

\*The one and only original RADIO SHACK is located in Boston and has no branches or affiliates elsewhere.

"TAB"

That's A Buy

\$39.00

KIT 866A's & XFORMER put 115VAC/50-60cps 2.5VCT/10 Amps 10K tube and sockets JOHN TUBES, SPECIAL \$5. GEN72A's & XFRMR instn & sockets SPECIAL WRITE for CATALOG

BUYS in TUBES

872A	\$2.25	304-TH Eimac	\$9.95
807 Westhse	1.05	809	1.79
811	1.95	810	2.59
813	6.75	814	4.50
211 GE	4.95	826	2.25
829B	3.94	832A	4.05
829B socket		931A	

Brother — this is it!

Brand New Surplus U. S. Air Corps Receiver BC-348

One of the Finest Ham Receivers Ever Sold by the Government

AT A FRACTION OF ITS WORTH

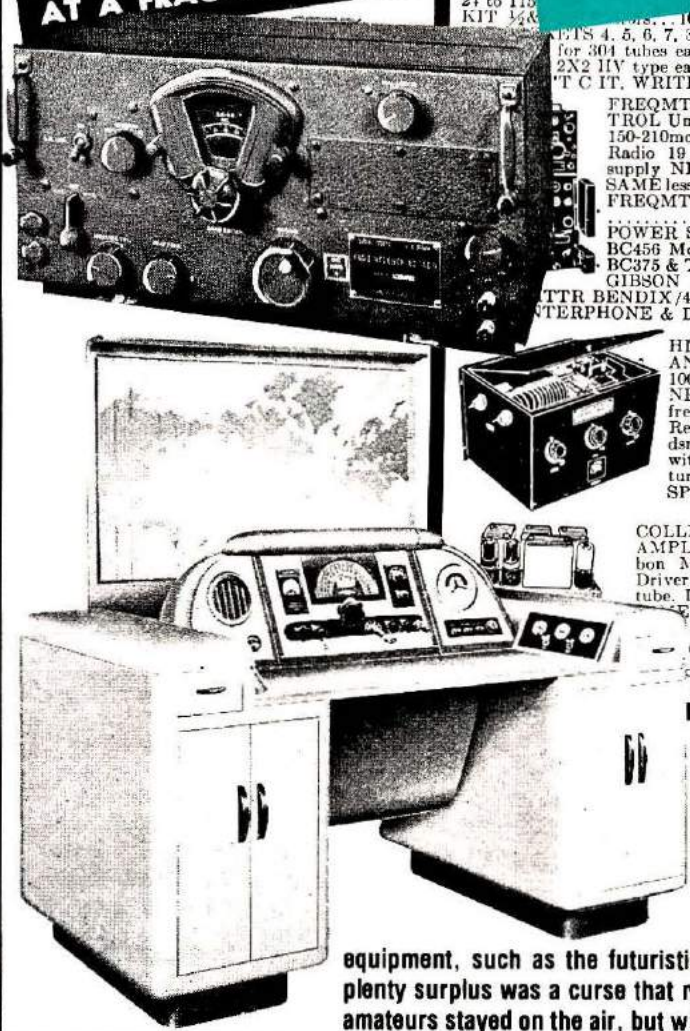
**WAR SURPLUS STORY**

RECTIFIERS BRIDGE  
IN OUT AMPS  
18V 14 1.35 2.4  
16V 12 1.5 2.4  
3 1.5  
36 1.5  
21 1.5 40maC-Cut  
WRITE FOR OTHER SIZES  
VAR 100B/175Watt/0-130V  
VAR 100C/860Watt/0-130V  
VAR 100R/115or230V/230or270V  
1N34 2for 2.10; 10for 9.85; 50 for  
WRITE for CATALOG  
MAYDON CLOCK MOTORS 10V/60cps  
1RPM @ 89c; 115V/60cps/1RPM @ 2.25;  
for \$10. 115V/25cps/1RPM @ 2.79; 4for  
0. BRACKET SWITCH & CAM for  
attachment to Clock Motors

