

## DOCUMENT RESUME

ED 118 733

95

CE 005 172

**TITLE** MAVA [Massachusetts Association of Vocational Administrators] 1972 Summer Workshops and Professional Improvement Project. Final Report.

**INSTITUTION** Massachusetts Association of Vocational Administrators.; Massachusetts State Dept. of Education, Boston. Div. of Occupational Education.

**SPONS AGENCY** Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.

**PUB DATE** Mar 73

**NOTE** 131p.; Not available in hard copy due to print quality of original copy; Photographs in Appendixes A and B will not reproduce in microfiche

**EDRS PRICE** MF-\$0.83 Plus Postage. HC Not Available from EDRS.

**DESCRIPTORS** Industrial Arts; \*Inservice Teacher Education; Program Evaluation; Questionnaires; \*Teacher Workshops; Trade and Industrial Education; Visual Arts; Vocational Education; \*Vocational Education Teachers

**IDENTIFIERS** Massachusetts

## ABSTRACT

The Massachusetts Association of Vocational Administrators (MAVA), with the assistance of the State Division of Occupational Education, developed a series of four-day, in service workshops aimed at vocational teachers throughout the State, and the document provides a final report of this project's first year. Part One covers general information regarding project planning and administration, workshop evaluation, and recommendations for future workshops and proposals for future MAVA projects. The 26 workshops were given at vocational-technical schools throughout the State, with host-school and non-host school directors recruiting participants. Host-school directors and all participants received pre and post-workshop questionnaires, which form the basis for program evaluation and recommendations. Participant responses indicated general satisfaction with the workshops. Part Two provides very brief descriptions of the workshops, which include: Electrical; Auto Mechanics; Auto Body; Clothing; Health Occupations; Data Processing; Graphic Arts; Machine Shop; Wood Trades; Plumbing; Food Trades; Academic; Painting and Decorating; Printing; Beauty Culture; Fashion Dressmaking; Drafting; Metal Fabrication, Welding, and Sheet Metal; and, Electronics. Samples of hand-out materials and administrative documents, including pre and post-workshop participant evaluation questionnaires, are appended. (LH)

ED1118733

OCT 13 1975

*MAVA*

MASSACHUSETTS ASSOCIATION OF VOCATIONAL ADMINISTRATORS

FINAL REPORT

MAVA 1972 Summer Workshops and  
Professional Improvement Project

March, 1973

U S DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

THIS DOCUMENT HAS BEEN REPRO-  
DUCED EXACTLY AS RECEIVED FROM  
THE PERSON OR ORGANIZATION ORIGIN-  
ATING IT. POINTS OF VIEW OR OPINIONS  
STATED DO NOT NECESSARILY REPRESENT  
OFFICIAL NATIONAL INSTITUTE OF  
EDUCATION POSITION OR POLICY.

A professional development project operated cooperatively  
with the Massachusetts Division of Occupational Education  
and funded by the U. S. Office of Education, Department of  
Health, Education, and Welfare, from P.L. 90-576 and P.L.  
90-35, Part F, funds.

CE 005172-

Discrimination Prohibited - Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." The Massachusetts Association of Vocational Administrators conducts its professional development program in full concurrence with this mandate, and additionally applies the above stipulations to the matters of sex and religious beliefs. Also, participants are welcomed from private school staffs.

Massachusetts Association of Vocational Administrators

FINAL REPORT

MAVA 1972 Summer Workshops and  
Professional Improvement Project

March, 1973

A professional development project operated cooperatively with the Massachusetts Division of Occupational Education and funded by the U. S. Office of Education, Department of Health, Education, and Welfare, from P.L. 90-576 and P.L. 90-35, Part F, funds.

TABLE OF CONTENTS

Introduction and Acknowledgments ..... 1  
By MAVA Professional Development Committee

Host School Directors and Workshops ..... 2

Background ..... 3

Part I

A. Project Planning and Administration ..... 6

B. Evaluation Format and Results ..... 9

C. Recommendations ..... 13

Recommendations for Improving Workshops ..... 13

General Recommendations and ..... 14  
Related Policy Decisions

Concluding Remarks ..... 17

Part II

Individual Workshop Descriptions ..... 18  
With Names of Participants

Appendices  
(p.63ff)

- A. Sample Handout Materials
- B. Sample Publicity
- C. Administrative Materials  
(For Use by New Host School Directors)
- D. Participant Evaluation Questionnaires  
With Covering Letter

## INTRODUCTION AND ACKNOWLEDGMENTS

Vocational Educators in Massachusetts, while cognizant of how necessary is financial support and technical assistance from the Division, have always acted on the premise that no vocational program can succeed without firm local support, commitment, and initiative. We therefore find it unremarkable that we, as school directors, should play a major role in the professional training of our own staffs.

Nevertheless, the idea that the Massachusetts Association of Vocational Administrators should assume an administrative role in such training came to mind so near to Summer that we accepted this responsibility with considerable apprehension. It seemed that too little time was available.

The fact that, by our tentative measure, we have succeeded clearly implies that we have received much help and cooperation. Primarily, credit should be extended to the eleven school directors who hosted the twenty-six workshops. Their enthusiasm and skill exceeded even that which we expected. These unselfish (and unpaid) men, their schools and their workshops are listed on the reverse of this page. Second - and in line with the theory of those who developed the federal Acts which support these workshops - we could not have achieved the needed currency of content without the active collaboration of many industries in Massachusetts. These most important contributors are listed in each of the workshop descriptions, in Part II of this report. Third, we are very grateful for the assistance and advice of the Division's staff - particularly the Office of Professional Development and its Chief, Mr. Jack Morine - and of Dr. Buzzell, who has been a firm backer of our work. Last, but hardly least, we credit our own professional personnel who enrolled in the workshops (in almost all cases, without pay or college credit) and gained much. We are sure that they will, in turn, give as much to their students. We are looking forward to a continued collaboration with all the above, next year.

In this initial report, only, we are including a series of appendices which will help new host-school directors understand the mechanics of preparing this kind of workshop. New volunteers will be most welcome.

The MAVA Professional Development Committee: Bob Butler, Chairman,  
John Harrington (member); Ruth Shea (member); Lot Cooke (consultant)

Address: c/o Worcester Voc. Sch. Dept., Wheaton Square, Worcester, MA. 01608

HOST SCHOOL DIRECTORS AND WORKSHOPS

<u>Name</u>	<u>School</u>	<u>Workshop(s)</u> *
Mr. Lawrence H. Babin Director	Quincy Vocational Technical School	(38) Electrical
Mr. Robert K. Butler Administrator	Worcester Vocational School Department (with G.M. and Ford, in automotive areas)	(34) Auto Mechanics & A/C (31) Auto Body & A/C (22) Clothing (28) Health Occupations
Mr. William A. Dwyer Sup't-Director	Blue Hills Regional Voc-Tech School	(7) Data Processing (22) Graphic Arts
Mr. Michael Gonzalez Director	Westfield Trade High School	(18) Machine Shop (13) Wood Trades
Mr. Donald E. Graves Sup't-Director	Southeastern Regional Voc-Tech School	(11) Plumbing (36) Wood Trades (13) Food Trades
Mr. John P. Harrington Sup't-Director	Diman Regional Voc-Tech School	(12) Academic (24) Health Occupations (18) Painting & Decorating (31) Machine Shop
Mr. Herbert P. Schmidt Director	Holyoke Trade High School	(15) Electrical (5) Printing
Ms. Ruth M. Shea Director	Henry O. Peabody School	(18) Beauty Culture (15) Fashion Dressmaking
Mr. Paul J. Sullivan Sup't-Director	Blackstone Valley Regional Voc-Tech Sch.	(13) Drafting (18) Metal Fabrication
Mr. Frederick J. Teed Sup't-Director	South Shore Regional Voc-Tech School	(12) Drafting (26) Metal Fab/Welding & Sheet Metal
Mr. Benjamin Wolk Sup't-Director	Shawsheen Valley Regional Voc-Tech Sch.	(19) Academic (22) Electronics

\* the number of attendees for each workshop appears in parentheses, preceding its title.

Total attendance at all MAVA 1972 Summer Workshops was 521

### BACKGROUND

The explanation and justification for the MAVA 1972 Summer Workshops and Professional Improvement Project are based on both national objectives and in-state conditions. Regarding national concerns, a 1970 publication of the U. S. Office of Education describes the federal Act involved as follows:

The Education Professions Development Act (EPDA or P.L. 90-35), enacted in 1967, amends Title V of the Higher Education Act of 1965. Part F of EPDA, which makes special provision for vocational education, is also known as Title II of P.L. 90-576, the 1968 Amendments to the Vocational Education Act of 1963.

Part F provides opportunities for experienced vocational educators with high potential for leadership to spend full time in advanced study and opportunities for other personnel concerned with vocational programs to receive training or retraining through cooperative arrangements, such as exchange programs with business and industry and inservice or preservice programs.

The same document explains the need for this Law as follows, in part:

7. Inservice training programs which are statewide or system-wide, or which provide for a comprehensive impact on vocational personnel in local educational agencies ..... are rare or non-existent.

The latter assertion did not apply to Massachusetts, at least until 1972. The State Vocational Education Agency, through the Division of Vocational Education (now the Division of Occupational Education), traditionally offered a week-long "Summer Conference" at a State College, as one means for vocational personnel to satisfy long-standing State requirements for professional improvement. While parts of the conference were common to all personnel, other parts were designed - and offered by the Division's own supervisors - for separate groups (for example, Machine Shop instructors).

Three factors spelled the end of these State-sponsored and offered conferences: First, the teachers themselves lost interest because the yearly offerings tended to become repetitive; second, and given the rapid expansion of vocational education into new regions of service (together with an equally rapid increase in State and Federal planning and reporting requirements), the burden of annual preparation of the conference workshops became too great on the Division's staff; and, third, increasing interest in the legal aspects of the local agency-local teacher relationship began to cast some doubt on what some interpreted as state-level "insistence" that the conference be attended, particularly without compensation to attendees.

4

However, the fact remained that the vocational school directors had first responsibility for maintaining the quality of their professional staff; and, the Division (i.e. the State Board for Vocational Education) had sole responsibility for approving them for employment.

Consequently - if somewhat tardily in the early Spring of 1972 - it was jointly agreed by MAVA and the Division to try a professional development experiment, in which the association would be responsible for offering inservice workshops to its own personnel, with the technical assistance of divisional supervisors. Statements permitting this (and similar) efforts were inserted in the FY 1973 State Plan under P.L. 90-576 (now P.L. 92-318) and the project was also inserted in the 1972-73 State Plan of Action under the aforementioned Part F of P.L. 90-35 (EPDA).

In addition to funding the MAVA 1972 Summer Workshops, the Division also permitted funds to be used for examining the possibility that MAVA might later offer other types of professional development services to its member schools; including the establishment of teacher data banks, the development and operation of teacher-oriented "resource centers", and the performance of professional personnel manpower-demand surveys. At the time, the Division made it clear that it had its own plans for such services and that these functions primarily resided in the State Agency under Chapters 74 and 837 of the Massachusetts General Laws. However, the Division generously permitted MAVA to canvass itself and its resources, possibly leading to new collaborative efforts.

As a result, this report covers the period from March of 1972 (when workshop planning began), through the workshops themselves (in mid-Summer), and into late Winter, 1973 (when the workshops had been evaluated and a MAVA position established on the possible self-service issues described above).

Part I of this report covers general information regarding project planning and administration, workshop evaluation, and recommendations for both future workshops and proposed new kinds of MAVA involvement. Part II offers concise descriptions of each workshop, in each case accompanied by participant listings. The Appendix contains samples of hand-out materials and administrative documents which are intended to aid those who may offer this type of inservice workshop, in the future.

PART I

- A - Project Planning and Administration
- B - Evaluation Format and Results
- C - Recommendations

### A. Project Planning and Administration

During the late Fall of 1971, an ad hoc "Westfield Week Study Committee" was appointed by MAVA to study the accomplishments of previous Summer Conferences and to make recommendations regarding possible substitutes. This committee, later permanently constituted as the "MAVA Professional Development Committee" conducted extensive surveys of directors and teachers, met formally twice during November of 1971, and reported its findings to the full MAVA membership on December 17, 1971.

The Committee recommended that the idea of a conference, or series of seminars, was valid and should be continued; however, that the format should be altered. It further recommended that: the Commonwealth be divided into two sections for the purpose of presenting dual "up-dating seminars" to vocational personnel; representatives of Industry be closely involved in all job-related seminars; host directors be charged with attendance records, industrial resource-person recruitment, and the establishment of behavioral goals for their workshops - but, that Divisional supervisors work with these host directors in the planning and execution of all seminars; and, "major emphasis be placed in curriculum development type of offerings with the directors soliciting suggestions from the faculty as to what the conference content should be." The Ad Hoc Committee concluded its report by suggesting that college instructors should be used where applicable and that college credit be sought for participants of the seminars.

This report was accepted by the MAVA membership and formed the basis for detailed planning. Several departures from the original schema are to be noted: Divisional supervisors largely were not able to be involved in the workshops, except on an occasional advisory basis; college instructors were used only in workshops for academic teachers; and, the seeking of college credit was shelved pending evaluation of initial workshops and further discussion on how institutions of higher education might become regularly and productively involved.

Following discussions and agreement with Divisional staff on the general project design and its funding probabilities, the MAVA Professional Development Committee requested the assistance of Mr. Lot H. Cooke, Jr., as Project Consultant. Mr. Cooke was already acting as MAVA consultant on two other projects. Several meetings were held in which the original "two-section"

## B. Evaluation Format and Results

In the context of educational research, the use of the term "evaluation" is misleading. True evaluation of the workshops would involve a number of difficult and costly steps, including the following: Matching the workshops' contents against carefully measured and prioritized performances sought by Industry; pre/post testing of participants' competencies, using matched group and/or statistical controls; further statistical analysis, at the least using chi-square tests; observation of teacher behavior in the shop or classroom; and - as the acid test of workshop impact - controlled measures of student-performance changes.

Most evaluations of the type appropriate to the MAVA project's level of funding ignore two or more of the above steps, but offer some form of supposedly sophisticated statistical analysis meant to impress the reader, but which actually measures very little. In this instance, MAVA has simply conducted participant surveys - in the form of pre- and post-workshop questionnaires - which attempt merely to measure participant intent and satisfaction; equally important, to solicit participant (mainly, teacher) recommendations for workshop improvement and voluntary involvement in the planning of future workshops. A third questionnaire was prepared for and completed by either the host school director or his workshop coordinator (see forms reproduced in Part II). The two participant questionnaires are included, in their entirety, as Appendix D of this report.

Much of the information contained in the responses was relevant primarily to the planning of the MAVA 1973 Summer Workshop program. Other data is being, or will be, used in other MAVA endeavors and will likewise be offered to the Division, for its possible use. The items which are reported below are offered as indicators of how the participants viewed the Summer program's overall organization and success; and, how they rated administrative and technical specifics.

Perusal of the entire questionnaires makes it clear that participant recommendations were carefully and fully sought. These results are not included, below, but will be found in Section C of this part.

Following the listing of responses for chosen questions, a set of conclusions will be offered, based on these responses and on various supplementary observations and judgments.

## Selected Questions and Responses

### Questionnaire No. 1

#### Participants' Years of Experience in Vocational Education

The range of responses was from 0 to 31 years, while the mean years of experience for all participants was 7.4 years in some aspect of professional service in vocational education. As might be expected, for several reasons (e.g. recent expansion of programs, motivation, recency of involvement with Industry), the years-experience curve was not normal: 58% of all participants had only 0 - 6 years experience, with a clear modal point occurring at 3 years.

#### Participants' Highest Educational Attainment

- 56% had completed high school (although possibly having some college credits), only
- 29% had completed a B.A. or B.S. degree
- 10% had completed an M.A., M.S. or EdM degree
- 3% had completed an Associate Degree (two years)
- 2% did not respond to question

#### Do you consider location of your workshop to be inconvenient for you ?

No: 63%                      Yes: 36%                      Doubtful: 1%

#### Approximately what percentage of your students would you classify as "disadvantaged", whether for racial, economic, educational preparation, or other reasons ?

The response to this question was most interesting, in that the overall response showed no pattern (i.e. did not form any kind of recognizable curve); the range was complete, from 0 - 100%, with responses being more-or-less evenly distributed, throughout the range.

### Questionnaire No. 2

#### From the short-range viewpoint, did the workshop give you what you expected to get from it ?

Yes: 75%                      No: 20%                      Doubtful: 5%

#### Do you feel that your attendance at the workshop will help your professional advancement ?

Yes: 90%                      No: 7%                      Doubtful: 3%

#### Would you now recommend this workshop to a colleague who did not attend ?

Yes: 90%                      No: 7%                      Doubtful: 3%

Please rate the below characteristics of your workshop by placing checks on the accompanying five-interval scale:

	<u>E</u>	<u>G</u>	<u>A</u>	<u>I</u>	<u>P</u>
(a) location of workshop	56%	37%	1%	6%	0%
(b) time workshop offered	61%	37%	1%	1%	0%
(c) selection of participants	62%	30%	3%	5%	0%
(d) workshop design	45%	47%	4%	4%	0%
(e) workshop content	48%	42%	4%	6%	0%
(f) workshop management	61%	33%	1%	5%	0%
(g) instructional quality	60%	30%	7%	3%	0%
(h) use of participant expertise	59%	32%	5%	4%	0%
(i) "take-away" materials	27%	48%	15%	10%	0%
(j) overall workshop success	49%	41%	5%	5%	0%

Legend: E=excellent [4-5] G=good [3-4] A=adequate [2-3] I=inadequate [1-2] P=poor [0-1]

53% of all item responses were in the "excellent" interval

37% of all item responses were in the "good" interval

5% of all item responses were in the "adequate" interval

5% of all item responses were in the "inadequate" interval

No response to any single item was in the "poor" interval.

Each item response was additionally weighted as occurring at the mid-point of its interval (i.e. 1.5, 2.5, 3.5, 4.5) and the vertical response totals (e.g. all those occurring in "excellent" interval) multiplied by the appropriate value. These were aggregated and divided by the total number of item responses, giving an overall rating of 3.88 (or, in the upper "good" level, for the entire workshop program). An internal check was provided by item (j), above, which itself showed a similar rating of 3.85

Do you think that the workshop staff understood your real needs and day-to-day problems ?

Yes: 69%                      No: 21%                      Doubtful: 10%

Do you feel that the problems of instructing the physically handicapped and disadvantaged students were adequately dealt with in your workshop ?

Yes: 25%                      No: 41%                      Doubtful: 34%

Comment: Note the similar uncertainty as that found in the response to the "% of disadvantaged students taught" item in questionnaire #1.

Do you feel that the technical content of the workshop was satisfactory ?

Yes: 83%                      No: 10%                      Doubtful: 7%

Assuming the necessary modifications were made, would you recommend repeating this workshop, next year ?

Yes: 85%                      No: 6%                      Doubtful: 9%

Do you feel that there is still a need for all Summer Workshop participants (of all types) to meet as a single group ?

Yes: 44%                      No: 41%                      Doubtful: 15%

Do you feel that MAVA is the appropriate organization for offering workshops of this type (assuming the State does not elect to offer them) ?

Yes: 79%                      No: 7%                      Doubtful: 14%

### Conclusions

Based on the above responses to Questionnaire No. 1, several tentative, but important conclusions may be stated:

1. The workshops are reaching young teachers, who need the instruction for reasons of inexperience or, possibly, lack of sufficient contact with industrial processes; however, lacking an actual experience/age distribution for all professional personnel in occupational education, the workshops may not be reaching a high enough percentage of older teachers whose trade knowledge may be dated.
2. Over half of the participants possessed but a high school diploma; therefore, in all probability, need specially tailored workshops of this type, when desiring to update their competencies. (This is not a reflection on such persons' intelligence, but concerns their lack of familiarity with academically oriented presentations and techniques.)
3. Stock phrases such as "with emphasis on instructional techniques for the disadvantaged and handicapped" have little operational meaning if participants are confused as to which students can be classified as "disadvantaged"; there is great confusion on this point, among professional personnel.

Based on the above responses to Questionnaire No. 2, the following conclusions seem warranted:

1. The great majority of workshop participants approve of the MAVA sponsorship, feel that the workshops were of real value to them, and recommend continuance of all of them.
2. The two specific areas of concern to the participants were the previously mentioned "disadvantaged student" problem and the apparent lack of "take-away" materials in some of the workshops.

In support of the first conclusion, directly above, MAVA points out that its initial effort attracted approximately one-third of all the Commonwealth's vocational teachers. Further, all teachers (except from two schools) attended on a voluntary, unpaid basis. It may finally be pointed out that informal surveys of school directors indicate that wide classroom and shop use is being made, by ex-participants, of workshop-originated materials.

### C. Recommendations

The following recommendations are listed in two distinct categories: (a) suggestions for improving workshop offerings, largely intended for host-school directors; and (b) general policy decisions on broad professional development issues, presented for consideration by the Division of Occupational Education Associate Commissioner and staff. Both types of recommendation were initially contained in an interim report to the MAVA President and adopted at the MAVA Mid-Winter Conference, on February 11, 1973.

#### Recommendations for Improving Workshops

As previously explained, these recommendations were developed in the following sequence: first, a larger list was compiled through analysis of the participant questionnaires; second, the Advisory Ad Hoc Committee considered this larger list, discarded a small number, and presented the balance to the MAVA Professional Development Committee; third, this committee voted on each proposal and presented the final list to the MAVA membership. This final list is as follows: Summer 1973 and future workshops should feature

1. More participant contributions, such as explanation of successful teaching techniques and aids, to the rest of each group
2. Increased participation by Industry personnel, either as instructors or as resource persons
3. More detailed information on OSHA requirements
4. More "combined" sessions, bringing occupational personnel of various types together
5. More information on multi-media teaching approaches
6. More information on sources of materials, covering areas such as trade content, planning, teaching methods, and others which the individual teacher - on his own and after the workshop - might tap
7. More opportunity to interact with other participants
8. Greater participation by State inspectors and licensing personnel, for discussion of new building codes and regulations, particularly as regards new products and procedures
9. Increased amount and quality of "take-away" materials, from workshops; and
10. Greater standardization of all workshops (e.g. common daily time schedules) and adherence to preparatory deadlines (e.g. dates on which various informational letters and responses should be submitted)

In addition, it is recommended that the MAVA Executive Committee, on the advice of the Professional Development Committee, not only rotate workshop assignments among existing host-schools, but also assign new schools to offer repeating workshops. It is felt that it would be self-defeating, in the long run, for the same schools to continue to offer the same workshops, even when high quality is maintained; repetitiveness of teaching approach and consequent participant apathy might well result. Therefore, it is further recommended that no single school offer a given workshop more than two successive years.

As an aid in this transfer of responsibility, it is also recommended that workshop coordinators for the following year be trained as part of current workshop activities and that each workshop budget include two days' time for payment of such coordinator, when a school changeover is scheduled to occur during the succeeding year.

#### General Recommendations and Related Policy Decisions

MAVA submits the following general recommendations, together with related policy decisions which support them, for the Division's consideration:

1. That the Division support the MAVA Summer Workshop Program during FY 1973

By all current measures and observations, the Summer 1972 workshops have been successful and are earning credit for both MAVA and the Division of Occupational Education. Commitments have been obtained from host schools to repeat last Summer's offerings in Summer 1973; and, it is planned to add new workshops in areas such as Evening Practical Arts and School Management and Finances for Administrators. The Association membership is firmly behind this enlarged training effort.

