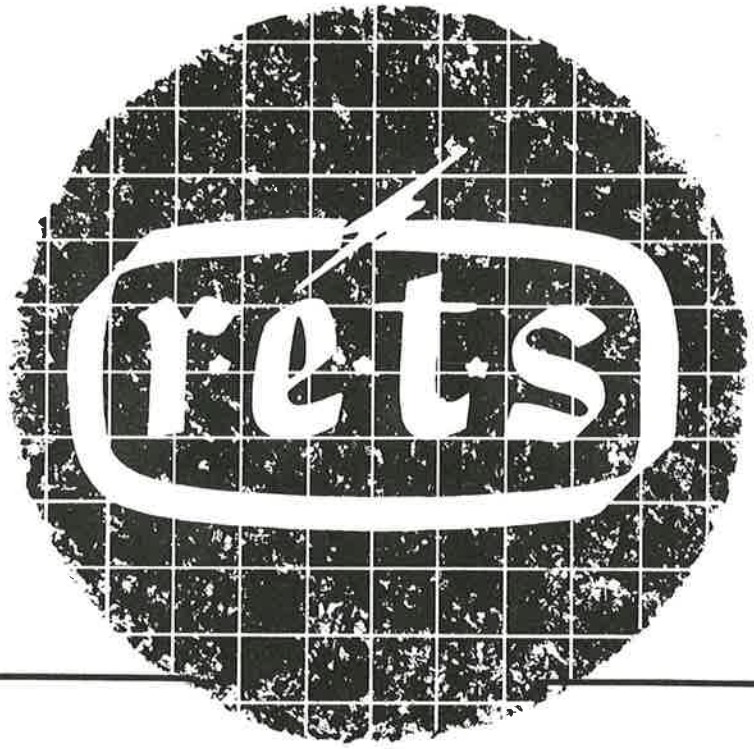
Training Specialists for Industry Since 1935

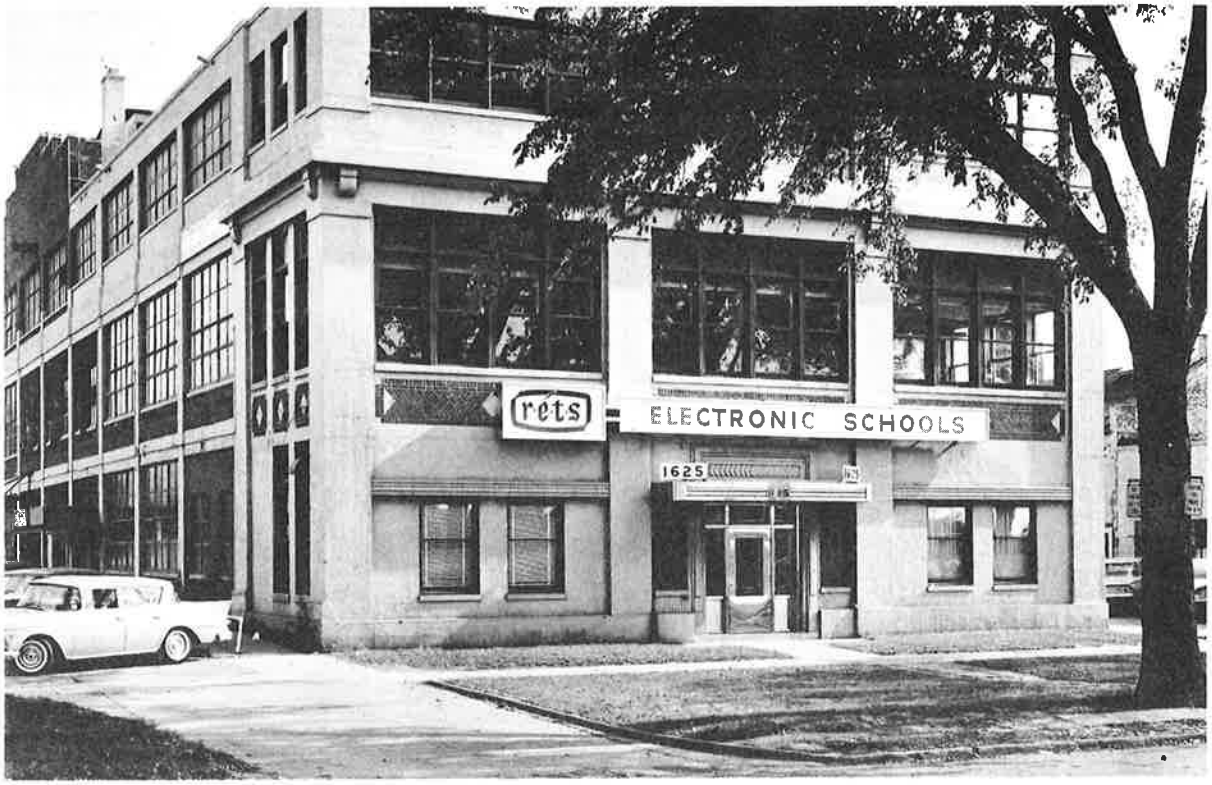


GENERAL INFORMATION *and* COURSE OUTLINES

R. E. T. S. ELECTRONIC SCHOOLS

INTERNATIONAL OFFICES
1625 E. Grand Blvd • Detroit, Michigan 48211

Revised October, 1972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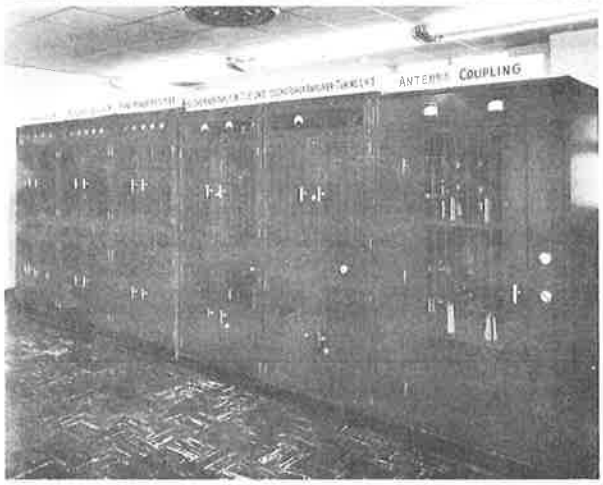
ANTENNA COUPLING

GENERAL INFORMATION

R.E.T.S. ELECTRONIC SCHOOLS is located at 1625 East Grand Boulevard, Detroit, Mich., immediately East of the intersection with Mt. Elliott Ave. The Edsel Ford Expressway provides direct access to the school from the Mt. Elliott ramps.

R.E.T.S. Electronic Schools was established in 1935 and has trained thousands of electronic specialists for employment in responsible positions throughout the world.

R.E.T.S. has established training laboratories in the United States and Canada to assist the Electronic Industry in acquiring the added personnel that the rapid growth of Electronics has created.

The R.E.T.S. training facility at the above address in Detroit, is the parent school and International Headquarters of the R.E.T.S. Electronic Training Systems.

The school occupies approximately 28,000 sq. feet of floor space in a building completely renovated in 1962, to provide air-conditioned lecture and laboratory rooms. Ample free parking facilities are available in the immediate vicinity of the school.

FULL TIME COURSES

ENTRANCE REQUIREMENTS. The applicant must have completed four years of secondary school or have an equivalent education that will be evaluated during a personal interview by a member of the Credentials Committee.

LENGTH OF COURSE: The course consists of nine semesters or quarters of twelve weeks each.

