development and execution of the lighting design process of this specific production is the purpose of this document. Although research plays a role in the design process, this thesis is not a demonstration of scholarly research skills as required by some programs. It is, more accurately, an illustration of the design process.

This thesis is to record the lighting design process for Bertolt Brecht's *The Threepenny Opera* which was produced by Texas Tech University on November nineteenth through twenty-second, 1998. The location was on the University Theatre Mainstage, Lubbock, Texas. The production staff was as follows: directed by Jonathan Marks, scenic design by Frederik B. Christoffel, costume design by Elizabeth A. Pollard, choreography by Diana Moore, musical direction and sound design by Steve Paxton, and lighting design by Todd Proffitt.

To define the lighting design process, the purpose of lighting must first be discussed and many term these as the functions or objectives of stage lighting. Richard Pilbrow divides lighting design up into five distinct categories, “selective visibility, reevaluation of form, composition, mood, and information.”¹ To define the lighting design process J. Michael Gillette in *Designing With Light an Introduction to Stage Lighting Design* suggests the steps of the lighting design process are commitment, analysis, research, incubation, selection, implementation, and evaluation. This process not only works for lighting design but also any creative endeavor.

The first and most important objective of the lighting designer is selected visibility. Pilbrow suggests “The cardinal rule is: each member of the audience must be able to see clearly and correctly those things that he is intended to see. Those parts of the stage which his attention should be drawn can be less brightly lit or left in complete darkness” (Pilbrow 7). Selected visibility also includes what Richard Palmer, in his book *The Lighting Art the Aesthetics of Stage Lighting Design*, defines as focusing attention. He defines it as “Determining the relative attention-getting value of elements in the visual field” (Palmer 6). The second function, revelation of form, can be defined as “to make an object appear naturally in three dimensions” (Pilbrow 8). Palmer describes it as “The arrangement of light to give size and shape to the performance area and to enhance or alter the apparent form of scenery, objects, and actors”(Palmer 5). A third objective of stage lighting is to provide information. This information consists of time, space and style. This is a newer objective and Pilbrow explains:

Theatre today, perhaps influenced by the speedier world in which we live, tends often to speak in shorthand. Plays no longer observe the Grecian unities of time and space; scenes jump through place and period as rapidly as the imagination of the playwright will allow. Lighting can support this

¹ Pilbrow explains this on page 2 of his book *Stage Lighting Design The Art, The Craft, The Life*.

fluidity by rapidly conveying to the spectator a sense of time and place.
(Pilbrow 9)

Theatrical style is another type of information that is conveyed to the audience. Palmer states: “To some extent every production has its characteristic style, and the lighting should be adapted to that particular production” (Palmer 7). Mood is described by Palmer as “Using light to stimulate a specific emotional response by the viewer” (Palmer 8). Mood is finding a moment in a play and reinforcing, the emotion, the text, the performers, and other visual elements. The final objective is creating a composition. Composition is defined as “the arrangement of light to create an over all visual design” (Palmer 6). Composing with light includes coloring the stage picture, establishing rhythm and shaping the stage space. Composition supports all the other functions and makes each possible.

All the objectives of stage lighting can interconnect and influence each other. By successfully accomplishing all the objectives and staying consistent with the script, an appropriate and competent lighting design can be achieved. It has been established that the need for lighting is to produce selected visibility, reveal form, provide information, create mood, and create a composition. Now the design process must be determined. As stated above, Gillette breaks this process up into seven distinct steps: commitment, analysis, research, incubation, selection, implementation, and evaluation.

Commitment is the first and most important of the processes of design. Gillette states: “If you wholeheartedly commit your energies to an assignment you are promising yourself that you will do the best work you can possibly do” (Gillette 148). Commitment involves a mental as well as physical commitment to the project. Once committed to the project the analysis can begin.

Analysis is divided into two objectives: (1) gathering information that will help clarify and refine the definition of the challenge you are facing and (2) identifying areas that will require further research. Many questions must be answered during this analysis. What

is the play is about and who wrote it? Where and who is producing the production? At this time production schedules must be looked at to determine deadlines and potential problems that may be involved in the schedule. It is also the time to find out where research is needed. So, if a fire effect is needed on stage, research into fire effects would be appropriate. After the questions of challenge are looked at then a formalist approach must be taken to analyze the script. A formalist approach is defined by James Thomas, in *Script Analysis for Actors, Directors, and Designers*, as “the search for the playable dramatic values” (Thomas 1). Often the early production meeting will help establish a direction to ask questions and guide research. Once the initial questions are asked they need to be answered through research. The research will then bring up a new set of questions for analysis and the cycle continues.

Research is also divided into two types: historical research and conceptual research. Historical research should include reading about the historical area the play was written in and is set in. Research should also look at past productions of the show, in particular the first production. Often, comparing productions can lead to insight to the script particularly productions where the playwright was involved. Information on the playwright needs to be explored, such as background and beliefs because often his or her opinions will strongly influence a play they have written. It will be easier to find elements to emphasize with the lighting, by getting a better understanding of the play’s roots. One goal of theatre artists is to get the ideas and themes of a play across to the audience. Often the external surroundings of the playwright effect the themes.

Conceptual research is research that help support or define concepts the production team wants to bring out in the production. Sketches or images that evoke feelings or responses that the team wants the audience to feel are useful types of research. Often these images contain a picture that has a quality of light that is desired for the current production. Often sketches or models are used in the early stages of the production to show basic ideas

that can or need to be expanded upon. Once all the research is completed the next step incubation.

Incubation is the second most important step in this process. It can be defined simply as getting away from the project to allow the subconscious to develop ideas. Incubation provides you with time let ideas hatch. During this period you should basically forget about the project. your subconscious mind will use the time to sort through the information you've gathered in the previous steps. During the incubation period new ideas will come to the fore front when the designer least expects it. After incubation it is time to take these ideas and start the selection process.

Selection consists of making choices based on the ideas discovered in the analysis and incubation phases. It is at this point in which the designer submits sketches of ideas to other members of the design team. It is at this point that the designer makes some broad decision on color, angle, intensity, and movement. General decisions get more specific until it is time to draw up the light plot. Once the light plot is drawn the implementation period begins.

Implementation is enacting all the decisions or choices made in the previous step. It starts with organizing the light plot into paper work and then the information is given to the electric's staff for execution. The light plot is hung and focused, then the light cues are written into the control board. The technical rehearsals are used to refine the lighting cues until the opening of the show. After the show it is time to evaluate the process.

Evaluation includes outside critiques and personal critiques. The outside critiques should come from peers and mentors. Evaluation should be an examination of the methods and materials used to reach the final design goal. It is important to look at what worked as well as what did not work. This information then is used to improve future productions.

This process, in theory, is a very linear process, but in reality processes intertwine and often come out of order. The early stages of production meetings may be far apart and

much of the incubation may come between them. To accurately record the lighting design for *The Threepenny Opera* it is necessary to record not only what the audience perceived but how the final choices made it to the stage. This process of choices will be described in the next three chapters and the final product will be shown through the light plot, paperwork, sketches and production photos in the appendices.

This chapter discussed the reasons for lighting design and the design process. Chapter II will discuss some of the preliminary research on the playwright, Bertolt Brecht, and some of his influences on theatre. It will also discuss the original production of *The Threepenny Opera*. Chapter III will discuss the preliminary phase including analysis, conceptual research, and the early production meetings. Chapter IV will then discuss choices or selections made by the lighting designer then how they were implemented. Evaluation from the collaborators and outside critics will be discussed in Chapter V.

CHAPTER II

BRECHT AND *THE THREEPENNY OPERA*

The first process of a theatrical production is the play must be written. To discuss the processes of *The Threepenny Opera* the play must be examined and the playwright must be examined. There is much controversy on who actually wrote this musical. Chapter Two will examine first the life of Bertolt Brecht and then examine his theories about theatre. The later half of the chapter will discuss the original production of *The Threepenny Opera*.

Brecht was born February 10, 1898 in Augsburg, Germany and lived there until 1924. He studied medicine in Munich and in 1918 served in an army hospital during the first World War. The war ended his medical career and began an intense political consciousness. Shortly after the war he took part in an unsuccessful revolution in his native land of Bavaria. This experience became the basis for his first successful play, *Drums in the Night*, written in 1922. It was at this time he became the Dramaturg for the Munich Kammerspiele theatre. Here he wrote and adapted plays such as *In the Jungle of the Cities* and an adaptation of Marlow's *Edward II*. In 1924 he moved to Berlin where he began to gain notoriety.

In Berlin he worked briefly with directors Max Reinhardt and Erwin Piscator and began developing relationships with such collaborators as Kurt Weill. He first collaborated with Weill on *The Rise and Fall of the City of Mahogany* in 1927. It was during this time he began to experiment with his new idea of epic theatre and at the same time became a Marxist. It was from Piscator he learned the use of posters, projections, stylized sets, motion pictures and lighting effects to express the themes of his plays. His first experiment with his new theories came in 1926 with his production of *Man is Man* which gained him his first critical success. During this period in Berlin he reunited with Weill for his most popular play of this period *Dreigreschenoper* or *The Threepenny Opera*, which was an

adaptation of John Gay's *The Beggars Opera*. He was also known in Berlin for such plays as *Happy End* (1927), *He Who Says Yes* (1929), *The Measures Taken* (1929), *St. Joan of the Stockyards* (1932) and *The Seven Deadly Sins/ He Who Says No* (1933). In 1932 Brecht was placed on the Nazi Party's list of decadent writers and, when Hitler came to power in 1933, he was forced into exile to Scandinavia.

He moved from place to place across Europe with his wife Helene Weigel and their children. They moved as the political climate changed in Europe and as World War II spread across the continent. In 1941 he obtained a visa to come to the United States. During his exile he wrote many of his best known plays. In 1939 he wrote *Mother Courage and Her Children* and in 1943 *The Good Woman of Setzuan*. While in the United States he met Charles Laughton and they collaborated on *Galileo*, a piece that Brecht wrote and rewrote from 1938 to 1954. *The Caucasian Chalk Circle*, one of Brecht's most famous plays, was written during his exile from Germany in 1945. In 1947 Brecht was summoned in front of the House Committee on un-American Activities and shortly after fled the United States back to Europe.

He stayed in Zurich until 1949 when he went to help stage a version of *Mother Courage and Her Children* starring his wife as the title role, in Berlin. It was staged at Reinhardt's old Deutches Theatre in the Soviet sector of Berlin. Shortly after this production he set up the Berliner Ensemble in East Berlin. He spent most of his time working with the group until his death from a heart attack in 1956.

Brecht contributed greatly to modern theatre and he created his own form of drama which he called "epic theatre." Epic Theatre is described by Dr. Norman A. Bert in his book *Theatre Alive*. He comments:

Brecht called his type of drama "epic theatre" to accent its loose, narrative style structure and to set it apart from conventional dramatic "Aristotelian" theatre. He said epic aimed to apply scientific method to the problem of human oppression, to reveal people's motivations and to show that since societal structures are man made, they can be changed by people. (Bert 504)

The main goal is to appeal to reason rather than emotion. To do this Brecht used an episodic structure so not to allow the audience to get too wrapped up or emotionally evolved in the story. The effect to keep the audience from getting emotionally evolved is known as the alienation effect or A-effect. This effect allows the audience to free itself from what Brecht termed, in *A Short Organum For The Theatre* as sociality-conditioned phenomena. Also by taking away the emotional attachment and societal prejudices Brecht hoped to create an audience that was intelligent and informed. In John Willett's translation of Brecht's *A Short Organum for the Theatre* Brecht makes this comment:

As we cannot invite the audience to fling itself into the story as if it were a river and let itself be carried vaguely hither and thither, the individual episodes have to be knotted together in such a way that the knots are easily noticed. The episodes must not succeed one another indistinguishably but must give us a chance to interpose our judgment. (Willett 201)

Brecht proposed to show the “knots” that tie the episodes together and create the alienation of the audience. He proposed the actors not get emotionally attached to the character which helped keep the audience from getting emotionally evolved. He also proposed choreography could alienate by using elegant movement and graceful groupings. Brecht liked to use projections and film clips to break up the episodes. Titles were projected on screens to start episodes and give necessary information needed to the play. In between each episode he used poetry, songs and music to help break up the episodes and to help emphasize some major themes of his plays. Brecht used staging techniques to achieve an alienation of the audience. He suggested that a set designer be free to give hints of historical or social conditions and not be tied to realistic or naturalistic representations. Exposing the actors before an entrance and exposed lighting were two other methods used by Brecht to alienate his audience. He wanted influence the audience to bring change to society and he felt he could inform the audience could bring about this change Brecht wrote his plays to take full advantage of these techniques and many of these ideas were incorporated into the original production of the *The Threepenny Opera*.

The Threepenny Opera is one of Brecht's most popular plays and some controversy and intrigue surrounds the original production. It all began when Elisabeth Haumpton, Brecht's secretary and collaborator, saw a London production of John Gay's *The Beggar's Opera*. Soon after the production she ordered a script and began to translate it for Brecht. Brecht liked what he read but was busy with several other projects. In early 1928 Brecht was at one of his usual eating establishments when he was approached by Ernst-Josef Aufricht. Aufricht was an actor who had decided to become a producer with ten thousand dollars his father had given him. He rented the Schiffbauerdamm Theatre and was looking for a new play to open the theatre. Brecht had several suggestions but Aufricht was not particularly interested until he mentioned this new play he had written a few scenes for. After reading what Brecht had written Aufricht decided to produce the play. He hired Erich Engel to direct and Caspar Neher as the stage designer. Neher was a school mate of Brecht and designed several of his productions over the years. Brecht had asked that Kurt Weill compose the music and Aufricht agreed but still hired another person to rework Gay's original music.

Once everyone was hired for the project the script needed to be finished. In early June Weill, Brecht and their wives went to the French River to finish the project. Brecht's wife, Helene Weigel, and Weill's wife, Lotta Lenya, studied their lines while the rest of the script was being written. In the beginning of August rehearsals started and that is where the trouble began. It began when Carola Neher was forced to leave the production to be with her dying husband. She was replaced by Roma Bahn. Peter Lorre was signed to play Peachum but backed out of the project. Rosa Valletti, a popular cabaret singer, was hired to play Mrs. Peachum but she refused to sing some of the lyrics. She signed a contract for another show thinking she would be let out of this project but to her dismay she remained in the role. Helene Weigel was stricken with an appendicitis and was replaced. Harold Paulsen decided that a song needed to be added in the very beginning about his character,

Macheath. He decided this only a few nights before opening so Brecht and Weill came up with “Mack the Knife” and it was not given to Paulsen but one of the beggars. Engal and Aufrecht tried to persuade Weill to cut the finale but he refused. Lenya’s song “Solomon Song” was cut due to the length of the production. Rumors spread across Berlin of the problems of the show. It opened to a house of curious patrons on August 31, 1928. The show was a financial success and was well received by the Berlin Audiences.

Since the opening of *The Threepenny Opera* it has been produced world wide and remains one of Brecht’s most popular plays. Looking at the playwright and the original production adds insight to the script. In bringing this text to light, this knowledge did add to the overall production. Due to the plays strong Communist themes it is important to learn that Brecht was not only a communist but was a part of a revolution in his native Bavaria. If it was not discovered these themes my be looked over and not recognized.

CHAPTER III

PRELIMINARY PHASE

The preliminary phase consists of three sections: commitment, analysis and research. Commitment according to Gillette comes in two forms: a commitment to one's self to do the best possible and a commitment to the project. Both are achieved once the production assignments are announced. At Texas Tech University the Director of Theatre, upon the recommendation Head of Design, ultimately are responsible for these assignments. Analysis is simply taking a closer look at the script and how it is related to the production. Historical research is covered in chapter 2 in this document. Conceptual research is research that helps set the production style of the production at hand. After committing to the process the script needs to be read and music needs to be listened to. Once the script is read several times analysis can begin.

Analysis is the next step in the design process. The approach taken by the lighting designer for this production is a formalist approach. James Thomas in *Script Analysis for Actors, Directors, and Designers* describes formal analysis as:

The search for the playable dramatic values that reveal a central unifying pattern that informs or shapes a play from the inside and coordinates all of its parts. Playable dramatic values are those features that energize actors, directors and designers in their work. To accomplish this goal, formalist analysis uses a traditional system of classifications to break up a play into its parts understand their nature and relationship. (Thomas 1)

This classical approach Thomas talks about is the Aristotelian approach and in his Poetics. Aristotle divided tragedy into six parts: plot, character, thought, diction, music, and spectacle.

Plot is described by Aristotle as being the most important of the elements of drama. An action statement gives the action for the play condensed into one or two sentences. An action statement for this play is: "Macheath receives a new life with a title, house, and

pension after begging for forgiveness.” Summarizing the play into a single statement allows the lighting designer to see the major change from the beginning of the play to the end of the play and this change could be emphasized by the lighting for *The Threepenny Opera*. Macheath, out of all the characters, makes the most significant change from the original balance. The form of this play most closely resembles melodrama. It has a double plot with the reversal coming at the end when Macheath is freed by the messenger and not hanged. Brecht’s play uses music to underscore some scenes, which is uncommon for melodrama. *The Threepenny Opera* does not stay true to the stock types of melodrama as Mac is not a true hero and Polly or Lucy are not pure heroines. On the surface the play has the same purpose of melodrama, which is to assure ourselves of a happy ending, but Brecht made it a point to undercut this in the “Third Threepenny Finale” when he discusses that real life usually endings are sad.

Often clichés are dominate melodrama and there was a major opportunity in *The Threepenny Opera* to emphasize these clichés. The plot is organized in a cause and effect method. The scenes in *The Threepenny Opera* are dependent on the scene before and if deleted the scenes would not make sense. Mac must marry Polly so that Peachum will get angry and try to have Macheath arrested and so on. It has some similarities to a rhetoric plot structure, which means it has a definite conclusion at the end of each act that drives a point or theme home but there is no clear cut definition of a problem in the beginning of the play.

An element of plot is the story and the story starts with a balance of the action. The balance begins with Peachum taking advantage of the poor and Macheath taking advantage of his thieves. Peachum gets new recruits and Macheath’s gang continue to steal. Peachum’s family helps in his business and Macheath is free from prosecution because of his friendship with Tiger Brown. The major upset or disturbance to this balance is Macheath’s marriage to Polly, Mr. Peachum’s daughter. Upset, the Peachum’s attempt to

get Macheath arrested so freedom is in jeopardy. The protagonist is the person most upset by the consequences of the disturbance and Macheath is the most upset by the disturbance. His freedom and life are most in danger. Macheath plans to hide out until everything blows over or he bribes his way out of trouble. An obstacle occurs at the Peachum's attempt to punish Macheath for marrying their daughter. Greed would be a major non-human obstacle. Tiger Brown wants to keep his job as sheriff and tries to capture Macheath but Jenny, the prostitute, turns him in twice for money. Most melodrama's have a complication and a good example is Macheath's final capture is what most drastically changes the action. Up to this point it appears he will avoid punishment. Polly and Lucy's struggle for Macheath is a secondary story line but not resolved to the magnitude of the main story. Peachum's statement to the audience that the play will have a happy ending is the point in which the outcome is certain, which constitutes the climax. The new balance or resolution occurs as the messenger brings the news that Macheath will receive a title, house, and pension from the Queen.

The next element after the plot is character. The character that needed the most analysis was Macheath because he is the protagonist. Who is Macheath? A thief, murderer, or a rapist but he is by no means average. In act one Mrs. Peachum described him as wearing kid gloves, spats, and a cane. He is a thief that does not get his hands dirty and has no fear of being caught. He is very sly and resourceful while remaining proud because the sheriff of London, Tiger Brown who is a friend and old army buddy. Even captured he knows he can bribe the guard to have no hand cuffs which gives him the opportunity to escape. Another example of his pride occurs when he chooses to hide out in the whore house when most people believed that would be too obvious. The fact that he was able to charm Polly and Lucy while being able to keep them apart for so long was a great sense of pride for him. It is this great pride that leads to his down fall at the end and his reason to ask forgiveness. In some ways he falls like a great tragic character but it is not a tragedy because in the end he

attains money and a title from the Queen. Another aspect of his character is his role as a raisinour, or some one who reveals the playwrights thoughts. Brecht used the main characters to get his message across to the audience not just Macheath. At these points in the play Brecht wanted to see the actor on stage rather than the character of Macheath.

Another way to look at Macheath is to look at the qualities of a good character. To be a good character Macheath must: be volitional or cause the play to progress, have stature, interact with other characters, have charm, be believable, be attractive, and he must have clarity or it is easy to see what he wants. He is volitional by trying to get money and women and staying out of jail. Polly, Lucy, Jenny, Tiger and the gang all look up to him, which gives him stature. Interaction comes easy for this character because his pride won't let him stay away from the action. His charm makes him the most attractive to almost everyone in the play. He is believable because this character not only works in the play but is found in real life. It is easy to see that he wants wealth and women, which gives clarity, which means his purpose is clear.

Thought or idea, the next element, directly influences both the plot and characters of a play. *The Threepenny Opera* tends to be combination of idea based and entertainment based. The very powerful songs enforce the playwright's views. Every song makes some sort of point and most do not further the action of the play. Yet it is not totally idea based because without the songs you would have a very cause and effect mimetic play. Several themes are presented in *The Threepenny Opera*. The first, once humans reach a certain point of despair they need to resort to un-human acts to survive. Second, when a capitalistic society is allowed to operate greed dominates.

All the central characters in some way or another let greed affect their decisions. Last, happy endings are rare in real life so be thankful for what you have. Brecht uses many rhetorical and thought devices to give greater meaning to the ideas expressed in the play. Characters like Mack the Knife, Saw Tooth Bob, Crook Finger Jack and Matt the Mint

gives some hints to their personality or occupation. The audience knows immediately that any one named the knife is probably a killer. Exposed technical elements and actors being seen waiting to go on stage before an entrance depends upon what the director and/or production team tries to communicate with the audience, but the script does not specifically call for them.

Does Brecht use styled speech? It is hard to tell from a translation whether or not it was in Brecht's original script. The translator does use a very lower class speech for those of less fortune but the songs contrast with a heightened speech. Being a play with music, *The Threepenny Opera* uses songs but it does it to stop the action of the play to remind the audience they are in a theatre. Brecht calls for projected titles for each scene and songs in the script as well as specific colors for each. The songs bluntly state Brecht's ideas. An example come in the second act finale simply asks "How do all humans live?" (Brecht 67). Another device that Brecht used is symbols. In some respect Peachum represents capitalism and all that is wrong with capitalism. He makes a profit off the poor and beggars without remorse.

The themes are then supported by the diction of the play. To begin to understand the language of Brecht's *The Threepenny Opera* it must be known that the director chose a translation by Michael Feingold. It was written in German then translated to English and the characters are English. It is also interesting that some of the German text comes from a translation of the English play *The Beggars Opera*. Brecht used the German language for effect in many of the songs to help get his point across. One song that the original German lyrics were used for effect was the "Soldiers Song." The diction set a rhythm for the song and helped set the mood for this disturbing song. The final line of the chorus in this song is "I betcha we get steak tartar for breakfast next day" and in the Eric Bentley translation it states "we will chop them into beef steak tartar." Each translations came from the original German libretto, but each has a different tone and slightly different meaning. The

language, in this translation, is in-between stylized and slice of life. It is very common language but occasionally the translator includes bits of “the King’s English” to help give a setting to the play. The language of the songs are not stylized to give help emphasize the theme of the song and show the break between the character and the actor singing the role. Sub-text is a major part of this play. Many of the songs are an attempt to get the audience to change their opinion or take action against injustice. In the second act finale Brecht states that once humans do not have the basics of life the moral code breaks down, this is what Brecht wants the audience to see. Brecht wants the audience to help those that do not have these basics so morality will stay intact.

The last three elements of drama were the least important to Aristotle but very important to Brecht. The rhythm of the play is set up by Weill’s music. In the English translations of the play no form of verse is used to set up a rhythm or pace of the language. Music or sound is called for simply because the play is a musical. The script calls for several different visual elements that make up the spectacle. Projected song titles are called for by Brecht as well as a golden light used for many of the songs. Another element of spectacle used by Brecht is the use of the chorus. By adding more people to the stage it adds to the spectacle of the play. When he wanted to emphasize specific scenes, he added, the chorus of beggars and whores. The spectacle, rhythm and music all tie into the style of the production.

