How I Built My Own Television Receiver

By BILL NAGEL

Not very long ago, television was a complete mystery to me. But not only did I build a complete television receiver chassis—I had a lot of fun doing it. And I've learned so much in a practical way that I'm well on the road to becoming an expert. In a few years from now I'll be able to "write my own ticket."

I always had a yen to get into television, even while I was still in the service. But I didn't know just how to go about it—until I heard about the N.Y.T.I. of N.J. I went there with my discharge papers, and they did the rest. They showed me how the Veterans Administration would pay up to $500 a year against my total educational expenses, under the G. I. Bill of Rights. This meant that I had to pay very little out of my own pocket.

It's a big break for veterans like myself—especially when you get subsistence allowances in addition. And part-time jobs are easy to get so you can earn extra money. I held a job all the time I was in school. Of course, all of the students here aren't veterans.

What bothered me at first, was that my mathematics was kind of rusty. It had been some years since I had got out of high school. I soon found that the school had brush-up courses in math and even had facilities for teaching radio math from the beginning to students who had never had the advantage of a high school education. I convinced them that I was sincere and enthusiastic and that I was technically inclined, and so I became a student. Then the fun began. You know, you just...
I can't build a television set right off the reel. I built seven radio sets and had to go through a total of 75 practical electronic experiments, before they would even let me start on a television receiver.

Then I began work in earnest. The instructors here have plenty on the ball, and it was amazing how fast I progressed. I can't go into all the details here, but I turned out the swell television set you see in the photo. I look mighty proud of myself, don't I? I guess I am.

Boy, school was never like this. You should see the magnificent equipment. Finest in the world. There's a swell gang here—all interested in learning—all radio bugs. They come from all over, because practical television schools are hard to find, and the N.Y.T.I. of N.J. has a wonderful rep when it comes to television. You should see the image-orthicon television camera tube they have here at the school. Imagine a little tube that costs $750! The school cooperates in every way—I don't believe that you can find better teaching anywhere.

Another thing I like about the N.Y.T.I. of N.J. (which stands for the New York Technical Institute of New Jersey) is the convenient location. It's right in the heart of America's electronic industry. (Newark, N.J.), only 19 minutes from New York City. It's close to everything. Big radio, television and electronics manufacturers are nearby—like RCA, General Electric, Western Electric, DuMont, and Edison. So are the big network stations like WJZ, WEA, and WOR. This means that the school is always right up to date with the latest developments in radio and television.

The conditions here are really ideal. They have thousands and thousands of dollars worth of the latest types of equipment. In fact, I estimate that each student uses $3,500 worth of experimental and test equipment. And there is a great deal of individual instruction. Classes are small and the instructors really know their business.

I am sure there are a lot of young fellows, particularly veterans, (I was discharged because of disability), who want to get into this field. I understand there are about 120 openings for new day students in the classes beginning this November and December. If you want to get the complete dope about the school, you can have a free bulletin, which illustrates and describes the facilities and equipment; it also tells the classes that may be attended, housing conditions, costs, hours, etc. There is no charge for this bulletin. Just drop a postcard and ask for Bulletin 111. Send your postcard or letter to the New York Technical Institute of New Jersey, 188 Market Street, Newark, N. J.

I want to learn about television transmitters also. Here you see one we have under construction. I hope to enroll for a special evening class on television transmitters.

These are my fellow classmates. (note that I am second from the left, standing) with the television receiver chassis they built at the same time I built mine. I built the cabinet at home later on. Most of the classes are small, so you are sure of a lot of individual instruction, which is very important in learning the technical side of television.
Many veteran students are now attending N.Y.T.I. of N.J. under the generous provisions of the G.I. Bill of Rights, which allows any approved school of the veteran's choice to charge the Veterans Administration up to $500 a year against the educational expenses of qualified veteran students. Full-time students, with dependents, are also paid a subsistence allowance of $90 monthly by the VA, and those without dependents, $65. Many students hold part-time jobs, thus augmenting their monthly subsistence payments. However, you do not have to be a veteran to be accepted as a student.

A considerable number of out-of-state students attend the school because of its excellent, practical type of radio and television courses, so difficult to get anywhere else in the world today. Living quarters are obtainable by single students, but married students report considerable difficulty in finding quarters for their families.