SYSTEM OF CREDITS. The credit hours (Units) for each subject indicate the number of hours spent each week in class and laboratory for one semester. Each subject is listed with two credit numbers, representing (1) Classroom Time (2) Laboratory (or Drawing) Time. The division of time between lecture (or recitation), laboratory (or drawing) is shown in the Description of Subjects.

PART TIME COURSES

ENTRANCE REQUIREMENTS. The applicant must have completed two years of secondary school or have an equivalent education that will be evaluated during a personal interview.

SYSTEM OF CREDITS. Credits are computed on a clock hour basis and home assignments.

TUITION. Tuition rates are listed in the Course Outline for Electronic Technician Courses. Budget plans are available for payment of tuition.

REFUND POLICY. Refund policy is clearly stated under Electronic Technician Courses.

FULL TIME COURSES

REFUND POLICY. A full refund of any funds paid will be made, if this refund is requested by registered mail and postmarked within five days after the enrollment form was signed and the monies paid.

Any enrollee may cancel his enrollment by registered mail at any time after enrolling for any reason if such cancellation is more than 30 days prior to the beginning of instruction.

Any enrollee may cancel his enrollment by registered mail at any time for any reason within 10 days after enrolling even though less than 30 days may remain before the beginning of instruction.

In case of cancellation of enrollment as stated above, the student's obligation to the school will in no case exceed $50.00 and monies paid to the school in excess of $50.00 will be refunded to him.

All funds paid by the enrollee prior to the beginning of instruction shall be refunded if the student involved is inducted into the armed services and does not enter school for this reason.

All funds paid by the enrollee prior to the beginning of instruction shall be refunded if the student involved presents medical evidence that he will be unable to participate in the program.

An applicant student not requesting cancellation by his scheduled starting date is eligible for a refund of any amount paid on his registration and enrollment fee and tuition in excess of $100.00

If the student withdraws within the first week after he has started his first semester, and does so under the manner outlined on the opposite side of the enrollment agreement, he will receive a refund of any monies paid beyond 10% of the tuition for one calendar year plus one hundred dollars.

In the Specialized Electronics Servicing Course, if the student interrupts his course of training within the first 25% of his course, the student will receive a refund of any monies paid in addition to 25% of the total cost of the contract price of the course plus one hundred dollars.

A student starting school, with the exception stated above, is responsible for the payment in full for any quarter or semester he enters.

The refund policy of Electronic Technician Courses will be found under that heading.

CREDIT FOR PREVIOUS TRAINING. Credit for previous experience or training is granted on an entrance examination basis only. The student may be advanced to that level of training indicated as a result of the successful completion of the examination.

BULLETIN

GENERAL INFORMATION *CONTINUED*

SCHOOL CALENDAR. The School operates on a continuous schedule usually starting a class each month during the year. Advanced classes are scheduled as necessary according to the semester or quarter progression.

Enrollment dates are announced 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.

THE FOLLOWING LEGAL HOLIDAYS ARE OBSERVED: Decoration Day – Independence Day – Labor Day – Thanksgiving Day and the day following- day before Christmas Day and Christmas Day – day before New Year's and New Year's Day – Friday before Easter.

Students are excused from classes on the last Friday of the following semesters or quarters: One, Two, Four, Five, Seven, and Eight. After the completion of the Third and Sixth Semesters or Quarters a week's vacation is granted.

PROGRESS RECORDS. Student Periodic Progress Reports regarding grades, attendance, and an evaluation of the student's conduct, will be furnished to the person he designates.

STANDARDS OF PROGRESS. GRADING. A standard system is used for recording student progress: (A) Excellent, (B) Good, (C) Fair, (D) Passing, (E) Failure, and (INC) Incomplete.

MINIMUM PROGRESS. To graduate, a student must complete all lecture assignments and practical laboratory work with a (D) rating or better.

PROBATION. The Director may place a failing student on probation for a period of 30 days. If his grades do not improve by the end of the probationary period, he may be dismissed from the school.

ABSENCES. A student is required to make a report to his instructor after each absence. 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 the school or, if extenuating circumstances prevailed, given an opportunity to correct himself. If no improvement, AN INTERRUPTION FOR UNSATISFACTORY ATTENDANCE will result.

TARDINESS. Excused tardiness will be entered on the student's class record as excused. Unexcused tardiness will be entered as one hour's absence for tardiness. Excessive tardiness without an acceptable excuse will not be tolerated. In all cases the student is warned, but after the third recurrence he is either dismissed from the school or placed on probation.

MAKE-UP WORK. The student is required to make up work missed as a result of his absence. The instructor will assign the work that is to be completed to his satisfaction. If the student is absent too many times and is unable to maintain the class progress, he will be put back a class.

LEAVES. When a student returns to School after a short leave to complete military reserve or national guard obligations he will be permitted to re-enter at a phase of training that is identical to the one he left. Earlier phases of training may be repeated at no additional tuition costs as determined by the School.

PLACEMENT SERVICE. R.E.T.S. maintains a placement service that is available to all graduates. This service is available not only at the time of graduation, but at any time to an alumnus. Assistance is also given to any student seeking employment while attending school. This is not a guarantee of such employment or a minimum starting salary. No one is authorized by the School to make such guarantees.

HOUSING. The Wyoming area provides, within a short distance of R.E.T.S., adequate apartments and rooming facilities. Assistance will be provided to any student, upon request, to locate such quarters.

CONDUCT AND DISCIPLINE. The Institution reserves the right to dismiss at any time a student whom it deems unsatisfactory for any reason. Students are expected to behave with decorum, to obey the regulations of the Institution, and to pay due respect to its officers. Unethical or undesirable conduct, which is inconsistent with general good order, wherever it may occur, is held to be sufficient grounds for dismissal.

It is the purpose of the faculty to administer the discipline of the students so as to maintain a high standard of integrity and a scrupulous regard for the truth. The attempt of any student to present as his own any work which he has not honestly performed, or to pass any examination by improper means is regarded by the faculty as a most serious offense and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is likewise held to be a grave breach of discipline.

VOCATIONAL REHABILITATION PROGRAM. The cooperative effort of R.E.T.S. and the Department of Vocational Rehabilitation in many states has resulted in the rehabilitation of a great number of persons afflicted with physical disabilities into the field of Electronics, where they can earn their livelihood and become an integral part of this nationally important industry. There are many jobs in electronics that can be performed by the physically handicapped. This training may be taken in day or evening classes by either full-time or part-time attendance.

FOREIGN STUDENTS. This institution has been approved by the Immigration and Naturalization Service for the training of foreign students.

VETERANS. R.E.T.S. ELECTRONIC SCHOOLS is approved for training eligible veterans under Public Law 894 (Vocational Rehabilitation Program), and under Ch. 35, Title 38, United States Code (war orphan). Veterans or children of deceased veterans make application to the V.A. prior to entering school.

PARKING. A marked-off area on the east side of the building is reserved for the use of Faculty and Visitors. An additional area, in this same location, is available to students. R.E.T.S. assumes no responsibility, whatsoever, for any damage to any car, nor by loss by theft of any vehicle or any of its contents.

TO EDUCATE FOR LEADERSHIP IN THE FIELD OF ELECTRONICS

This Institution was created in the year of 1935 as an expression of faith in the then embryonic, electronics industry; and from the very beginning our policies have been directed toward the education of Electronic Engineering Technicians both in the theory and practical phases of electronics. It was our belief that this young industry had an urgent need for professional personnel, who could design, construct prototypes, and also install, maintain and sell the equipment.

R.E.T.S. has been built upon these policies. The contributions of our graduates to the electronic industry over the years have more than proved our convictions.