2. That the Division provide continuity for the MAVA Summer Workshop Program by including its costs as part of the "Regular Teacher Training" yearly budget

To date, the workshops have been largely funded from EPDA, Part F, funds and therefore fall in the "special need" category of professional development projects. The history of such projects indicates that they are intended to answer high-demand but temporary needs; and, are subsequently either discontinued or made a part of the "regular" program. MAVA believes

that the continuous updating of experienced vocational program personnel is, by nature, a recurring need and must be approached in a regularized, systematic fashion. As another example of the need for continuity, MAVA has decided - during the next two years - to move into new training areas such as Architectural Drafting, Occupational Home Economics, and Guidance-Placement (in conjunction with other State associations). These are largely unfamiliar personnel training areas and will require more lead-time than the current workshops. Planning should not be delayed by the uncertainty of yearly project approval out of "soft" monies.

3. That the Division consider a supplementary grant, during FY 1973, to permit MAVA to plan, offer, and evaluate four "Regional Vocational Personnel Conferences"

Data from the participant questionnaires, not reported above - plus concerns developing out of planning sessions at several levels - indicate MAVA's conviction that there are cogent reasons why all types of vocational personnel should meet and work together for at least one day each year. While the old "Fitchburg-Westfield Week" had deficiencies in content-field training, it had the advantage of bringing professionals together where they could interact in joint discussion of major issues and developments of import to all. Also, the individual workshops, being offered simultaneously, do not provide a vehicle for Industry (particularly the Educational Technology Industry) to make a condensed but comprehensive display of its new wares and services. MAVA proposes to offer the four conferences in November, spaced one week apart, with each lasting a single day. Each conference will cover approximately one-fourth of the State, on an equalized school population or staff basis. In addition to the above elements, each workshop will feature addresses by knowledgeable State and National officials, as well as seminar-type workshops to develop positions. The one-week spacing is suggested as necessary to allow the industrial exhibits to be moved from one location to the next. It is very possible that both the Massachusetts Vocational Association and the Division of Occupational Education will be approached to act as co-sponsors and collaborators in this experimental regional conference effort.

4. That the Division consider using MAVA as a contractor for revising curricula in existing programs, much as it does in the closely related area of professional improvement

Participant questionnaire returns indicated - and the Ad Hoc Committee agreed - that workshops should begin to include a strong "curriculum review/

revision" element. A few Summer 1972 workshops actually made small beginnings in this direction. It was suggested that, on a pilot basis, some workshops might be extended to two weeks, for the purpose of considering and adapting course materials which had been developed elsewhere, whether in Massachusetts schools or in other States. However, during a subsequent MAVA Professional Development Committee meeting, it was pointed out that

- (a) all areas of vocational-technical school curriculum needed updating - probably most in the four academic/related areas of English, Social Studies, Mathematics, and the Sciences - and this was too comprehensive an undertaking to be appended as a "tag" on the MAVA Summer Workshops proposal;
- (b) for the first time, the U. S. Office of Education was disbursing funds under Part F, Section 554, of EPDA - the stated purpose of which is "to familiarize teachers with new curriculum developments" - and that a separate proposal could be developed to apply for these special funds; and
- (c) the Division of Occupational Education was already moving into the curriculum development field and might be amenable to a long-term cooperative arrangement with MAVA for such purpose. It is recommended that the Division meet with MAVA representatives to discuss this area and to consider FY 1974 funding for a new-type project (probably in the four academic/related fields mentioned above) which would combine elements of both curriculum and professional development and which would feature collaboration among selected MAVA schools and Division supervisors (and/or staffs of special State projects such as CEDIS).

5. That the Division expand its existing services to vocational-technical school personnel development, with full cooperation of MAVA

As stated previously, part of this year's project involved assessment by MAVA of the proposal (by some of its members) that it seek to perform various services, to and for its own schools, in the professional development domain. The proposed services would extend well beyond the Summer Workshops, into matters such as need surveys relating to future staff requirements; consulting services on professional development opportunities, for vocational-technical school teachers; the creation and operation of a "resource center" for instructional/teaching aid materials for use by member schools; and, in general, offering "clearinghouse" and "liaison" services.

Both the Ad Hoc Advisory Committee and the MAVA Professional Development Committee agreed that these services were presently lacking and must

be provided. However, they also agreed (as did the MAVA Executive Committee), after careful consideration of all factors, that such functions properly belonged to the Division of Occupational Education, under Chapter 837; and, that divisional staff should be given full opportunity to perform these functions, with the genuine cooperation of the MAVA membership. Most of these members (if not all) are aware that the Division's Office of Professional Development has been understaffed and overworked, simultaneously having to redesign the entire Regular Teacher Training program and to contend with a new Federal program (Part F, EPDA) which, itself, is suffering from growth pains and periodically increases its demands for more sophisticated planning and evaluation. MAVA members also accept the Associate Commissioner's assurances that concrete steps are being taken, in line with the suggestions offered in the first paragraph of this recommendation. In light of these circumstances, MAVA voluntarily withdraws its proposal to, itself, perform these functions; and, instead, offers its guarantee to the Division of full cooperation and backing in the latter's own efforts.

#### Concluding Remarks

In completing this Final Report of the Summer 1972 workshops and by submitting it to the Associate Commissioner, Division of Occupational Education, MAVA submits that it has met the performance objectives and all other conditions stated in this past year's grant document. Because of the apparent success of this initial effort, it is appropriate to quote as follows from the Interim Report which was accepted by the MAVA membership, on February 21, 1973:

The MAVA Committee on Professional Development strongly recommends that official appreciation be extended to Dr. Buzzell and the Division for supporting this MAVA effort, and, in fact, for providing MAVA with the opportunity for taking a hand in the inservice training of its own school staff-members. Whatever credit is earned by the MAVA program should rightfully be shared with the Division of Occupational Education, since the program is an extension of the Division's previous "summer conferences" and since the Division is basically responsible for maintaining the quality of vocational-technical school personnel.

PART II

Individual Workshop Descriptions  
With Names of Participants

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Drafting
2. Name of Host School: Blackstone Valley Reg. Voc. Tech. H.S.  
Address: Pleasant Street  
Upton, MA 01568
3. Name of Host School: Paul J. Sullivan, Superintendent Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 24, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: Stanley Budzyna  
Title and School: Shop Coordinator
6. Number of Participants Attending : Total - 14  
(a) Shop Teachers 13 (d) Administrators \_\_\_\_\_  
(b) Related Teachers \_\_\_\_\_ (e) Counselors \_\_\_\_\_  
(c) Academic Teachers \_\_\_\_\_ (f) Other (name) 1 Shop Coordinator
7. Industry or Other Resource Persons Used in Workshop Presentations:  
(a) Name (see facing page) (b) Name \_\_\_\_\_  
Firm or Organization: \_\_\_\_\_ Firm or Organization: \_\_\_\_\_
8. Major Topics Covered in Workshop:  
(a) I.B.M. tape-controlled drafting machines  
(b) Engineering Requirements and Architectural Drawing Today  
(c) Micro-filming  
(d) True positioning, dimensioning and tolerancing for engineering drawings
9. Host School Director's Overall Evaluation of Workshop:  
From comments of participants, '72 conference was best in years.  
Participating companies were outstanding in their workshops and  
material given to members. (Summary - Excellent - SJB)  
Recommendations for Improvement: Do not admit late enrollees to program  
after cut-off date. Late enrollees create problems, especially when  
lunches are provided and guides are required.
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

DRAFTING

Chester Blackman

Stanley Budzyna

Arthur Croteau

Paul Dumas

William Fanning

Eldridge Hoag

Alfred Lacky

Arthur Metras

John Nydam

John O'Donnell

Harold Ostrowski

Helen Potter

Paul Vieu

Everett Young

Item #7 (on previous page)

Mr. Merton E. Tinkham  
North American Rockwell, Draper Div.  
25 Hopedale Street  
Hopedale, Mass. 01747

Mr. Anthony Allegrezza, Personnel Dir.  
Automated Grey Iron, Aluminum, and  
Main Foundries

Mr. Ned Ganter and Mr. Walter Mollis  
The Foxboro Company  
Foxboro, Mass.

Mr. Richard J. Lamoureux and  
Ms. Suzanne O. Carlson  
Lamoureux & Carlson, Architects  
14 East Worcester Street  
Worcester, Mass. 01604

Mr. Frederick Thibeault  
The Jamesbury Corporation  
640 Lincoln Street  
Worcester, Mass. 01605

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Metal Fabrication
2. Name of Host School: Blackstone Valley Reg. Voc. Tech. H.S.  
Address: Pleasant Street  
Upton, MA 01568
3. Name of Host School: Paul J. Sullivan, Superintendent Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 24, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: James L. Trilligan  
Title and School: Instructor, Bl. Valley Reg. Voc. Tech. H.S.
6. Number of Participants Attending :  

(a) Shop Teachers	<u>18</u>	(d) Administrators	_____
(b) Related Teachers	_____	(e) Counselors	_____
(c) Academic Teachers	_____	(f) Other (name)	_____
7. Industry or Other Resource Persons Used in Workshop Presentations:  

(a) Name <u>(see facing page)</u>	(b) Name _____
Firm or Organization: _____	Firm or Organization: _____
8. Major Topics Covered in Workshop:  

(a) <u>Mapp Gas</u>
(b) <u>OSHA - Occupational Safety and Health Act</u>
(c) <u>Gas-Tungsten Arc-Gas Metal Arc-Applications</u>
(d) <u>and troubleshooting</u>
9. Host School Director's Overall Evaluation of Workshop:  
A great amount of interest was shown in the presentations and field trips. The attendance was very good and the time schedules were adhered to. It was a very good program. (JLT)  
 Recommendations for Improvement: Field trips planned on better time schedule.
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

METAL FABRICATION

William Mullen	Gennaro Vescera
Albert Russo	Herbert Miller
Peter McDonald	Francis Marcell
Agostino Puopolo	John Banionis
William Messenheimer	Edward LaVigne
Albert D'Ambrosio	Edward Tamulen
Wallace Przybycien	Samuel D'Angona
Quinto Cimma	Harmon Miedema
Ronald Wayne	James Trilligan

Item #7 (on previous page)

Mr. William Meredith and  
Mr. Frank Propon  
Union Carbide, Linde Div.

Mr. Joseph Catino  
Welders Supply

Mr. Horace Jones  
AIRCO

## Other Companies Cooperating:

Wyman-Gordon Plant, North Grafton, Mass.

Norton Company, Worcester, Mass.

Bay State Abrasive Company, Westboro, Mass.

AVCO Research Laboratory, Everett, Mass.

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Data Processing
  2. Name of Host School: Blue Hills Regional Technical School  
Address: 100 Randolph Street  
Canton, MA 02021
  3. Name of Host School: William A. Dwyer, Superintendent-Director  
Dir. or Supt-Dir
  4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
  5. Name of Coordinator: Robert P. Nelson, Assistant Director  
Title and School: in conjunction with Donald Ryley, Chairman  
Data Processing Department
  6. Number of Participants Attending :  
(a) Shop Teachers 7 (d) Administrators \_\_\_\_\_  
(b) Related Teachers \_\_\_\_\_ (e) Counselors \_\_\_\_\_  
(c) Academic Teachers \_\_\_\_\_ (f) Other (name) \_\_\_\_\_
  7. Industry or Other Resource Persons Used in Workshop Presentations:  
(a) Name \_\_\_\_\_ (b) Name \_\_\_\_\_  
Firm or Organization: \_\_\_\_\_ Firm or Organization: \_\_\_\_\_  
IBM, Opscan, Standard Register, Potter Instrument
  8. Major Topics Covered in Workshop:  
(a) Terminals for School Systems  
(b) Epic Socrates Student Scheduling and Report Card Systems  
(c) Optical Scanning Techniques  
(d) Forms Design and School Applications; (e) Innovative Equipment
  9. Host School Director's Overall Evaluation of Workshop:  
Program was very successful and well-received by student  
participants and Industry Representatives
- Recommendations for Improvement: Continue MAVA's proposed implementation  
of locating professional improvement courses in the various schools,  
taking advantage of the opportunities which different locations provide
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

DATA PROCESSING

Elmer Carlson

Robert L. Snider

Francis X. Hayes

Vincent E. Breen

Theresa M. Bellini

George Clisham

Donald Ryley

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Graphic Arts
  2. Name of Host School: Blue Hills Regional Technical School  
Address: 100 Randolph Street  
Canton, MA 02021
  3. Name of Host School: William A. Dwyer, Superintendent-Director  
Dir. or Supt-Dir
  4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
  5. Name of Coordinator: Robert P. Nelson, Assistant Director  
Title and School: in conjunction with William Coughlan, Chairman  
Graphic Arts Department
  6. Number of Participants Attending :  
(a) Shop Teachers 22 (d) Administrators \_\_\_\_\_  
(b) Related Teachers \_\_\_\_\_ (e) Counselors \_\_\_\_\_  
(c) Academic Teachers \_\_\_\_\_ (f) Other (name) \_\_\_\_\_
  7. Industry or Other Resource Persons Used in Workshop Presentations:  
(a) Name (see facing page) (b) Name \_\_\_\_\_  
Firm or Organization: \_\_\_\_\_ Firm or Organization: \_\_\_\_\_
  8. Major Topics Covered in Workshop:  
(a) Lithographic Platemaking  
(b) Career Information, Visual and Curriculum Materials, & Tech. Mat.  
(c) Contact Screen Story  
(d) Computers and the Art of Phototypesetting (cont. on facing page)
  9. Host School Director's Overall Evaluation of Workshop:  
Program was successful and well-received by student participants,  
as well as Industry representatives
- Recommendations for Improvement: Continue MAVA's proposed implementation  
of locating professional improvement courses in the various schools,  
taking advantage of the opportunities which different locations provide
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guide-lines); and (b) Name listing of workshop participants.

GRAPHIC ARTS

Geno James

Walter Ross

James Hanagan

Albert T. Edhard

Harry H. Cramer

Gregory Smith

Raymond R. Smith

Robert Bissonnette

Stephen W. Urbanek

Raymond Michaud

Richard Crowe

Charles Robinson

Charles W. Brown

Robert Tierney

Edward Correia

Donald L. Langille

Frank Boyer

Vincent A. DeVita

Richard W. Armington

Edward M. Macedo

William Coughlan

Sidney Barnsley

Item #7 (on previous page)

Mr. Don O'Neil and

Mr. Marvin Tymick

A.B. Dick Company

Mr. Charles R. Climer

A.M. Varsity Division

Mr. John Peterson

Compugraphis Corporation

Mr. Joseph Hosford

Minnesota Mining &amp; Mfg. Co.

Mr. Earl D. Horrigan, Jr.

E.I. DuPont DeNemours &amp; Co.

Mr. Richard Thatcher

Eastman Kodak Company

Item #8 (cont. from previous page)

(e) Contacting-Stripping-Film Processors

(f) Phototypesetting Seminar

(g) Small Web Offset

(h) Updating the Graphic Communications Educational System

(i) Camera Techniques, Photographic Materials, Plates and Press

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Television Production Seminar for Academic Teachers
2. Name of Host School: Diman Regional Vocational Technical High School  
Address: Stonehaven Road  
Fall River, MA 02723
3. Name of Host School: John P. Harrington, Superintendent-Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: Dennis Duval  
Title and School: Guidance Director, Diman Regional
6. Number of Participants Attending :  
(a) Shop Teachers \_\_\_\_\_ (d) Administrators \_\_\_\_\_  
(b) Related Teachers \_\_\_\_\_ (e) Counselors \_\_\_\_\_  
(c) Academic Teachers 12 (f) Other (name) \_\_\_\_\_
7. Industry or Other Resource Persons Used in Workshop Presentations:  
(a) Name Messrs. Archer, Case, (b) Name \_\_\_\_\_  
Cory, and Frost  
Firm or Organization: \_\_\_\_\_ Firm or Organization:  
Southeastern Massachusetts University
8. Major Topics Covered in Workshop:  
(a) The uses of T.V. in Education (e.g. creation of visuals)  
(b) Audio systems, mixers, tape recorders, and their uses  
(c) Slide and film uniplaxers and multiplexers  
(d) Portable T.V. apparatus (e.g. the Sony Video Rover); uses of video  
tape in instructional TV
9. Host School Director's Overall Evaluation of Workshop:  
Very favorable response and performance from participants  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Recommendations for Improvement: longer planning time, especially  
for canvassing prospective participants on their workshop needs  
\_\_\_\_\_  
\_\_\_\_\_

Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

30

TELEVISION PRODUCTION SEMINAR FOR ACADEMIC TEACHERS

Miss Barbara Colavecchio

Donald Sullivan

Russell Booth

Edward Terceiro

David Ferreira

Arthur Vuilleumier

Marry Gloster

Laura Marvill

Michael Hadala

Edward Cambra

Mrs. Hope Collins

Manuel Raposa

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

Medical Assistants - Dental Assistants -  
Health Service Occupations

1. Name of Workshop: \_\_\_\_\_
2. Name of Host School: Diman Regional Vocational Technical High School  
Address: Stonehaven Road  
Fall River, MA 02723
3. Name of Host School: John P. Harrington, Superintendent-Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: Margaret P. Hession, R.N.  
Title and School: Coordinator, Diman Regional Sch. of Prac. Nurs.
6. Number of Participants Attending :
 

(a) Shop Teachers _____	(d) Administrators _____
(b) Related Teachers _____	(e) Counselors _____
(c) Academic Teachers _____	(f) Other (name) <u>24</u> (Health Educators)
7. Industry or Other Resource Persons Used in Workshop Presentations:
 

(a) Name <u>Livia Duhaime, Dir.</u>	(b) Name <u>Joan Mathison, Pb. Health</u>
Sch. of Nursing	Nursing Advisor
Firm or Organization:	Firm or Organization:
<u>St. Luke's Hospital, New Bedford</u>	<u>Mass. Dept. of Public Health</u>
8. Major Topics Covered in Workshop:
  - (a) Writing behavioral objectives for Medical Assistants,
  - (b) Dental Assistants, and the Health Service occupations
  - (c) Evaluating behavioral objectives (for above)
  - (d) Venereal disease - Symptoms, Diagnosis and Treatment
9. Host School Director's Overall Evaluation of Workshop:
 

Participants seemed most interested in workshop content,  
performed assigned tasks satisfactorily, and voiced intent  
to use newly acquired information and skills in classroom

Recommendations for Improvement: more time to talk with practitioners  
in the field; greater advance notice to participants
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

MEDICAL ASSISTANTS - DENTAL ASSISTANTS - HEALTH SERVICE OCCUPATIONS

Mrs. Anne M. Sheehan

Mrs. Nancy Shionis

Miss Ann Masel

Mrs. Anita McCully

Mrs. Dorothy Neves

Miss Mary Tudbury

Mrs. Stella Sullivan, R.N.

Mrs. Elizabeth McHenry, R.N.

Miss Peterson

Miss Mary Donovan

Mrs. Ellis

Mrs. Mersey

Mrs. Marilyn Campbell

Miss Margaret Keady

Mrs. Barbara Shaw

Miss Frances Kneeland

Miss Margaret Hession

Mrs. Anne Delisle

Mrs. Mary Dunne

Mary Peters

Mary Johnston

Mrs. Ellen McCarthy

Eugenia Haponik, R.N.

Mrs. Ethel Chatigny

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Painting & Decorating
2. Name of Host School: Diman Regional Vocational Technical High School  
Address: Stonehaven Road  
Fall River, MA 02723
3. Name of Host School: John P. Harrington, Superintendent-Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: Stanley J. Remiesiewicz  
Title and School: Assistant Director, Diman Regional
6. Number of Participants Attending :
- |                       |           |                    |       |
|-----------------------|-----------|--------------------|-------|
| (a) Shop Teachers     | <u>18</u> | (d) Administrators | _____ |
| (b) Related Teachers  | _____     | (e) Counselors     | _____ |
| (c) Academic Teachers | _____     | (f) Other (name)   | _____ |
7. Industry or Other Resource Persons Used in Workshop Presentations:
- |                            |       |                       |       |
|----------------------------|-------|-----------------------|-------|
| (a) Name (see facing page) | _____ | (b) Name              | _____ |
| Firm or Organization:      | _____ | Firm or Organization: | _____ |
8. Major Topics Covered in Workshop:
- |     |  |
|-----|--|
| (a) | <u>Air-less spray painting with conventional lacquers</u>          |
| (b) | <u>Spot finishing</u>  |
| (c) | <u>Silk screen printing and the use of color in commercial art</u> |
| (d) | <u>Wood finishing and wallpapering</u>                             |
9. Host School Director's Overall Evaluation of Workshop:  
Excellent
- Recommendations for Improvement: Continue to involve teachers in  
the planning of workshop; increase, if possible
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

PAINING & DECORATING

Elio J. Dalessio

Joseph H. Brundige

Anthony T. Manna

William E. Matte

Donald G. Tripp

Gordon Haggerty

Fred R. Bresnahan

James White

Roger K. Gingras

Antonio Sardinha

Richard Mansfield

Jonia Goncalves

Roland A. Paradis

Thomas W. Slowe

Henry E. Boucher

James Ryan

John J. Frackleton

James E. Owens

Item #7 (on previous page)

Mr. Andrew McMillan, Field Rep.  
Binks Manufacturing Co.  
(through the courtesy of:

Mr. Benny Di Caprio  
Providence Lacquer and Supply Center)

Field Representative  
Mohawk Finishing Products, Inc.

Ms. Joan C. Reed, Fashion  
Illustrator and Commercial Artist

Mr. Joseph Consilvio, and  
Mr. Roy Julian  
Lambert Company, Inc.  
Boston, Mass.

Field Representative  
DEFT, Inc. (through courtesy of:  
Mr. Lester Schwartz,  
Schwartz Lumber Company  
Fall River, Mass.)

Staff of Harvey Probbler, Inc.  
Fall River, Mass.

Mr. Douglas Rossig, Paper Hanging Consultant  
Henkel, Inc.  
Teaneck, New Jersey

(through the courtesy of: Mr. Abraham Ehrenhaus, American Wallpaper Co.  
Fall River, Mass.)

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Machine Shop
2. Name of Host School: Diman Regional Vocational Technical High School  
Address: Stonehaven Road  
Fall River, MA 02723
3. Name of Host School: John P. Harrington, Superintendent-Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: John P. Harrington  
Title and School: Superintendent-Director, Diman Regional
6. Number of Participants Attending :
 

(a) Shop Teachers	<u>31</u>	(d) Administrators	_____
(b) Related Teachers	_____	(e) Counselors	_____
(c) Academic Teachers	_____	(f) Other (name)	_____
7. Industry or Other Resource Persons Used in Workshop Presentations:
 

(a) Name <u>Mr. Joseph E. Kochhan</u>	(b) Name _____
Product Director	
Firm or Organization:	Firm or Organization:
<u>Brown and Sharpe Company, Industrial Products Division</u>	_____
8. Major Topics Covered in Workshop:
 

(a) <u>Day #1&amp;#2: Numerical Tape Control; Electrical Discharge Machining</u>
(b) <u>Day #3: Metrification - the impact of proposed federal legislation</u>
(c) <u>to convert to metric system; OSHA of 1971; updating Machine Shop</u>
(d) <u>course-of-study (latter repeated during Day #4, plus evaluation)</u>
9. Host School Director's Overall Evaluation of Workshop:
 

Very good

\_\_\_\_\_

\_\_\_\_\_

Recommendations for Improvement: \_\_\_\_\_

Increase amount of detailed take-home materials

\_\_\_\_\_
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

MACHINE SHOP

Gilbert Coelho

Robert H. Bertrand

Walton B. Phillips

Walter J. Banas

Camille C. Plaud

Richard W. Pierce

Joseph Bourdeau

Norman Abood

Peter P. Beliunas

John Walker

John Ashton

Carl A. Douglas

James McKearney

Philip L. Pepin

Ottavio Cerullo

Walter Sybertz

Norman Casey

Zygmunt Diobro

Roland Benoit

Joseph Faryniarz

Edmond Prastek

John Janiak

Edwin Rudenauer

John Pieroni

Alfred Bento

Robert J. Withers, Sr.

