

To You Poince

From Oliveira - chairman of electronics committee

11/1/71

Subject - Temporary Policy (until meetings can be arranged)

Submit - any further recommendations to me in writing after examining this.

Policy for Time Reservations & use of Q315 + 306

1. All users must pass technicians test. (See tech. test outline)
2. Users must be enrolled in a course or independent study which requires the use of equipment. Students wishing to prepare for courses may also sign up for self study time provided there is a faculty sponsor.
3. Weekly reservations by Friday of preceding week must be made. ^{visiting fellows and professors must observe the above.} The weekly schedule will be posted by Monday ^{on the door of the respective studios by the technician} in the main office. Unfilled time slots may be had on a first come first serve basis. If reserved time is unused after 15 minutes from posted time, the time may be claimed by a stand-by user. ^{every effort must be made to accommodate} On very special or urgent occasions ^{stand by} a faculty member may pre-empt a student's reservation although this practice should not be abused.
4. ^{+ visitors} Users including faculty members should submit a statement of purpose for projects. To help ^{the committee to} us determine future needs and to see how the studios are being used with a view to expansion.
5. Student users ^{+ visitors} must have a Faculty sponsor who signs his statement of purpose each quarter. The signed statement must be given to the technician.
6. When the number of users is large the most equitable time distribution will be determined as fairly as possible. A hierarchy will occur ~~only~~ if necessary. ^{we are not yet operating at capacity.}

All users are responsible for reserving that required for time is used.

7. Users are responsible for maintaining security of the studios.
8. Users must report malfunctions of equipment in writing to the technician. Leo Prince has a mailbox in the music office. (Technician must publish guidelines)
9. No equipment is to be removed from the studios. Special cases will be considered by the Electronics Committee.
10. Technician shall post a list of qualified users with the Electronics Committee and the Music office every quarter.

Key.

To ELECTRONICS COMMITTEE

4/25/72

Policy for the use of Electronic Music Studios at UCSD

Draft.
All users must have a faculty sponsor

1. All users must pass the Dept. technician's test.

The test is as follows: All users must demonstrate a working knowledge of

A. Tape Recorders (as per installation)

1. Tape threading

2. Playback

3. Recording

4. Special precautions if any

B. Pre-amplifiers

C. Power amplifiers

D. Patching facilities

E. Synthesizers (a user who wishes to begin self instruction may do so if items A, B, C

+ D are passed satisfactorily.

2. All users must have a faculty sponsor.
3. In all cases the technician will demonstrate the proper approach to the use of the facilities. If the potential user is deficient the technician must advise the faculty sponsor of the deficiency.
4. Student users must be enrolled in a course or independent study which requires the use of equipment. Students wishing to prepare for courses or engage in research are also eligible.



DEPARTMENT OF MUSIC

POST OFFICE BOX 109
LA JOLLA, CALIFORNIA 92037

To Electronics Committee - 5/11/72
 thru Pauline - Note #1
 from Warren
 About Concert on May 16.

Bruce Rittenbach & I will be
 doing our live electronics piece
 on the Tuesday night concert
 in 408.

To perform it we will
 need to use the following equipment

- Boxes A, B, C, A + LeBuckly
 - 1 Revof for HL134
 - 2 Mikes & Cables
 - Leus Patchcord Kit for Concerts
 - 2 Extra Channels of Amplification for Four
 Discrete Channels
- Thank - Warren



DEPARTMENT OF MUSIC

POST OFFICE BOX 109
LA JOLLA, CALIFORNIA 92037

To the Electronics Committee
via Pauline
from Warren
re Concert on 16th

5/11/92
Note # 2

Bruce & I would like to record
our piece during the concert on
the 16th.

After talking to Jim Campbell about this
I find that we have no more 4 track
~~portable~~ portable recorder. However he said
that I should see ^{if} Lew ~~if~~ wants to
portable-ize the 4 track 440 for this concert.

Talking to Dave Gamper he said he would
be glad to help Lew if Lew agreed to do it.

Therefore I'm requesting that this be
done if possible.

Thank
Warren (over)



UNIVERSITY OF TORONTO LIBRARY

UNIVERSITY OF TORONTO LIBRARY

N.B.

- For many & Various Reasons the concert cant take place in 409 - hence this difficulty.

Thank
March

UNIVERSITY OF TORONTO LIBRARY

UCSD ELECTRONIC MUSIC STUDIOS

TO: Faculty
Students
Staff

FROM: Pauline Oliveros
Chairman of the Electronics Committee

DATE: 22 September 1972

Interim Users Policy:

- I. All users must have a faculty sponsor. The Potential user must write a brief statement of purpose* which will be signed by the faculty sponsor and given to Lew Prince, the Department technician. This must be done for every quarter.
- II. All users must demonstrate a working knowledge of Tape recorders as per installation, pre-amplifiers, power amplifiers, patching facilities and any associated equipment. The test shall be administered by the Department technician.
- III. The technician will demonstrate the proper approach to the use of the facilities. If the potential user is deficient, the technician must advise the faculty sponsor and submit recommendations for ways to remedy the deficiency.
- IV. The technician shall post a list of qualified users with the Electronics Committee and the Music office every quarter.
- V. The technician will post a time schedule on the door of the respective Electronic Music Studio users may sign up on a weekly first come, first serve, basis. The number of hours available to each user will depend on the number of qualified users. Students enrolled in courses involving the use of certain equipment will have priority over personal research if necessary. All users are responsible for time reservations. If the reserved time is unused the user must make an effort to alert a stand by user. Abuse of reservations will result in loss of the use of the studios. After 15 minutes an unused reservation belongs to a stand by user.
- VI. Users are responsible for maintaining the security of the studios. After compliance with items I and II above keys and combinations to locks may be obtained from the Music office. The user must not loan or copy keys nor reveal combinations to any unqualified user.
- VII. Users must always help maintain an order by studio. This means clean up after a working period and report all malfunctions of equipment in writing to the technician.

VIII. No equipment is to be removed from the studios. Special cases will be considered by the Electronics Committee. Report any missing items in writing, with time and date directly to the technicians.

*The statement of purpose is intended to aid the Electronics Committee in determining needs and future direction of the studios. What kind of projects are you doing? What equipment do you expect to use? What do you need that we don't have? Is your project course work? or research?

- ① Distance \propto is function of ω or ω^2
- ② angular displacement \propto splitting signal to speaker pairs.
- ③ poppler

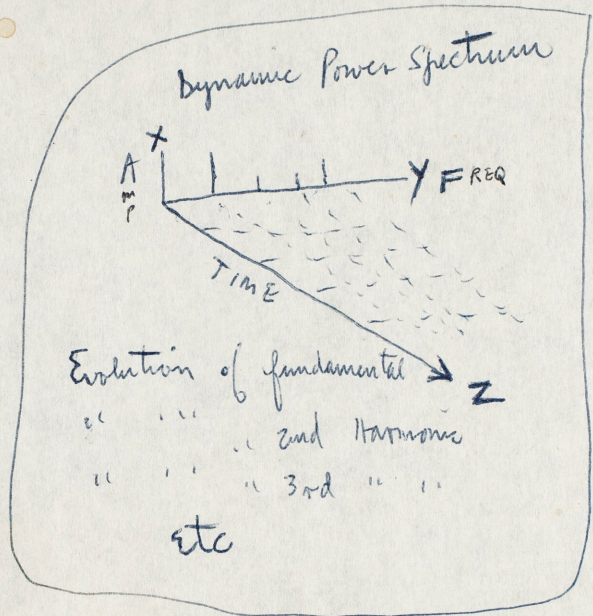
Simple means
(or circuit)
for large bandwidth range.

Go from ω to ω^2 with
one circuit.

Manfred Schroeder
1960 AES
Reverberator Article

Carrier always constant
 Δf is variable

as Δf grows
modulations indep grows
and more sidebands



Manfred - would like copy.
11:30 Friday

May 20, 1972

Dear Miss Oliveros,

I talked to you for a short time last week concerning my use of the electronic studios at UCSD this coming summer. Art Woodbury of the Music Department here at Davis has agreed to sponser me as you suggested. I hope that you will allow me to come there for a change of atmosphere and exchange of ideas. I am out of school on the 10th of June and would come to San Diego shortly after that. Please contact me at: 1025 Chestnut lane

Davis, Cal. 95616

Yours Truly,

Dan Robinson

Dear Mr. Robinson,

Please have Mr. Woodbury sign an introductory letter addressed to Lew Prince our technician.

He will check you out for use of our studios.

You may make an appointment with him through the dept. secretary Ms. Barbara Alvarez. You may use the studios with the understanding that UCSD Faculty and students have priority.

Sincerely yours,
P. Oliveros

cc Lew Prince

June 12, 1972
Mr. Dan Robinson
1025 Chestnut Lane
Davis, California
95616

Dear Mr. Robinson:

Please have Mr. Woodbjury sign an introductory letter addressed to Lew Prince our technician. He will check you out for use of our studios. You may make an appointment with him through the department secretary, Ms. Barbara Alvarez. You may use the studios with the understanding that UCSD faculty and students have priority.

Sincerely yours,

Professor of Music

UCSD

cc: Lew Prince

THE MORE YOU WITHDRAW, THE MORE UNACCEPTABLE YOU BECOME "

SILBER

NINEVAN

TEN

ELEVEN

TWELVE

THIRTEEN

FOURTEEN

FIFTEEN

SIXTEEN

SEVENTEEN

EIGHTEEN

NINETEEN

TWENTY

TWENTYONE

TWENTYTWO

TWENTYTHREE

TWENTYFOUR

TWENTYFIVE

TWENTYSIX

TWENTYSEVEN

TWENTYEIGHT

TWENTYNINE

THIRTY

THIRTYONE

THIRTYTWO

THIRTYTHREE

THIRTYFOUR

THIRTYFIVE

THIRTYSIX

THIRTYSEVEN

THIRTYEIGHT

THIRTYNINE

FORTY

FORTYONE

FORTYTWO

FORTYTHREE

FORTYFOUR

FORTYFIVE

FORTYSIX

FORTYSEVEN

FORTYEIGHT

FORTYNINE

FIFTY

FIFTYONE

FIFTYTWO

FIFTYTHREE

FIFTYFOUR

FIFTYFIVE

FIFTYSIX

FIFTYSEVEN

425 OCEAN AVE #20
DEL MAR
92014

Music Department
Faculty Meeting
May 30, 1972
12 noon - 2 p.m.

AGENDA:

1. Proposal to the National Endowment for the Arts - June 5
 - A) Chamber Music
 - B) Project Relationships
 - C) Procedure
2. Recommendations of the Concert Committee - Tom Nee
3. Post-Doctoral Policies
4. Report of Regents Lectureship Vote - see attached
5. Report of the Performance Committee - Keith Humble
6. ELECTRONICS

MA Committees

TAPE FOR WARREN BURT

OPEN SEMINAR TITURS - 3: - 6 PM

Barbara X 401 + 402

May 18, 1972

Minutes of the Concert Committee

Scheduling of Concerts: Everyone who wants to schedule a concert put proposal in writing, including physical arrangements and probable cost, and put in program assistant's box, 407 M.C. Concerts arising out of classes do not need approval of concert committee, but should be listed with program assistant to avoid conflict in scheduling. (The best time for class sponsored concerts in the future would be noon or afternoon.)