Among these accomplishments was the recommendation of over four hundred graduate engineers and technicians who were employed by Chrysler Missile. Many of these graduates have progressed to executive positions, including the chief engineer in charge of all Chrysler operations at Cape Kennedy.

The "Broadcast Engineers Journal," the official publication of Broadcast Engineers and Technicians, state in an article concerning R.E.T.S. as follows: "The student learns early in his training the important element of job responsibility and is lectured on the important aspects of personality, dependability, and the art of getting along with people — his fellow workers and the employer, alike."

The article ended with the following statement. "That's the story behind R.E.T.S. and how they produce the rare combination of technical training and operational experience, the student with experience, and a real sense of responsibility to himself, his fellow workers and his employer."

In the late 1930's and early 1940's R.E.T.S. personnel conducted valuable research programs in television and also taught classes in this new means of communication. When commercial television burst on the scene in the early post-war years, the school was in an excellent position to assume the responsibility for training young men as technicians and engineers to fill the many positions which resulted from television's explosive growth.

During these early years, most graduates were employed by the large television networks, as well as independent TV and radio stations. In recent years, however, R.E.T.S. graduates have been called upon to assume important technical positions in such rapidly expanding fields as aircraft, missiles, computors, automation, space exploration and industrial electronics. Mankind has barely begun to unlock the wonders of the age of electronics. As we probe the secrets of the earth and outer space, the need for skilled technicians will become greater. R.E.T.S. is proud of its role in our progress this far and accepts the challenge of training future leaders in the field of electronics.

ELECTRONIC ENGINEERING TECHNOLOGY COURSE

THE OBJECTIVE of this training program is to prepare the graduate for the many fields of Electronic Engineering Technology, including Communications, Telecasting, Broadcasting, Industrial, Medical, Computers, Automation, space, and radar.

THIS TRAINING PROGRAM IN ELECTRONIC ENGINEERING TECHNOLOGY COMPRISES NINE QUARTERS. EACH QUARTER CONSISTS OF TWELVE WEEKS OF TRAINING.

TRAINING PROGRAM SCHEDULE

Quarters	Weeks	Credit Hours (Units)	Clock Hours
I	12	25	300
II	12	25	300
III	12	25	300
IV	12	25	300
V	12	25	300
VI	12	25	300
VII	12	25	300
VIII	12	25	300
IX	12	25	300
TOTALS			
9	**108**	**225**	**2700**

OUTLINE OF TRAINING PROGRAM AND TUITION COSTS

ELECTRONIC ENGINEERING TECHNOLOGY COURSE

Quarters One, Two and Three

	Units		
I QUARTER	Class Room	Laboratory	Combined
ELECTONICS I	10		
MATHEMATICS REVIEW	5		
ELECTRONIC LABORATORY I		10	
Totals	15	10	25
II QUARTER			
ELECTRONICS II	10		
APPLIED MATHEMATICS I	5		
ELECTRONIC DRAWING I		2.5	
ELECTRONIC LABORATORY II		7.5	
Totals	15	10	25
III QUARTER			
ELECTRONICS III	7.5		
ELECTRONIC DRAWING I		2.5	
APPLIED MATHEMATICS II	5		
ELECTRONIC LABORATORY III		10	
Totals	12.5	12.5	25

Cost ($510.00) First Quarter – $360.00 for each succeeding quarter – includes
(a) Text Material, (b) Lab. Fees, (c) Tuition

OUTLINE OF TRAINING PROGRAM AND TUITION COSTS

ELECTRONIC ENGINEERING TECHNOLOGY COURSE

Quarters Four, Five and Six

IV QUARTER	Units Class Room	Laboratory	Combined
ELECTRONICS IV	7.5		
ALGEBRA I	5		
COMMUNICATION SKILLS I	5		
ELECTRONIC LABORATORY IV		7.5	
Totals	17.5	7.5	25

V QUARTER			
ELECTRONICS V	7.5		
ALGEBRA II	5		
COMMUNICATION SKILLS II	5		
ELECTRONIC LABORATORY V		7.5	
Totals	17.5	7.5	25

VI QUARTER			
ELECTRONICS VI	10		
COMPUTER MATHEMATICS	5		
ELECTRONIC LABORATORY VI		10	
Totals	15	10	25

OUTLINE OF TRAINING PROGRAM AND TUITION COSTS

ELECTRONIC ENGINEERING TECHNOLOGY COURSE

Quarters Seven, Eight and Nine

	Units		
VII QUARTER	**Class Room**	**Laboratory**	**Combined**
ELECTRONICS VII	10		
TECHNICAL MATHEMATICS I	5		
ELECTRONIC LABORATORY VII		10	
Totals	15	10	25
VIII QUARTER			
ELECTRONICS VIII	7.5		
TECHNICAL MATHEMATICS II	5		
PHYSICS I	2.5		
TECHNICAL WRITING I	2.5		
ELECTRONIC LABORATORY VIII		7.5	
Totals	17.5	7.5	25
IX QUARTER			
ELECTRONICS IX	5		
TECHNICAL MATHEMATICS III	5		
TECHNICAL WRITING II	5		
ELECTRONIC LABORATORY IX		10	
Totals	15	10	25
Grand Total of Units (for nine quarters)	140	85	225

ELECTRONIC ENGINEERING TECHNOLOGY COURSE

ELECTRONICS I 10 UNITS

Fundamental electrical quantities, voltage, current, resistance, power, inductance, capacitance, measuring instruments, volt-ohm-milliammeter, vacuum tube voltmeter, cathode ray, oscilloscope, series circuits, parallel circuits, series parallel circuits, magnetism, motors, alternators, generators.

ELECTRONICS II 10 UNITS

Static and dynamic characteristics of electron tubes, static and dynamic characteristics of solid state devices, essential functions of receivers, AM receivers, FM receivers, TV receivers, power supply circuits, basic voltage and power amplifier circuits, detectors, discriminators, oscillators, mixers, electronic servicing by signal injection.

ELECTRONICS III 7.5 UNITS

Solid state physics, types of transistors, static parameters, Alfa, Beta, temperature effects, CB amplifier, CE amplifier, CC amplifier, load lines circuit parameters, biasing methods and bias stabilization, types of distortion in amplifiers, cascade amplifiers, oscillators, regulated power supplies.

ELECTRONICS IV 7.5 UNITS

Commercial communication receiving systems, superheterodyne theory, RF amplifiers, mixers, local oscillators, IF amplifiers, discriminators, detectors, A.V.C., squelch, ANL, audio amplifiers, power supplies, UHF and VHF circuit techniques, circuit tracing, test equipment limitations, electronic servicing by signal injection and by signal tracing, servicing with VOM, antennas, transmission lines.

ELECTRONICS V 7.5 UNITS

Basic transmitter circuit functions, transmitter oscillators, tuned RF power amplifiers, push pull and parallel power amplifiers, frequency multipliers, amplitude modulation methods, frequency modulation methods, audio peak limiters TV receiving systems, sync. systems, vertical and horizontal deflection circuits, AGC, AFC, flyback power supplies, cathode-ray display devices.

ELECTRONICS VI 10 UNITS

Industrial electronics, gas filled tubes, phase shift devices, sequence timing, motor controls, photoelectric devices, proximity controls, saturable reactors, basic computer theory, basic logic circuits, AND gates, OR gates, NAND gates, NOR gates, encoders, decoders, transistor gate logic, half-adder, full-adders, multivibrators, up-down-ring counters, Boolean Algebra.