Alfonso Conte

Thomas Procop

Norman H. Blanchard

Robert S. Lawrence

Myron Croteau

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Beauty Culture
2. Name of Host School: Henry O. Peabody School for Girls  
Address: Peabody Road  
Norwood, MA 02062
3. Name of Host School: Miss Ruth M. Shea, Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: William P. Maher  
Title and School: Guidance Counselor - Henry O. Peabody
6. Number of Participants Attending :  
(a) Shop Teachers 18 (d) Administrators \_\_\_\_\_  
(b) Related Teachers \_\_\_\_\_ (e) Counselors \_\_\_\_\_  
(c) Academic Teachers \_\_\_\_\_ (f) Other (name) \_\_\_\_\_
7. Industry or Other Resource Persons Used in Workshop Presentations:  
(a) Name Revlon Company (b) Name Ralph G. Shakour Co.  
Firm or Organization: Firm or Organization:  
\*(c) Dr. Leon Brenner - Framingham Youth Guidance Center
8. Major Topics Covered in Workshop:  
(a) Cosmetics and Make-up  
(b) Latest trends and techniques in hair coloring  
(c) Personality and human relations  
(d) \_\_\_\_\_
9. Host School Director's Overall Evaluation of Workshop:  
Good deal of enthusiasm on part of participants.  
Excellent exchange of ideas - and common problems.  
\_\_\_\_\_  
Recommendations for Improvement: More practical experience and  
conferees' participation.  
\_\_\_\_\_
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guide-lines); and (b) Name listing of workshop participants.

BEAUTY CULTURE

Mrs. Lois Hume  
Mr. Raymond Farrell  
Miss Mildred Giello  
Mrs. Elaine Rubaszko  
Mrs. Madeline Dunlay  
Mr. Maurice Wilcox  
Mrs. Helen Sawyer  
Mrs. Irene Dery  
Mrs. Edwina Bogosian  
Mrs. Mildred Baker  
Miss Louise Ulrich  
Miss Margurite Sicurella  
Mrs. Dorothy Mombro  
Mrs. Zelda Brandon  
Mrs. Irene Duguay  
Miss Helen Brierly  
Mrs. Margaret Haggerty .  
Mrs. Ruth Marcus

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Fashion Dressmaking
2. Name of Host School: Henry O. Peabody School for Girls  
Address: Peabody Road  
Norwood, MA 02062
3. Name of Host School: Miss Ruth M. Shea, Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: William P. Maher  
Title and School: Guidance Counselor - Henry O. Peabody
6. Number of Participants Attending :  
(a) Shop Teachers 15 (d) Administrators \_\_\_\_\_  
(b) Related Teachers \_\_\_\_\_ (e) Counselors \_\_\_\_\_  
(c) Academic Teachers \_\_\_\_\_ (f) Other (name) \_\_\_\_\_
7. Industry or Other Resource Persons Used in Workshop Presentations:  
(a) Name Marita Sarenti (b) Name Linda Faioli, Cambridge Center  
Enid Goldsmith Studio, Newton for Adult Educ. & Freelance Designer  
Firm or Organization: Firm or Organization:  
(c) Dr. Leon Brenner - Framingham Youth Guidance Center
8. Major Topics Covered in Workshop:  
(a) Modeling and Make-up for the Fashion Industry  
(b) The Basic Muslin  
(c) Personality and Human Relations  
(d) \_\_\_\_\_
9. Host School Director's Overall Evaluation of Workshop:  
Great interest in the program content. Good sharing of ideas.  
\_\_\_\_\_  
\_\_\_\_\_  
Recommendations for Improvement: More active participation of  
conferees. Project that can be accomplished within the time  
of the conference.
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

FASHION DRESSMAKING

Mrs. Phyllis Falcone

Ms. Rose Pantano

Mrs. Henrietta Cox

Mrs. Eleanor Lyons

Mrs. Lydia Walsh

Mrs. Eileen Lenahan

Mrs. Stella Travinsky

Miss Amelia Peters

Miss Sophie Pidacks

Mrs. Mary Desmond

Mrs. Stephanie Kos

Miss Elizabeth Wright

Mrs. Kathleen M. Lamir

Mrs. Helen Baron

Mrs. Elena Cucchiara

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Electrical
2. Name of Host School: Holyoke Trade High School  
Address: 325 Pine Street  
Holyoke, MA 01040
3. Name of Host School: Herbert P. Schmidt, Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: Edward H. Bey  
Title and School: Holyoke Trade High School
6. Number of Participants Attending :  
(a) Shop Teachers 15 (d) Administrators         
(b) Related Teachers        (e) Counselors         
(c) Academic Teachers        (f) Other (name)
7. Industry or Other Resource Persons Used in Workshop Presentations:  
Messrs. Cantwell, Kaiser  
(a) Name Vandowski, Paulk (b) Name Mr. Bassett (c) Mr. Doyle  
Firm or Organization: Hampden Engineering Corp. Firm or Organization: Simplex Time Recorder Co. (c) Monsanto
8. Major Topics Covered in Workshop:  
(a) Hampden Equipment: Universal Machine; Solid State Control Equipment  
(b) OSHA: Occupational Safety and Health Act information; Nat'l. Elec. Code  
(c) Simplex Fire Alarm Circuits and Equipment; radioactive detectors  
(d) Discussion of Shop and Related Problems; Hampden lessons and lab reports
9. Host School Director's Overall Evaluation of Workshop:  
Proceeded smooth'y; excellent participant involvement  
and response  
Recommendations for Improvement: Additional time for planning  
is required
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

ELECTRICAL

Clifford Dickinson

Robert H. Cresty

Anthony Petrecelli

Joseph J. Zawada

John S. Donnelly

Thomas Jones

Edward R. Sienkiewicz

John Beahn

Joseph Murphy

Frank Larkiewicz

Robert E. Klopfer

Edward H. Bey

Edward Mullen

Lewis Paradise

Edward Vandoloski

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Electrical
2. Name of Host School: Quincy Vocational-Technical School  
Address: Woodward Avenue  
Quincy, MA 02169
3. Name of Host School: Laurence H. Babin, Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: Edmund O'Hara  
Title and School: Medford Vocational-Technical
6. Number of Participants Attending :
 

(a) Shop Teachers	_____	(d) Administrators	_____
and			
(b) Related Teachers	<u>38</u>	(e) Counselors	_____
(c) Academic Teachers	_____	(f) Other (name)	_____
7. Industry or Other Resource Persons Used in Workshop Presentations:
 

(a) Name <u>John Flynn</u>	(b) Name _____
Firm or Organization:	Firm or Organization:
<u>Hampden Engineering</u>	_____
8. Major Topics Covered in Workshop:
 

(a) <u>OSHA</u>
(b) <u>Code Revision</u>
(c) <u>Alarm Systems</u>
(d) _____
9. Host School Director's Overall Evaluation of Workshop:
 

Everyone seemed quite pleased with the course and I received many letters expressing their gratitude for such a fine course.

Recommendations for Improvement: More opportunity for participants to present their own successful approaches and course units to fellow participants (i.e. sharing the wealth)
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

ELECTRICAL

Phillip A. Pirrone	John A. Karahalidis
Patsy Sbardelli	John C. Sullivan
Clyde Deering, Jr.	Henry F. Corcoran
John W. Fallon	Joseph M. Landreville
John Caples	Roger E. Daviault
Daniel Griffin	Oiva K. Maki
Joseph A. Marrone	Kevin J. Hoag
Francis G. McCarthy	Joseph F. Shell
James R. Crowley	Chester B. Hayden
Louis S. Caiani	Samuel J. Ferraro
Rudolph W. Sibilis	Raymond A. DeCampo
Henry W. Cusick	Robert L. Quindley
John J. Hagan	C. J. Allia, Jr.
William Nanes	Emil J. Dow
Harry Rabb	Stanley J. Panek
Frank A. Robilotto	William L. Toomey
Richard A. Canty	Paul Jones
Joseph G. Flanagan	Walter Wilk
Robert Michelson	Edmund O'Hara

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Academic
2. Name of Host School: Shawsheen Valley Regional Vocational Technical High  
Address: 100 Cook Street  
Billerica, MA 01866
3. Name of Host School: Benjamin Wolk , Superintendent-Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: John R. Judge, Jr.  
Title and School: Social Studies , Shawsheen Regional
6. Number of Participants Attending : Total = 19
 

(a) Shop Teachers	<u>1</u>	(d) Administrators	<u>1</u>
(b) Related Teachers	<u>2</u>	(e) Counselors	<u>3</u>
(c) Academic Teachers	<u>12</u>	(f) Other (name)	<u>        </u>
7. Industry or Other Resource Persons Used in Workshop Presentations:
 

(a) Name <u>Mr. Knox</u>	(b) Name <u>Mr. Royce</u>
Firm or Organization:	Firm or Organization:
<u>Department of Education</u>	<u>Nashoba Tech</u>
8. Major Topics Covered in Workshop:
  - (a) Student-centered Curriculum
  - (b) Role of Guidance in a Vocational School
  - (c) Role of the Related Teachers
  - (d)
9. Host School Director's Overall Evaluation of Workshop:  
Successful in all respects
- Recommendations for Improvement: Greater advance consultation with  
teachers and others, regarding possible content of workshop
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

ACADEMIC

Margery J. Auvinen

George Gold

Mary M. Hubbard

Peter J. Mullen

Anthony J. Prendergast

Edward W. Smith

James F. Zabierek

Paul L. McCabe

Richard R. Viscarello

Thomas F. Lividoti

David Prusky

James F. Kelly

Mitchell M. Charkiewicz

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Toward 1980 in Electronics
2. Name of Host School: Shawsheen Valley Regional Vocational Technical High  
Address: 100 Cook Street  
Billerica, MA 01866
3. Name of Host School: Benjamin Wolk, Superintendent-Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: C. H. Marks  
Title and School: Electronic Instructor, Shawsheen
6. Number of Participants Attending .  
(a) Shop Teachers 22 (d) Administrators \_\_\_\_\_  
(b) Related Teachers \_\_\_\_\_ (e) Counselors \_\_\_\_\_  
(c) Academic Teachers \_\_\_\_\_ (f) Other (name) \_\_\_\_\_
7. Industry or Other Resource Persons Used in Workshop Presentations:  
(a) Name (see facing page) (b) Name \_\_\_\_\_  
Firm or Organization: \_\_\_\_\_ Firm or Organization: \_\_\_\_\_
8. Major Topics Covered in Workshop:  
(a) Employment Trends - Employers' Needs  
(b) New Area to be Covered in Electronic Course  
(c) Electromechanical & Electronics - Basic  
(d) Oscilloscopes - Curriculum Development
9. Host School Director's Overall Evaluation of Workshop:  
Generally, successful
- Recommendations for Improvement: More advance consultation with teachers.  
[NOTE: There was a large amount of take-home material - too much  
to show samples.]
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guide-lines); and (b) Name listing of workshop participants.

43

ELECTRONICS

Roger E. Cray

Joseph M. Brown

Frank J. Shore

Edward F. Hakkila

John E. Filios

Charles M. Kennedy

Wilfrid J. Savoie

Ernest J. Pedro

Frank Rubino

Anthony J. Palumbo

Arthur B. O'Leary

Chester H. Marks

Gerard B. Lachance

John B. Hilyard

Raymond G. Hawley

Francis S. McKeen

James F. Norris

John J. Kardokas

Joseph Martins

Joseph D. Morin

Roland C. Paquette

Item #7 (on previous page)Mr. Jack Lindon  
HoneywellDr. Gordon Partridge  
General RadioMr. Hayes  
Hewlett-PackardMr. Andy Abrahamson  
Western ElectricStaff Representatives  
Digiac CorporationMr. Ken Gregware  
Tektronix CorporationMs. Charlotte Meisner  
Division of Employment Security  
Commonwealth of Massachusetts

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Plumbing
  2. Name of Host School: Southeastern Regional Vocational Technical School  
Address: 250 Foundry Street - Route 106  
South Easton, MA 02375
  3. Name of Host School: Donald E. Graves , Superintendent-Director  
Dir. or Supt-Dir
  4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
  5. Name of Coordinator: William A. McConnell  
Title and School: Technical Supervisor , Southeastern Regional
  6. Number of Participants Attending :
 

(a) Shop Teachers	<u>11</u>	(d) Administrators	_____
(b) Related <sup>and</sup> Teachers	_____	(e) Counselors	_____
(c) Academic Teachers	_____	(f) Other (name)	_____
  7. Industry or Other Resource Persons Used in Workshop Presentations:
 

(a) Name <u>(see facing page)</u>	(b) Name _____
Firm or Organization: _____	Firm or Organization: _____
  8. Major Topics Covered in Workshop:
    - (a) Visuals in the Classroom
    - (b) Electrical Fusion Coil Method
    - (c) Interpretation of State Plumbing Code
    - (d) Carriers and Drains
  9. Host School Director's Overall Evaluation of Workshop:  
Interested group of participants.
- Recommendations for Improvement: Participants overwhelmingly  
suggested "curriculum development" for next workshop.
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

PLUMBING

Richard G. Belanger

Stanley Dobek

Donald F. Foley

Norman Harrison

Joseph H. Mulligan

Arthur A. Norton

Robert O'Donnell

Rocco J. Sammartano

Harry Tragakis

Stanley Woodacre

William Robinson

Item #7 (on previous page)

Mr. Kenneth Halloran  
New England Film Service, Inc.  
Waltham, Mass.

Mr. Roland F. Simoneau  
Dyna-Comm, Inc.  
Marlboro, Mass.

Mr. Russell Wordell  
Plumbing Inspector  
Taunton, Mass.

Mr. Risi  
State Board of Examiners  
Commonwealth of Massachusetts

Mr. Robert W. Lundberg  
Smith, Ham Janikies, Inc.  
239 Binney Street  
Cambridge, Mass.

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Wood Trades  
of Host School: Southeastern Regional Vocational Technical School  
Address: 250 Foundry Street - Route 106  
South Easton, MA 02375

3. Name of Host School: Donald E. Graves , Superintendent-Director  
Dir. or Supt-Dir

4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop

5. Name of Coordinator: William A. McConnell  
Title and School: Technical Supervisor , Southeastern Regional

6. Number of Participants Attending :  
(a) Shop Teachers and 36 (d) Administrators \_\_\_\_\_  
(b) Related Teachers \_\_\_\_\_ (e) Counselors \_\_\_\_\_  
(c) Academic Teachers \_\_\_\_\_ (f) Other (name) \_\_\_\_\_

7. Industry or Other Resource Persons Used in Workshop Presentations:  
(a) Name \_\_\_\_\_ (see facing page) (b) Name \_\_\_\_\_  
Firm or Organization: \_\_\_\_\_ Firm or Organization: \_\_\_\_\_

8. Major Topics Covered in Workshop:  
(a) Visuals in the Classroom  
(b) Power Actuated Tools and Hand Power Tools  
(c) Modern Architectural Techniques  
(d) Plywood Construction/Oak Flooring/Grading Western Lumber

9. Host School Director's Overall Evaluation of Workshop:  
Varied program which was generally acceptable to participants.

Recommendations for Improvement: Schedule at least one field trip.

10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.



WOOD TRADES

Andrew A. Arcadipane	Edsel L. Johnson
John R. Arcadipane	Edward Johnson
John Barcellos	Joseph L. Kiwak
John A. Berger	Robert Landry
Kenneth R. Bradbury	William F. Lawless
Armand G. Briere	Theodore K. Maki
Roger Brilliant	James P. Nolan
Donald H. Brine	Daniel B. O'Callaghan
Joseph S. Caliri	Charles C. O'Connell
William F. Collins	Howard L. Plant
Albert J. Comeau	Herbert C. Rainey
Gerard Desrusiers	Rudolph G. Schultz
Angelo A. DiBenedetto	Charles H. Seguer
Donald Drew	James E. Smith
Patsy J. Francose	J. F. Strumski
Michael Frongillo	Wallace R. Teto
Arthur Hart	Anthony F. Vatalaro
Camille A. Houde	Cesare J. Yannetty

Item #7 (on previous page)

Mr. Kenneth Halloran New England Film Service, Inc. Waltham, Mass.	Mr. Everett Erickson Erickson Architectural Associates
Mr. Roland F. Simoneau Dyna-Comm, Inc. Marlboro, Mass.	Mr. Stuart McNeil Clipper Abrasives Rockland, Mass.
Mr. Charles Renner Renner Tool and Supply Boston, Mass.	Mr. Robert Brownell Community Concepts Corporation Acton, Mass.
Mr. French Field Company Dorchester, Mass.	Mr. Rod Rida Downes Lumber Company Boston, Mass.
Representative Rockwell Company	Representative Formica Corporation
Mr. Robert C. Cornell Weston Wood Products Boston, Mass.	Mr. Gerald Clark American Plywood Associates Boston, Mass.
	Mr. Louis Dasenbrock Southern Forest Products Assoc. Atkinson, New Hampshire

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Food Trades
2. Name of Host School: Southeastern Regional Vocational Technical School  
Address: 250 Foundry Street - Route 106  
South Easton, MA 02375
3. Name of Host School: Donald E. Graves , Superintendent-Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: William A. McConnell  
Title and School: Technical Supervisor , Southeastern Regional
6. Number of Participants Attending :
 

(a) Shop Teachers	_____	(d) Administrators	_____
and	<u>13</u>	(e) Counselors	_____
(b) Related Teachers	_____	(f) Other (name)	_____
(c) Academic Teachers	_____		
7. Industry or Other Resource Persons Used in Workshop Presentations:
 

(a) Name <u>(see facing page)</u>	(b) Name _____
Firm or Organization: _____	Firm or Organization: _____
8. Major Topics Covered in Workshop:
  - (a) Visuals in the Classroom
  - (b) Teaching Aids and the Slow Learner
  - (c) A Look at the Foods Industry
  - (d) Shop and Related Classroom Procedures
9. Host School Director's Overall Evaluation of Workshop:
 

At the request of participants, a day and a half was spent on their relating to their own operation to disseminate information to aid others in improving their programs. This was excellent.

Recommendations for Improvement: In 1973, we will attempt to acquire more resource people from various institutions.
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

54

FOOD TRADES

Arthur H. Ahola  
 Wilho A. Ahola  
 Thomas Connelly  
 Frank Christello  
 Marie T. Duerden (Mrs.)  
 William F. Duffy  
 Dorothy Fisher  
 John R. MacKenzie  
 Theodore Nystrom  
 Joan B. Reich (Mrs.)  
 Martha Robinson  
 John R. Rosenhooven  
 John F. Stokinger

Item #7 (on previous Page)

Miss Pat Conlin  
 Marriott Corporation

Staff Member  
 Chamber of Commerce

Mr. Kenneth Halloran  
 New England Film Service, Inc.  
 Waltham, Mass.

Mrs. Laura Marvill  
 Audio-Visual Department  
 Southeastern Regional

Mr. Roland F. Simoneau  
 Dyna-Comm, Inc.  
 Marlboro, Mass.

Mr. Christopher Borden III  
 Supervisor  
 Southeastern Regional

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Drafting
2. Name of Host School: South Shore Regional Vocational Technical H.S.  
Address: Webster Street  
Hanover, MA 02339
3. Name of Host School: Frederick J. Teed , Superintendent-Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: William Kerrigan  
Title and School: Acad. Dept. Head, South Shore Regional
6. Number of Participants Attending :
 

(a) Shop Teachers		(d) Administrators	_____
and	<u>12</u>	(e) Counselors	_____
(b) Related Teachers		(f) Other (name)	_____
(c) Academic Teachers	_____		
7. Industry or Other Resource Persons Used in Workshop Presentations:
 

(a) Name <u>James Cahill</u>	(b) Name _____
Firm or Organization:	Firm or Organization:
<u>N.E. District Mgr. Welsh Co.</u>	_____
8. Major Topics Covered in Workshop:
 

(a) <u>Geometric tolerancing and true positioning</u>
(b) _____
(c) _____
(d) _____
9. Host School Director's Overall Evaluation of Workshop:  
Workshop progressed smoothly and participant interest was high.  
\_\_\_\_\_  
\_\_\_\_\_
- Recommendations for Improvement: Greater amount of take-home material;  
larger number of outside resource persons; more advance planning  
time.  
\_\_\_\_\_
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

DRAFTING

William Cahill

Paul DiPaolo

Eugene Dussault

Thomas J. Giacchetto

Robert I. Thayer

Linwood Turner

Manuel Demello

Ernest H. Hargreaves

L. Gordon Pratt

Joseph Thibodeau

William C. Stephenson

John T. Lehane

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Metal Fabrication & Welding/Sheet Metal
2. Name of Host School: South Shore Regional Vocational Technical H.S.  
Address: Webster Street  
Hanover, MA 02339
3. Name of Host School: Frederick J. Teed , Superintendent-Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
5. Name of Coordinator: William Kerrigan  
Title and School: Acad. Dept. Head, South Shore Regional
6. Number of Participants Attending :
 

(a) Shop Teachers	_____	(d) Administrators	_____
and	26	(e) Counselors	_____
(b) Related Teachers	_____	(f) Other (name)	_____
(c) Academic Teachers	_____		
7. Industry or Other Resource Persons Used in Workshop Presentations:
 

(a) Name <u>(see facing page)</u>	(b) Name _____
Firm or Organization: _____	Firm or Organization: _____
8. Major Topics Covered in Workshop:
 

(a) <u>New Welding equipment and techniques; plasma arc</u>
(b) <u>Plastic duct-forming and welding</u>
(c) _____
(d) _____
9. Host School Director's Overall Evaluation of Workshop:
 

Excellent response

\_\_\_\_\_

\_\_\_\_\_

Recommendations for Improvement: More advance planning time

\_\_\_\_\_

\_\_\_\_\_
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

METAL FABRICATION & WELDING/SHEET METAL

Fred Lehman	Richard Seggelin
John Shores	George J. Bettencourt
Patrick Giuggio	Edward Harris
John Woods	Alfred Varraso
Alfred E. Foulkes	Victor A. Barbato
Nicholas J. Albanese	Burton Leone
James J. McLoughlin	Alfred Censorio
George M. McColgan	William A. Wescott
James Stewart	E. R. Watters
A. E. Clow	Edward Catabia
Albert J. Conte	Louis Ferrari
Clifford Masticola	Arthur Marchand
Richard Howe	Joseph M. Zdanovich

Item #7 (on previous page)

Mr. James O'Conner Kamweld Products	Mr. Jay Van Brunt Thermal Dynamic Corporation
Mr. Frank Poper, Region Engineer Linde Div. of Union Carbide	Mr. William Meredith Linde Corporation
Mr. Edward Zahumensky and Mr. Lloyd C. Dell Welding Division Westinghouse	Mr. Vincent Garofalo Raytheon Company

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Machine Shop
2. Name of Host School: Westfield Vocational High School  
Address: 33 Smith Avenue  
Westfield, MA 01088
3. Name of Host School: Michael Gonzalez , Director  
Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 30, '72  
Workshop
5. Name of Coordinator: Raymond Noga  
Title and School: Dept. Head, Westfield Vocational High School
6. Number of Participants Attending :
 

(a) Shop Teachers	<u>18</u>	(d) Administrators	<u>      </u>
(b) Related Teachers	<u>      </u>	(e) Counselors	<u>      </u>
(c) Academic Teachers	<u>      </u>	(f) Other (name)	<u>      </u>
7. Industry or Other Resource Persons Used in Workshop Presentations:
 

(a) Name <u>Robert Link</u>	(b) Name <u>Representatives</u>
Firm or Organization:	Firm or Organization:
<u>Superior Electric Company</u>	<u>American Steel &amp; Aluminum;</u>
	<u>Metallurgy Consultants</u>
8. Major Topics Covered in Workshop:
 

(a) <u>N/C Programming - Theory and Practical</u>
(b) <u>Metallurgy - Heat Treatment of Steels</u>
(c) <u>Field Trip - Electroplating of Metals</u>
(d) <u>      </u>
9. Host School Director's Overall Evaluation of Workshop:
 

Excellent

\_\_\_\_\_

\_\_\_\_\_

Recommendations for Improvement: More preparation time.

