SPECIAL BULLETIN No. 8 - 1959-60

RADIO ELECTRONIC TELEVISION SCHOOLS
3730 Woodward Avenue
Detroit 1, Michigan

PROPRIETORS

William W. Bailey
Laurence R. Howard
Glenn W. Carpenter
Thomas J. Casey

ADMINISTRATIVE PERSONNEL

I. H. Alyea ..... *General Manager*
Norman M. Randolph ..... *Personnel Director*
Harry Luzer ..... *Chief Instructor*
Jack Burr ..... *Assistant Chief Instructor*
Verne C. Joslyn ..... *Chief Registrar*
Mary Hawley ..... *Bursar*
Nikola Kraguljac ..... *Purchasing Director*

EDUCATIONAL RESEARCH DIVISION

ROBERT G. MIDDLETON, *International Director of Technical Information*
RAYMOND NAUTH, *E.E., Ph.D., Director*
H. V. LESLIE, *Manager, Specialized Training Division*

FULL TIME INSTRUCTORS

Ross Armstrong
Norman Bush
Dellroye Darling
Robert Dubois
James C. Eby
Sahap M. Emirbayer
Robert Engle
Edward W. Hawley
Ronald Hildreth
Frank Humer
Nicholas Hytinen
Ruben L. Johnson
Robert Kinde
Frank Lesinsky
Stanley Marsik
Floyd K. Masutani
Orville O. May
Lewis Newby
Steve Pavlekovich
Charles F. Richmond
J. Ross Thompson
Frank Trimboli
Leslie Truscott
Barry Turner
Josef Van Wie
David Withers

PART TIME INSTRUCTORS

Giovanni DiGiantomasso ..... *Chrysler Missile*
E. Shields Dierkes ..... *WWJ-TV*
Leslie Hefner ..... *Burroughs Corp.*
Ralph Meadus ..... *Chrysler Corporation*
Irving Pomish ..... *Pomish TV*

LABORATORY ASSISTANTS

Alfred N. Forzley
John R. Gyorki
George R. Lazar
John S. Otto, Jr.
Mouhamad Y. Shourbaji
Warren G. Sprosty
Guy M. Stevenson

1. SCHOOL CALENDAR

The School operates on a continuous schedule, usually starting a beginning class each month during the year. Advanced classes are scheduled as necessary according to the term progression.

Enrollment dates are scheduled 60 to 90 days prior to the starting date. The student may enroll for any scheduled date and a place is reserved for him in that particular class.

2. THE FOLLOWING LEGAL HOLIDAYS ARE OBSERVED

Independence Day (July 6, 1959), Labor Day (September 7, 1959), Thanksgiving Day and day following (November 26 and 27, 1959), Christmas Eve and Christmas Day (December 24 and 25, 1959), New Year's Eve and New Year's Day (December 31, 1959, and January 1, 1960).

3. ENTRANCE REQUIREMENTS FOR TERM I

Completion of two years secondary school, or equivalent as determined in a personal interview by a member of the Credentials Committee

4. CREDIT FOR PREVIOUS TRAINING

Credit for previous experience or training is granted on an entrance examination basis only. A student may enter this training program at that level he establishes by means of an examination given by this Institute.

5. LEAVE TIME

A leave of absence may be granted a student because of illness or any established need. The student may reenter at the same point of advancement previously attained prior to his absence.

6. ABSENCES

A student is required to make a report to his instructor after each absence, or class cut. If the absence is unexcused the student is warned. Five unexcused absences result in the student being sent to a School Official at which time he is, either dismissed from school, or if extenuating circumstances prevailed, given an opportunity to correct himself. If no improvement, dismissal results.

7. MAKE-UP WORK

a. As a result of absence his instructor will assign the work missed. The student is required to make-up this work to the satisfaction of his instructor. However, a student missing too much time, and unable to keep up with his class, is put back a class. The expense of this additional schooling is donated by the school.

b. Addition of two one-half hour periods, before and after regular scheduled hours, to allow students opportunity of make-up work caused by their having to leave early or arrive late because of employment complications.