The Threepenny Opera is more a “literary play” than a “theatrical play.” A theatrical play’s purpose is entertainment and a literary play’s purpose is to emphasize the playwrights thoughts. The script calls for and expects the use of sound and visual elements to bring home the point of the production. The script calls for the use of titles for the songs and even describes the lighting looks for many of the songs as golden light. *The Threepenny Opera* is more presentational than representational. Therefore it presents elements of the show directly to the audience. The characters pull out of the world of the

play in the songs and in scenes to speak directly to the audience. Brecht made it a point to remind the audience they are in a theatre and the message of the play is more important than the story. The act finales are the best example of this alienation. Conventional , meaning it uses conventions, would be the best way to describe *The Threepenny Opera*. It uses the convention of songs to emphasize the points of the script. The script uses obvious stylized dialogue which have now become conventions of the American theatre. He also uses the convention of changing lighting from the songs to scenes. Songs themselves are a convention. When was the last time someone was walking down the street and broke into song? To say that *The Threepenny Opera* is not a part of the epic theatre movement would be to say that Brecht did not write the play. This play is rooted in many of the Marxist ideas of a single ruling class. *The Threepenny Opera* portrays the lower class and it shows how the middle class, represented by Peachum and Brown take advantage of this lower class. During the play it shows how the struggle between Brown, Peachum and Macheath is really a scheme for each to gain profit. The play has some elements of revolution. Peachum plans a demonstration in act three but this idea is not fully developed. Through the struggle of the economic classes, the truth is revealed to the audience. The use of songs and titles are used to alienate the audience and remind them they are in a theatre. It also follows the methodology of episodic script. The songs can be rearranged in the script with ease but the parts of the script that are *The Beggars Opera* are very cause and effect.

Brecht worked against many of the conventions that Aristotle proposed. But Brecht's plays still had some sort of plot, character, thought, diction, rhythm and spectacle. Brecht just put the emphasis on the thought and spectacle. His plots were episodic to help keep the audience from getting wrapped up in the story and become more engaged with the themes of the play. *The Threepenny Opera* is more plot oriented than many of Brecht's plays simply because it was an adaptation of Gay's *The Beggars Opera*. Aristotle's

approach is a valid one to look at *The Threepenny Opera* even if it simply shows the differences between the two approaches to drama.

Analysis of the script is used to bring an informed decision to the production meetings. The production meetings began in late September. At the initial production meeting the main topic of discussion was the play. The director of the production began to discuss the many levels the play takes place on. The first level, the world the play, takes place in the world of the characters. This world happens near the time of queen Victoria's coronation. The next level is the world of John Gay's production of *The Beggars Opera*. Brecht's adaptation of this play was often a direct translation of the original piece. The third level is the period in which Brecht produced this play. The last level is Texas Tech University's production of *The Threepenny Opera*. The director discussed showing all of these levels in our production. One way to translate this into the designs could be to take it from the vantage that this production is a small group of players that can afford some things but not the best. It was discussed showing the seams of the production, which was part of Brecht's alienation effect. The seams would be reminders to the audience they were still in the theatre, for example, the set rotating in the view of the audience and exposed lighting. The discussion in this first meeting turned to the music for the production.

In the early meetings the musical director discussed the quality of the music for *The Threepenny Opera*. He felt the music needed to be sung well but not necessarily by good singers. Some of the instruments that might be used were an accordion or a banjo. The production team listened to a couple of versions of the music including a cabaret version sung in the original German. Several more discussions occurred in the following production meetings.

In one of the initial meetings the costume designer brought up the idea of using two dimensional objects and three dimensional objects to help show the different levels of the play. She brought in examples of potential costumes and one example was one of the

whores' dresses. The outline of a dress would be cut out of masonite and placed over undergarments or dresses to show the effect. Later in the process she brought in examples of the color pallet she intended to use. It used many earth tones or colors that had tints of earth tones in them. The use of two dimensional verses three dimensional highly influenced the scenic design.

The initial discussions about the set concentrated on how the set was going to represent several environments. It was proposed by the designer that a unit set, that was rotated by the actors, would not only show several locations but also help show the "seams" of the production. The scenic designer also discussed adding in two dimensional items such as cut out beggar's garments in the opening scene or beams in the stable scene that would be three dimensional and then would turn into two dimensional items. He discussed using the cyc wall and that it could be lit to show different scenes or emotions. The use of large strips of fabric that could be lit was proposed and these "drops" could be used to define the different areas. Later discussions and the model revealed a pallet of earth tones. The moon seemed to be a recurring theme in *The Threepenny Opera* and the director decided a physical moon was needed. It was discussed that lighting it was possible from the front positions. By lighting it from the front at a flat angle it allowed to moon to appear two dimensional which ties into the set and costumes. After seeing sketches of the costumes and a model of the set it was time to make some preliminary decisions on the lighting.

The lighting was heavily influenced by the set and costume designs. In an effort to show the different levels it was decided to make some of the lighting more two dimensional in the scenes and more three dimensional during the songs. The problem with two dimensional lighting was if it was too flat it may become too uninteresting. The director asked that whenever possible the lighting be interesting. By making the songs more visually interesting it was possible to give greater emphasis to the themes Brecht was trying

to get across. Another way of showing levels was in the angle or direction the light would strike the performers and the set. To accurately bring out the earth tones in the set and costumes a pallet of earth tones was suggested. After the initial discussion conceptual research needed to be done.

Conceptual research is research done to expand upon ideas that are brought up in the analysis and production meeting stages of the design process. The first idea explored was the idea of dimensionality. The computer program Virtual Light Lab™ was a tool used to help solve the problem of making the environment two dimensional and interesting at the same time. Virtual Light Lab™ allows the operator to experiment with different lighting angles and colors in a virtual setting. The solution was in using front light to achieve visibility and sidelight from one side to add visual interest. Virtual Light Lab™ was used to determine the color palette. An earth tone amber and light lavender was used from the front to accentuate the set and costumes. A warm amber with some sepia was chosen from one side to add a warm glow to the set. To complement the amber a lavender was chosen. Color Changers would provide the backlight and some of the side light. Each color scroller allows the operator to choose one of sixteen different colors at any moment in the show. In the University Theatre's Light Lab, the idea of using low lights from the floor was discovered. It was here the idea of angle was explored to show the different worlds of the play. In using angle several tests were conducted to determine if three follow spots could be used effectively in the space. Once the conceptual research was complete the incubation process began.

Incubation is a very important part of the design process. It allows the brain to subconsciously sort all the information needed for the play. Often during this period solutions to problems will reveal themselves. Often incubation occurs in large and small blocks of time depending on the step of the process. Incubation for *The Threepenny Opera* occurred in-between the production meeting and during the production of *Everykinda Man*,

a Texas Tech University Laboratory Theatre Production, which was lit by the same lighting designer. Incubation is such a subconscious process that it makes measuring its benefits nearly or almost impossible.

The analysis process asks the questions and presents problems and challenges for a particular production or script and often during *The Threepenny Opera* process questions were brought up in the production meetings. Other questions were raised by attending rehearsals and seeing what choices the actors and director are making. It is the research that help solve the problems that are discovered. Once these questions are answered, a period of incubation is needed to allow the subconscious to process the information. All the research and analysis leads to the next step, making choices.

CHAPTER IV

CHOICES

Making choices is a part of any theatrical production; actors make character choices, directors make casting choices and interpretive choices and scenic designers make set choices, etc. They all choose ways to interpret the script and how to bring the script to life. This is what separates theatre from drama. In the design process choices are made during the selection and implementation period of the design. Basic design choices are made through discussions with the director and production team and are then translated into a light plot for the master electrician and his or her crew to hang. In *The Threepenny Opera* the preliminary choices were discussed with the director in a meeting to discuss lighting and a presentation to the production team. Many of the broad concepts that were discussed during the preliminary phases were solidified into the lighting design. Choices were made in several areas including: the levels of the play, color palette, movement, and shadows. Once the choices were made the design was implemented through the light plot, hang and focus, and technical rehearsals.

The early discussions about the levels of *The Threepenny Opera* solidified into three different levels in the lighting design. The first level was the world of the play and it was this level that the two dimensional visual elements would be emphasized. This level consists of the scenes that progressed the story of the play. Using front light coming to the stage at only a slight angle, ten to fifteen degrees, would not sculpt the body and give an appearance of a flat figure. A side light with a touch of color was used to add to the atmosphere of the play. In the stable scene a warm side light was used to represent the warm glow of candles or torches that might light the environment. In the world of the play the color palette consisted of color tints and very few saturated colors. In contrast to this level was the world of the songs.

This level was comprised of the songs and first and second act finales. The songs are used by Brecht to emphasize the themes of the play. In the songs it was necessary to show as much contrast to the world of the play as possible. Sculpted light that used high saturated colors was used. Follow spots helped distinguish the difference between the two worlds and allowed for the use of more saturated color. The follow spot help keep visibility on the performer while allowing a composition of the stage picture. During “Barbara’s Song” Polly was separated by a follow spot from the environment. With the songs it was necessary to emphasize to the audience that they were no longer in the world of the play. Often the songs were blocked down stage center and with the use of the follow spot it pulled the singer out of the world of the play. During the early discussions of the lighting the director discussed using an expressionistic look to emphasize certain songs. At these moments of the production a more stylized approach was taken by the lighting and direction. During the “Epitaph” gobos were used to break up the environment. During “Pirate Jenny” footlights and floor mounted instruments were used to change the angle of light for this song. The low angle of these lights gave the feeling of unnaturalness and complimented the highly stylized poses of Macheath and the gang members. The song world was comprised of many different looks and styles but it was all with the purpose to draw the audience away from the story and concentrate on the themes.

The third level that was emphasized by the lighting was the third act finale. In a discussion with the director he expressed the desire to have this song look like a finale from a Verde opera. Brecht, in this scene, pokes fun at opera and its use of the happy ending. To differentiate it from the other levels it was decided to make it the most plastic or modeled of all the scenes. While many of the songs were dark and foreboding the finale needed to be bright and cheerful. The script takes a sharp turn from the style in the rest of the play and the lighting needed to match and emphasize this change. The colors used were warm but were much more subtle than the pervious songs.

The fourth level was the performance of *The Threepenny Opera* at Texas Tech University. It was the level that reminded the audience they were in a theatre. It was revealed to the audience by the lighting in two ways. Exposed lighting instruments were a constant reminder. During some of the scene changes the work lights were brought up to reveal the actors not the characters they were portraying, changing the set and props for the next scene.

The color palette was the next concept that was solidified. The initial palette came from the costumes. The costume designer used a palette that was based in earth tones. The front light was an amber with a large amount of sepia to bring the earth tones out. The front light, in each area, also consisted of a scroller that could be changed into sixteen different colors. The scrollers were used to give maximum flexibility for the scenes. Side light coming from stage left had a saturated amber that was used in many of the indoor scenes to represent candle light. In many instances it was used as the key light for the stable or Peachum scenes. From stage right a lavender side light was used for a variety of scenes. It was specifically chosen for "The Pimps Ballad" which has a tango in the middle of it. It also added to the environment of the whore house. The whores' costumes consisted of lavenders blues and reds and the lavender highlight from the side help accentuate the costumes. A wash of side light and footlights with scrollers were used, again, to allow maximum flexibility. An orange back light was chosen for several scenes Brecht also described a golden song light in the text of the script and in notes on *The Threepenny Opera*. It was chosen to compliment the lavender side light for the "The Pimps Ballad." A dark blue back light was chosen for songs like "Melodrama" or "Love Song." The cyc and fabric drops added visually to the color palette. Each could be lit to accentuate a mood or emotion in the scene. The colors were made by mixing the primary colors of light, red, blue, and green, to create a variety colors. Generally they were more stylized for the songs and more realistic in the scenes. An example would be the "Jealousy Duet" in which the cyc

and sails were turned green. While the color choices were being made choices about the movement were made.

In lighting two types of movement can be controlled. One is the movement from one cue to another and the second is the light source moving. The movement from one cue to another is one factor in the pacing of a show. It is controlled by the time it takes to bring a cue up or down. It was decided that for *The Threepenny Opera* the pace would vary. For the cues into the songs a fast movement would help draw attention to the fact the actors were breaking into song or remind the audience they are in a theatre. Quick black outs were used to punctuate the end of songs. Subtle changes in cues were used to help show a time of day passage. A slow fade at the end of a song could also punctuate a feeling or emotion. At the end of "Melodrama" a slow fade was used to embellish Polly's sorrow. The second type of movement is in light moving across the stage. The use of follow spots were the main source of moving light. They were used primarily for visibility of the singers. Using the spots allowed for darker and more moody compositions. It also allowed the opportunity to use shadows.

In Gillette's book, *Designing with Light*, he discusses the term "happy accident" which is something that happens that is unplanned but works to the advantage of the lighting designer. A "happy accident" occurred in *The Threepenny Opera* by using floor mounted instruments and footlights. It is expected that shadows will be cast on the floor and walls but usually there is an attempt to wash out these shadows. It was decided to use these shadows on the front drop for some of the songs. What was not expected were the shadows cast upon the set by the floor mounted instruments. Normally every attempt would be made to wash these shadows out. What was discovered during the level set for this show was how effective they could be in the songs. For "Pirate Jenny" the gang members' freezes were made more frightening and powerful by the shadows on the wall behind them. These shadows were not planned but very effective. It was planned to use

shadows in “Solomon’s Song” and “Ballad of the Prisoner of Sex.” Both songs were staged in front of the drop. The footlights provided a great opportunity to cast shadows up on the drop to help give an eerie mood to both songs. The last cast shadow was the shadow cast by the moon. A recurring image, or motif, in *The Threepenny Opera* was the moon. It was represented on stage by a cut out that was flown in at the appropriate moment. The cut out was lit with an ellipsoidal and projected a circle on the back wall. This circle lit the moon and created somewhat of a second moon with the beam of light. All of the shadow work helped add to the texture of the overall design and added to the visual interest of the production. The shadows were just one on the many choices made in lighting *The Threepenny Opera* .

The Threepenny Opera has many elements of melodrama, as discussed in Chapter III. One element of melodrama is the use of clichés. The choice was made to help reinforce these clichés with lighting. For example, In “Jealousy Duet” the cyc and fabric drops are lit with a green light. This same light was used for “Lucy’s Aria.” The moon light was blue which has become a cliché lighting effect. The happy ending that is called for in the script was lit with predictable bright low saturated light, which is typical for a melodrama. Without thorough script analysis these elements may not have been brought to life on stage.

Each choice made is designed to enhance the overall production. Each choice must also work within the production concept and mesh with the rest of the production elements. The choices made were not only those made by the lighting designer but choices that made for a good collaboration of artists, the designers, choreographer and director. By allowing this collaboration the lighting design was better than one person could have conceived on his or her own.

CHAPTER V

EVALUATION

In Gillette's model for the design process the final step is evaluation. Evaluation is an important step for the theatre artist because it allows for growth as an artist. Evaluation comes in two forms, critical evaluation and self evaluation. Critical evaluation comes from mentors and peers reviewers, while self evaluation comes from the artist. Each takes a look at what worked in the project and what did not work. Then this information is used to improve upon weakness and develop strengths in the next project. In the evaluation of the lighting design for *The Threepenny Opera*, critical analysis will come from four areas. First will be from the Director of Theatre and Head of Design, Professor Frederik Christoffel. The second from the Director of the production Dr. Jonathan Marks and third from Ms. Elizabeth Pollard the Costume Designer. The final critical evaluation will come from Dr. Norman Bert, the Chairperson of the Department of Theatre and Dance, a self evaluation will follow.

The first evaluation is from Professor Frederik Christoffel, and he states:

In the lighting design for *The Threepenny Opera*, Todd Proffitt brought an enthusiasm and work ethic to the project, as well as a solid knowledge of the play that ensured the lighting for the production to be carefully planned and skillfully executed. Although the rest of the production team was faculty, Todd functioned as a peer rather than a student. He earned the right to function in that manner by his professional attitude and serious approach to the project.

Mr. Proffitt did an excellent job of creating the many layers of the production discussed by the director early on in the design process. Todd made use of position, angle, and texture in a way that both heightened the plasticity of the characters and emphasized the two-dimensional elements of the set and costumes when desired. His use of color and lack of color helped in establishing the alienation the director wished to create in this production. He made use of work-lights, spotlights, and every other form of illumination available to him to create the worlds of the play, songs, and scenic changes that were desired. The rhythm of the play was pushed along by the musical cueing of the show and stopped it dead-in-its-tracks when desired. Subtle tonal shifts were juxtaposed by radical slashes of color and movement that heightened the dramatic action of the play. Light became a scenic element as well as a subliminal character in the play. *The*

Threepenny Opera poses many challenges for the designer. First it is neither an opera in the traditional sense, nor is it a musical. Secondly it is not a play or a play with music. It is all of the forms mentioned. In his lighting design, Todd worked hard to create lighting appropriate to each genera the play wandered into, including not any type of play at all (illustrated by the scene shifts under work light).

In conclusion, Todd's work was a fine example of the best of what lighting can be, meeting all the elements and requirements without sacrificing any one for the other.

The second evaluation is from Dr. Jonathan Marks the Director for *The Threepenny Opera*. He states:

While most of the principle collaborators on the production team were faculty members, Todd functioned as his talent and character indicate he should: as a peer, and as a professional. He maintained clear and effective communication with me and the other members of the team throughout the process. In paper tech and full tech rehearsals he showed himself to be sensitive to the text, to my interpretation, and the all the collaborators, and resourceful in solving problems. He functioned both proactively and reactivity, and effectively in both modes.

In production meetings I had laid forth the concept roughly as follows: of course, each scene takes place at a different time and in a different space. Within the scenes, however, the songs take place in a different dimension: furthermore, each song's dimension is different from every other song's. For the lighting designer, then, the task was to create quite a number of different worlds, separated by quick changes and sharp differentiating edges.

Though he checked with me at appropriate intervals about the progression of his thinking about this basic (though rather unusual) concept, Todd Clearly understood it from the get-go, and his strategies for achieving it were right on the nose. He accomplished the task imaginatively and efficiently, and made my vision come to life more fully than I could possibly have foreseen.

What is more, his work during technical rehearsals bore the same make of a steady, good-natured, and generous collaborator and creator.

I need a bold and artistic partner in realizing my vision of *The Threepenny Opera*, and I found Todd to be just the designer I needed.

The third Evaluation is from Elizabeth Pollard, Ms. Pollard states:

My experience in working with Todd Proffitt on *The Threepenny Opera* was joyous in both process and product. From the first production meeting to technical rehearsals to strike I found Todd to be a creative, collaborative artist and teacher.

Threepenny Opera is a demanding play in scale, genre, and theme. The name Bertolt Brecht is daunting in and of itself. In addition to the multiplicity of locale there is a constant attention to the real time and space of the performance. The historic context surround the play is a three hundred year dramaturgical journey. The sung dialogue lives in a different world

from the spoken word, but both contain elements of satire and melodrama. Between Brechtian theatre theories and Marxist political theories the play has seemingly endless layers. Perhaps the most significant challenge specific to our production was the separation of the actor from the character and the "role." Dimension became a visual element and a device for alienation.

As the costume designer I threw Todd many a curve ball and was astounded by how well he catches. Todd lit scenes in which rags and metallics stood side by side. The diversity of the palette (from saturate jewel tones to whites and pastels) did not elicit a single grumble and even evoked an occasional chuckle. The delineation of the three dimensional actor and the two dimensional costume pieces (designed to indicate rather than realistically represent character) was crucial to my vision of the play. Todd worked with me to isolate the body from the emblem. He understood the visual meaning I was trying to make and was constantly willing to explore and support that meaning with me. Todd separated the song from the dialogue. At the very core of his contribution is Todd's ability to delineate what is formal and what is spatial. The scenes in front of the curtain are a great example of Todd's understanding of the work. Todd made a dimension of exaggerated shadows on the drop that was simply magical. Todd did not illuminate the play; he formed the play with light and illuminated its most resonant themes.

I'm not alone in my esteem of Todd Proffitt and his work on *Threepenny*. His student crew sang his praises. Todd has a gift of turning unskilled undergraduates into an organized and unified lighting crew. His students describe Todd's passion and discipline as infectious. They speak with respect for his craftsmanship and his attention to the education of each crew member.

In conclusion I can only say that I was thrilled to be a part of Todd's thesis project and equally pleased to be asked to participate in the support document. My written participation affords me the opportunity to express my appreciation of a student and colleague who values the process of theatre. Todd Proffitt is a collaborative artistic capable of producing work of a professional quality in an academic setting.

The final critical evaluation is from Dr. Norman Bert the Chairperson of the Department of Theatre and Dance at Texas Tech University. This evaluation was presented to Mr. Proffitt in a memo dated December 1, 1998 as the chairperson's production response.

Mr. Proffitt's lighting contributed fully to the beauty, meaning, and power of our production of *Threepenny Opera*. It did all the things I expect from lighting--provided appropriate illumination, helped set the time and place of the various scenes, enhanced the mood and style of the play, and increased the enjoyment of the experience through color and variety. And it did all of these things without inappropriately or obtrusively calling attention to itself. Specific lighting elements and effects which I particularly enjoyed included the use of footlights (maybe a first in my 30 years of theatre

attendance), the pattern gobos used to good effect, the variety of colors, and the moon special which not only lit the drop-in moon but also spilled beautifully onto the drop to create a wonderful echo of the primary element. It seemed to me that this would not be an easy set to light, given its height and its multiple configurations, but Todd rose to the challenge and succeeded. Todd made masterful use of the capabilities of our new, multi-faceted lighting system. Although I did not observe any work sessions, I know from consistent reports that he has earned the respect of faculty members, staff members, and students alike for his competence, artistry, and excellent interpersonal skills in working with other theatre artists. He is already in demand as lighting designer by other faculty directors.

The final step in evaluation is self evaluation. To begin there were several items that have improved from previous work and several items that need to be improved upon. The use of color and modeling improved from previous projects. One of the major obstacles was giving the element of two dimensionality while keeping the lighting interesting to the eye. This was achieved by relying on side light as key light and seemed to work for this production. Most of the audience was unaware of many of the lighting choices even though many of the choices were bold and colorful. To make these bold choices that are still subtle to the audience was a great asset to this production. It should be expected that an audience with a theatre background should notice the lighting and many of the subtle details, like the use of angle, should only be picked up by other lighting designers. The area that needs the most improvement is in speed of work. The speed of the hang and focus improved but cueing the show took three technical rehearsals and this needs to be improved upon. Stronger preparation of the cues before the first technical rehearsal can improve this speed. It is also necessary for an even greater attention to detail. This area was improved upon for this project but it still needs to be worked on for future productions. This detail and speed will improve with experience. In the professional world, often, less time is given to prepare for a production and both speed and accuracy are essential tools in staying on top of the project.

The lighting design for *The Threepenny Opera*, for the lighting designer, was successful. It was successful because it helped the lighting designer grow as an artist and it

was successful because of the great collaboration between the production team. Each evaluation from a member of the production team revealed this. Harold Prince in the forward to Richard Pilbrow's book *Stage Lighting Design: The Art, The Craft, and The Life* said this about collaboration:

The ideal collaboration is that in which I present an idea and wait to see what I get in return. If I get back exactly what I asked for, I have failed. After all I am not a designer, I am not an actor, I am not a playwright. I want something larger, more creative. I want a surprise. (Pilbrow 15)

The Threepenny Opera was something larger and more creative. The project was guided by Dr. Jonathan Marks and it was his great skills in collaboration that made the total project a success, which made the lighting design a success.