\_\_\_\_\_

\_\_\_\_\_
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

MACHINE SHOP

John DeMarco

Walter Porowski

Alexander Skrobacki

Walter Glondek

Edwin Waskiewicz

Joseph Kasper

James Templeman

Edwin Warkulewicz

James Buijnarowski

Steve Olesiak

Norman Smith

Gordon Allen

Raymond Noga

Fred Placzek

Francis Simmitt

Edward Wrobleski

James Ferris

Michael Bruzik

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Wood Trades
2. Name of Host School: Westfield Vocational High School  
 Address: 33 Smith Avenue  
Westfield, MA 01088
3. Name of Host School: Michael Gonzalez , Director  
 Dir. or Supt-Dir
4. Inclusive Dates of : Begin: June 26, '72 End: June 30, '72  
 Workshop
5. Name of Coordinator: Donald Dougenik  
 Title and School: Dept. Head, Westfield Vocational High School
6. Number of Participants Attending :
- |                       |           |                    |       |
|-----------------------|-----------|--------------------|-------|
| (a) Shop Teachers     | <u>13</u> | (d) Administrators | _____ |
| and                   |           | (e) Counselors     | _____ |
| (b) Related Teachers  | _____     | (f) Other (name)   | _____ |
| (c) Academic Teachers | _____     |                    |       |
7. Industry or Other Resource Persons Used in Workshop Presentations:
- |                                      |                              |
|--------------------------------------|------------------------------|
| (a) Name <u>Mr. Gaetono Theodore</u> | (b) Name <u>Mr. M. Zeppo</u> |
| Firm or Organization:                | Firm or Organization:        |
| <u>Westfield Woodworking</u>         | <u>Westfield Chemical</u>    |
8. Major Topics Covered in Workshop:
- (a) Modern Woodworking Technology
- (b) Shop Procedures
- (c) Police Lecture on Drug Abuse
- (d) Field Trip to Woodworking Industry
9. Host School Director's Overall Evaluation of Workshop:  
Very informative - participants pleased
- Recommendations for Improvement: More time for preparation
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

WOOD TRADES

Gordon H. Baker

Peter Janis

Edward C. Sefranka

Leopold A. Dutremble

Ernest J. Dwyer

David J. Forrest

Carl Utzinger

Joseph S. Cimoch

Edgar Tousignant

Francis D. Olszewski

Walter F. Letourneau

Clifford E. Junkins

Robert B. Otis

Adolph O. Midura

HOST SCHOOL DIRECTOR'S QUESTIONNAIRE: MAVA SUMMER WORKSHOP PROGRAM

Please complete the following for the workshop you offered this year (Summer 1972) and return, as soon as possible, to Robert K. Butler, Chairman, MAVA Committee on Professional Development. Please complete a separate form for each workshop you offered.

\* \* \* \* \*

1. Name of Workshop: Auto Mechanics, Auto Body and Air Conditioning
  2. Name of Host School: Worcester Vocational School Department  
Address: Wheaton Square  
Worcester, MA 01608
  3. Name of Host School: Robert K. Butler, Administrator  
Dir. or Supt-Dir
  4. Inclusive Dates of : Begin: June 26, '72 End: June 29, '72  
Workshop
  5. Name of Coordinator: N. Michael Luksha, Head  
Title and School: Automobile Department
  6. Number of Participants Attending :  
(a) Shop Teachers 65 (d) Administrators \_\_\_\_\_  
(b) Related Teachers \_\_\_\_\_ (e) Counselors \_\_\_\_\_  
(c) Academic Teachers \_\_\_\_\_ (f) Other (name) \_\_\_\_\_
  7. Industry or Other Resource Persons Used in Workshop Presentations:  
(a) Name Resident Instructors of (b) Name Resident Instructors of  
3 General Motors Divisions 2 Ford Motor Co. Divisions  
Firm or Organization: Cadillac-Pontiac-United Delco Firm or Organization: Air Conditioning-Auto Body
  8. Major Topics Covered in Workshop:  
(a) Automotive Mechanics, Automatic Transmissions, Air Conditioning  
(b) Charging & Starting Circuits, Carburetion & Electrical  
(c) Minor Engine Tune-Up & Emission Controls  
(d) Auto Body, Spot Paint Repair, Color Matching
  9. Host School Director's Overall Evaluation of Workshop:  
Excellent program in which shop teachers receive information on  
latest automotive advances from top Industry specialists
- Recommendations for Improvement: Two training staffs (G.M., FoMoCo)  
need earlier notice in order to schedule sufficient instructors to  
accommodate heavy potential enrollment
10. Please attach the following: (a) Any lesson or "take-home" materials which could be included in final report, as sample illustrations of your workshop's content (e.g. technical info, schematics, lesson plans, guidelines); and (b) Name listing of workshop participants.

AUTO MECHANICS, AUTO BODY, AIR CONDITIONING

General Motors Workshop

Dominic Bruno  
Joseph P. Glancy  
Edward J. Barrett  
Tadeusz Szilaz  
Carl G. Nordgren  
Charles Hudson

Cadillac Division

Thurston D. Grant  
Maurice E. Moran  
Thomas B. Martindale  
Stephen A. Chmiel  
Kenneth E. Williams  
John Kuzeja

Chester C. Grabowski  
Lionel E. Pelligrini  
Louis Campbell  
Hugo C. Crescenzi  
James A. McNamee  
Murray Kliman

United Delco Division

Edwin W. Kocur

Ernest Driesen

Warren F. Baker

Pontiac Division

William Lawry  
Joseph Ciccui  
A. T. Vaughan  
Stanley M. Boehler

R. J. Barrett  
Michael Cignarelli  
Robert Russo  
Robert Thompson  
Stephen P. White

Arthur E. Wilk  
George Tucker  
Esio J. Grassi  
Dominic Rantuccio

Ford Motor Company Workshop

Air Conditioning Division

Anthony Cogoli  
James Dupont  
Edward E. Stange  
Dwight P. Stearns  
Clarence A. Randall  
Benjamin Valdes

Joseph J. Carchia  
Howard Walker  
John Morrell  
Michael J. Mango  
Roger H. Bourguignon

Henry Scott  
Joseph B. Kuchyt  
Carl W. Wright  
Norman Johnson  
Calvin Kalishman  
Alexander Kapamagian

Auto Body

Mr. Balthazar  
Mr. Wells  
Mr. Peaslee  
Mr. Martell  
Mr. Malinowski  
Mr. Goller  
Mr. Mello

Mr. Thompson  
Mr. LaFond  
Mr. Walkama  
Mr. Calabrese  
Mr. Majka  
Mr. Garrity  
Mr. McLeod

148 ,

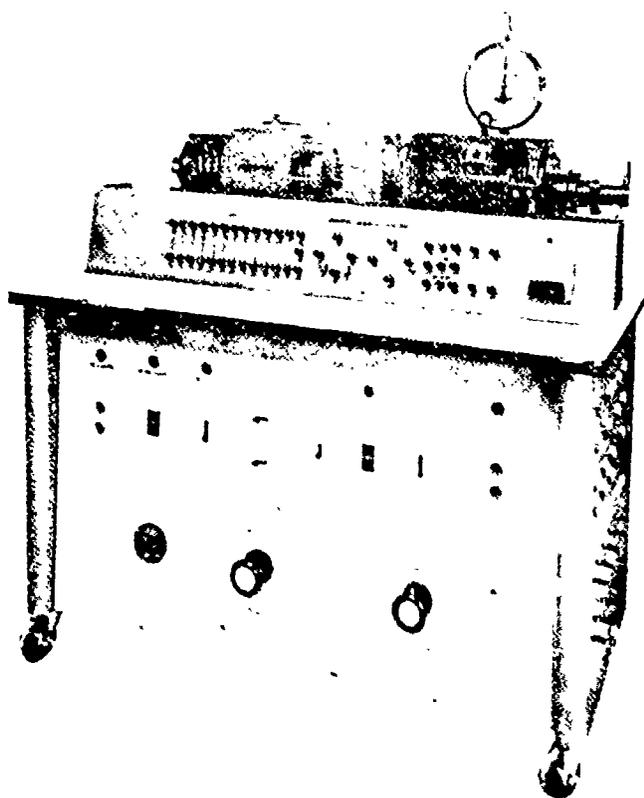
APPENDIX A

Sample Handout Materials

*Hampden*

ROTATING ELECTRIC MACHINES

THE  
UNIVERSAL LABORATORY  
MACHINE



*Hampden* ENGINEERING CORPORATION

SHAKER ROAD

EAST LONGMEADOW, MASSACHUSETTS

67

# ROTATING ELECTRIC MACHINES

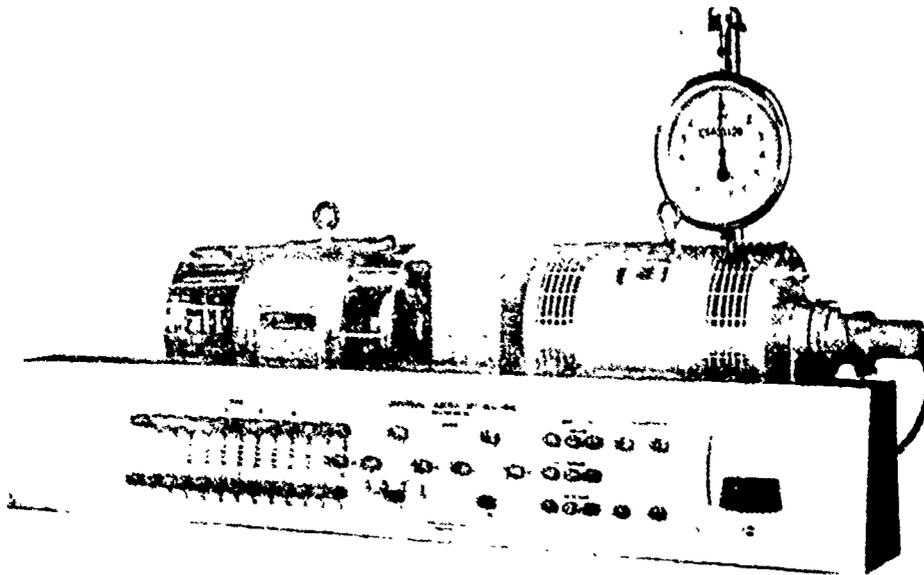


Fig. 1. Cct H-REM-120-M2  
The Universal Laboratory Machine (Less Stand)

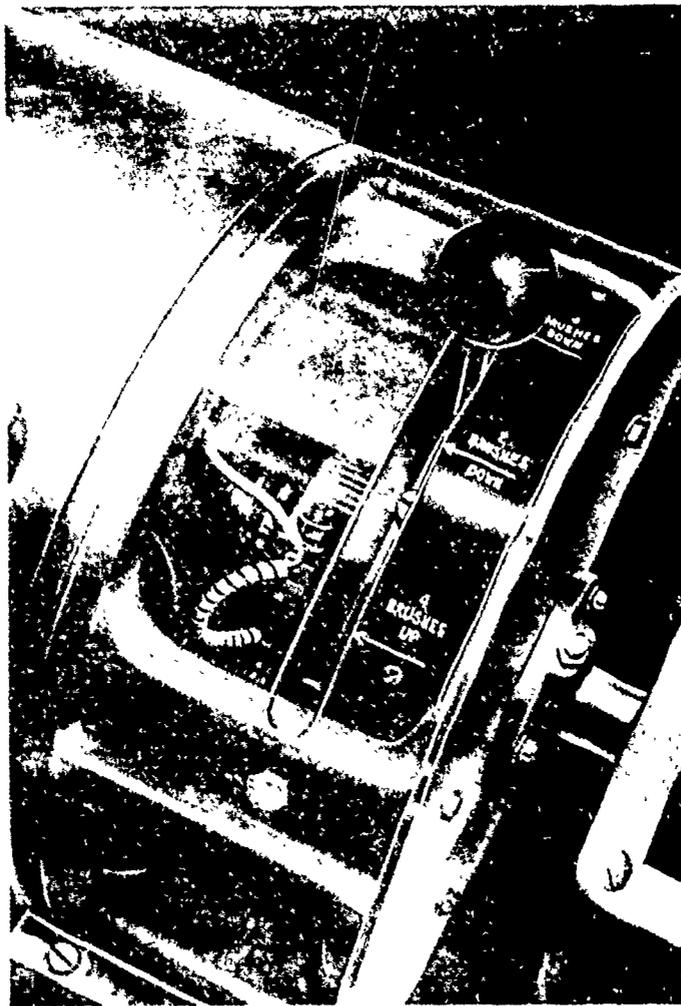


Fig. 2.  
The Brush Lifting Gear

63

# A UNIVERSAL LABORATORY MACHINE

## INTRODUCTION

In recent years the pattern of experimental work on electrical machines in College and University laboratories has changed. More emphasis is now placed upon the common electromagnetic principles of machines, upon their dynamic performance and their use as elements in control systems. There is also a growing tendency to introduce in the later stages of courses a more generalized approach to the analysis of electrical machines similar to that pioneered by Gabriel Kron.

On attempting to change laboratory courses to suit this new approach it is soon found that the conventional laboratory machines offer too few experimental facilities. Furthermore, as the numbers of students in laboratory classes increase, the need for multiplication of a given experiment arises and it then becomes costly, financially and in terms of space, to equip laboratories with many machines of conventional type.

To meet these changing needs a simple "Universal Laboratory Machine", which can operate in a variety of a.c. and d.c. modes, has been introduced by Hampden Engineering Corporation.

## GENERAL DESCRIPTION

The Universal Laboratory Machine set shown in Fig. 1 consists of a 2 K.V.A. uniform gap "Universal Machine" coupled to a trunnion mounted d.c. dynamometer. The dynamometer torque can be measured under both motoring and generating conditions by means of a spring balance calibrated directly in pounds-feet and newton-metres. A 36-position locking device is fitted in the dynamometer to allow stalled torque measurements on the Universal Machine. There is also provision for fitting an a.c. tachometer on the dynamometer.

The Universal Machine is basically a two-pole induction motor with all of the stator coil ends brought out. Its rotor has a commutator winding with 2-phase and 3-phase tappings and all of these windings, including a full-pitch search coil on the dynamometer armature, are brought out to the large self-explanatory terminal panel which can be seen in Fig. 1.

The stator coils can be connected to form a variety of single-phase, two-phase and three-phase windings with different phase spreads for the a.c. modes of operation and also to form the main field, compounding and compensating windings that are required for the d.c. modes of operation. These windings are also terminated at a 24-way socket so that, if desired, the coil to coil inter-connections for a particular winding can be made by simply inserting an appropriate pre-wired plug, a variety of which is included with the machine.

A three-position brush lifting mechanism, shown in Fig. 2, is fitted on the Universal Machine so that the brushes can be lifted off the commutator when they are not required, thus preventing spurious effects from short-circuited coils.

A rotor-angle indicator, shown in Fig. 3, permits measurement of machine load angle, winding induct-

ances as a function of angular position, and, in conjunction with the dynamometer locking device, static torque/angle characteristics.

Ventilating fans have been omitted so as to make the set quiet in operation and more suitable for lecture demonstration work.

The nominal ratings of the Universal Machine are: — 1.5–2 kVA 200/115v, 3-phase, 60 c/s, 3400–3600 r.p.m. in its a.c. modes of operation, and 1 kW 110v, 1800–2400 r.p.m. in its d.c. modes of operation.

The dynamometer has a 1/2-hour rating of 3 kW 110v, 2400/3600 r.p.m. as a separately excited d.c. generator and it can also be operated as a 110v d.c. shunt motor over the same speed range using field control.

## PRINCIPAL MODES OF OPERATION

By appropriate connection of the stator and rotor windings the Universal Machine can operate in a wide variety of modes.

(a) As a three-phase, 200/115V induction motor with 2-phase, 3-phase, 6-phase or 12-phase secondary connections.

(b) As a two-phase, 115V/phase, induction motor with the above secondary connections. In this mode it can run as a 2-phase servo motor and can be used to demonstrate the principle of the drag-cup tachometer.

(c) As a single phase, 115V, capacitor motor and as a simple single-phase induction motor.

In these modes the power output ranges from 1–2 h.p.

The Universal Machine can also be operated:

(d) As a three-phase, 115V, synchronous machine with distributed field and damper windings, each of 90° spread, or of 120° and 60° spreads respectively. For synchronous motor operation the machine can be started as an induction motor and synchronised on the line by feeding d.c. to the field winding. The synchronous reactance is approximately 2 p.u.

(e) As a three phase, 76V a.c., 110V d.c. rotary converter.

The Universal Machine can operate in a variety of d.c. modes. In some of these it is necessary to compensate the armature m.m.f. because of the small, and uniform, air-gap length, which is of course desirable for the induction modes. Speeds for 110V d.c. operation are in the range 1800–2400 r.p.m. The machine can then run: —

(f) As a 1 h.p. d.c. shunt or series motor,

(g) As a 1 kW d.c. generator with separate or shunt main field excitation and a choice of two degrees of series compounding.

(h) As an amplidyne or metadyne generator, and

(i) As a metadyne transformer, which has certain dynamic properties which are of interest from the viewpoint of generalized machine analysis.

CO

*Hampden*

# ROTATING ELECTRIC MACHINES

It is also possible to run the machine as.

(j) An a.c. series motor.

These many different modes of operation of one machine demonstrate the unity and common principles of electrical machines. The field conditions within all of these machines can be examined by means of the search coils and the results can be used to explain why a salient pole form of construction is preferable for certain types of machine; the field distribution within the d.c. dynamometer being used as an example.

If a number of these Universal Machines are installed in a laboratory it is possible for several groups of students to do the same experiment simultaneously and thus a greater degree of co-ordination can be achieved between lecture work and laboratory work than is usually possible in a machines laboratory.

If several machines are available they can be used for experimental work on interconnected machines such as Ward-Leonard drives, Selsyn systems and interconnected synchronous machines. The power rating of the Universal Machine is also convenient for control system experiments and many experiments on speed, position and voltage control of both a.c. and d.c. machines can be devised using control devices such as saturable reactors, transistors and controlled rectifiers.

Versatile machines of this type are invaluable for student project work.

## TUTORIAL APPLICATIONS

One of the most important applications of the Universal Machine is that of demonstrating to students some of the basic features of electrical machine theory, such as:—

- (a) the relationship between the spatial distribution of current in a winding and the resultant m.m.f. and flux density distributions,
- (b) the relationship between winding spread and the space harmonics of m.m.f.
- (c) the nature of the voltages induced in commutator and phase windings by stationary, pulsating and travelling flux density distributions,
- (d) the torque developed by the interaction of winding m.m.f.s and, of course,
- (e) the field distributions within particular machines.

Some typical oscillograms are shown in Figs. 5, 6, 7 and 8.

Experimental work and demonstrations of this kind can present machine theory in a novel and stimulating

way and can provide a sound basis for a unified treatment of machines.

A comprehensive instruction manual is provided with each machine.

## SUMMARY OF TECHNICAL DATA UNIVERSAL MACHINE

Ratings: 1.5–2 KVA, 200–115V, 3-phase, 60 c/s, 3400–3600 r.p.m. in a.c. modes

1 kW, 110V, 1800–2400 r.p.m. in d.c. modes.

Stator: 24 slots wound with a 12 coil single-layer winding, coil pitch 1-12. Four auxiliary commutating windings are fitted on the d and q axes.

Rotor: 36 slots, skewed one slot-pitch, wound with a full-pitch commutator winding having 72 coils, tapped for 2-phase and 3-phase outputs. Full-pitch search coils are fitted on stator and rotor.

## DYNAMOMETER

Rating: 3 kW, 110V, 4-pole, 2400/3600 r.p.m. as a separately excited d.c. generator. Will operate as a 110V shunt motor with field control over same speed range.

Full-pitch search coil on dynamometer armature.

Torque measurements by spring balance calibrated in pounds feet and newton metres.

36-position locking device for stalled torque measurements. Over-all dimensions of set: 48½" long x 22½" wide x 30" high.

Weight: 506 lbs.

## Variations on the Standard Machine:

The set can also be supplied with castors and, if desired, with vertical pillars for supporting the terminal panel directly above the machine at bench level. By simply adding a bench top, with the control gear mounted beneath, the set can be converted into a self-contained experimental unit as in Fig. 4.

A salient pole version of the Universal Machine is also available. This uses the same frame and armature as the standard machine.

The salient pole stator has a four-section main field winding and distributed damper windings on both axes. It can be operated as a salient pole synchronous machine and as a versatile "two-axis" d.c. machine.