ELECTRONICS VII 10 UNITS

Information structure and numbers. Logic functions: pulse, gates, and bistable multivibrators. Functional blocks: adders, complementer, encoders, decoders, counters and registers. Binary arithmetic operations, sub-systems, words and commands, codes. Arithmetic hardware. The control sub-system, software and programming. Memories, and input/output devices.

ELECTRONIC ENGINEERING TECHNOLOGY COURSE

ELECTRONICS VIII 7.5 UNITS

The electronic technician and standard technical practices, analysis of technical measurements, AC, DC, and transient network analysis, circuit and waveform analysis, system analysis including specification, functions, and diagrams.

ELECTRONICS IX 5 UNITS

Individual application through study and research of electronic theory and practice leading to a technical semester paper.

ELECTRONIC LABORATORY I 10 UNITS

Fundamental electrical quantities, voltage, current, power, resistance inductance, capacitance. Measuring instruments, volt-ohm-milliammeter, vacuum-tube voltmeter, cathode-ray oscilloscope, series circuits, parallel circuits, series parallel circuits, motors, alternators, generators.

ELECTRONIC LABORATORY II 7.5 UNITS

Static and dynamic characteristics of electron tubes, half wave power supplies, full wave power supplies, basic amplifier circuits, voltage and power audio amplifiers, tuned amplifiers, detectors, oscillators, converters, amplifier circuit analysis. Electronic servicing using signal generator and V-O-M.

ELECTRONIC LABORATORY III 10 UNITS

Static and dynamic characteristics of solid state devices, temperature effects, amplifier circuits, compensation input impedance, bias, bias stabilization, coupling, amplifier circuit measurements, servicing solid state devices, percent regulation measurements in power supplies.

ELECTRONIC LABORATORY IV 7.5 UNITS

Commercial communication receiving systems, A.M., F.M., P.M., UHF, and VHF measuring techniques, circuit tracing, test equipment limitations, characteristic impedance of transmission lines, characteristics of one fourth wavelength and one half wave length sections of transmission lines, antennas and antenna arrays.

ELECTRONIC LABORATORY V 7.5 UNITS

Commercial communications transmitters, frequency measurements, deviation measurements, percent modulation measurements, power output measurements, audio peak limiters, television receiving systems, use of the cathode-ray oscilloscope in servicing electronic equipment, display devices, high voltage measuring techniques.

ELECTRONIC ENGINEERING TECHNOLOGY COURSE

ELECTRONIC LABORATORY VI 10 UNITS

Industrial electronics, phase shift circuits, sequence timing, motor control, photoelectric devices, proximity controls. Basic computers, computer patch boards, logic system boards, multivibrator oscillators, gates, encoders, decoders.

ELECTRONIC LABORATORY VII 10 UNITS

Experiments with the solid state and integrated circuit breadboards for extended analysis of logic circuits, counters, serial and parallel adders, code conversion, and clock synchronizing. Demonstrations and use of the classroom digital computer system.

ELECTRONIC LABORATORY VIII 7.5 UNITS

Technical standards for common construction practices, including printed and integrated circuits. Meters and standard measurement techniques. Evaluation of oscilloscope performance. Pulse and transient waveform examination. Demonstration of systems composed of any of the following: (a) Laser (optics), (b) microwave, (c) radar, (d) studio equipment, (e) computer hardware, (f) industrial numerical control, (g) electronic controls for electric welding.

ELECTRONIC LABORATORY IX 10 UNITS

Data collection for technical semester paper. Information gathered through experiments, measurements, observation, and operation of equipment will support the theory and descriptions set forth in the semester paper.

MATHEMATICS REVIEW I 5 UNITS

Basic fundamentals of arithmetic; fractions, decimals, powers and roots, square root, ratio and proportion. Operations of addition, subtraction, division, and multiplication with whole numbers, decimal numbers and fractions. Scientific notation (powers of ten) and slide rule.

APPLIED MATHEMATICS I 5 UNITS

The application of mathematics to electronic circuits is emphasized. Subjects studied include equations containing fractions, graphing linear equations, exponents and radicals, study of angles, trigonometric functions, solution of right triangles, and periodic functions.

APPLIED MATHEMATICS II 5 UNITS

Mathematical application to alternating current and series and parallel AC circuits are studied. Included are functions of angles, periodic functions, vectors, equations for voltage and current, resistance, inductance, capacitance, and logarithms.

ELECTRONIC ENGINEERING TECHNOLOGY COURSE

ALGEBRA I 5 UNITS

Multiplication of signed numbers, division of signed numbers, numerical reductions, evaluation of algebraic expressions, multiplication of monomials by a monomial, division of multinomials by a monomial, division of multinomials, transposition, general solution of linear equations, factoring, binomial factors, simple trinomial factors.

ALGEBRA II 5 UNITS

Fractions, equations of the first degree, exponents, roots and radicals, graphic methods, quadratic equations, systems involving quadratic equations, angles, trigonometric functions, tables of functions, solution of right triangles.

COMPUTER MATHEMATICS 5 UNITS

Covers the basic number systems used in computers, binary, octal, hexa-decimal. Conversion from one number system to another: the use of these number systems by modern computers and fundamentals of algebra used in programing languages.

TECHNICAL MATHEMATICS I 5 UNITS

Functions, algebraic equations, systems of linear equations, mathematics of resistive networks, trigonometry.

TECHNICAL MATHEMATICS II 5 UNITS

Vector algebra and complex numbers, logarithms and exponents, matrix algebra, parameters of two-part networks.

TECHNICAL MATHEMATICS III 5 UNITS

Introduction to calculus.

ELECTRONIC DRAWING I 5 UNITS

Basic drafting equipment, geometry of lines, construction of straight lines, construction of curved lines, line weights and conventions, use of scales, free-hand lettering, graphic presentation of engineering data, orthographic projection, third angle projection, views, circles, ellipses and surfaces, auxiliary views, section views, isometric drawing, graphic symbols, schematic diagrams, connection of wiring diagrams.

ELECTRONIC ENGINEERING TECHNOLOGY COURSE

PHYSICS I 2.5 UNITS

Force and motion, work, energy and power, analysis of basic machines, friction, rotation, torque, power transmission. The nature of light and illumination, principles of optical instruments.

COMMUNICATION SKILLS I 5 UNITS

Principles of English: grammar, punctuation, sentence and paragraph composition.

COMMUNCATIONS SKILLS II 5 UNITS

Effective organization and presentation of ideas; fundamentals of technical writing.

TECHNICAL WRITING I 2.5 UNITS

Effective style, organization, and mechanics in technical writing. Qualities of technical reports.

TECHNICAL WRITING II 5 UNITS

Analysis of technical articles and papers, formal and semiformal technical reports and proposals, business correspondence, preparation and publication of a technical term paper.

Outline Of Training Program And Tuition Costs

SPECIALIZED ELECTRONICS SERVICING COURSE

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OBJECTIVE: The Specialized Electronics Servicing Course was developed by R.E.T.S. Electronics Schools to meet the continuing demand for personnel qualified to maintain and repair entertainment electronic equipment, such as color television, high-fidelity sound systems, tape recorders, stereo multiplex, and electronic organs. Since the terminal objective of the course is employment in the service industry, the course is of an extremely practical nature. The ability of the graduate should be such that he will be immediately profitable to his employer without further "on-the-job" training. In fact, it is intended that the student be prepared to become self-employed as an entertainmentt electronics service man, if that is his desire.

This is NOT a design engineering course. The mathematics included in the course is limited to that required to understand the operation of practical circuits and systems, allowing as much as possible of the available time to be devoted to practical subject matter.