All other concerts must be approved by concert committee before they can be scheduled.

Concert Management: We recommend a concert manager be responsible for physical details of concerts. Concert management could also be part of a department seminar and enlist members to take turns in assuming responsibility for arrangements of concerts.

Concert dates should be established at the beginning of each quarter. Background information for publicity and posters should be turned in to program assistant 3 weeks prior to a concert.

Entertaining visitors: It was suggested that office space, with desk, be made available for visiting artists.

Those entertaining visitors are allowed \$7 per meal for the visitor and \$7 for themselves.

Faculty members who have visitors they want entertained, or picked up from the airport should get in touch with program assistant with details.

A petty cash fund of \$20 to \$30 per quarter might be a good way to handle after concert refreshments.

VOTE ON REGENTS LECTURESHIPS 1972-1973

The number indicates the votes in that category received by the candidate.

	Vote <u>1</u>	Vote <u>2</u>	Vote <u>3</u>	Vote <u>4</u>
Babbitt	2	2	2	0
Brun	1	1	0	2
Francois	3	1	2	1
Marx	0	1	1	1
Nath	3	1	2	0
Takahashi	1	3	0	0
Zukofsky	0	0	1	3

RESULTS:

1. Francois
2. Nath
3. Babbitt

It is possible to bring someone as a Regents Lecturer and later employ this person in another capacity. However, during their appointment as a Regents Lecturer, no other position can be held with the University as the Lectureship is considered a full-time commitment.

Regents Lectureships are for a period of at least two weeks but not as long as a quarter.

5/30/72

Tech Test for Studios

to be given to entering graduates
Provide schematics for each facility.

I Person must demonstrate basic working knowledge of tape recorders. (as installed in particular studio)

1. Tape threading
2. Play
3. Record
4. Special precautions if any (i.e. gate on AG 350)

II Demonstrate working knowledge of pre-amp - amp facilities

III Demonstrate working knowledge of Synthesizer (s) or *capability for self instruction.*

IV Patching Facilities

Test will not be to see how "fancy" a patch may be made on Synth. but merely on basis of patching same.

In all cases the technician will demonstrate the proper approach to the use of the facilities. Technicians must advise faculty sponsor of any deficiencies and advise the student how to remedy the deficiency.

Electronics Committee Agenda

4/25/72

1. Users Guide for EMS
2. Request from Rittenbach & Burt re Buchla Modules
3. Campbell's Mandeville presentation
4. Request Pomie to update ^{equipment} list of all facilities
5. Request Pomie to provide diary for 1 week of his activities.

Consider a lab fee for attrition on audio cables etc.

Proper Reporting of Malfunction of Ebe Equip.

1. Draw simple but thorough sketch or diagram of your patch which was in use when malfunction occurred.
2. Verbally state malfunction condition
3. Place in my mailbox in music office ASAP. And if possible list on squawk sheet on bulletin board in studio in question.

Function - Equipment - Location

Qualities - Priorities - distribution

advise John

Wagner 60 dB

Investigate line from computer center

Intrusion - Respect

Security

Creative effort (Ken)

Performance Tests (New Ponce avoid label mystique)

Define Functions (Keith) clearly defined complexes

complete Systems in existence

Functions should ~~determine~~ ^{determine} the equipment
not equipment determine the functions

Education - Research

Hierarchy

Purpose - Economics

access

Human Engineering

Research responsibility

Instruction " " "

Block diagrams

of facilities

1. Performance

2. Classrooms + ~~including~~ Tutorials

2a Tutorials

3. Creative work | advanced | beginning

4. Dubbing - editing

5. Student recording

6. Concert recording + Archives

7. Research

8. Technicians needs
8a Contingency function Reserve

9. Dubbing High Quality Faculty research

10. Computer Users

11. Listening

13. Self-talk Labs innovative projects grant

concerts are
(continuing education)

How can we redistribute
existing equipment?

Project our needs -
Contingency Installation
portable + substitutes
for

Monday
April 24

Dear Pauline :

Request (plea .. please) time again :

Warren B. & i are doing this lecture / concert at San Diego State this Sat. nite. They are letting us use the two Buchla super modules they have there. However since we are doing a full hour long live electronic improvisation, they really don't satisfy our needs — especially in terms of the 10 in V.C. mixer which is the heart of our improvisation. Anyway i (we) are asking to borrow 2 Buchla Super Modules. I know I asked before and was refused however this is especially important to me. I realize the necessity for some sort of action to impress the reality of the situation on the "Department" but this doesn't help me while i am a student here. It seems a shame for me to know that the equipment is sitting there un-used when I would like to be using it. I would be willing to take the boxes Sat. & return them Sat with no one being the wiser. I would like to talk with you about this if talking will make things happen.

I thank you for your time. Bruce R.

UCSD Users Guide

Users Guide Lab

Guidelines for reporting malfunctions

Human engineering

Technicians Test

How to handle amplifier?

Definition of terms written

pre amp functions

Amp functions

Tape Recorders

Patching function

Synthesizers

Self regulation
of studio use -

Match the intent to the facility.

Interim

What is the facility?

How does the subject fit the facility?

5 copies

Policy on Use of E. M. Studios

A. Who may use

front direction
 Q 315 (Research Studio)
 Q 306 (Instructional Facility)
~~Q 134 Instructional~~

Priority
Instruction
Research

Faculty
Graduates
Undergraduates
Visitors

1. Any student who is enrolled in a class or classes (at UCSD) 199-299, which requires the use of studios may do so, providing the following conditions are met:

- a. Written consent of instructor
- b. Satisfactory performance of tech test

2. Students engaged in research

3. Faculty engaged in research

4. Visitors " " " " research

Instruction

B. When

1. Sign-up sheet will be posted on door of studio each Mon. AM. for following week. Time will be scheduled for 1 week only.

2. Time allotment

a. Time per person shall be determined in the following manner:

1. Total number of people desiring to use studio(s) will be determined. "Prime Time" will be considered to be from 8 AM to 11 PM, or 15 hrs per day. Based on 7 days, this is 105 hrs/wk.

Para I old.

105 hrs wk / bodies = max prime time allotment / wk / person.

Time must be scheduled by Tues noon of any week. Any prime time not scheduled by this time may be picked up by any authorized person over and above their max. allotment. In addition, time between 11 PM and 8 AM is First-come, 1st served basis, and is not scheduled.

3. No - Show - Policy

Time reserved by any person, and not in use by 15 minutes after scheduled time may be picked up by any authorized person, on 1st come basis. Repeated no-show by any individual may result in suspension of studio privileges unless suitable excuse is presented to committee (i.e. prolonged illness, etc.)

4. Faculty Use.

Faculty may Pre-empt student

use of studio in an emergency situation, such as preparation of material for class, if desired.

Otherwise, faculty must schedule time as anyone else.

C Notes

I A sign in-out roster will be provided in each studio. Included will be a conditions and comments column. All malfunctions and missing equipment must be recorded by persons using studio. If item is missing, or severe damage has occurred, and has not been recorded, the last person signed in will be considered responsible for that (those) item(s). (Forced entry is an obvious exception)

II Students will sign statement of Financial Responsibility for loss/severe damage to studio equipment.

2. etc.

III Security Measures:

a. Padlock will be installed in addition to key locks. Students will be issued combination when authorization is presented.

b. Honor System

Any person who has been found to give combination and/or keys to unauthorized person(s) will lose all studio privileges automatically and with no discussion.

IV Visiting Dignitaries

Visitors from other UNIV. or colleges (Faculty) may gain access to our facilities upon sponsorship of USD Music Dept faculty member. However, all rules + regulations apply as to use, including tech demonstration of proficiency.

Low - Make a check out list

What constitutes a
check out?

→ attendant

From Faculty - ^{Equipment} needs ^{→ anticipated.} for courses and research
Maximum time limit?

Material in class rooms.

→ [Check out Center] HL Library

Please Note : This memo is distinct from the one recently distributed by Dave Ganser. His purpose is to collect thesis information. Mine is an attempt to effect speedy changes in the present policy.

TO THE MUSIC STUDENTS:

The purpose of this note is to provide a forum for the expression of opinion concerning policies and administration of the electronic facilities in the department. It is my hope that such an expression by the students will assist the faculty and department chairman in formulating a documented policy that will clear up at least some of the confusion and misunderstanding that now exists. The need for a documented policy and known power structure is stressed because the alternative -- individual verbal communication -- is known to be extremely fickle given a situation in which the right hand rarely knows what the left is doing.

I am asking every student who has been, is, or hopes to be concerned with the use of electronics in the department, to assemble two statements: the first concerned with any complaints you might have and the second with your suggestions for improving the situation. Please be as specific and concise as possible. You might consider some of the following:

pro/con discussion re the use of weekly/monthly/term sign up sheets perhaps with a "no show" rule whereby a person loses his right to the facilities if he/she doesn't show within a certain time.

Good ✓ a list of all qualified users for each facility so people can tell where they stand and can detect improper usage.

maximal use of the facilities by means of a system of random access where any qualified user has a right to use facilities any time they are not in use -- within the constraint of signed up times and the no show rule.

the necessity of padlocks

who should be setting and administering policy?

student/faculty electronics committee?

Good ✓ having a list of all equipment usable by the students together with written conditions for who may use it, for how long, where, etc.

Please return your statements to me as soon as possible. I will compile them and see that they receive a hearing from the chairman and the related faculty members.

Please submit three (3) copies.

Bruce E. Rittenbuhl

ELECTRONICS COMMITTEE MEETING

COMMITTEE MEMBERS: ✓ Pauline Oliveros

Keith Humble

Ken Gaburo

Lew Prince

Dave Gamper - Grad. Representative

Blair Tabor - Undergrad. Representative

Jim Campbell - Guest

WHEN: Tuesday, April 25, 1972

12:00 to 2:00 p.m.

PLACE: Conference Room

AGENDA

Jim Campbell will present plans for Mandeville Center.

Fri 4/21/72

To: Pauline Oliveros, Chwmn., Elec. Committee

From: Lew Prince

Subject: Committee Meeting

Dear Pauline: How about having a meeting with this item on the agenda as I have previously corresponded with you:

Publication of Policy and Procedure Manual for usage of E.M. Studios

I really think that the students are entitled to have some published document to that effect so that they may refer to same in the event of any questions. I realise that you put out an interim document, but that was to committee members only, and to the best of my knowledge, Dave Gamper is the only student who may have seen same.