Auxiliary control equipment for operation  
of this machine is included in consoles

See Page 7

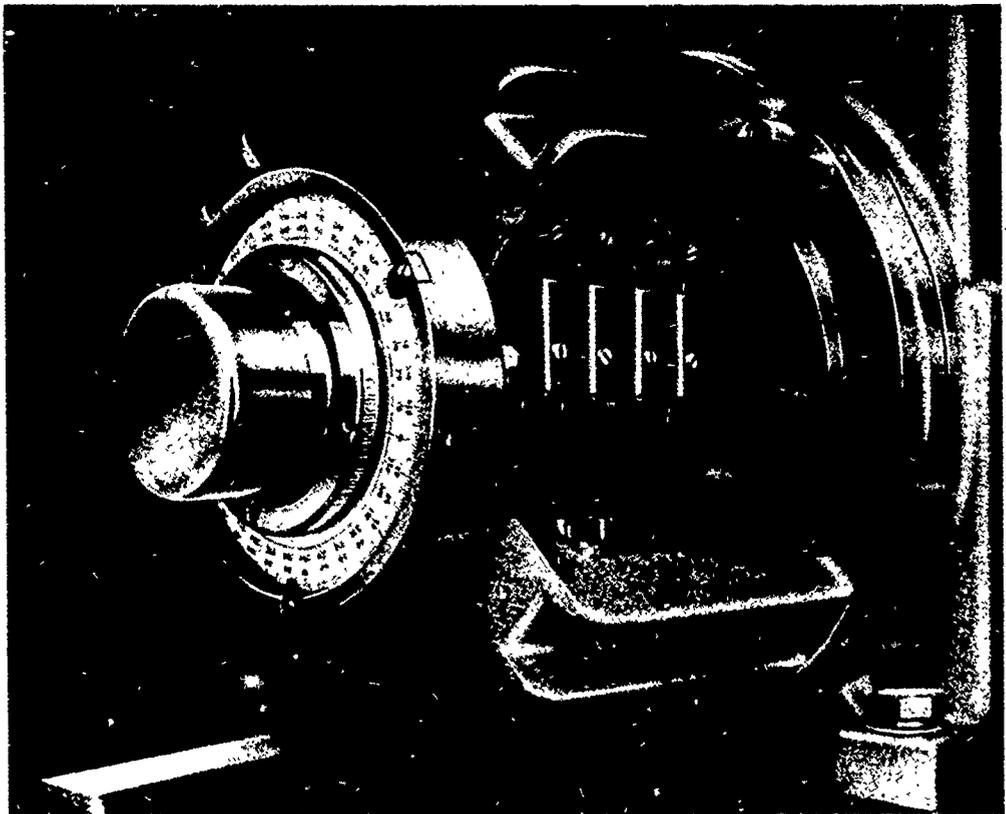


Fig. 3.  
The Roto-angle Indicator

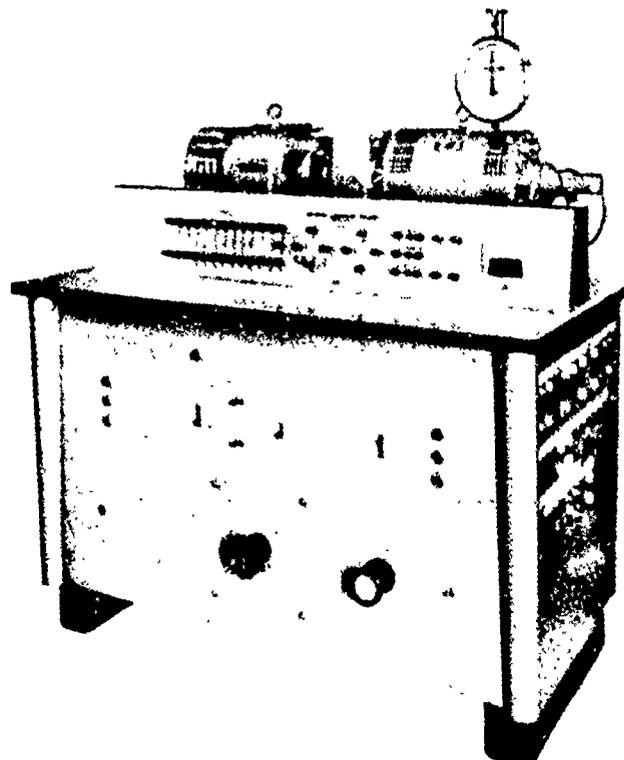
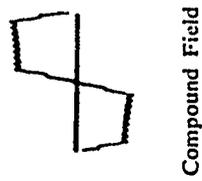
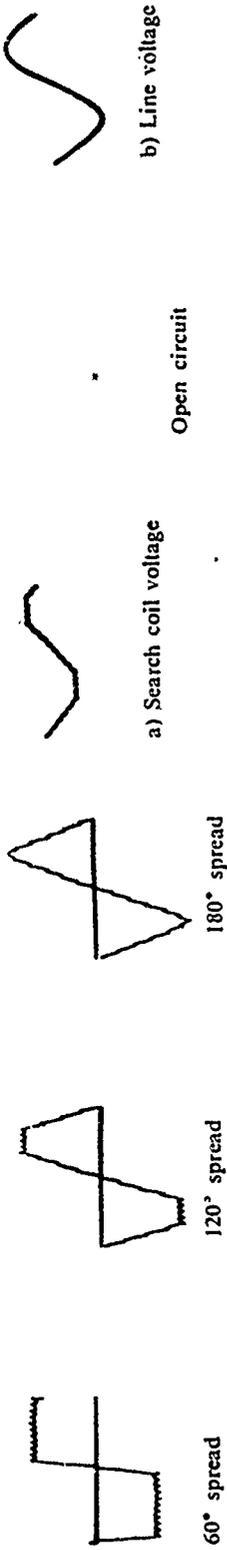


Fig. 4. Cot. H-REM-120-C  
The Universal Laboratory Machine with Panel  
and Tachometer and Control Console  
(Stationary)

71

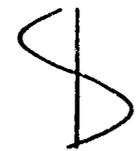
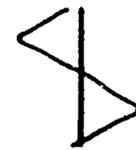
*Hampden*

# ROTATING ELECTRIC MACHINES



b) D.C. Field Windings

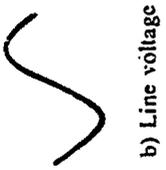
Fig. 5 Winding m.m.f. distributions  
(E.m.f.'s induced in a full-pitch search coil)



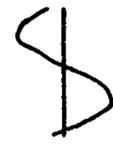
b) 4 coils  
120° spread

c) 6-coils  
180° spread

Fig. 6 E.m.f.'s induced in a distributed winding.  
(Field m.m.f. triangular)



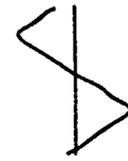
Open circuit



Full load u.p.f.

Fig. 7 Oscillograms for a 3-phase alternator.

(120° spread field winding)



Line voltage on full load u.p.f.

Fig. 8 Oscillograms for a single-phase alternator.

TERMINAL PANEL:

Wired and connected to the machine with flexible cables shall be a terminal panel approximately 58" long x 7" wide x 9 1/4" high.

The terminal panel to be equipped with binding posts for all field leads, armature leads, slip ring leads, search coil leads, and a dual range tachometer 0-2000-4000 range. Winding for armature, etc., shall be diagrammatically shown on the panel.

Terminal panel shall be equipped with necessary length of jumper cords for connecting up any type of experiment within the capabilities of the unit. In addition, six master plugs with 24 pins shall be provided so the instructor may connect in these master plugs for demonstration without the necessity of using jumper cords for stator intercoil connection.

These six master plugs shall be wired for the most common modes of operation.

CONTROL CONSOLE

The control console Type \* \_\_\_\_\_ shall be approximately 60" long, 34" wide and 36" high. The bench shall be supplied in all steel construction, totally enclosed, ventilated through the bottom and rear. 1-1/4" thick plywood top to be supplied with bonded Formica surface and trimmed with black plastic.

The front of the console shall have various controls for the following equipment:

1. 1 - Dynamometer field rheostat and auxiliary series resistance.
2. 1 - AC starter
3. 1 - DC starter of automatic 2-step type with overload and field failure protection.
4. 1 - Generalized machine field rheostat rate 0-200 ohms 1-10 amperes.
5. 1 - Generalized machine field swamp resistor.
6. 1 - 0-208V 3KVA variable autotransformer.
7. 1 - 110V d-c 30 amp full wave rectified power supply and controls.
8. 1 - 115V 2Ø 3W power source.
9. 1 - Wound Rotor Motor Rheostat w/control devices.

Facilities for capacitor starting, capacitor running or induction running of a single phase induction motor.

Facilities for induction starting and synchronous running of a 3Ø synchronous motor.

The right-hand end of the console shall have all terminating jack receptacles from the power supply, load bank, starter controls, etc.

Also at the right-hand end shall be provided ten 3-pole switches to provide varying 1Ø and 3Ø loads up to 3KW from the load bank mounted within the console. All controls, terminal jacks, etc., shall be provided with explanatory engraved plates to describe their function. For the terminal jacks on the right-hand end of this bench, provide a complete set of patch cords of proper length to connect between the Terminal Panel and jacks located on the right-hand end of the bench. These cords shall be made up of #14 super-flexible cable provided with rubber insulated handles, 1/2 red, 1/2 black.

The left-hand of the console shall be provided with a locking cord compartment.

The complete console shall be wired of type JIC and AVB switchboard wire tested and ready for use.

CORD LIST

The following cords shall be provided for use with each unit:

7 - 6'-0" #12 wire HP-1PR HL-2R	6 - 0'-8 1/2" #14 wire HL-2R HL-2R
12 - 3'-0" #12 wire HP-1PR HP-1SR	6 - 2 1/2'-0" #14 wire HL-2R HL-2R
3 - 6'-0" #12 wire HP-2SR HL-2R	6 - 24 pin plugs prewired
15 - 0'-8 1/2" #14 wire HP-1PR HP-1PR	
	1 - 10'-0" 5 single #14 4-HP-2SR #3521 1-HP-2PR
	This primary cord required only on Mobile Types I and II

CONSOLE COVER\*\*

This console shall be provided with a grey nylon plastic coated cover complete with zipper for ease in installation.

PRIMARY INPUT 208/120 volts 3-phase 4-wire 20-ampere.

INSTRUCTION MANUAL

Each machine shall be provided with a bound instruction manual containing instructions and set-up diagrams.

EXPERIMENT MANUAL

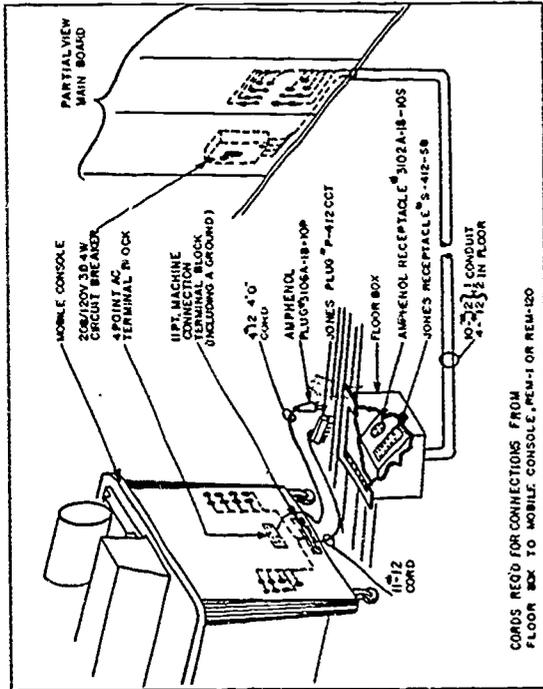
Each machine shall be provided with a bound experiment manual, Hampden #120EX and 120EX-VT.

NOTE \* See page 8 for type of console required.  
\*\* Cover is optional - furnished only when specified.

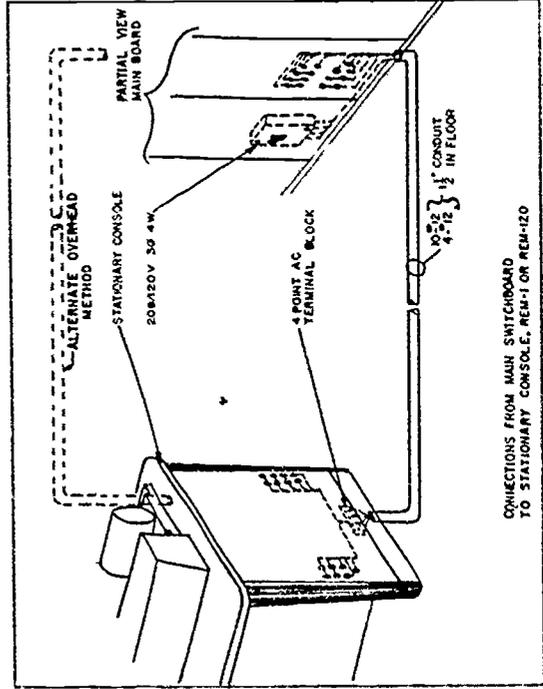
78

# ROTATING ELECTRIC MACHINES

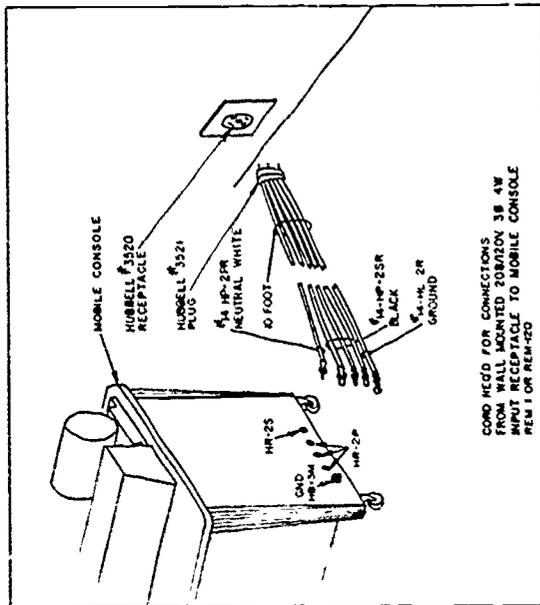
## TYPE III



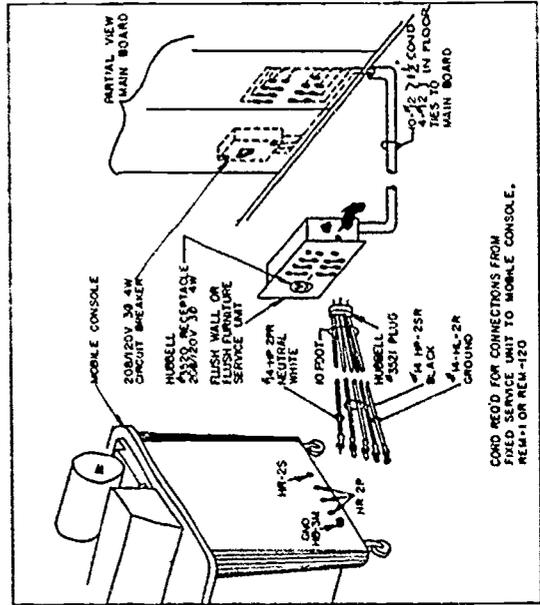
## TYPE IV



## TYPE I



## TYPE II



WESTERN NEW ENGLAND COLLEGE  
Springfield, Massachusetts

Electric Machinery Laboratory

Experiment No. 317-H8

Subject: Speed Control of a D-C Shunt-Connected Motor.

Purpose: The purpose of the experiment is to determine the no-load speed characteristics of a d-c shunt-connected motor.

Discussion

In a d-c motor, the counter emf induced in the armature winding under steady-state conditions must always be equal to the applied voltage less the RI drop in the armature circuit. The counter emf is directly proportional to the speed and to the total flux per pole in the magnetic field of the machine. This suggests two methods by which the speed of the motor may be controlled: (1) If the applied voltage is held constant and the field current is reduced by means of a field rheostat, thus decreasing the total flux per pole, the counter emf will momentarily decrease. For steady-state conditions to be restored, the speed must increase until the counter emf is again in balance with the applied voltage. (2) If the field excitation is held constant and the applied voltage is increased, the applied voltage becomes momentarily greater than the sum of the counter emf and the armature circuit RI drop. Again the speed must increase to restore steady-state conditions.

It will be seen therefore that the speed of the motor may be increased either by an increase of applied voltage or by a decrease of field current. Conversely, the speed may be decreased either by a reduction of applied voltage or by an increase of field current. Both methods of course may, and often are, used simultaneously. Each of the methods will be investigated in this experiment.

The voltage applied to the armature circuit may be changed either by use of a variable-voltage d-c source or by insertion of a variable resistance in the circuit. The latter method will be used in this experiment. The resistance load bank of the machine console will provide the variable resistance.

Apparatus Required

- 1 Hampden ULM set
- 1 D-c voltmeter, 150-volt scale
- 1 D-c ammeter, 10-amp scale
- 1 Strobotac
- Power supply: 110 volts d-c from the laboratory switchboard.

Procedure

1. Connect the universal machine to operate as a shunt motor, as shown in Fig. 1, page 49 of the laboratory manual, except that the 110-volt source is to be obtained from the laboratory switch-board instead of from the machine source.
2. Check all connections carefully. The check should be done by other members of the group than those who made the connections.
3. Set the field rheostat to the minimum resistance (fully counter-clockwise) position. (This should be done whenever the motor is restarted for any reason.) Start the motor. Vary the field current in about ten steps from 9 amperes down to 4 amperes (approximately), recording field current and speed for each step.
4. Shut down and reconnect in accordance with Fig. 2, page 50. Make sure that all connections in the field circuit are made solidly.
5. Again check connections carefully.
6. Set the rheostat to the minimum resistance position and restart the motor by switching on the 110-volt supply. Before starting, switch all ten steps of the resistance lead bank to the "on" position. Also, make sure that the field switch is closed.
7. Starting with all ten resistors switched in, switch out one at a time, recording armature voltage and speed for each step. (The shunt field current will remain essentially constant as it is separately connected to the 110-volt supply. Record its value.)

Note: When the d-c starter is used in the motor circuit, the motor has both "open-field" and "under-voltage" protection. That is, the line contactor would automatically be opened in case of either a break in the field circuit or a reduction of input voltage below a certain value. For this reason, the starter cannot be used in the second half of the experiment. If it were used, its under-voltage protection would trip power from the motor when the armature voltage was reduced below the trip value by switching out of resistors. This explains why it was so essential that the field connections be made as solidly as possible and that the field circuit be closed before the switch in the armature supply is closed. If a d-c motor should lose its field excitation, its speed would head toward infinity very quickly. The motor might literally fly apart. It is recommended therefore that one member of the group remain near the armature supply switch during this part of the experiment. He will then be in a position to trip the switch quickly if the motor should start to "run away."

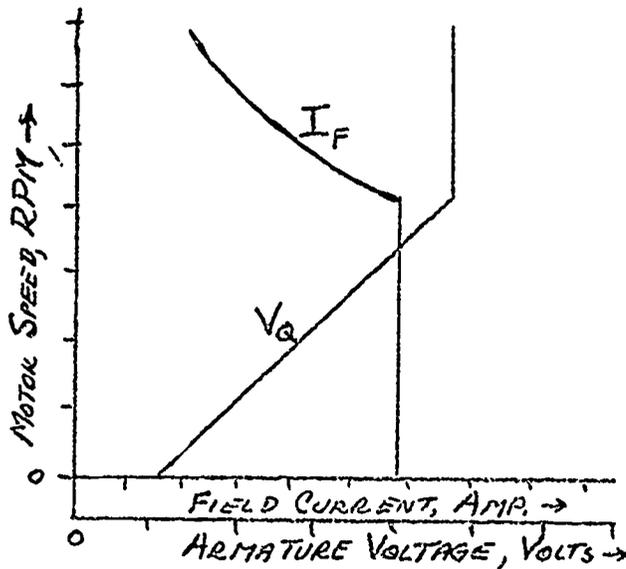
Experiment No. 317-H8

Report

Prepare a formal report. Plot field current and armature voltage versus speed on one set of axes. Discuss your results.

Questions

1. From your results, predict the shape of the speed-versus-load characteristic of a series motor. Give reasons for your prediction.
2. Can the counter emf of a motor ever be equal to the applied voltage under steady-state conditions? Why? Can the two be equal under transient conditions (sudden change of field excitation, applied voltage, or load)? If, so, for how long? Explain.



JLC 24 January 1970

7:

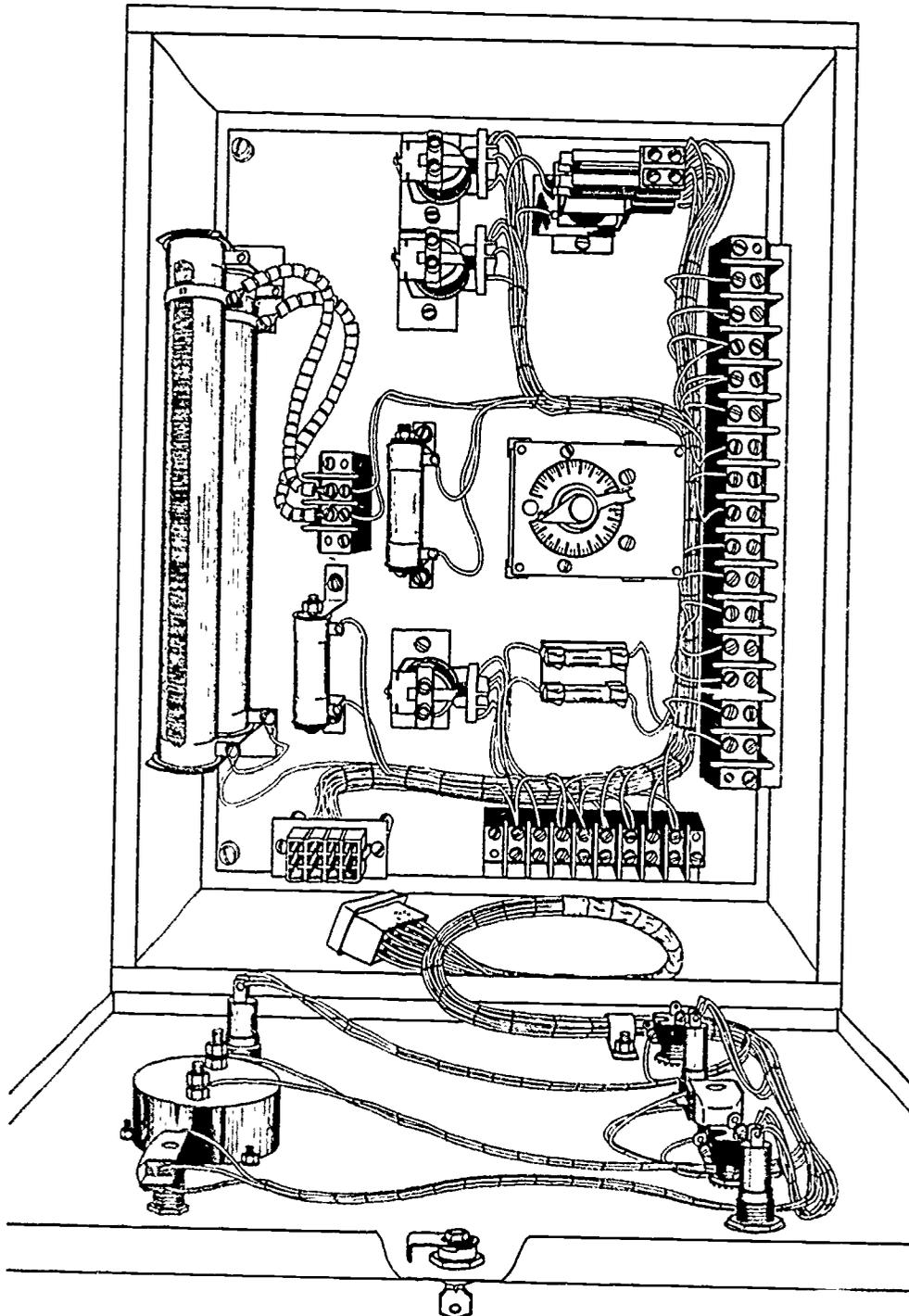


FIRE ALARM  
SERVICE INSTRUCTIONS

FIRE ALARM CONTROLS  
TYPES 4246 and 4247

SIMPLEX TIME RECORDER CO.

FIRE ALARM CONTROLS  
TYPES 4246 and 4247



Type 4247-2 Control

Ed 6 67

2

73

FIRE ALARM CONTROLS  
TYPES 4246 and 4247

TABLE OF CONTENTS

GENERAL DESCRIPTION

Introduction	4
Power Requirements	4
Installation	4

BASIC OPERATION

General	5
Station Circuit Supervision	5
Signal Circuit Supervision	5
Operating Power Failure	5
Alarm Initiating Circuit Trouble	6
Alarm Signaling Circuit Trouble	6
Supervisory Power Failure (Type 4247 only)	6
Alarm Condition	6

ADDITIONAL PROVISIONS

Types 4246-C and 4247-C Adapter Panel	7
Pre-signal and Coded Systems	7
Maintenance	7

INSTRUCTIONAL DRAWINGS

Type 4246-2 Control	8
Type 4246-1 Control	9
Type 4247-4 Control	10
Types 4246-C and 4247-C Adapter Panel	11

# FIRE ALARM CONTROLS

## TYPES 4246 and 4247

### GENERAL DESCRIPTION

#### Introduction

The Type 4246 Control is a single supervised fire alarm panel designed to operate one circuit of manual fire alarm stations or automatic detectors and either one, two, or four circuits of alarm signaling devices. A number appearing after the dash in the model number indicates the number of signal circuits. The Type 4247 Control is provided with double supervision, but, with the exception of this feature, is identical in every way to the Type 4246 panel. The following information refers to both the Type 4246 and the Type 4247 when no explicit distinction is made.