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APPENDIX A
LIGHT PLOT AND SECTIONAL

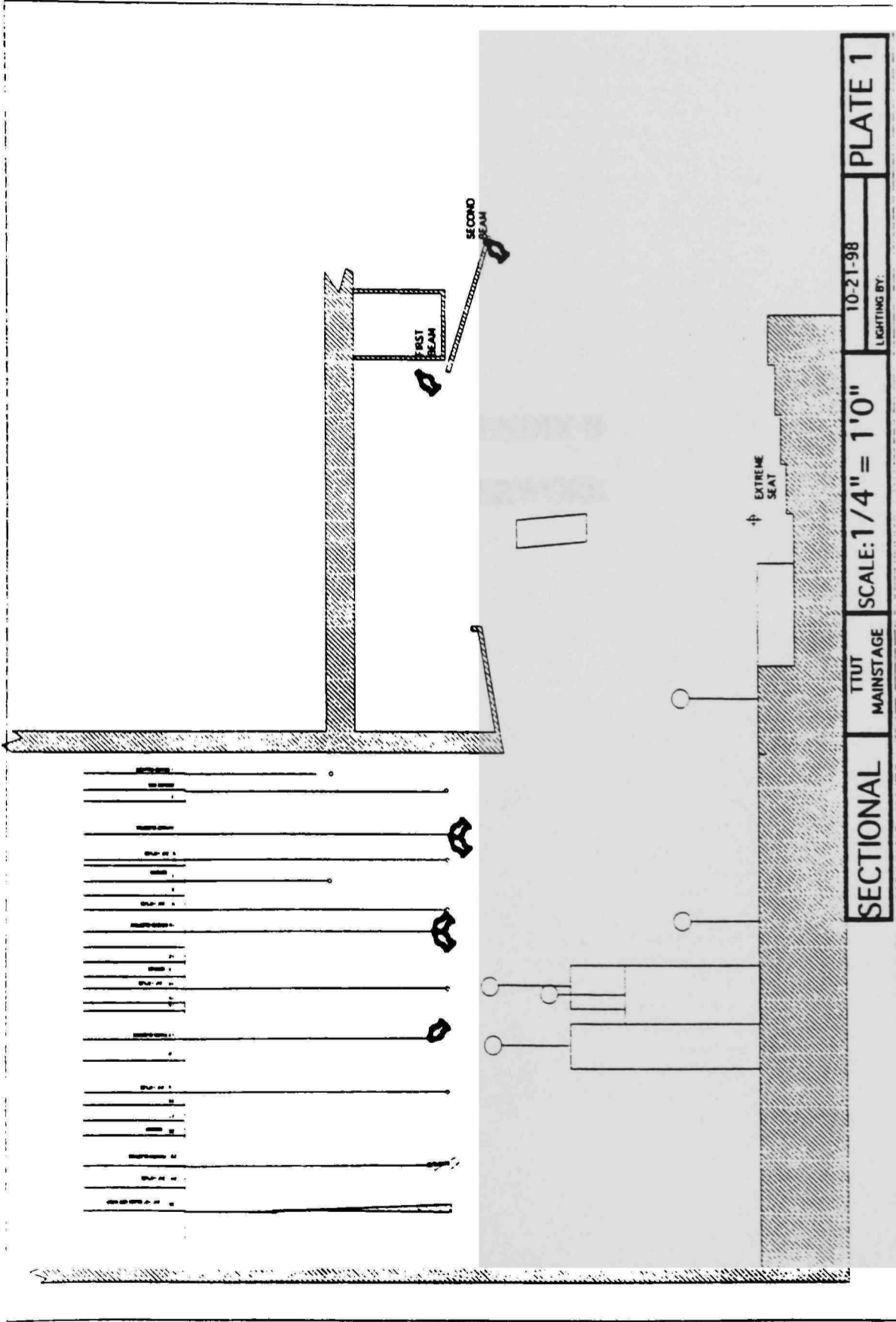


Figure A.2 Sectional

APPENDIX B
PAPERWORK

Table B.1 Instrument Schedule

The Three Penny Opera
TEXAS TECH UNIVERSITY THEATRE

Instrument Schedule
3/20/99 9:07 PM

5 pages

12/18/98

1ST BEAM

	Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
1	20-40	FEL	25			E	S1		
2	6" 20°	FEL	29			I	S1		
3	20-40	FEL	5			E	G365		
4	Source 4 19°	EHF	106			FO	N/C		
5	6" 20°	FEL	9			I	G365		
6	20-40	FEL	24			D	S1		
7	6" 20°	FEL	28			H	S1		
8	20-40	FEL	4				G365		
9	6" 20°	FEL	32			L	S1		
10	6" 20°	FEL	12			L	G365		
11	6" 20°	FEL	8			H	G365		
12	20-40	FEL	23			C	S1		
13	20-40	FEL	3			C	G365		
14	6" 20°	FEL	27			G	S1		
15	6" 20°	FEL	31			K	S1		
16	6" 20°	FEL	11			K	G365		
17	20-40	FEL	22			B	S1		
18	6" 20°	FEL	7			G	G365		
19	20-40	FEL	2			B	G365		
20	Source 4 19°	EHF	105			FO			
21	6" 20°	FEL	30			J	S1		
22	6" 20°	FEL	26			F	S1		
23	6" 20°	FEL	10			J	G365		
24	20-40	FEL	21			A	S1		
25	6" 20°	FEL	6			E	G365		
26	20-40	FEL	1			A	G365		

FIRST ELECTRIC

	Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
1	Source 4 36°	FEL	86				R362		
2	Source 4 26°	EHF	85				R362		
3	8" Fres	BVT	115				N/C		
4	Source 4 26°	EHF	84				R362		
5	Source 4 26°	EHF	65			E	R21		
6	par64mfl	FFR	45			E	R80		
7	8" Fres	BVT	115				N/C		
8	20-40	FEL	36			P	S1		
9	20-40	FEL	16			P	G365		
10	Source 4 26°	EHF	64			D	R21		
11	par64mfl	FFR	44			D	R80		
12	20-40	FEL	35			O	S1		
13	20-40	FEL	15			O	N/C		
14	Source 4 26°	EHF	63			C	R21		
15	par64mfl	FFR	43			C	R80		
16	20-40	FEL	34			N	S1		
17	20-40	FEL	14			N	G365		
18	Source 4 26°	EHF	62			B	R21		

Table B.1 Continued

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FIRST ELECTRIC -continued

Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
19 par64mfl	FFR	42			B	R80		
20 20-40	FEL	33			M	S1		
21 20-40	FEL	13			M	G365		
22 Source 4 26°	EHF	61			A	R80		
23 par64mfl	FFR	41			A	R80		
24 Source 4 26°	EHF	83				R09		
25 Source 4 26°	EHF	82				R09		
26 Source 4 36°	FEL	81				R09		HIGH SIDE

SECOND ELECTRIC

Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
1 Source 4 36°	FEL	96				R362		
2 Source 4 26°	EHF	95				R362		
3 Source 4 26°	EHF	94				R362		
4 Source 4 26°	EHF	120			HA	R05		HALL
5 par64mfl	FFR	49			I	R80		
6 Source 4 36°	FEL	69			I	R21		
7 par64wfl	FFS	125			DR	S3		
8 Source 4 26°	EHF	119			HA	R05		HALL
9 par64mfl	FFR	48			H	R80		
10 Source 4 36°	FEL	68			H	R21		
11 Source 4 36°	FEL	67			G	R21		
12 par64mfl	FFR	47			G	R80		
13 Source 4 26°	EHF	127				S3		
14 Source 4 26°	EHF	118				R05		
15 Source 4 36°	FEL	66			F	R21		
16 par64mfl	FFR	46			G	R80		
17 Source 4 26°	EHF	117				R05		
18 Source 4 26°	EHF	93				R09		
19 Source 4 26°	EHF	92				R09		
20 Source 4 36°	FEL	91				R09		

THIRD ELECTRIC

Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
1 Source 4 26°	EHF	104				R362		
2 par64wfl	FFS	133				S3		
3 par64mfl	FFR	132				S3		
4 8" Fres	BVT	116				N/C		
5 30°	FEL	76			P	R21		
6 par64wfl	FFS	56			P	R80		
7 par64sp	FFP	131				S3		
8 8" Fres	BVT	116				N/C		
9 Source 4 26°	EHF	103				R362		
10 Source 4 36°	FEL	72			L	R21		
11 par64wfl	FFS	52			L	S1		
12 Source 4 36°	FEL	126			DR	S2		JAIL
13 Source 4 36°	FEL	71			K	R21		
14 par64wfl	FFS	51			K	R80		
15 par64wfl	FFS	122			DR	S3		
16 20-40	FEL	18			R	G365		

Table B.1 Continued

The Three Penny Opera

Instrument Schedule

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THIRD ELECTRIC -continued

Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
17 par64sp	FFP	130				S3		
18 par64wfl	FFS	50		J		R80		
19 Source 4 36°	FEL	70		J		R21		
20 Source 4 26°	EHF	102				R09		
21 par64wfl	FFS	147				R47		
22 par64mfl	FFR	129				S3		
23 par64wfl	FFS	128				S3		
24 par64wfl	FFS	150				S3		
25 par64wfl	FFS	121		DR		S3		FABRIC
26 Source 4 26°	EHF	101				R09		

FOURTH ELECTRIC

Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
1 par64wfl	FFS	124			DR	S3		DROP
2 30°	FEL	75			O	R21		
3 par64wfl	FFS	55			O	R80		
4 30°	FEL	74			N	R21		
5 par64wfl	FFS	54			N	R80		
6 30°	FEL	73			M	R21		
7 par64wfl	FFS	53			M	R80		
8 par64wfl	FFS	123			DR	S3		

Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
1 Far Cyc	FGT	134				R127		
2 Far Cyc	FGT	135				R125		
3 Far Cyc	FGT	136				R126		
4 Far Cyc	FGT	137				G880		
5 Far Cyc	FGT	134				R127		
6 Far Cyc	FGT	135				R125		
7 Far Cyc	FGT	136				R126		
8 Far Cyc	FGT	137				G880		
9 Far Cyc	FGT	134				R127		
10 Far Cyc	FGT	135				R125		
11 Far Cyc	FGT	136				R126		
12 Far Cyc	FGT	137				G880		
13 Far Cyc	FGT	134				R127		
14 Far Cyc	FGT	135				R125		
15 Far Cyc	FGT	136				R126		
16 Far Cyc	FGT	137				G880		

BOOM 1

Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
1 Source 4 36°	FEL	161				S3		
2 Source 4 36°	FEL	162				R47		

BOOM2

Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
1 Source 4 36°	FEL	163				S3		
2 Source 4 36°	FEL	164				R321		

Table B.1 Continued

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LADDER 1

	Type	Lamp	Chan	Cir	Dim Mk	Color Group	Note
1	par64wfl	FFS	143			R47	
2	par64wfl	FFS	142			R47	
3	par64wfl	FFS	148			S3	
4	par64wfl	FFS	141			R47	

LADDER 2

	Type	Lamp	Chan	Cir	Dim Mk	Color Group	Note
1	par64wfl	FFS	146			R47	
2	par64wfl	FFS	145			R47	
3	par64wfl	FFS	149			S3	
4	par64wfl	FFS	144			R47	

LADDER 4

	Type	Lamp	Chan	Cir	Dim Mk	Color Group	Note
3	par64wfl	FFS	153			R321	
4	par64wfl	FFS	152			R321	
1	par64wfl	FFS	158			S3	
2	par64wfl	FFS	151			R321	

LADDER 5

	Type	Lamp	Chan	Cir	Dim Mk	Color Group	Note
1	par64wfl	FFS	156			R321	
2	par64wfl	FFS	155			R321	
3	par64wfl	FFS	159			S3	
4	par64wfl	FFS	154			R321	

LADDER 6

	Type	Lamp	Chan	Cir	Dim Mk	Color Group	Note
1	par64wfl	FFS	160			S3	
2	par64wfl	FFS	157			R321	

SIDE PIPE

	Type	Lamp	Chan	Cir	Dim Mk	Color Group	Note
1	Source 4 19°	EHF	107			N/C	

	Type	Lamp	Chan	Cir	Dim Mk	Color Group	Note
	Far Cyc	FGT	138			R127	
	Far Cyc	FGT	138			R127	
	Far Cyc	FGT	138			R127	
	Far Cyc	FGT	138			R127	
	Far Cyc	FGT	138			R127	
	Far Cyc	FGT	138			R127	
1	Source 4 36°	FEL	109			S2	
2	Source 4 36°	FEL	110			S2	
3	Source 4 36°	FEL	111			S2	
4	6" Fres	BTL	108			R02	
5	6" Fres	BTL	108			R02	
6	6" Fres	BTL	108			R02	
7	6" Fres	BTL	108			R02	

Table B.1 Continued

The Three Penny Opera

Instrument Schedule

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-continued

	Type	Lamp	Chan	Cir	Dim	Mk	Color	Group	Note
8	6" Fres	BTL	108				R02		
9	Source 4 36°	FEL	112				S2		
10	Source 4 36°	FEL	113				S2		
11	Source 4 36°	FEL	114				S2		

Table B.2 Continued

The Three Penny Opera		Channel List					page 2
Channel 13							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #21	20-40	FEL			M	G365	
Channel 14							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #17	20-40	FEL			N	G365	
Channel 15							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #13	20-40	FEL			O	N/C	
Channel 16							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #9	20-40	FEL			P	G365	
Channel 18							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT_ #16	20-40	FEL			R	G365	
Channel 21							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #24	20-40	FEL			A	S1	
Channel 22							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #17	20-40	FEL			B	S1	
Channel 23							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #12	20-40	FEL			C	S1	
Channel 24							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #6	20-40	FEL			D	S1	
Channel 25							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #1	20-40	FEL			E	S1	
Channel 26							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #22	6" 20°	FEL			F	S1	
Channel 27							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #14	6" 20°	FEL			G	S1	
Channel 28							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #7	6" 20°	FEL			H	S1	

Table B.2 Continued

The Three Penny Opera		Channel List						page 3
Channel 29								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
1ST BEAM #2	6" 20°	FEL			I	S1		
Channel 30								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
1ST BEAM #21	6" 20°	FEL			J	S1		
Channel 31								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
1ST BEAM #15	6" 20°	FEL			K	S1		
Channel 32								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
1ST BEAM #9	6" 20°	FEL			L	S1		
Channel 33								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #20	20-40	FEL			M	S1		
Channel 34								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #16	20-40	FEL			N	S1		
Channel 35								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #12	20-40	FEL			O	S1		
Channel 36								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #8	20-40	FEL			P	S1		
Channel 41								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #23	par64mfl	FFR			A	R80		
Channel 42								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #19	par64mfl	FFR			B	R80		
Channel 43								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #15	par64mfl	FFR			C	R80		
Channel 44								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #11	par64mfl	FFR			D	R80		
Channel 45								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #6	par64mfl	FFR			E	R80		

Table B.2 Continued

The Three Penny Opera		Channel List						page 4
Channel 46								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
SECOND ELEC_ #16	par64mfl	FFR			G	R80		
Channel 47								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
SECOND ELEC_ #12	par64mfl	FFR			G	R80		
Channel 48								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
SECOND ELEC_ #9	par64mfl	FFR			H	R80		
Channel 49								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
SECOND ELEC_ #5	par64mfl	FFR			I	R80		
Channel 50								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
THIRD ELECT_ #18	par64wfl	FFS			J	R80		
Channel 51								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
THIRD ELECT_ #14	par64wfl	FFS			K	R80		
Channel 52								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
THIRD ELECT_ #11	par64wfl	FFS			L	S1		
Channel 53								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FOURTH ELEC_ #7	par64wfl	FFS			M	R80		
Channel 54								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FOURTH ELEC_ #5	par64wfl	FFS			N	R80		
Channel 55								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FOURTH ELEC_ #3	par64wfl	FFS			O	R80		
Channel 56								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
THIRD ELECT_ #6	par64wfl	FFS			P	R80		
Channel 61								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #22	Source 4 26°	EHF			A	R80		
Channel 62								
Position	Type	Lamp	Cir	Dim	Mk	Color	Group	Note
FIRST ELECT_ #18	Source 4 26°	EHF			B	R21		

Table B.2 Continued

The Three Penny Opera		Channel List						page 5
Channel 63								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
FIRST ELECT_ #14	Source 4 26°	EHF			C	R21		
Channel 64								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
FIRST ELECT_ #10	Source 4 26°	EHF			D	R21		
Channel 65								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
FIRST ELECT_ #5	Source 4 26°	EHF			E	R21		
Channel 66								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
SECOND ELEC_ #15	Source 4 36°	FEL			F	R21		
Channel 67								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
SECOND ELEC_ #11	Source 4 36°	FEL			G	R21		
Channel 68								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
SECOND ELEC_ #10	Source 4 36°	FEL			H	R21		
Channel 69								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
SECOND ELEC_ #6	Source 4 36°	FEL			I	R21		
Channel 70								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #19	Source 4 36°	FEL			J	R21		
Channel 71								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #13	Source 4 36°	FEL			K	R21		
Channel 72								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #10	Source 4 36°	FEL			L	R21		
Channel 73								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
FOURTH ELEC_ #6	30°	FEL			M	R21		
Channel 74								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
FOURTH ELEC_ #4	30°	FEL			N	R21		
Channel 75								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
FOURTH ELEC_ #2	30°	FEL			O	R21		

Table B.2 Continued

The Three Penny Opera		Channel List					page 6
Channel 76							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT_ #5	30°	FEL			P	R21	
Channel 81							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #26	Source 4 36°	FEL				R09	HIGH SIDE
Channel 82							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #25	Source 4 26°	EHF				R09	
Channel 83							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #24	Source 4 26°	EHF				R09	
Channel 84							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #4	Source 4 26°	EHF				R362	
Channel 85							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #2	Source 4 26°	EHF				R362	
Channel 86							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #1	Source 4 36°	FEL				R362	
Channel 91							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #20	Source 4 36°	FEL				R09	
Channel 92							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #19	Source 4 26°	EHF				R09	
Channel 93							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #18	Source 4 26°	EHF				R09	
Channel 94							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #3	Source 4 26°	EHF				R362	
Channel 95							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #2	Source 4 26°	EHF				R362	
Channel 96							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #1	Source 4 36°	FEL				R362	

Table B.2 Continued

The Three Penny Opera		Channel List					page 7
Channel 101							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT. #26	Source 4 26°	EHF				R09	
Channel 102							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT. #20	Source 4 26°	EHF				R09	
Channel 103							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT. #9	Source 4 26°	EHF				R362	
Channel 104							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT. #1	Source 4 26°	EHF				R362	
Channel 105							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #20	Source 4 19°	EHF			F0		
Channel 106							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
1ST BEAM #4	Source 4 19°	EHF			F0	N/C	
Channel 107							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SIDE PIPE #1	Source 4 19°	EHF				N/C	
Channel 108							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
#4	6" Fres	BTL				R02	
#5	6" Fres	BTL				R02	
#6	6" Fres	BTL				R02	
#7	6" Fres	BTL				R02	
#8	6" Fres	BTL				R02	
Channel 109							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
#1	Source 4 36°	FEL				S2	
Channel 110							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
#2	Source 4 36°	FEL				S2	
Channel 111							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
#3	Source 4 36°	FEL				S2	
Channel 112							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
#9	Source 4 36°	FEL				S2	

Table B.2 Continued

The Three Penny Opera		Channel List					page 8
Channel 113							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
#10	Source 4 36°	FEL				S2	
Channel 114							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
#11	Source 4 36°	FEL				S2	
Channel 115							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FIRST ELECT_ #3	8" Fres	BVT				N/C	
FIRST ELECT_ #7	8" Fres	BVT				N/C	
Channel 116							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT_ #4	8" Fres	BVT				N/C	
THIRD ELECT_ #8	8" Fres	BVT				N/C	
Channel 117							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #17	Source 4 26°	EHF				R05	
Channel 118							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #14	Source 4 26°	EHF				R05	
Channel 119							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #8	Source 4 26°	EHF			HA	R05	HALL
Channel 120							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
SECOND ELEC_ #4	Source 4 26°	EHF			HA	R05	HALL
Channel 121							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT_ #25	par64wfl	FFS			DR	S3	FABRIC
Channel 122							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT_ #15	par64wfl	FFS			DR	S3	
Channel 123							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FOURTH ELEC_ #8	par64wfl	FFS			DR	S3	
Channel 124							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
FOURTH ELEC_ #1	par64wfl	FFS			DR	S3	DROP

Table B.2 Continued

The Three Penny Opera		Channel List						page 9
Channel 125								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
SECOND ELEC_ #7	par64wfl	FFS			DR	S3		
Channel 126								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #12	Source 4 36°	FEL			DR	S2	JAIL	
Channel 127								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
SECOND ELEC_ #13	Source 4 26°	EHF				S3		
Channel 128								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #23	par64wfl	FFS				S3		
Channel 129								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #22	par64mfl	FFR				S3		
Channel 130								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #17	par64sp	FFP				S3		
Channel 131								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #7	par64sp	FFP				S3		
Channel 132								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #3	par64mfl	FFR				S3		
Channel 133								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
THIRD ELECT_ #2	par64wfl	FFS				S3		
Channel 134								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
#1	Far Cyc	FGT				R127		
#5	Far Cyc	FGT				R127		
#9	Far Cyc	FGT				R127		
#13	Far Cyc	FGT				R127		
Channel 135								
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note	
#2	Far Cyc	FGT				R125		
#6	Far Cyc	FGT				R125		
#10	Far Cyc	FGT				R125		
#14	Far Cyc	FGT				R125		

Table B.2 Continued

The Three Penny Opera

Channel List

page 10

Channel 136

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
#3	Far Cyc	FGT			R126	
#7	Far Cyc	FGT			R126	
#11	Far Cyc	FGT			R126	
#15	Far Cyc	FGT			R126	

Channel 137

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
#4	Far Cyc	FGT			G880	
#8	Far Cyc	FGT			G880	
#12	Far Cyc	FGT			G880	
#16	Far Cyc	FGT			G880	

Channel 138

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
#	Far Cyc	FGT			R127	
#	Far Cyc	FGT			R127	
#	Far Cyc	FGT			R127	
#	Far Cyc	FGT			R127	
#	Far Cyc	FGT			R127	
#	Far Cyc	FGT			R127	

Channel 141

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
LADDER 1 #4	par64wfl	FFS			R47	

Channel 142

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
LADDER 1 #2	par64wfl	FFS			R47	

Channel 143

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
LADDER 1 #1	par64wfl	FFS			R47	

Channel 144

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
LADDER 2 #4	par64wfl	FFS			R47	

Channel 145

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
LADDER 2 #2	par64wfl	FFS			R47	

Channel 146

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
LADDER 2 #1	par64wfl	FFS			R47	

Channel 147

Position	Type	Lamp	Cir	Dim Mk	Color Group	Note
THIRD ELECT. #21	par64wfl	FFS			R47	

Table B.2 Continued

The Three Penny Opera		Channel List					page 11
Channel 148							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 1 #3	par64wfl	FFS				S3	
Channel 149							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 2 #3	par64wfl	FFS				S3	
Channel 150							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
THIRD ELECT_ #24	par64wfl	FFS				S3	
Channel 151							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 4 #2	par64wfl	FFS				R321	
Channel 152							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 4 #4	par64wfl	FFS				R321	
Channel 153							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 4 #3	par64wfl	FFS				R321	
Channel 154							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 5 #4	par64wfl	FFS				R321	
Channel 155							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 5 #2	par64wfl	FFS				R321	
Channel 156							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 5 #1	par64wfl	FFS				R321	
Channel 157							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 6 #2	par64wfl	FFS				R321	
Channel 158							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 4 #1	par64wfl	FFS				S3	
Channel 159							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 5 #3	par64wfl	FFS				S3	
Channel 160							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
LADDER 6 #1	par64wfl	FFS				S3	

Table B.2 Continued

The Three Penny Opera		Channel List					page 12
Channel 161							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
B00M 1 #1	Source 4 36°	FEL				S3	
Channel 162							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
B00M 1 #2	Source 4 36°	FEL				R47	
Channel 163							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
B00M2 #1	Source 4 36°	FEL				S3	
Channel 164							
Position	Type	Lamp	Cir	Dim	Mk	Color Group	Note
B00M2 #2	Source 4 36°	FEL				R321	

