## INDEX TO SURPLUS

A comprehensive bibliography of magazine articles dealing with amateur radio use and conversion of surplus electronic equipment.

Over 600 articles published in the five major magazines from 1945 to 1961 are arranged by equipment type and date of publication.

73 MAGAZINE

ELECTRONICS WORLD

QST

CQ

RADIO-ELECTRONICS

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### FOREWORD

This compilation is dedicated to all amateurs who have, as has the writer, wasted countless hours searching for a remembered magazine article. The wealth of information that has been published on the amateur use of surplus electronic equipment will, if the appropriate reference can be identified, serve as a guide for almost any conversion project.

It has been necessary, in the preparation of this guide, to read, or at least scan, all amateur writings published since World War II. This task, if such it might be called, has resulted in a renewed appreciation of the many genuine contributions the amateur has made to the advancement of the art. The record is contained in our journals for all to read and know that we are indeed privileged to be a part of the amateur fraternity.

ROY E. PAFENBERG W4WKM

## INTRODUCTION

During the last 15 years, an impressive number of articles dealing with amateur application and conversion of surplus military electronic equipment have been published in the amateur and popular radio magazines. The sheet volume of published information is confusing and even the most avid surplus advocate often has difficulty in locating a remembered surplus conversion article.

There is nothing more disheartening than to grope through a difficult conversion job and then discover that someone else had already been there and published a complete "how to do it" article. It is to fill this vacuum that this listing of surplus conversion articles has been prepared.

A discussion of the considerations leading to the selection of material and the format in which presented seems in order. To be of practical value, the periodicals in which the articles were published must be generally available to those who will dig them out. This has limited the selection to the more popular, nationally distributed magazines: 73 MAGAZINE, CQ, QST, ELECTRONICS WORLD (RADIO NEWS - RADIO & TELEVISION NEWS - RADIO & T.V. NEWS) and RADIO-ELECTRONICS (RADIO-CRAFT). Complete files are available in the larger libraries. Your own collection, local amateur clubs and your friends are other sources. Back issues are available from most publishers, however selection tends to be spotty.

Much thought has gone into the arrangement of this bibliography and it is believed that the format selected will be of greatest convenience to the majority of users. The listing is divided in sections, by equipment type or subject, arranged in alphabetical-numerical sequence. Individual articles are listed under these headings in reverse order of publication. The logic behind this is simple. A run through the major headings will locate a listing of all published articles on any given subject. If a specific article is desired, the approximate date of publication will be known and location is easy. If general information is desired, the articles are listed with the most modern material appearing first.

The choice of format for the individual entries presented problems. A "clean", uncomplicated layout is essential and maximum information must be provided. It is believed that the format selected is a good compromise. Title of the article, author, publication and date are essential and are presented first. The page number may be found in the index of the magazine and, since its inclusion complicates the entry, is not listed. Then, most difficult of all, remarks, in sufficient detail to permit identification of the article, must be included. These remarks are primarily factual although objective comment is sometimes made.

Terminology and nomenclature used for subject and category headings will make the military purist shudder. The type name selected is which appears to be in most general amateur use. Where absolutely necessary, cross reference is made and in rare instances, where an article deals with two or more equipments, duplicate entries occur. No attempt has been made to include a JAN or individual military service type of cross-reference.

Definition of the word "surplus" has determined the scope of this bibliography. While dealing primarily with military surplus, commercial surplus items in good supply and of value to the amateur have been included. On the other hand, although all amateur teletype operation is conducted with either commercial or military surplus equipment, articles on this subject are not listed. This field and the publications devoted to the art are so specialized that it is not practical to cover the subject in a general listing.

Errors or omission and commission are certain to creep into a work of this nature and magnitude. Readers are urged to send corrections and additions to the writer, in care of the publisher. These corrections and additions will be made and the listing brought current in future printings. ABA-1 (G-43AAG) ..... See: BC-645

AN/APA-38 PANADAPTOR "CONVERSION OF THE AN/APA-38" Sam Harris W1FZJ

Conversion information on this surplus panadaptor. Full schematic is CQ-July 1959 (VHF Column) given along with modification details.

AN/APN-1 RADIO ALTIMETER "A VERSATILE SWEEP FREQUENCY GENERATOR" Robert M. Berler W2EPC Radio & Television News-December 1951

A laboratory type instrument which covers 5 to 110 MC and features an electronic time base and intensity frequency marker.

AN/APQ-9 ..... See: T-39/APQ-9

AN/APS-4 . . . . See: ID-11/APS-4

AN/APS-13 RADIO TRANSMITTER-RECEIVER "420 ON A BUDGET" Donald L. Stoner W6TNS CQ-October 1955

In this conversion, the APS-13 transmitter is driven by a 5 watt, 2 meter rig. Receiver and transmitter are installed on a new chassis.

"OPERATING THE APS-13 ON 420 MC" Joseph W. Addison W&PKD QST-May 1948

Simple modifications put this "good buy" on 420 MC.

AN/APX-6 TRANSPONDER "APX-6 ON 1296 MC" Dick Stevens W1QWJ QST-June 1961 (Hints and Kinks)

How to scoot this equipment up to the high end of the band.

"PRACTICAL OPERATING HINTS FOR 1215 MC" Edward P. Tilton W1HDQ QST-February 1961

Additional conversion information on the AN/APX-6.

"COMMUNICATION ON 1215 MC. WITH THE APX-6" Edward P. Tilton W1HDQ QST-September 1960

Practical conversion details enable amateur UHF work with this low cost surplus item.

AN/ARC-1 RADIO SET "A SURPLUS 'COMMUNICATOR'" Roy E. Pafenberg W4WKM CQ-May 1960

This article describes, in detail, conversion of the AN/ARC-1 to an AC operated 2 meter transeiver.

AN/ARC-4 RADIO SET "CONVERTING THE ARC-4 FOR TWO" Lawrence M. Wood K2CSD CQ-November 1955

A relatively easy conversion of this 📤 transmitter-receiver. Power supply information is given.

AN/ARC-5 ..... See: COMMAND SET

AN/ARN-5 .... See:R-89/ARN-5

AN/ARN-7 RADIO COMPASS
"THE 'ULTIMATE' CW RECEIVER"
Robert R. Pittman and Gerald
Summers W5FKQ
QST-September 1952

AN/ARR-1 RADIO RECEIVER EQUIPMENT
"A 220 MC CONVERTER FROM THE
SURPLUS R-1/ARR-1"
L. W. May, Jr. W5AJG
Radio & Television News-January 1949

AN/ARR-2 RADIO RECEIVING EQUIPMENT
"CONVERTING THE ARR-2"
Kenneth B. Grayson W2HDM
CQ-August 1959 (Surplus Column)

AN/ART-13 RADIO TRANSMITTING SET
"NOTES ON CONVERSION OF THE
AN/ART-13"
Kenneth B. Grayson W2HDM
CQ-March 1960 (Surplus Column)

"Q MULTIPLIER, S.S.B. Q5-ER AND SOJ"
L. M. Temple W1DI
QST-September 1956

"CONVERTING THE AN/ART-13 TO SSB"
George W. Kindt W3VYY
CQ-August 1956

"FREQUENCY STANDARD FROM A C.F.I. UNIT" A. W. Horst W9CUX CQ-January 1949

"CONVERTED ART-13 SPEECH AMPLIFIER WITH PEAK CLIPPER & LOW-PASS FILTER" W. M. Scherer W2AEF CQ-December 1947

"ANOTHER METHOD OF CONVERTING THE ART-13" R. D. Valentine W2GX and Athan Cosmas W2PKD CQ-February 1947 Coils used from this direction finder give super-selectivity in the receiver described in this article.

Practical conversion details for this surplus mystery.

Details on putting this surplus bargain on 2 meters. The complete schematic diagram is provided.

A bibliography of conversions for the AN/ART-13 and a discussion of the problems encountered.

AN/ART-13 CFI Unit transformers are used in this QRM-beating combination.

Conversion details on converting a converted AN/ART-13 to SSB linear operation.

This unit from the AN/ART-13 generates usable harmonics of 50 KC up through 10 meters. A power supply and harmonic amplifier are described.

A compact and economical speech amplifier using the audio chassis from the AN/ART-13 transmitter.

This conversion is a variation on the one described in the November, 1946 issue of CQ. The oscillator coil is pruned to give air frequency coverage of 3,4 to 30,6 MC.

"AUTOTUNE TRANSMITTER AN/ART-13" George Lichterman Radio News-December 1946

"CONVERTING THE ART-13 TRANSMITTER" Paul L. Rafford, Jr. W2GQM CQ-November 1946

AN/CRC-7 RADIO SET
"CONVERTING THE AN/CRC-7"
Kenneth B. Grayson W2HDM
CQ-April 1958 (Surplus Column)

AN/TRC-8 RADIO SET
"The AN/TRC-8 RECEIVER ON 2
METERS"
CQ-June 1960 (Surplus Column)

"THE AN/TRC-8 RECEIVER ON 220 MC" Kenneth B. Grayson W2HDM CQ-May 1960 (Surplus Column)

ARB RADIO COMPASS

"CONVERTING THE ARB"

Kenneth B. Grayson W2HDM

CQ-June 1958 (Surplus Column)

ASB-5 RADAR RECEIVER
"ASB-5 RADAR RECEIVER TO 420 MC"
Donald L. Stoner W6TNS
CQ-October 1956 (Surplus Column)

ASB-7 RADAR RECEIVER
"A 425 MC SUPER FROM THE NAVY'S
ASB-7"
L. W. May, Jr. W5AJG
Radio News-July 1947

ATJ/ATK ..... See: CRV-59AAE

B19 MARK II RADIO SET
"CONVERTING THE MARK II"
Louis H. Hippe W6APQ
Radio-Electronics-November 1951

A simple conversion and one of the first for this high-power aircraft transmitter.

Lots of valuable information is contained in this early article on the AC conversion of the AN/ART-13 transmitter. 10 meter coverage is provided.

Data on converting this "tin can" transmitter-receiver to the 2 meter band. Get out the can opener.

Extending the conversion (CQ-May 41960) of the R-48/TRC-8 to 2 meters.

A simple conversion of the R-48/ TRC-8 to AM and instructions for alignment to 220 MC.

Conversion details on this Navy aircraft direction finder. AC power supply and front panel controls are features of this conversion.

A very fine conversion of this high performance receiver. Modification installs HFO tuning, a new front panel and audio system. AC power supply schematic is provided.

A rack panel mounted conversion of this superior receiver. New audio system, S meter and AC power supply are featured in this conversion.

The "boat anchor" conversion. This article tells how to put the "A" set on 75 meters and the "B" set on 2 meters. An AC supply is described.

BC-191 ..... See: BC-375

BC-221 FREQUENCY METER
"USING THE BC-221 TO CHECK CB
FREQUENCY"
R. L. Conhaim 19W7577
Electronics World-May 1961

"CONVERSION OF THE BC-221" Kenneth B. Grayson W2HDM CQ-April 1959 (Surplus Column)

BC-221 AS A CARRIER INJECTION GENERATOR FOR S.S.B." Marlin R. King KP4RC QST-March 1958 (Hints and Kinks)

"INTERPOLATION FREQUENCY MEASUREMENTS WITH THE BC-221" Charles L. Riley, Jr. W1JJY QST-January 1956

"ADDING A BANDSPREAD RANGE TO THE BC-221 FREQUENCY METER" Beverly Dudley QST-August 1953

"REDUCED OUTPUT FROM THE BC-221-A FREQUENCY METER" T. D. Koranye W2SFW QST-July 1953 (Hints and Kinks)

"CRYSTAL CALIBRATION WITH THE BC-221" Glenn H. Thomas CQ-December 1952

"DEMOTHBALLING THE BC-221" Richard E. Nebel W2DBQ CQ-December 1950

"MEASURING FREQUENCY WITH THE BC-221" Morris Dorsey W4KXX CQ-December 1950

"MODULATING THE BC-221 FREQMETER" W. S. Kemper W4KOF Radio-Electronics-August 1950 Notes on improving the stability and accuracy of the BC-221. Complete schematic of one model is shown.