8. TARDINESS

If a student arrives late for class, he will not be permitted to enter that class unless he has a legitimate excuse for being tardy. If the student does not submit an acceptable excuse, he will be allowed to enter class but will be charged with a minimum of one hour tardiness. Abnormal tardiness without an acceptable excuse will not be permitted. In all such cases the student is warned, but after the third reoccurrence is sent to a School Official at which time he is either dismissed from school, or given another opportunity to correct himself before dismissal.

9. INTERRUPTIONS FOR UNSATISFACTORY ATTENDANCE

At the discretion of School Officials and after a warning students will be interrupted for unsatisfactory attendance.

10. GRADING SYSTEM

Alphabetical A-B-C-D-E. A is the highest grade that may be attained. A through D are passing grades. E is a failing grade. An E student is not permitted to enter the next term. D- is a conditional grade. The student given a conditional standing may be permitted to enter the next term. The student in such a case is given a period of ten weeks to attain satisfactory grades. If successful he is given credit for satisfactory completion of the conditional term. Failure of the student to attain passing grades during this probationary period results in dismissal. He may not reenter. Progress records are kept on each student, grades being given at the end of each calendar month.

11. STUDENT CONDUCT

The student's conduct is expected to be that of a gentleman at all times. His conduct must not interfere in any way with the progress of his fellow students. He further is expected to abide by all school rules and regulations concerning attendance, tardiness, and general conduct. Infringement of these regulations may, at the option of the School, subject the student to dismissal.

12. TUITION

Tuition rates are listed in the Course Outline on pages 3 and 4. Budget plans are available for tuition.

13. AVAILABLE SPACE, FACILITIES AND EQUIPMENT

Approximately 33,000 square feet of floor space is occupied by the school in four locations. All buildings are of brick and concrete construction. All space is well-lighted and ventilated and heated with central heat. Adequate lavatories are provided. All school properties have been inspected and approved by the fire department, Board of Health and Underwriters.

14. EQUIPMENT

The school has a completely equipped operating experimental U.H.F. TV station. The F.C.C. has approved this experimental station, construction started as of 1949. It was completed in early 1951.

The school also has a very modern equipped amateur radio station.

The school, further, has all of the necessary and complete test and demonstration equipment required to the teaching of the training program as outlined below.

PRACTICAL TELEVISION AND COMMUNICATION ENGINEERING COURSE
TOTAL WEEKS — 106 TOTAL HOURS — 2840
OUTLINE AND SEQUENCE OF TERMS OF TRAINING PROGRAM

TERM I—Basic Electronics and Radio Service
30 weeks ..... 825 hours

TERM II—Frequency Modulation
16 weeks ..... 440 hours

TERM III—Television Technician
30 weeks ..... 750 hours

TERM IV—Practical Television and Communication Engineering
30 weeks ..... 825 hours

OUTLINE OF TRAINING AND TUITION COST

TERM I—Subjects and Hours

TERM REFERENCE: Basic Electronics & Radio Service

Radio and Electronic Theory	275.0 hours
Mathematics	85.5 hours
Radio Lab and Shop Practice	100.0 hours
Practical Laboratory	157.0 hours
Shop Practice	207.5 hours
	825.0 hours

Total Cost of Term ($540.00) includes:

(a) Textbooks
(b) Lab Fees
(c) Tuition

Textbooks Furnished Students:

"Elements of Radio"—*Marcus & Marcus, Prentice Hall, Inc., N. Y.*

"Allied Radio Data Handbook"—*Allied Radio Corp., Chicago*

"RCA Receiving Tube Manual"—*R.C.A. Corp., Harrison, N. Y.*

Classroom work sheets—*R.E.T.S. staff*

Laboratory work sheets—*R.E.T.S. staff*

As Reference:

"Rider's Manuals"—*John F. Rider*

TERM II—Subjects and Hours

TERM REFERENCE: Frequency Modulation
High Frequency and U.H.F. Radio

Electronic Theory	256.0 hours
Mathematics	83.5 hours
Laboratory Construction	75.0 hours
Shop Practice	25.5 hours
	440.0 hours

Total Cost of Term ($288.00) includes:

(a) Textbooks
(b) Lab Fees
(c) Tuition

Textbooks Furnished Students:

