

University of Miami Music Engineering Studio Manual

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PREFACE

The University of Miami was the pioneer music school to establish a four-year degree in the audio arts. Ted Crager, Associate Dean, worked to accredit the curriculum and obtain enough equipment to outfit a small 16 track facility, hire a new faculty member and enroll a dozen students. Since then it has grown to two studios, one all digital surround-sound and another 48 track digital; both with automation, SMPTE time code, and a wide array of peripheral equipment. The faculty has grown to three, the students to over eighty.

Our growth and prosperity stems from our prestige, which has enabled us to get donations as well as support from within the university. This, in turn, enables us to recruit better students and expose them to the wider variety of equipment in state of the art facilities. All this gives graduates a better background to compete in the industry. The industry, in turn, is eager for our graduates, which, in the end, comes around full circle to enhance our prestige.

This could not occur without a high level of organization based around a master plan that provides direction and integrates the many facets of our operations together to work as a unified whole. The purpose of this manual is to outline our structures and allow a newcomer to view the big picture while showing how he/she can become a positive influence in our quest for progress. It should be noted that what is here could never be complete, but there are obvious generalities that can be extended to the many discrete situations that occur daily. If in doubt, it is wise to consult with staff members and music engineering faculty, as opposed to interpreting the rules for yourself. You will find that most rules are refinements of our "Golden Rule," which in essence holds that we must not cause problems for the next person who also needs to rely on our facilities.

OUR CHARTER FUNCTIONS

- Recording Services -

Like most music schools, we provide service to the faculty and students through the recording of recitals or sessions, the copying and editing of tapes and compact discs, and rendering sound reinforcement for performances. We do this for fees that are below that of private recording studios, thus making these services more available to the university community. We use Music Engineering (MUE) or Electrical Engineering/Audio (EAN) students for the labor through a special internship. The fees are applied directly to the equipment that we use for the services, thus making the service self-perpetuating. This gives the school a valuable outlet to connect with the outside world through demo tapes, recordings and radio broadcasts. The students of that program get opportunities to gain practical experiences that augment their theoretical studies.

Since we are subsidized by the university, it would be unfair to compete with commercial recording facilities. Therefore, we restrict the sale of services to the university community and other organizations that are not profiting from the materials we produce for them. *As such, recordings made here may not be sold or used in a commercial release. Also, students may not charge for the use of the facilities.*

Our studios, and the auditoriums as well, are the showcase facilities of the music school and a "must see" for all visiting dignitaries, prospective students and their parents. For this reason, we must keep the rooms clean, presenting a professional appearance. There is no eating or drinking in any music school building, including the Weeks Studio, the Gusman Studio, and the Clarke Recital Hall.

It almost goes without saying that as long as the School of Music administration are proud of our facilities, they will not be hesitant to support them.

- The Music Engineering Program -

Closely intertwined with Recording Services is the Music Engineering Program which consists of both undergraduate (a major in music and audio engineering with a minor in electrical engineering or computer science) and graduate degree offerings. Our equipment is operated and managed by the students of the program and, in the off hours is made available for their use as long as the privilege is not abused. This is done for no cost to the student; we have opted to spend our money in a way that gives us a state of the art, fully equipped multifunction facility that runs around the clock.

An outstanding privilege of the program is that keys are available to students in order to use

delicate and expensive equipment at night without supervision. This privilege can be offered only if students conduct themselves in a responsible fashion. Individual revocations of these privileges will occur if the faculty and student staff feel that the user is performing in a manner that may jeopardize studio operations.

- The Electrical Engineering Audio Program -

In 1992, a new program was added at the university for electrical engineering students. Undergraduates enrolled in this program have a major in electrical engineering and an emphasis in audio. This new program (EAN) is allied with the MUE program. These students have many courses in common and also participate in the use of the facilities; their privileges are the same as those of the MUE's as described above.

- The Tape Archives -

The tape archives are a historical record of the school, a collection of recital recordings that have been engineered by MUE/EANs. These recordings are presently housed in Gusman Hall. Needless to say, new additions to the archives will continue to occur regularly.