21 to 115  
KIT 144  
... 4.95  
... 1.98  
SETS 4, 5, 6, 7, SP, 25 for 2.49  
for 304 tubes each... .9  
2X2 HV type each... .3  
"T C IT. WRITE to "TAB"  
FREQMTR. WVMTR & CON  
TROL Unit BC1162p/0RC150, freq  
150-210mc's ideal Citizens band  
Radio 19 tubes & 115V/60cps pwr  
supply NEW SPECIAL... \$25.95  
SAME less Tubes (LT)... 19.95  
FREQMTR & WVMTR only (LT)  
... 13.95  
POWER Supply only (LT)  
BC456 Modulator used (LT)  
BC375 & TU & Tubes used...  
GIBSON GIRL XMTTR...  
TTR BENDIX/40Watts used LN...  
STERPHONE & DYN LN...  
\$39.50

HIPOWER VARIABLE  
ANTENNA NETWORK  
1001A/1KWRF/1.5 to 7mc  
NEW easily converted to  
freq use CASED 5"x15"  
Relay Rack mtg. Coil, C  
dsr. RFMTR etc. NEW  
with Tech Manual loose Coil  
turns require cementing  
SPECIAL... \$9.95

COLLINS ART13 SPEECH  
AMPLIFIER Dynamic or Car  
bon Mike or line inpt. Audio  
Driver to PPG & Monitoring  
tube. Less Tubes... 4.50  
& CLIPPER KIT &  
& Data. NEW... 8.25  
GRAM" SPECIALS  
d Post. & 25% deposit.  
back "TAB" Guarantee.



BY BILL ORR, W6SAI

To thousands of equipment-starved amateurs the warehouses full of surplus equipment was a blessing, and the BC-348 series of receivers, left center, and the command sets, upper right, were rulers of the ham shack. To manufacturers of new equipment, such as the futuristic console, left, and the advanced receiver, above, the horn-of-plenty surplus was a curse that marked the end of the road for many of them. Profits were made, amateurs stayed on the air, but what happened to progress?



Two weeks after the end of World War II, one of the largest assembly buildings on earth hummed with purposeful activity. As far as I could see down its half-mile length, the building was filled with just-completed, four engine, heavy bombers. The aircraft, gleaming with Air Force insignia, were surrounded by mechanics and technicians.

One-by-one, the planes were rolled out the door of the building where a tank truck gave each one a few gallons of high-octane fuel. With a cough, then a roar, and belching blue exhaust flames, the engines were started. After a few minutes, the engines were turned off, the remaining gasoline was siphoned from the tanks, and the bomber was officially turned over to the government.

After a pause, a tractor was hooked to the nosewheel of each aircraft and it was towed slowly to the end of an ever-growing line of similar planes. At the front of the line, another tractor pulled a bomber into position under a crane which supported a two-ton lead ball, swinging at the end of a cable. After a second flurry of paper work, the technicians and mechanics moved away from the doomed aircraft.

The lead ball was hoisted high into the air and let fall with a thunderous crash

## HARRISON HAS IT!

### HARRISON SELECT SURPLUS

Your assurance of good, usable, guaranteed, surplus material at seasonally low prices — TOP VALUE ALWAYS! Come in and browse through our large HSS Department.

**BEAM POWER TUBE VALUES**  
 807 Always popular. New Amateur net. \$2.30  
 HSS—\$1.75 each. Three or more at \$1.47  
 814 Can give 160 watts output with only 115 watts drive. Net price \$14.00, reduced from \$17.50  
 HSS \$7.45

257-B  
 Full power up to 150 Mc., 1.4 watts drive  
 230 watts output. Net price is \$24.50  
 Harrison sells them for **\$6.90** only.