Table B.3 Color List

The Three Penny Opera
TEXAS TECH UNIVERSITY THEATRE

Color List
3/20/99 9:15 PM

3 pages

12/18/98

1ST BEAM

S1	7.5"	: 12
G365	7.5"	: 12
	7.5"	: 1

FIRST ELECTRIC

R362	7.5"	: 3
R21	7.5"	: 4
R80	10"	: 5
S1	7.5"	: 4
G365	7.5"	: 3
R80	7.5"	: 1
R09	7.5"	: 3

SECOND ELECTRIC

R362	7.5"	: 3
R05	7.5"	: 4
R80	10"	: 4
R21	7.5"	: 4
S3	10"	: 1
S3	7.5"	: 1
R09	7.5"	: 3

THIRD ELECTRIC

R362	7.5"	: 2
S3	10"	: 9
R21	7.5"	: 4
R80	10"	: 3
S1	10"	: 1
S2	7.5"	: 1
G365	7.5"	: 1
R09	7.5"	: 2
R47	10"	: 1

FOURTH ELECTRIC

S3	10"	: 2
R21	7.5"	: 3
R80	10"	: 3

R127	FarCyc	: 4
R125	FarCyc	: 4
R126	FarCyc	: 4
G880	FarCyc	: 4

BOOM 1

S3	7.5"	: 1
R47	7.5"	: 1

Table B.3 Continued

The Three Penny Opera

Color List

page 2

BOOM2

S3	7.5"	: 1
R321	7.5"	: 1

LADDER 1

R47	10"	: 3
S3	10"	: 1

LADDER 2

R47	10"	: 3
S3	10"	: 1

LADDER 4

R321	10"	: 3
S3	10"	: 1

LADDER 5

R321	10"	: 3
S3	10"	: 1

LADDER 6

S3	10"	: 1
R321	10"	: 1

SIDE PIPE

R127	FarCyc	: 6
S2	7.5"	: 6
R02	7.5"	: 5

Color List Totals

S1	7.5"	: 16	= 3 sheets
G365	7.5"	: 16	= 3 sheets
	7.5"	: 1	= 1 sheet
R362	7.5"	: 8	= 2 sheets
R21	7.5"	: 15	= 3 sheets
R80	10"	: 15	= 4 sheets
R80	7.5"	: 1	= 1 sheet
R09	7.5"	: 8	= 2 sheets
R05	7.5"	: 4	= 1 sheet
S3	10"	: 17	= 5 sheets
S3	7.5"	: 3	= 1 sheet
S1	10"	: 1	= 1 sheet
S2	7.5"	: 7	= 2 sheets
R47	10"	: 7	= 2 sheets
R127	FarCyc	: 10	
R125	FarCyc	: 4	
R126	FarCyc	: 4	
G880	FarCyc	: 4	
R47	7.5"	: 1	= 1 sheet
R321	7.5"	: 1	= 1 sheet

Table B.3 Continued

The Three Penny Opera

Color List

page 3

<u>Color List Totals -continued</u>			
R321	10"	: 7	= 2 sheets
R02	7.5"	: 5	= 1 sheet

Table B.4 Equipment List

Equipment List
 The Three Penny Opera
 TEXAS TECH UNIVERSITY THEATRE

9:16 PM

3/20/99

12/18/98

Type	Lamp	Used	Have	Need	Left
Source 4 36°	FEL	22	24	0	2
Source 4 26°	EHF	22	24	0	2
Source 4 19°	EHF	3	10	0	7
30°	FEL	4	0	4	0
6" 20°	FEL	14	21	0	7
20-40	FEL	19	25	0	6
6" Fres	BTL	5	0	5	0
8" Fres	BVT	4	0	4	0
par64wfl	FFS	34	0	34	0
par64mfl	FFR	11	0	11	0
par64sp	FFP	2	0	2	0
Far Cyc	FGT	22	0	22	0
gobo		16			
scroller		36			
boom position		4			

Total Lights Used: 162
 Total Lights Needed: 82

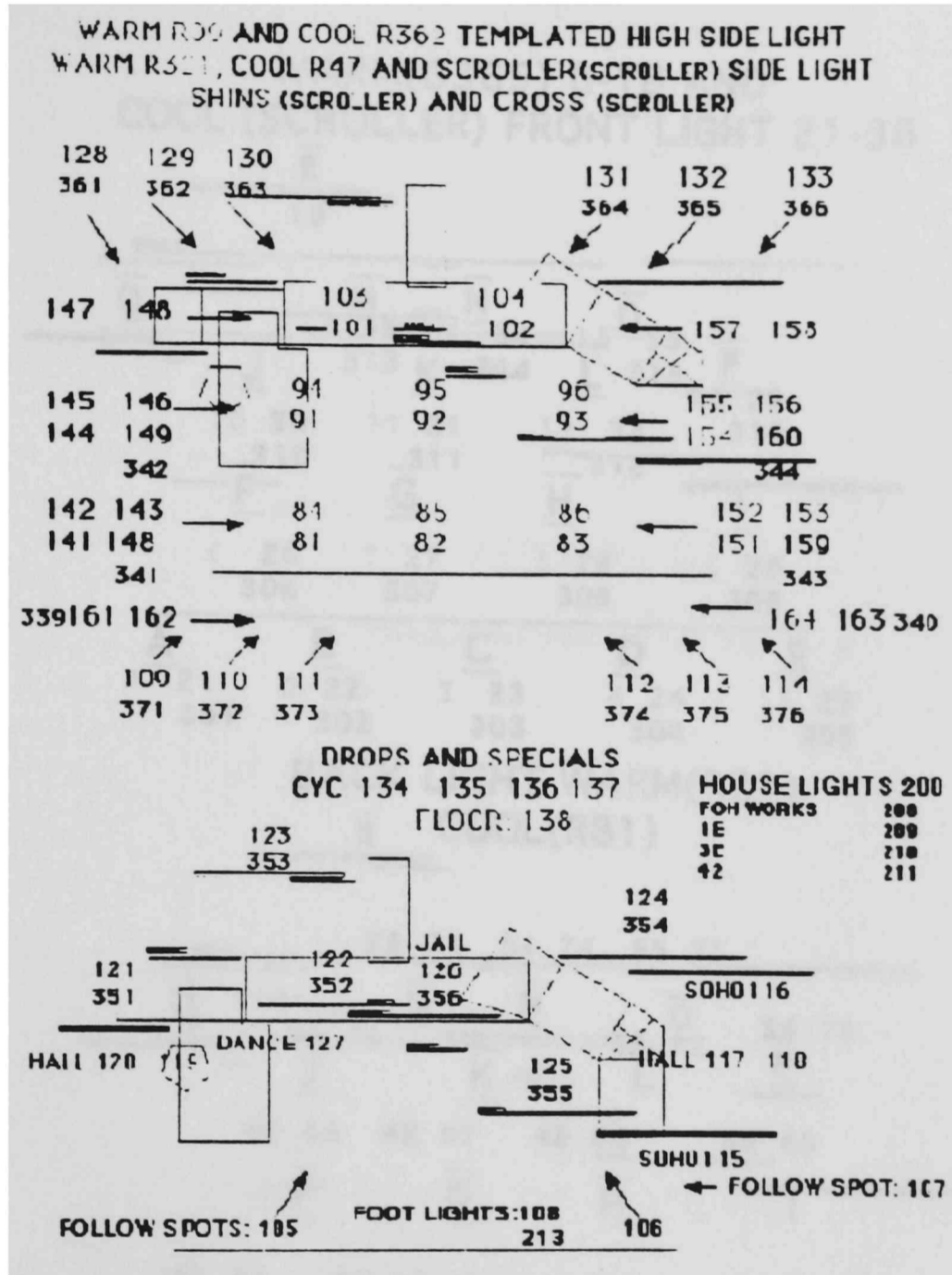
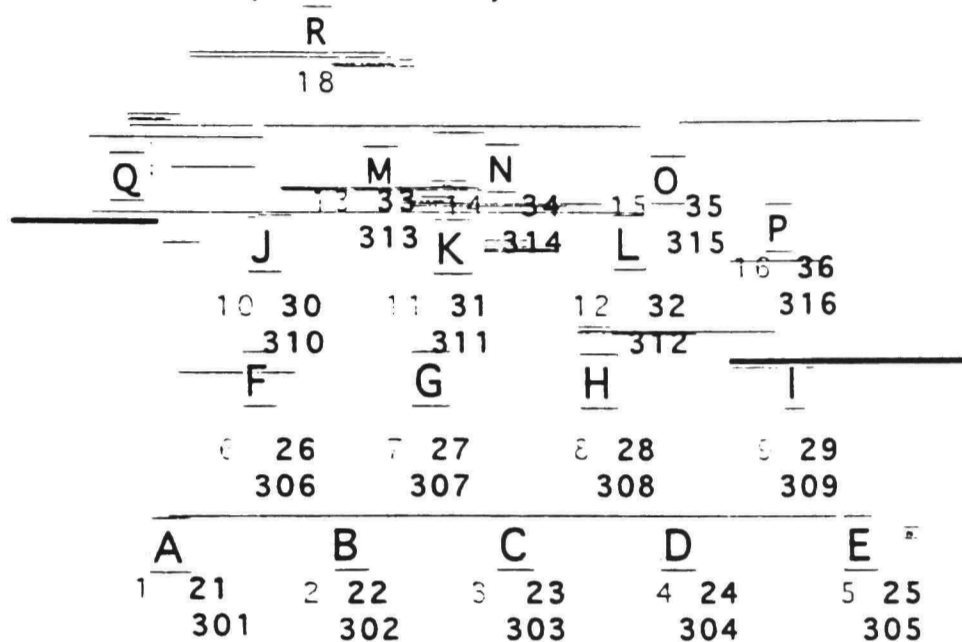


Figure B.1 Magic Sheets

WARM(G365) 0-18 AND
COOL (SCROLLER) FRONT LIGHT 21-38



BACK LIGHT WARM(R21)
R COOL(R81)

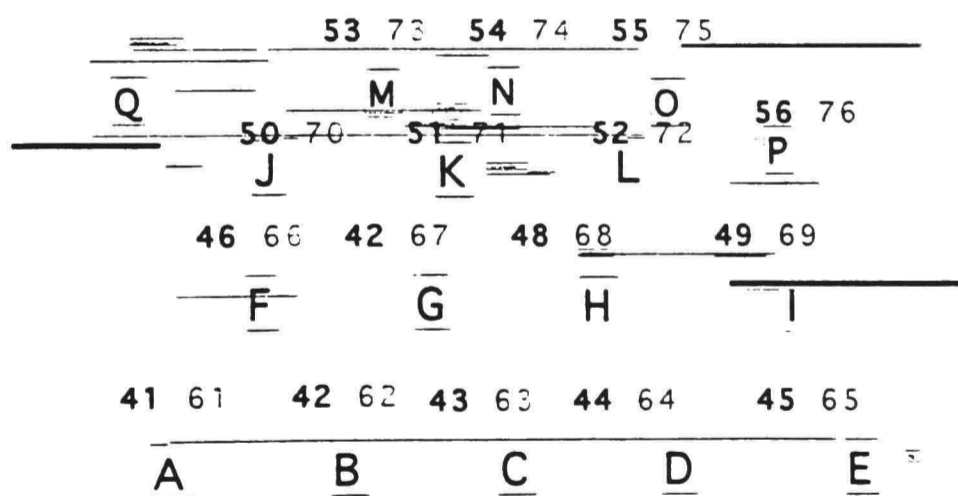


Figure B.1 Continued

APPENDIX C
PRELIMINARY CUE LIST

Table C.1 Group List

FRONT LIGHT			SIDE LIGHT		
GROUP 1	W F/L	ALL	GROUP 26	R47	ALL
GOURP 2	W F/L	A-B-C-D-E	GROUP 27	R47	DS
GOURP3	W F/L	F-G-H-I	GROUP 28	R47	CS
GOURP 4	W F/L	J-K-L	GROUP 29	R47	PLATFORM
GOURP 5	W F/L	M-N-O (PLATFORM)	GROUP 30	SR	W/SCROLL
GOURP 6	W F/L	O-P(STAIRS)	GROUP 31	SR	SCROLLERS
GROUP 7	C F/L	ALL	GROUP 32	R321	ALL
GOURP 8	C F/L	A-B-C-D-E	GROUP 33	R321	DS
GOURP9	C F/L	F-G-H-I	GROUP 34	R321	CS
GOURP 10	C F/L	J-K-L	GROUP 35	R321	PLATFORM
GOURP 11	C F/L	M-N-O (PLATFORM)	GROUP 36	SL	W/SCROLL
GOURP 12	C F/L	O-P(STAIRS)	GROUP 37	SL	SCROLLERS
GROUP 13	C F/L	SCROLLERS ALL	HIGH SIDE		
BACK LIGHT			GROUP 38	C	ALL
GROUP 14	C B/L	ALL	GROUP 39	C	1E
GOURP 15	C B/L	A-B-C-D-E	GROUP 40	C	2E
GOURP16	C B/L	F-G-H-I	GROUP 41	C	3E
GOURP 17	C B/L	J-K-L			
GOURP 18	C B/L	M-N-O (PLATFORM)	GROUP 42	W	ALL
GOURP19	C B/L	O-P(STAIRS)	GROUP 43	W	1E
			GROUP 44	W	2E
GROUP 20	W F/L	ALL	GROUP 45	W	3E
GOURP 21	W F/L	A-B-C-D-E	SHINS AND CROSS		
GOURP 22	W F/L	F-G-H-I	GROUP 46	SHINS	ALL
GOURP 23	W F/L	J-K-L	GROUP 47	SHINS	SCROLLERS
GOURP 24	W F/L	M-N-O (PLATFORM)	GROUP 48	CROSS	ALL
GOURP 25	W F/L	O-P(STAIRS)	GROUP 49	CROSS	SCROLLERS
			GROUP 50	HALL	

Table C.2 Preliminary Cue List

CUES FOR THREE PENNY OPERA				
CUE	SPOT	DESCRIPTION	CYC	
Q 1	PRESET UP	HOUSE LIGHTS AND SHOW DROP LIT WITH FOOTLIGHTS AND THREEPENNY LIT		
Q 2	HOUSE 1/2			
Q 3	HOUSE OUT			
Q 4	<u>SPOT UP</u> ON CONDUCTOR			
Q 5	<u>SPOT OUT</u>			
Q 6	PRESET OUT BLACKOUT			
Q 7	BALAD OF MACK THE KNIFE	<u>SPOT UP</u>	ON STEVE AND ISLE LIGHTS	
Q 8	QUICK FADE OUT			
Q 9	ACT 1 SCENE ONE	EARLY MORNING	LOW SIDE WITH BLUE SL SIDE	<u>DRBLUE</u>
Q 10	QUICK FOR PEACHUM'S SONG	<u>SPOT UP</u>	STRONG TEMPLATES AND SHINS	<u>MUDDY</u>
Q 11	RETURN	<u>SPOT OUT</u>	RETURN	<u>DRBLUE</u>
Q 12	START SUN RISE	90 SEC CUE		
Q 13	SECOND SUN RISE	90 SEC CUE	ON PEACHUMS DISCOVERY	<u>LTBLUE</u>
Q 14	WHY CANT THEY	<u>2 SPOTS UP</u>	SPOTS UP ON SINGERS SIMILAR TO PEACHUMS SONG	<u>GREENAMBER</u>
Q 14.5	FADE DOWNSTAGE			

Table C.2 Continued

Q 15	BLACK OUT	<u>SPOTS OUT</u>	
Q 16	A1S2	STABLE EVENING	BLUE SIDE LIGHT NO HI SIDE <u>DARK LAV</u>
<u>NO CHANGE FOR THE FIRST WEDDING SONGS</u>			
Q 17	PIRATE JENNY	<u>SPOT UP 1+3</u>	HIGH SIDE BLUE BLUE BL <u>LAV</u> BLUE GREEN SHINS
Q 18	RETURN	<u>SPOTS 1+3 OUT</u>	Q 17
Q 19	SOLDIERS SONG	<u>SPOTS 1+2</u>	RED SHINS ORANGE SIDE OR RED LAV CROSS
Q 20	RETURN	<u>SPOTS 1+3 OUT</u>	Q 18
Q 21	WEDDING SONG	<u>SPOT 1 ON GUYS</u>	STRONG BLUE OR LAV SPEC <u>LT LAV</u> ON COUPLE
Q 22	RETURN	<u>SPOTS 1 OUT</u>	Q 20 A BIT SOFTER? LAV
Q 23	LOVE SONG	<u>SPOTS 1+3</u>	JUST POLLY AND MAC? AND MOON
Q 24	BLACK OUT	<u>SPOTS 1+3 OUT</u>	
Q 24.3	SCENE CHANGE		
Q 24.6	BLACKOUT		
Q 25	ACT1 S3		DAY NOON HIGH SIDE WARM LTBLUE
Q 26	BARBARA SONG	<u>SPOTS 1+3</u>	PEACHUMS IN HI SIDE AND LT/B AT FULL
Q 27	RETURN	<u>SPOTS 1+3 OUT</u>	BLUES POLLY IN WARM SIDE AND SPOT 3 TO PULL HER OUT Q 25

Table C.2 Continued

Q 28 ACT 1 FINALY	<u>SPOTS 1 + 2</u>	ADD SPOT IN CENTER FOR POLLY HIGH SIDE AND 321	ORANGE
Q 28.5 FADE DOWN STAGE			
Q 29 TEMPO CHANGE		ADD RED SHINS AND MORE RED ON CYC	
Q 30 BLACKOUT			
Q 31 HOUSE UP			
Q 32 PRESET UP			
Q 33 HOUSE TO 1/2			
Q 34 HOUSE OUT			
Q 35 CONDUCTOR SPOT	<u>SPOT 1 UP</u>		
Q 36 SPOT OUT	<u>SPOT ONE OUT</u>		
Q 37 PRESET OUT			
Q 38 ACT II STABLE DAY		A STORMS A COMMING	LT BLUE
Q 39 MELODRAMA	<u>SPOT 1 AND 3</u>	FADE MOST OF SET	
		BLUE AND LAVANDERS	DARK BLUE
Q 40 BLACKOUT	<u>SPOTS OUT</u>	GENERAL	
Q 41 BALLAD	<u>SPOT 1 UP</u>	MORE COLOR ESPECIALLY 47	
Q 42 BLACKOUT	<u>SPOT OUT</u>		
Q 43 WHORE HOUSE RAINY DAY		RAINY DAY	DARK BLUE
Q 44 TANGO PIMPS SONG	<u>SPOT 1 UP</u>	TANGO R21 B/L 47 SIDE	DARK LAV
Q 45 JENNY SPOT	<u>SPOT 2 UP</u>		
Q 46 RETURN	Q 43		
Q 47 BLACKOUT			
Q 47.3 SCENE CHANGE			

Table C.2 Continued

Q 47.6	SCENE CHANGE OUT			
Q 48	JAIL		BACK LIGHT AND DROP	LT BLUE
Q 49	LIVING IN STYLE	<u>SPOT 1 UP</u>	TURK CROSS LIGHT AMBER SIDE	BLUE
Q 50	RETURN	<u>SPOT 1 OUT</u>	Q 48	
Q 51	JELOUSY DUET	SPOT 1 AND 2 UP	FADE DOWN STATE JUST BLUE CROSS	CONFL IN CYC
Q 52	RETURN TO 50	SPTO 1 + 2 OUT		LT BLUE
Q 53	ACT 2 FINIALLY	SPOT 1 AND2	HIGH SIDES AND SHINS	RED ORAN
Q 54	BLACKOUT			
Q 55	HOUSE UP			
Q 56	PRESET UP			
Q 57	HOUSE HALF			
Q 58	HOUSE OUT			
Q 59	CONDUCTOR	<u>SPOT 1 UP</u>		
Q 60	CODUCTOR OUT	<u>SPOT 1 OUT</u>		
Q 61	PRESET OUT			
Q 62	EVENING PEACHUM HOME		HI SIDE BLUE DRK BLUE SOME 321	DRK BLUE
Q 63	SEXUAL REPRISE	<u>SPOT 1 UP</u>	?	
Q 64	RETURN TO 63	<u>SPOT OUT</u>		
Q 65	SONG OF HUMAN EFFORT	SPOT UP1+3	EXPRESION WITH TOP ON BEGGERS	CYC?

Table C.2 Continued

Q 66 RETURN	SPOT 1+3 OUT		
Q 67 REPRISE HUMAN EFFORT	SPOT 1 UP ON PEACHUM		
Q 68 BLACKOUT	<u>SPOT ONE OUT</u>		
Q 69 CHANGE LIGHT			
Q 70 CHANGE OUT			
Q 71 LUCYS ARIA	<u>SPOT 1+3</u>	SIDE BACK AND FRONT	GREEN CYC
Q 72 ROOM AT OLD BAILES NIGHT?	<u>SPOT 1+3 OUT</u>	NITE JUST BACK LIGHT AND FRONT DRK BLU	
Q 73 SOLOMON SONG	SPOT 1+3UP	IN FRONT OF DROP	
Q 74 BLACKOUT			
Q 75 5 AM			DR BLUE
Q 76 SLOW FADE UP ON MORNING			DR BLUE
Q 77 CALL FROM GRAVE	SPOT 1+3	WHITE SHINS	RED
Q 78 RETURN	SPOT 1+3 OUT		

Table C.2 Continued

Q 79 MORE SUN RISE

Q 80 CALL FROM GRAVE

SPOT 1+3

WHITE SHINS

RED

Q 81 RETURN

SPOT 1+3 OUT

Q 82 EPITAPH

SPOT 1 AND 3

HIGH EXPRESSION

Q 83 FADE DOWN STAGE

Q 84 FULL STAGE BACK UP

Q 85 GALLOS EARLY MORNING

Q 86 FINILLY

Q 87 SPOT UP ON TIGER

Q 88 SPOT UP ON MACHEATH

SPOT 1

Q 89 SPOT UP ON POLLY

SPOT 2

Q 90 MRS PEACHUM

Table C.2 Continued

Q 91 PEACHUM
Q92 SLOW FADE
93 CURTIAN CALL
94 HOUSE UP
95 POST SHOW

APPENDIX D

ANSI CUES

PRINTED FROM AN ETC EXPRESSION 3 LIGHTING CONSOLE

Table D.1 Cues 1-600

Cue 1.0

Up 3

Down 3

Chan 41@ 5f 42@ 5f 43@ 5f 44@ 5f 45@ 5f 46@ 5f 47@ 5f 48@ 5f 49@ 5f
Chan 50@ 5f 51@ 5f 52@ 5f 53@ 5f 54@ 5f 55@ 5f 56@ 5f 108@ ff 201@ 4
Chan 213@ ff 255@ ad 282@ ad 283@ ad 284@ ad 285@ ad 287@ ad 288@ ad

Up 2

Down 2

Chan 41@ 5f 42@ 5f 43@ 5f 44@ 5f 45@ 5f 46@ 5f 47@ 5f 48@ 5f 49@ 5f
Chan 50@ 5f 51@ 5f 52@ 5f 53@ 5f 54@ 5f 55@ 5f 56@ 5f 105@ ff 108@ ff
Chan 201@ 4c 213@ ff 255@ ad 282@ ad 283@ ad 284@ ad 285@ ad 287@ ad
Chan 288@ ad

Cue 3.0

Up 2

Down 2

Chan 41@ 5f 42@ 5f 43@ 5f 44@ 5f 45@ 5f 46@ 5f 47@ 5f 48@ 5f 49@ 5f
Chan 50@ 5f 51@ 5f 52@ 5f 53@ 5f 54@ 5f 55@ 5f 56@ 5f 108@ ff 201@ 4c
Chan 213@ ff 255@ ad 282@ ad 283@ ad 284@ ad 285@ ad 287@ ad 288@ ad
Chan

Cue 3.5

Up 2

Down 2

Chan 41@ 5f 42@ 5f 43@ 5f 44@ 5f 45@ 5f 46@ 5f 47@ 5f 48@ 5f 49@ 5f
Chan 50@ 5f 51@ 5f 52@ 5f 53@ 5f 54@ 5f 55@ 5f 56@ 5f 108@ ff 201@ 4c
Chan 213@ ff 255@ 61 282@ 61 283@ 61 284@ 61 285@ 61 287@ 61 288@ 61
Chan

Cue 4.0

Up 2

Down 2

Chan 41@ 5f 42@ 5f 43@ 5f 44@ 5f 45@ 5f 46@ 5f 47@ 5f 48@ 5f 49@ 5f
Chan 50@ 5f 51@ 5f 52@ 5f 53@ 5f 54@ 5f 55@ 5f 56@ 5f 108@ ff 201@ 4c
Chan 213@ ff 287@ f2 288@ f2

Cue 5.0

Up 4

Down 4

Chan 287@ f2 288@ f2 353@ ff 354@ ff

Cue 6.0

Up 5

Down 5

Chan 1@ 57 2@ 57 3@ 57 4@ 57 5@ 57 6@ 57 7@ 57 8@ 57 9@ 57 10@ 57 11@ 57
Chan 12@ 57 81@ b1 82@ b1 83@ b1 91@ b1 92@ b1 93@ b1 115@ 5d 123@ 3c
Chan 124@ 3c 126@ 66 135@ 77 137@ 80 151@ c8 154@ 96 164@ d9 287@ f2
Chan 288@ f2 353@ ff 354@ ff