COURSE SCHEDULE

Calendar weeks required to complete course 50
(3-16 week semesters, one week off between semesters for grading & evaluation.)
Active class time per day . . . . . 5 hours
Days per week 5
Total hours 1200

Breakdown typical class day:

A. Theory – 3 class hours
Consists of lecture and demonstration with extensive use of training aids. During this time the student may be required to do some supervised study from materials supplied by the school.

B. Practical Laboratory – 2 clock hours
Practical demonstrations, student practice under close guidance of experienced instructors, with accepted procedure.

C. Lunch break – ½ clock hour

Electronics Servicing Course In:

HOME ENTERTAINMENT ELECTRONIC DEVICES

OUTLINE OF TRAINING PROGRAM AND TUITION COSTS

SEMESTER ONE – Electricity, Electronics and Radio Construction

I. Basic Electricity
Lighting Circuits
Basic Instruments
Motors and Generators
Signaling circuits (burglar alarms, fire alarms, etc.)
Fundamentals of house wiring
Meter reading – Voltmeter, Ohmmeter, and Milliameter
Meter circuit applications
Oscilliscope applications
Servicing instruments and their applications
Basic arithmetic review

II. Basic Electronics
Components
Manufacturer's codes
Series, parallel, and compound circuits
Tubes and Transistors
Capacitance
Inductance
Reactance
Electronic power supplies
Mathematics as required to understand the above subjects.

III. Radio Construction
Block diagram, transmitters and receivers
Low-frequency amplifiers
Detectors
High-frequency amplifiers
Oscillators
Mixers
Service of AM receivers
Standard service procedures
Specialized service instruments
Math as required to understand the above subjects.

Semester One Totals: Lecture Training 240 Hours
Laboratory Assignments 160 Hours

Electronics Servicing Course In:

HOME ENTERTAINMENT ELECTRONIC DEVICES

OUTLINE OF TRAINING PROGRAM AND TUITION COSTS

SEMESTER TWO – Solid State Fundamentals, Servicing and T. V. Fundamentals

IV. Solid State Fundamentals
- Transistor math
- Junction transistors
- Transistor types and construction
- Basic transistor amplifier circuits
- The transistor as a circuit element
- The biasing of transistors
- Cascaded amplifiers
- Power amplifiers and phase inverters
- Wideband amplifiers

V. Servicing Audio Equipment
- AM receivers
- FM receivers
- Solid state receivers
- Tape recorders
- Hi-Fi systems
- High-power audio amplifiers
- Electronic Organs
- Auto radio receivers

VI. Monochrome T. V. Fundamentals
- Television Systems
- Cathode Ray devices
- Deflection Oscillators
- Deflection Amplifiers
- Video Amplifiers
- Wide-band Solid State systems
- Intercarrier Sound systems
- Television Tuners
- Low Voltage Power Supply and Distribution
- Sync Separators

Semester 11 – Totals:	Lecture Training	240 Hours
	Lab. Assignments	160 Hours

Electronics Servicing Course In:

HOME ENTERTAINMENT ELECTRONIC DEVICES

OUTLINE OF TRAINING PROGRAM AND TUITION COSTS

SEMESTER THREE – Color T.V. Fundamentals, Color T.V. Systems and Service Practice

VII. Color T.V. Fundamentals
- Color Signal Makeup
- Signal display
- Signal flow in color circuits
- Signal flow in common circuits
- Complete Color T.V. Block diagram
- Color purity set-up
- Color T.V. gray scale set-up
- Color CRT Static convergence
- Color CRT Dynamic convergence

VIII. Color T.V. System
- Chroma Amplifiers
- Chroma demodulators
- Color difference Amplifiers
- 3.58 mc Oscillator
- Color killer circuits
- Color Sync Section
- Picture tube blanking circuits
- Picture tube input circuits
- Color sync Alignment procedures

IX. Service Practice
- Auto radio
- Reel to reel tape recorders
- Cartridge tape decks
- Record players
- Hi-Fi systems
- Electronic Organs
- Tube type monochrome T.V. Receivers
- Solid state monochrome T.V. Receivers
- Tube type Color T.V. Receivers
- Solid State Color T.V. Receivers

Semester III – Totals:	Lecture Training	240 Hours
	Lab. Assignments	160 Hours
Course Totals:	Lecture Training	720 Hours
	Lab. Assignments	480 Hours

COST OF COURSE

Enrollment fee	$ 150.00
Tuition per semester	480.00
Total cost	$ 1,590.00

This includes all manuals, material, lab and lecture fees.
Budget plans are available

Part Time Training Program

ELECTRONIC TECHNICIAN COURSES

r·e·t·s

Specialized training programs in Electronics are available under the R.E.T.S. combination resident and home study system. These programs are especially planned for the student who must remain fully employed while in training and consist of approximately 12 hours of home study each week and one evening (or morning) of attendance (4 hours) each week for laboratory work. The following chart shows the courses available under the "R.E.T.S. Specialized Training Program."

COMPUTER ELECTRONICS
125 Lessons
TO BE COMPLETED IN APPROXIMATELY 125 WEEKS
BASIC ELECTRONICS
TRANSISTORS
INDUSTRIAL ELECTRONICS
SOLID STATE
COMPUTERS

COMMUNICATIONS ELECTRONICS
125 Lessons
TO BE COMPLETED IN APPROXIMATELY 125 WEEKS
BASIC ELECTRONICS
TRANSISTORS
INDUSTRIAL ELECTRONICS
SOLID STATE
F.C.C. LICENSE PREPARATION
COMMUNICATIONS

ELECTRONIC SERVICE SPECIALIST
140 Lessons
TO BE COMPLETED IN APPROXIMATELY 125 WEEKS
BASIC ELECTRONICS
TRANSISTORS
INDUSTRIAL ELECTRONICS
SOLID STATE
INSTRUMENTATION
COLOR TELEVISION

The Electronic Service Specialist Course includes the following test equipment that becomes the property of the student as he completes and pays his tuition as follows: (30 Lessons – Vacuum Tube Voltmeter) (58 Lessons – Signal Generator) (87 Lessons – Oscilloscope) (115 Lessons – Dot-Bar Generator) (140 Lessons – Approx. 12" Color T.V. Set).

R.E.T.S. REFUND POLICY

A full refund of any funds paid will be made, if this refund is requested by registered mail and postmarked within five days after the enrollment form was signed and the monies paid.

Any enrollee may cancel his enrollment by registered mail at any time after enrolling for any reason if such cancellation is more than 30 days prior to the beginning of instruction.

Any enrollee may cancel his enrollment by registered mail at any time for any reason within 10 days after enrolling even though less than 30 days may remain before the beginning of instruction.

In case of cancellation of enrollment as stated above, the student's obligation to the school will in no case exceed $50.00 and monies paid to the school in excess of $50.00 will be refunded to him.

All funds paid by the enrollee prior to the beginning of instruction shall be refunded if the student involved is inducted into the armed services and does not enter school for this reason.

All funds paid by the enrollee prior to the beginning of instruction shall be refunded if the student involved presents medical evidence that he will be unable to participate in the program contracted for.

An applicant student not requesting cancellation by his scheduled starting date is eligible for a refund of any amount paid on his registration and enrollment fee and tuition in excess of $100.00.

If the student withdraws within the first week after he has started his first phase, and does so under the manner outlined on the opposite side of the enrollment agreement, he will receive a refund of any monies paid beyond 10% of the tuition for one calendar year plus one hundred dollars.

A student starting school, with the exception stated above, is responsible for the payments as scheduled in the enrollment agreement.