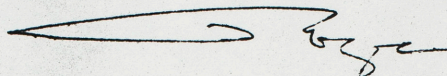
Thank you,


Lew

20 April 1972

Dear Lew,

Bruce Leibig would like to have the use of Q 315 this Spring in connection with his work in a thesis 299 with me. Please check him out as soon as you can manage it. Thanks.

A handwritten signature in dark ink, appearing to read "Roger Reynolds", written in a cursive style.

Roger Reynolds

cc Roger Reynolds
Pauline Oliveros
Bruce Leibig

Q315 USERS -- MEETING

On Thursday, 12:00 noon, March 9 in 408MC (Music Gallery) there will be a meeting to discuss:

- 1) what the sign-up policy should be
- 2) the possibility of maintaining a co-op supply pool
- 3) Routine clean-up procedures
- 4) improvements to come
- 5) anything else

If you want to say something but can't make the meeting, send a proxy, see me or write something and leave it in my box. This meeting is on short notice at a possibly inconvenient time but hopefully will establish a precedent for regular users meetings.

Dave Gamper

Thurs 16 Mar

Pauline:

The people in your 105 class seem to be under the impression that:

1. They have never been told how to thread a Revox
 2. They have never been told to hang bad patch cords on nails
 3. They have never been told not to rearrange equmt to suit themselves
 4. They have never been told to write down system problems & leave in my mail box
 5. They have not been told not to play guitars thru amps
- Could you dispell their illusions?

Love
Jew

PS One spkr has been ruined by overdriving, probably with guitar. It now rattles pretty badly. Cost of replacement \$60, repair ≈ \$25-30.

4/3/72

Dear Pauline,

I shall attempt herein to list all items which need time and \$ spent on them in excess of normal maintenance procedures.

1. Buchla System has hundreds of worn-out, noisy, leaky "pots" and leaky electrolytic capacitors. Estimate: 100-200 hours, and \$400-800 in parts. I can't really be certain of time or parts until I'm in the "thick" of it.
2. Bad spkr in Q306 - needs re-coning \approx \$30.
3. Moog has a few minor adjustment problems, but I don't think any \$ to speak of.
4. New output tubes needed for 1 Mac Amp, and 4 Dyne Amps.
12 tubes @ \approx \$20/pair = \$120

Maintenance report

(2)

There are undoubtedly other tubes needed, \approx \$100, but the outputs are most necessary.

5. About 1500 feet of heavy gauge wire needed for wiring (Speaker) of art gallery and asst'd jacks, etc.
 \approx \$100 and about 8-16 hours.

6. New motor is on the way for Tapesonic, but I'm afraid the heads are shot too.
About \$100 - 150.

I also suggest that Revox machines in Buchla room are getting mechanically tired - you might consider replacing them, but hopefully not with Revox's.

(3)

Replace Scully with 4 channel
Amper in QB15 ??
On trade in, Scully worth 1K
Amper cost \approx 5K.

→ Scully now out of business. ←

I think that about gets the
worst of it. If I think of
any others, will write them to
you.

Lew

P.S. - Forgot - Old, old
portable Sony 777 (in 2D-2346)
Needs heads, etc. \approx \$100
Also, we need spkr's for 2346

3/29

Pauline:

New combinations

Q306 - 2703

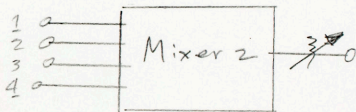
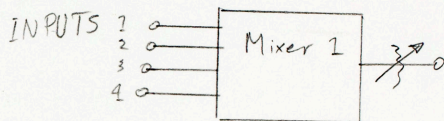
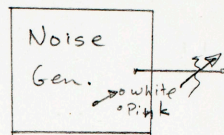
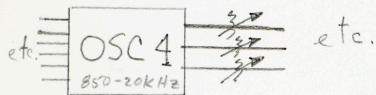
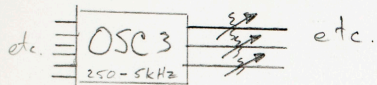
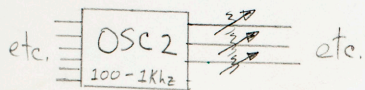
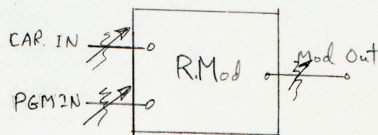
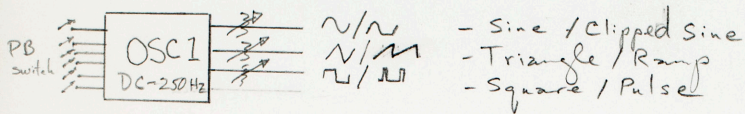
Q315 0372

JP

Proposed Basic Electronic Music Module

Music 100c
cost \$150.00

Block Diagram -




All circuitry uses operational amplifier technology.
all connections made by external patching. Each osc. incapable of sweeping its frequency range and also producing 64 discrete steps - total 256 discrete steps.
(All discrete steps are variable with trim pots.)

Parts Cost Estimate		
Proposed	Basic Electronic Music Module	MUS 100c
	\$25.00	P. Supply
	\$18.00	P.B. Switches
	\$30.00	Pots
	\$18.00	Semiconductors
	10.00	Passive Components
	15.00	Chassis
	7.00	Knobs
	18.00	Connectors
	9.00	Misc.
	<hr/>	
	150.00	

Dary John Miegelle

Di: PM

Dear Pauline;  (P.S. that is a 'Peace' sign not an obscene gesture.)

None of your students except Larler have ever reported Buchla troubles to me.

Once, I found a sheet on the floor in there, after I had finished fixing things. By chance, I had found all problems on sheet anyway.

As for the gates, I have heard rumors, checked them, and not found any leakage. Perhaps if someone were to 'patch it up' for me I could

(2)

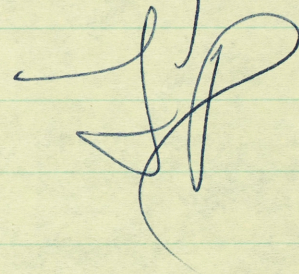
see a problem. It does not seem to occur with a simple patch of oscillator in - trigger from finger board type of set-up.

2 Eltro needs parts + mods by machine shop - no \$ available. Var. speed is totally shot - power supply hums fiercely + relays are shot. Peter M., who built the thing, has been scheduled to come over + work with me 6 times but has never showed up. It is

physically impossible for one person
to lift it out + put on bench.

I have recommended that we buy
a Mac Amp + an oscillator to
replace that old Kluge. Lets
talk about it next wk.

All my love

A stylized handwritten signature in cursive script, possibly reading 'JP' or similar initials.

SAN DIEGO: DEPARTMENT OF MUSIC
LA JOLLA, CALIFORNIA

January 19, 1972

Dear Pauline,

I think the idea of setting up technical and ground rules for Q315 and 306 are really great. We appreciate the work of the electronic committee very much and all these things are going to help a great deal.

Thanks,

John

SAN DIEGO: DEPARTMENT OF MUSIC
LA JOLLA, CALIFORNIA

February 10, 1972

Dear Pauline, Electronics Committee, et al. -

Thanks for the recommendation--we will try to budget some equipment in next year's budget. Let me suggest that you join Barbara A. and myself in forming the budget next year. Without a "dirge" you understand our problem.

Lew is a fine technician and we would like to help him. What can be done from your end is in the research grants area, etc.

The spare parts we can set aside; \$100 is for now as a start.

JOHN

Dear John,

1/9/72

The Electronics Committee strongly recommends that \$1500 be allocated for our technician Lew Prince as soon as possible. This money is to enable Lew to purchase the following test equipment and parts necessary for his job:

1. Flutter meter ca. \$500 - 750
2. Distortion analyzer ca. 150 - 200
3. Capacitance bridge ca 75 - 100
4. Spare parts supply 500

We should also like to remind the faculty that we are facing depreciation effects on all of our equipment. Aside from costly replacement we will need to provide a continuing budget for upkeep. The above request is a minimal step in that direction.

Sincerely yours,

P. Oliveira
Electronics Committee

CC Lew Prince
P. Oliveira ✓

elephant's child
R. Kip King

Tiger Tiger for John

When equipment is signed out then it must be returned immediately after use with all accessory items.

Test equipment for the technician \$1500.00
Remind of depreciation

February 7, 1972

TO: Faculty

SUBJECT: Student Accounts for Computer Usage

I wish to make it possible for students to teach themselves programming without undue formality or administrative restrictions.

Several students have complained to me that they are unable to learn to program by themselves because they cannot get permission to use the Computer Center machines without an account. These are serious students who wish to learn about computers without taking a full course on the subject. Prior to this time, the Instructional Use Committee would only give computer funds to faculty members who were teaching courses.

To make it possible for individual students to gain some experience on computers by themselves, I am initiating student accounts. This will be a small account under a student's name. It will be limited to a monetary value between \$10 and \$20. (Students who require more lengthy calculations will still have to apply under the rubric of a research course (199 or 299) under the name of his faculty adviser.)

Procedure

Any student wishing such an account should apply at my office (or that of my secretary). I have devised a (reasonably) painless form to fill out. (I will ask for their student registration number.) The student should do some preparation first: I will not teach a course. She or he should have read or learned enough about computers to know both the name of the computer language to be learned and also the book or the method that will be used in this self instructional process.

Tutors

If students wish to volunteer as tutors, I will keep their names available for distribution to those who wish to learn but don't know how to start.

Donald A. Norman, Chairman
Instructional Use of Computers Committee
1537 Psychology/Linguistics Building
(Extension 2018)

002 0116 Q-450
MISS PAULINE OLIVEROS
MUSIC
407 MC

Eqt Needed

F luther Meter $\approx 500 - 1000$

Distort. Analyzer $\approx 75 - 1000$

Capacitance Bridge $\approx 75 - 200$

Spare Parts

Cap's

Resist's

Pots

Xistors

} etc

\approx

200 - 500

Ask Bruce R. + Bruce L. to submit schematic for filter
will check it over and Lew Princi will build.

Agenda Stern - Design Review board to take heat
off.

We need to solve the check out problem
Sony 800 is all tied up and I need for Buchla Class
Example of arbitrary move
Get projected needs from every faculty

[Lew make a check-out list] How long?

Portable equipment + associated needs until someone else wants.

Portable Sony's 12

2 left

Micro 2 AKG

2 for 409

2 Electrovoice

2 Art Gallery

} Classroom

1 Echoplex

Amplex PR 10

(checked out to Erickson)

" " 600

(Full track ")

3 hagra

(Olwiner, Erickson, Silber)

4 Dyna Amps

Mono

2 " Pre amps

Concert Cable kit

Hebrews German
Goddess

Siroc

Revelation

Apocalypse

ch. 12

Elizabeth is
the mother of John
the Baptist

Luke Chpt 2
Magnificat

My soul magnifies
the Lord

Smoothing Filter

1. Description : The filter is in two sections. The first is a 3 pole active low pass filter with switchable cutoff frequencies and a slope of 18 db/octave. The damping factor of 0.71 gives a corner peaking of about 2db. This improves the phase & amplitude below the knee of the breakpoint.