Students at N.Y.T.I. of N.J. particularly like the way the school puts into practice what it teaches. You actually build a television receiver. You also build as many as 7 radio receivers of different types. Class study and laboratory study, in the proper combination, increase interest—and your hands get as smart as your head. With only average ability you can learn radio servicing in 8 months. In only 4 more months, you can know television receiver servicing. You can take even more advanced engineering-type courses if you wish. And throughout all your laboratory work you are using the finest and latest laboratory equipment available.

No high-school diplomas are required. Every
An Advanced Class in Television at N.Y.T.I. of N.J., famous television school, and the 17-tube television sets they built. Students at this school have been building television sets as part of their courses since 1939, when television programs were first broadcast regularly. School officials found that this practical method of instruction is productive of very satisfactory results. Each student may build a set and keep it to use in his own home laboratory, if he chooses to. The school is located in the heart of the radio, television, electronics industry.

TELEVISION RECEIVERS!

student must have at least a grammar-school education, however. And the school requires that a student be earnest, sincere and technically inclined. Students without proper mathematical backgrounds are taught the radio and television mathematics they need.

You probably have been wondering what N.Y.T.I. of N.J. means. It stands for the New York Technical Institute of New Jersey, a resident school located in Newark, N. J., just across the river from New York City (only 20 minutes from Broadway by subway or train). The school is located in the heart of America’s great radio and electronics industry. Such leading television, radio and electronics manufacturers as Western Electric, Du Mont, Federal and Edison are nearby. Newark also is near Radio Stations W2Z, WEA, WABC and WOR; each a leader in broadcasts going on networks all over the country. This means that the school offers numerous advantages, as it is in touch with the most recent developments in radio and television. This also means that qualified radio and television engineers are available to the school for teaching purposes.

During the war N.Y.T.I. of N.J. was approved for the training of enlisted Signal Corps personnel by the U. S. Army. When the war ended the enrollment increased even more, because of the influx of veterans desirous of getting practical television training. At the present time, there are 120 openings for new students for the classes beginning in October and November 1946.

The school issues a special Bulletin, Numbered 110, which illustrates and describes its facilities and equipment and shows students using its varied laboratory equipment. Bulletin 110 also describes classes that may be attended, housing conditions, costs, hours, etc. To get complete information write for Bulletin 110 (for which no charge is made) to the New York Technical Institute of New Jersey, 158 Market St., Newark, N. J.

A line of RCA television receivers used for comparative test purposes at N.Y.T.I. of N.J.
NOW YOU can BUILD a TELEVISION

To stimulate its radio and television training program, the New
York Technical Institute of New Jersey is offering men interested
in television this unusual opportunity.

If you are unable to leave home to go
to a resident school, N.Y.T.I. of N.J.
can supply you with parts to build a
television chassis in your own home. You
will be supplied with the same instructions
and directions with
which the school’s resi-
dent students are equip-
ped, when they reach the
stage in their training
that calls for television
set construction. If you
already have a sound
radio background, with
experience in building
radio receivers, you will
be surprised to find how
much you can learn about television by
building this set.

N.Y.T.I. of N.J. is
one of America’s lead-
ing resident schools for
men seeking dependable, thorough, up-to-
the-minute training in
the various fields of ra-
dio and electronics.

A School Particularly Suited
to War Veterans

The schooling offered by N.Y.T.I. of N.J.
is particularly useful to War Veterans who
recognize the high-earning possibilities of
technical training in radio and television
and are willing to tackle the class and lab-
atory work offered, regardless of their
previous education.

No high-school diplomas are needed for
entrance. But N.Y.T.I. of N.J. requires
that a student be earnest, sincere and radio-
minded. Students without proper math-
ematical backgrounds are taught the radio
and television mathematics they need. Sev-
eral students with only grammar school
educations have successfully completed ad-
vanced technical television courses.

Many veteran students are now attending
N.Y.T.I. of N.J. under the generous
provisions of the G.I. Bill of Rights, which
allows any approved school of the veteran’s
choice to charge the Veterans Adminis-
tration up to $500 a school year against the
educational expenses of qualified veteran
students. Full-time students, with depen-

You can build a direct viewing television chassis similar to the
one pictured above, either in your own home or in the magni-
ficently equipped shops and laboratories of this famous television
school, located in the HEART of America’s television
manufacturing and broadcasting industry. Mail the coupon at
the right to get full details.
SET RIGHT in YOUR OWN HOME!

Instructor demonstrating theory of light in connection with study of optical systems used in projection-type television receivers. This is just another one of the pieces of equipment which the New York Technical Institute of N.J. has available for resident student instruction.

Radio News, December 1946