**0-1 DC MILLIAMMETERS**  
 Flush panel mount bakelite case. 1/2 inch diameter. D'Arsonval movement with jewelled bearings. 2% guaranteed accuracy. FB for multi-meter, field strength, etc. Excellent value at only **\$4.75**

**.0001 MF 9000 VOLT** 2 METER  
 peak working mica condensers, Sangamo Type P3L. Ward-Leonard type Z.O.  
 3" x 2" x 3" body. List Per Dozen \$1.00  
 price \$29.15. HSS \$6.75 (\$55 per Thousand)

**COAXIAL CABLE!**  
 All new, perfect, and at lowest prices!

JAN TYPE	Impedance	O.D.	1-100'	100' and up
RG-11/U	75 Ohms	.405"	10c	7c
RG-13/U	74 Ohms	.420"	14c	10c
RG-39/U	73 Ohms	.315"	11c	8c
RG-58/U	55 Ohms	.195"	8c	5c
RG-22/U	95 Ohms	.405"	25c	25c

TWINAX  
 \*Double Shield.  
 Furnished in one piece within -0% to +20% of length ordered. Full measure.

**24G TUBES**  
 (3C24) An FB tube for VHF. 90 watts rated class C output. Compact size. Ham net was \$9.00, reduced to \$6.00 but Harrison sells them for only \$1.48 each.  
 Three or more at **\$1.48**

**XTALS**  
 Here is the VALUE in Ham band stals that tops anything you have ever seen. Made for Signal Corps—so they must be good. A fully mounted and sealed crystal for less than the blank alone. 40 METERS in DC-35 and 60 METERS in DC-34 holders. **90c**  
 (Three or more postpaid). Specify frequency range when ordering.

**9002 TUBES 9003**  
 Harrison sells you these popular types at the lowest prices yet! First quality, fully tested. No rejects here!  
 9002 or 9003. Five for **\$2.49**  
 (Postpaid in USA)

amidships of the bomber. Its spine was broken, the wings collapsed, and the landing gear was crushed. Again and again the lead ball was dropped until the new bomber was a mass of wreckage. A puffing bulldozer then swept the corpse into a huge pile of rubble and the next plane was brought into position under the crane.\*

The foreman in charge of demolition, wearing a yellow hard hat, approached me. "You a radio ham?" he yelled above the din. Before I could answer, he said, "Why don't you go down the line and take some of the radio equipment out of the planes? Anything you can remove without a screwdriver is yours. A pity to waste all this surplus radio gear. There's tons

\*Similar scrapping of aircraft and radio equipment was reported in the newspapers for Guam, Japan, and England.

of it in the warehouse, too, and the taxpayers will never see it; that's for sure!"

### The foreman was wrong

At the end of World War II, amateurs were allowed back on the air, but, for most of them, it was a slow start back to normality. Many hams were still overseas in the armed forces, and those at home had little equipment. In many cases their receivers had been sold to the Government during the war, and several war-production drives for panel meters had stripped the erstwhile hamshacks of indicating devices. Although new receivers were becoming available, they were selling for about twice the price of comparable pre-war receivers. Yes, amateur radio seemed to be getting off to a slow start, indeed.

Unknown to most radio amateurs, a vast fortune in communications equipment belonging to the War Assets Administration and the Defense Supply Corporation, agencies of the United States Government, was stored in bulging supply depots scattered across the United States and abroad. This is the story of some of that equipment, and the impact it had on amateur radio.

It all began quietly enough. In mid-August, 1945, the

## SURPLUS PRICES SLASHED!

**COMMAND EQUIPMENT**  
 (274N, ARC-S, ATA)

Receivers New Used

190-550 RC \$12.95  
 1.5-0 Mc. 14.95  
 3-0 Mc. 5.95 3.95  
 G-0 Mc. 0.95 5.95  
 3-Rec. Bark .99  
 3-Control Head .99

**TRANSMITTERS**

BC-696, 3-4 Mc. \$14.95  
 T-19, ARCS, 3-4 Mc. 12.95  
 BC-457, 4-5.3 Mc. 3.95  
 T-20, ARCS, 4-5.3 Mc. 5.95 3.95  
 BC-458, 5-3.7 Mc. 3.95  
 T-22, ARCS, 7-9.1 Mc. 12.95 6.95

**MODULATORS**

BC-456 \$2.95 \$ 1.95  
 MD-7, ARCS, Push-pull 8.95  
 SCR-522 \$24.95  
 ARC-4 Xmit-Rec. 16.95  
 APN-4 Receiver 12.95  
 APN-4 Indicator 17.95  
 APN-1 Xmit-Rec. 6.95