A tone modulator and AC power supply improve the utility of this popular instrument.

Another use for this versatile surplus instrument.

Simple modification improves the accuracy of this instrument tenfold.

3.5 to 4 MC coverage with accuracy to  $\pm 10$  cycles in the 80 meter band.

Modification permits accurate measurement of weak signals.

A simple trick for approximating crystal frequencies with the BC-221.

A rack mounting for the surplus, "chassis only" BC-221. Details are given on making a calibration book.

Special interpolation charts for the ham bands makes precise measurement a 10 second snap.

A modulator-power supply that is easy to build.

"NULL INDICATOR FOR THE BC-221" W. A. M. Wood VE4MW QST-May 1950 (Hints and Kinks)

"CALIBRATING A BC-221 FREQUENCY METER" Beverly Dudley QST-March 1950

"YOUR BC-221 AS AN AUDIO GENERATOR" Clifford E. Vogt W8NCO QST-February 1950

"A ONE-TUBE VFO AMPLIFIER" Gerald T. White W3LTR and L. W. Sieck W4KMG QST-January 1950

"USING THE BC-221 FREQUENCY METER AT V.H.F." Henry H. Cross W100P QST-January 1950 (Hints and Kinks)

"TONE MODULATING THE BC-221" John E. Pitts, Jr. W6CQK CQ-August 1949

"NULL INDICATOR FOR THE BC-221" Joseph C. Juel W9BGC CQ-October 1948

"FREQUENCY METER DOUBLES AS SSB AND CW DETECTOR" Major Harry Longerich DL4RX/W2GQY Radio & Television News-September 1948

"ADDING TONE MODULATION TO THE BC-221 FREQUENCY METER" Herb Carlson W3NHA QST-May 1948 (Hints and Kinks)

"ADDING TONE MODULATION TO THE BC-221 FREQUENCY METER" Chester B. Cunningham W3MHW QST-May 1948

"DATA ON SURPLUS FREQUENCY METERS" Felix W. Mullings W5BVF CQ-January 1948 A simple device helps find exact zero beat.

How to use harmonics for frequency meter calibration.

Versatile application of this surplus gem.

Amplifier-power supply to convert the BC-221 to a VFO.

A one tube harmonic generator for the BC-221.

A simple modulator for the BC-221 permits identification of the frequency meter signal.

Simple circuit for visual null detection improves accuracy of the BC-221.

"Front end" injection system uses the BC-221 as the carrier oscillator.

Simple modification adds a valuable feature to this popular item.

Another simple tone modulator for the BC-221 frequency meter.

Information on which models of the BC-221 require audio stage modification for AC operation.

"POWER SUPPLY FOR THE SCR-211 FREQUENCY METER" Al Jackson W1NI

QST-May 1947 (Hints and Kinks)

"COMPACT POWER SUPPLY FOR THE BC-221" Russel Tighe W2ALH CQ-April 1947

"THE BC-221 FREQUENCY METER AS A VFO" Howard W. Johnson W7NU QST-March 1947

BC-224 RADIO RECEIVER "POWER SUPPLY FOR THE BC224 RECEIVER" Joseph Zelle Radio-Electronics-November 1950

BC-224 ..... See: BC-348

BC-312 RADIO RECEIVER "GETTING THE BC-312 AND BC-348 ON THE AIR" Kenneth B. Grayson W2HDM CQ-February 1959 (Surplus Column)

> "'PHONE SELECTIVITY FOR THE BC-312" Howard L. Morrison W7ESM QST-February 1954

"POWER FOR THE BC-312" Guv Black Radio-Craft-January 1948

BC-342 RADIO RECEIVER "Q MULTIPLIER FOR THE BC-312 OR BC-342" Harry K. Long W7CQK QST-December 1958 (Hints and Kinks)

> "CURING BACK-LASH IN THE BC-342" K. G. Bucklin W2CDP QST-June 1952 (Hints and Kinks)

"FURTHER IMPROVEMENTS IN THE BC-342" R. M. Smith W1FTX QST-August 1951 (Hints and Kinks)

A simple power supply with description and circuit.

A simple power supply for the BC-221. WARNING: THE CHASSIS IS HOT!

Discussion of the concept along with application schematics.

A self-contained, AC supply for this 12 volt version of the BC-348.

A series of converters for use with these receivers is described. Other conversion considerations are discussed.

Adding an FT-241 crystal filter to the BC-312.

A self-contained power supply for this surplus, 12 volt receiver.

Modification of the Heathkit QF-1 Q Multiplier to permit use with these 470 KC IF receivers.

Simple mechanical adjustment solves this problem.

New IF transformers pep up this receiver.

"THE Q5-ER"
Philip S. Rand W1DBM
QST-December 1947

"REVAMPING THE BC-342" George Grammer W1DF QST-September 1946

BC-348 RADIO RECEIVER
"BC-348 ALIGNMENT"
Garnet W. Frank
QST-July 1959 (Hints and Kinks)

"NEW LIFE FOR THE BC-348" Richard Panosh K9KYV CQ-May 1959

"TNS, AUDIO AMPLIFIER AND POWER SUPPLY FOR THE BC-348" Kenneth B. Grayson W2HDM CQ-March 1959 (Surplus Column)

"GETTING THE BC-312 AND BC-348 ON THE AIR" Kenneth B, Grayson W2HDM CQ-February 1959 (Surplus Column)

"NOTE ON SURPLUS TYPE BC-348 RECEIVERS" George S. Carson WøJV QST-September 1957 (Hints and Kinks)

"IMPROVING THE SELECTIVITY OF THE BC-348 — WITHOUT PAIN" Joseph L, Boswell W7KEG CQ-September 1956

"DOUBLE CONVERSION USING THE BC-348" Jack Ditton W3KQJ QST-June 1954 (Hints and Kinks)

"A NEW, SIMPLIFIED Q5-ER"
Robert H. Weitbrecht W6NRM/W9TCJ
CQ-July 1953

"MODIFYING TUNING RANGE OF THE BC-348" Jack G. Hines W5GAB QST-January 1952 (Hints and Kinks) Notes on improved selectivity for the BC-342 and construction details for an outboard, 175 KC IF system.

Modifications for more effective amateur use of this receiver.

IF alignment precautions to avoid shorting out the transformers.

An S meter and crystal phasing control for this receiver.

Schematic diagram of the BC-348 along with conversion information and circuit refinements.

A series of converters for use with these receivers is described. Other conversion considerations are discussed.

These tips improve calibration and add a BFO trimmer for SSB reception.

How to use the BC-946 Command Set receiver as a Q5-er for the BC-348.

Using the 200-500 KC range of the BC-348 as a tunable IF for converters.

BC-453 IF transformers are used in this "down-up-down" converter for use with the BC-348. Though not developed in this article, the writer had modern "pass-band" tuning within reach.

Practical method of providing 10 meter coverage with this popular receiver.

"CURING BACKLASH IN BC-348 RECEIVERS" Norman E. Blackie W6WNZ QST-January 1951

"TRIPLE CONVERSION WITH THE BC-348" C. R. Wade W9HZZ CQ-November 1950

"BROADCAST-BAND COVERAGE WITH THE BC-348-Q" Victor Alfonsi W2VSU QST-September 1949 (Hints and Kinks)

"LOW IMPEDANCE COUPLING TO THE BC-348" Robert H. Mitchell W4RQR CQ-July 1949

"ADDITIONAL BC-348-P GAIN AND SELECTIVITY" Jack Najork W2HNH CQ-April 1949

"14 AND 21-MC BANDSPREAD FOR THE BC-348" Robert W. Ehrlich W9SMV CQ-December 1948

"CURING NOISE-LIMITER PROBLEMS R. Wayne Parcel QST-November 1948

"REDUCING RECEIVER DRIFT" Floyd Gardner W9BQJ CQ-October 1948

"A Q5-ER FOR BC-348 OWNERS... BUILDING A SIMPLE CONVERTER" William W. Orr W2OWA QST-June 1948

"A Q5-ER FOR BC-348 OWNERS ... BY ADDING SERIES PADDERS" G. M. Kosolapoff QST-June 1948

"A Q5-ER FOR BC-348 OWNERS ... CONVERTING WITH AN EXTERNAL OSCILLATOR"
Philip S. Rand W1DBM
QST-June 1948

Adjustment takes care of this problem.

The BC-453 and a converter, mounted in the ex-dynamotor compartment, team up with the BC-348 for Q5-er performance.

Simple converter for use with surplus receivers.

A simple capacitive network greatly improves performance of the BC-348 when used with coaxial cable input.

This writer states that, by picking up the 915 KC IF of the BC-348 on a standard broadcast receiver, improved performance will result.

The modification is simple but the work lies in getting into the RF boxes.

One answer to noise limiter problems with the BC-348-P.

Curing drift in the BC-348 with negative temperature coefficient capacitors,

External converter shifts the IF of the BC-348 to within the tuning range of the BC-453 Command Set receiver.

Simple modification of the BC-453 to permit operation on the 915 KC IF of the BC-348.

Using an external crystal oscillator and mixing in the BC-453 RF stage to permit use with the BC-348 receiver.

"A Q5-ER FOR BC-348 OWNERS ...
MODIFYING THE COILS"
Marv Gonsior W6VFR
QST-June 1948

"'S' METER CALIBRATION TECH-NIQUES FOR COMMUNICATIONS RECEIVERS" Robert M. Berler W2EPC Radio News-April 1948

"SO I BOUGHT A BC-348-Q" J. H. Owens W2FTW CQ-April 1948

"ELIMINATING BACK-LASH IN THE BC-348 RECEIVERS" Kenneth A. Jenkins W6OYM QST-February 1948 (Hints and Kinks)

"CALIBRATING THE BC-348" A. F. Prescott, W8DLD QST-November 1947

"A FURTHER NOTE ON THE BC-348-Q" Paul M. Kersten, M. D. WØWIT QST-November 1947

"MODIFYING THE BC-348-O"
W. B. Bernard W3IWX
QST-November 1947

"SERVICING XTAL FILTERS IN THE BC-348" QST-August 1947 (Hints and Kinks)

"THE DIALLESS CONVERTER" James H. Creutz W2PMQ and Donald F. McAvoy W2PRT QST-June 1947

"CONVERTING THE BC-348-Q" Paul M. Kersten WØWIT QST-January 1t47

BC-357 RADIO RECEIVER
"THE HAM ALARM"
Hartland B. Smith W8VVD
CQ-April 1958

Reworking the BC-453RF coils to permit operation on the BC-348 IF of 915 KC.

S meter circuits and adjustment techniques are discussed with the BC-348 as the example.

Major modification of the BC-348 includes IF transformer changes, removal of the crystal filter, audio amplifier and AVC circuit changes. Lots of work,

A simple answer to an old problem.

A new tuning knob and auxiliary dial are described along with a calibration method for the BC-348.

Notes on antenna input changes and substitution of an 1852 tube in the front end.

AC power supply, noise limiter and other modifications for this variation of the BC-348.

Repair of heat induced failure of the BC-348 crystal filter.

10 and 11 meter converters designed for installation in the dynamotor well of the BC-348.

Description and schematic diagrams of circuit changes. No original schematic.

This bargain priced marker-beacon makes a carrier operated, Auto-Call unit.