The 2nd section is an active twin tee notch rejection filter, with the notches tuned exactly at the sampling rate. Since the notch is extremely narrow, it is very important that low drift components be used in this section i.e. silver mica capacitors & metal film or wire wound resistors.

The overall gain of the filter is $\frac{1}{2}$ (-6 dbm) in order to better match levels between the output of the D/A converter (10Vp-p) and the standard audio line input of the recorder.

2. Calibration : A sine wave oscillator, frequency counter & scope are used. Adjust the oscillator to exactly the sampling frequency (ie exactly 10, 20, 30 or 40 KHZ) using the counter & adjust the 1K Ω trimpot in each twin-tee section for a null at its respective frequency. The design has hopefully given the trimpot enough range, but if a null cannot be obtained, it might be necessary to pad one of the capacitors (using only mica caps.). It should be possible to achieve a 60db null in each case.

After calibration, overall frequency response should be measured in each switch position. The output should be capable of 20Vp-p at 20 KHZ without slew rate or other distortions.

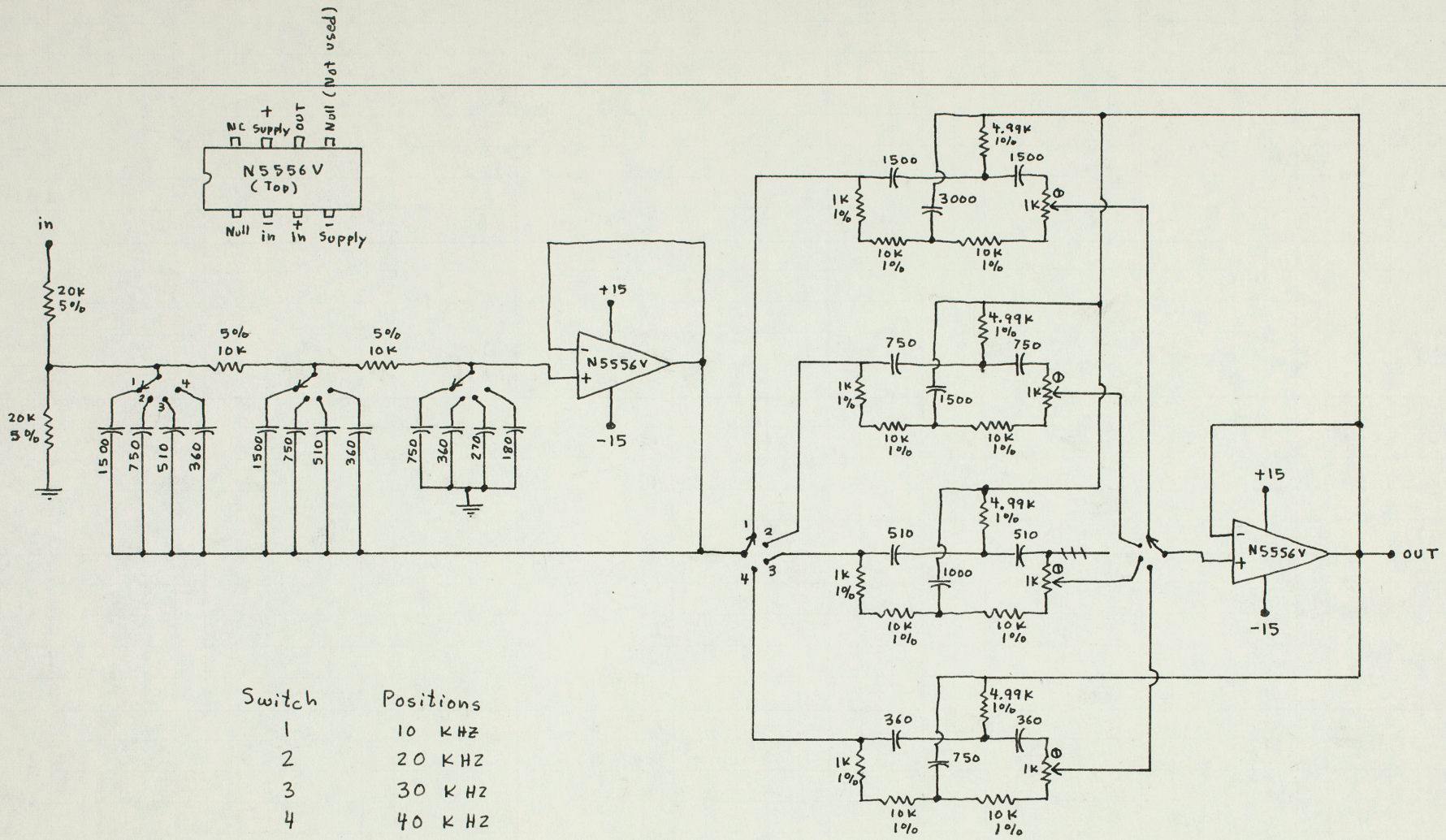
The twin-tee null should be rechecked when the filter is actually installed.

Note : I have the N5556Vs, I.C. sockets & perf board that can be used from the dept. grant



B.F.K.
also rectifiers, fuse holders & switches for power supply

Smoothing Filter



Switch	Positions
1	10 KHZ
2	20 KHZ
3	30 KHZ
4	40 KHZ

5% resistors can be
1/4 W carbon

trimpots should be
22 turn also with low
T.C. (cermit or wire wound)

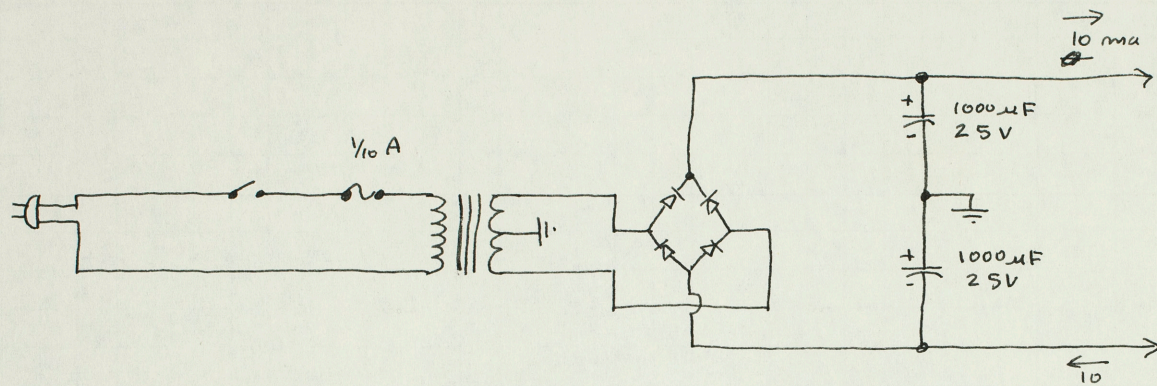
all capacitors 5% mica
values in pf.

switch = 5 poles, 4 position
(Centralab PA-2021)

all 1% resistors should be
metal film or wire wound with
a T.C. of 100 PPM/°C or less

supply ± 15V @ 10 ma
regulation + hum not too
important

Power supply



rectifiers 50 piv
500 ma

transformer
secondary 24V C.T. at 50 ma or more

staner P-8394 or equiv.

Smoothing Filter

1. Description: The filter is in two sections. The first is a 3 pole active low pass filter with switchable cutoff frequencies and a slope of 18 db/octave. The damping factor of 0.71 gives a corner peaking of about 2db. This improves ^{the} phase & amplitude below the knee of the breakpoint.

The 2nd section is an active twin tee notch rejection filter, with the notches tuned exactly at the sampling rate. Since the notch is extremely narrow, it is very important that low drift components be used in this section i.e. silver mica capacitors & metal film or wire wound resistors.

The overall gain of the filter is $\frac{1}{2}$ (-6 dbm) in order to better match levels between the output of the D/A converter (10Vp-p) and the standard audio line input of the recorder.

2. Calibration: A sine wave oscillator, frequency counter & scope are used. Adjust the oscillator to exactly the sampling frequency (ie exactly 10, 20, 30 or 40 KHz) using the counter & adjust the 1K Ω trimpot in each twin-tee section for a null at its respective frequency. The design has hopefully given the trimpot enough range, but if a null cannot be obtained, it might be necessary to pad one of the capacitors (using only mica caps.). It should be possible to achieve a 60db null in each case.

After calibration, overall frequency response should be measured in each switch position. The output should be capable of 20Vp-p at 20 KHz without slew rate or other distortions.

The twin-tee null should be rechecked when the filter is actually installed.

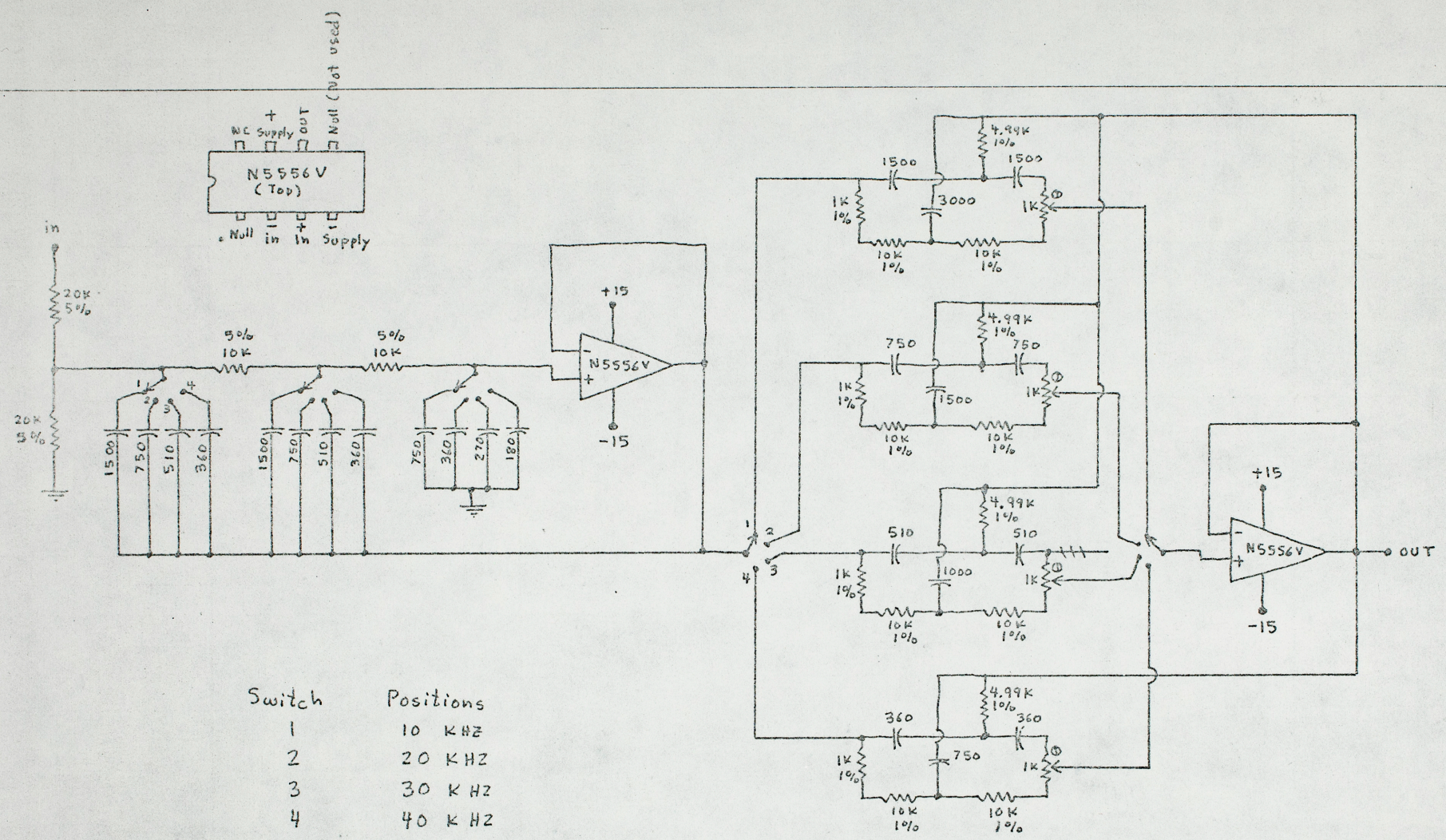
Note: I have the N5556Vs, I.C. sockets & perf board that can be used from the dept. grant