Like any library we must treat this material with respect. Because no recording medium exists that is immune to damage, the lifetime of these recordings is limited and even shortened by their use. *For this reason, recordings may not be played for entertainment nor may they ever leave the building.*

THE MANAGEMENT

- Director of Music Engineering -

The Director of Music Engineering is the ultimate authority concerning all academic matters of the MUE program. Unless restricted by the dictates of higher authorities, all matters of admissions, suspensions, course content, grading fairness, etc. are ultimately overseen by the Director. He also functions as the main spokesperson of our program to the deans and outsiders.

- Director of Recording Services -

The Director of Recording Services is the person responsible for the day to day operations of the facilities, including acquiring of supplies and materials, and logistics of people and equipment.

Several aspects of the day to day operation of the studio are handled by the members of the student staff, who are given responsibilities and authority not granted to most students. Without their help, services offered to the school and program would be severely limited.

- Studio Manager -

The Studio Manager is the student staff member in charge of maintaining the smooth operation of the audio facilities and will work as a mediator between faculty and students. Generally, the Studio Manager's responsibilities include, but are not limited to: the organization of policy, organization of staff meetings (when need be), organizing staff hours (*such that there will always be a member of staff in the Weeks Studio from 10am to 6pm during the week*), updating and maintaining the 'MUE STAFF' section of the general 'MUE' web page, and organizing the maintenance filing cabinet where our equipment manuals are located. The Studio Manager also leads the rest of the staff in decisions on penalties for violation of policy, and ideas for constantly improving our facilities.

- Chief Maintenance Engineer -

The responsibility of the Chief Engineer is to participate in, and oversee the maintenance needs of all the facilities. The Chief Engineer also assists in student maintenance training, as a mentor for the beginning students, and a resource for the more advanced students. *If problems arise during a session, the Chief Engineer is the person to whom you are writing the log; after a problem is logged, an alternative means of working around the failure should be found.*

- Assistant Maintenance Engineers -

In conjunction with the Chief Engineer, the Assistant Chief Engineer will determine the faults and needed repairs of the equipment. The Assistant Chief Engineer becomes another source of information for MUE/EANs by encouraging them to assist with the maintenance of the studios.

- Booking Manager -

The Booking Manager's job is to insure that the scheduling of studio time runs smoothly. *They will also ensure that class projects will be able to be completed by prioritizing the booking of studio time for class projects over that of personal sessions (only after the request has been approved in writing by a member of the MUE faculty). [*NOTE*: any engineer wishing to book priority time in either studio for any reason other than completion of a class project must plea their case to the Studio Manager and one MUE faculty member and receive written permission from both.]*

Booking sessions for the available studio recording time slots are held at a regular, pre-announced time for students. At this time, all properly licensed personnel book available times. Following the session, the Booking Manager posts all the scheduled times on the calendar in the staff area. They must also keep track of the status and amount of hours available for all users.

- Licensing Manager -

This is essentially a teaching position. The Licensing Manager is available to answer questions about licensing procedure, policy, or the operation of the two studios. The Licensing Manager is responsible for updating and grading of the license exams and should notify the Booking Manager of status changes. *Exams are given by the Licensing Manager at specified times arranged by both parties.* Exam scores are recorded in the Licensing status book, which is kept in the staff area.

- Computer Maintenance Position -

The Computer Maintenance person oversees the operation of the computer lab in the Weeks Studio. This individual is responsible for installing new software on the computers, debugging any program faults, addressing network and log-on issues, and for overall maintenance on the computers.

- Chief/Staff Engineer -

The responsibility of the Chief Engineer is to help the instructors organize and train the students for the MMI 160/161 jazz recording sessions. Also, the Chief Engineer is responsible for coordinating and dealing with any problems, such as emergency back-ups, that occur with the MWP producer's session. The Chief Engineer has an interest in determining what gear should be purchased for the studio.