"THE MIGHTY MIDGET" H. L. Apple W4HER CQ-March 1948

BC-375 RADIO TRANSMITTER
"A BANDSWITCHING, LOW COST
400 WATT LINEAR"
Howard L. Morrison W7ESM
CQ-May 1961

"150 WATTS CW FOR 80-40 AND 20" Norman S. Howard W1JBV CQ-May 1960

"A 6 INPUT COAXIAL SWITCH" Ken "Judge" Glanzer K7GCO CQ-July 1959

"TABLE TOP LINEAR"
N. R. McLaughlin W3LNT/KH6
CQ-January 1959

"HIGH POWER MOBILE" Joseph Marshall W3SNA CQ-May 1957

"THE O-T TRANSMITTER" G. L. Countryman W3HH CQ-September 1955

"MY 'FINAL' EXCITER" Carlton G. Rich W8ZYG CQ-December 1954

"A BANDSWITCHING 813 RIG WITH PI-SECTION OUTPUT" Robert M. Resconsin W1TRF QST-June 1954

"CAPACITANCE OF BC-375-E TUNING CONDENSERS" W. E. McCormick W5KMA QST-September 1951 (Hints and Kinks)

"A V.H.F. FREQUENCY METER" David Birnbaum W3PGP QST-October 1950

"ANTENNA TUNER FROM THE BC-375E" R. J. Rodenbo W8YPG CQ-February 1950 An all-band transmitter with the BC-357 as an enclosure.

Liberal use of BC-375 and Command Set transmitter components keeps this amplifier in the budget class.

This commercial appearing transmitter makes extensive use of BC-375 parts.

BC-375 tuning unit tap switch is the heart of this heavy duty antenna switch.

This 900 watt PEP amplifier uses BC-375 components and 5 837 tubes.

BC-375 parts and a fan-belt driven PE-73 team up for high power mobile operation.

Extensive use of BC-375 tuning unit parts is made in this medium power triode final.

This beat frequency exciter uses a BC-375 tuning unit as a foundation and enclosure.

An extremely popular transmitter which uses many BC-375 components.

Handy identification chart for these unmarked surplus units.

BC-375 tuning unit serves as the enclosure for a versatile instrument.

How to use the BC-375 antenna coupling circuit and components as a universal antenna matching unit. "LOW DRIFT CONDENSERS FROM THE BC-375-E" R. V. McGraw W2LYH QST-October 1949 (Hints and Kinks) A source of low temperature coefficient units for your VFO.

"ANTENNA SWITCH FROM THE BC-375-E" C. Vernon Chambers W1JEQ QST-August 1949 (Hints and Kinks) Heavy duty unit serves as the station antenna switch.

"A NEW LOW-COST TRANSMITTER" Carlton G. Rich W8ZYG Radio-Electronics-June 1949 75 watt VFO rig covers 80-40 and 20 meters. Extensive use is made of BC-375 parts.

"THE BC-375E STRIPS FOR ACTION" Jim Kirk W6DEG CQ-May 1949 This reasonable conversion of the BC-375 uses an 826 in the final.

"A MODERN VARIABLE FREQUENCY OSCILLATOR" Robert C. Merryman W3FBB Radio & Television News-December 1948 A modern VFO built around the TU-6-B tuning unit.

"TEN METER FINAL FROM TU-10-B" L. W. May W5AJG Radio-Electronics-November 1948 A simple, 200 watt final which uses this surplus turning unit as the foundation.

"A SURPLUS-PARTS BANDSWITCHING TRANSMITTER" C. Vernon Chambers W1JEQ QST-September and October 1948 Construction details of a 7 band, 150 watt transmitter from surplus. BC-375 tuning unit parts are used extensively.

"TRANSMITTER-RECEIVER FROM SURPLUS TUNER" C. E. Clark W1KLS Radio News-November 1947 A TU-6-B tuning unit is used to house this 1 tube transmitter and 2 tube receiver.

"A VARIABLE FREQUENCY OSCILLATOR: Robert W. Field W4KAP Radio News-September 1947

A 3 5 to 4 MC VFO, of good construction, using the TU-5-B tuning unit.

"AN INEXPENSIVE CRYSTAL SUBSTITUTE" Harold W. Harrison W5DFZ QST-July 1947 Construction details on a VFO using a BC-375 tuning unit.

"WHAT ABOUT THE BC-375-E?" Richard M. Smith W1FTX QST-December 1946 Circuit details, discussion and conversion data. Original schematic is not provided.

BC-406 RADAR RECEIVER
"LOW COST HIGH FREQUENCY
SUPERHET"
Henry Geist W3AOH
CQ-February 1946

Complete conversion details on how to put this VHF radar receiver on 10 meters.

BC-412 RADAR INDICATOR
"CONVERTING THE BC-412"
Lyman E. Greenlee
Radio-Craft-October 1946

A scope from this radar indicator. Heavy too.

BC-603 RADIO RECEIVER
"CONVERTING THE BC-603"
Kenneth B. Grayson W2HDM
CQ-December 1959 (Surplus Column)

Information on adding an AC power supply and aligning the unit to the 36 to 50 MC band.

"BC-603 AM DETECTOR CIRCUIT" Kenneth B. Grayson W2HDM CQ-December 1958 (Surplus Column) Circuit of a simplified AM detector circuit for the BC-603.

"CONVERTING THE BC-603" Kenneth B. Grayson W2HDM CQ-October 1958 (Surplus Column) Further conversion of the BC-603 marrows up the IF and changes from FM to AM detection.

"CONVERTING THE BC-603" Kenneth B. Grayson W2HDM CQ-September 1958 (Surplus Column) This conversion adds an AC power supply and puts the receiver on the 6 meter band.

BC-604 RADIO TRANSMITTER
"CONVERTING THE BC-604"
Kenneth B. Grayson W2HDM
CQ-November 1960 (Surplus Column)

A reasonably practical conversion of this \$4.95 wonder puts it on 10 or 15 with 30 watts.

BC-605 AUDIO AMPLIFIER
"AN INTERCOM FROM THE BC-605"
Daniel Scholman
Radio & Television News-April 1950

A simple conversion of this armored vehicle audio amplifier.

BC-610 RADIO TRANSMITTER
"SINGLE SIDEBAND WITH THE BC-610"
R. H. Mitchell W5DWT
QST-November 1955

Conversion details on this high power surplus rig.

"CHASING THE TENNESSEE VALLEY INDIANS OUT OF THE BC-610 TRANSMITTER" Lester C. Harlow W4CVO QST-May 1951 How to "button up" this popular transmitter.

"ELIMINATING TVI CAUSED BY THE BC-610" R. H. Mitchell W4RQR/5 Radio & Television News-April 1951 Practical methods of reducing spurious output from this high power harmonic generator.

"CURE FOR 'TALK-BACK' IN THE BC-610" J K. Hall, Jr. W4KCT QST-September 1949 (Hints and Kinks)

"DATA ON THE BC-610 TANK COILS" Eugene Black, Jr. W2ESO CQ-September 1949

"A MODIFICATION OF THE BC-610 EXCITER UNIT"
Lt. Col. C. R. Offringa, USAF W4CT QST-July 1948

BC-624 ..... See: SCR-522

BC-625 ..... See: SCR-522

BC-645 IFF TRANSPONDER
"THE BC-645 — A 420 MC TRANSCEIVER FOR THE TECHNICIAN"
Donald L. Stoner W6TNS
CQ-December 1956

"OPERATING THE BC-645 ON 420 MC" John T. Ralph and H. M. Wood W3JYA QST-February 1947

BC-654 ..... See: SCR-284

BC-659 RADIO RECEIVER AND TRANSMITTER
"BA-41 FOR THE BC-659"
Kenneth B. Grayson W2HDM
CQ-September 1959 (Surplus Column)

"MORE ON THE BC-659" Kenneth B. Grayson W2HDM CQ-June, 1959 (Surplus Column)

"USING THE BC-659" Kenneth B. Grayson W3HDM CQ-May 1959 (Surplus Column)

BC-669 RADIO RECEIVER AND TRANSMITTER
"OPERATION REBUILD: THE BC-669"
Frank A. Mohler W2IAZ
CQ-July 1961

BC-683 . . . . See: BC-603

BC-684 .... See: BC-604

Things are not always what they seem, and this is true of this BC-610 problem. Relay circuit modification cures this.

Use and modification data on the BC-610 tank coils for the amateur bands.

Construction details of an exciter using BC-610 tuning units.

A step by step conversion of this popular unit. OK for local work, as the writer points out.

An "essentially painless" conversion of the BC-645. No schematic diagram of the original equipment is provided.

How to use standard batteries in lieu of this "hard to get" surplus item.

A modulator and AM detector for the conversion described in the May, 1959 issue of CQ.

Alignment data for 10 meter, FM operation of this battery powered, portable transceiver.

A comprehensive treatment on converting the BC-669 to amateur operation.

BC-733 LOCALIZER RECEIVER
"CONVERTING THE BC-733"
Kenneth B. Grayson W2HDM
CQ-October 1959 (Surplus Column)

Modifying this surplus bargain for 2 meter operation.

BC-746 TRANSMITTER-RECEIVER
"A V.F.O. FOR ONLY A FEW CENTS"
I. Pickell W3PPQ
CQ-March 1954

A compact VFO using components of a BC-746 tuning unit.

"A BANTAM 1-WATTER" QST Staff QST-January 1948 A miniature rig using a BC-746 tuning unit.

BC-779 RADIO RECEIVER
"THE ULTIMATE CONVERSION OF
THE SUPER PRO RECEIVER"
Charles E. Reed W6FHB
CQ-April 1961

Internal power supply and all the desired refinements are covered in this detailed conversion article.

"POWER FOR THE OLD PRO" Jim Kyle K5JKX/6 73 Magazine-February 1961 An easily constructed power supply for the Super Pro purchased less the power chassis.

"DOWN WITH DRIFT" Jim Kyle K5JKX/6 73 Magazine-January 1961 Temperature compensation applied to the vintage Super Pro gives great improvement in stability.

"SAVE YOUR SUPER-PRO FOR SSB" Commander Paul H, Lee W3JHR CQ-September 1958

A product detector, hang AVC and high frequency oscillator stabilization are covered in this article.

"SERVICE NOTES ON SOME HAMMARLUND RECEIVERS" Frank Lester W2AMJ QST-February 1957 (Hints and Kinks)

Details on stabilization of the HFO and improvements in the limiteraudio circuits.

"IMPROVING STABILITY OF H-F OSCILLATOR IN THE BC-779 RECEIVER" L. W. Stockton CQ-October 1952

Simple modification adds voltage regulator.

"IMPROVING RECEIVER STABILITY"
James N. Whitaker W2BFB
CQ-May 1948

A new type HFO tube and main tuning capacitor adjustment make great improvement in frequency stability.

BC-788 RADIO ALTIMETER
"FUN ON 420 WITH THE BC-788"
Fred D. Clapp W6DSZ
QST-July 1948

Details for putting this equipment on 420 MC phone. The original schematic diagram is not provided.

BC-794 ..... See: BC-779

BC-929 INDICATOR
"THE SUPERSIMPLESCOPE"
John W. Campbell, Jr. W2ZGU
CQ-November 1957

"CONVERTING THE BC-929A OSCILLOSCOPE" Stephen Popp W9JFX QST-August 1957

BC-1004 ..... See: BC-779

BC-1068 IFF RECEIVER
"2 METER CONVERSION OF THE 1068-A"
Charles B. Ware W3GQS
CQ-June 1948

"A GOOD TELEVISION FROM WAR SURPLUS" Ernest J. Schultz W2MUU Radio-Craft-January 1948

BC-1158 TRANSMITTER-MODULATOR
"CONVERTING THE BC-1158"
Walt Burdine W8ZCV
CQ-January 1957 (Novice Column)

"ON SIX METERS WITH THE TU-75-A" Walt Burdine W8ZCV CQ-January 1956

BC-1206 RADIO RANGE RECEIVER
"CONSOLAN — WHAT IS IT?\_
Elbert Robberson
Radio-Electronics-March 1961

"A.C.-D.C. CONVERSION OF THE BC-1206"
O. L. Woolley WØSGG
Radio & Television News-June 1950

BC-1284 AMPLIFIER
"LIGHTHOUSE PRESELECTOR"
Maurice Gutman W2VL
CQ-March 1947

BC-1335 RECEIVER-TRANSMITTER
"CONVERTING THE BC-1335 TO AM"
Kenneth B. Grayson W2HDM
CQ-July 1959 (Surplus Column)

A good argument for use of the basic scope as an accurate, wideband meter. A converted BC-929 does the job.