B.E.K.
also rectifiers, fuse holders & switches for power supply

1/13/72

Smoothing Filter



Switch	Positions
1	10 KHZ
2	20 KHZ
3	30 KHZ
4	40 KHZ

5% resistors can be
1/4 W carbon

trimpots should be
22 turn also with low
T.C. (cermit or wire wound)

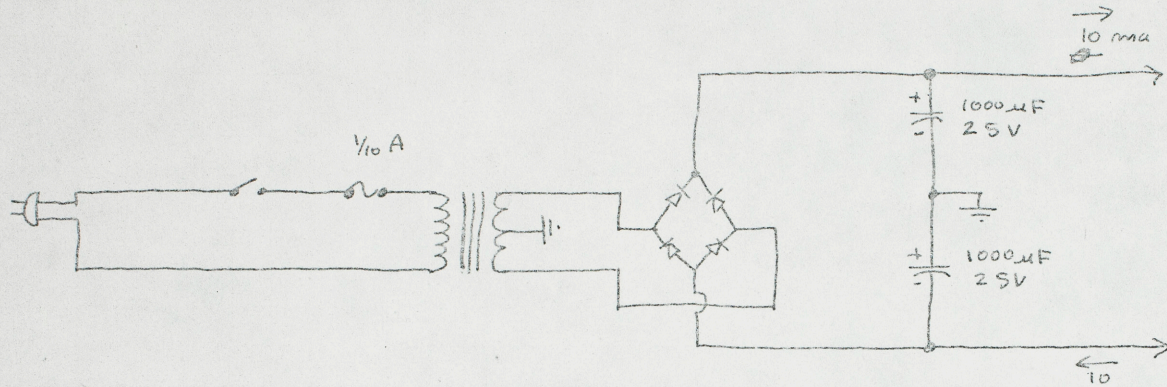
all capacitors 5% mica
values in pf.

switch = 5 poles, 4 position
(Centralab PA-2021)

all 1% resistors should be
metal film or wire wound with
a T.C. of 100 PPM/°C or less

supply ± 15V @ 10ma
regulation + hum not too
important

Power supply



rectifiers 50 piv
500 ma

transformer
secondary 24V C.T. at 50 ma or more

stamps P-8394 or equiv.

Policy on Use of E. M. Studios

A. Who may Use

1. Any student who is enrolled in a class or classes ^(at UCSD), including 199-299, which requires the use of studios may do so, providing the following conditions are met:
 - a. Written consent of instructor
 - b. Satisfactory performance of tech test

B When

1. Sign-up sheet will be posted on door of studio each Mon. AM. for following week. Time will be scheduled for 1 week only.
2. Time allotment
 - a. Time per person shall be determined in the following manner:
 - ± Total number of people desiring to use studio(s) will be determined.

"Prime Time" will be considered to be from 8 AM to 11 PM, or 15 hrs per day. Based on 7 days, this is 105 hrs/wk.

Page I old.

105 hrs wk / bodies = max prime time allotment / wk / person.

Time must be scheduled by Tues noon of any week. Any prime time not scheduled by this time may be picked up by any authorized person over and above their max. allotment. In addition, time between 11 PM and 8 AM is First-come, 1st served basis, and is not scheduled.

3. No-Show Policy

Time reserved by any person, and not in use by 15 minutes after scheduled time may be picked up by any authorized person, on 1st come basis. Repeated no-show by any individual may result in suspension of studio privilege unless suitable excuse is presented to committee (i.e. prolonged illness, etc.)

4. Faculty Use.

Faculty may Pre-empt student

use of studio in an emergency situation, such as preparation of material for class, if desired.

Otherwise, faculty must schedule time as anyone else.

C Notes

I A sign in-out roster will be provided in each studio. Included will be a conditions and comments column. All malfunctions and missing equipment must be recorded by persons using studio. If item is missing, or severe damage has occurred, and has not been recorded, the last person signed in will be considered responsible for that (those) item(s). (Forced entry is an obvious exception)

II Students will sign statement of Financial Responsibility for loss/severe damage to studio equipment.

C. etc.

III Security Measures:

a. Padlock will be installed in addition to key locks. Students will be issued combination when authorization is presented.

b. Honor System

Any person who has been found to give combination and/or keys to unauthorized person(s) will lose all studio privileges automatically and with no discussion.

IV Visiting Dignitaries

Visitors from other UNIV. or colleges (faculty) may gain access to our facilities upon sponsorship of USD Music Dept faculty member. However, all rules + regulations apply as to use, including tech demonstration of proficiency.

To: Electronics Committee

From: Lew Ponce

Subject: Filter for computer music projects
Attachment: Parts list from B.R.

Shortly before vacation, Bruce Rittenbach presented me with parts list only for purchase. I inquired of Bruce Leiby as to the design, and found that B.R. had done same, not the Computer or APIS people. I also asked for the schematic, and did not receive same.

Because of certain parts questions, I did not purchase parts, as Bruce was not around during Xmas vac.

This turned out to be a good thing, because last week Bruce R. asked for list back for changes. Had I purchased the parts, they would not have been suitable.

It is my opinion that B.R. is not capable of designing a useable

(2)

piece of equipment, nor is he
capable of properly constructing
same so that it will be mechanically
sound.

If I am provided with a suitable
design, executed by capable hands,
I will construct same ASAP.

Jew

Dec 8

Lew

Here is the list of parts for you to order for the Music II L.P. filter. See Barbara for acct #. Please follow the specs exactly and do not substitute without 1st checking with me.

T Thanks

Bruce R.

Filter Parts List

I.

Resistors

2 ea	20K	1/4W	5%	carbon	} .5
2 ea	10K	"	"	"	
1 ea	30K	"	"	"	

The following resistors are 1% metal film and must have a T.C. of 100 ppm/°C or less. 1/4W. Suggest Corning style NA60 avail. from Elmas.

3 ea	4.99K				3.
6 ea	10.0K				6.
3 ea	1.00K				3.

3 ea	1K	22 turn	trimpots	Beckman Model 89P	avail G.S. Marshall	4.5
------	----	---------	----------	-------------------	---------------------	-----

II.

Capacitors: all the following must be 5% mica. CDE #s are given

2 ea	200 pf	CD15-FD	201J03	.7
6 ea	390 pf	CD15-FD	391J03	3.2
1 ea	620 pf	CD19-FD	621J03	.5
3 ea	820 pf	CD19-FD	821J03	1.5
2 ea	1200 pf	CD19-FD	122J03	2.1
3 ea	1500 pf	CD19-FD	152J03	2.4
1 ea	3000 pf	CD19-FD	302J03	1.5

III

Other

2 ea	Sigmetics	N5556V	op amps	(G.S. Marshall)	4.0
1 ea	5 pole, 3 position, non-shorting rotary switch	ceramic	Centralab #PA2017		8.0
1 ea	encapsulated power supply	110V AC in	→ + and -15V at 25 ma		20.0

Semiconductor Circuits # LCD 2.15.25

San Diego Rep: RDP Instruments
phone 224-3729

1 ea	Gray Ham. Minibox	10X6X3 1/2	Bud CU-2110A	3.4
1 ea	115V pilot light			3.4
				\$ 64.3

very approx

TO JOHN SILBER,

11/18/71

FROM PAULINE OLIVEROS FOR THE ELECTRONICS COMMITTEE

RE - COMPUTER USERS EQUIPMENT NEEDS

THE COMMITTEE RECOMMENDS THAT THE COMPUTER USERS BE PROVIDED WITH A NAGRA FULL TRACK, 15 IPS TAPE RECORDER AND \$60 TO HAVE A LO-PASS FILTER DESIGNED AND CONSTRUCTED UNDER THE DIRECTION OF BRUCE LEIBIG.

THE COMMITTEE CONCURS THAT THESE NEEDS ARE MINIMAL AT THIS TIME AND FURTHER RECOMMENDS A THOROUGH INVESTIGATION OF POSSIBLE FUTURE NEEDS AND ANTICIPATED COSTS. MOST IMMEDIATELY A LINE FROM THE COMPUTER CENTER TO A TERMINAL IN OUR DEPT. SHOULD BE INVESTIGATED.

THE COMMITTEE CONCURS THAT THE COMPUTER MUSIC PROJECT IS A VALUABLE FUNCTION OF OUR PROGRAM AND MUST HAVE FULL SUPPORT TO CONTINUE PRODUCTIVELY.

CC LEW PRINCE
KEITH HUMBLE
KEN GIBSON
BRUCE LEIBIG
DAVE GRAMPER

Nov 17, 71

TO: P. Oliveros

FROM: W. BURT

RE: Formal Written Proposal for a series of Tape Concerts for Winter & Spring

Proposal: 2 series of tape concerts. ① to be a bi-weekly series of noon concerts (e.g. every other Monday) ② to be a monthly evening concert.

I. Noon Concerts. Held in Art Gallery. Will consist of 45 minutes of music (i.e. 12:10 → 12:55). To serve as a forum for all sorts of tape pieces and ideas. Generally as relaxed a setting as possible. People come in, sit down (hopefully on floor) listen to tapes, leave.

II. Evening concerts: Held in Art Gallery. Will consist of about 60-90 minutes of music. (i.e. 8:30 → 10 PM). To be a showroom for CLASS i.e. really good pieces - our best feet forward - outstanding compositions, etc. As few chairs as possible in gallery - the audience should relax in a non-directed manner - they aren't watching a performer, why should they face one?