#### Power Requirements

All Controls are designed for connection to 115 volt AC, 60 cycle sources, although provisions for 230 volt AC are available on special order. In either case, supervisory power must be taken from a phase other than the one that provides operating power.

Signal circuit operating current requirements depend on the type and, in some cases, the quantity of signaling devices on the circuit. The operating current in each circuit may be varied by changing the amount of resistance offered by the variable compensating resistor. Operating current can be measured by placing an ammeter in series with the circuit during simulated alarm conditions. For more specific information on current requirements, reference should be made to the Wiring Diagrams that accompany the equipment for each installation.

#### Installation

In some installations, especially flush mounts, the back box is shipped and installed separately before the rest of the system. Any control panels and remaining parts of the cabinet are shipped later on a temporary wooden back box and must be remounted onto the permanent back box at the installation site. In some cases, particularly when there are more than two panels, the panels are mounted on channeling strips which, in turn, are attached to the temporary back box. Since the panels are interconnected, it is recommended that instead of separating the panels from the channeling strips, the whole unit be removed from the temporary back box and mounted on the permanent one.

# FIRE ALARM CONTROLS

TYPES 4246 and 4247

## BASIC OPERATION

### General

The following explanation of operation is based primarily on the panel circuitry as it appears in Instructional Drawing 1. This description of a Type 4246-2 Control in a non-coded system is representative of all Type 4246 and 4247 basic panels. Besides the specific distinctions made in the text, the difference between the Type 4246-2 Control and other panels are shown in other instructional drawings appearing in this publication.

### Station Circuit Supervision

When power is applied to the operating and supervisory power terminals, a circuit exists from fuse 10 through reset switch 13 to terminal S4. Current flows through the alarm initiating circuit and resistor 2 to terminal S1 and returns through contacts 5AU and relay 3 to neutral. Relay 3 energizes, but because of the voltage drop across resistor 2, relay 5, connected in parallel with relay 3, remains inoperative. Relay 5A in a 4246-4 Control operates the same as Relay 5.

### Signal Circuit Supervision

The transfer of relay contacts 3-1 allows power at terminal R1 to be applied through resistor 8 and contacts 5BU to terminal G1. Current passes through signal circuit 1, the other G1 terminal and compensating resistors 6 and 7 to terminal G2 and signal circuit 2. Current returns through the other G2 terminal, contacts 5BL and relay 4 to neutral. Relay 4 is energized and contacts 4-1 transfer, opening the circuit between the supervisory power source and the trouble indicators. Resistor 8 and the coil of relay 4 drop enough voltage to prevent the alarm signaling devices from sounding at this time.

### Operating Power Failure

In the case of operating power loss, relay 4 deenergizes. The transfer of contacts 4-1 allows supervisory power to be applied to the disarrangement circuit. Trouble lamp 16 is illuminated and audible device 12 (if used) sounds. Manually operating switch 14 silences the audible device, but the lamp remains illuminated until the trouble is corrected and the circuit is reestablished. Upon circuit restoration, the audible device will sound again until the silencing switch is returned to its normal position.

## FIRE ALARM CONTROLS

### TYPES 4246 and 4247

#### Alarm Initiating Circuit Trouble

If power in the alarm initiating circuit is interrupted by an open or a ground, relay 3 is deenergized and contacts 3-1 open the circuit to relay 4. When relay 4 deenergizes and contacts 4-1 transfer, the trouble circuit is activated as described under "Operating Power Failure".

Note: A ground occurring between terminals S4 and S3 in the station circuit will blow fuse F10, causing relay 4 to deenergize.

#### Alarm Signaling Circuit Trouble

When power in any alarm signaling circuit is interrupted by an open or a ground, relay 4 deenergizes, resulting in the same operation of the disarrangement circuit as explained under "Operating Power Failure".

Note: The voltage drop across resistor 8 prevents the signaling devices from sounding when a signal circuit is grounded at any point.

#### Supervisory Power Failure (Type 4247 only)

When supervisory power fails, relay 19 deenergizes (See Instructional Drawing 3). The transfer of contacts 19 allows operating power to be applied to the supervisory trouble circuit. The resulting operation is similar to the one that occurs in the operating power trouble circuit as described under "Operating Power Failure".

#### Alarm Condition

The activation of an alarm initiating device allows current to bypass resistor 2. The resulting increased voltage allows relay 5 to energize and its contacts to transfer. Power is then applied from fuse 0 through contacts 5AL to resistors 6 and 7 and the now parallel signal circuits. Current returns from signal circuit 1 through contacts 5BU and contacts 5BL to neutral. The return to neutral from signal circuit 2 is also through contacts 5BL. The removal of resistor 8 from the circuit allows the alarm signaling devices to sound.

At the same time, the transfer of contacts 5BL causes relay 4 to deenergize, activating the trouble indicators.

Contacts 5AU hold relay 5 energized until reset switch 13 is operated to interrupt the circuit. In this way, the alarm circuits are kept operating until the alarm warning is completed, even though the alarm initiating device may be reset ahead of time.

## FIRE ALARM CONTROLS TYPES 4246 and 4247

### ADDITIONAL PROVISIONS

#### Types 4246-C and 4247-C Adapter Panel

When more than four signal circuits are required, a combination of two Control panels is necessary. For example: in a Type 4246-C6 system with six gong circuits, a 4246(47)-4 is combined with a 4246(47)-2. Interconnection of two or more Controls must be made through a 4246(47)-C panel. See Instructional Drawing 4.

A Type 4246-C panel contains a tie relay and provisions for additional trouble indicating circuits. The 4247-C contains, in addition, a supervisory power trouble circuit to provide double supervision.

Tie relay 5 is located between the two G1 terminals of the C panel and thus in series with one of the signal circuits of the 4246-4. During normal supervisory conditions the signal circuit voltage is not high enough to cause relay 5 to operate. However, during alarm conditions relay 5 operates and contacts 5 transfer to allow 115 volt operating power from terminal OP to be applied to terminal S1 of the 4246-2. The resulting increased voltage across gong operating relay 5 in the 4246-2 causes the same operation as described previously under "Alarm Conditions" in the description of the operation of the 4246-2 Control. Signaling devices on all six circuits will sound.

Note: Since the C panel and both Control panels operate from the same supervisory power source, only one panel needs to be a Type 4247 to fulfill any double supervision requirement. When a complete system of more than four signal circuits is installed all at once, the double supervision feature is contained in a Type 4247-C panel. However, later additions to an existing Type 4247 Control require only a Type 4246-C panel and Type 4246 Control.

#### Pre-signal and Coded Systems

Provisions for pre-signal alarm and coded alarm signals are discussed in other publications.

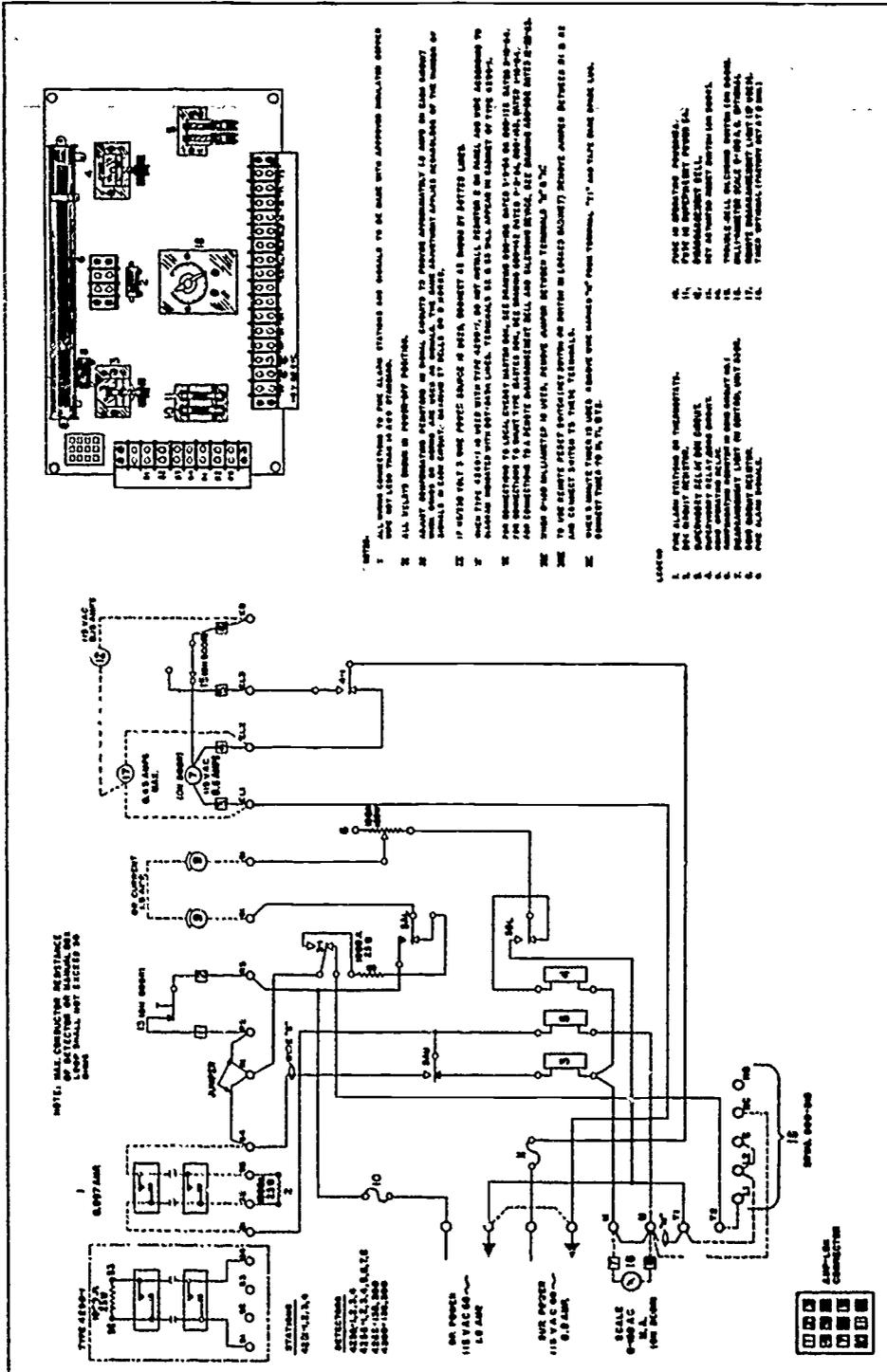
#### Maintenance

None of the components of this equipment should be lubricated. However, periodic inspection and cleaning is important. It is recommended that proper servicing by authorized Customer Engineers be obtained by contacting your nearest Simplex branch office.



# FIRE ALARM CONTROLS

## TYPES 4246 and 4247

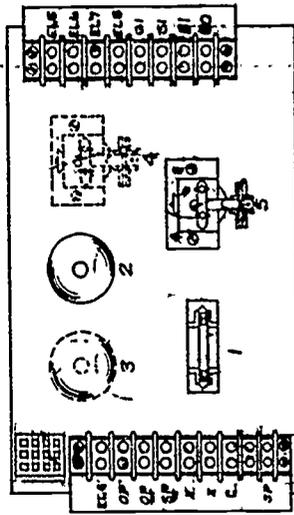


Instructional Drawing 2  
Type 4246-1 Control



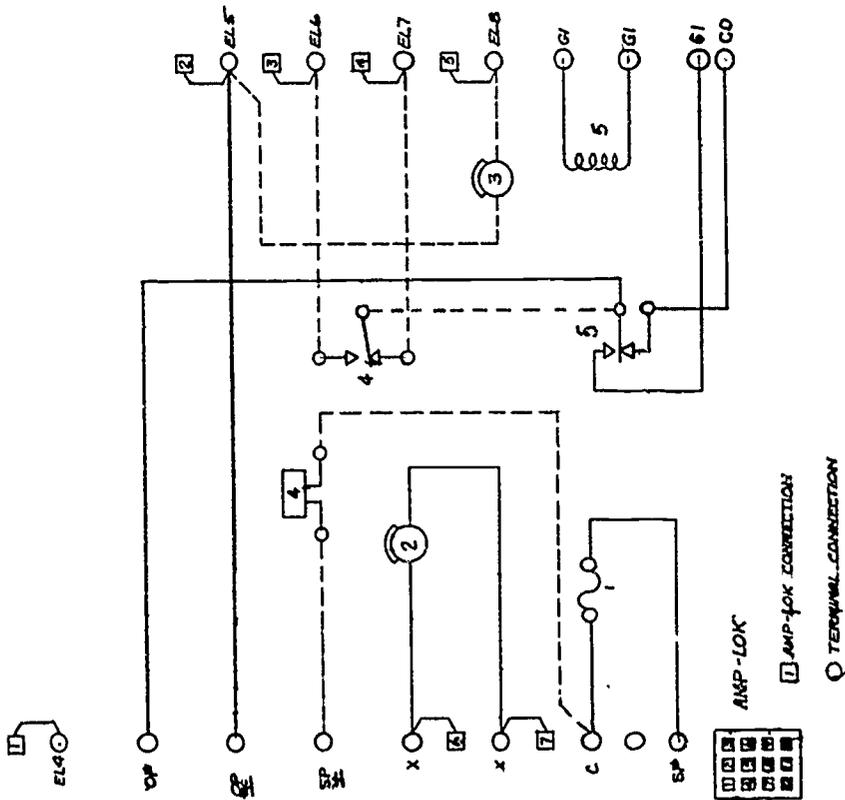
# FIRE ALARM CONTROLS

## TYPES 4246 and 4247



- 1. FUSE IN SUPERVISORY POWER 5A
- 2. BELL FOR 4246-C SINGLE SUPERVISED
- 3. BELL FOR 4247-C DOUBLE SUPERVISED
- 4. RELAY FOR DOUBLE SUPERVISION.
- 5. TIE RELAY (LIFE EXCEEDED)

NOTE: DOTTED LINES ARE ADDED FOR 4247-C PANEL



Instructional Drawing 4  
Types 4246-C and 4247-C Adapter Panel



## S I M P L E X T I M E R E C O R D E R C O .

PLANTS IN: GARDNER, MASSACHUSETTS, U.S.A.  
SAN JOSE, CALIFORNIA, U.S.A.

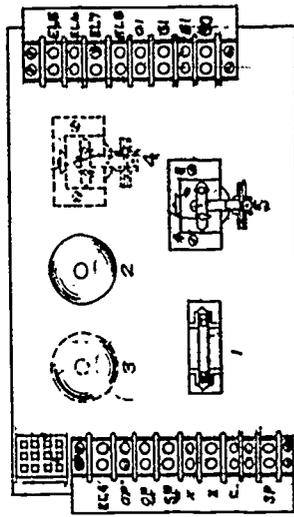
HALIFAX, YORKSHIRE, ENGLAND • ZELL, NECKAR, WEST GERMANY

SUBSIDIARIES IN: AUSTRALIA • CANADA • THE UNITED KINGDOM  
FRANCE • GERMANY • BELGIUM • LUXEMBOURG  
SUCCESSORS TO: INTERNATIONAL TIME RECORDING CO. (U.S.A.)  
GLEDHILL-BROOK TIME RECORDERS, LTD., ENGLAND  
REPRESENTATIVES FOR: DITTA ENRICO BOSELLI, S. P. A., ITALY

OFFICES & REPRESENTATIVES IN PRINCIPAL CITIES OF THE WORLD

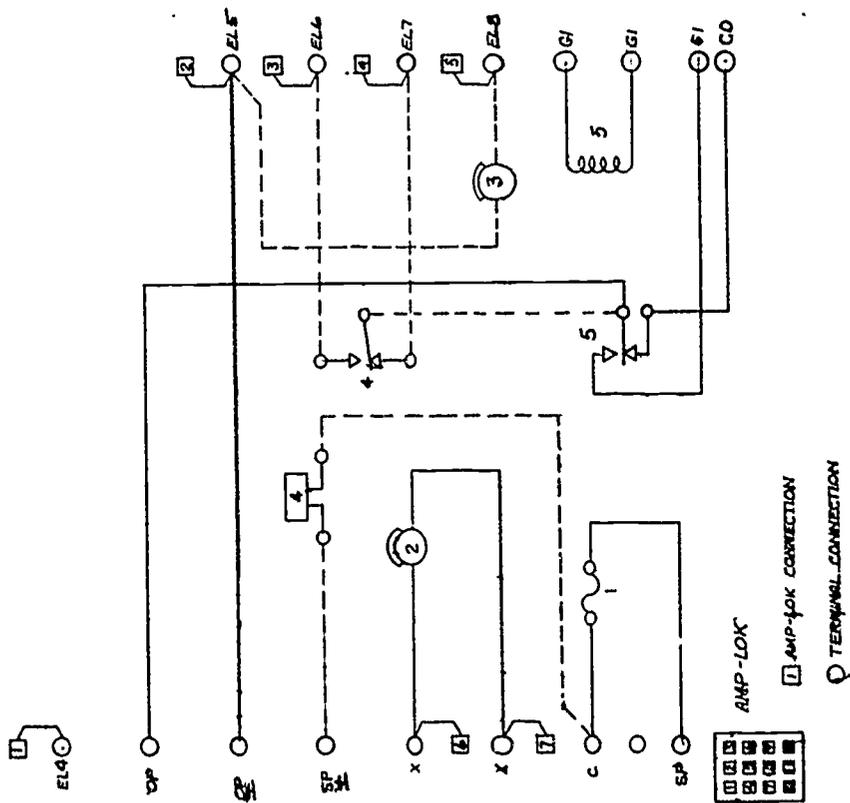
# FIRE ALARM CONTROLS

## TYPES 4246 and 4247



1. FUSE IN SUPERVISORY POWER SA
2. BELL FOR 4246-C SINGLE SUPERVISED
3. BELL FOR 4247-C DOUBLE SUPERVISED
4. RELAY FOR DOUBLE SUPERVISION
5. TIE RELAY (LIFE LINE RELAY)

NOTE: DOTTED LINES ARE ADDED FOR 4247-C PANEL



Instructional Drawing 4  
Types 4246-C and 4247-C Adapter Panel



# S I M P L E X T I M E R E C O R D E R C O .

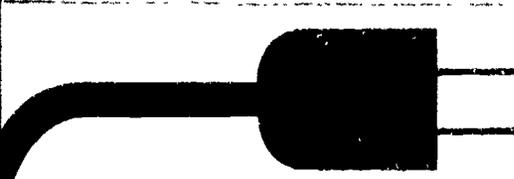
PLANTS IN: GARDNER, MASSACHUSETTS, U.S.A.  
SAN JOSE, CALIFORNIA, U.S.A.

HALIFAX, YORKSHIRE, ENGLAND - ZELL, NECKAR, WEST GERMANY

SUBSIDIARIES IN: AUSTRALIA • CANADA • THE UNITED KINGDOM  
FRANCE • GERMANY • BELGIUM • LUXEMBOURG  
SUCCESSORS TO: INTERNATIONAL TIME RECORDING CO. (U.S.A.)  
GLEDHILL-BROOK TIME RECORDERS, LTD., ENGLAND  
REPRESENTATIVES FOR: DITTA ENRICO BOSELLI, S. p. A., ITALY

OFFICES & REPRESENTATIVES IN PRINCIPAL CITIES OF THE WORLD





# electricity

## A GOOD SERVANT A DEADLY MASTER

Life today without electricity would not exist as we know it—man would be tied to a plow, die at an early age and never know what happens 50 miles from home. The harnessing of electricity signaled an era of development which history has never witnessed.

But, do you know what electricity is? Is your knowledge good enough to prevent accidents from happening? If not, I-T-E believes a little understanding can go a long way, and perhaps save a life in your family. . .

All matter is made up of atoms, and each electrically balanced atom has a nucleus about which electrons orbit. When there is an interchange of electrons between atoms, we call it electricity. However, different atoms have different electron characteristics which divide matter into two groups—conductors and insulators. A copper atom, for example, has electrons which are easily moved, making copper a popular carrier of electricity. Rubber, on the other hand, has exceedingly stable electrons which refuse to be dislodged.

One excellent way to visualize how electricity flows is to think of water in a pipe. In order for the water to flow there must be pressure (pump), a means of directing the water (pipes) and a means of converting this flow of water to energy (water wheel).

In order for electrons to flow, there must be pressure (generator), measured in volts; a means of directing the electrons (wire) and a means of converting this flow of electrons to energy (electric motor). An electric can opener, a power drill, a radio are all devices designed to use electric current to work and lighten our load; amuse and lighten our spirit; inform and enlighten our minds.

This basic look at electricity deals only with normal operating conditions, but there are three

abnormal conditions which can occur in an electrical circuit. You should be familiar with them.

**OVERLOAD**—The devices plugged into the circuit demand more electricity than the system can handle.

**SHORT CIRCUIT**—Because of an insulation failure or similar occurrence, current bypasses the load and follows a *low* resistance path.

**GROUND FAULT**—Current doesn't always follow the path of least resistance, it will also follow unintended, higher resistance paths to ground. Many Ground Fault currents are very small when compared to normal current flow. For example, a lethal ground fault current can be as little as .02 amps, and fuses and circuit breakers do not begin protection until current surpasses the rating of the device. Until now, there has been no method of automatically disconnecting the dangerous ground fault current.

In the United States each year, many people are killed (and who knows how many injured) by electricity. There is no comfort in the fact that Americans use more electricity per capita than any other country in the world—we must try to stop this needless loss of life.

By using common sense and caution in certain areas, we can get a head start in eliminating electrical accidents. Areas where the use of electricity is especially hazardous are those where there is ready access to ground. These include swimming pools, decorative fountains, outdoor receptacles, kitchens, bathrooms and workshops.

In industry, additional precaution is necessary wherever you find drop lights, control panels and hand tools.

Our indispensable servant—electricity—must be treated with respect. It can be a deadly master.



I-T-E INTRODUCES THE GROUND FAULT INTERRUPTER. AN ELECTRICAL PRODUCT WHOSE ONLY CONCERN IS FOR YOUR SAFETY. IT IS THE TYPE OF PRODUCT I-T-E HOPES IS NEVER ACTIVATED—ITS JOB AS A WATCHDOG IS SATISFYING ENOUGH. ASK AN ELECTRICAL CONTRACTOR ABOUT PUTTING GFI PROTECTION IN YOUR HOME OR PLACE OF BUSINESS.

A TEENAGE GIRL HAS HER RADIO PLUGGED IN NEAR THE ROOFTOP POOL



A HOUSEWIFE IS POKING A FORK IN THE TOASTER

THE BALCONY CHEF'S ROTISSERIE IS PLUGGED INTO AN OUTDOOR RECEPTACLE

A TODDLER FIDDLES WITH A BOBBY PIN NEAR AN ELECTRICAL OUTLET

THE GARDENER IS CLIPPING SHRUBBERY WITH ELECTRIC SHEARS

# SOON, YOU'LL NOT HAVE A CHOICE. THE NATIONAL ELECTRICAL CODE REQUIRES A GFI UNIT IN:

## 1972 (Section 680-31)

Ground Fault Circuit Protection for storable swimming pools.

## 1972 (Section 680-6)

Ground Fault Circuit Protection for receptacles in the proximity of swimming pools.