Cue 7.0

Up 0

Down 0

Chan 1@ 4a 2@ 4a 3@ 4a 4@ 4a 5@ 4a 84@ ff 85@ ff 86@ ff 94@ ff 95@ ff
Chan 96@ ff 105@ ff 115@ 5d 135@ ff 287@ f2 288@ f2 339@ ff 340@ ff
Chan 353@ f0 354@ ff

Table D.1 Continued

Cue 8.0

Up 0

Down 0

Chan 1@ 4a 2@ 4a 3@ 4a 4@ 4a 5@ 4a 84@ ff 85@ ff 86@ ff 94@ ff 95@ ff

Chan 96@ ff 105@ ff 114@ ff 115@ 5d 135@ ff 161@ ff 162@ ff 163@ ff

Chan 164@ d9 287@ f2 288@ f2 339@ ff 340@ ff 353@ f0 354@ ff

Cue 9.0

Up 2

Down 2

Chan 1@ 4a 2@ 4a 3@ 4a 4@ 4a 5@ 4a 84@ ff 85@ ff 86@ ff 94@ ff 95@ ff

Chan 96@ ff 105@ ff 106@ ff 114@ ff 115@ 5d 135@ ff 161@ ff 162@ ff

Chan 163@ ff 164@ d9 287@ f2 288@ f2 339@ ff 340@ ff 353@ f0 354@ ff

Chan

Cue 10.0

Up 2

Down 2

Chan 1@ 4a 2@ 4a 3@ 4a 4@ 4a 5@ 4a 84@ ff 85@ ff 86@ ff 94@ ff 95@ ff

Chan 96@ ff 106@ ff 114@ ff 115@ 5d 135@ ff 161@ ff 162@ ff 163@ ff

Chan 164@ d9 287@ f2 288@ f2 339@ ff 340@ ff 353@ f0 354@ ff

Cue 11.0

Up 0

Down 0

Chan 41@ 4d 44@ 4d 45@ 4d 46@ 4d 47@ 4d 48@ 4d 49@ 4d 50@ 4d 51@ 4d

Chan 52@ 4d 53@ 4d 54@ 4d 55@ 4d 56@ 4d 287@ f2 288@ f2 339@ ff 340@ ff

Chan 353@ f0 354@ ff

Cue 12.0

Up 0

Down 0

Chan 209@ 7e 210@ 7e 211@ 7e 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24

Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf

Chan 341@ bf 342@ bf 354@ ff

Cue 13.0

Up 5

Down 2

Chan 22@ a7 23@ a7 24@ a7 25@ 02 26@ 02 27@ 02 28@ 02 29@ 02 30@ 02

Chan 31@ 02 32@ 02 84@ ff 85@ ff 86@ ff 95@ 29 96@ ff 124@ 8e 135@ a5

Chan 148@ ce 149@ ce 161@ ce 201@ 26 301@ 24 302@ 24 303@ 24 304@ 24

Chan 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24

Chan 339@ bf 341@ bf 342@ bf 354@ ed 374@ 9e

Cue 14.0

Up 1

Down 1

Chan 41@ a9 42@ a9 43@ a9 44@ a9 45@ a9 46@ a9 47@ a9 48@ a9 49@ a9

Chan 50@ a9 51@ a9 52@ a9 53@ a9 54@ a9 55@ a9 56@ a9 84@ ff 85@ ff

Chan 86@ ff 95@ 2b 96@ ff 105@ ff 108@ ff 114@ ff 124@ 8e 135@ a5 137@ ff

Chan 148@ ce 149@ ce 161@ ce 181@ 66 182@ 12 183@ 12 213@ ff 301@ 24

Chan 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24

Chan 310@ 24 311@ 24 312@ 24 314@ 70 339@ bf 341@ bf 342@ bf 354@ ed

Chan 374@ 9e 376@ ff

Table D.1 Continued

Cue 15.0

Up 0

Down 0

Chan 6@ 6b 21@ 38 22@ a7 23@ a7 24@ a7 25@ 02 26@ 4f 27@ 66 28@ 8a 29@ 14

Chan 30@ 4a 31@ 02 32@ 14 84@ ff 85@ ff 86@ ff 95@ 2b 96@ ff 124@ 8e

Chan 135@ a5 148@ ce 149@ ce 152@ 2b 161@ ce 181@ 66 182@ 21 183@ 12

Chan 201@ 26 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24

Chan 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 341@ bf 342@ bf

Chan 354@ ed 374@ 9e

Cue 16.0

Up 1:00

Down 1:00

Chan 1@ 11 2@ 11 3@ 11 4@ 11 5@ 11 6@ 11 7@ 11 8@ 11 9@ 11 10@ 11 11@ 11

Chan 12@ 33 16@ 26 21@ 41 22@ b8 23@ b8 24@ b8 25@ 17 26@ 54 27@ 5e

Chan 28@ 48 29@ 2e 30@ 52 31@ 17 32@ 17 36@ 26 81@ 29 82@ 29 83@ 29

Chan 84@ ff 85@ ff 86@ ff 91@ 29 93@ 29 96@ ff 124@ 8e 134@ 11 135@ a5

Chan 136@ 11 137@ 11 148@ ce 149@ ce 161@ ce 181@ 69 182@ 29 183@ 12

Chan 201@ 4d 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24

Chan 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 341@ bf 342@ bf

Chan 354@ ed 374@ 9e

Cue 17.0

Up 2:30

Down 2:30

Chan 1@ 4e 2@ 4e 3@ 4e 4@ 4e 5@ 4e 7@ 4e 8@ 4e 9@ 87 10@ 1c 11@ 4e 12@ 4e

Chan 16@ 44 21@ 61 22@ f2 23@ f2 24@ f2 25@ 5b 26@ 66 27@ 67 28@ 64

Chan 29@ c7 30@ 65 31@ 5b 32@ 5b 36@ 63 81@ ab 82@ ab 83@ ab 84@ ff

Chan 85@ ff 86@ ff 91@ ab 93@ ab 96@ ff 124@ ab 134@ 78 135@ a5 136@ 4b

Chan 137@ 4b 148@ ce 149@ ce 151@ 2d 152@ 2d 153@ 2d 161@ ce 164@ 88

Chan 181@ 69 182@ 29 183@ 12 201@ 4d 301@ 24 302@ 24 303@ 24 304@ 24

Chan 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24

Chan 339@ bf 340@ 3a 341@ bf 342@ bf 354@ ef 374@ 9e

Cue 18.0

Up 0

Down 0

Chan 46@ 78 47@ 78 48@ 78 49@ 78 50@ 78 51@ 78 52@ 78 53@ 78 54@ 78

Chan 55@ 78 56@ 78 105@ ff 106@ ff 108@ 7c 161@ ff 163@ ff 213@ 7c 301@ 24

Chan 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24

Chan 310@ 24 311@ 24 312@ 24 339@ bf 340@ 47 341@ bf 342@ bf 354@ ed

Chan 374@ 9e

Cue 19.0

Up 0

Down 0

Chan 46@ 6e 47@ 6e 48@ 6e 49@ 6e 50@ 6e 51@ 6e 52@ 6e 53@ 6e 54@ 6e

Chan 55@ 6e 56@ 6e 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24

Chan 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ 47 341@ bf

Chan 342@ bf 354@ ed 374@ 9e

Cue 20.0

Up 3

Down 3

Table D.1 Continued

Chan 84@ c3 85@ c3 86@ c3 87@ c3 88@ c3 89@ c3 90@ c3 94@ c3 95@ c3
Chan 96@ c3 116@ 23 135@ db 136@ 1a 141@ 66 142@ 66 143@ 66 144@ 66
Chan 145@ 66 146@ 66 147@ 66 148@ 78 149@ 78 161@ ee 301@ 24 302@ 24
Chan 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24
Chan 311@ 24 312@ 24 339@ bf 340@ 47 341@ bf 342@ bf 353@ f0 354@ ed
Chan 374@ 9e

Cue 21.0

Up 2

Down 2

Chan 1@ 26 2@ 26 3@ 26 4@ 26 5@ 26 6@ 26 7@ 26 8@ 26 84@ c3 85@ c3 86@ c3
Chan 87@ c3 88@ c3 89@ c3 90@ c3 94@ c3 95@ c3 96@ c3 116@ 23 123@ 4d
Chan 135@ db 136@ 1a 141@ 66 142@ 66 143@ 66 144@ 66 145@ 66 146@ 66
Chan 147@ 66 148@ 78 149@ 78 151@ 3f 152@ 3f 153@ 3f 154@ 3b 155@ 3b
Chan 156@ 3b 161@ ee 164@ 3f 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24
Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf
Chan 340@ 47 341@ bf 342@ bf 353@ f0 354@ ed 374@ 9e

Cue 22.0

Up 3

Down 3

Chan 1@ 4d 2@ 4d 3@ 4d 4@ 4d 5@ 4d 6@ 4d 7@ 4d 8@ 4d 9@ 4d 84@ c3 85@ c3
Chan 86@ c3 87@ c3 88@ c3 89@ c3 90@ c3 94@ c3 95@ c3 96@ c3 116@ 23
Chan 123@ 4d 135@ db 136@ 1a 141@ cf 142@ cf 143@ cf 144@ cf 145@ cf
Chan 146@ cf 147@ 66 148@ 78 149@ 78 151@ 66 152@ 66 153@ 66 154@ 62
Chan 155@ 62 156@ 62 161@ ee 162@ 69 164@ 66 301@ 24 302@ 24 303@ 24
Chan 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24
Chan 312@ 24 339@ bf 340@ 47 341@ bf 342@ bf 353@ f0 354@ ed 374@ 9e

Chan

Cue 23.0

Up 0

Down 0

Chan 84@ c3 85@ c3 86@ c3 87@ c3 88@ c3 89@ c3 90@ c3 94@ c3 95@ c3
Chan 96@ c3 105@ ff 116@ 23 123@ 4d 135@ db 136@ 1a 141@ cf 142@ cf
Chan 143@ cf 144@ cf 145@ cf 146@ cf 147@ 66 148@ 78 149@ 78 151@ 66
Chan 152@ 66 153@ 66 154@ 62 155@ 62 156@ 62 161@ ee 162@ 69 164@ 66
Chan 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24
Chan 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ 47 341@ bf 342@ bf
Chan 353@ f0 354@ ed 374@ 9e

Cue 24.0

Up 0

Down 0

Chan 1@ 13 2@ 4d 3@ 4d 4@ 4d 5@ 4d 6@ 4d 7@ 4d 8@ 4d 9@ 4d 84@ c3 85@ c3
Chan 86@ c3 87@ c3 88@ c3 89@ c3 90@ c3 94@ c3 95@ c3 96@ c3 116@ 23
Chan 123@ 4d 135@ db 136@ 1a 141@ cf 142@ cf 143@ cf 144@ cf 145@ cf
Chan 146@ cf 147@ 66 148@ 78 149@ 78 151@ 66 152@ 66 153@ 66 154@ 62
Chan 155@ 62 156@ 62 161@ ee 162@ 69 164@ 66 301@ 24 302@ 24 303@ 24
Chan 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24
Chan 312@ 24 339@ bf 340@ 47 341@ bf 342@ bf 353@ f0 354@ ed 374@ 9e

Chan

Cue 25.0

Table D.1 Continued

Up 4

Down 4

Chan 1@ 7a 2@ 7a 3@ 7a 4@ 7a 5@ 7a 6@ 7a 7@ 7a 8@ 7a 9@ 7a 11@ 36 14@ 17
Chan 16@ 2b 84@ c3 85@ c3 86@ c3 87@ c3 88@ c3 89@ c3 90@ c3 94@ 21
Chan 95@ c3 96@ c3 116@ 23 123@ 4d 135@ db 136@ 1a 141@ cf 142@ cf 143@ cf
Chan 144@ cf 145@ cf 146@ cf 147@ 66 151@ 66 152@ c5 153@ c5 155@ c1
Chan 156@ c1 162@ 69 164@ c5 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24
Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ 5c
Chan 340@ 47 341@ 5c 342@ 5c 353@ f0 354@ ed 371@ 8f 372@ 8f 373@ 8f
Chan 374@ 9e

Cue 26.0

Up 1

Down 1

Chan 90@ c3 93@ d4 105@ ff 107@ ff 109@ 70 110@ ff 111@ c4 135@ ff 136@ 98
Chan 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24
Chan 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ 47 341@ bf 342@ bf
Chan 353@ f0 354@ ed 371@ 8f 372@ 8f 373@ 8f 374@ 9e

Cue 27.0

Up 3

Down 3

Chan 1@ 7a 2@ 7a 3@ 7a 4@ 7a 5@ 7a 6@ 7a 7@ 7a 8@ 7a 9@ 7a 11@ 36 14@ 17
Chan 16@ 4d 18@ 4d 84@ c3 85@ c3 86@ c3 87@ c3 88@ c3 89@ c3 90@ c3
Chan 94@ 21 95@ c3 96@ c3 116@ 23 123@ 4d 135@ db 136@ 1a 141@ cf 142@ cf
Chan 143@ cf 144@ cf 145@ cf 146@ cf 147@ 66 151@ 66 152@ c5 153@ c5
Chan 155@ c1 156@ c1 162@ 69 164@ c5 301@ 24 302@ 24 303@ 24 304@ 24
Chan 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24
Chan 339@ 5c 340@ 47 341@ 5c 342@ 5c 353@ f0 354@ ed 371@ 8f 372@ 8f
Chan 373@ 8f 374@ 45 375@ 45 376@ 45

Cue 28.0

Up 0

Down 0

Chan 61@ ff 62@ ff 63@ ff 64@ ff 65@ ff 66@ ff 67@ ff 68@ ff 69@ ff
Chan 105@ a8 106@ ff 112@ 24 113@ ff 134@ 4a 136@ 6d 148@ ff 149@ ff
Chan 151@ 22 152@ 22 153@ 22 154@ 22 155@ 22 156@ 22 161@ ff 164@ 5d
Chan 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24
Chan 309@ 24 310@ 24 311@ 24 312@ 24 339@ 5c 340@ 47 341@ 5c 342@ 5c
Chan 353@ f0 354@ ed 371@ 8f 372@ 8f 373@ 8f 374@ 45 375@ 45 376@ 45
Chan

Cue 29.0

Up 0

Down 0

Chan 1@ 7a 2@ 7a 3@ 7a 4@ 7a 5@ 7a 6@ 7a 7@ 7a 8@ 7a 9@ 7a 11@ 36 14@ 17
Chan 16@ 4d 84@ c3 85@ c3 86@ c3 87@ c3 88@ c3 89@ c3 90@ c3 94@ 21
Chan 95@ c3 96@ c3 116@ 23 123@ 4d 135@ db 136@ 1a 141@ cf 142@ cf 143@ cf
Chan 144@ cf 145@ cf 146@ cf 147@ 66 151@ 66 152@ c5 153@ c5 155@ c1
Chan 156@ c1 162@ 69 164@ c5 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24
Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ 5c
Chan 340@ 47 341@ 5c 342@ 5c 353@ f0 354@ ed 371@ 8f 372@ 8f 373@ 8f
Chan 374@ 45 375@ 45 376@ 45

Table D.1 Continued

Cue 30.0

Up 3

Down 3

Chan 41@ b8 42@ b8 43@ b8 44@ b8 45@ b8 46@ b8 47@ b8 48@ b8 49@ b8
Chan 50@ b8 51@ b8 52@ b8 105@ 78 116@ 23 123@ 4d 135@ db 136@ ff 141@ ff
Chan 144@ ff 151@ 40 152@ 8c 153@ 40 154@ 8c 301@ 24 302@ 24 303@ 24
Chan 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24
Chan 312@ 24 339@ 5c 340@ 47 341@ 5c 342@ 5c 353@ f0 354@ ed 371@ 8f
Chan 372@ 8f 373@ 8f 374@ 9e

Cue 31.0

Up 3

Down 3

Chan 1@ 05 2@ 36 3@ 36 4@ 36 6@ 36 7@ 36 8@ 36 9@ 36 10@ 36 11@ 36 12@ 36
Chan 14@ 36 15@ 36 16@ 36 84@ c3 85@ c3 86@ c3 87@ c3 88@ c3 89@ c3
Chan 90@ c3 94@ 21 95@ c3 96@ c3 116@ 23 123@ 4d 135@ db 136@ 1a 141@ cf
Chan 142@ cf 143@ cf 144@ cf 145@ cf 146@ cf 147@ 66 151@ 7a 152@ 7a
Chan 153@ 7a 154@ 7a 155@ 7a 156@ 7a 162@ 69 164@ c5 301@ 24 302@ 24
Chan 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24
Chan 311@ 24 312@ 24 339@ bf 340@ 47 341@ 5c 342@ 5c 353@ f0 354@ ed
Chan 371@ 8f 372@ 8f 373@ 8f 374@ 9e

Cue 32.0

Up 1.5

Down 1.5

Chan 46@ 29 47@ 29 48@ 29 49@ 29 50@ 29 51@ 29 52@ 29 53@ 29 54@ 29
Chan 55@ 29 105@ 78 107@ ff 161@ ff 162@ bf 301@ 24 302@ 24 303@ 24
Chan 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24
Chan 312@ 24 339@ bf 340@ 47 341@ 5c 342@ 5c 353@ f0 354@ ed 371@ 8f
Chan 372@ 8f 373@ 8f 374@ 9e

Cue 34.0

Up 4

Down 4

Chan 46@ 4d 47@ 4d 48@ 4d 49@ 4d 50@ 4d 51@ 4d 52@ 4d 301@ 24 302@ 24
Chan 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24
Chan 311@ 24 312@ 24 339@ bf 340@ 47 341@ 5c 342@ 5c 354@ ed 371@ 8f
Chan 372@ 8f 373@ 8f 374@ 9e

Cue 35.0

Up 3

Down 3

Chan 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24
Chan 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ 47 341@ 5c 342@ 5c
Chan 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ 9e

Cue 36.0

Up 3

Down 3

Chan 1@ 0e 2@ a6 3@ a6 4@ a6 5@ 0e 6@ 4a 7@ 4a 8@ a6 9@ a6 10@ 4a 11@ a6
Chan 12@ 80 16@ 36 81@ 7e 82@ 4b 83@ 4b 91@ a4 92@ a4 93@ a4 124@ 43
Chan 134@ 7d 136@ 7d 137@ a7 151@ d7 154@ d7 156@ d7 164@ 31 201@ 4d
Chan 339@ bf 340@ 7b 341@ 18 342@ 18 354@ ff 371@ 4b 372@ 4b 373@ 4b
Chan 374@ 5a

Table D.1 Continued

Cue 37.0

Up 0

Down 0

Chan 81@ 33 82@ 33 83@ 33 91@ 33 92@ 33 93@ 33 105@ a8 107@ ff 135@ 59

Chan 136@ 59 154@ 6e 155@ 6e 156@ 6e 161@ ff 162@ ff 163@ ff 203@ 7a

Chan 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24

Chan 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ bf 341@ 5c 342@ 5c

Chan 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ 9e

Cue 38.0

Up 0.2

Down 0.2

Chan 1@ 29 2@ a5 3@ a6 4@ a5 5@ 80 6@ a2 7@ a2 8@ a2 9@ c9 10@ 80 11@ 80

Chan 16@ 51 81@ 33 82@ 33 83@ 33 91@ 33 92@ 33 93@ 33 124@ 2a 134@ 6b

Chan 135@ 0f 136@ 6b 137@ 83 151@ 6e 152@ 6e 153@ 6e 154@ 6e 155@ 6e

Chan 156@ 6e 164@ 75 201@ 4d 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24

Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf

Chan 340@ bf 341@ 5c 342@ 5c 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf

Chan 375@ cf 376@ cf

Cue 38.5

Up 0

Down 0

Chan 1@ 34 2@ 4c 3@ 4d 4@ 4c 5@ 27 6@ 49 7@ 49 8@ 49 9@ 49 10@ 27 11@ 27

Chan 12@ 08 105@ ff 134@ 12 136@ 12 137@ 2a 151@ 15 152@ 15 153@ 15

Chan 154@ 15 155@ 15 156@ 15 164@ 1c 301@ 24 302@ 24 303@ 24 304@ 24

Chan 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24

Chan 339@ bf 340@ bf 341@ 5c 342@ 5c 354@ ff 371@ 8f 372@ 8f 373@ 8f

Chan 374@ cf 375@ cf 376@ cf

Cue 38.7

Up 0

Down 0

Chan 1@ 8d 2@ a5 3@ a6 4@ a5 5@ 80 6@ a2 7@ a2 8@ a2 9@ a2 10@ 80 11@ 80

Chan 12@ 61 16@ 51 81@ 33 82@ 33 83@ 33 91@ 33 92@ 33 93@ 33 124@ 2a

Chan 134@ 6b 135@ 0f 136@ 6b 137@ 83 151@ 6e 152@ 6e 153@ 6e 154@ 6e

Chan 155@ 6e 156@ 6e 164@ 75 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24

Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf

Chan 340@ bf 341@ 5c 342@ 5c 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf

Chan 375@ cf 376@ cf

Cue 39.0

Up 0

Down 0

Chan 3@ d9 61@ cc 62@ cc 63@ cc 64@ cc 65@ cc 66@ cc 67@ 54 68@ 54 69@ 54

Chan 70@ 54 71@ 54 72@ 54 108@ bf 113@ 33 114@ 57 134@ 6e 136@ 80 213@ bf

Chan 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24

Chan 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ bf 341@ 5c 342@ 5c

Chan 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Chan

Cue 40.0

Up 0

Down 0

Table D.1 Continued

Chan 3@ d9 61@ cc 62@ cc 63@ cc 64@ cc 65@ cc 66@ cc 67@ 54 68@ 54 69@ 54
Chan 70@ 54 71@ 54 72@ 54 105@ ff 108@ bf 113@ 33 114@ 57 134@ 6e 136@ 80
Chan 213@ bf 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24
Chan 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ bf 341@ 5c
Chan 342@ 5c 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf
Chan 388@ 2b

Cue 41.0

Up 0

Down 0

Chan 3@ d9 61@ cc 62@ cc 63@ cc 64@ cc 65@ cc 66@ cc 67@ 54 68@ 54 69@ 54
Chan 70@ 54 71@ 54 72@ 54 105@ ff 106@ ff 108@ bf 113@ 33 114@ 57 134@ 6e
Chan 136@ 80 213@ bf 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24
Chan 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ bf
Chan 341@ 5c 342@ 5c 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf
Chan 376@ cf 388@ 2b

Cue 44.0

Up 3

Down 3

Chan 3@ d9 61@ cc 62@ cc 63@ cc 64@ cc 65@ cc 66@ cc 67@ 54 68@ 54 69@ 54
Chan 70@ 54 71@ 54 72@ 54 105@ ff 106@ ff 108@ bf 112@ bf 113@ 33 114@ 57
Chan 131@ 5c 132@ 5c 133@ 5c 134@ 1a 136@ 80 213@ bf 301@ 24 302@ 24
Chan 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24
Chan 311@ 24 312@ 24 339@ bf 340@ bf 341@ 5c 342@ 5c 354@ ff 371@ 8f
Chan 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 45.0

Up 0

Down 0

Chan 255@ ad 282@ ad 283@ ad 284@ ad 285@ ad 287@ ad 288@ ad 301@ 24
Chan 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24
Chan 310@ 24 311@ 24 312@ 24 339@ bf 340@ bf 341@ 5c 342@ 5c 354@ ff
Chan 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 46.0

Up 3

Down 3

Chan 46@ 4d 47@ 4d 48@ 4d 49@ 4d 50@ 4d 51@ 4d 52@ 4d 53@ 4d 54@ 4d
Chan 55@ 4d 108@ b3 201@ 40 213@ b3 255@ ad 282@ ad 283@ ad 284@ ad
Chan 285@ ad 287@ ad 288@ ad 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24
Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf
Chan 340@ bf 341@ 5c 342@ 5c 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf
Chan 375@ cf 376@ cf 388@ 2b