Programming: Within the setup outlined above - the aim for the concerts would be either Variety (of aesthetic, mood, etc.) or ~~Interest~~ Special Interest (i.e. - a noon concert of Tape Music from Khurdistan). I would in general program the concerts and be responsible for the technical operation, but would presumably have a superior, such as Jim Campbell or yourself.

Compilation of tapes: before the end of the quarter, I will distribute a sheet to everyone* asking them what tapes they have in their collections and will then write to other people asking them for tapes. I will be responsible for the compilation and programming of the tapes.

One final note: In general, this series should be limited to tape alone, but other interesting pieces for instrument & tape or live electronics and tape could also be scheduled.
*Faculty, Students, Friends at other schools, etc.

RECORDING TECHNICIAN (October, 1959)

DUTIES SUMMARY:

Under direction, operates and maintains sound recording equipment in the production of verbal speeches, lectures, and readings; and performs other related duties as required.

DISTINGUISHING CHARACTERISTICS:

The class of Recording Technician is distinguished from the class of Sound Technician in that there is less variety in types of recording; less requirement for design and fabrication; and less supervision and/or instruction of others.

EXAMPLES:

Makes sound recordings of lectures, speeches, and readings for faculty; sets microphones in studio; operates audio-input console, turntables, and tape.

Arranges recording sessions for students in sound laboratory work, and cuts the tape; arranges for the playing of instructional recordings for students.

Serves as production engineer for tape-recorded broadcasts of readings; mixes sound from microphones; re-records, splices, and edits tape to produce final recording.

Serves as curator of sound library; makes recordings of useful material, arranges with outside agencies for acquisition of materials, and catalogs recordings.

Acts as custodian of studios and sound recording equipment, and maintains pertinent records.

Maintains, makes ordinary repairs, and/or installs sound equipment such as audio-input consoles, microphones, tape recorders, and disc cutters.

MINIMUM EDUCATION AND EXPERIENCE QUALIFICATIONS:

Two years of college with courses in mathematics and physical sciences, and two years of practical experience with sound equipment including professional broadcast recording; or an equivalent combination of education and experience.

November 30, 1971

TO: Pauline Oliveros

FROM: Lew Prince

SUBJ: Your Letter

1. As to the policies for studio use, I realize that these are somewhat arbitrary, and a little hard to follow sometimes, but there have been many complaints in the past regarding inequitable distribution of studio time. Certain persons have previously usurped the bulk of "prime time" without having "produced" any piece de resistance. (This last is not my decision, but rather feedback from you, Ken, Bob, etc.) Thus, I felt that some means of controlling how much time was spent by any one student in the studios was necessary. (In the event there were many potential users of "the space").

The only way I could see to control this was to force people to come to me in order to gain access (the combination) to studios, since anyone and everyone has keys, and since with the quantity of new people here, I wished to give some basic instructions to them in operating procedures which would safeguard our expensive devices.

2. The only tape machine which will meet the needs of computer people for sig/noise is the Nagra. (-68db)(fulltrack) No stereo machine will do better than -60.
3. Filter: We have no filter with specifications of 36 db per octave. (P. S. Funds have been allocated for filter--Bruce Leibig and I have spoken about this.)
4. Maintenance Schedule (315 & 306) (Except in special cases):

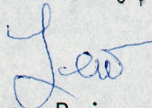
315 - Monday morning till 12 noon
306 - No use as yet - so schedule is open
409E - Thursday morning from 9-12

Classrooms and labs (H.L.) as possible so as not to interfere with class use.

I do attempt to check classrooms nearly every day, but at least once a week.

I trust you will forgive me for this late reply.

Sincerely,


Lew Prince

DEAR ROGER,

11-13-71

SINCE YOU OBJECT TO ITEM 3 OF MY MEMO TO JOHN SILBER, DATED 11.11.71 RE BRUCE RITTENBACH, LET ME ANSWER YOUR OBJECTIONS:

a.) "WHAT IS AN INTEGRATED ELECTRONIC MUSIC SYSTEM?"

IN THE CONTEXT OF THE MEMO IT MEANS WHAT KIND OF INTERFACING COMPONENTS OR CIRCUITS OR DEVICES DO WE NEED IN ORDER TO MAKE USE OF ALL OF THE EQUIPMENT WE ALL READY HAVE? WE HAVE A LOT OF COMPONENTS ^(EQUIPMENT), BUT NO SYSTEMATIC USE OF SUCH. NO INTEGRATED IDEA OF HOW TO MAKE FLEXIBLE CONFIGURATIONS OF EQUIPMENT WHICH WILL BETTER SERVE THE NEEDS OF THE FACULTY AS A WHOLE. YOUR QUESTION IS A GOOD ONE. ANSWERS MUST START COMING FROM EVERYONE WHO IS CONCERNED.

b.) "THAT MEANS THAT BRUCE RITTENBACH WILL BE ALLOWED TO PLAY WITH \$900 WORTH OF COMPONENTS." YES HE WILL. AS FAR AS I'M CONCERNED THAT IS GOOD FOR THE FOLLOWING REASONS 1. WHO ELSE CAN DO ANYTHING WITH THESE COMPONENTS BEFORE OBSOLESCENCE SETS IN? 2. THE ORIGINAL SPIRIT OF THE GRANT WAS AIMED TOWARDS CREATIVE RESEARCH. I TAKE THAT TO MEAN TO LOOK FOR SOMETHING WHICH DOES NOT ALREADY EXIST OR TO GO BEYOND EXISTING IDEAS. AT THE TIME OF THE GRANT 3 YEARS AGO AN ANALOGUE SOUND DEVICE SUCH AS I HAD IN MIND DID NOT EXIST. IT STILL DOES NOT

HOWEVER TO PURSUE MY IDEA WITH THE PRESENT RESOURCES IS PURE FOLLY. TO GO AHEAD WITH A CONSERVATIVE PLAN WITHIN OUR MEANS IS SIMPLY DUPLICATION OF EFFORT RATHER THAN HONEST RESEARCH. 3. "IT IS TOO GRANDIOSE."

SO BE IT. 4. I ASSUME YOUR FURTHER OBJECTION TO BE CONCERNED WITH BRUCE'S LACK OF FINESSE AS A BUILDER. WELL, YOU CAN'T GET BLOOD OUT OF A TURNIP. I DON'T KNOW A SINGLE DESIGNER WITH THE EXCEPTION OF MIDDLETON^{MAYBE} WHO HASN'T NEEDED TO BREADBOARD CIRCUITS, OR EXPERIMENT A LOT IN ORDER TO FIND NEW WAYS OF DOING THINGS. THERE IS NO USE IN BUILDING PROTO TYPES OR EXPERIMENTAL CIRCUITS LIKE A TANK. ESPECIALLY IF THE RESOURCES ARE SO LIMITED. IF YOU THINK BRUCE IS NOT QUALIFIED TO PRODUCE ANYTHING WORTHWHILE THEN FIND SOMEONE WHO IS AND THE MEANS TO IMPLEMENT SOME WORK. I HAVE TRIED TO MAKE THE BEST OF AN EXISTING SITUATION OF LIMITED MEANS. WHAT BRUCE PRODUCES MAY VERY WELL BE CRUDE HOWEVER IT WILL BE SOMETHING RATHER THAN NOTHING, HE WILL DO A GIVEN AMOUNT WITHIN A GIVEN TIME, HIS RESULTS WILL WORK. IF WE SIT ON THOSE PARTS, I DOUBT THAT THEY WILL HATCH INTO PREAMPS, MIXERS ETC. THEY WILL SIMPLY SIT ON THE SHELF WITH NOTHING HAPPENING.

I HAVE TRIED RATHER UNSUCCESSFULLY TO FOCUS THE ATTENTION OF THE FACULTY ON THE FACT THAT WILL OGDON'S SOLUTION TO THE FACULTY'S ^{ELECTRONIC} DESIGNING NEEDS HAS BEEN INVESTED IN GRADUATE STUDENTS APPOINTED

AS R.A.S. BRUCE UNDERSTANDS HIS RA TO MEAN DOING DESIGN WORK FOR THE DEPARTMENT. AS FAR AS I AM CONCERNED THIS COMMITMENT MUST BE HONORED FOR HUMAN REASONS AS WELL AS WE AIN'T GOT ANYBODY ELSE.

IN MY OPINION THIS IS HIGHLY UNSATISFACTORY. WE NEED PROFESSIONAL CONSULTATION ON ELECTRONIC PROJECTS BUT THIS IS GOING TO REQUIRE A COLLECTIVE EFFORT.

THAT MEANS MEETING AND HASHING OUT THE PROBLEM WITH FULL ATTENTION GIVEN TO IT.

IN THE MEANTIME BRUCE NEEDS SUPERVISION, ADVICE AND SUPPORT (CONFIDENCE). SINCE I HAVE SUPERVISED THE DEPT. GRANT SINCE IT WAS RECEIVED AND BRUCE FOR THIS QUARTER, I THINK THAT SOMEONE ELSE SHOULD HAVE A GO AT IT.

PAULINE

CC JOHN SILBER
KEN GASURO
BOB ERICKSON

Pauline, This
looks OK. I'm sorry you
took so much trouble to
answer what could have been
done conversationally. Still, I
now understand more clearly.
Thanks, [Signature]

DEAR ROGER,

4-13-71

SINCE YOU OBJECT TO ITEM 3 OF MY MEMO TO JOHN SILBER, DATED 11.11.71 RE BRUCE RITTENBACH, LET ME ANSWER YOUR OBJECTIONS:

a.) "WHAT IS AN INTEGRATED ELECTRONIC MUSIC SYSTEM?"

IN THE CONTEXT OF THE MEMO IT MEANS WHAT KIND OF INTERFACING COMPONENTS OR CIRCUITS OR DEVICES DO WE NEED IN ORDER TO MAKE USE OF ALL OF THE EQUIPMENT WE ALL READY HAVE? WE HAVE A LOT OF COMPONENTS ^(EQUIPMENT), BUT NO SYSTEMATIC USE OF SUCH. NO INTEGRATED IDEA OF HOW TO MAKE FLEXIBLE CONFIGURATIONS OF EQUIPMENT WHICH WILL BETTER SERVE THE NEEDS OF THE FACULTY AS A WHOLE. YOUR QUESTION IS A GOOD ONE. ANSWERS MUST START COMING FROM EVERYONE WHO IS CONCERNED.

b.) "THAT MEANS THAT BRUCE RITTENBACH WILL BE ALLOWED TO PLAY WITH \$900 WORTH OF COMPONENTS." YES HE WILL. AS FAR AS I'M CONCERNED THAT IS GOOD FOR THE FOLLOWING REASONS 1. WHO ELSE CAN DO ANYTHING WITH THESE COMPONENTS BEFORE OBSOLESCENCE SETS IN? 2. THE ORIGINAL SPIRIT OF THE GRANT WAS AIMED TOWARDS CREATIVE RESEARCH. I TAKE THAT TO MEAN TO LOOK FOR SOMETHING WHICH DOES NOT ALREADY EXIST OR TO GO BEYOND EXISTING IDEAS. AT THE TIME OF THE GRANT 3 YEARS AGO AN ANALOGUE SOUND DEVICE SUCH AS I HAD IN MIND DID NOT EXIST. IT STILL DOES NOT

HOWEVER TO PURSUE MY IDEA WITH THE PRESENT RESOURCES IS PURE FOLLY. TO GO AHEAD WITH A CONSERVATIVE PLAN WITHIN OUR MEANS IS SIMPLY DUPLICATION OF EFFORT RATHER THAN HONEST RESEARCH. 3. "IT IS TOO GRANDIOSE."