"Refund Policy for Veterans Enrolled under Public Law 89-385 V.A. Regulation Title 38 Chapter 34"

"If a veteran should fail to enter the course, or withdraw or is discontinued therefrom at any time prior to completion, the refund will be an approximate pro rata portion of the charges for tuition, fees, and other charges that the length of the completed portion of the course bears to its total length. In the event of cancellation, a $10.00 fee will be retained by the School in lieu of a registration fee to cover registration costs."

Technician Course in Computer Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - COMPUTERS

OUTLINE OF TRAINING PROGRAM AND TUITION COSTS

125 Lesson Training Program
To Be Completed In Approximately 125 Weeks
TRAINING PROGRAM SCHEDULE

PHASE	WEEKS	RESIDENT	HOME ASSIGNMENT	TOTAL CLOCK HOURS
One	25	100 hours	300 hours	400
Two	25	100 hours	300 hours	400
Three	25	100 hours	300 hours	400
Four	25	100 hours	300 hours	400
Five	25	100 hours	300 hours	400
Totals	125	500 hours	1500 hours	2000

Electronic computers. The objective of this course is to prepare the student for industrial electronics, and computer operation and the application of computers to business and industry.

PHASE ONE – Electricity & Electronics (Subject & Hours)

I. Basic Electricity

Introduction to Modern Electronics
Introduction to Electricity
Simple Characteristics of Electricity – I
Units and Symbols
Electrical Laws
Electrical Circuits
Magnetism and Electromagnetism
Measuring Equipment – I

II. Basic Electronics

Simple Characteristics of Electricity – II
Characteristics of Resistance
Applied Electricity
Generators
Fundamentals of AC
Oscilloscopes
Electronic Tubes
Inductance

III. Electronic Components

Capacitance
Capacitance – II
Characteristics of Reactance
Motors

Technician Course in Computer Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - COMPUTERS

Continued

III. Electronic Components (Continued)

Solid State and Tube Rectifiers
Power Supplies
Power Supplies for Modern Electronic Equipment
Waves and Electromagnetic Waves and the Broadcast System
Triodes, Tetrodes and Pentodes

Phase One Totals:	Resident Training	100 hours
	Home Assignments	300 hours

PHASE TWO – Circuit Configurations & Systems Analysis (Subjects & Hours)

IV. Circuit Configurations

Voltage and Power Amplifiers
Amplifier Circuits
Resonance
Filters and Parallel Resonant Circuits
Detectors
Coupling of Circuits
Oscillators and Oscillator Circuits
Mixer Operation and Input Circuits

V. Systems Analysis

Signal Tracing and Electronic Servicing
Introduction to Frequency Modulation (FM)
Frequency Modulation – II
Solid State Fundamentals
Junction Transistors
Transistor Types and Construction
Configurations and Classes of Solid State Amplifiers
The Biasing of Transistors
Semiconductor Regulated Power Supplies

VI. Solid State Electronics

Cascaded Amplifiers
Low Frequency Solid State Amplifiers
High Frequency Solid State Amplifiers
Wide Band Amplifiers
Solid State Oscillators
Practical Solid State Circuits
Practical Solid State Oscillator Circuits
Transistor Servicing
High Fidelity

Phase Two Totals:	Resident Training	100 hours
	Home Assignments	300 hours

Technician Course in Computer Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - COMPUTERS

Continued

PHASE THREE – Electronics in Industrial Systems (Subjects & Hours)

VII. Industrial Electronics – I

Electronic Symbols (Industrial)
Instrumentation
Alternating Current
Vacuum Tubes in Industry
Gas Filled Tubes and Phase-shift Devices
Sequency Timing
Regulators and Regulated Power Supplies
Motor Controls

VIII. Industrial Electronics – II

Photoelectric Devices
Resistance Welding – Part I
Resistance Welding – Part II
Conversion Devices and Proximity Controls
Induction and Dielectric Heating
Saturable Reactors and Magnetic Amplifiers
Automation and Logic Switching
Solid State Power Controls

IX. Industrial Electronics – III

Ultrasonics
Synchros and Servomechanisms
Temperature Controlling Devices
Telemetry and R.F. Control
Inspection and Sorting Controls – I
Inspection and Sorting Controls – II
Counting Controls
Maintenance

Phase Three Totals:	Resident Training	100 hours
	Home Assignments	300 hours

PHASE FOUR – Computer Math & Circuits

X. Solid State Switching

Introduction to Computers
General Computer Organization
Transistor as a Circuit Element
Biasing Transistors – I
Biasing Transistors – II
Junction Transistor
Transistor Switching Characteristics
Transistorized Oscillators
The Bistable Multivibrator

Technician Course in Computer Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - COMPUTERS

Continued

XI. Solid State Logic

Transistor Gate Logic
Computer Logic Circuits
Binary Arithmetic (Add, Subtract)
Binary Arithmetic (Multiplication, Division)
Boolean Algebra (Symbolic Logic, Logic Diagrams)
Boolean Algebra (Postulates, Theorems)
Simplification of Logic Expressions
Logic Circuitry (Nand, Nor Operations)

XII. Numbering Systems

Binary Arithmetic (Fractions, Complements, Conversions)
Binary Arithmetic (Complements – nines, tens, ones, twos)
Octal Number System (Conversions, Add, Subtract)
Sexadecimal & Binary Codes (Basic)
Gray Code and Others
Numerical Control
Mechanizing Logic (And Gate)
Logic Circuits (Or, Not)

Phase Four Totals:	Resident Training	100 hours
	Home Assignments	300 hours

Technician Course in Computer Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - COMPUTERS

Continued

PHASE FIVE – Computer Systems and Circuits.

XIII. Gate Circuits

Nand Gates & Flip Flops
Register Circuits
Counters & Dynamic Registers
Adder Logic – Introduction to Decoders
Decoding Circuits/Integrated Circuits
Introduction to Programming
The WADAC Computer Part I
The WADAC Computer Part II

XIV. Peripheral Gear

The WADAC Computer Part III
Programming Part I
Programming Part II
Input-Output Schemes Part I
Input-Output Schemes Part II
Control Schemes Part I
Control Schemes Part II
Control Schemes Part III

XV. General Purpose Computers

Control Schemes Part IV
Arithmetic Unit Part I
Arithmetic Unit Part II
Arithmetic Unit Part III
Memory Unit Part I
Memory Unit Part II
Memory Unit Part III
Memory Unit Part IV
Programming the BI-TRAN Six

Phase Five Totals:	Resident Training	100 hours
	Home Assignments	300 hours
Course Totals:	Resident Training	500 hours
	Home Assignments	1500 hours

Cost: ($335.00) for Phase I, Phase II, Phase III, Phase IV and Phase V ($250.00) each - includes (a) Textbooks, (b) Lab Fees, (c) Tuition
Budget Plans Available

Technician Course In Communications Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - FCC LICENSE PREPARATION - COMMUNICATIONS

OUTLINE OF TRAINING PROGRAM AND TUITION COSTS

125 Lesson Training Program To Be Completed In Approximately 125 Weeks TRAINING PROGRAM SCHEDULE				
PHASE	WEEKS	RESIDENT	HOME ASSIGNMENT	TOTAL CLOCK HOURS
One	25	100 hours	300 hours	400
Two	25	100 hours	300 hours	400
Three	25	100 hours	300 hours	400
Four	25	100 hours	300 hours	400
Five	25	100 hours	300 hours	400
Totals	125	500 hours	1500 hours	2000

Electronic communications. The objective of this course is to prepare the student for industrial electronics, and prepare him for the examination for an F.C.C. license, Telecasting, Broadcasting, and other activities necessitating an F.C.C. license.