A low cost scope from surplus.

A good conversion of this still available IFF unit.

A converted BC-1068 IFF receiver is the heart of this television set.

Complete conversion data, including schematic diagrams, for putting this little gem on 6 meters.

A 6 meter conversion of this plug-in tuning unit for the BC-1158 transmitter-modulator.

This article describes the CON-SOLAN navigation system and outlines use of the BC-1206 for this purpose. A schematic diagram of the BC-1206 is given.

A simple conversion of this pauper's Q5-er.

This, at that time, "state of the art" amplifier is converted for 6 to 10 db improvement in signal-to-noise ratio in the 2 meter band.

Complete schematic diagram and conversion data for AM operation of this SCR-619 unit.

"BC-1335 TO SIX"
Kenneth B. Grayson W2HDM
CQ-December 1958 (Surplus Column)

"USING THE BC-1335" Kenneth B. Grayson W2HDM CQ-December 1957 (Surplus Column)

BD-77 DYNAMOTOR
"HIGH POWER MOBILE"
Joseph Marshall W3SNA
CQ-May 1957

"A HIGH POWER MOBILE SUPPLY" Frank Kirby W6WI CQ-September 1951

BN IFF TRANSMITTER-RECEIVER
"AN INEXPENSIVE 2 METER CONVERTER FROM THE BN-IFF"
Donald L. Stoner W6TNS
CQ-November 1956

C-161 COIL
"APPLIED HYBRID HUSBANDRY"
Joseph A. White W5KMH
CQ-September 1958

"HYBRID HUSBANDRY" Captain Sidney S. Rexford W2TBZ CQ-November 1957

COMMAND SET ANTENNA RELAY UNIT
"CONVERTING THE BC-442 ANTENNA
RELAY"
Severn T. Green K8MSF
CQ-March 1960

"WHAT HAS HAPPENED TO THE RF AMMETER" Howard S. Pyle W7OE CQ-July 1958

"THE LOW DOWN ON THE BC-442-A" John T. Frye W9EGV Radio-Electronics-April 1953

"S METER FROM SURPLUS"
G. H. Hauge
Radio-Electronics-June 1952

Detail on how to convert this unit to 6 meter operation.

Alignment data for 11 meter operation and a very mild conversion for use on 10 meters

A fan-belt driven BD-77 and BC-375 components team up for high power mobile operation.

Mobile power supply considerations are discussed and a fan-belt driven BD-77 installation is described.

Converting the "front end" of the BN IFF to a 2 meter converter.

A practical, hybrid phone patch using surplus C-161 telephone coils.

A complete discussion of phone patch problems and one derived answer. Surplus C-161 coils are used in a hybrid.

This unit converts nicely to a coaxial type, antenna relay with built in AC power supply.

The BC-442 is repackaged to provide an RF ammeter for coaxial lines. The old timer discusses the advantages of the RF ammeter.

Details on using BC-442 components. Calibration charts are given for the meter, thermocouple and transformer.

How to use the meter from the BC-442 as an S meter.

"UNDER-THE-DASH MOBILE TRANS-MITTER FOR 75-METER PHONE OPERATION" O. M. Lowery W4MMK CQ-July 1950 Use of the BC-442 case as a chassisenclosure makes this miniature rig possible.

COMMAND SET DYNAMOTORS
"SOME USES FOR THE SCR-274
DYNAMOTORS"
Elmo V. Boswell WØPXW
QST-September 1949 (Hints and Kinks)

These 28 volt dogs convert to AC motors.

"SOME USES FOR THE SCR-274 DYNAMOTORS" Richard M. Smith W1FTX QST-September 1949 (Hints and Kinks) Use of these units as pillow blocks for beam antennas.

COMMAND SET RECEIVERS
"AUDIO BOOSTING THE COMMAND
RECEIVERS"
Art Korn K8HDR
73 Magazine-April 1961

Audio circuit changes to improve the Command Set receivers for amateur applications.

"THE BC-453 AS A TUNABLE I.F. IN A MULTI-BAND RECEIVER" Carl H. Ericson W2PPL QST-February 1961 An improved version, with better performance, of the writers original conversion. A lot for your money.

"NOT JUST A NOVELTY" Davis A. Helton WØPME QST-January 1961

QST-November 1960

The BC-455 contributes to this mobile CQ installation.

"FOR THE COMMAND RECEIVER: NOISE LIMITER, A.V.C., AND S METER" Lewis G. McCoy W11CP QST-December 1960

Refinements for the Command Set receivers. W1ICP describes the treatment for the BC-445.

"50 AND 144-MC. RECEPTION AT LOW COST" Lewis G. McCoy W1ICP This article describes crystal controlled converters for use with the BC-455 as a tunable IF.

"A COMPLETE 80-METER C.W. STATION USING SURPLUS UNITS" David L. Cabaniss W1TUW QST-June 1960 Complete details on a package station using the BC-454 and the BC-696.

"INEXPENSIVE AND EASY AMATEUR RECEPTION" Lyle Parsons W7HLU CQ-March 1960 A Command Set receiver conversion with bandspread modification and a tuning range of 6950 to 7330 KC.

"A POOR MAN'S Q MULTIPLIER" Lewis G. McCoy W1ICP QST-March 1960

"TWO-BAND COVERAGE WITH THE BC-454" Yardley Beers W2AWH QST-January 1960

"A 3 BAND COMMAND RECEIVER" Louis L. Brent WØUC CQ-January 1960

"A PHASING-TYPE SIDEBANDER" Adelbert Kelley W4EEU QST-November 1959

"TUNABLE-I.F. RECEIVER USING THE BC-453" Carl H. Ericson W2PPL QST-September 1959

"AN ARC-5 TRIPLE SUPERHET" Frank S. Gue VE3DPC QST-August 1959

"80 THROUGH 6 WITH THE BC-454" Lewis G. McCoy W1ICP QST-May 1959

"BANDSPREADING THE BC-455" Hovey M. Cowles W3JWZ QST-April 1959 (Hints and Kinks)

"A 6 METER TRANSMITTER-RECEIVER" Joel Ross K2HXS CQ-April 1959

"GETTING STARTED WITH THE BC-454" Lewis G. McCoy W1ICP QST-January 1959

"USING THE GONSET SUPER-SIX AHEAD OF A COMMAND RECEIVER" Ronald E. Delp W6DAW QST-April 1958

"THE COMMAND TWINS" Rolf Schick DL3AO CQ-February 1958 Improved selectivity for the BC-454 and BC-455 with controlled IF regeneration.

Coil modification gives 80 and 40 meters with the BC-454. Coil data is given for all bands from 1.7 to 56 MC.

A BC-453 and converter package is described in detail.

Use of Command Set components reduces the cost for this version of the "Sideband Package".

This up-dated surplus receiver, in an economical package, meets modern standards of performance.

The BC-453, BC-454 and the BC-455 team up in this bargain basement, high performance receiver.

Data on converters for all band use with the BC-454 as a tunable IF.

After this modification, 40 meters covers 2 1/2" on the dial.

Home built transmitter, International Crystal FCV-1 converter and the BC-455 make up this neat mobile installation.

Conversion details on an 80 meter receiver described in simple language.

A low cost combination provides lots of results with little work.

The BC-454 and BC-453 combine for budget SSB receiver on 14, 21 and 28 MC.

"CHEAP DOUBLE CONVERSION"
A. W. McAuly W3CEO
CQ-September 1957

"THE R-28/ARC-5 FOR TWO METERS" Donald L, Stoner W6TNS CQ-June 1957 (Surplus Column)

"A COMMAND SET SIX METER TRANSCEIVER" Donald L. Stoner W6TNS CQ-March 1957 (Surplus Column)

"PRODUCT DETECTOR FOR COMMAND RECEIVERS" Charles McDowell W4JJX QST-December 1956 (Hints and Kinks)

"IMPROVING THE SELECTIVITY OF THE BC-348 — WITHOUT PAIN" Joseph L. Boswell W7KEG CQ-September 1956

"THE SINGLE SIDEBAND Q5-ER" Donald L. Stoner W6TNS CQ-September 1956

"A NINE-TUBE AMATEUR-BAND RE-CEIVER WITH 3-KC SELECTIVITY" Emory E. Toops W9HLH QST-March 1956

"THE NOVICE Q5-ER" Donald L. Stoner W6TNS CQ-January 1956

"RESISTOR HINTS"
E. M. Fry K2CW
QST-July 1955 (Hints and Kinks)

"BETTER SELECTIVITY IN MOBILE RECEPTION" Ray A, Tell W2TZI QST-June 1955

"THE ARC-5 REPACKAGED" W. B. Bernard K6EUS CQ-March 1955

"A MOBILE S.S.B. RECEIVER FOR 80 AND 40" Robert A. Thomason W4SUD QST-March 1955 RF coils for the BC-455 are rewound for 10 meter coverage and the 2830 KC IF fed to the station receiver.

A mobile, 2 meter, fixed frequency conversion of this VHF Command receiver.

The BC-654 Command Set receiver with the International Crystal FCV-1 converter and FO-6 oscillator make this six meter package.

This modification gives excellent SSB reception with the Q5-er.

How to use the BC-946 Command Set receiver as a Q5-er for the BC-348.

An outboard Q multiplier and 80-40-20 meter converter for use with the Novice Q5-er (CQ-January, 1956).

This high performance receiver makes full use of BC-453 components.

An outboard converter covers an easy 80 and 40 with the BC-453. Conversion of the BC-453 is covered in detail.

Precautions to observe with Command Set resistors.

The R-23/ARC-5 as a Q5-er for the Gonset converter gives good mobile performance.

This Command Set receiver is stripped and rebuilt, with several refinements, on a 3 1/2" relay rack panel.

The BC-453 as a mobile SSB receiver.

"A LAZY MAN'S PANORAMIC ADAPTOR" Robert W. Ehrlich W4CUU QST-November 1954

"THE COMMAND SET ROUNDUP" Herb S. Brier W9EGQ CQ-February 1954

"CONVERTING THE R-28/ARC-5 V.H.F. RECEIVER" Furman C. Cobb CQ-December 1953 (The VHF-UHF News)

"A COMMAND SET RECEIVER FOR 6 AND 10" Charles L. Faulkner W6FPV QST-September 1953

"A NEW SIMPLIFIED Q5-ER" Robert H. Weitbrecht W6NRM/W9TCJ CQ-July 1953

"QRM-CUTTING SELECTIVITY FOR THE MOBILE RECEIVER" George M. Brown W2CVV Radio & Television News-May 1953

"A SINGLE-CONTROL TRANSMITTER-RECEIVER" Gus Treuke W6DSR QST-May 1953

"BANDPASS CRYSTAL FILTERS FOR RECEIVING" Byron Goodman W1DX QST-April 1953 (On The Air With SSB)

"BANDSPREAD DIAL FOR THE COM-MAND RECEIVERS" Jesse O. Bostwick W7LDT CQ-March 1953

"THE EASY WAY HETERODYNE EXCITER" Major R. H. Mitchell W6TZB CQ-March 1953 The BC-453 Q5-er converts to a panadaptor.

A comprehensive summary, with lots of detail, of the Command Set receiver conversions.

A continuous tuning conversion of this VHF Command Set receiver. Power supply is not discussed.

Converters added to the BC-454 and packaged in the conventional receiver style make an economical receiver for 3.5, 28 and 50 MC.

BC-453 IF transformers are used in this "down-up-down" converter used with the BC348. Though not developed in this article, the writer had modern "pass-band" tuning within reach.

This "from scratch" IF amplifier strip for mobile use features Command Set IF transformers.

A true transceiver from the BC-453. Transmitter frequency is locked to the receive frequency.

A simple configuration of surplus crystals in front of the BC-453 tightens up the bandpass to 1,3 KC.

Vernier scale for use on the tuning knob of the Command Set receivers.