SO BE IT. 4. I ASSUME YOUR FURTHER OBJECTION TO BE CONCERNED WITH BRUCE'S LACK OF FINESSE AS A BUILDER. WELL, YOU CAN'T GET BLOOD OUT OF A TURNIP. I DON'T KNOW A SINGLE DESIGNER WITH THE EXCEPTION OF MIDDLETON^{MAYBE} WHO HASN'T NEEDED TO BREADBOARD CIRCUITS, OR EXPERIMENT A LOT IN ORDER TO FIND NEW WAYS OF DOING THINGS. THERE IS NO USE IN BUILDING PROTO TYPES OR EXPERIMENTAL CIRCUITS LIKE A TANK. ESPECIALLY IF THE RESOURCES ARE SO LIMITED. IF YOU THINK BRUCE IS NOT QUALIFIED TO PRODUCE ANYTHING WORTHWHILE THEN FIND SOMEONE WHO IS AND THE MEANS TO IMPLEMENT SOME WORK. I HAVE TRIED TO MAKE THE BEST OF AN EXISTING SITUATION OF LIMITED MEANS. WHAT BRUCE PRODUCES MAY VERY WELL BE CRUDE HOWEVER IT WILL BE SOMETHING RATHER THAN NOTHING, HE WILL DO A GIVEN AMOUNT WITHIN A GIVEN TIME, HIS RESULTS WILL WORK. IF WE SIT ON THOSE PARTS, I DOUBT THAT THEY WILL HATCH INTO PREAMPS, MIXERS ETC. THEY WILL SIMPLY SIT ON THE SHELF WITH NOTHING HAPPENING.

DEAR ROGER,

11-13-71

SINCE YOU OBJECT TO ITEM 3 OF MY MEMO TO JOHN SILBER, DATED 11.11.71 RE BRUCE RITTENBACH, LET ME ANSWER YOUR OBJECTIONS:

a.) "WHAT IS AN INTEGRATED ELECTRONIC MUSIC SYSTEM?!"

IN THE CONTEXT OF THE MEMO IT MEANS WHAT KIND OF INTERFACING COMPONENTS OR CIRCUITS OR DEVICES DO WE NEED IN ORDER TO MAKE USE OF ALL OF THE EQUIPMENT WE ALL READY HAVE? WE HAVE A LOT OF COMPONENTS ^(EQUIPMENTS), BUT NO SYSTEMATIC USE OF SUCH. NO INTEGRATED IDEA OF HOW TO MAKE FLEXIBLE CONFIGURATIONS OF EQUIPMENT WHICH WILL BETTER SERVE THE NEEDS OF THE FACULTY AS A WHOLE. YOUR QUESTION IS A GOOD ONE. ANSWERS MUST START COMING FROM EVERYONE WHO IS CONCERNED.

b.) "THAT MEANS THAT BRUCE RITTENBACH WILL BE ALLOWED TO PLAY WITH \$900 WORTH OF COMPONENTS." YES HE WILL. AS FAR AS I'M CONCERNED THAT IS GOOD FOR THE FOLLOWING REASONS 1. WHO ELSE CAN DO ANYTHING WITH THESE COMPONENTS BEFORE OBSOLESCENCE SETS IN? 2. THE ORIGINAL SPIRIT OF THE GRANT WAS AIMED TOWARDS CREATIVE RESEARCH. I TAKE THAT TO MEAN TO LOOK FOR SOMETHING WHICH DOES NOT ALREADY EXIST OR TO GO BEYOND EXISTING IDEAS. AT THE TIME OF THE GRANT 3 YEARS AGO AN ANALOGUE SOUND DEVICE SUCH AS I HAD IN MIND DID NOT EXIST. IT STILL DOES NOT

I HAVE TRIED RATHER UNSUCCESSFULLY TO FOCUS THE ATTENTION OF THE FACULTY ON THE FACT THAT WILL OGDON'S SOLUTION TO THE FACULTY'S ^{ELECTRONIC} DESIGNING NEEDS HAS BEEN INVESTED IN GRADUATE STUDENTS APPOINTED AS R.A.E. BRUCE UNDERSTANDS HIS RA TO MEAN

DOING DESIGN WORK FOR THE DEPARTMENT. AS FAR AS I AM CONCERNED THIS COMMITMENT MUST BE HONORED FOR HUMAN REASONS AS WELL AS WE HIN'T GOT ANYBODY ELSE.

IN MY OPINION THIS IS HIGHLY UNSATISFACTORY. WE NEED PROFESSIONAL CONSULTATION ON ELECTRONIC PROJECTS BUT THIS IS GOING TO REQUIRE A COLLECTIVE EFFORT.

THAT MEANS MEETING AND HASHING OUT THE PROBLEM WITH FULL ATTENTION GIVEN TO IT.

IN THE MEANTIME BRUCE NEEDS SUPERVISION, ADVICE AND SUPPORT (CONFIDENCE). SINCE I HAVE SUPERVISED THE DEPT. GRANT SINCE IT WAS RECEIVED AND BRUCE FOR THIS QUARTER, I THINK THAT SOMEONE ELSE SHOULD HAVE A GO AT IT.

PAULINE

cc JOHN SILBER
 KEN CABURO
 BOB ERICKSON

HOWEVER TO PURSUE MY IDEA WITH THE PRESENT RESOURCES IS PURE FOLLY. TO GO AHEAD WITH A CONSERVATIVE PLAN WITHIN OUR MEANS IS SIMPLY DUPLICATION OF EFFORT RATHER THAN HONEST RESEARCH. 3. "IT IS TOO GRANDIOSE."

SO BE IT. 4. I ASSUME YOUR FURTHER OBJECTION TO BE CONCERNED WITH BRUCE'S LACK OF FINESSE AS A BUILDER. WELL, YOU CAN'T GET BLOOD OUT OF A TURNIP. I DON'T KNOW A SINGLE DESIGNER WITH THE EXCEPTION OF MIDDLETON^{MAYBE} WHO HASN'T NEEDED TO BREADBOARD CIRCUITS, OR EXPERIMENT A LOT IN ORDER TO FIND NEW WAYS OF DOING THINGS. THERE IS NO USE IN BUILDING PROTO TYPES OR EXPERIMENTAL CIRCUITS LIKE A TANK. ESPECIALLY IF THE RESOURCES ARE SO LIMITED. IF YOU THINK BRUCE IS NOT QUALIFIED TO PRODUCE ANYTHING WORTHWHILE THEN FIND SOMEONE WHO IS AND THE MEANS TO IMPLEMENT SOME WORK. I HAVE TRIED TO MAKE THE BEST OF AN EXISTING SITUATION OF LIMITED MEANS. WHAT BRUCE PRODUCES MAY VERY WELL BE CRUDE HOWEVER IT WILL BE SOMETHING RATHER THAN NOTHING, HE WILL DO A GIVEN AMOUNT WITHIN A GIVEN TIME, HIS RESULTS WILL WORK. IF WE SET ON THOSE PARTS, I DOUBT THAT THEY WILL HATCH INTO PREAMPS, MIXERS ETC. THEY WILL SIMPLY SIT ON THE SHELF WITH NOTHING HAPPENING.

I HAVE TRIED RATHER UNSUCCESSFULLY TO FOCUS THE ATTENTION OF THE FACULTY ON THE FACT THAT WILL OGDON'S SOLUTION TO THE FACULTY'S ^{ELECTRONIC} DESIGNING NEEDS HAS BEEN INVESTED IN GRADUATE STUDENTS APPOINTED AS R.R.E. BRUCE UNDERSTANDS HIS RA TO MEAN

DOING DESIGN WORK FOR THE DEPARTMENT. AS FAR AS I AM CONCERNED THIS COMMITMENT MUST BE HONORED FOR HUMAN REASONS AS WELL AS WE HAIN'T GOT ANYBODY ELSE.

IN MY OPINION THIS IS HIGHLY UNSATISFACTORY. WE NEED PROFESSIONAL CONSULTATION ON ELECTRONIC PROJECTS BUT THIS IS GOING TO REQUIRE A COLLECTIVE EFFORT.

THAT MEANS MEETING AND HASHING OUT THE PROBLEM WITH FULL ATTENTION GIVEN TO IT.

IN THE MEANTIME BRUCE NEEDS SUPERVISION, ADVICE AND SUPPORT (CONFIDENCE). SINCE I HAVE SUPERVISED THE DEPT. GRANT SINCE IT WAS RECEIVED AND BRUCE FOR THIS QUARTER, I THINK THAT SOMEONE ELSE SHOULD HAVE A GO AT IT.

PAULINE

cc John SILBER
KEN CASUIRO
BOB ERICKSON

TO KEN , KEITH AND DAVID GAMPER

11/11/71

FROM PAULINE

REGARDING ELECTRONICS COMMITTEE MEETING

WE MUST MEET SOON TO CONSIDER THE RESULTS OF GAMPER'S QUESTIONNAIRE AND RITTENBACH'S QUESTIONNAIRE CONCERNING USE OF THE STUDIOS. OTHER ITEMS ARE AS FOLLOWS :

1. COMPUTER USERS NEED FOR ANALOGUE EQUIPMENT.
2. ~~SET~~ STUDIO USERS QUALIFICATIONS
3. BROCHURE OF WHAT IS AVAILABLE TO STUDENTS. + Faculty

PLEASE SUBMIT OTHER AGENDA ITEMS TO MY BOX IN WRITING.

I AM ASKING IRENE TO ORGANIZE MEETING AS SOON AS POSSIBLE.

11/11/71

DEAR LEW,

WE WILL HAVE AN ELECTRONICS COMMITTEE MEETING SOON
TO CONSIDER POLICY ON THE FOLLOWING:

SIGN UP SCHEDULE

USER'S QUALIFICATION TEST (TO ARRIVE AT STANDARD)

EQUIPMENT AVAILABILITY AND SECURITY

PLEASE SUBMIT TO ME IN WRITING (I HAVE A TIN EAR) ANY
SUGGESTIONS YOU HAVE WITH A VIEW TOWARDS STANDARD
PROCEDURES, OR MAINTAINING CURRENT POLICIES.

ALSO ANY ITEMS YOU HAVE FOR THE AGENDA.