## 1973 (Section 210-22)

Ground Fault Circuit Protection for all outdoor receptacles in residential occupancies.

## 1974 (Section 210-7)

Ground Fault Circuit Protection for construction site receptacles.

## Future (Section 215-8?)

Ground Fault Circuit Protection for branch circuits in hazardous areas, such as bathrooms, kitchens and work shops.

## Future (Section 555-3?)

Ground Fault Circuit Protection for marinas and boatyards

# MOST ASKED QUESTIONS ABOUT GFI

## WHAT IS GROUND FAULT PROTECTION?

Ground fault interrupters provide protection for people from the danger of ground leakage current.

## HOW IS GROUND FAULT PROTECTION PROVIDED?

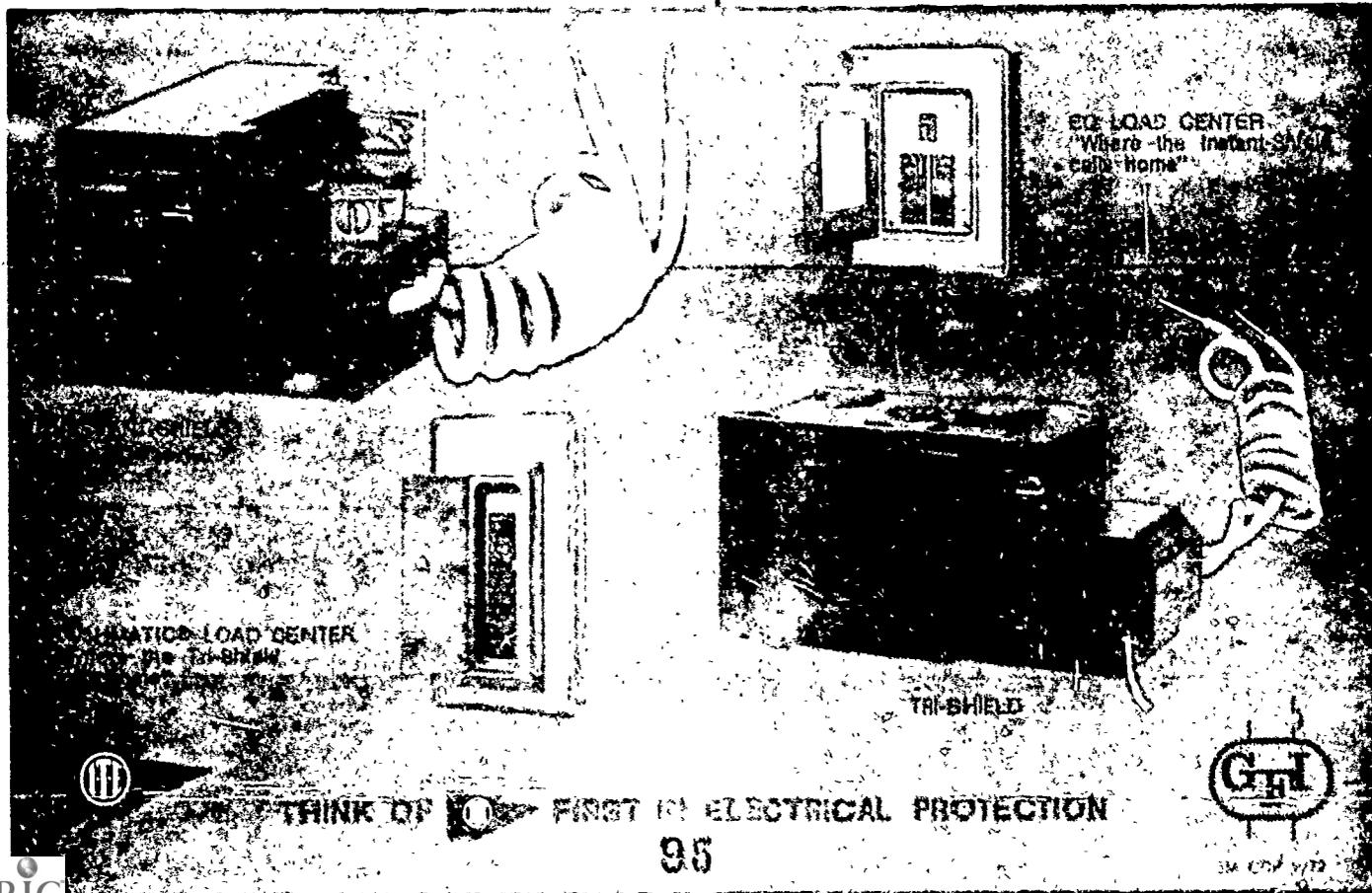
Ground fault protection is provided through the use of a fast, reliable, solid state sensing device which works in conjunction with a circuit breaker.

## WHY IS GROUND FAULT PROTECTION REQUIRED?

Ground fault protection is required because circuit breakers and fuses do not protect people from low magnitude faults to ground.

## CAN YOU GET A "SHOCK" FROM A CIRCUIT PROTECTED WITH A GROUND FAULT INTERRUPTER?

Yes if a fault to ground occurs and if a person is the path to ground, a shock will be received. However, the ground fault interrupter will limit the duration of the shock, which will reduce the danger of a possible fatal accident.



APPENDIX B

Sample Publicity

# SOUTHEASTERN REGIONAL VOCATIONAL TECHNICAL SCHOOL

BROCKTON - EAST BRIDGEWATER - EASTON - FOXBORO - MANSFIELD - NORTON - SHARON - STOUGHTON - WEST BRIDGEWATER

*Superintendent-Director*  
DONALD E. GRAVES

250 FOUNDRY STREET - ROUTE 106  
SOUTH EASTON, MASSACHUSETTS 02375  
TELEPHONE: 238-4371 AREA CODE 617

June 26, 1972

Press release

## SOUTHEASTERN REGIONAL HOSTS CONFERENCE

The Massachusetts Association of Vocational Administrators annually conducts summer workshops for all teachers in the Commonwealth which is designed to keep the instructors current with industrial techniques.

This year, the Southeastern Regional School District is hosting workshops in the Food, Wood and Plumbing trades. Over one hundred teachers from all over the state have assembled for the four-day seminar under the leadership of Donald E. Graves, Superintendent-Director and William A. McConnell, Technical Supervisor. Lecturers from Industry from as far away as Washington, D.C. have been scheduled.

The teachers in other trades and in the academic area of study from Southeastern are attending workshops in other vocational schools throughout the state.

# Summer Seminar For Instructors At Valley Tech

## 50 Expected To Attend Program

By GEORGE G. NEWTON

**UPTON** — A summer conference for Central Massachusetts vocational instructors in drafting and metal fabrication will open Monday in the Blackstone Valley Regional Vocational Technical High School, pleasant street, with nearly 50 expected to attend.

"The program will consist of seminars conducted by professionals from industry rather than from education", Paul J. Sullivan, superintendent-principal of the bvrvtsh announced.

"Through the use of experts from industry we will update the knowledge of our instructors and inject new thinking into our curriculum offerings. In addition to the seminars and demonstrations at our school, we will also visit various manufacturing plants in the area to view the latest techniques in industry."

Continuing, Mr. Sullivan explained. "The professional improvement program for our instructors was conceived and organized by our professional organization known as the Massachusetts Association of Vocational Administrators. Most of the regional vocational technical schools volunteered to serve as hosts to these summer workshops.

"We offered to sponsor a program for Machine Drafting and a second course in Metal Fabrication for all vocational instructors in Central and Western Massachusetts"

### Registration Monday

"Through the cooperation of our friends in industry we have set up an excellent program that will improve the knowledge and skill of our instructors which will make it possible for them to serve their students more effectively than in the past."

Mr Sullivan announced the following four-day schedule the coming week:

Monday—8 to 9 a.m. registration. 9 a.m. instructors go to Draper Division, North American Rockwell at Hopedale, where the subject will be "I.B.M. Tape Controlled Drafting Machine" to be conducted by Merton F. Tinkham from 9.30 a.m. to noon after which there will be lunch.

In the afternoon, 1 to 3 p.m. the instructors will visit the Hopedale plant's three foundries with the tour in charge of Anthony Allegrezza, personnel director, to include automated grey iron, aluminum and mmin foundries.

Tuesday, 8 a.m. to 4 p.m. the instructors will have a workshop conducted by Ned Genter and Walter Mollis at the Foxboro Co. plant on "True Positioning, Dimensioning and Tolerancing for Engineering Drawings."

On Wednesday, the instructors will be at Heald plant, Worcester, 8 a.m. to noon with continuation of the same workshop from 1 to 4 p.m. on "Micro-Filming"

### Final Day

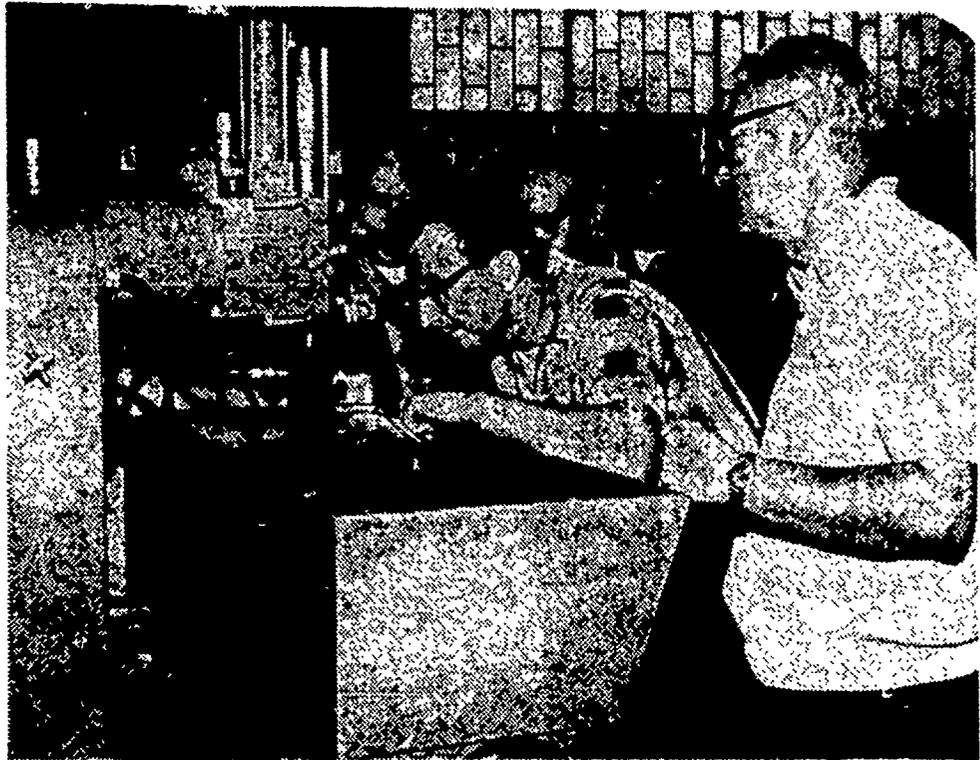
Thursday, fourth and final day, "Architectural Drawing Today" from 9 a.m. to noon in charge of Richard J. Lancoureur and Suzanne O. Carlson, members of the American Institute of Architects, at the local school. After lunch, the Jamesbury Corp. of Worcester, Frederick Thibeault, will be in charge of the workshop, on "Engineering Requirements Today" at the firm's plant.

The workshop schedule for metal fabrication and wilding instructors schedule is as follows: Monday in the metal fabrication shop, 9 a.m. to noon, MAPP Gas—"The Safe High Energy Fuel" and 1 to 3 p.m., "The Occupational and Health Act."

Tuesday, at school's shop, "9 a.m. to noon, "Gas Metal Arc Welding—Gas Tungsten Arc Welding", and 1 to 3 p.m., "Applications and Trouble Shooting."

Wednesday, 9 a.m. to noon, Wyman-Gordon plant, North Grafton. "Forging Industry—Repair and Maintenance" Afternoon at Norton Co., Worcester, tour of plant and study of management techniques.

Thursday, 9 a.m. to noon, at AVCO Bay State Abrasive Co., at Westboro. "Application of G.M.A. Spray Type Welding" afternoon session on "Deep Penetration Welding With High Power Lasers" by AVCO Research Laboratories at Everett



Vocational-technical instructors attend workshop at Diman Regional Vocational Technical High School aimed at alerting instructors at changes in industry. Herald News Photo

## Diman High Hosts Instructor Workshops

The Massachusetts Association of Vocational Administrators is conducting a series of workshops throughout the state for vocational-technical instructors through Thursday.

The purpose of the workshops is to keep instruction up-to-date in the vocational-technical schools in the commonwealth by bringing in experts in various fields who alert the instructors to the various changes that are taking place in industry.

The workshops are a departure from the previous practice of having all vocational-technical teachers meet at Westfield in a conference arranged by the Division of Occupational Education. This year, workshops are held in various vocational-technical schools throughout the state with Diman Regional Vocational-Technical High School hosting the machine shop, painting and decorating, health services and a television production seminar which is being conducted at Southeastern Massachusetts University.

The content of the workshops has been determined as a result of a survey sent to all the vocational instructors in the state requesting that they submit those topics which would be of most value to them. At the close of the workshops on Thursday the teachers will be asked to evaluate the program and to make recommendations for the next summer's workshops. One hundred teachers are attending the four workshops held at Diman and it is anticipated that there will be a total enrollment of 700 teachers throughout the state.

Cooperation was received from Ashworth Brothers, Harvey Prober, A. J. Mitchell Company, Fall River Tool and Die Company, Schwartz Lumber, and American Wallpaper Company of Fall River; Mohawk Finishing Products, Inc. and Lambert Inc. of Boston; Providence Lacquer and Sup-

ply Center and Brown & Sharpe of Providence; the Massachusetts Department of Public Health; Lakeville Hospital, St. Luke's Hospital, Highland Heights, and the American Federation of Nursing Home Administrators; and Southeastern Massachusetts University.

APPENDIX C

Administrative Materials

# SOUTHEASTERN REGIONAL VOCATIONAL TECHNICAL SCHOOL

BROCKTON - EAST BRIDGEWATER - EASTON - FOXBORO - MANSFIELD - NORTON - SHARON - STOUGHTON - WEST BRIDGEWATER

*Superintendent-Director*  
DONALD E. GRAVES

250 FOUNDRY STREET - ROUTE 106  
SOUTH EASTON, MASSACHUSETTS 02375  
TELEPHONE: 238-4371 AREA CODE 617

April 24, 1972

Dear Director:

As part of the summer program sponsored by MAVA, the Southeastern Regional Vocational-Technical School has been designated to host workshops in the Plumbing, Carpentry and Food Trades.

Please contact your instructors in these areas, complete the enclosed forms and return to me before May 8, 1972. Those people requesting participation will be notified on final details and workshop agenda the week of May 22, 1972. Instructors will determine the content of a specific workshop by providing us with suggestions.

Thank you for your cooperation.

Sincerely,



William A. McConnell  
Technical Supervisor

WAM/mo  
enc.

SOUTHEASTERN REGIONAL VOCATIONAL-TECHNICAL SCHOOL  
250 FOUNDRY STREET  
SOUTH EASTON, MASSACHUSETTS 02375

Telephone 238-4371

CARPENTRY WORKSHOP

June 26 thru June 29, 1972 - 9:00 A.M. to 4:00 P.M.

Instructors attending from Diman Regional School

---

---

---

---

---

---

---

We would like to have the workshop include:

---

---

---

---

---

---

---

Return to William A. McConnell at Southeastern by May 8, 1972.

SOUTHEASTERN REGIONAL VOCATIONAL-TECHNICAL SCHOOL  
250 FOUNDRY STREET  
SOUTH EASTON, MASSACHUSETTS 02375

Telephone 238-4371

FOODS WORKSHOP

June 26 thru June 29, 1972 - 9:00 A.M. to 4:00 P.M.

Instructors attending from Diman Regional School

---

---

---

---

---

---

---

---

We would like to have the workshop include:

---

---

---

---

---

---

---

---

Return to William A. McConnell at Southeastern by May 8, 1972.

SOUTHEASTERN REGIONAL VOCATIONAL-TECHNICAL SCHOOL  
250 FOUNDRY STREET  
SOUTH EASTON, MASSACHUSETTS 02375

Telephone 238-4371

PLUMBING WORKSHOP

June 26 thru June 29, 1972 - 9:00 A.M. to 4:00 P.M.

Instructors attending from Diman Regional School

---

---

---

---

---

---

---

We would like to have the workshop include:

---

---

---

---

---

---

---

Return to William A. McConnell at Southeastern by May 8, 1972.

# SOUTHEASTERN REGIONAL VOCATIONAL TECHNICAL SCHOOL

BROCKTON - EAST BRIDGEWATER - EASTON - FOXBORO - MANSFIELD - NORTON - SEABOARD - SToughtON - WEST BRIDGEWATER

*Superintendent-Director*  
DONALD E. GRAVES

250 FOUNDRY STREET - ROUTE 106  
SOUTH EASTON, MASSACHUSETTS 02375  
TELEPHONE: 238-4371 AREA CODE 617

May 24, 1972

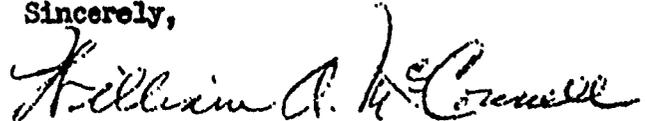
Dear Director:

Enclosed please find tentative agenda for those teachers who have indicated a desire to attend the MAVA workshops at Southeastern Regional. The content of the workshops was determined from teachers' suggestions. We anticipate only minor changes, if any.

As you know, Southeastern Regional will host the Plumbing, Wood Trades and Food Trades seminars and we are expecting excellent attendance for all three areas.

Thank you for your cooperation.

Sincerely,



William A. McConnell  
Technical Supervisor

WAN/lm

# SOUTHEASTERN REGIONAL VOCATIONAL TECHNICAL SCHOOL

BROCKTON - EAST BRIDGEWATER - EASTON - FOXBORO - MANFIELD - NORTON - SHARON - STOUGHTON - WEST BRIDGEWATER

Superintendent-Director  
DONALD E. GRAVES

250 FOUNDRY STREET-ROUTE 106  
SOUTH EASTON, MASSACHUSETTS 02375  
TELEPHONE: 238-4371 AREA CODE 617

## WOOD TRADES

Monday, June 26

8:45 - 9:15 Registration and Coffee  
9:15 - 10:30 Mr. Kenneth Halloran  
New England Film Service Inc.  
Waltham, Mass.  
Lecture and Demonstration -  
"Visuals in the Classroom"  
10:45 - 12:00 Hands on Visual Workshop  
1:00 - 4:00 Mr. Roland F. Simoneau  
dyna-comm, inc.  
Marlborough, Mass.  
Televisions role in Educational  
Technology.

Tuesday, June 27

9:00 - 12:00 Mr. Charles Renner  
Renner Tool and Supply  
Boston, Mass.  
Lecture and Demonstration -  
Power Actuated Tools  
1:00 - 4:00 Mr. French  
Field Company  
Dorchester, Mass.  
and  
Representative from Rockwell Co.  
Lecture and Demonstration -  
Hand Power Tools

Wednesday, June 28

9:00 - 10:30 Mr. Everett Erickson  
Erickson Architectural Associates  
"Modern Architectural Techniques  
for the building trades."  
10:45 - 12:00 Mr. Stuart McNeil  
Clipper Abrasives  
Rockland, Mass.  
Lecture and Demonstration -  
Coated Abrasives  
1:00 - 3:00 Mr. Robert Brownell  
Community Concepts Corp.  
Acton, Mass.  
Lecture and Demonstration -  
New concepts of community construction  
3:00 - 4:00 Mr. Rod Rida  
Downes Lumber Company  
Boston, Mass.  
106  
and  
Representative from Formica Corp.  
Filled tour of Formica Plant

WOOD TRADES (continued)

Thursday, June 29

- 9:00 - 12:00 Mr. Gerald Clark  
American Plywood Associates  
Boston, Mass.  
Film and Demonstration -  
Plywood construction and its uses.
- 1:00 - 2:30 Mr. Robert C. Cornell  
Weston Wood Products  
Boston, Mass.  
Lecture and Demonstration -  
Grading Western Lumber
- 2:45 - 3:45 Mr. Louis Dasenbrock  
Southern Forest Products Assoc.  
Atkinson, New Hampshire  
Demonstration and Discussion -  
Oak Flooring
- 3:45 - 4:00 Suggestions and recommendations  
for future seminars.  
Certificates issued.

# SOUTHEASTERN REGIONAL VOCATIONAL TECHNICAL SCHOOL

BROCKTON · EAST BRIDGEWATER · EASTON · FOXBORO · MANCHESTER · NORTON · SHARON · STOUGHTON · WEST BRIDGEWATER

Superintendent-Director  
DONALD E. GRAVES

250 FOUNDRY STREET-ROUTE 106  
SOUTH EASTON, MASSACHUSETTS 02375  
TELEPHONE: 238-4371 AREA CODE 617

## PLUMBING

Monday, June 26	8:45 - 9:15	Registration and Coffee
	9:15 - 10:30	Mr. Kenneth Halloran New England Film Service Inc. Waltham, Mass. Lecture and Demonstration - "Visuals in the Classroom"
	10:45 - 12:00	Hands on Visual Workshop
	1:00 - 4:00	Mr. Roland F. Simoneau dyna-comm, inc Marlborough, Mass. Televisions role in Educational Technology.
Tuesday, June 27	9:00 - 4:00	Mr. Russell Wordell Taunton, Mass. Plumbing Inspector Interpretation of local Plumbing Codes.
Wednesday, June 28	9:00 - 4:00	Representative from State Board of Examiners Interpretation of State Plumbing Code.
Thursday, June 29	9:00 - 12:00	Names to be announced. Lecture and Demonstration - Glass and Plastic pipe installation.
	1:00 - 3:30	Mr. Robert W. Lundberg Smith, Ham Janicles, Inc. 239 Binney Street Cambridge, Mass. "Fuscal" - Electrical Fusion Coil Method.
	3:30 - 4:00	"Smith" - Carriers and Drains. Suggestions and recommendations for future seminars. Certificates issued.

# SOUTHEASTERN REGIONAL VOCATIONAL TECHNICAL SCHOOL

BROCKTON - EAST BRIDGEWATER - EASTON - FOXBORO - MANFIELD - NORTON - SEABOARD - STOUGHTON - WEST BRIDGEWATER

Superintendent-Director  
DONALD E. GRAVES

250 FOUNDRY STREET - ROUTE 106  
SOUTH EASTON, MASSACHUSETTS 02378  
TELEPHONE: 238-4371 AREA CODE 617

## FOOD TRADES

Monday, June 26

8:45 - 9:15 Registration and Coffee  
9:15 - 10:30 Mr. Kenneth Halloran  
New England Film Service Inc.  
Waltham, Mass.  
Lecture and Demonstration -  
"Visuals in the Classroom"  
10:45 - 12:00 Hands on Visual Workshop  
1:00 - 4:00 Mr. Roland F. Simoneau  
dyna-comm, inc.  
Marlborough, Mass.  
Televisions role in Educational  
Technology.

Tuesday, June 27

9:00 - 12:00 Name to be announced  
Chamber of Commerce Representative  
"A look at the Foods Industry"  
1:00 - 2:30 Mrs. Laura Marvill  
Southeastern Regional A-V Dept.  
Sources of material for Food Trades.  
2:30 - 4:00 Mr. Christopher Borden III, Supervisor  
Southeastern Regional  
"Teaching aids and the slow learner."