APS-13 Xmit-Rec. New 17.95  
 BC-645 Xmit-Rec. New 12.95  
 ATN Receivers 24.95  
 BC-375 Transmitter 11.95  
 Tuning Units for above 1.95  
 BC-223 with 1 TU 49.50  
 ASII series Receiver 17.95  
 BC-929A Indlc. New 15.95  
 BC-929A Indlc. Used 6.95  
 ATQ 2 HF Transmitter 19.95  
 RAX Receiver 200-1500 kc., 1.5-9 Mc. Each 15.95  
 RA-10 Receiver, Models FA, DA, MN 26 C Receiver. 32.50  
 New 18.95  
 MN-26 Y Receiver 14.95  
 BC-431 Receiver 10.95  
 MN-20 E-Loop, New 6.95  
 D U 1 Loop, New 19.95  
 BC-434 Control Box, New 1.49  
 AIN-7 Receiver 12.95  
 C4ARN-7 Control Box 4.95  
 PE-237 Vibra-Park B, 12, 24, V. Input, Output; 525 V. 095 A, 100V. 042A; 0.5 V. 2 A; 0 V. 3 A; 3 V. 450 A. 12.95

ESEGE SALES CO., LTD.

**BEST BETS IN HEADSETS!**  
 HS-38 2,000 ohm. New. \$1.75  
 HS-23 4,000 ohm. New. \$2.95

**METERS! METERS!**  
 0-1 amp. R.F. 2" rd. G.E. \$2.99  
 0-8 amp. R.F. 2" rd. G.E. 2.98  
 0-25 MADC 2" rd. Weston 2.49  
 0-50 MADC 2" rd. se. Westinghouse 2.99  
 0-15 VAC 2" rd. Westinghouse 2.50

**PE103 DYNAMOTOR**  
 6 & 12 V. input; output, 500 V. @ 160 mils. Ideal for mobile. Excel. cond. \$15.95

**APQ-5 POWER SUPPLY:** Electronically controlled power. Embraces 2-5U4G, 4-6Y6, 2VR150, 1-6B17, 1-GX5. Operates from 115 V., 400 cycle. Replacing transformer with 60 cycle. Makes ideal lab or test supply. Excellent cond. Ea. \$6.95

**BC375 TRANSMITTER:** 100 W. Phone or CW. 2-211 tubes in dual. Complete with all tubes but less tuning unit. \$12.95  
**HAMS! WE ARE LOOKING FOR TUBES AND ALL TYPES OF CLEAN EQUIPMENT. CONTACT US FOR HIGHEST PRICES! CLEAN UP BY SELLING TO COLUMBIA!**

**RCBU COAX CABLE**  
 52 ohm. New. Per 100 ft. \$4.95  
 Per ft. 5c  
**TRANSFORMERS:** 115 VAC 60 cy. 5 V. @ 10 amp with 50 W. socket mounted on top. Good cond. \$6.95  
**PARTS KIT FOR 274N & ARC-S COMMAND EQUIPMENT:** 1.2 mfd. condenser, C16, 3X.22 condenser, L15 AP choke, 1100-20 ohms output transformer, T-50 Tone Oscillator, T-51 Mike Transformer (20-330 ohms). EACH KIT: \$9c



# ESSE WILL BUY ANYTHING ELECTRONIC

Attention Factories, Hams, Dealers, Individuals

## WE NEED AT ONCE!

We are Especially Interested in Large Quantities

BC-348 Receivers, AC or DC models  
 BC-312 Receivers  
 BC-221 Frequency Meters  
 SCR-522 Transmitters & Receivers  
 Hallicrafters BC-610 Transmitters  
 Any factory built transmitters and receivers such as Hallicrafters, National, Temco, Collins, RCA, RME, Hammerlund, Millen, Meck, Harvey-Wells, Meissner, Sonar, McMurdo-Silver, Gonset, Stancor, Bud, etc.  
 Amateur or commercial sets  
 Large stocks of tubes  
 Large stocks of transformers