- Inventory Manager -

The Inventory Manager is responsible for keeping track of all the equipment related to the MUE program. They are responsible for directly doing inventory of the Orange Kit and Green Kit on a regular basis. Addition of new equipment or the moving or deleting of older gear is coordinated by the Inventory Manager. *All discrepancies with the inventories are reported to him/her which, in turn, will quickly precipitate actions to locate the missing gear and discipline careless users.* Often, the Inventory Manager will coordinate the shipping, receiving, and ordering of supplies and equipment. It is very important that the studio stays well supplied and that broken and loaned equipment is promptly taken care of.

- Audio Tech Position –

The Audio Tech student helps teachers with the set up of stereo systems for classes and performs light repair on the Hi-Fi systems located in offices and classrooms throughout the school. Technically, this student works for the deans' office but uses the resources of our facilities to accomplish the tasks.

- General Staff Duties -

Each of the staff members, in addition to their specialized duties, have extra responsibilities. Each staff member is assigned a certain number of hours per week, based on their course schedule, in which they will be 'on duty' in the Weeks Studio; this ensures that someone is always in the studio during 10am to 6pm on weekdays, thus creating a more secure facility.

Staff hours, which will be posted on the bulletin board outside the computer lab also ensure that each staff member can be reached on a regular basis. Problems that any engineer or producer may have with an individual staff member should be addressed to them during their staff hours. *Engineers will pick up keys for gigs, classes, and personal sessions from a staff member during staff*

hours. All staff members are expected to help studio users whenever possible and they should also be able to assist in solving the facilities' problems.

LICENSING

- Overview -

Before a student may use the Music Engineering facilities, the student must demonstrate a certain level of responsibility and technical competence.

You must obtain a license before booking time in Weeks Studio or Gusman Studio. Students are strongly encouraged to get licensed before Junior year. The exams are administered through the Licensing Manager and may be taken during the hours specified and posted by the Licensing Manager.

- Music Engineering Policy -

Before pursuing any license, the student must first pass the Music Engineering Policy exam. All beginning students are urged to pass the policy as soon as possible. The exam is based on material from this manual and day-to-day functions within the Music Engineering program. *There are questions on the policy exam that are not covered in this manual; these questions should be able to be answered confidently if all information in this manual is understood.* In order to motivate students to read this manual and learn the rules and regulations, test taking of any exam is limited to a maximum of four times per semester. *The exam may be taken regardless of the student's academic level.* The Policy exam consists of 20 multiple choice questions, and passing requires a perfect score (100%).

- Weeks License -

In order to book time in the Weeks studio, *the student must have secured, or be in the process of training for,* a Weeks license. To begin training for a Weeks license, the student must be, at least, a first semester sophomore and also have passed the policy exam. It is the trainee's responsibility to find a training engineer, whose job is to prepare the trainee for the license testing. *Every new student is encouraged to establish a rapport with the upperclassmen, which effectively facilitates finding a trainer.* The training engineer may be a licensed student or alumnus; quality training is recognized by the trainee passing the Hands-on Exam (described below) the first time, and the reward for this is five additional hours of studio time given to the trainer.

The student in training must book two five-hour sessions with the training engineer. It is suggested that the first five-hour session should be devoted to familiarization with the Weeks studio and signal flow of the mixing console and its peripherals. The second five-hour session should be devoted to tracking and other concepts of higher complexity. It should be noted that all studio time spent towards fulfilling licensing requirements is booked against the license applicant's allotted time.

After completing the two training sessions the trainee must take the Weeks Technical exam (Written Test). It consists of twenty multiple-choice questions, passing requires a minimum score of 90%, and it may be taken a maximum of four times per semester. *After passing the Weeks Technical exam, the final hurdle is a hands-on exam* given by the Licensing Manager or another licensed engineer approved by the Licensing Manager, in which the license candidate and the Licensing Manager meet in the Weeks control room at a prearranged time and the candidate must demonstrate a thorough knowledge of the studio by successfully performing a series of operations commonly encountered during a typical recording session.