Using the BC-454 and BC-455 receivers "in reverse" as stable VFO exciters, Receiver function is not retained.

"FORTY-METER MOBILE WITH YOUR ARC-5" Lt, Cdr. Paul H, Lee W4RXO CQ-March 1953

"GETTING ON THE 7.2 MC BAND" Herb Brier W9EGQ CQ-March 1953 (Novice Shack Column)

"TUNABLE IF STRIP FOR V.H.F. CONVERTERS"
Ralph W. Burhans W8FKC
QST-October 1952 (Hints and Kinks)

"MOBILE WITH THE ARC-5/SCR-274" Lt. Paul H. Lee W4RXO CQ-May 1952

"A HIGH-FREQUENCY DOUBLE CON-VERSION SUPERHET FOR I.F. FRE-QUENCIES ABOVE 500 KC" Fred J. Lingel W2ZGY Radio & Television News-September 1951

"NEW LIFE FOR THE Q5-ER" Douglas R. Jordan QST-February 1951

"A XTAL CONTROLLED Q5-ER" Harold Bourell W1QVC CQ-December 1950

"TRIPLE CONVERSION FOR THE BC-348" C. R. Wade W9HZZ CQ-November 1950

"A TWO-TUBE CRYSTAL CONTROLLED CONVERTER FOR 10 METERS" Charles L. Faulkner W6FPV QST-August 1950

"USING THE BC-454 AND BC-455 FOR 20 METER OPERATION" F. K. Sullivan W8UYK Radio & Television News-August 1950

"A HIGH FREQUENCY CRYSTAL FILTER" Kenneth P. Lange WØBEN QST-April 1950 This article supplements the mobile conversion described in "Mobile with the ARC-5/SCR-274", CQ-May, 1952.

A simple, outboard converter for use with the BC-454 permits reception on 40 meters.

Details on changing the coverage of the BC-454 to 8-14 MC.

A very comprehensive article on the Command Set and its conversion. "Must" reading before any conversion.

No converter and little conversion of the BC-453. The second harmonic of the HF oscillator is used as the mixing frequency.

Another conversion of the BC-453 with refinements.

A built-up unit using back-to-back, 85 KC Command Set IF transformers. A crystal controlled converter stage is used.

The BC-453, with a converter mounted in the ex-dynamotor location, teams up with the BC-348 for Q5-er performance.

Double conversion using the BC-453. Notes on improving this receiver provided.

A method of using the HF oscillator of the BC-455 as a converter. The BC-455 then feeds a BC-454.

Increased selectivity for those converter-BC-455 combinations.

"SUBSTITUTE FOR THE ARC-5 PLUG" John R. Riley CQ-April 1950

"STAY OUT OF JAIL" Ford L. McGraw W6STS CQ-January 1950

"COMMAND SET SPECIAL" F. A. Bartlett W6OWP/6 CQ-November 1949

"Q5-ER AS A VERTICAL AMPLIFIER FOR AN OSCILLOSCOPE" A. T. Purseglove W1QFB QST-November 1949 (Hints and Kinks)

"CONVERSION OF THE BC-453 TO THE BROADCAST BAND: John R. Immel W6ZKJ CQ-October 1949

"A CRYSTAL CONTROLLED PLUG-IN CONVERTER FOR THE Q5-ER" John L. Stewart W6UJD QST-October 1949

"SCR-274N SELENIUM SUPPLY" Lloyd V. Broderson W6CLV CQ-October 1949

"MOBILE RECEIVER FOR 75-METER 'PHONE"
Marion D. Conham
QST-July 1949 (Hints and Kinks)

"COUPLING THE 453 AS A Q5-ER" Herbert S. Brier W9EGQ CQ-June 1949

"READY-MADE 274N TUNING KNOB" David H. Schick W4KPH CQ-June 1949

"GREATER SELECTIVITY WITH THE LAZY MANS Q5-ER" Maynard B. Chenoweth W8CUS QST-March 1949 (Hints and Kinks)

"A DOUBLE-CONVERSION RECEIVER FOR \$30!" Allen A. Engleman WøMYU CQ-February 1949 How to use the PL-153 with the ARC-5.

This article covers the use of the BC-454 as a station monitor.

The BC-454 or BC-455 are featured in this complete, AC operated, station package. A fine emergency rig.

Using the BC-453 with the basic scope for "on the air" tests and modulation checks.

Coil data for converting this Command Set receiver to the broadcast band.

This converter and the BC-453 make a selective 80 and 40 meter receiver.

A compact, AC line operated supply for the Command Set receivers. WARNING: THE CHASSIS IS HOT!

How to use the BC-454 in conjunction with a BC receiver for double-conversion mobile reception.

A phone jack connection for the Q5er. It is dependent on the poor audio filtering present in most receivers.

One of those "Well I'll be darned" ideas that is so obvious it escaped attention.

Modification of the BC-453 IF transformers provides even greater selectivity.

Crystal controlled converters and the BC-453 make a neat package which provides coverage on 80-40 and 20 meters. "NOISE LIMITERS FOR THE SCR-274N RECEIVERS"
Don Jeppesen W#QFZ
CQ-January 1949

"SCR-274N TUNING KNOB" T. C. Freedom W3HVE CQ-January 1949

"MORE SELECTIVITY FOR THE BC-455-B" E. W. Williamson Radio-Electronics-December 1948

"BANDSPREADING THE BC-455" George E. Bidwell W9FIS CQ-November 1948

"POWER HOUSE PORTABLE" Clyde C. Lary W6GCS CQ-October 1948

"PUTTING THE BC-455 ON 10" Everett J. Gilbert W9MSP CQ-September 1948

"A TRIPLE CONVERSION FOR THE COMMUNICATIONS RECEIVER" William I. Orr W6SAI QST-September 1948

"OUTPUT PLUG FOR A 274N RECEIVER" Alva H. Clark W4DCB CQ-August 1948

"CONVERSION OF THE SCR-274N RECEIVERS" C. W. Roeschke W5MLX Radio News-June 1948

"INCREASING THE BANDSPREAD ON THE SCR-274 RECEIVERS" Arthur Larky CQ-June 1948

"A Q5ER FOR BC-348 OWNERS...
BUILDING A SIMPLE CONVERTER"
William W. Orr W2OWA
QST-June 1948

A simple 1N34 limiter circuit for the Command Set receiver.

Home constructed knob has less backlash than the hard-to-get surplus knob.

How to replace the 2830 KC IF transformers with quality 455 KC units for improved performance.

A professional presentation on exactly how to spread the 40 meter band across the entire dial of the BC-455.

A portable package consisting of the Command Set transmitter and receiver with an AC power supply.

The usual conversion information along with new coil data for 10 meter operation of the BC-455 receiver.

Discussion of the lazy man's Q5-er, leading to construction details for a highly selective receiver adaptor using BC-453, 85 KC IF transformers.

Using the surplus PL-291 plug as an output connector when these receivers are used as converters.

"All about" Command Set receivers.

Pulling plates from the tuning capacitor of the BC-454 gives added bandspread.

An external converter shifts the IF output of the BC-348 to a frequency within the tuning range of the BC-453.

A Q5-ER FOR BC-348 OWNERS ... BY ADDING SERIES PADDERS" G. M. Kosolapoff QST-June 1948

"A Q5-ER FOR BC-348 OWNERS ... CONVERTING WITH AN EXTERNAL OSCILLATOR" Philip S. Rand W1DBM QST-June 1948

"A Q5-ER FOR BC-348 OWNERS ... MODIFYING THE COILS" Marv Gonsio W6VFR QST-June 1948

"BC-946 AS B.C. RECEIVER" Lynn G. Herbert Radio-Craft-February 1948

"THE LAZY MAN'S Q5-ER" Byron Goodman W1DX QST-January 1948

"TUNING DEVICE FOR THE ARC-5" George Nelson W2RAC CQ-January 1948

"CONVERTING THE SCR-274N RECEIVER" Russel F, Sievert W8OZA CQ-November 1947

COMMAND SET TRANSMITTERS
"A BANDSWITCHING, LOW COST 400
WATT LINEAR"
Howard L. Morrison W7ESM
CQ-May 1961

"A UNIQUE SUPPRESSED CARRIER TRANSMITTER" Robert W. Stolzenbach W8KP CQ-May 1961

"THE GENTLEMAN'S V.F.O. OR HOW TO KEY A COMMAND SET" Ed Marriner W6BLZ CQ-February 1961

"FM VFO EXCITER" D. L. Cabaniss W1TUW 73 Magazine-November 1960 Changes to the BC-453 permit operation on the 915 KC IF frequency of the BC-348.

A fairly simple answer to the problem. An external crystal oscillator mixes in the RF stage of the BC-453 to translate the IF output of the BC-348.

Reworking the BC-453 coils to permit operation on the BC-348 IF of 915 KC.

An AC-DC command set modification for the broadcast band.

The classic of all surplus conversion articles. An adaptation of the BC-453 Command Set receiver as a highly selective, outboard IF amplifier.

A convenient and simple tuning crank for the Command Set receivers.

The start of it all. Conversion details and an AC power supply are described. Warning: The chassis is hot!

Liberal use of Command Set transmitter and BC-375 components keeps this amplifier in the budget class.

A 100 watt DSB rig built around the Command Set transmitter. The 6AR8 balanced modulator is featured.

An extensive rebuild of the BC-458 with time sequence keying and other desirable features.

This VFO uses the BC-459 for FM operation. Use on 10 meters and higher is discussed.

"DELUXING THE ARC-5 TRANSMITTER" George Shuart W4AMN QST-September 1960

"A 1625 GROUNDED GRID LINEAR AMPLIFIER" David L. Bell W8GUE CQ-September 1960

"SIX METERS WITH THE ARC-5/T-23" Sam Harris W1FZJ CQ-July 1960 (VHF Column)

"A COMPLETE 80-METER C.W. STA-TION USING SURPLUS UNITS" David L. Cabaniss W1TUW QST-June 1960

"S,S,B. ON 144 MC WITH THE T-23/ARC-5" L. W. May, Jr. W5AJG QST-May 1960

"ANOTHER APPROACH TO DSB CON-VERSION OF COMMAND TRANS-MITTERS" Richard G. Fenner W5AVI CQ-February 1960

"CRYSTAL CONTROL FOR THE BC-457 AND BC-459" Lewis G. McCoy W11CP QST-November 1959

"'CHEAP AND EASY S.S.B.' GOES ON 15" John V. Fill K2GC/4 QST-August 1959

"PUTTING THE ARC5 ON TWO-METER SB" Dick Ray W5SNX/2 CQ-June 1959

"THE 200 L/ARC 5" W. R. Booher W9NTI CQ-December 1958

"REAL LAZY LINEARS" Kenneth B. Grayson W2HDM CQ-May 1958 (Surplus Column) The ultimate in BC-696 or T-19/ARC-5 conversions. 200 watts CW input, VFO or crystal and bandswitching to 80 or 40 meters are features.

200 watts input with 20 watts drive and all on a Command Set transmitter chassis.

Not too much detail but some fine conversion notes.

Complete details on a station package using the BC-454 and the BC-696.

Using this Command Set VHF unit as a mixer-amplifier for 2 meter sideband.

Low level modulation with the 1625 stage operated as a linear amplifier is featured in this BC-458 conversion.

Novice conversions of these popular Command Set transmitters.

The W2EWL BC-458 conversion, described in QST-March, 1956, goes on 21 MC.

Conversion of the T-23/ARC-5 provides high level mixing and modification of the output stage for linear operation.

A Command Set transmitter serves as a foundation for this completely self-contained 837 (2) linear amplifier.