PHASE ONE – Electricity & Electronics (Subject & Hours)

I. Basic Electricity

Introduction to Modern Electronics
Introduction to Electricity
Simple Characteristics of Electricity – I
Units and Symbols
Electrical Laws
Electrical Circuits
Magnetism and Electromagnetism
Measuring Equipment – I

II. Basic Electronics

Simple Characteristics of Electricity – II
Characteristics of Resistance
Applied Electricity
Generators
Fundamentals of AC
Oscilloscopes
Electronic Tubes
Inductance

III. Electronic Components

Capacitance
Capacitance – II
Characteristics of Reactance
Motors

Technician Course In Communications Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - FCC LICENSE PREPARATION - COMMUNICATIONS

Continued

III. Electronic Components (Continued)

Solid State and Tube Rectifiers
Power Supplies
Power Supplies for Modern Electronic Equipment
Waves and Electromagnetic Waves and the Broadcast System
Triodes, Tetrodes and Pentodes

Phase One Totals:	Resident Training	100 hours
	Home Assignments	300 hours

PHASE TWO – Circuit Configurations & Systems Analysis (Subjects & Hours)

IV. Circuit Configurations

Voltage and Power Amplifiers
Amplifier Circuits
Resonance
Filters and Parallel Resonant Circuits
Detectors
Coupling of Circuits
Oscillators and Oscillator Circuits
Mixer Operation and Input Circuits

V. Systems Analysis

Signal Tracing and Electronic Servicing
Introduction to Frequency Modulation (FM)
Frequency Modulation – II
Solid State Fundamentals
Junction Transistors
Transistor Types and Construction
Configurations and Classes of Solid State Amplifiers
The Biasing of Transistors
Semiconductor Regulated Power Supplies

VI. Solid State Electronics

Cascaded Amplifiers
Low Frequency Solid State Amplifiers
High Frequency Solid State Amplifiers
Wide Band Amplifiers
Solid State Oscillators
Practical Solid State Circuits
Practical Solid State Oscillator Circuits
Transistor Servicing
High Fidelity

Phase Two Totals:	Resident Training	100 hours
	Home Assignments	300 hours

Technician Course In Communications Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - FCC LICENSE PREPARATION - COMMUNICATIONS

Continued

PHASE THREE – Electronics in Industrial Systems (Subjects & Hours)

VII. Industrial Electronics – I

Electronic Symbols (Industrial)
Instrumentation
Alternating Current
Vacuum Tubes in Industry
Gas Filled Tubes and Phase-shift Devices
Sequency Timing
Regulators and Regulated Power Supplies
Motor Controls

VIII. Industrial Electronics – II

Photoelectric Devices
Resistance Welding – Part I
Resistance Welding – Part II
Conversion Devices and Proximity Controls
Induction and Dielectric Heating
Saturable Reactors and Magnetic Amplifiers
Automation and Logic Switching
Solid State Power Controls

IX. Industrial Electronics – III

Ultrasonics
Synchros and Servomechanisms
Temperature Controlling Devices
Telemetry and R.F. Control
Inspection and Sorting Controls – I
Inspection and Sorting Controls – II
Counting Controls
Maintenance

Phase Three Totals:	Resident Training	100 hours
	Home Assignments	300 hours

PHASE FOUR – Advanced Electronic Math & Circuitry.

X. Electronic Math

Equations & Ratio and Proportion
Powers of Ten
Logarithms
Decibels
Slide Rule
Power, Work, Efficiency
Magnetism I
AC Theory I

Technician Course In Communications Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - FCC LICENSE PREPARATION - COMMUNICATIONS

Continued

XI. Componant Parameters

Inductance Characteristics
Capacitance Characteristics
Inductance & Capacitance as Circuit Elements
Trigonometry for Alternating Current Electricity
AC Theory II
Alternating Current Series Circuits
Parallel AC Circuits
Resonant Circuits

XII. Amplifier Parameters

Vacuum Tube Characteristics
Mutlielectrode Tubes
Power Amplifiers
Triodes & Diodes – Circuit Arrangments & Functions
Basic Solid State Devices
Solid State Circuitry
Batteries
Generator Types & Characteristics

Phase Four Totals:	Resident Training	100 hours
	Home Assignments	300 hours

PHASE FIVE – Advanced Electronic Systems.

XIII. Transmitters

Motor Types & Characteristics
Introduction to Power Supplies
Power Supplies & Filters
Measuring Devices
Oscillator Configurations & Classes
Radio Frequency Amplifiers
Transmitter Circuits
A.M. Transmitters
A.M. Modulation
Single Sideband Transmission

XIV. Commercial Receivers

Studio Equipment
Sidebands A.M.
A.M. Receivers
Frequency Modulation
F.M. Receivers
Receiver Trouble-Shooti[illegible]

Technician Course In Communications Electronics

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - FCC LICENSE PREPARATION - COMMUNICATIONS

Continued

XIV. Commercial Receivers (Continued)

F.C.C. Rules & Regulations as applied to Transmitters
Propagation of Radio Waves

XV. Transmitting Systems

Antennas
Transmission Lines
Frequency Measurement
Broadcast Stations
Television Transmitters
Television Receivers
Microwave
Radar

Phase Five Totals:	Resident Training	100 hours
	Home Assignments	500 hours
Course Totals:	Resident Training	500 hours
	Home Assignments	1500 hours

Cost: ($335.00) for Phase I, Phase II and III, IV and V ($250.00) each – includes (a) Textbooks, (b) Lab Fees, (c) Tuition
Budget Plans Available

Technician Course As An Electronic Service Specialist

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - INSTRUMENTATION - COLOR TELEVISION

OUTLINE OF TRAINING PROGRAM AND TUITION COSTS

140 Lesson Training Program To Be Completed in Approximately 125 Weeks TRAINING PROGRAM SCHEDULE				
PHASE	WEEKS	RESIDENT	HOME ASSIGNMENT	TOTAL CLOCK HOURS
One	25	120 hours	360 hours	480
Two	25	112 hours	336 hours	448
Three	25	116 hours	348 hours	464
Four	25	108 hours	324 hours	432
Five	25	104 hours	312 hours	416
Totals	125	560 hours	1680 hours	2240

Electronic Service Specialist. The objective of this course is to prepare the student for the sales, and installation, and repair of radios, amplifiers, tape players, and black and white and color television.

PHASE ONE – Electricity & Electronics (Subjects & Hours)

I. Basic Electricity

Introduction to Modern Electronics
Introduction to Electricity
Simple Characteristics of Electricity – I
Units & Symbols
Electrical Laws
Electrical Circuits
Magnetism & Electromagnetism
Measuring Equipment – I
Meter Range Switches

II. Basic Electronics

Simple Characteristics of Electricity – II
Characteristics of Resistance
Measuring Equipment – II
Applied Electricity
Generators
Fundamentals of AC
Oscilloscopes
Vacuum Tube Voltmeters
Electronic Tubes
Inductance

III. Electronic Components

Capacitance
Capacitance II

Technician Course As An Electronic Service Specialist

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - INSTRUMENTATION - COLOR TELEVISION

Continued

III. Electronic Components (Continued)

Characteristics of Reactance
Motors
Solid State & Tube Rectifiers
Power Supplies
Meter Calibration
Power Supplies for Modern Electronic Equipment
Waves & Electromagnetic Waves & The Broadcast System
Triodes, Tetrodes and Pentodes
Meter Repair