Large stocks of condensers  
 Large stocks of resistors  
 Large stocks of speakers  
 BC-224 Receivers  
 BC-342 Receivers  
 Police type VHF transmitters and receivers for mobile application  
 Collins ART-13 Transmitters  
 APS-13's  
 SCR-269F or G Fairchild or Bendix ADF's  
 Headphones in quantity lots  
 Microphones in quantity lots  
 Field telephones  
 Sound-powered telephones

wartime system of priority allocations was scrapped, permitting sale of communications equipment to the general public without a "show of necessity."

In the November, 1945, issue of QST, the Hallicrafters Company announced that it was offering "government radio and electronic supplies" for general distribution, under contract SIA-3-24 with the Reconstruction Finance Corporation. A coupon was included with the full-page advertisement, soliciting inquiries about bidding for the various items.

But, the red tape prevailed.

## AMATEURS! HAMS! EXPERIMENTERS!

- \* NOW—TRANSMITTING TUBES \*  
 AT SENSATIONALLY LOW PRICES! \*
- \* 955 ACORN TUBE Detector Amplifier Oscillator Tube—Brand New. . . . . 19c ea. \*
  - \* 1625 Transmitting beam power amplifier same as 807 except 12.0 volt filament medium duty base. . . . . 14c ea. \*
  - \* 003, VR150 Voltage Regulator Tube. . . . . 49c ea. \*
  - \* 836A 3B27 Half Wave High Vacuum Rectifier. Ratings 5000 V max. Heater 2.5 V at 5 amps. . . . . 99c ea. \*
  - \* 829 PUSH PULL Twin Beam Power Amplifier Tube. . . . . \$1.49 ea. \*

Although large businesses seemed able to buy some choice items, little material appeared in the ham marketplace.\* Then, in early 1946, a trickle of war surplus equipment began to show up at the larger radio distributors, such as Harrison Radio in New York. By midsummer, the trickle had become a stream as more and more radio

\*In 1946, a letter to the Sales Agency of the Reconstruction Finance Corporation brought a reply to contact the manufacturer of the equipment. A follow-up letter to selected manufacturers brought an answer that told me to contact the RFC Sales Agency! War veterans could apply through the Smaller War Plant Corporation office for a certificate to buy surplus radio equipment directly from the RFC, provided that the applicant was in the radio repair, test, sales, manufacturing, or similar electronics business. The certificate could not be issued to amateurs, or to the public at large. By late 1946, the RFC had been severely cut back, the Smaller War Plant Corporation was defunct, and the military began direct, sealed-bid sales to the public. The system had collapsed of its own red tape!

distributors obtained government surplus radio equipment.

### The coming of "Surplus Sam"

I don't think anyone, including the government, was really aware of the great quantity of communications equipment that had been built during the waning years of the war.

By mid-1946, the Reconstruction Finance Corporation had gone out of the surplus business, and the military, frantic to unload their stocks of equipment, began to sell it at closed bid — by the pound — to any and all bidders. Most radio distributors, unwilling to get into the junk business, stood aside while a new breed of entrepreneurs stepped into the picture: The surplus dealers who handled nothing but government surplus equipment.

Within just a few months the price of surplus equipment dropped sharply, and the flood reached full tide. For only pennies on the dollar, a radio amateur could outfit himself with a station that looked like a military communications post! Overnight, unknown surplus dealers sprang up, and the heretofore obscure Esse Radio Company of Indianapolis, Indiana, ran four-page advertisements in CQ magazine, showing their surplus stocks and a photograph of their three-story warehouse! In the same issues

**POWER!! POWER!!**



**EIMAC**  
**304TL**  
 BRAND NEW  
 JAN. INSPECTED  
**SUPER VALUE**  
 BETTER ORDER  
 4 OR MORE  
**TODAY**  
**90c**  
 EA  
 WHILE THEY LAST  
 ANY QUANTITY

**SUPER SPECIAL**  
 BRAND NEW \$3.95 ea  
 EIMAC 304TH \$3.95 ea  
 JAN. INSPECTED



of CQ, R & M RADIO ran two-page advertisements featuring more war surplus goodies. By February, 1948, as more and more equipment reached the market, some of the ham magazines resembled war surplus catalogs!