A Command Set transmitter modification for getting 250 watts PEP from a pair of 1625 tubes. "USING THE BC-459 WITH THE V.H.F. OVERTONE OSCILLATOR" Ray L. Sherwood W9DRY QST-December 1957

"HI- AND LO-BAND EDGE MARKERS FOR 'COMMAND' TRANSMITTERS" Joseph W. Thane KØGGL QST-October 1957 (Hints and Kinks)

"SSB TEN METER CONVERTER FOR THE BC-458 VFO" John W. Govier W8QNW CQ-October 1957

"ONE FOR THE ROAD" F. A. Bartlett W60WP CQ-June 1957

"INSTANT SIDEBAND: James P. Bonner W4EFH CQ-May 1957

"TWO METERS WITH THE T-23/ARC-5" Harold Morris W4VUO and Joe Westenhover W4FEC CQ-April 1957

"A 100 WATT DSB MOBILE TRANSMITTER: Jack Najork W2HNH CQ-March 1957

"AN 'ALL BAND' BC-458 — A HETERO-DYNE V.F.O. FOR S.S.B." Ben Russ W2QZ QST-February 1957

"CHEAP AND EASY S.S.B." Anthony Vitale W2EWL QST-March 1956

"TUNING THE MOBILE ANTENNA FROM THE DRIVERS SEAT" Frank T. Morgan W7RFG QST-October 1955

"LOW COST VFO" Paul Lee W2EWP CQ-July 1955 Notes on using the BC-459 as a VFO into the crystal socket of overtone oscillators.

Adding another marker crystal to existing calibration circuit.

This converter accepts the 10-11 MC output of the BC-458 VFO and puts out the 7.5 MC conversion frequency required by some commercial exciters.

Oscillator isolation, reference shift modulation and remote control are features of this 35 to 40 watt, BC-459 rig.

DSB conversion of the BC-696. Conversion takes only a few minutes if external low level modulator is used.

A very simple AC powered conversion with 30 watts input to the final.

A neat mobile conversion of the Command Set transmitter to 80 meter DSB operation.

This Command Set transmitter is used as the mixing signal generator for use with 9 MC SSB exciters.

Sideband the easy way using the BC-458.

A BC-696 antenna coil and a BC-442 RF ammeter are combined in this novel but practical mobile application.

A complete rebuild of the Command Set transmitter gives a high performance VFO. "AUTOMATIC MOBILE ANTENNA TUNING" John A. Hargrave WØIGP QST-May 1955

"MOTOR DRIVEN LOADING COIL" Charles T. Miser W9MDC CQ-May 1955

"MODIFYING COMMAND TRANSMITTER RELAYS FOR 6-VOLT OPERATION" K. M. Isbell W6BOQ QST-April 1955 (hints and Kinks)

"BREAK-IN WITH THE 274N" Frank A. Mohler W2IAZ CQ-August 1954

"THE COMMAND SET ROUNDUP" Herb S. Brier W9EGQ CQ-February 1954

"OPERATING THE BC-696 TV FRINGE AREAS" John D. Ticen W9UUV OST-December 1953

"REMOTE MOBILE-ANTENNA RESONATING" J. C. Picken, Jr. K6DY and B. A. Wambsganss W6WOY QST-December 1953

"A SIMPLE HETERODYNE EXCITER FOR 10 METERS" Charles Faulkner W6FPV QST-November 1953

"PUT YOUR SCR-274 N ON 160 METERS" Eugene Westervelt W9DRJ CQ-June 1953

"A CRYSTAL-CONTROL ADAPTOR FOR THE BC-696" Henry R. Greeb WØFVD CQ-April 1953

"BETTER KEYING FOR THE CON-VERTED BC-457" Vernon M. Slichter WN7RKY QST-March 1953 (Hints and Kinks) Surplus Command Set transmitter coil is the heart of the tuner described in this article.

The antenna coil from the BC-696 and the drive motor from the RL-42B do the job in this mobile installation.

Just what the title says.

Novel keying system for the Command Set transmitters uses few parts.

A comprehensive summary, with lots of detail, of the Command Set transmitter conversions.

Extensive circuit changes in this Command Set transmitter minimize TVI.

ARC-5 roller coil and surplus 24 volt DC motor make an ideal antenna tuner for mobile installations.

The BC-459, with internal conversion circuitry, makes a highly stable exciter for 10 meter operation.

Instructions and coil data for operating the BC-457 on 160 meters.

This little device permits crystal operation with the Command Set transmitter. Change over takes less than a minute.

Changing the 1626 oscillator to a 12A6 for improved performance.

"FORTY-METER MOBILE WITH YOUR ARC-5" Lt. Cdr. Paul H. Lee W4RXO CQ-March 1953

"BC-459A CALIBRATION CRYSTAL FOR CONVERTER USE" John W. Watson W7GHB QST-February 1953 (Hints and Kinks)

"MODERNIZING THE SCR-274-N TRANSMITTER" Carl V. Hays W6RTP Radio & Television News-January 1953

"CRYSTAL ADAPTOR FOR THE ARC-5 TRANSMITTERS" John R. Abbott W6ZOL QST-December 1952 (Hints and Kinks)

"GRID-BLOCK KEYING" E. R. Syphrit W3LWN CQ-September 1952

"ON 15 METERS — QUICK" H. N. Lem W2CTE CQ-August 1952

"MOBILE WITH THE ARC-5/SCR-274" Lt. Paul H. Lee W4RXO CQ-May 1952

"TVI TREATMENT FOR 'COMMAND' TRANSMITTERS"
James F. Quigley WØFQO
QST-April 1952 (Hints and Kinks)

"BANDSPREADING THE 'COMMAND' TRANSMITTERS" George Young W5KQD QST-February 1952 (Hints and Kinks)

"THE NOVICE CONVERSION OF A 'COMMAND' TRANSMITTER"
R. M. Smith W1FTX and
W. E. Bradley W1FWH
QST-November 1951

"KEYING THE BC-696" Holland M. Carter W4ADE QST-July 1951 This article supplements the ARC-5-SCR-274 mobile conversion described in CQ-May, 1952.

Using this 8 MC rock in a converter oscillator.

40 meters and 40 watts in a commercial appearing conversion. This rig is described fully for easy duplication.

A gadget to make for easy crystal changes in the Command Set transmitters.

Grid-block keying applied to both the oscillator and amplifier in the Command Set transmitters.

How to reach 21 MC with the BC-458 and the BC-459 Command Set transmitters.

A very comprehensive article on the care and feeding of the Command Set in mobile operation. Must reading.

A method of reducing TVI from the BC-457.

Easy modification of the BC-457 and BC-458 transmitters to provide 10 KC per dial division calibration.

Conversion details on the BC-457 or the T-20/ARC-5 as a Novice transmitter.

Practical keying circuit for the Command Set transmitters.

"WAR SURPLUS FOR CIVIL DEFENSE" P. S. Rand W1DBM CQ-May 1951

"WAR SURPLUS FOR CIVIL DEFENSE" P. S. Rand W1DBM CQ-April 1951

"AT LAST A PRACTICAL ALL-BAND HETERODYNE V.F.O." L. Dennis Shapiro W2URX CQ-December 1950

"TVI-PROOFING THE ARC-5 V.H.F. TRANSMITTER" O. W. H. Johnson W2ZYX QST-November 1950

"SCR-274N TRANSMITTER MODIFICATIONS" James N. Whitaker W2BFB CQ-August 1950

"MODIFYING THE BC-459 FOR TVI-FREE 40-METER OPERATION" Herbert S. Brier W9EGQ CQ-June 1950

"SUBSTITUTE FOR THE ARC-5 PLUG" John R. Riley CQ-April 1950

"TVI-PROOFING THE COMMAND TRANSMITTER" Samuel J. Lanzalotti W2DVX CQ-March 1950

"A HIGH-POWER MODULATOR FOR MOBILE OPERATION" George M. Brown W2CVV CQ-February 1950

"STABILIZING THE VFO" Clarence A. West W2IYG CQ-February 1950

"PLUG IN EXCITERS FROM
'COMMAND' TRANSMITTERS"
T. Glade Wilcox W9UHF and
Charles Hoffman W9ZHL
QST-January 1950

Extensive rebuilding of the BC-458 or BC-459 for 50 MC mobile operation.

Extensive rebuild of the BC-458 or BC-459 for operation on the 10 meter band.

The T-20/ARC-5 is the foundation for this practical and modern exciter.

How to operate the T-23/ARC-5 and get along with your neighbors.

Some practical thoughts and words of warning. Particular emphasis is placed on keying these transmitters.

Shielding, filtering and keying modifications comprise part of the treatment given the BC-459. Lots of good information.

How to use the PL-153 plug with the ARC-5.

Details on application of the classic cures to de-TVI the Command Set transmitters.

This modulator is constructed on a Command Set transmitter chassis for mounting in a Command Set rack.

Lots of good information on the use of the BC-696 Command Set transmitter as a VFO.

Versatile transmitter design uses Command Set transmitters as exciters. "COMMAND SET SPECIAL" F. A. Bartlett W6OWP/6 CQ-November 1949

"CURING CHIRP IN COMMAND TRANSMITTERS" Alfred Scott Cline W6LGU QST-October 1949 (Hints and Kinks)

"TVI-FREE RIG FOR 10" Mack Seybold W2RYI CQ-October and November 1949

"SCREEN GRID MODULATING THE COMMAND RIGS"
Robert R. Hall WØCRO
CQ-September 1949

"VOLTAGE REGULATOR FOR COM-MAND SETS" F. C. Breeden W2SIJ CQ-June 1949

"ADAPTING THE SCR-274N SERIES TRANSMITTERS FOR 14 MC" William I. Orr W6SAI QST-April 1949

"SCR-274N KEYING FILTER" Bill Orr W6SAI CQ-April 1949

"20-METER OPERATION OF THE BC-659A" Willem Van Aller W2VIK CQ-February 1949

"POWER HOUSE PORTABLE" Clyde C. Lary W6GCS CQ-October 1948

"BANDSPREADING THE SCR-274N" E. Henrich W8OVL CQ-August 1948

"COAX ANTENNA CONNECTOR FOR COMMAND TRANSMITTERS" F. C. Breeden W2SIJ CQ-July 1948 The BC-457 or BC-459 Command Set transmitter is used in this complete station package.

Help clean up the bands.

A BC-458 transmitter is buried in the interior of this buttoned up 813 rig. The hard way to de-TVI a Command Set.

Simple modulator and power supply for Command Set transmitters.

A rather obscure load equalizing relay circuit for use with Command Set transmitters.

Conversion details for putting the BC-457 and BC-696 Command Set transmitters on 20 meters.

Simple filter circuit with oscillator plate and PA screen keying provides good results.

Simple change to get 20 and 40 meter operation with this Command Set transmitter.

Portable station using Command Set components. An AC power supply is constructed in an extra transmitter case.

An elaborate but effective dial for the Command Set transmitters.

This hint allows V.F.O. and complete transmitter use with simple output connector arrangement.

"VARIATIONS IN THE MODIFICATION OF THE SCR-274N TRANSMITTERS FOR 11 and 10 METERS" Vince Dawson WØZJB CQ-July 1948 How to use the BC-458 and the BC-459 for 10 meter and VHF VFO applications.

"VARIATIONS IN THE MODIFICATION OF THE SCR-274N TRANSMITTERS FOR 40 AND 20 METERS" Edwin W. Hannum W2VNU/8 CQ-July 1948 Electrical and mechanical changes put the BC-659 on 20 meters.

"VARIATIONS IN THE MODIFICATION OF THE SCR-274N TRANSMITTERS FOR 80 AND 40 METERS" E. B. McIntyre W3KHJ CQ-July 1948 Rack mounting a pair of Command Set transmitters with switching circuits between them.

"ARC-5 TRANSMITTER MODIFICA-TIONS ... ELIMINATING RIPPLE IN THE BC-459-A" J. R. Abbott W6ZOL QST-June 1948 Chirp is cleaned up by deletion of the eye tube.

"ARC-5 TRANSMITTER MODIFICA-TIONS ... IMPROVED KEYING" T. A. Previtt W9UKT OST-June 1948 Oscillator plate and amplifier screen keying improves Command Set transmitters.

"ARC-5 TRANSMITTER MODIFICA-TIONS ... MAKING USE OF THE TUNING EYE" F. W. Wright W2UWK QST-June 1948 Changes to the indicator tube bias circuit permits its use in AC conversions.