Failing the hands-on test results in the trainee having to book a remedial training session with a different licensed engineer and then retaking the hands-on exam. Upon completion, the student becomes fully qualified to use the Weeks studio. The last person to train the engineer before they pass the hands-on test is rewarded with an additional five hours.

- Gusman License -

In order to book time in the Gusman Studio, the student must have secured, or be in the process of training for, a Gusman license. *To begin training for a Gusman license, the student must already be Licensed in Weeks Studio.* It is the trainee's responsibility to find a training engineer,

whose job it is to prepare the trainee for the license testing. The training engineer must be a licensed student or faculty member. Training engineers will be awarded bonus studio hours.

Students in training must book two 4-hour sessions with the training engineer. It should be noted that all studio time spent towards licensing requirements is booked against the license applicants allotted time.

After completing the two training sessions the trainee must take the Gusman Technical exam (Written Test). It consists of twenty multiple-choice questions, passing requires a minimum score of 90%. The test may be taken a maximum of 4 times in a semester. The test cannot be taken twice in the same week. After passing the Gusman Technical exam, a hands-on test may be schedule with the licensing engineer or a faculty member. The student must demonstrate a thorough knowledge of the studio by performing a series of operations commonly encountered during a session. Failing the hands-on test results in the trainee having to book an additional training session and then retaking the hands-on exam. Upon passing the hands-on exam, the student becomes fully qualified to use the Gusman Studio.

THE AUDIO FACILITIES

- Dub Rack -

The Dub Rack is provided for engineers to use for making CD's or cassettes of their recordings. During Staff Hours, the Dub Rack may be used on a first come, first serve basis. During a booked session or class, use of the Dub Rack is by permission of the session engineer or faculty member. *NOTE: The Dub Rack is not to be used for illegal purposes. Copyrighted material may not be duplicated FOR ANY REASON. NO EXCEPTIONS!*

- Weeks Studio (Orange Kit) -

This studio is located in the Weeks Center. After hours sessions are available here and can be booked against a student's allocated time as long as the license qualifications have been met. *A key for this kit can be obtained during any staff members' staff hours.*

- Gusman Studio (Black Kit) -

The Gusman keys are available only to approved students in certain classes that require projects in Gusman and to those licensed in Gusman. *A key for this kit can also be obtained during any staff members' staff hours.*

- Green Kit -

The stereo recording equipment is in this kit and can be checked out as needed for weekly ensemble recording. *The Green Kit key can be checked out during any staff member's staff hours. Checking the Green Kit key out for any other reason must be first approved by the MUE faculty.*

- Macintosh/ProTools -

ProTools can be used to create samples and perform digital editing. This computer should be used only for these and other music/synthesizer applications and not for games and word processing. Save all work to disk, as the hard drives will be frequently erased.

- Computer Lab -

There are several computers of different types available for Music Engineering students. These machines can be used by students for general purposes when not needed for their specialized tasks during anytime between 10am and 6pm during the week. **Students working on assigned class projects have priority over other general users.**

Do not write on any program disks or hard drives. Again, hard drives will be erased from time to time, so you will need your own floppies to save your work. **Important!!!** *You may not add any unnecessary software to the machines, especially software downloaded from the internet. Be aware that what you download could contain a virus. If you feel that something should be added to a machine, please request it through the Computer Maintenance Staff Member or write it in the computer log book located in the computer lab. Please do not make copies of the software for use on other machines or for distribution outside Music Engineering. The copyrights of the software must be protected in order to allow their authors to earn a livelihood and continue writing more programs.*

As important as maintaining the integrity of lab computers is, maintaining the integrity of the lab itself is equally important. In order to maintain a professional appearance, the lab should be kept clean and organized at all times. The aisle in the center of the computer lab should be kept free of obstruction at all times. *Bags, instruments, and chairs should not be left in the middle of the aisle. Likewise, bags and instruments should not be placed on any of the desktops.* Keep all your belongings on the floor in your immediate area or on the closest chair, if it is not being used. Ultimately it is the responsibility of studio staff to keep the lab area clean for guests and students, but following the aforementioned lab guidelines will help keep things running smoothly for everyone.