Cue 46.5

Up 2

Down 2

Chan 46@ 4d 47@ 4d 48@ 4d 49@ 4d 50@ 4d 51@ 4d 52@ 4d 53@ 4d 54@ 4d
Chan 55@ 4d 108@ b3 201@ 40 213@ b3 255@ 64 282@ 64 283@ 64 284@ 64
Chan 285@ 64 287@ 64 288@ 64 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24
Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf
Chan 340@ bf 341@ 5c 342@ 5c 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf
Chan 375@ cf 376@ cf 388@ 2b

Table D.1 Continued

Cue 47.0

Up 2

Down 2

Chan 108@ b3 201@ 40 213@ b3 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24

Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf

Chan 340@ bf 341@ 5c 342@ 5c 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf

Chan 375@ cf 376@ cf 388@ 2b

Cue 48.0

Up 3

Down 3

Chan 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24

Chan 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ bf 341@ 5c 342@ 5c

Chan 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Chan

Cue 49.0

Up 3

Down 3

Chan 1@ 4f 2@ 9e 3@ 9e 5@ 26 6@ 17 7@ 9e 9@ c2 10@ 3d 11@ 9e 12@ 6e

Chan 81@ 9c 82@ 9c 83@ 9c 116@ 4d 123@ 47 135@ 40 136@ 40 137@ 70 152@ cf

Chan 153@ ff 156@ 26 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24

Chan 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ bf

Chan 341@ 5c 342@ 5c 351@ 26 353@ 7d 354@ ff 371@ 8f 372@ 8f 373@ 8f

Chan 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 50.0

Text happy spots

Up 6

Down 6

Chan 41@ fa 42@ fa 43@ fa 44@ fa 45@ fa 46@ fa 47@ fa 48@ fa 49@ fa

Chan 50@ fa 51@ fa 52@ fa 53@ fa 54@ fa 55@ fa 56@ d7 105@ b5 107@ ff

Chan 108@ 73 109@ 3d 110@ 9d 135@ ff 136@ 5d 213@ ff 301@ 24 302@ 24

Chan 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24

Chan 311@ 24 312@ 24 339@ bf 340@ bf 341@ 5c 342@ 5c 351@ 26 353@ 7d

Chan 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Chan

Cue 51.0

Text warm spots

Up 3

Down 3

Chan 105@ 63 203@ 5e 213@ 78 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24

Chan 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf

Chan 340@ bf 341@ 5c 342@ 5c 351@ 26 353@ 7d 354@ ff 371@ 8f 372@ 8f

Chan 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 52.0

Up 0

Down 0

Chan 213@ 78 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24

Chan 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ bf 341@ 5c

Chan 342@ 5c 351@ 26 354@ ff 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf

Chan 376@ cf 388@ 2b

Table D.1 Continued

Cue 53.0

Up 3

Down 3

Chan 41@ 69 42@ 69 43@ 69 44@ 69 45@ 69 46@ 69 47@ 69 48@ 69 49@ 69
Chan 50@ 69 51@ 69 52@ 69 53@ 69 54@ 69 55@ 69 105@ 80 108@ 4f 161@ e8
Chan 162@ ff 163@ 1a 164@ 99 213@ a3 301@ 24 302@ 24 303@ 24 304@ 24
Chan 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24 312@ 24
Chan 339@ bf 340@ bf 341@ 5c 342@ 5c 351@ 26 354@ ff 371@ 8f 372@ 8f
Chan 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 54.0

Up 2

Down 2

Chan 41@ 69 42@ 69 43@ 69 44@ 69 45@ 69 46@ 69 47@ 69 48@ 69 49@ 69
Chan 50@ 69 51@ 69 52@ 69 53@ 69 54@ 69 55@ 69 301@ 24 302@ 24 303@ 24
Chan 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24 309@ 24 310@ 24 311@ 24
Chan 312@ 24 339@ bf 340@ bf 341@ 5c 342@ 5c 351@ 26 354@ ff 371@ 8f
Chan 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Followon 3.5

Cue 55.0

Up 3

Down 3

Chan 301@ 24 302@ 24 303@ 24 304@ 24 305@ 24 306@ 24 307@ 24 308@ 24
Chan 309@ 24 310@ 24 311@ 24 312@ 24 339@ bf 340@ bf 341@ bf 342@ bf
Chan 343@ bf 344@ bf 351@ 26 353@ 1f 354@ 1f 371@ 8f 372@ 8f 373@ 8f
Chan 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 56.0

Up 3

Down 3

Chan 11@ 4f 20@ ff 21@ 7a 22@ 7a 23@ 7a 24@ 7a 25@ 7a 26@ 7a 27@ 7a
Chan 28@ 7a 29@ 7a 30@ 07 31@ d1 32@ 07 36@ 73 41@ 9d 42@ 9d 43@ 9d
Chan 44@ 9d 45@ 9d 46@ 9d 47@ 9d 48@ 9d 49@ 9d 50@ 9d 51@ 9d 52@ 9d
Chan 53@ 9d 54@ 9d 55@ 9d 56@ 9d 84@ 7d 85@ 7d 86@ 7d 94@ 7d 95@ 7d
Chan 96@ 7d 103@ 5e 104@ ff 121@ 29 123@ 24 124@ 24 135@ 80 147@ ff
Chan 148@ ff 149@ cb 159@ cb 160@ cb 161@ cb 163@ cb 301@ 36 302@ 36
Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36
Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf 340@ bf
Chan 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 353@ 1f 354@ 1f 361@ 12
Chan 362@ 12 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf
Chan 388@ 2b

Cue 57.0

Up 0

Down 0

Chan 61@ d6 62@ ff 63@ ff 64@ ff 65@ d6 66@ d6 67@ d6 68@ d6 69@ d6
Chan 105@ f1 128@ 90 129@ ff 130@ ff 135@ 80 141@ ff 142@ ff 143@ ff
Chan 144@ ff 145@ ff 146@ ff 147@ ff 159@ ff 160@ ff 301@ 36 302@ 36
Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36
Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf 340@ bf
Chan 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 354@ 11 361@ 12 362@ 12
Chan 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Table D.1 Continued

Chan

Cue 58.0

Up 1

Down 1

Chan 61@ d6 62@ ff 63@ ff 64@ ff 65@ d6 66@ d6 67@ d6 68@ d6 69@ d6

Chan 105@ f1 106@ c5 128@ 90 129@ ff 130@ ff 135@ 80 141@ ff 142@ ff

Chan 143@ ff 144@ ff 145@ ff 146@ ff 147@ ff 159@ ff 160@ ff 301@ 36

Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36

Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf

Chan 340@ bf 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 354@ 11 361@ 12

Chan 362@ 12 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf

Chan 388@ 2b

Cue 59.0

Up 1

Down 1

Chan 61@ d6 62@ ff 63@ ff 64@ ff 65@ d6 66@ d6 67@ d6 68@ d6 69@ d6

Chan 105@ f1 128@ 90 129@ ff 130@ ff 135@ 80 141@ ff 142@ ff 143@ ff

Chan 144@ ff 145@ ff 146@ ff 147@ ff 159@ ff 160@ ff 301@ 36 302@ 36

Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36

Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf 340@ bf

Chan 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 354@ 11 361@ 12 362@ 12

Chan 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Chan

Cue 60.0

Up 1

Down 1

Chan 61@ d6 62@ ff 63@ ff 64@ ff 65@ d6 66@ d6 67@ d6 68@ d6 69@ d6

Chan 105@ f1 106@ c5 128@ 90 129@ ff 130@ ff 135@ 80 141@ ff 142@ ff

Chan 143@ ff 144@ ff 145@ ff 146@ ff 147@ ff 159@ ff 160@ ff 301@ 36

Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36

Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf

Chan 340@ bf 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 354@ 11 361@ 12

Chan 362@ 12 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf

Chan 388@ 2b

Cue 61.0

Up 1

Down 1

Chan 61@ d6 62@ ff 63@ ff 64@ ff 65@ d6 66@ d6 67@ d6 68@ d6 69@ d6

Chan 105@ f1 128@ 90 129@ ff 130@ ff 135@ 80 141@ ff 142@ ff 143@ ff

Chan 144@ ff 145@ ff 146@ ff 147@ ff 159@ ff 160@ ff 301@ 36 302@ 36

Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36

Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf 340@ bf

Chan 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 354@ 11 361@ 12 362@ 12

Chan 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Chan

Cue 62.0

Up 2

Down 2

Chan 61@ d6 62@ ff 63@ ff 64@ ff 65@ d6 66@ d6 67@ d6 68@ d6 69@ d6

Table D.1 Continued

Chan 105@ f1 106@ c4 128@ 90 129@ ff 130@ ff 135@ 80 141@ ff 142@ ff
Chan 143@ ff 144@ ff 145@ ff 146@ ff 147@ ff 159@ ff 160@ ff 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf
Chan 340@ bf 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 354@ 11 361@ 12
Chan 362@ 12 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf
Chan 388@ 2b

Cue 63.0

Up 3

Down 3

Chan 61@ d6 62@ ff 63@ ff 64@ ff 65@ d6 66@ d6 67@ d6 68@ d6 69@ d6
Chan 105@ d9 106@ ff 128@ 90 129@ ff 130@ ff 135@ 80 141@ ff 142@ ff
Chan 143@ ff 144@ ff 145@ ff 146@ ff 147@ ff 159@ ff 160@ ff 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf
Chan 340@ bf 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 354@ 11 361@ 12
Chan 362@ 12 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf
Chan 388@ 2b

Cue 64.0

Up 3

Down 3

Chan 21@ 7a 22@ 7a 23@ 7a 24@ 7a 25@ 7a 26@ 7a 27@ 7a 28@ 7a 29@ 7a
Chan 30@ 07 31@ 07 32@ 07 36@ 73 41@ 9d 42@ 9d 43@ 9d 44@ 9d 45@ 9d
Chan 46@ 9d 47@ 9d 48@ 9d 49@ 9d 50@ 9d 51@ 9d 52@ 9d 53@ 9d 54@ 9d
Chan 55@ 9d 56@ 9d 84@ 7d 85@ 7d 86@ 7d 94@ 7d 95@ 7d 96@ 7d 103@ ff
Chan 104@ ff 123@ 24 124@ 24 135@ 80 147@ ff 148@ ff 149@ cb 159@ cb
Chan 160@ cb 161@ cb 163@ cb 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36
Chan 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36
Chan 314@ 36 315@ 36 316@ 36 339@ bf 340@ bf 341@ bf 342@ bf 343@ bf
Chan 344@ bf 351@ 1f 353@ 1f 354@ 1f 361@ 12 362@ 12 363@ 12 371@ 8f
Chan 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 65.0

Up 1

Down 1

Chan 26@ 7a 29@ 7a 36@ 73 41@ 9d 42@ 9d 43@ 9d 44@ 9d 45@ 9d 46@ 9d
Chan 47@ 9d 48@ 9d 49@ 9d 50@ 9d 51@ 9d 52@ 9d 53@ 9d 54@ 9d 55@ 9d
Chan 56@ 9d 84@ 7d 85@ 7d 86@ 7d 94@ 7d 95@ 7d 96@ 7d 103@ ff 104@ ff
Chan 121@ 4a 123@ 4a 124@ 4a 135@ 80 147@ ff 148@ ff 149@ cb 159@ cb
Chan 160@ cb 161@ cb 163@ cb 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36
Chan 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36
Chan 314@ 36 315@ 36 316@ 36 339@ bf 340@ bf 341@ bf 342@ bf 343@ bf
Chan 344@ bf 351@ 17 353@ 17 354@ 17 361@ 12 362@ 12 363@ 12 371@ 8f
Chan 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 66.0

Up 3

Down 3

Chan 41@ ff 42@ ff 43@ ff 44@ ff 45@ ff 46@ ff 47@ ff 48@ ff 49@ ff
Chan 50@ ff 51@ ff 52@ ff 53@ ff 54@ ff 55@ ff 56@ ff 135@ ff 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36

Table D.1 Continued

Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf
Chan 340@ bf 341@ bf 342@ bf 343@ bf 344@ bf 351@ 1f 353@ 1f 354@ 1f
Chan 361@ 12 362@ 12 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf 375@ cf
Chan 376@ cf 388@ 2b

Cue 67.0

Up 3

Down 3

Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ bf 340@ bf 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 353@ 1f
Chan 354@ 1f 361@ 12 362@ 12 363@ 12 371@ 8f 372@ 8f 373@ 8f 374@ cf
Chan 375@ cf 376@ cf 388@ 2b

Cue 68.0

Up 3

Down 3

Chan 209@ e2 210@ 8a 211@ 8a 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36
Chan 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36
Chan 314@ 36 315@ 36 316@ 36 339@ bf 340@ bf 341@ bf 342@ bf 343@ bf
Chan 344@ bf 351@ 26 353@ 1f 354@ 1f 361@ 12 362@ 12 363@ 12 371@ 8f
Chan 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 69.0

Up 3

Down 3

Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ bf 340@ bf 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 352@ ff
Chan 353@ 1f 354@ 1f 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 8f
Chan 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 70.0

Up 3

Down 3

Chan 2@ 69 3@ 69 4@ 69 6@ 57 7@ 80 8@ 69 10@ 21 42@ ff 43@ ff 44@ ff
Chan 47@ ff 48@ ff 122@ 7a 125@ 73 126@ b5 137@ a8 170@ 42 301@ 36 302@ 36
Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36
Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ bf 340@ bf
Chan 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f
Chan 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 8f 372@ 8f 373@ 8f
Chan 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 71.0

Up 1

Down 1

Chan 2@ 69 3@ 69 4@ 69 6@ 40 7@ 80 8@ 69 42@ ff 43@ ff 44@ ff 47@ ff
Chan 48@ ff 119@ bd 120@ bd 122@ ab 125@ 73 126@ b5 137@ a8 170@ 42
Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ bf 340@ bf 341@ bf 342@ bf 343@ bf 344@ bf 351@ 26 352@ ff
Chan 353@ 1f 354@ 1f 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 8f
Chan 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 72.0

Table D.1 Continued

Up 0.5

Down 0.5

Chan 2@ 69 3@ 69 4@ 69 6@ 40 7@ 80 8@ 69 42@ ff 43@ ff 44@ ff 47@ ff
Chan 48@ ff 122@ ab 125@ 73 126@ b5 137@ a8 170@ 42 301@ 36 302@ 36
Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36
Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf
Chan 341@ 38 342@ bf 343@ bf 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f
Chan 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 8f 372@ 8f 373@ 8f
Chan 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 73.0

Up 0

Down 0

Chan 2@ 34 3@ 34 4@ 34 7@ 34 42@ ff 43@ ff 44@ ff 47@ ff 48@ ff 105@ 8f
Chan 122@ ab 125@ 73 126@ 3b 135@ ff 148@ ff 159@ ff 161@ ff 163@ ff
Chan 170@ 1c 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36
Chan 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36
Chan 316@ 36 339@ 38 340@ bf 341@ 38 342@ bf 343@ bf 344@ bf 351@ 26
Chan 352@ d1 353@ 1f 354@ 1f 355@ d1 356@ ff 361@ 12 362@ 12 363@ 12
Chan 371@ 8f 372@ bf 373@ 8f 374@ cf 375@ bf 376@ cf 388@ 2b

Cue 74.0

Up 0

Down 0

Chan 2@ 69 3@ 69 4@ 69 6@ 40 7@ 99 8@ 80 27@ 5e 42@ ff 43@ ff 44@ ff
Chan 47@ ff 48@ ff 117@ 4d 118@ 4d 122@ ab 125@ 73 126@ b5 137@ a8 170@ 42
Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 38 342@ bf 343@ bf 344@ bf 351@ 26 352@ ff
Chan 353@ 1f 354@ 1f 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 8f
Chan 372@ 8f 373@ 8f 374@ cf 375@ cf 376@ cf 388@ 2b

Cue 75.0

Up 0

Down 0

Chan 2@ 69 3@ 69 4@ 69 6@ 40 7@ b3 8@ 99 27@ 28 42@ ff 43@ ff 44@ ff
Chan 47@ ff 48@ ff 117@ 4d 118@ 4d 119@ 73 120@ 73 122@ ab 125@ 73 126@ b5
Chan 137@ a8 170@ 42 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36
Chan 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36
Chan 315@ 36 316@ 36 339@ 38 340@ bf 341@ 38 342@ bf 343@ bf 344@ bf
Chan 351@ 26 352@ ff 353@ 1f 354@ 1f 355@ ff 356@ ff 361@ 12 362@ 12
Chan 363@ 12 371@ 8f 372@ bf 373@ 8f 374@ cf 375@ bf 376@ bf 388@ 2b
Chan

Cue 76.0

Up 0

Down 0

Chan 62@ ff 63@ ff 64@ ff 67@ ff 68@ ff 105@ 9d 106@ 9d 108@ ff 110@ ff
Chan 113@ d1 117@ 4d 122@ ff 125@ ff 126@ b5 134@ ff 170@ 42 213@ ff
Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 38 342@ bf 343@ bf 344@ bf 351@ 26 352@ f0
Chan 353@ 1f 354@ 1f 355@ f0 356@ ff 361@ 12 362@ 12 363@ 12 371@ 8f

Table D.1 Continued

Chan 372@ bf 373@ 8f 374@ cf 375@ bf 376@ cf 388@ 2b

Cue 77.0

Up 1

Down 1

Chan 2@ 69 3@ 69 4@ 69 6@ d9 7@ b3 8@ 99 27@ 28 42@ ff 43@ ff 44@ ff

Chan 47@ ff 48@ ff 113@ 49 117@ 4d 118@ 4d 119@ 73 120@ 73 122@ ab 125@ 73

Chan 126@ b5 137@ a8 170@ 42 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36

Chan 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36

Chan 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 38 342@ bf 343@ bf

Chan 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f 355@ ff 356@ ff 361@ 12

Chan 362@ 12 363@ 12 371@ 8f 372@ bf 373@ 8f 374@ cf 375@ bf 376@ bf

Chan 388@ 2b

Cue 79.0

Up 0

Down 0

Chan 6@ 40 105@ a6 122@ ab 125@ 73 126@ 57 134@ ff 135@ ff 301@ 36 302@ 36

Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36

Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 8c 340@ 8c

Chan 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f

Chan 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 8f 372@ bf 373@ 8f

Chan 374@ cf 375@ bf 376@ bf 388@ 2b

Cue 81.0

Up 0

Down 0

Chan 42@ ff 43@ ff 44@ ff 47@ ff 48@ ff 122@ ab 125@ 73 126@ b5 135@ ff

Chan 148@ ff 159@ ff 170@ 42 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36

Chan 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36

Chan 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c

Chan 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f 355@ ff 356@ ff 361@ 12

Chan 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 81.5

Up 2

Down 2

Chan 2@ 69 3@ 69 4@ 69 6@ 40 7@ c2 8@ 69 27@ 28 42@ ff 43@ ff 44@ ff

Chan 47@ ff 48@ ff 112@ 03 117@ 4d 118@ 4d 119@ 73 120@ 73 122@ ab 125@ 73

Chan 126@ b5 137@ a8 170@ 42 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36

Chan 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36

Chan 314@ 36 315@ 36 316@ 36 339@ 38 340@ 8c 341@ 8c 342@ bf 343@ 8c

Chan 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f 355@ ff 356@ ff 361@ 12

Chan 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 82.0

Up 0

Down 0

Chan 42@ ff 43@ 33 44@ 73 48@ 33 49@ cc 105@ ad 106@ b7 108@ ff 109@ ff

Chan 110@ ff 111@ ff 112@ 19 113@ 19 136@ ff 213@ ff 301@ 36 302@ 36

Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36

Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf

Chan 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f

Chan 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47

Table D.1 Continued

Chan 388@ 2b
Cue 83.0
Up 0
Down 0
Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff
Chan 353@ 1f 354@ 1f 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 47
Chan 372@ 47 373@ 47 388@ 2b
Cue 84.0
Up 0
Down 0
Chan 255@ b3 282@ b3 283@ b3 284@ b3 285@ b3 287@ b3 288@ b3 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f
Chan 354@ 1f 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47
Chan 373@ 47 388@ 2b
Cue 85.0
Up 2
Down 2
Chan 46@ 57 47@ 57 48@ 57 49@ 57 50@ 57 51@ 57 52@ 57 53@ 57 54@ 57
Chan 55@ 57 56@ 57 57@ 57 58@ 57 108@ ff 201@ 40 213@ ff 255@ b3 282@ b3
Chan 283@ b3 284@ b3 285@ b3 287@ b3 288@ b3 301@ 36 302@ 36 303@ 36
Chan 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36
Chan 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c
Chan 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f 355@ ff
Chan 356@ ff 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b
Chan
Cue 85.5
Up 3
Down 3
Chan 46@ 57 47@ 57 48@ 57 49@ 57 50@ 57 51@ 57 52@ 57 53@ 57 54@ 57
Chan 55@ 57 56@ 57 57@ 57 58@ 57 108@ ff 201@ 40 213@ ff 255@ 66 282@ 66
Chan 283@ 66 284@ 66 285@ 66 287@ 66 288@ 66 301@ 36 302@ 36 303@ 36
Chan 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36
Chan 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c
Chan 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f 355@ ff
Chan 356@ ff 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b
Chan
Cue 86.0
Up 0
Down 0
Chan 57@ 57 58@ 57 108@ ff 201@ 40 213@ ff 301@ 36 302@ 36 303@ 36 304@ 36
Chan 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36
Chan 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf
Chan 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f 355@ ff 356@ ff
Chan 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b
Cue 87.0

Table D.1 Continued

Up 3

Down 3

Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff
Chan 353@ 1f 354@ f0 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 47
Chan 372@ 47 373@ 47 388@ 2b

Cue 88.0

Up 3

Down 3

Chan 22@ b5 23@ b5 24@ b5 26@ b5 27@ b5 28@ b5 29@ b5 36@ 82 84@ c7
Chan 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 124@ 73 135@ 6e 141@ f7 142@ f7
Chan 143@ f7 144@ f7 145@ f7 146@ f7 151@ cf 154@ cf 201@ 4d 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f
Chan 354@ ed 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47
Chan 373@ 47 388@ 2b

Cue 89.0

Up 0

Down 0

Chan 1@ Of 2@ Of 3@ Of 4@ Of 5@ Of 6@ Of 7@ Of 8@ Of 9@ Of 10@ Of 11@ Of
Chan 12@ Of 13@ Of 14@ Of 15@ Of 16@ Of 17@ Of 18@ Of 19@ Of 20@ Of
Chan 21@ Of 22@ Of 23@ Of 24@ Of 25@ Of 26@ Of 27@ Of 28@ Of 29@ Of
Chan 30@ Of 31@ Of 32@ Of 33@ Of 34@ Of 35@ Of 36@ Of 41@ ff 84@ c7
Chan 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 108@ ff 124@ 73 135@ 6e 141@ f7
Chan 142@ f7 143@ f7 144@ f7 145@ f7 146@ f7 151@ cf 154@ cf 201@ 4d
Chan 213@ ff 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36
Chan 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36
Chan 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26
Chan 352@ ff 353@ 1f 354@ ed 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12
Chan 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 90.0

Up 1

Down 1

Chan 22@ b5 23@ b5 24@ b5 26@ b5 27@ b5 28@ b5 29@ b5 36@ 82 84@ c7
Chan 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 124@ 73 135@ 6e 141@ f7 142@ f7
Chan 143@ f7 144@ f7 145@ f7 146@ f7 151@ cf 154@ cf 201@ 4d 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f
Chan 354@ ed 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ bf 372@ bf
Chan 373@ bf 388@ 2b

Cue 91.0

Up 0

Down 0

Chan 84@ c7 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 105@ ff 109@ 69 110@ 69
Chan 111@ 69 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36
Chan 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36

Table D.1 Continued

Chan 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26
Chan 352@ ff 353@ 1f 354@ ed 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12
Chan 371@ bd 372@ bd 373@ bd 388@ 2b

Cue 92.0

Up 0

Down 0

Chan 22@ b5 23@ b5 24@ b5 26@ b5 27@ b5 28@ b5 29@ b5 36@ 82 84@ c7
Chan 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 124@ 73 135@ 6e 141@ f7 142@ f7
Chan 143@ f7 144@ f7 145@ f7 146@ f7 151@ cf 154@ cf 201@ 4d 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f
Chan 354@ ed 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ bf 372@ bf
Chan 373@ bf 388@ 2b