"ARC-5 TRANSMITTER MODIFICA-TIONS ... 14-MC OUTPUT FROM THE BC-459-A" Byron Goodman W1DX QST-June 1948 A clean 20 meter modification of the BC-459-A.

"ARC-5 TRANSMITTER MODIFICA-TIONS ... N.F.M. ADDED TO THE BC-459-A" Don Imhoff W8YFS QST-June 1948 Little change is made in the transmitter and an external speech amplifier is used.

"ARC-5 TRANSMITTER MODIFICA-TIONS ... 14-MC OUTPUT FROM THE BC-459-A" John T. McIntosh W8ZGO QST-June 1948 A simple change puts the BC-459-A on 20 meters.

"CONVERSION NOTES ON THE BC-696A" John T. Frye W9EGV Radio News-March 1948

"20 AND 40 METERS WITH THE

"20 AND 40 METERS WITH THE BC-459A TRANSMITTER"
Edwin W. Hannum W2VNU/8
CQ-March 1948

"MOBILE WITH THE SCR-274N" George M. Brown W2CVV CQ-January 1948

"CONVERTING THE SCR-274-N FOR VFO OPERATION ON FM OR AM" L. W. May, Jr. W5AJG/W5JKM CQ-May 1946

### COMMERCIAL SURPLUS

"BARRY'S TWO METER GEM"
Kenneth B. Grayson W2HDM
CQ-September 1960 (Surplus Column)

"50--240-MC CONVERTER-RECEIVER USING HELICAL TYPE INDUCTOTUNER" Radio-Electronics Staff Radio-Electronics-June 1956

"A BANDSWITCHING V.H.F. CONVERTER AND HARMONIC CHECKER" Edward P. Tilton W1HDQ QST-July 1951

"WIDE-RANGE V.H.F. CONVERTER" C. O. Bishop W7HEA CQ-November 1949

# COMMERCIAL SURPLUS, POLICE RADIO EQUIPMENT

"MOTOROLA TEST SET" Beryl Dassow W9HKA 73 Magazine-March 1961

"SURPLUS POLICE RIGS FOR CD" Bill Bailey W9JJD CQ-May 1955

"CONVERTING THE RCA MI-7800 POLICE TRANSMITTERS FOR 28-MC. MOBILE USE" Warren Chase W1QNM QST-September 1951 Complete details for converting this 80 meter Command Set transmitter.

Simple change gives two band coverage with this Command Set transmitter.

A complete 10 meter mobile treatment for the Command Set transmitter, 6 volt conversion is covered.

How it all started. The first of the Command Set transmitter conversion articles.

A 240 MC telemetering transmitter with 20 watts output is converted to 2 meters.

Details on using this TV tuner item in a continuous coverage receiver.

A good example of commercial surplus utilization. A TV tuner makes a fine VHF converter.

A 44 to 216 MC converter using a commercial surplus Mallory Inductotuner.

An Alignment test set for those Motorola police radio sets that are coming into amateur use.

Conversion notes on using surplus Motorola police equipment, fixed and mobile, on 10 meter FM.

Rebuild of this popular VHF, commercial surplus transmitter gives good 10 meter performance.

"USING THE MOTOROLA T-69-20A ON 10 AND 6"
L. W. May, Jr. W5AJG
QST-August 1951

This commercial mobile transmitter needs little conversion for amateur 10 meter use.

CRV-59AAE TELEVISION CAMERA
"HAM TV"
Donald L. Stoner W6TNS
CQ-May 1957 (Surplus Column)

Detailed conversion data and much information on amateur use of this surplus Navy "Block III" Television bomb guidance equipment.

CRYSTALS - APPLICATION
"TAKE YOUR PICK"
73 Magazine Staff
73 Magazine-April 1961

Complete discussion of crystal filters for receivers. Application of surplus crystals is covered.

"HIGH-FREQUENCY CRYSTAL FILTERS FOR S.S.B." D. J. Healey W3HEC QST-October 1960 Design procedures and a practical circuit for high performance crystal filters using surplus crystals.

"THE PHJ-1" Clyde B. Lee W4PHJ QST-September 1960 This CW receiver uses surplus DC-34 crystals in a cascade filter-amplifier.

"IMPROVED SELECTIVITY FOR OLDER RECEIVERS" John M. Palmer W1SGN QST-July 1960 A low-cost, half-lattice crystal filter for use with the Super Pro or the HQ-129X receivers.

"THE 'IMP' — A 3-TUBE FILTER RIG" Joseph S. Galeski, Jr. W4IMP QST-May 1960 An SSB exciter using surplus high frequency crystals in a half-lattice filter.

"SOME NEW IDEAS IN A HAM-BAND RECEIVER" Pitt W. Arnold W9BIY and Craig R. Allen W9IHT QST-May 1960 A superior receiver using surplus crystals in a high frequency filter.

"MOBILE S.S.B. TRANSCEIVER" Benjamin H. Vester W3TLN QST-June 1959

High frequency crystal filter uses FT-243 crystals.

"SURPLUS-CRYSTAL HIGH-FRE-QUENCY FILTERS" Benjamin H, Vester W3TLN QST-January 1959 Design and application notes on halflattice filters using surplus 4 to 7 MC crystals.

"A SIDE-BAND PACKAGE" George K. Bigler W6TEU QST-June 1958 A well designed and much duplicated exciter using surplus crystals in the sideband filter. "AN INEXPENSIVE CRYSTAL-FILTER I.F. AMPLIFIER" Hugh L. Gottfried W6YBR QST-February 1958  $\begin{array}{l} \mbox{High frequency surplus crystals are} \\ \mbox{used in this CW IF strip.} \end{array}$ 

"SUPER SELECTIVITY WITH CRYSTALS" Richard F. Burns W9NVC Radio & T.V. News-July 1957 Details on an outboard IF filter using surplus FT-241-A crystals.

"SSB CRYSTAL FILTER" E. L. Klein W4UHN CQ-June 1957 A printed circuit version of the Edmunds crystal filter using FT-241 crystal units.

"VOX SSB EXCITER" Robert C. Treadwell W3TCQ CQ-August 1956

A 10 watt exciter using FT-241A crystals in an Edmunds filter.

"USING 'OUT OF BAND' CRYSTALS FOR THE AMATEUR BANDS" Herbert Greenberg W2EEJ CQ-February 1956

Multiplication tricks enable these surplus "dogs" to be used.

"A RECEIVER VARIABLE SELECTIVITY ADAPTER" John T. Richards W6RUD CQ-November 1955

A full lattice filter with shunt crystals designed for installation in an HQ-120X receiver.

"A VARIABLE BANDWIDTH FILTER" H. E. Thomas W6CAB QST-February 1955

Filters using FT-241 crystals and an ingenious inversion system do the job.

"SIDEBAND FILTERS USING CRYSTALS" Richard F. Burns W9NVC QST-November 1954

A full discussion on the use of surplus FT-241 crystals in sideband filters.

"CASCADED HALF-LATTICE CRYSTAL-FILTERS FOR 'PHONE AND C.W. RECEPTION" Howard L. Morrison W7ESM QST-May 1954

Surplus FT-241 crystals give the old Super-Pro new life.

""PHONE SELECTIVITY FOR THE BC-312" Howard L. Morrison W7ESM QST-February 1954

Adding an FT-241 crystal filter to the BC-312.

"SIMPLIFIED CRYSTAL I.F. FILTER"
William Bruce Cameron W8IVJ
Radio & Television News-November 1953

Surplus 200 KC crystal is the heart of this "odd frequency" IF system.

"A HALF-LATTICE CRYSTAL-FILTER EXCITER" Byron Goodman W1DX QST-June 1953 (On The Air With SSB) Another cascaded filter using surplus crystals.

"BANDPASS CRYSTAL FILTERS FOR RECEIVING" Byron Goodman W1DX QST-April 1953 (On The Air With SSB)

"DESIGN NOTES ON A SPECIALIZED 'PHONE RECEIVER" Robert W. Erlich W2NJR QST-April 1953

"A DIFFERENT BALANCED MODU-LATOR AND CRYSTAL FILTER" Byron Goodman W1DX QST-April 1953 (On The Air With SSB)

"GETTING STARTED ON SINGLE SIDEBAND" Jack N. Brown W4OLL CQ-April 1953

"A CRYSTAL FILTER FOR 'PHONE RECEPTION" William E. Good W3LQE QST-October 1951

"CRYSTAL LATTICE FILTERS FOR TRANSMITTING AND RECEIVING" C. E. Weaver W2AZW and J. N. Brown W4OLL QST-June and August 1951

"A CRYSTAL-FILTER S.S.B. EXCITER"
F. E. Edmunds W1JEO/9
QST-November 1950

"A DUAL-CRYSTAL 'Q5-ER'" Reginald A. Titt Ex-G3CMJ QST-September 1950

"A HIGH FREQUENCY CRYSTAL FILTER" Kenneth P. Lange WØBEN QST-April 1950

'fool proof socket for ft-243" Felix W. Mullins W5BVF CQ-September 1948

CRYSTALS -- PROCESSING
"UTILIZING SMALL PIN CRYSTALS"
Antonio Gelineau W4LEQ
CQ-February 1961

A simple configuration of surplus crystals in front of the BC-453 Q5-er tightens up the bandpass to 1,3 KC.

A deluxe receiver using 8 surplus crystals in a cascaded, full-lattice arrangement.

Cascaded half-lattice filter uses surplus crystals.

The Edmunds crystal filter, using FT-241 crystals, is used in this SSB exciter.

Another filter circuit using the surplus FT-241-A crystal units.

A classic, Surplus, low frequency crystals come into their own.

Another classic. First of a long line of filters using crystals from the SCR-508 - SCR-608 Radio Sets.

Surplus crystals give improved selectivity in CW reception.

Increased selectivity for those converter-BC-453 combinations.

Wiring scheme for the octal socket that prevents wrong insertion of the crystal.

How to adapt the HC-6/U holder to the FT-243 socket.

"ANOTHER CRYSTAL GRINDING COMPOUND" Kim A, Boriskin K2MGS QST-November 1959 (Hints and Kinks)

"ADAPTER FOR FT-243 CRYSTALS" Francis LeBaron W1TQZ QST-May 1959 (Hints and Kinks)

"CHANGING CRYSTAL FREQUENCIES"
J. H. Ellison W6AOI
QST-October 1958 (Hints and Kinks)

"CRYSTALS WHERE YOU WANT THEM" Lewis G. McCoy W1ICP QST-June 1958

"A SAFE METHOD FOR ETCHING CRYSTALS" Albert J. Newland W2IHW QST-January 1958

"HOW TO GRIND CRYSTALS" Robert B. Kuehn WØHKF CQ-November 1957

"A VARIABLE FREQUENCY CRYSTAL HOLDER"
Allen A. Engleman W4RMU
QST-February 1956

"COTTER-PIN ADAPTER FOR SURPLUS TYPE CR-1A CRYSTALS" Lee Rogers W5HGH QST-February 1955 (Hints and Kinks)

"QUARTZ CRYSTAL ETCHING"
Gene Brizendine W4ATE
Radio & Television News-May 1954

"MODIFIED CRYSTAL HOLDER" Robert B. Kuehn WØHKF CQ-August 1952

"CRYSTALS FOR BC-625 TRANS-MITTERS" John B. Riley CQ-October 1948

"MODIFYING THE FT-243 CRYSTAL HOLDER" Jim Rothsten W2MXG CQ-October 1948 Electric razor sharpening compound used for crystal grinding.

How to enlarge the pins of the FT-243 to fit the SCR-522 and other surplus equipment.

All about how to etch crystals with household chemicals.

Those surplus crystals are usable. Grinding techniques for the novice.

Ammonium bifluoride etches those surplus rocks up to frequency.

Full details on grinding and etching those surplus crystals to frequency.

Modification of the FT-243 holder provides limited frequency adjustment.