Phase One Totals: Resident Training	120 hours
Home Assignments	360 hours

PHASE TWO – Circuit Configurations & Systems Analysis (Subjects & Hours)

IV. Circuits Configurations

Voltage and Power Amplifiers
Amplifier Circuit
Resonance
Filters and Parallel Resonant Circuits
Detectors
Coupling of Circuits
Oscillators & Oscillator Circuits
Mixer Operation & Input Circuits

V. Systems Analysis

Signal Tracing & Electronic Servicing
Signal Generators
Introduction to Frequency Modulation (FM)
Signal Generator Calibration
Frequency Modulation – II
Signal Generator Repair
Solid State Fundamentals
Junction Transistors
Transistor Types & Construction
Configuration & Classes of Solid State Amplifiers
The Biasing of Transistors

VI. Solid State Electronics & Industrial Applications

Semiconductor Regulated Power Supplies
Cascaded Amplifiers

Technician Course As An Electronic Service Specialist

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - INSTRUMENTATION - COLOR TELEVISION

Continued

VI. Solid State Electronics & Industrial Applications (Continued)

Low Frequency Solid State Amplifiers
High Frequency Solid State Amplifiers
Wide Band Amplifiers
Solid State Oscillators
Practical Solid State Circuits
Practical Solid State Oscillator Circuits
Transistor Servicing
High Fidelity

Phase Two Totals:	Resident Training	112 hours
	Home Assignments	336 hours

PHASE THREE – Electronics in Industrial Systems (Subjects & Hours)

VII. Industrial Electronics – I

Electronic Symbols
Oscilloscopes – II
Instrumentation
Alternating Current
Vacuum Tubes in Industry
Gas Filled Tubes & Phase-Shift Devices
Sequence Timing
Scope Timers
Regulators & Regulated Power Supplies
Oscilloscope Power Supplies
Motor Controls

VIII. Industrial Electronics – II

Photoelectric Devices
Resistance Welding – Part I
Resistance Welding – Part II
Conversion Devices & Proximity
Induction & Dielectric Heating
Saturable Reactors & Magnetic Amplifiers
Automation & Logic Switching
Solid State Power Controls

IX. Industrial Electronics – III

Ultrasonics
Syncros & Servomechanisms
Temperature Controlling Devices
Telementry and R.F. Control
Inspection & Sorting Controls – I

Technician Course As An Electronic Service Specialist

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - INSTRUMENTATION - COLOR TELEVISION

Continued

IX. Industrial Electronics – III (Continued)

Inspection & Sorting Controls – II
Counting Controls
Scope Calibration & Repair
Maintenance

Phase Three Totals: Resident Training 116 hours
Home Assignments 348 hours

PHASE FOUR – Tube Type & Solid State (Black & White T.V.).

X. Introduction To T.V.

Very High Frequency (VHF) Antennas
Visual Monitoring Systems
Wide-Band Amplifiers
Deflection Systems
High & Low Voltage Power Supplies
The Video Signal
T.V. Pattern Generators
Low Voltage Power Supplies for Electronic Equipment
RF Tuners for Television Reception

XI. Monochrome Circuits

IF Amplifiers in Broadcast & Industrial T.V. Reception
Wide-Band Alignment Procedures
Wide-Band Detectors in Electronic Equipment
Cathode-Ray Display Devices
Intercarrier Sound Circuits
Sync Separation & DC Restoration
Vertical Deflection & Vertical Oscillator Circuits
Horizontal Oscillator & AFC Circuits
Horizontal Deflection Circuits

XII. Monochrome Service

AGC Circuit Operation & Test
RF & IF Alignment
Television Receiver Servicing
Television Receiver Servicing – II
Practical Service Procedures
Generalized Television
UHF Receiving Equipment
Transistor Applications in Television Receivers

Phase Four Totals: Resident Training 108 hours
Home Assignments 324 hours

Technician Course As An Electronic Service Specialist

BASIC ELECTRONICS - TRANSISTORS - INDUSTRIAL ELECTRONICS SOLID STATE - INSTRUMENTATION - COLOR TELEVISION

Continued

PHASE FIVE – Tube Type & Solid State (Color T.V.).

XIII. Solid State T.V. Circuits

Solid State T.V. Tuners
Solid State Video I-F & Detectors
Solid State Video Amplifiers
Solid State AGC – Horizontal & Vertical SYNC
Solid State Verttcal – Sweep Systems
Solid State Horizontal – AFC & Oscillators
Solid State Horizontal – Output & High Voltage Sections
Solid State Intercarrier Sound & Audio

XIV. Introduction To Color T.V.

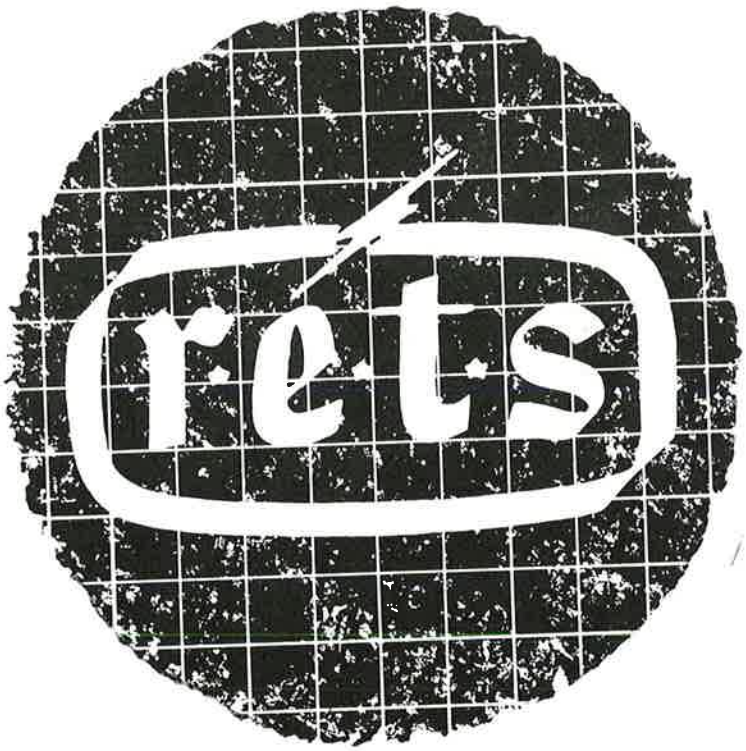
Electronic Color Translation
Setup Procedures
The Dot-Bar Generator
Colorimetry
Make-Up of the Color Picture Signal
Color RF and I-F Circuits
Band-Pass Amplifier, Color SYNC, & Color-Killer Circuits
Color Demodulator
The Matrix

XV. Color T.V. Service

Color Picture Tube and Associated Circuits
Aligning the Color Receiver
Trouble Shooting the Color Receiver
Servicing the Tuner – Video I-F Circuitry
Servicing the SYNC Separator & Video Amplifier
Servicing the Chroma – Sound – Automatic Fine Tuning Circuitry
Servicing the Vertical – AFC – Horizontal Oscillator Circuitry
Basic & Detailed Horizontal Output Circuit Service
Focus & Convergence Service
Power Supply Service

Phase Five Totals:	Resident Training	104 hours
	Home Assignments	312 hours
Course Totals:	Resident Training	560 hours
	Home Assignments	1680 hours

Total Cost of Electronic Service Specialist Course $2450.00 – includes (a) Textbooks, (b) Lab Fees, (c) Tuition and the following test equipment: Vacuum Tube Volt Meter – Signal Generator – Oscilloscope – Dot Bar Generator and Approx. 12" Color T.V. Set
Budget Plans Available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