### The manufacturers

Needless to say, the flood of surplus radio equipment knocked the new-equipment market into a cocked hat! Who

tended to make obsolete the flood of old-style, war-surplus triodes.

Meanwhile, the character of war surplus equipment slowly began to change in a subtle way. Some pieces of equipment, not necessarily the best, had disappeared from the market. The cumbersome and unstable BC-375 aircraft transmitter, bought by hams mostly for parts, became unavailable; and the BC-654A

coded radio messages over point-to-point communications networks on the mainland of China.

The BC-654A transmitter-receiver, and other good items of communications equipment, had been purchased by Israel in the early years of that country. In addition, during the Korean War, the United States Government bought back certain choice items of equipment that it needed, but

**BC-348 RECEIVER**

Acclaimed the best military receiver for amateur use, this handling six bands

**AAE XMTR BC-375-E**

For a real bargain, you can't beat these used, but in A-1 shape, BC-375's. Furnished complete with five tubes, seven tuning units covering 200 kc to 12 mc (less BC band); unit BC-306-A antenna tuning

**New WILLARD RECHARGEABLE STORAGE BATTERIES**

New 6 volt battery in spill-proof clear plastic case, housed in metal case for easy mounting. Applicable for a wide range of uses where battery power is needed. Shipped dry. Uses standard battery electrolyte available everywhere.

Price, each  
Lots of Ten  
Without metal case, each  
Lots of Ten

**\$49.50**

a-c conversion  
\$4.00/348.....\$6.50

**PE-103 DYNAMOTOR New Lot, only \$9.00**

Brand new, in original Signal Corps packing; delivers 160 mils at 500 volts; operates from 6 or 12 volts d-c; shock-mounted assembly includes relays, switches, filters, and



**SCOOP:** The famous B-19; Mark II; 40 & 80 meter xmtr-revr with tubes; dynamotor power supply, instruction manual, 12 ft. antenna & base, V.H.F. antenna and base, dummy antenna, mounts, 1 headset, microphone, key, junction boxes and interconnecting cables, N-1.....\$29.95

**B-19 Mark II** complete tank installation with all spares. Packed for export. Instruction manual, etc. N-1..... 44.95

would buy a \$275 receiver when it was possible to buy an acceptable war-surplus receiver for only \$49? Why buy a \$45 transmitting tube when you could get the same tube — surplus — for only 49 cents!

Of course, under these circumstances, many manufacturers went out of business. Some of them introduced new products, many of which didn't even get off the ground. TAYLOR TUBE COMPANY closed its doors and EIMAC, one of the largest independent tube manufacturers, survived only because it brought out a new line of high-gain tetrodes that

transmitter-receiver combination that covered the frequency range between 3.7 and 5.8 MHz had disappeared. Where did they go, who bought them, and why?

Looking back on those days, it appears that Nationalist China had bought enormous stocks of surplus radio equipment which eventually fell into the hands of the Chinese Communists. By the mid-1950s, West Coast Amateurs were cursing those old BC-375 transmitters which had showed up on the 80-meter band, chirping and blurring their

were in short supply.