Cue 93.0

Up 0

Down 0

Chan 41@ 9e 42@ 9e 43@ 9e 44@ 9e 45@ 9e 46@ 9e 47@ 9e 48@ 9e 49@ 9e
Chan 84@ c7 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 105@ ff 109@ 69 110@ 69
Chan 111@ 69 127@ ff 135@ ff 201@ 4d 301@ 36 302@ 36 303@ 36 304@ 36
Chan 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36
Chan 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf
Chan 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f 354@ ed 355@ ff 356@ ff
Chan 361@ 12 362@ 12 363@ 12 371@ bd 372@ bd 373@ bd 388@ 2b

Cue 94.0

Up 0

Down 0

Chan 22@ b5 23@ b5 24@ b5 26@ b5 27@ b5 28@ b5 29@ b5 36@ 82 84@ c7
Chan 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 124@ 73 135@ 6e 141@ f7 142@ f7
Chan 143@ f7 144@ f7 145@ f7 146@ f7 151@ cf 154@ cf 201@ 4d 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f
Chan 354@ ed 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ bf 372@ bf
Chan 373@ bf 388@ 2b

Cue 95.0

Up 0

Down 0

Chan 41@ ff 84@ c7 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 108@ ff 124@ 73
Chan 135@ 6e 141@ f7 142@ f7 143@ f7 144@ f7 145@ f7 146@ f7 151@ cf
Chan 154@ cf 201@ 4d 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36
Chan 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36
Chan 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf
Chan 351@ 26 352@ ff 353@ 1f 354@ ed 355@ ff 356@ ff 361@ 12 362@ 12
Chan 363@ 12 371@ bf 372@ bf 373@ bf 388@ 2b

Cue 96.0

Up 1

Down 1

Chan 22@ b5 23@ b5 24@ b5 26@ b5 27@ b5 28@ b5 29@ b5 36@ 82 84@ c7

Table D.1 Continued

Chan 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 124@ 73 135@ 6e 141@ f7 142@ f7
Chan 143@ f7 144@ f7 145@ f7 146@ f7 151@ cf 154@ cf 301@ 36 302@ 36
Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36
Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf
Chan 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f 354@ ed
Chan 355@ ff 356@ ff 361@ 12 362@ 12 363@ 12 371@ bf 372@ bf 373@ bf
Chan 388@ 2b

Cue 97.0

Up 0

Down 0

Chan 41@ 9e 42@ 9e 43@ 9e 44@ 9e 45@ 9e 46@ 9e 47@ 9e 48@ 9e 49@ 9e
Chan 84@ c7 85@ c7 86@ c7 94@ 21 95@ d4 96@ c7 105@ ff 109@ 69 110@ 69
Chan 111@ 69 135@ ff 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36
Chan 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36
Chan 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf
Chan 351@ 26 352@ ff 353@ 1f 354@ ed 355@ ff 356@ ff 361@ 12 362@ 12
Chan 363@ 12 371@ bd 372@ bd 373@ bd 388@ 2b

Cue 98.0

Up 0

Down 0

Chan 209@ eb 210@ eb 211@ eb 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36
Chan 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36
Chan 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c
Chan 344@ bf 351@ 26 352@ ff 353@ 1f 354@ ed 355@ ff 356@ ff 361@ 12
Chan 362@ 12 363@ 12 371@ bd 372@ bd 373@ bd 388@ 2b

Cue 99.0

Up 3

Down 3

Chan 352@ e0 355@ e0

Cue 100.0

Up 2

Down 2

Chan 62@ b0 63@ b0 64@ b0 66@ a8 67@ 40 105@ 9e 107@ ff 122@ ff 125@ ff
Chan 134@ ff 136@ 2b 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36
Chan 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36
Chan 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf
Chan 351@ 26 352@ e0 353@ 1f 354@ 1f 355@ e0 356@ f0 361@ 12 362@ 12
Chan 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 101.0

Up 1

Down 1

Chan 21@ ad 22@ 96 23@ 08 26@ b3 27@ b3 41@ c9 42@ ff 43@ ff 46@ ff
Chan 47@ ff 122@ ff 125@ ff 134@ 45 135@ 80 136@ 2b 301@ 36 302@ 36
Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36
Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf
Chan 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ eb 353@ 1f 354@ 1f
Chan 355@ eb 356@ f0 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47
Chan 388@ 2b

Cue 102.0

Table D.1 Continued

Up 6

Down 6

Chan 21@ a6 22@ a6 23@ a6 24@ 66 26@ b3 27@ b3 28@ 4a 42@ ff 43@ ff
Chan 44@ ff 46@ ff 47@ ff 122@ ff 125@ 6e 134@ 45 135@ 80 136@ 2b 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ eb 353@ 1f
Chan 354@ 1f 355@ eb 356@ f0 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47
Chan 373@ 47 388@ 2b

Cue 102.5

Up 8

Down 8

Chan 21@ a6 22@ a6 23@ 66 24@ 66 26@ b3 27@ b3 28@ 4a 42@ ff 43@ ff
Chan 44@ ff 46@ ff 47@ ff 122@ ff 125@ ff 134@ 04 135@ 9c 136@ 2b 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ec 353@ 1f
Chan 354@ 1f 355@ ec 356@ f0 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47
Chan 373@ 47 388@ 2b

Cue 103.0

Up 2

Down 2

Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed
Chan 353@ 1f 354@ 1f 355@ ed 356@ f0 361@ 12 362@ 12 363@ 12 371@ 47
Chan 372@ 47 373@ 47 388@ 2b

Cue 104.0

Up 1

Down 1

Chan 46@ 4d 47@ 4d 48@ 4d 49@ 4d 50@ 4d 51@ 4d 52@ 4d 105@ 6b 107@ ff
Chan 108@ ff 161@ ff 162@ ff 163@ ff 164@ ff 213@ ff 301@ 36 302@ 36
Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36
Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf
Chan 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed 353@ 1f 354@ 1f
Chan 355@ ed 356@ f0 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47
Chan 388@ 2b

Cue 105.0

Up 1.5

Down 1.5

Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed
Chan 353@ 1f 354@ 1f 355@ ed 356@ f0 361@ 12 362@ 12 363@ 12 371@ 47
Chan 372@ 47 373@ 47 388@ 2b

Cue 106.0

Up 3

Down 3

Chan 22@ 69 23@ 69 24@ 69 27@ 87 28@ 6e 42@ ff 43@ ff 44@ ff 47@ ff

Table D.1 Continued

Chan 48@ ff 117@ 40 118@ 40 119@ 40 120@ 40 122@ ff 125@ ff 126@ ff
Chan 135@ 9e 136@ 2b 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36
Chan 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36
Chan 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf
Chan 351@ 26 352@ ed 353@ 1f 354@ 1f 355@ ed 356@ f0 361@ 12 362@ 12
Chan 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 107.0
Up 0
Down 0
Chan 42@ ff 43@ ff 44@ ff 47@ ff 48@ ff 105@ 52 107@ ff 108@ 33 109@ ff
Chan 110@ ff 111@ ff 113@ 91 122@ ff 125@ ff 126@ ff 136@ ba 213@ 33
Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed
Chan 353@ 1f 354@ 1f 355@ ed 356@ f0 361@ 12 362@ 12 363@ 12 371@ 47
Chan 372@ 47 373@ 47 388@ 2b

Cue 108.0
Up 0
Down 0
Chan 22@ 69 23@ 69 24@ 69 27@ 87 28@ 6e 42@ ff 43@ ff 44@ ff 47@ ff
Chan 48@ ff 117@ 54 118@ 54 119@ 54 120@ 54 122@ ff 125@ ff 126@ ff
Chan 135@ 9e 136@ 2b 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36
Chan 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36
Chan 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf
Chan 351@ 26 352@ ed 353@ 1f 354@ 1f 355@ ed 356@ f0 361@ 12 362@ 12
Chan 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 109.0
Up 10
Down 10
Chan 2@ 3b 3@ 3b 4@ 3b 7@ 21 8@ 3b 22@ 69 23@ 69 24@ 69 27@ 87 28@ 6e
Chan 42@ ff 43@ ff 44@ ff 47@ ff 48@ ff 117@ 54 118@ 54 119@ 54 120@ 54
Chan 122@ ff 125@ ff 126@ ff 135@ 9e 136@ 2b 137@ 57 301@ 36 302@ 36
Chan 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36
Chan 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf
Chan 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ f2 353@ 1f 354@ 1f
Chan 355@ f2 356@ f5 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47
Chan 388@ 2b

Cue 110.0
Up 1
Down 1
Chan 2@ 3b 3@ 3b 4@ 3b 7@ 4d 8@ 3b 22@ 69 23@ 69 24@ 69 27@ 87 28@ 6e
Chan 42@ ff 43@ ff 44@ ff 47@ ff 48@ ff 117@ 54 118@ 54 122@ ff 125@ ff
Chan 126@ ff 135@ 9e 136@ 2b 137@ 57 301@ 36 302@ 36 303@ 36 304@ 36
Chan 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36
Chan 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf
Chan 343@ 8c 344@ bf 351@ 26 352@ f2 353@ 1f 354@ 1f 355@ f2 356@ f5
Chan 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 111.0
Up 0

Table D.1 Continued

Down 0

Chan 42@ ff 43@ ff 44@ ff 47@ ff 48@ ff 105@ 52 107@ ff 108@ 33 109@ ff
Chan 110@ ff 111@ ff 113@ 91 122@ ff 125@ ff 126@ ff 136@ ba 213@ 33
Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed
Chan 353@ 1f 354@ 1f 355@ ed 356@ f0 361@ 12 362@ 12 363@ 12 371@ 47
Chan 372@ 47 373@ 47 388@ 2b

Cue 112.0

Up 0

Down 0

Chan 2@ 6b 3@ 6b 4@ 6b 7@ 85 8@ 6b 22@ 69 23@ 69 24@ 69 27@ 87 28@ 6e
Chan 42@ ff 43@ ff 44@ ff 47@ ff 48@ ff 117@ 54 118@ 54 122@ ff 125@ ff
Chan 126@ ff 135@ 9e 136@ 2b 137@ 75 301@ 36 302@ 36 303@ 36 304@ 36
Chan 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36
Chan 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf
Chan 343@ 8c 344@ bf 351@ 26 352@ fc 353@ 1f 354@ 1f 355@ fc 356@ fc
Chan 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 113.0

Up 0

Down 0

Chan 1@ 61 2@ 61 3@ 6b 4@ 6b 7@ 6b 8@ 6b 21@ 57 22@ ad 23@ 69 24@ 69
Chan 27@ 87 28@ 6e 41@ ff 42@ ff 43@ ff 44@ ff 47@ ff 48@ ff 108@ 3b
Chan 117@ 54 118@ 54 119@ ff 120@ ff 122@ ff 125@ ff 126@ ff 135@ 9e
Chan 136@ 2b 137@ 75 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36
Chan 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36
Chan 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf
Chan 351@ 26 352@ fc 353@ 1f 354@ 1f 355@ fc 356@ fc 361@ 12 362@ 12
Chan 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 114.0

Up 0

Down 0

Chan 84@ ed 85@ ed 86@ ed 94@ ed 95@ ed 96@ ed 103@ ed 104@ ed 105@ a3
Chan 106@ ff 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36
Chan 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36
Chan 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26
Chan 352@ ed 353@ 1f 354@ 1f 355@ ed 356@ f0 361@ 12 362@ 12 363@ 12
Chan 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 115.0

Up 2

Down 2

Chan 46@ 78 47@ 78 48@ 78 49@ 78 50@ 78 51@ 78 52@ 78 106@ ff 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed 353@ 1f
Chan 354@ ff 355@ ed 356@ f0 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47
Chan 373@ 47 388@ 2b

Cue 116.0

Up 3

Table D.1 Continued

Down 3

Chan 81@ d9 82@ d9 83@ d9 91@ d9 92@ d9 93@ d9 101@ ff 102@ ff 105@ ff
Chan 106@ ff 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36
Chan 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36
Chan 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26
Chan 352@ ed 353@ 1f 354@ ff 355@ ed 356@ f0 361@ 12 362@ 12 363@ 12
Chan 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 117.0

Up 3

Down 3

Chan 81@ d9 82@ d9 83@ d9 91@ d9 92@ d9 93@ d9 101@ ff 102@ ff 105@ ff
Chan 106@ ff 115@ 2e 124@ ff 137@ ba 301@ 36 302@ 36 303@ 36 304@ 36
Chan 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36
Chan 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf
Chan 343@ 8c 344@ bf 351@ 26 352@ ed 353@ 1f 354@ ff 355@ ed 356@ f0
Chan 361@ 12 362@ 12 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 118.0

Up 1

Down 1

Chan 81@ d9 82@ d9 83@ d9 91@ d9 92@ d9 93@ d9 101@ ff 102@ ff 115@ 2e
Chan 124@ ff 137@ ba 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36
Chan 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36
Chan 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf
Chan 351@ 26 352@ ed 353@ 1f 354@ ff 355@ ed 356@ f0 361@ 12 362@ 12
Chan 363@ 12 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 119.0

Up 0

Down 0

Chan 105@ a1 106@ ff 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36
Chan 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36
Chan 315@ 36 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf
Chan 351@ 26 352@ ed 353@ 1f 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c
Chan 363@ 8c 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 120.0

Up 0

Down 0

Chan 1@ cf 2@ cf 3@ cf 4@ cf 5@ cf 6@ cf 7@ cf 8@ cf 9@ cf 10@ cf 11@ cf
Chan 12@ cf 13@ 69 14@ ff 15@ 63 61@ b3 62@ b3 63@ b3 64@ b3 65@ b3
Chan 66@ b3 67@ b3 68@ b3 69@ b3 70@ 66 71@ b3 72@ b3 73@ b3 74@ b3
Chan 75@ b3 105@ ff 115@ 5e 124@ bd 128@ ff 129@ 29 130@ ff 135@ ff
Chan 141@ ff 142@ ff 143@ ff 144@ ff 145@ ff 146@ ff 147@ ff 151@ ff
Chan 152@ ff 153@ ff 156@ ff 157@ ff 158@ ff 162@ ff 164@ ff 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed 353@ 1f
Chan 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c 363@ 8c 371@ 47 372@ 47
Chan 373@ 47 388@ 2b

Cue 122.0

Up 1

Table D.1 Continued

Down 1

Chan 1@ cf 2@ cf 3@ cf 4@ cf 5@ cf 6@ cf 7@ cf 8@ cf 9@ cf 10@ cf 11@ cf
Chan 12@ cf 13@ 69 14@ 63 15@ 63 61@ b3 62@ b3 63@ b3 64@ b3 65@ b3
Chan 66@ b3 67@ b3 68@ b3 69@ b3 70@ 66 71@ b3 72@ b3 73@ b3 74@ b3
Chan 75@ b3 106@ ff 115@ 5e 124@ bd 128@ ff 129@ 29 130@ ff 135@ ff
Chan 141@ ff 142@ ff 143@ ff 144@ ff 145@ ff 146@ ff 147@ ff 151@ ff
Chan 152@ ff 153@ ff 156@ ff 157@ ff 158@ ff 162@ ff 164@ ff 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed 353@ 1f
Chan 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c 363@ 8c 371@ 47 372@ 47
Chan 373@ 47 388@ 2b

Cue 123.0

Up 0

Down 0

Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed
Chan 353@ 1f 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c 363@ 8c 371@ 47
Chan 372@ 47 373@ 47 388@ 2b

Cue 124.0

Up 3

Down 3

Chan 1@ cf 2@ cf 3@ cf 4@ cf 5@ cf 6@ cf 7@ cf 8@ cf 9@ cf 10@ cf 11@ cf
Chan 12@ cf 13@ 69 14@ 63 15@ 63 61@ b3 62@ b3 63@ b3 64@ b3 65@ b3
Chan 66@ b3 67@ b3 68@ b3 69@ b3 70@ 66 71@ b3 72@ b3 73@ b3 74@ b3
Chan 75@ b3 106@ ff 115@ 5e 124@ bd 128@ ff 129@ 29 130@ ff 135@ ff
Chan 141@ ff 142@ ff 143@ ff 144@ ff 145@ ff 146@ ff 147@ ff 151@ ff
Chan 152@ ff 153@ ff 156@ ff 157@ ff 158@ ff 162@ ff 164@ ff 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed 353@ 1f
Chan 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c 363@ 8c 371@ 47 372@ 47
Chan 373@ 47 388@ 2b

Cue 125.0

Up 3

Down 3

Chan 1@ cf 2@ cf 3@ cf 4@ cf 5@ cf 6@ cf 7@ cf 8@ cf 9@ cf 10@ cf 11@ cf
Chan 12@ cf 13@ 69 14@ 63 15@ 63 61@ b3 62@ b3 63@ b3 64@ b3 65@ b3
Chan 66@ b3 67@ b3 68@ b3 69@ b3 70@ 66 71@ b3 72@ b3 73@ b3 74@ b3
Chan 75@ b3 105@ ff 106@ ff 115@ 5e 124@ bd 128@ ff 129@ 29 130@ ff
Chan 135@ ff 141@ ff 142@ ff 143@ ff 144@ ff 145@ ff 146@ ff 147@ ff
Chan 151@ ff 152@ ff 153@ ff 156@ ff 157@ ff 158@ ff 162@ ff 164@ ff
Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed
Chan 353@ 1f 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c 363@ 8c 371@ 47
Chan 372@ 47 373@ 47 388@ 2b

Cue 126.0

Table D.1 Continued

Up 3

Down 3

Chan 1@ cf 2@ cf 3@ cf 4@ cf 5@ cf 6@ cf 7@ cf 8@ cf 9@ cf 10@ cf 11@ cf
Chan 12@ cf 13@ 69 14@ 63 15@ 63 61@ b3 62@ b3 63@ b3 64@ b3 65@ b3
Chan 66@ b3 67@ b3 68@ b3 69@ b3 70@ 66 71@ b3 72@ b3 73@ b3 74@ b3
Chan 75@ b3 106@ ff 115@ 5e 124@ bd 128@ ff 129@ 29 130@ ff 135@ ff
Chan 141@ ff 142@ ff 143@ ff 144@ ff 145@ ff 146@ ff 147@ ff 151@ ff
Chan 152@ ff 153@ ff 156@ ff 157@ ff 158@ ff 162@ ff 164@ ff 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed 353@ 1f
Chan 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c 363@ 8c 371@ 47 372@ 47
Chan 373@ 47 388@ 2b

Cue 127.0

Up 3

Down 3

Chan 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36
Chan 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36
Chan 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed
Chan 353@ 1f 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c 363@ 8c 371@ 47
Chan 372@ 47 373@ 47 388@ 2b

Cue 129.0

Up 0

Down 0

Chan 255@ b3 282@ b3 283@ b3 284@ b3 285@ b3 287@ b3 288@ b3 301@ 36
Chan 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36
Chan 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 38
Chan 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ed 353@ 1f
Chan 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c 363@ 8c 371@ 47 372@ 47
Chan 373@ 47 388@ 2b

Cue 130.0

Up 3

Down 3

Chan 108@ ff 213@ ff 255@ b3 282@ b3 283@ b3 284@ b3 285@ b3 287@ b3
Chan 288@ b3 301@ 36 302@ 36 303@ 36 304@ 36 305@ 36 306@ 36 307@ 36
Chan 308@ 36 309@ 36 310@ 36 311@ 36 312@ 36 313@ 36 314@ 36 315@ 36
Chan 316@ 36 339@ 38 340@ bf 341@ 8c 342@ bf 343@ 8c 344@ bf 351@ 26
Chan 352@ ed 353@ 1f 354@ ff 355@ ed 356@ f0 361@ 8c 362@ 8c 363@ 8c
Chan 371@ 47 372@ 47 373@ 47 388@ 2b

Cue 600.0

Up 3

Down 3

Chan 6@ 40 122@ ab 125@ 73 126@ 57 134@ ff 135@ ff 301@ 36 302@ 36 303@ 36
Chan 304@ 36 305@ 36 306@ 36 307@ 36 308@ 36 309@ 36 310@ 36 311@ 36
Chan 312@ 36 313@ 36 314@ 36 315@ 36 316@ 36 339@ 8c 340@ 8c 341@ 8c
Chan 342@ bf 343@ 8c 344@ bf 351@ 26 352@ ff 353@ 1f 354@ 1f 355@ ff
Chan 356@ ff 361@ 12 362@ 12 363@ 12 371@ 8f 372@ bf 373@ 8f 374@ cf
Chan 375@ bf 376@ bf 388@ 2b

APPENDIX E
LIGHT BOARD PRINT OUTS

Table E.1 Patch

			Patch
Chan	Dimmer/Level/Profile		
1	1	5	1
2	2	4	1
3	3	2	9
4	4	1	9
5	8		
6	50		
7	39		
8	27		
9	13		
10	46		
11	11	3	5
12	23		
13	93		
14	87		
15	82		
16	77		

Table E.1 Continued

			Patch
Chanl	Dimmer/Level/Profile		
17	17		
18	18	164	
19	94		
20	147		
21	21	52	
22	22	36	
23	28		
24	14		
25	6	25	
26	26	48	
27	31		
28	15		
29	7		
30	49		
31	33		
32	20	32	

Table E.1 Continued

		Patch	
Chan	Dimmer/Level/Profile		
33	92		
34	34	86	
35	81		
36	76		
37	37		
38	38		
39			
40			
41	98		
42	91		
43	85		
44	79		
45	74		
46	131		
47	125		
48	119		

Table E.1 Continued

		Patch	
Chan	Dimmer/Level/Profile		
49	113		
50	166		
51	162		
52	155		
53	201		
54	54	196	
55	55	187	
56	56	146	
57	57		
58	58		
59	59		
60	60		
61	61	97	
62	62	90	
63	63	84	
64	64	78	

Table E.1 Continued

			Patch
Chan	Dimmer	Level/Profile	
65	65	73	
66	66	130	
67	67	124	
68	68	120	
69	115		
70	168		
71	160		
72	154		
73	198		
74	193		
75	186		
76	145		
77			
78			
79			
80			

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
81	104	
82	101	
83	99	
84	72	
85	70	
86	69	
87		
88		
89		
90		
91	140	
92	136	
93	134	
94	111	
95	109	
96	105	

Table E.1 Continued

	Patch
Chan	Dimmer/Level/Profile
97	
98	
99	
100	
101	175
102	172
103	152
104	141
105	44
106	9
107	53
108	254
109	223
110	222
111	221
112	215

Table E.1 Continued

				Patch
Chan	Dimmer/Level/Profile			
113	214			
114	114	218		
115	71	75		
116	116	144	149	
117	132			
118	129			
119	117			
120	112			
121	121	174		
122	163	210		
123	202			
124	185			
125	118	156 00	180	
126	126	157		
127	128			
128	171			

Table E.1 Continued

		Patch				
Chan	Dimmer/Level/Profile					
129	170					
130	165					
131	148					
132	143					
133	142					
134	182	189	195	200	206	
135	183	190	199	205	209	
136	181	188	194	203	208	
137	184	191	197	204	207	
138						
139						
140						
141	100					
142	102					
143	103					
144	137					

Table E.1 Continued

		Patch	
Chan	Dimmer/Level/Profile		
145	138		
146	139		
147	169		
148	96		
149	135		
150	173		
151	89	158	
152	83		
153			
154	108		
155	107		
156	106		
157	150		
158	153		
159	88	159	
160	110		

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
161	161 220	
162	219	
163	217	
164	216	
165		
166		
167		
168		
169		
170	122	
171	123	
172		
173		
174		
175		
176	176	

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
177	177	
178	178	
179	179	
180		
181	42	
182	133	
183	127	
184		
185		
186		
187		
188		
189		
190		
191		
192		

Table E.1 Continued

				Patch
Chan	Dimmer/Level/Profile			
193				
194				
195				
196				
197				
198				
199				
200				
201	30			
202	45			
203	43			
204	40			
205	24			
206	16			
207	10			
208	5	12	47	
	00			

Table E.1 Continued

			Patch
Chanl	Dimmer/	Level/	Profile
209	80	95	
210	151	167	
211	192	211	
212	212		
213	213	286	
214			
215			
216			
217			
218			
219			
220			
221			
222			
223			
224	224		

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
225	225	
226	226	
227	227	
228	228	
229	229	
230	230	
231	231	
232	232	
233	233	
234	234	
235	235	
236	236	
237	237	
238	238	
239	239	
240	240	

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
241	241	
242	242	
243	243	
244	244	
245	245	
246	246	
247	247	
248	248	
249	249	
250	250	
251	251	
252	252	
253	253	
254		
255	255	
256	256	