DO WE HAVE ANY PORTABLE TPE MACHINING AT PRESENT WITH
A GOOD SIGNAL-NOISE RATIO WHICH CAN BE DESIGNATED
FOR USE BY COMPUTER MUSIC STUDENTS?

DO WE HAVE A PORTABLE LO PASS FILTER, 36 DB PER 8^{DE}
CUT OFF 5KC, WHICH ALSO COULD BE DESIGNATED FOR THEIR USE?

LETS GET TOGETHER SOON FOR A DISCUSSION OF SELFHELP LABS
TO MAKE SURE ALL IS WELL.

PAULINE

P.S. WHAT IS YOUR MAINTENANCE SCHEDULE?

Electronics Committee Agenda

- 1 Users Test
- 2 What is the maintenance schedule
- 3 Sign up schedule
- 4 Map of equipment
- 5 Students recording studio for quality recordings. Where is it?
- 6 2 Revox in HL for Copying-Dubbing
How access?
- 7 Equipment list
- 8 Computer ~~to~~ Users

Lo pass filter 30db per octave cut off 5Kc
(Nagra in the future)

Portable Tape machine now what do we have?

Increasing need (70db)

→ designed + built for \$60

To be kept nearby
(Liebig Office? or?)

To Keith + Ken + Dave Gampfer

11-1/71

From - Pauline

Concerning Electronics Committee Meeting

Attached is temporary policy for Users of Q315 + Q306.
I am asking Lew Ponce to use this policy until the
committee drafts a more thoughtful procedure
(if necessary)

Questions for your consideration:

Should Q315 + Q306 be pad locked with a weekly
change in combination? as Lew has now taken it upon
himself to do? ^{This is repressive + oppressive can you sug-}
gest compromise for security sake?

So the attached policy adequate?

What are your amendments or additions or deletions?

When Dave Gampfer collects the results of his question-
naire, we should consider them in our deliberations.

Until I hear from you I will consider the
attached policy to be in affect.

27 October 1971

Attention: All Graduate Students and Faculty Members

From: Lew Prince

Subject: Use for projects of Q315 and Q306 (Buchla and Moog)

Time for these spaces must be scheduled through me at my office. WRITTEN Authorization (on a quarterly basis) is necessary for Grads and undergrads, and must be signed by faculty sponsor and delivered to me in person.

All time will be scheduled on a weekly basis, non-permanent, and MUST BE ARRANGED FOR ON THE PRECEDING FRIDAY in order that the schedule may be posted in the Music Office.

Thank you for your cooperation.

Lew

- a) If you do it by quarter 90% do show or time arranged if time can't be used by others.
- b) What or problems ^{schedules +} security - with contracts it can be changed weekly
- c) If you do not schedule use then there are problems in seeing that time is equitably distributed among all students.

(Betty Wong - 30 hrs a week)

D) Nights + Week ends - schedule also → ?

E) Keep tape dubbing over in A-L.

TO THE FACULTY

FROM THE ELECTRONICS COMMITTEE

DUTIES OF FULL-TIME TECHNICIAN

Please read the attached and comment, if necessary, to its completeness or incompleteness. If you have any questions concerning the outlined duties please put them in my box as soon as possible.

Since it is the 1st of July and since the Faculty voted to hire a full-time technician, it is imperative that the formulation of his duties be set as soon as possible.

There is no provision for duplication in the duties of the full-time technician. It was felt by the Committee that, although a tape duplicator is very much needed, this should not be in the domain of the electronics technician.

There also is no provision for the recording of events listed. This, again, is outside the domain of the full-time technician. Hopefully this activity can be covered by those members of the recording class (Music 104a, 104b/204) capable of doing the activity.

In addition, there is no provision for the technician to be an electronic processor during rehearsals, concerts, or for the fabrication of tapes of processed material suitable for the use during rehearsals and concerts. This must be left to providence.

If the Committee does not receive information from you by the 1st of August then, it is assumed, all is well.

(for the Electronics Committee)
Jim Campbell, faculty member

DUTIES OF FULL-TIME TECHNICIAN

page 2

6. The committee felt that the technician would not be responsible to fabricate any electronic devices not indigenous to the system. He, of course, must be able to have a system work and if that means that he must make up cables, plugs, housings, etc., then he must fabricate those items. All other fabrication should be done by either a research assistant hired especially for that purpose, or outside the Department.
7. The committee began a discussion of priority maintenance but did not finish it.

DUTIES OF FULL-TIME TECHNICIAN

1. Due to the nature of our involvement with electronic equipment it seems to the Electronics Committee that two types of maintenance are involved:
 - a. a cursory examination to ascertain that all parts of each system are in working order for day-by-day teaching;
 - b. the normal week-by-week maintenance of each system as outlined by the maintenance booklets available for each part of the system.

Therefore, the Committee recommends that the technician be responsible for both items above under the following schedule:

- a. all classroom systems be checked between 8:00 and 9:00 a.m. of each class day;
- b. a weekly maintenance schedule be set up for each system and posted so that all of us know when this or that particular system is being maintained and, therefore, not available for use.

The cursory examination should establish 1) that all channel A inputs go to all channel A outputs; 2) that all channel B inputs go to all channel B outputs; 3) there is no distortion evident; 4) there is no noise evident; 5) that each system is working commensurate with the quality expected from each system; 6) that if a problem exists within a system a note is made of that problem and, if major, the problem is corrected after all systems have been checked.

2. The Committee felt that, with the exception of the Moog and the Buchla, all systems should have a weekly maintenance. This maintenance includes the degaussing and cleaning of all tape recorder parts, playback/recording alignment procedures, and so forth. In the case of the Moog and the Buchla areas: they should be maintained on a daily basis due to their heavy use.
3. Maintenance records on each piece of electronic equipment should be established showing date, time, event, cost, etc., of maintenance.
4. The committee felt that the technician, in order to perform his duty, should secure all necessary equipment specification sheets, schematics, maintenance books, etc., and, in addition, the technician should maintain the inventory of all electronic equipment in accordance with the rules of the University.
5. The committee discussed purchasing procedures in relation not only to the needs of the Department but also in relation to the needs of each individual member. The conclusion was that the technician would take care of his area (except for large, expensive items which must be cleared through the Committee) and that each member would be responsible for his own needs.

E M S A

Electronic Music Studios of Amherst, Inc.
460 West Street, Amherst, Mass. 01002
(413) 256-8591

October 1971

A Letter to Professors of Music

I am pleased to announce that Electronic Music Studios of Amherst (EMSA), a new corporation, has recently been formed for the purpose of developing and propagating electronic techniques in the arts. Our office and studio in Amherst, to be completed this month, are open to visitors at all times.

Electronic music is our main interest. We are creating a studio for composing, recording and reproducing electronic music, as well as for education in the techniques associated with this new art. Our income derives from the sale of equipment. We are especially interested in making available a line of compact and inexpensive systems for the use of teachers and students in schools and colleges. The time has come when a complete electronic music studio of professional quality can be assembled for the price of a small grand piano. And the cost of adding a synthesizer to an otherwise well equipped sound studio is very low indeed.

We have acquired the rights to educational sales of equipment from Electronic Music Studios (London), Ltd., who produce a wide range of synthesizers and related electronic instruments. Their first synthesizer, variously known as the "Putney" or the "VCS-3," has sold widely around the world. It is well engineered and beautifully compact, but it is now available in even smaller form and at a lower price under the name "Synthi A." The instrument is the size of a brief case, but it is nonetheless a complete synthesizer, quite acceptable as the heart of a professional music studio. It lends itself particularly well to education in music and musical acoustics.

With our educational discount (forty percent below retail price), the cost of a Synthi A is well under \$1000. Peripherals for the instrument include a touch-sensitive keyboard and a 32-event 2-track digital sequencer. Coming from London, in addition to Synthi A, is a long line of new instruments foremost among which is Synthi 100, the most sophisticated studio synthesizer available. It contains, among other new features, a 256-event digital sequencer which is also available separately as a useful peripheral in any studio or in performance of electronic music.

As our studio grows, we shall become a unique facility for intercomparison of ideas and techniques in the electronic arts. We invite you to visit, to write for our price lists and brochures, or to suggest that we visit you with demonstration equipment.

Everett Hafner
President, E M S A

The odds for building the Mandeville Center are so impressive that no one is taking bets. Because of that condition I sense the possibility that one day we will receive a request for the equipment we desire for the building; and that request will have a deadline of the next day if we wish to indeed equip the building. Therefore, I wish to alert you to this possibility and to forestall such a crisis by asking for your input as to the following:

1. What do you wish to do in this building?
2. How do you wish to accomplish the thing you wish to do?
3. What equipment do you need to accomplish the thing you wish to do under the following categories:
 - a. office space/time?
 - b. research space/time?
 - c. instructional space/time?
 - d. performance space/time?
 - e. leisure space/time?
 - f. "thinking" space/time?
4. What other conditions do you need to impose so as to accomplish the thing you wish to do?

The only set parameter with which we must operate is the structure of the building; not even the Muses could change that now. I have placed the plans on a table in the Conference room so that you can look at what it is. The following pages (and their contents) are the most important for your perusal:

- page 5 - showing the two large rehearsal spaces and the intervening "sound studio";
- page 6 - showing the "electronic studio" and the "tape studio";
- page 7 - showing the music court with "office" spaces and "rehearsal" and "locker" spaces;
- page 8 - showing the administration suite, conference room and "offices" plus the "rehearsal" room;
- page 11 - showing the lower level of the Recital Hall and Concert Hall;
- page 12 - showing the platforms and seating areas of the Recital Hall and Concert Hall;
- page 13 - showing the "Sound and Lighting" control booth;
- page 22 - showing a cross-sectional of the academic wing and the general purpose wing.

The titles of rooms listed above that are shown in quotes ("") are titles only and in no way do they imply that that space will, indeed, be used in that function.

request for information concerning the Mandeville Center for the Arts:
page 2

One important point to keep in mind: all of the office spaces and the rehearsal spaces you see in the Music Court are sound isolated from each other so that they could, if needed, be used for sound making rooms without disturbance from one room affecting another (within reason). This is not true of the office space on the administration level.

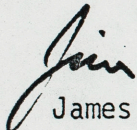
In addition: five of the offices (presumably on the administration level) are meant for drama personnel.

The spaces titled classroom are generally assignable spaces and do not belong to the Music Department. However, we have been assured that only those departments housed in the Center will make use of those spaces and that we may have the opportunity to request certain equipment pertinent to our needs for those spaces. Hopefully, this will be the case.

I can not impress you enough about the sense of urgency concerning the request (s) listed above. Having experienced the crisis on this campus for five years now I do believe that we are approaching one. I am in daily contact with the Office of Architects and Engineers and, at the moment, they have no further information than that it's possible the Center is in the works.

I will be out of town until the 8th of May and will not be able to answer any questions you have until then. However, upon my return I intend to contact each of you to see if there are any questions and to collect your thoughts (written down, please) on the building.

Sincerely,



James L. Campbell