"F.M. Simplified"—*M. S. Kiver, (D. VanNostrand, New York)*

"Radio Amateur Handbook"—*American Radio Relay League*

Classroom work sheets—*R.E.T.S. staff*

Laboratory work sheets—*R.E.T.S. staff*

As Reference:

Radio Operations License Q & A Manual *by Kaufman*

School's Lending Library:

"Modern Physics for the Engineer"—*L. N. Ridenour*

"Television Broadcasting"—*Howard A. Chinn*

"Proceedings of the I.R.E."—*Institute of Radio Engineers*

"Product Engineering"—*McGraw Hill*

"Control Engineering"—*McGraw Hill*

"Electronics"—*McGraw Hill*

"Servomechanism Practice"—*William R. Ahrendt*

Books by Robert G. Middleton:

"TV Trouble Shooting Volume I"—*Rider*
"TV Trouble Shooting Volume II"—*Rider*
"Sweep & Market Generators"—*Gernsbeck*
"Pix-O-Fix Trouble Finder Guide"—*Reinhardt*
"How to Use Test Probes" *co-authored with Ghirardi-Rider*
"Servicing Color TV"—*Gernsbeck*
"How to Use Oscilloscopes"—*Gernsbeck*
"TV—It's a Cinch"—*Gernsbeck*

TERM III—Subjects and Hours

TERM REFERENCE: Television Technician

Television, Color Television, and Advanced Electronics

Theory	275.0 hours
Mathematics	50.0 hours
TV Lab	175.0 hours
Shop Practice	100.0 hours
Color Television Basic Phase	50.0 hours
Color Television Theory Phase	50.0 hours
Color Television Service Phase	50.0 hours
	750.0 hours

Total Cost of Term ($540.00) includes:

(a) Textbooks
(b) Lab Fees
(c) Tuition

Textbooks Furnished Students:

"Basic Television"—*Bernard Grob (McGraw-Hill)*
Classroom work sheets—*R.E.T.S. staff*
Laboratory work sheets—*R.E.T.S. staff*
As Reference:
"Television Simplified"—*M. S. Kiver (D. VanNostrand)*
Radio Operations License Q & A Manual *by Kaufman*
"Principles of Television"—*D. G. Fink (McGraw-Hill)*
"Television"—*Zworykin & Morton (John Wiley & Son)*
"Television IV"—*Goldsmith, et al (RCA Publishers)*
"Cathode-Ray Tube and Typical Applications"—*Copyrighted by Allen B. Dumont Lab., Clifton, N. J.*
Color Television Text Material *by Robert G. Middleton*

TERM IV—Subjects and Hours

TERM REFERENCE: Practical Television & Communications Engineering

Physics as applied to Electronics Engineering

	206.25 hours
Advanced Mathematics	206.25 hours
Communications and Electronics Theory	275.00 hours
Communications or Electronics Lab	137.50 hours
	825.00 hours

Total Cost of Term ($540.00) includes:

(a) Textbooks
(b) Lab Fees
(c) Tuition

Textbooks Furnished Students:

"Introduction to Mathematical Analysis"—*F. L. Griffin, Ph.D.*
"Introductory Applied Physics"—*Harris & Hemmerling*
Classroom work sheets—*R.E.T.S. staff*
Laboratory work sheets—*R.E.T.S. staff*
As Reference:
"Radio Handbook, 13th Edition"—*Editors and Engineers, Ltd.*
"Electronic Measurements"—*Terman & Pettit*
"Modern Introductory Physics"—*Ira M. Freeman*
"Radio Antenna Engineering"—*E. A. Laport*
"Schaum's Outline of College Physics"—*Schaum Publishing Co.*
"Radio Engineering"—*F. E. Terman*
"Radar Circuit Analysis"—*Department of the Air Force*
"Practical Radio Communication"—*Nilson & Hornung*
"Standards of Good Engineering Practice"—*FCC (U. S. Government Printing Office)*
"Industrial Electronic Control"—*W. D. Cockrell*
"Writing the Technical Report"—*J. Raleigh Nelson*
"A Guide to Technical Writing"—*Crouch & Zetler*
"Radar System Engineering"—*Ridenour*