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
257	257	
258	258	
259	259	
260	260	
261	261	
262	262	
263	263	
264	264	
265	265	
266	266	
267	267	
268	268	
269	269	
270	270	
271	271	
272	272	

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
273	273	
274	274	
275	275	
276	276	
277	277	
278	278	
279	279	
280	280	
281	281	
282	282	
283	283	
284	284	
285	285	
286		
287	287	
288	288	

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
289	289	
290	290	
291	291	
292	292	
293	293	
294	294	
295	295	
296	296	
297	297	
298	298	
299	299	
300		
301	313	
302	326	
303	309	
304	322	

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
305	327	
306	316	
307	331	
308	321	
309	333	
310	330	
311	325	
312	328	
313		
314		
315		
316		
317		
318		
319		
320		

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
321		
322		
323		
324		
325		
326		
327		
328		
329		
330		
331		
332		
333		
334		
335		
336	336	

Table E.1 Continued

		Patch	
Chan	Dimmer/Level/Profile		
337	337		
338	338		
339	329	339	
340	319	340	
341	317	341	
342	314	342	
343	320	343	
344	310	344	
345	345		
346	346		
347	347		
348	348		
349	349		
350	350		
351	302	351	
352	335	352	

Table E.1 Continued

			Patch
Chan	Dimmer	Level/Profile	
353	332	353	
354	304	354	
355	300	355	
356	306	356	
357	357		
358	358		
359	359		
360	360		
361	318	361	
362	311	362	
363	315	363	
364	308	364	
365	312	365	
366	334	366	
367	367		
368	368		

Table E.1 Continued

		Patch	
Chan	Dimmer/Level/Profile		
369	369		
370	370		
371	301	371	
372	305	372	
373	303	373	
374	323	374	
375	307	375	
376	324	376	
377	377		
378	378		
379	379		
380	380		
381	381		
382	382		
383	383		
384	384		

Table E.1 Continued

		Patch
Chan	Dimmer/Level/Profile	
385	385	
386	386	
387	387	
388	388	
389	389	
390	390	
391	391	
392	392	
393	393	
394	394	
395	395	
396	396	
397	397	
398	398	
399	399	
400	400	

Table E.2 Cue List

Cue List						
Cue/Type	Up/Down	Wait	Link	Follow	Rate	Label
1	3					
2	2					
3	2					
3.5	2					
4	2					
5	4					
6	5					
7	0					
8	0					
9	2					
10	2					
11	0					
12	0					
13	5	2				
14	1					
15	0					
16	1:00					
17	2:30					
18	0					
19	0					
20	3					
21	2					
22	3					
23	0					
24	0					
25	4					
26	1					
27	3					
28	0					
29	0					
30	3					
31	3					
32	1.5					
34	4					
35	3					
36	3					
37	0					
38	0.2					
38.5	0					
38.7	0					
39	0					
40	0					
41	0					
44	3					
45	0					
46	3					
46.5	2					
47	2					

Table E.2 Continued

Cue List						
Cue/Type	Up/Down	Wait	Link	Follow	Rate	Label
48	3					
49	3					
50	6					happy spots
51	3					warm spots
52	0					
53	3					
54	2				3.5	
55	3					
56	3					
57	0					
58	1					
59	1					
60	1					
61	1					
62	2					
63	3					
64	3					
65	1					
66	3					
67	3					
68	3					
69	3					
70	3					
71	1					
72	0.5					
73	0					
74	0					
75	0					
76	0					
77	1					
79	0					
81	0					
81.5	2					
82	0					
83	0					
84	0					
85	2					
85.5	3					
86	0					
87	3					
88	3					
89	0					
90	1					
91	0					
92	0					
93	0					
94	0					
95	0					

Table E.2 Continued

Cue List

Cue/Type	Up/Down	Wait	Link	Follow	Rate	Label
96	1					
97	0					
98	0					
99	3					
100	2					
101	1					
102	6					
102.5	8					
103	2					
104	1					
105	1.5					
106	3					
107	0					
108	0					
109	10					
110	1					
111	0					
112	0					
113	0					
114	0					
115	2					
116	3					
117	3					
118	1					
119	0					
120	0					
122	1					
123	0					
124	3					
125	3					
126	3					
127	3					
129	0					
130	3					
600	3					

Table E.3 Submaster List

Submaster List							
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page
1	0	Man	0	Pile-on		conductor cues	1
3	0	Man	0	Pile-on			
5	0	Man	0	Pile-on			
10	0	Man	0	Pile-on			
12	0	Man	0	Pile-on		moon	
13	0	Man	0	Pile-on		spot one	
14	0	Man	0	Pile-on		spot two	
15	0	Man	0	Pile-on		spot 3	
23	0	Man	0	Pile-on			
24	0	Man	0	Pile-on			
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page 2
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page 3
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page 4
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page 5
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page 6
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page 7
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page 8
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page 9
Sub	Up	Dwell	Down	Type	Rate	Label	Sub Page 10

APPENDIX F
VIRTUAL LIGHT LAB™ SKETCHES



Figure F.1 Virtual Light Lab™ Sketch

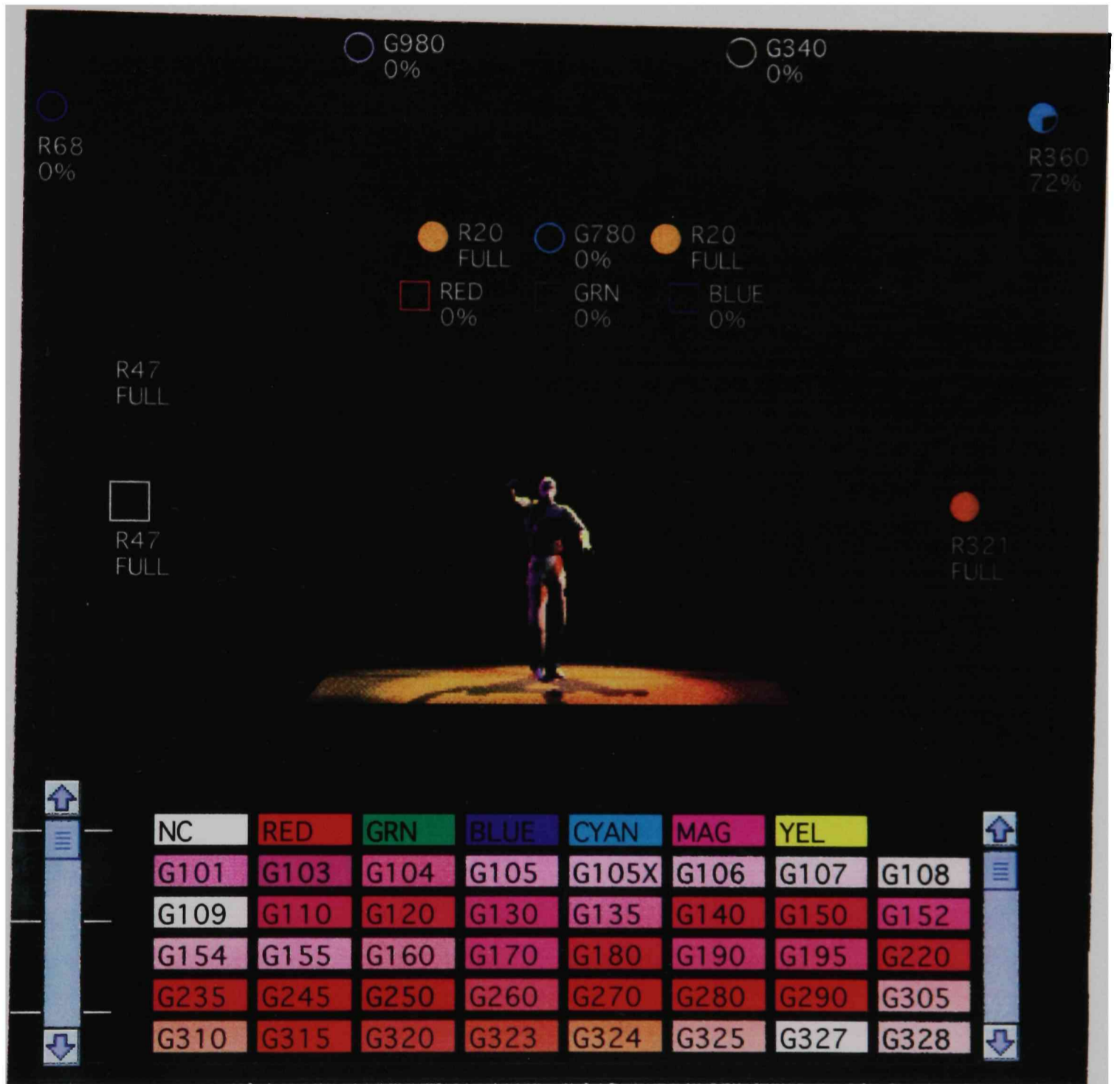


Figure F.2 Virtual Light Lab™ Sketch

APPENDIX G
PHOTOS OF THE *THE THREEPENNY OPERA*



Figure G.1 *The Threepenny Opera* Act I Scene 2 Picture



Figure G.2 *The Threepenny Opera* Act I Scene 2 Picture

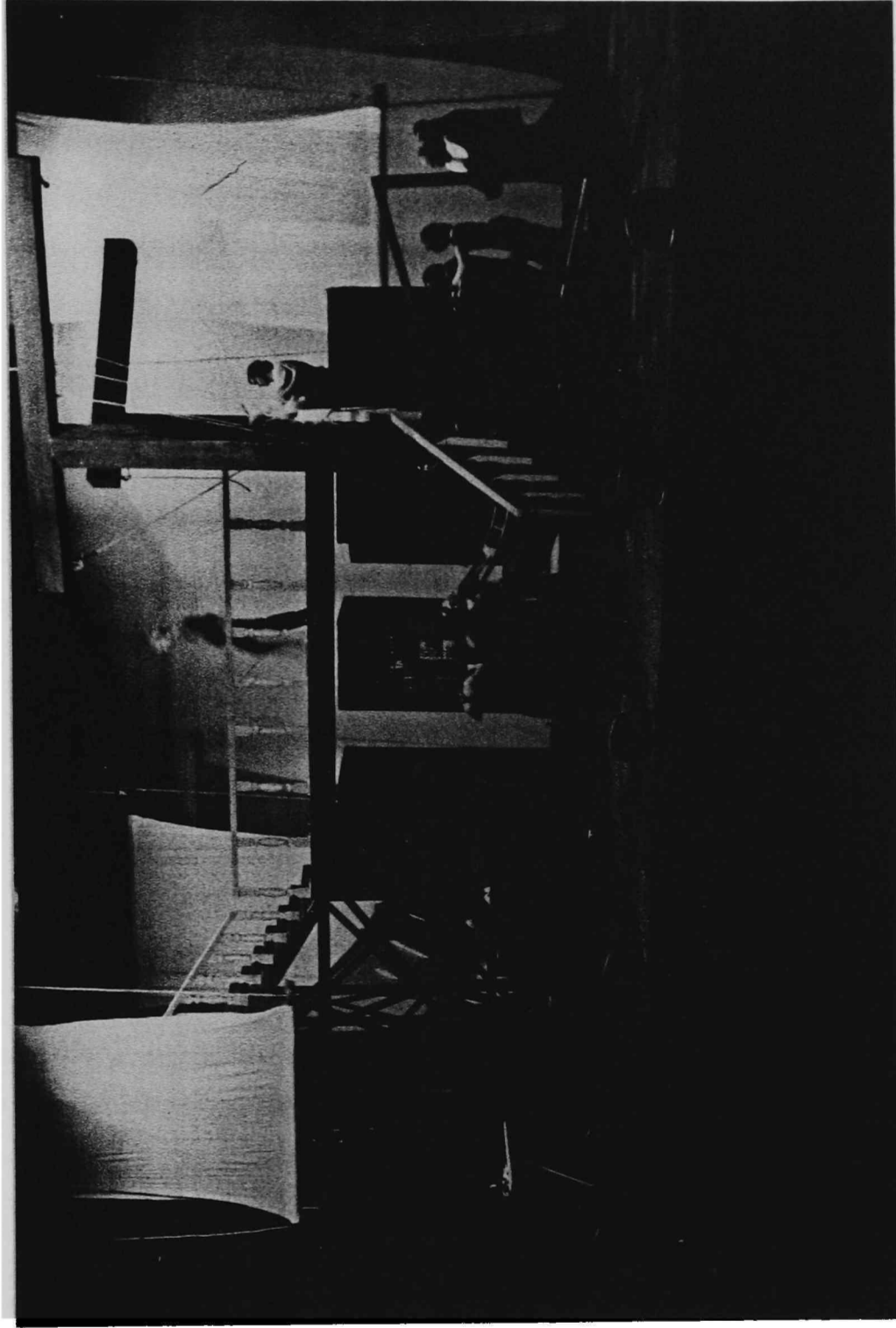


Figure G.3 *The Threepenny Opera* Scene Change Picture



Figure G.4 *The Threepenny Opera* Act II Scene 1 Picture

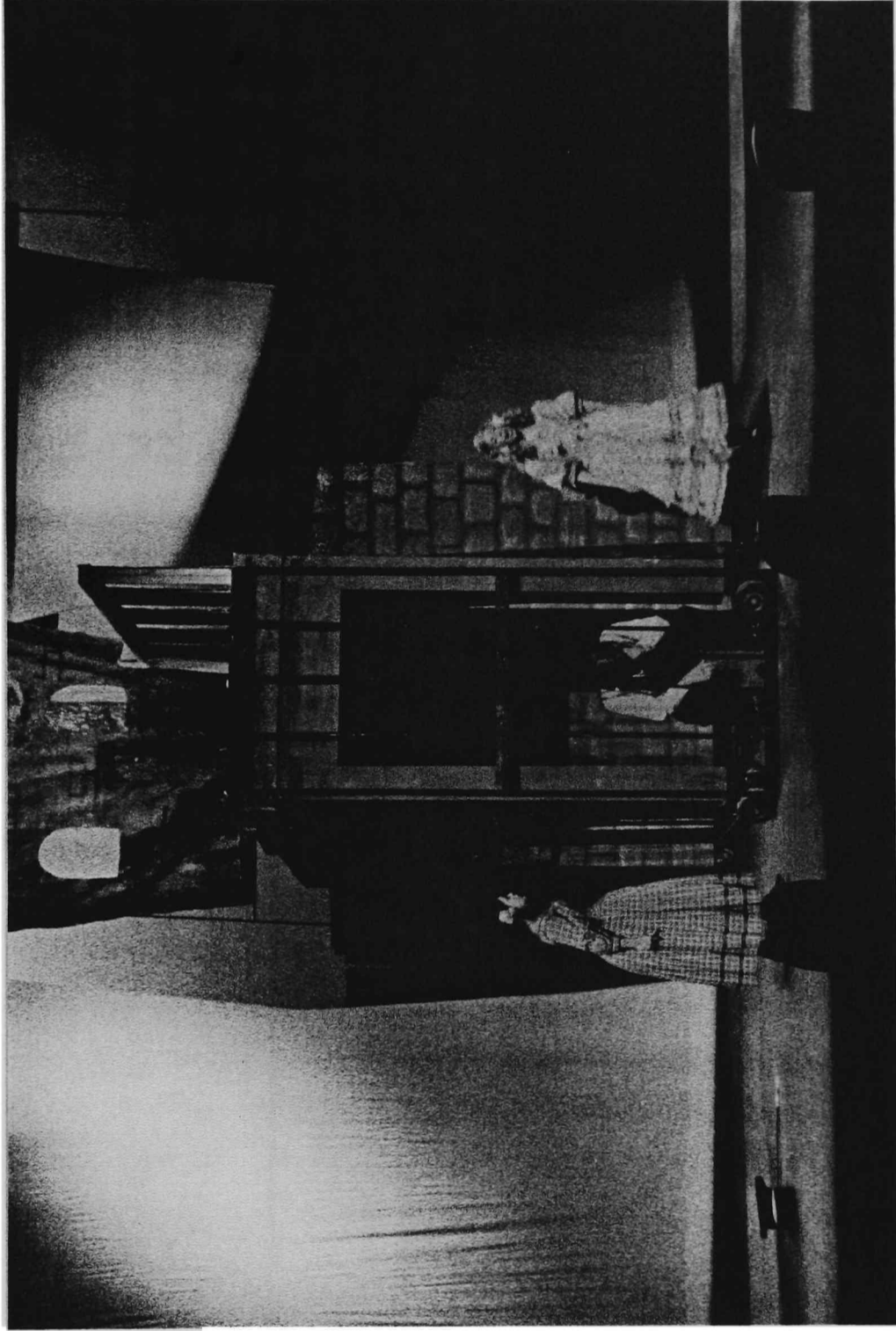


Figure G.5 *The Threepenny Opera* Act II Scene 3 Picture

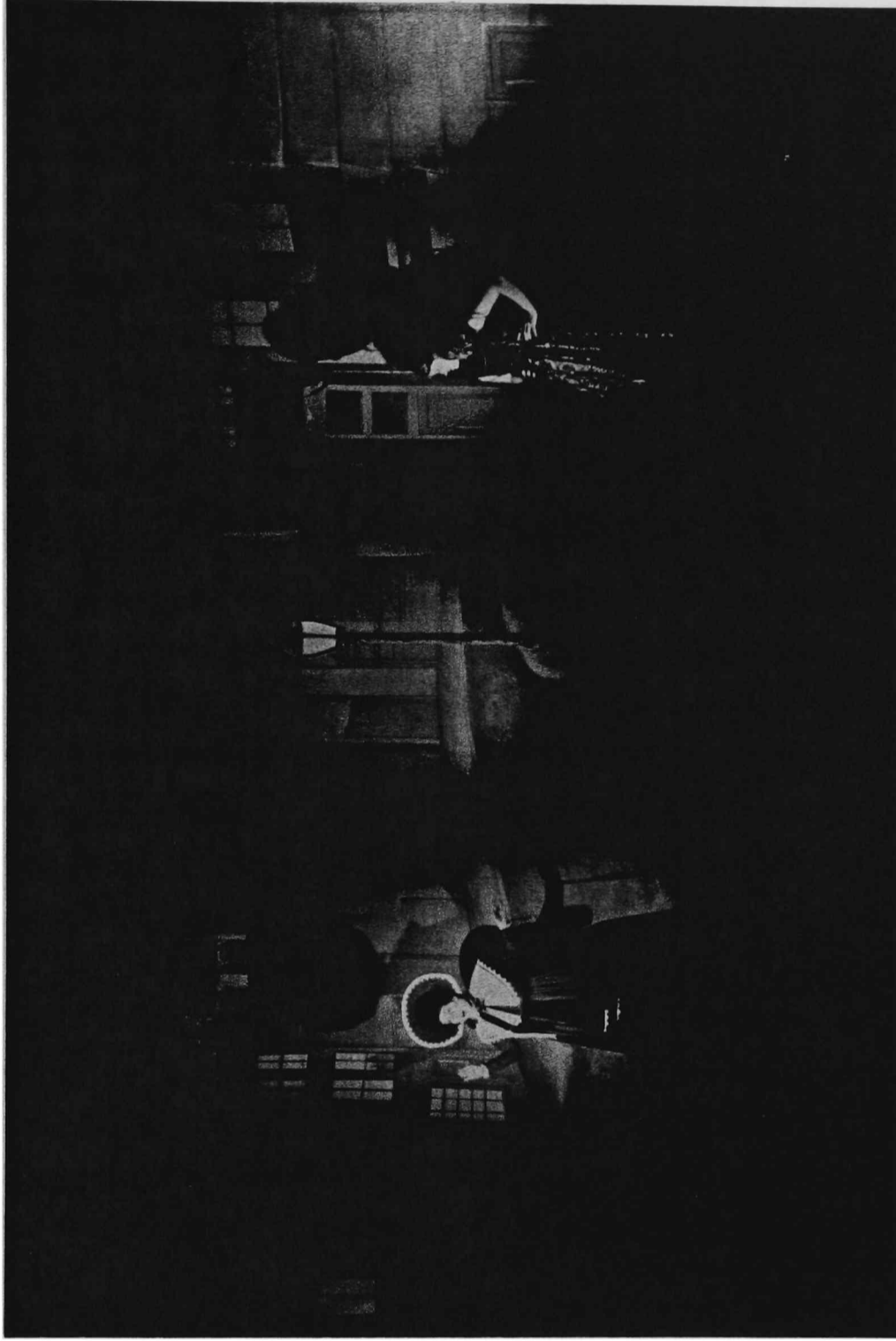


Figure G.6 *The Threepenny Opera* Interlude Picture

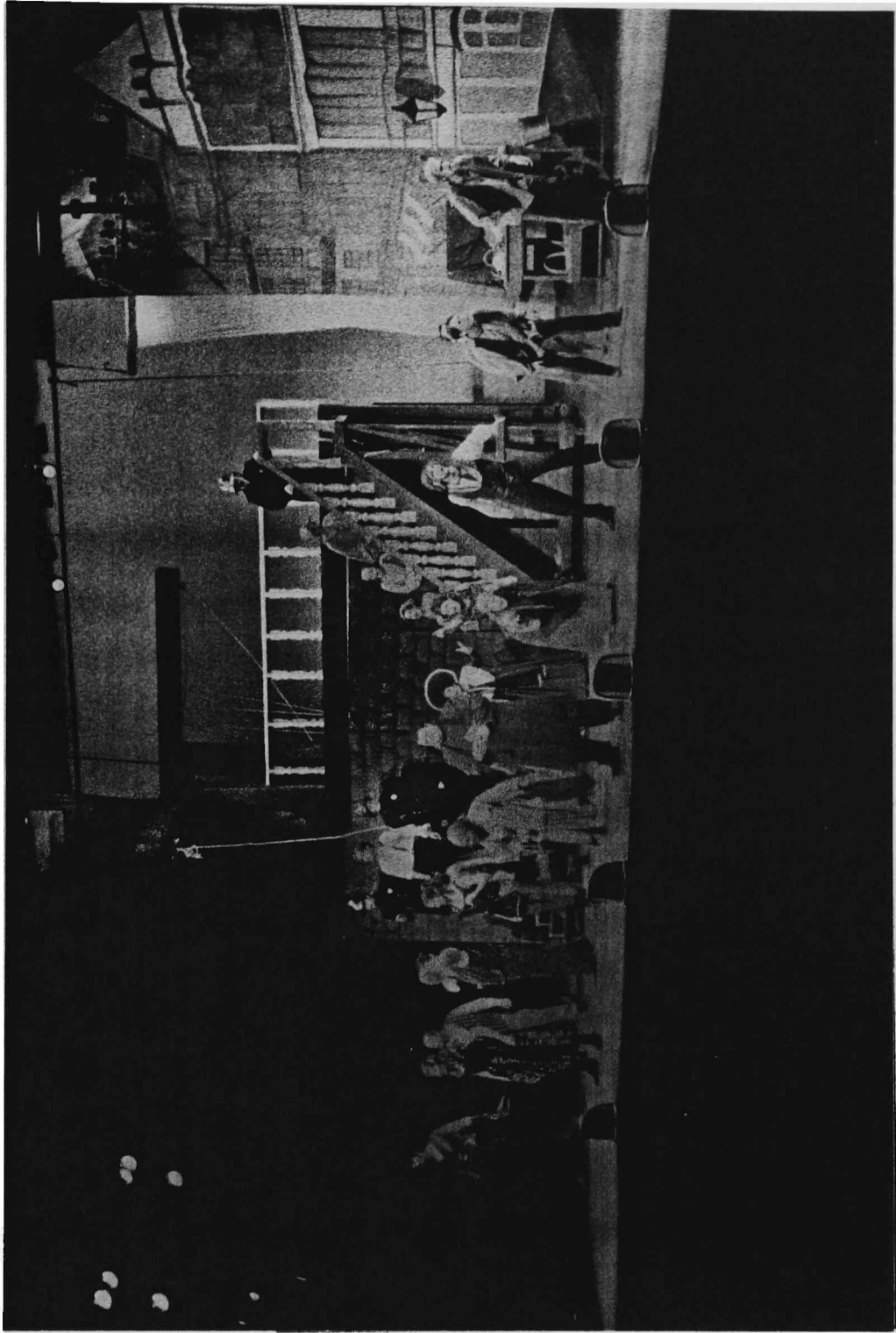


Figure G.7 *The Threepenny Opera* Act III Scene 3 Picture

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