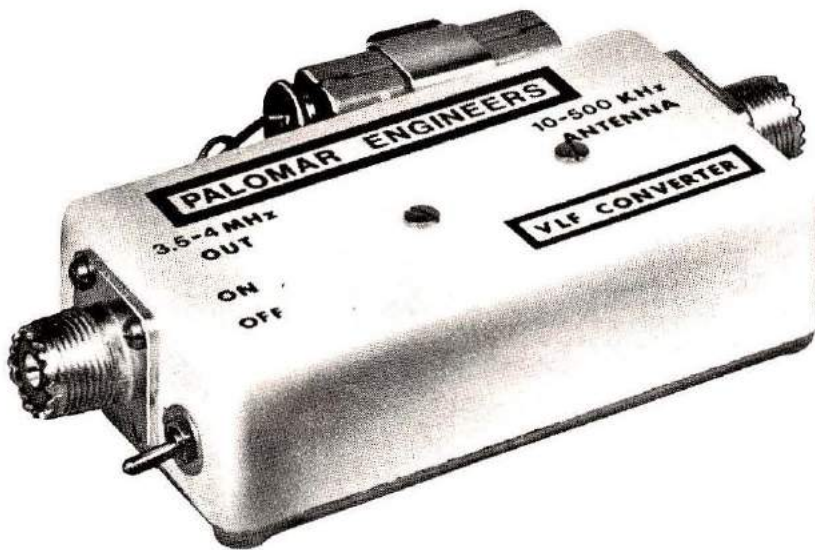
In 1950, a prominent war-surplus junkie confided to me that he had made a quick \$60,000 in two days by buying war-surplus transmitting tubes from the United States Army at *fourteen cents a pound*, and selling them to the United States Navy at *\$35 apiece!*

### The deadline

By 1951, the huge stocks of good war-surplus material had been virtually depleted and the equipment left for sale, such as oxygen bottles, tuning boxes, dynamotors, and out-of-band crystals, was mostly junk. The party was over, and on the



# VLF CONVERTER



- New device opens up the world of Very Low Frequency radio.
- Gives reception of the 1750 meter band at 160-190 KHz where transmitters of one watt power can be operated without FCC license.
- Also covers the navigation radiobeacon band, standard frequency broadcasts, ship-to-shore communications, and the European low frequency broadcast band.

The converter moves all these signals to the 80 meter amateur band where they can be tuned in on an ordinary shortwave receiver.

The converter is simple to use and has no tuning adjustments. Tuning of VLF signals is done entirely by the receiver which picks up 10 KHz signals at 3510 KHz, 100 KHz signals at 3600 KHz, 500 KHz signals at 4000 KHz.

The VLF converter has crystal control for accurate frequency conversion, a low noise rf amplifier for high sensitivity, and a multipole filter to cut broadcast and 80 meter interference.

All this performance is packed into a small 3" x 1½" x 6" die cast aluminum case with UHF (SO-239) connectors.

The unique Palomar Engineers circuit eliminates the complex bandswitching and tuning adjustments usually found in VLF converters. Free descriptive brochure sent on request.

Order direct. VLF Converter \$55.00 postpaid in U.S. and Canada. California residents add sales tax.

**Explore the interesting world of VLF. Order your converter today! Send check or money order to:**

## **PALOMAR ENGINEERS**

P.O. Box 455, ESCONDIDO, CA. 92025 — Phone [714] 747-3343

horizon appeared a small cloud — no bigger than a man's hand: television interference, TVI.

Since 1948 the number of television sets had increased sharply and, by 1950, many amateurs were in serious trouble with television interference. The surplus equipment, designed over a decade before and hastily pressed into operation by eager amateurs after the war, was simply not *clean* enough to meet modern operating standards.

To top it all off, ESSE RADIO COMPANY and other surplus stores were running magazine advertisements offering to *buy back* the surplus equipment sold to hams only a short time before! Overseas buyers were looking for good war-surplus radio gear, and many amateurs were at last willing to unload all of the military equipment in favor of communications equipment that better fitted their needs and the changing state of the art.

The popularity of single sideband finally signalled the doom of the surplus market. True, even today, bits and pieces of World War II radio gear are for sale: It looks as if the popular *Command* receivers will go on forever. But, the days when an up-to-date Amateur station boasted a BC-348 communications receiver, a 500-watt BC-610 transmitter, a BC-221 frequency meter, and a modified SCR-522 for two-meter work are probably gone forever.

The grand old radio equipment of World War II, rendered obsolete at last by the combination of age, TVI, ssb, and solid-state devices, is now only a collector's item, bringing back memories to old-time hams who served their country well in the greatest of all wars.

HRH

The photographs of equipment and the advertisements used as illustrations are from *CQ* and *QST* magazines of the war-surplus era, and are reproduced here with their permission.