RULES AND REGULATIONS

The Rules and Regulations that follow apply to every MUE, EAN, SJW, and MWP. Though most may appear to be simple common sense, please read them carefully, as failure to abide by the rules (and seeing that musicians and observers are doing the same) will result in penalties addressed to the session engineer and/or producer. Severity of the punishment is decided by the student staff and the MUE faculty. *Since it would be impossible to make a list of every stipulation that pertains to our facilities, please always remember to use common sense; if you have concerns, please consult a staff member or MUE faculty.*

- * The session engineer along with the producer who booked the session, if one exists, are ultimately responsible for the actions of everyone attending a recording session.
- * The session engineer may refuse access to anyone, except staff, during his/her session. If you want to use a part of the facility that the engineer is not using, you must ask their permission to do so; if they agree, they will become accountable for your actions.
- * Any key transfers (Gusman and Weeks) must be recorded in the log book. If there is no session between the time your session ends and staff hours begin, you should lock the studio and drop the key in the metal drop box located under the stairwell in the Volpe Building labeled *MUE Drop Box*. Otherwise it is your responsibility to get the key to the next engineer. Check the booking manual before your session to see who has a session after yours.
- * The keys should be passed from engineer to engineer in a timely manner. It is the responsibility of the engineer with the current session to make sure that the next engineer has the orange kit key by the start of their session. In the event, that the key exchange does not go smoothly and the next engineer is in jeopardy of not getting the full amount of studio time allotted to them, the engineer who is responsible for the problem will have **2 sessions** revoked.
- * If doors are found unlocked and the students present do not have keys for them, then Campus Security should be called (8-6666) to have them locked.
- * If you see someone around any of the MUE facilities that you don't recognize, don't hesitate to ask why they are there.
- * In order to use the studio, a student must book time at a booking session which is held periodically at pre-arranged times. The engineer must be present or send a representative. In no instance will anyone book time for more than one person. If no arrangements can be made, the engineer may contact the Booking Manager after the booking session to sign up for any times that are still available.
- * Musicians and other people attending the session are NOT permitted to use the equipment or assist the engineer. (ex. USE THE CONSOLE, SET UP MICS, ETC.)
- * There should be ABSOLUTELY NO FOOD OR DRINK in the studio and control room.
- * The studio, control room, and mic closet should be left in a clean and orderly fashion.
- * The engineer/producer completing the session is the one responsible for any mess that is made
- * Do not write directly on the console or any other equipment.
- * The grand pianos are not to be moved into the Gusman elevator. Do not do this even if you are asked by a recitalist. *The responsibility of the pianos belongs to the concert hall staff.*
- * *Be on time for your session and be ready to leave on time.* Do not impose upon someone else's studio time. If you know in advance you may need some extra set-up or tear-down

time, try to make arrangements with the appropriate engineer. If the engineer after you doesn't show up for his time, you can use it, free of deductions on your studio hours.

* Equipment belonging in the Orange Kit may not be removed for use elsewhere unless approved by the faculty/staff and the person who will be using the studio at that time.

- Booking for Weeks Sessions-

Each licensed engineer is allowed **10 sessions** per semester. If the engineer has used all of their session times, they can book sessions after all of the engineers that have not used their 10 hours have completed the booking procedure. If needed, after all of the engineers with less than 10 hours have booked, extra rounds of booking can be held that will be open to any licensed engineer (regardless of total session hours).

In the event that a licensed engineer wishes to cancel a session, they have the following options:

(a) The engineer can find another engineer to take their session. In this case, the studio time will be transferred to the engineer taking the session.

(b) Otherwise, if the licensed engineer cancels the session at least 48 hours prior to their session they will still have **1 session** taken away from their allotted time and the session will be open for booking.

(c) If the engineer cancels within 48 hours of their session, they will be penalized **2 sessions**.