Wednesday, June 28

9:00 - 12:00 To be announced.  
1:00 - 4:00 Panel Discussion  
General Shop Procedures  
Related Classroom Procedures  
Input from all participants relating  
to their own operation to disseminate  
information to aid others in improving  
their program .

Thursday, June 29

9:00 - 3:30 Continuation of Panel Discussion  
3:30 - 4:00 Suggestions and Recommendations  
for future seminars.  
Certificates issued.

# *Diman Regional Vocational Technical High School*

FALL RIVER · SOMERSET



SWANSEA WESTPORT

TELEPHONE 678-2691

JOHN P. HARRINGTON, SUPT. DIRECTOR

STANLEY J. REMIESIEWICZ, ASSISTANT DIRECTOR

STONEHAVEN ROAD

*Fall River, Massachusetts 02723*

April 26, 1972

Dear

Your professional organization MAVA is assuming the responsibility of organizing a summer program for the professional improvement of our teachers. This program will take place the week of June 26, 1972. It will run Monday through Thursday from 9:00 A.M. to 4:00 P.M.

Diman Regional Vocational Technical High School will conduct workshops for the Health Occupations, (Practical Nursing, Medical Assistants and Dental Assistants) Painting and Decorating and Machine Shop.

Will you please poll your instructors in these areas for the following information:

1. How many will attend in each area?
2. What topics would they like to have included in the workshop?

Please send me this information as soon as possible but no later than May 8, 1972 as I have to set up an agenda based on the suggestions of the teachers. We do have numerical tape control and EDM facilities.

Sincerely,

John P. Harrington  
Superintendent-Director

DIMAN REGIONAL VOCATIONAL TECHNICAL HIGH SCHOOL  
Stonehaven Road  
Fall River                      Massachusetts 02723

MAVA PROFESSIONAL WORKSHOP  
for  
PAINTING AND DECORATING INSTRUCTORS

June 26, 27, 28, 29                      1972

PAINTING AND DECORATING

Monday, June 26, 1972

9:00 - 12:00

Spray Painting

Demonstration of Air-less spray painting with conventional lacquers. Conducted by Andrew McMillan, field representative of Binks Mfg. Co., through the courtesy of Benny Di Caprio, Providence Lacquer and Supply Centre, Inc. Providence, Rhode Island.

12:45 - 3:45

Spot Finishing

Demonstration by a representative of Mohawk Finishing Products, Inc.

Tuesday, June 27, 1972

9:00 - 12:00

Silk Screen Printing

A workshop to provide hands on experience in silk screen printing to be conducted by Joseph Consilvio and Roy Julian of the Lambert Co., Inc., Boston, Mass.

12:45 - 3:45

The Use of Color in Commercial Art

A lecture illustrating and demonstrating the use of color in Commercial Art by Joan C. Reed, fashion illustrator, and commercial artist.

Page Two

Wednesday, June 28, 1972

9:00 - 12:00

Wood Finishing

This program will be conducted by a representative of DEFT, Inc., Torrance, Calif., through the courtesy of Lester Schwartz, Schwartz Lumber Co., Fall River, Mass.

12:45 - 3:45

Field Trip to Harvey Probbler, Inc. Fall River, Massachusetts, nationally known manufacturers of custom made furniture.

Thursday, June 29, 1972

9:00 - 12:00

Wallpapering

A live demonstration of every type of wall covering.

Conducted by Douglas Rossig - Paper Hanging Consultant for Henkel, Inc., Teaneck, New Jersey, through the courtesy of Abraham Ehrenhaus, American Wallpaper Co., Inc., Fall River, Mass.

Mr. Rossig will be happy to answer questions on any problems you may have encountered in wallpapering.

12:45 - 3:45

Exchange of ideas on the curriculum by instructors. Evaluation of the program. Issuance of certificates.

JPH/mmd

June 6, 1972

Mr. Joseph Silva  
Fall River Middle School  
Melrose Street  
Fall River, Mass.

Dear Mr. Silva:

We are conducting a workshop for painting and decorating instructors from all vocational schools in the state at Diman on June 26, 27, 28 and 29, 1972.

The reason we are writing this letter to you is that many of the topics we are covering in the workshop would have great value to your industrial arts teachers particularly the woodworking instructors who do have their students finish their projects.

We point out particularly the topics on Wood Finishing, Spot Finishing and Spray Painting and Silk Screen Printing for Printing Instructors or Art teachers.

If there are any teachers in your school system who would like to participate in all or any part of the workshop we would be very happy to have them.

There is no charge and a certificate will be awarded at the end of the workshop.

All we ask is to have anyone who is interested to submit their name by letter or phone to us so that we will know how many will be at the workshop

The workshop is also a good opportunity for industrial arts and vocational education teachers to know one another better. We encourage this.

Sincerely,

John P. Harrington  
Superintendent-Director

mmd

June 6, 1972

Mr. John Donnelly, Principal  
Henry Lord Junior High School  
615 Tucker St.  
Fall River, Mass.

Dear Mr. Donnelly:

We are conducting a workshop for painting and decorating instructors from all vocational schools in the state at Diman on June 26, 27, 28 and 29, 1972.

The reason we are writing this letter to you is that many of the topics we are covering in the workshop would have great value to your industrial arts teachers particularly the woodworking instructors who do have their students finish their projects.

We point out particularly the topics on Wood Finishing, Spot Finishing and Spray Painting and Silk Screen Printing for Printing Instructors or Art Teachers.

If there are any teachers in your school system who would like to participate in all or any part of the workshop we would be very happy to have them.

There is no charge and a certificate will be awarded at the end of the workshop.

All we ask is to have anyone who is interested to submit their name by letter or phone to us so that we will know how many will be at the workshop.

The workshop is also a good opportunity for industrial arts and vocational education teachers to know one another better. We encourage this.

Sincerely,

John P. Harrington  
Superintendent Director

JPH/jb

114

June 6, 1972

Mr. Thomas Hammond, Principal  
B.M.C. Durfee High School  
289 Rock Street.  
Fall River, Mass.

Dear Mr. Hammond:

We are conducting a workshop for painting and decorating instructors from all vocational schools in the state at Diman on June 26, 27, 28 and 29, 1972.

The reason we are writing this letter to you is that many of the topics we are covering in the workshop would have great value to your industrial arts teachers particularly the woodworking instructors who do have their students finish their projects.

We point out particularly the topics on Wood Finishing, Spot Finishing and Spray Painting and Silk Screen Printing for Printing Instructors or Art teachers.

If there are any teachers in your school system who would like to participate in all or any part of the workshop we would be very happy to have them.

There is no charge and a certificate will be awarded at the end of the workshop.

All we ask is to have anyone who is interested to submit their name by letter or phone to us so that we will know how many will be at the workshop.

The workshop is also a good opportunity for industrial arts and vocational education teachers to know one another better. We encourage this.

Sincerely,

John P. Harrington  
Superintendent Director

JPH/jb

June 6, 1972

Mr. Robert J. Nagle  
Superintendent of Schools  
417 Rock St.  
Fall River, Mass.

Dear Mr. Nagle:

We are conducting a workshop for painting and decorating instructors from all vocational schools in the state at Diman on June 26, 27, 28 and 29, 1972.

The reason we are writing this letter to you is that many of the topics we are covering in the workshop would have great value to your industrial arts teachers particularly the woodworking instructors who do have their students finish their projects.

We point out particularly the topics on Wood Finishing, Spot Finishing and Spray Painting and Silk Screen Printing for Printing Instructors or Art teachers.

If there are any teachers in your school system who would like to participate in all or any part of the workshop we would be very happy to have them.

There is no charge and a certificate will be awarded at the end of the workshop.

All we ask is to have anyone who is interested to submit their name by letter or phone to us so that we will know now many will be at the workshop.

The workshop is also a good opportunity for industrial arts and vocational education teachers to know one another better. We encourage this.

Sincerely,

John P. Harrington  
Superintendent Director

JPH/jb

116

June 5, 1972

Miss Eleanor Presbrey  
Director of Nursing  
Union Hospital  
Highland Avenue  
Fall River, Mass.

Dear Miss Presbrey:

We are conducting a workshop for practical nurse instructors and other health instructors from vocational schools in Massachusetts on June 26, 27, 28 and 29, 1972 and we are enclosing a few copies of the agenda.

Please consider this letter a personal invitation to the supervisors in charge of the practical nursing students and to anyone else on your staff who may be interested in attending all or any part of the workshop which may be of help to them.

All that we ask is that we be notified of those people who are planning to attend.

Sincerely,

John P. Harrington  
Superintendent Director

Enclosures

JPH/jb

DIMAN REGIONAL VOCATIONAL TECHNICAL HIGH SCHOOL  
Stonehaven Road  
Fall River Massachusetts 0272

MAVA PROFESSIONAL WORKSHOP  
for  
MEDICAL ASSISTANTS, DENTAL ASSISTANTS  
& HEALTH SERVICE OCCUPATIONS INSTRUCTORS

June 26, 27, 28, 29, 1972

MEDICAL ASSISTANTS, DENTAL ASSISTANTS  
& HEALTH SERVICE OCCUPATIONS INSTRUCTORS

Monday, June 26, 1972

9:00 - 12:00  
12:45 - 3:45

Writing Behavioral Objectives

Livia Duhaime,  
Director, School of Nursing, St. Luke's  
Hospital, New Bedford, Mass.

Tuesday, June 27, 1972

9:00 - 12:00  
12:45 - 3:45

Evaluating Behavioral Objectives

Livia Duhaime, Director  
School of Nursing, St. Luke's  
Hospital, New Bedford, Mass.

Thursday June 29, 1972

~~Wednesday, June 28, 1972~~

9:00 - 12:00  
12:45 - 3:45

Group work on writing Behavioral  
Objectives for Medical Assistants,  
Dental Assistants and Health Service  
Occupations.

Leader - Margaret P. Hession, R.N.,  
B.S. Coordinator, Diman Regional  
School of Practical Nursing.

Wednesday June 28, 1972

~~Thursday, June 29, 1972~~

9:00 - 12:00  
12:45 - 3:45

Field trip to Highland Heights (A High  
Rise Apartment for the Physically  
Impaired.)

Veneral Disease - Symptoms, Diagnosis,  
Treatment. Speaker Joan Mathison,  
Public Health Nursing Advisor, Division  
of Veneral Disease, Massachusetts Dept.  
of Public Health.

MAVA SUMMER WORKSHOP  
SOUTHEASTERN REGIONAL VOCATIONAL-TECHNICAL SCHOOL  
June 26 - 29, 1972

Please Print

NAME \_\_\_\_\_

SCHOOL \_\_\_\_\_

TRADE \_\_\_\_\_

# SOUTHEASTERN REGIONAL VOCATIONAL TECHNICAL SCHOOL

BROCKTON - EAST BRIDGEWATER - EASTON - FOXBORO - MANSFIELD - NORTON - SMARON - SToughtON - WEST BRIDGEWATER

Superintendent-Director  
DONALD E. GRAVES

250 FOUNDRY STREET - ROUTE 106  
SOUTH EASTON, MASSACHUSETTS 02375  
TELEPHONE: 338-4371 AREA CODE 617

## FOOD TRADES

Monday, June 26	A-V Theater & Cafetorium
Tuesday, June 27	Library
Wednesday, June 28	Library
Thursday, June 29	Library

## WOOD TRADES

Monday, June 26	A-V Theater & Cafetorium
Tuesday, June 27	Woodworking Shop
Wednesday, June 28	A-V Theater
Thursday, June 29	A-V Theater

## PLUMBING

Monday, June 26	A-V Theater & Cafetorium
Tuesday, June 27	A-V Theater
Wednesday, June 28	Related Classroom
Thursday, June 29	Plumbing Related & Shop



# SOUTHEASTERN REGIONAL VOCATIONAL TECHNICAL SCHOOL

BROCKTON - EAST BRIDGEWATER - EASTON - FOXBORO - MANFIELD - NORTON - SHARON - STOUGHTON - WEST BRIDGEWATER

*Superintendent-Director*  
DONALD E. GRAVES

250 FOUNDRY STREET - ROUTE 106  
SOUTH EASTON, MASSACHUSETTS 02375  
TELEPHONE: 238-4371 AREA CODE 617

## FOOD TRADES

### PANEL DISCUSSION FORMAT

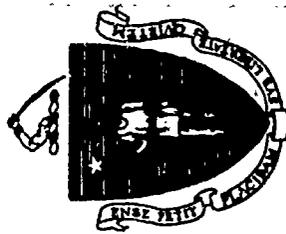
Please allow contributing individual to complete his or her presentation before questioning. Address all questions to the chair.

1. General Statement
  - a. Numbers of teachers, students, grades, etc.
2. How students apply for or are placed in Foods Dept.
3. Shop operation
  - a. Student uniforms
  - b. Student assignments
  - c. Food ordering
  - d. Receipt handling
  - e. Record keeping
  - f. Disposition of Food ( Dining Room )
  - g. Disposition of Bakery Products
  - h. After hour activities ( Foods Dept. )
  - i. Placement
  - j. Other items of significance
4. Related Classroom Operation
  - a. Number of students and time spent in related
  - b. Textbooks, notebooks, other teaching materials
  - c. Demonstrations
  - d. Other items of significance

**Massachusetts Association of Vocational Administrators**  
**Short Term Institute for In-Service Training of Professional Persons**  
**Responsible for Vocational-Technical Education in Massachusetts**

This is to certify that \_\_\_\_\_  
satisfactorily completed \_\_\_\_\_ hours of a \_\_\_\_\_ hour Summer Workshop in  
\_\_\_\_\_ conducted at \_\_\_\_\_,

and coordinated through the Massachusetts Association of Vocational Administrators, under the funding support of the Massachusetts Department of Education, Division of Occupational Education.



\_\_\_\_\_  
*Institute Director*

\_\_\_\_\_  
*Date*

APPENDIX D

Participant Evaluation Questionnaires  
With Covering Letter

Introduction to the Participant Questionnaires

To Each Participant:

As you are now aware, a distinct change has occurred in the traditional "Summer Workshop" which was formerly offered by the Division of Occupational Education, at one of our State Colleges. For a variety of reasons, the division has requested that our association offer this professional improvement option, on an experimental basis during 1972. We are doing this, under a State grant award from P.L. 90-576 and the Education Professions Development Act.

Since this arrangement was not formalized until this past Spring, we anticipate that the format of the program, its content and its directions may not fully or uniformly meet the needs of all participants. We are also well aware that we have not been able to consult with teachers, and other staff, to the degree which we would have preferred, in program planning.

Consequently, apart from the normal requirement that program evaluation be performed, we are especially anxious to obtain your honest comments so that we can immediately correct this lack of adequate communication, as well as remove the usual "bugs" from a first-trial effort. In addition, we will be working - during the Summer and early Fall - to prepare a new proposal to the division, not only for an expanded and improved series of workshops next year, but also so that MAVA can develop on-going new means of serving teachers, administrators and other staff members during the year.

We need help in this design activity and we are firmly committed to the proposition that school faculty and other staff should be actively, effectively and continuously involved. We therefore direct your attention to the final part of questionnaire #2 which inquires as to your availability for service on a special ad hoc committee, which will work with the MAVA Professional Development Committee, MAVA consultants, and the DOE Office of Professional Development.

There are two questionnaires which should be completed while you are attending your workshop: #1, at the workshop start; and #2, as the workshop is concluding. A third and final questionnaire will be mailed to you, during the Fall term, inquiring as to the extent to which your workshop experience has had an impact on your regular professional duties. We have attempted to avoid complicated questionnaire formats, since we know you will not exactly be completing the forms at your leisure. We have also tried to omit potentially "controversial" questions which might persuade you to remain anonymous. However, you may omit your name, if you so desire. Other identifying information is very important for purposes of proper analysis of returns.

Thank you for your cooperation. We trust you will find the workshops well worth your time and we are looking forward to collaborating with you, in future efforts. Final reports and other pertinent material will be mailed to your given address.

MAVA Professional Development Committee:

Robert Butler, Chairman  
Ruth Shea  
John Harrington



2. What short or long-range benefits do you expect to receive from this workshop? (list in order of importance)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. How did you first hear about workshop?

\_\_\_\_\_

4. Did you receive advice on whether to attend? If so, from whom?

Y N

5. Were you assigned to workshop of your choice?

Y N

6. Did you receive advance information about your workshop's content?

Y N

Did you receive advance information about mechanics of attendance?

Were you consulted on workshop content?

7. How many miles is workshop location from your home?

\_\_\_\_\_ miles

Do you consider this inconvenient?

Y N D

8. Do you teach or otherwise come into contact with physically handicapped students?

Y N

9. Approximately what percentage of your students would you classify as "disadvantaged", whether for racial, economic, educational preparation, or other reasons?

\_\_\_\_\_ %

10. Regarding this particular workshop, what suggestions do you have for more effective advance planning or advance informational procedures? (list in order of importance)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THANK YOU FOR YOUR COOPERATION

Note: If questionnaire #2 was stapled together with this questionnaire, please retain in safe place, with your daily workshop materials, so that it will be available for you to complete, at conclusion of workshop. Supplies are limited.

MASSACHUSETTS ASSOCIATION OF VOCATIONAL ADMINISTRATORS

SUMMER 1972 PROFESSIONAL IMPROVEMENT WORKSHOPS

PARTICIPANT EVALUATION QUESTIONNAIRE #2

- Instructions:
- (1) If you included your name and address when completing questionnaire #1 (at start of workshop), you need only print your name and address, below; the other items can be left blank. If you did not indicate your name, please complete all other items.
  - (2) Except where otherwise indicated, boxes to be checked at right of page are notated as follows: Y = Yes, N = No and D = in doubt or of doubtful value.
  - (3) Please keep responses to open-ended questions brief; if longer comments seem necessary, append separate sheet and identify by question number.

Participant Information:

Name            Last            First            Middle Initial

\_\_\_\_\_

Address (mailing) .    No.            Street            Locality            Zip

\_\_\_\_\_

Home School

\_\_\_\_\_

Professional Position

\_\_\_\_\_

(Shop Teacher, Related Teacher, Academic Teacher, Administrator, Guidance Counselor, Department Head, Other - identify)

Age \_\_\_\_\_    Sex \_\_\_\_\_    Yrs in Voed \_\_\_\_\_    Yrs in Present Job \_\_\_\_\_

Highest Educational Attainment:    HS \_\_\_\_\_    AA or AS \_\_\_\_\_    BA or BS \_\_\_\_\_  
MA or MS or EdM \_\_\_\_\_    EdD or doctorate \_\_\_\_\_

Attended Previous Summer Conference (Westfield or Fitchburg) ?    Y     N

Attended Present or Previous Special EPDA-type Project ?    Y     N

In Process of Completing Regular Teacher Training Program ?    Y     N

Name of Specific Workshop You Are Now Attending: \_\_\_\_\_

1. From the short-range viewpoint, did the workshop give you what you expected to get ?    Y     N     D

If not, why not ? \_\_\_\_\_  
\_\_\_\_\_



2. Do you feel that your attendance at the workshop will help your professional advancement ?
- Y            N            D

If not, why not ? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

3. Would you now recommend this workshop to a colleague who did not attend ?
- Y            N            D

4. Please rate the below characteristics of your workshop by placing checks of the accompanying five-point scale:

	Excellent	Adequate	Poor
(a) location of workshop	_ _ _ _	_ _ _ _	_ _ _ _
(b) time workshop offered	_ _ _ _	_ _ _ _	_ _ _ _
(c) selection of participants	_ _ _ _	_ _ _ _	_ _ _ _
(d) workshop design	_ _ _ _	_ _ _ _	_ _ _ _
(e) workshop content	_ _ _ _	_ _ _ _	_ _ _ _
(f) workshop management	_ _ _ _	_ _ _ _	_ _ _ _
(g) instructional quality	_ _ _ _	_ _ _ _	_ _ _ _
(h) use of participant expertise	_ _ _ _	_ _ _ _	_ _ _ _
(i) "take-away" materials	_ _ _ _	_ _ _ _	_ _ _ _
(j) overall workshop success	_ _ _ _	_ _ _ _	_ _ _ _

5. Do you think that the workshop staff understood your real needs and day-to-day problems ?
- Y            N            D

On what do you base this ? \_\_\_\_\_  
 \_\_\_\_\_

6. Do you feel that the problems of instructing the physically handicapped and disadvantaged students were adequately dealt with in your workshop ?
- Y            N            D

7. During your workshop, were you involved in any kind of evaluation other than completing these forms (notebook review, testing, etc.) ?
- Y            N            D

If "yes", describe briefly \_\_\_\_\_  
 \_\_\_\_\_

8. Do you feel that the technical content of the workshop was satisfactory ?
- Y            N            D

If not, what would you add ? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

9. List the strong points of your workshop (if any), in order of importance
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

10. List the weak points of your workshop (if any), in order of severity \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. What general suggestions can you offer which might improve your workshop, if and when it is next offered ? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. Assuming the necessary modifications were made, would you recommend repeating this workshop, next year ?

	Y	N	D
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Could you suggest any type of workshop for next year which (to your knowledge) was not offered this year ?

	Y	N	D
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If "yes", describe briefly \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

14. Briefly describe your tentative plans for using what you have gained from your workshop, in your home school \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

15. Were any suggestions given you, during workshop, on how to effect such implementation ?

	Y	N
	<input type="checkbox"/>	<input type="checkbox"/>

If "yes", by whom \_\_\_\_\_

16. Do you feel that there is still a need for all Summer Workshop participants (of all types) to meet as a single group ?

	Y	N	D
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If "yes", why ? \_\_\_\_\_  
\_\_\_\_\_

17. Do you feel that teachers in a specific unit trade or discipline should also have workshop sessions with:

Teachers in other areas ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Guidance Counselors ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administrators/Coordinators ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Supervisors ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Do you feel that MAVA is the appropriate organization for offering workshops of this type (assuming the State does not elect to offer them) ?
- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| Y                        | N                        | D                        |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

If not, why not ? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

19. In your opinion, do you think that MAVA could be of additional service to vocational-technical schools and their staffs, by:
- |   |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|
|   | Y                        | N                        | D                        |
| (a) developing and operating a year-round system for matching staff needs with available training resources, in the professional improvement area ?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) providing up-to-date abstracts of various professional improvement opportunities ?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) developing (with D.O.E.) guidelines and opportunities for exchange programs with Industry ?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) developing and operating a "job bank", listing employment openings, qualification standards, and other data ?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) compiling, assessing and disseminating teacher-oriented materials such as the use of multi-media approaches, use of testing devices, techniques of individualized instruction, training simulators currently on market, among other possibilities ? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

20. In MAVA's efforts to plan its future involvement in the professional improvement area, do you feel that teachers and other non-administrative staff should be included (as proposed in introduction to questionnaire #1) ?
- |  |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|
|  | Y                        | N                        | D                        |
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

21. Would you be interested in serving on an ad hoc committee for such purposes, during the Summer and early Fall of 1972 ?
- |  |                          |                          |
|--|--------------------------|--------------------------|
|  | Y                        | N                        |
|  | <input type="checkbox"/> | <input type="checkbox"/> |

If "yes", under what conditions ?

- (a) time during Summer \_\_\_\_\_  
 (b) time of week \_\_\_\_\_  
 (c) time of day \_\_\_\_\_  
 (d) duration of meeting \_\_\_\_\_  
 (e) paid or unpaid \_\_\_\_\_

- (f) Would Route 128, due West of Boston, be a satisfactory location for such ad hoc committee meetings ?
- |  |                          |                          |
|--|--------------------------|--------------------------|
|  | Y                        | N                        |
|  | <input type="checkbox"/> | <input type="checkbox"/> |