- Weeks Sessions -

* The double doors at the back of the building are used for access and the studio is entered through the sound lock door after business hours. During the day, the sound lock door is secured and all traffic passes through the computer lab.

* The double doors should never be left open. If you expect visitors, have them ring the doorbell. The door can be opened from the intercom panel inside the control room.

* The door in the far corner of the studio has a magnetic lock that prevents it from being used unless the fire alarm goes off.

* All doors should be locked when you leave your session

- Gusman Sessions –

* The ramp door is to be used for entry and exit with evening sessions

* You are not to enter the concert hall area at any time, for any purpose

* When there is no session immediately following yours, perform a full power down upon leaving

* Turn off all lights when leaving the studio

* Recording services equipment is not to be tampered with

- General Safety -

* There is no smoking allowed in any auditorium or studio.

* Exit doors should never be blocked by any item at any time. If lights have burned out in passageways or exit signs, the condition should be reported to a member of the hall staff.

* The engineer should familiarized himself with the locations of the fire alarms as well as the fire extinguishers and they should know the types of fire each extinguisher can control.

* In case of a fire, sound the nearest alarm immediately, and evacuate the building while shutting doors behind you and call Public Safety when out of the building.

* If someone is seriously injured or in need of emergency assistance, call 9-911. If there is a security issue, call campus security at 8-6666. The engineer should also be able to locate the first aid kit.

* Caution should be taken if handling large or heavy cases and equipment. Do not attempt to lift heavy objects alone. The American College Health Association advises to "squat directly in front of the object to be lifted, then rise, letting your legs do all the work. Keep the object you are lifting close to your body, and don't twist."

- Maintenance -

* Report any missing or malfunctioning equipment in the log book as well as problems occurring during a session. A good log describes the symptoms you observed, as specific as

possible, how you determined the particular piece of gear to be faulty, and any troubleshooting methods you used (along with the transfer of keys). Try to isolate the malfunction to the nearest knob, switch, patch point, or other user accessible point.

- * Once a problem is logged, find alternate means to continue your session.
- * If the broken item is a stand or a cable, it should be placed in the cardboard box in each kit labeled, 'Broken Equipment,' and the Inventory Manager will assume responsibility for it.
- * Only the Chief Engineer, his/her Assistant and any approved maintenance crew member can do major maintenance. Minor maintenance can be done by any engineer, after discussing the procedure and obtaining permission from the Chief Engineer.
- * If a fuse blows, replace it with an identically rated fuse ONLY. Be sure the cause for the blown fuse has been identified, corrected, and logged.
- * If you, your assistants, or a musician damages a piece of equipment unintentionally, report it in the proper fashion. If you do not report the accident and are found out to be responsible for some damage, penalties will be severe.
- * Only studio maintenance personnel are allowed to physically connect or disconnect any audio cabling.
- * Under no circumstances are you to install software or external peripherals on the ProTools machines in Weeks/Gusman

- Producers -

Producers in the Media Writing and Production program and the Studio Jazz Writing program are also given access to the facilities through the studio hours given them. During a session that a producer has booked, they are the person in charge. Producers should be aware of all procedures outlined here, and adhere to them. Failure to do so will result in a loss of privileges. Before actually booking time, the producer must also pass (100%) the producer's policy exam at which time, they will be allotted 20 hours of studio time.

Rules that apply specifically to producers are as follows: The producer must always have a licensed engineer running the studio. Producers may choose their own engineer from the MUE Program. This engineer must be present at all times. No keys will be issued to producers. The producer should not perform any of the technical tasks during the sessions; these should all be carried out by the music engineers. The producer, as the person in charge of the session, can be held responsible for the actions of all persons in the facility. As such, they must be familiar with the rules and regulations and ensure that all personnel abide by them in the proper fashion. In addition, producers must handle cancellation of sessions in the studio in the same manner that engineers are required to. Therefore, it is highly suggested that producers have a licensed engineer lined up for the session before booking. This will help to avoid canceling a session because of not finding an engineer.