Simple means of using these crystals in standard sockets.

How to bring those surplus crystals to frequency without work.

Lots of work but it can be done. How to replace the pins in the large holders to fit the FT-243 sockets.

Adjustment of the BC-624 - BC-625 socket clips allows use of the FT-243 crystals.

How to modify the FT-243 holder to permit use in the large pin crystal sockets.

"CHANGING THE FREQUENCY OF A 'PLATED' CRYSTAL"
E. B. McIntyre W3KHJ
CQ-October 1947

"CRYSTAL GRINDING WITHOUT TEARS" Francis R, Cowles W1AOK QST-April 1946

"QUARTZ CRYSTAL FINISHING FOR HAMS" Richard E. Nebel W2DBQ CQ-July 1945 A wealth of valuable information, in a couple of paragraphs, on plating, reverse plating and etching of sur-

How to use those surplus crystals.

How to determine the "cut" of a crystal and bring it in on frequency.

### DYNAMOTORS

"FULL DYNAMOTOR OUTPUT WITH 1/2 THE INPUT VOLTAGE" Donald L. Stoner W6TNS CQ-August 1957 (Surplus Column)

"ROTARY CONVERTERS"
M. K. Brooks and W. Brooks W6JAB
CQ-May 1956

"USING YOUR 12-VOLT DYNAMOTORS" Dale L. Hileman WØMCB CQ-May 1953

"ANOTHER DYNAMOTOR USE" M. L. Winner W3NCV CQ-May 1952

FL-8 RADIO FILTER
"SAF-4 — THE C.W. MAN'S QRM
ELIMINATOR"
Gilbert C. Ford W7OXD
CQ-November 1957

"PROJECT CONELRAD" Joseph E. Howell K9CKP CQ-June 1957

"IMPROVED S/N WITH THE FL-8" Marv Gonsior W6VFR CQ-July 1952

"AUDIO FILTER CONNECTION"
C. Ray Wagner W2FEN
QST-August 1950 (Hints and Kinks)

This article tells how to rotate one brush to provide half-voltage operation.

Using those dual voltage dynamotors as DC transformers.

The "two battery" system of mobile operation is described. For today's 12 volt ignition systems, the method has equal merit with respect to 28 volt units.

A maritime mobile use for 28 volt dynamotors. Series operation allows use with any reasonable source voltage.

Cascaded FL-8 filters, with interstage amplifiers, provide real CW selectivity.

A CONELRAD system, using the surplus FL-8 range filter, that really works.

How the FL-8, in the "voice" mode, reduces receiver noise.

An easy way to connect the surplus FL-8 without mutilating the receiver.

"VARIABLE AUDIO SELECTIVITY WITH THE SURPLUS FL-8 FILTER" John P. Tyskewicz W1HXU CQ-May 1950 1 Resistor + FL-8 = Variable Selectivity.

"AUDIO FILTERS FOR ELIMINATING QRM" Robert O, Bennett W6DVE QST-July 1949 Details on using the FL-8 filter as a receiver accessory.

"A QRM ELIMINATOR"
G. L. Countryman, W3HH, W1RBK
CQ-June 1949

Two audio filters team up in this outboard device designed to reduce the hash in the crowded bands.

"LOW COST AUDIO SELECTIVITY" Richard G. Talpey W2PUD CQ-September 1948 An effective bandpass filter made from components of the FL-8A filter.

"QRM SLICERS! REINTRODUCING AUDIO SELECTIVITY" Clayton F. Bane W6WB CQ-June 1948 Discussion, pro and con, of peaked audio filters with the FL-8 being the case in point.

#### GENERAL

"A DIGEST OF SURPLUS RADIO EQUIPMENT" Gordon E. Hopper W1MDG 73 Magazine-October 1960 Practical suggestions on various items of surplus radio equipment.

"SURPLUS EQUIPMENT INFORMATION" Charles J. Schauers F7FE/W6QLV CQ-October 1959 (Ham Clinic Column)

A discussion of surplus electronic equipment for the amateur.

"SURPLUS ON THE CITIZENS BAND" Kenneth B. Grayson W2HDM CQ-June 1959 (Surplus Column)

General information. WARNING: Check current FCC regulations.

"AN INTRODUCTION TO SURPLUS EQUIPMENT" Kenneth B. Grayson W2HDM CQ-January and February 1958 (Surplus Column) A tabulation of surplus equipment with characteristics and conversion required.

"SURPLUS CONVERSIONS" Donald L. Stoner W6TNS CQ-September 1956

A general discussion of surplus and surplus conversions, Much of this information is still valid.

"SURPLUS REFERENCE SHELF FOR THE CONSTRUCTOR" Dr. L. B. Hedge Radio-Electronics-October 1950 A library listing to light your way to better surplus utilization.

"CONFESSIONS OF A SURPLUS HOUND" Cecil R. Nelin Radio & Television News-September 1948 Surplus can be bad.

"SURPLUS CONVERSIONS" Milton Kalashian Radio-Craft-August 1948 An early bibliograph of surplus conversions.

"ARMY SURPLUS RADIO MATERIALS" Lt. Col. David Talley W2PF CQ-April 1946 A look at the Army surplus picture.

"MORE ON SURPLUS" Maurice Gutman W2VL CQ-March 1946 A status report on surplus in early 1946.

"WAR SURPLUS FOR THE HAM"
Major M. R. Gutman USAF (Inactive)
W2VL
CQ-December 1945

General discussion of the surplus picture in late 1945.

GF-11 RADIO TRANSMITTER
"MOBILE WITH THE GF-11"
R. H. Brown W6OVX
CQ-January 1957

40 and 80 meter operation with this older, Navy surplus transmitter.

"IMPROVED KEYING FOR THE GF-11 TRANSMITTER" R. W. Thornally W6NG QST-July 1950 (Hints and Kinks)

Modified keying circuit for this Navy aircraft transmitter.

#### HS-33 HEADSET

"THE AMATEUR'S 'WIRELESS'
TELEPATCH"
Walter S. Rogers W1DFS
Radio & Television News-December 1951

No electrical connection is required with this patch which uses A.N.B. units from the HS-33 headset.

"THE R-5 MIKE"
Walter S. Rogers W1DFS
CQ-November 1949

Using the ANB-H-1 headset unit as a microphone. Response curves are given.

I-83 TEST SET
"CONVERTING THE I-83"
Roy E, Pafenberg W4WKM
CQ-November 1960

This very well metered dynamotor tester makes an easy conversion to a bench power supply.

I-177 TUBE TESTER

"ADAPTER FOR SURPLUS TUBE
TESTERS"

J. R. Throop WA6CLT
CQ-May 1961

An easily constructed adapter allows test of modern tubes on the I-177

"I-177 TUBE TESTER ADAPTER" Kenneth B. Grayson W2HDM CQ-September 1959 (Surplus Column)

ID-11/APS-4 INDICATOR
"USING THE APS-4"
Kenneth B. Grayson W2HDM
CQ-March 1961 (Surplus Column)

ID-60/APG-15 INDICATOR
"CONVERTING THE ID-60/APG-15"
Kenneth B. Grayson W2HDM
CQ-August 1958

KEY J-38
"'ANCHORING' THE J-38 KEY"
Don Simon KNØICY

Don Simon KNØJCY QST-March 1958 (Hints and Kinks)

"A BUILT-ON CLICK FILTER FOR THE TYPE J-38 KEY" Clifford A. Mason K2AFO QST-February 1956 (Hints and Kinks)

LM ..... See: BC-221

MARK II . . . . See: B19 MARK II

MILITARY SURPLUS COMMERCIAL EQUIPMENT

"C.W. XMITTER FOR 20 OR 10" Kenneth B. Grayson W2HDM CQ-January 1961 (Surplus Column)

"VOX WITH THE TYPE 3 CARRIER OPERATED LOUDSPEAKER PANEL" Kenneth B, Grayson W2HDM CQ-June 1959 (Surplus Column)

"TYPE 3 CARRIER OPERATED LOUDSPEAKER CONTROL PANEL Kenneth B. Grayson W2HDM CQ-January 1959 (Surplus Column)

"MORE BANDSPREAD ON NATIONAL MILITARY MODELS" Robert J. Murray W1FSN CQ-August 1956

"CIRCUIT IMPROVEMENTS IN THE TELRAD 18-A" Floyd A. Trueblood W3LZC/7 QST-October 1950 Details on an adapter to permit test of modern tubes. A test setting chart is provided.

Make a scope for the shack. The surplus ID-11/APS-4 provides a good start.

A compact, surplus scope. Although power supply is shown, voltages can usually be stolen from the transmitter.

Reversing the key on the base keeps it from walking off the table.

There is room on the base of this surplus key to install a shielded filter box.

A 10 watt rig from a balloon-borne telemetry transmitter. A simple modulator is described.

A further application of the equipment described in CQ-January 1959.

Outboard squelch is provided by this \$5.00 wonder.

Notes on making the surplus National receivers more suitable for amateur band use.

Modification improves crystal starting in this surplus crystal standard.

"SOUPING UP A WAR-SURPLUS HRO" Paul D. Rockwell W3AFM QST-February 1949

"IMPROVING THE MEISSNER 150-B FOR C.W. WORK" Bob M. Simmons WØARH QST-May 1948 (Hints and Kinks)

"F.M. RECEPTION WITH THE WILCOX F-3" John A. Dinter W8OAP QST-April 1948

"REVAMPING THE 150-B FOR 14-MC OPERATION" John M. Murray W1BNN QST-September 1947

#### MISCELLANEOUS

"ECONOMICAL CUSTOM RESISTORS" Roy E. Pafenberg W4WKM 73 Magazine-May 1961

"IMPEDANCE MATCHING IN SURPLUS EQUIPMENT" Roy E. Pafenberg W4WKM 73 Magazine-March 1961

"CONVERTING THE BRITISH TYPE 26 CONVERTER" Kenneth B. Grayson W2HDM CQ-August 1960 (Surplus Column)

"INEXPENSIVE MODULATOR TRANSFORMERS" R. P. Haviland K3BGX Electronics World-May 1960

"A FOOLPROOF S METER" H. O. Lorenzen W3BLC QST-December 1959

"KNOBS FOR APC TYPE CAPACITORS" Stanley O. Andrews W4AHW QST-March 1959 (Hints and Kinks)

"SURPLUS 6 METER GROUND PLANE VERTICAL" Robert K. Wallace K8BYQ and William B. Randolph W8VFT CQ-July 1958 A new RF stage and oscillator stabilization for this old-timer.

Break-in for this popular surplus transmitter.

Simple FM modification of this "strip" receiver.

Details on converting this Meissner transmitter to 20 meters and adding a low level mike input.

How to change those surplus precision resistors to required values.

Listing of audio input and output impedances for various items of surplus equipment.

This converter is a fine 50 to 65 MC unit with an output frequency of 7.5 MC.

Information on how to use surplus power transformers as modulation transformers.

A universal S meter circuit for surplus receivers.

Shaft extensions make these surplus units usable.

Use of surplus components makes this a cheap and good antenna design.

"HOLDERS FOR RADAR-TYPE CRYSTALS" William R. Deal K1CLD QST-April 1958 (Hints and Kinks)

"MODULATORS FOR SURPLUS EQUIPMENT" Kenneth B. Grayson W2HDM CQ-March 1958 (Surplus Column)

"WAVEMETERS USING BUTTERFLY TANK CIRCUITS" W. Gerald Banshak QST-July 1957

"USING THE 'Q' MULTIPLIER WITH MILITARY RECEIVERS" Donald L. Stoner W6TNS CQ-February 1957 (Surplus Column)

"USE THOSE JUNK BOX CHOKES" Sherman H. Hubelbank Radio & Television News-October 1956

"USING APC CAPACITORS WITH KNOBS" Douglas R. Schneider W2ZVY CQ-August 1956 (Letters Column)

"MODIFYING UNDERSIZE SURPLUS PHONE JACKS" Rev. Michael Windolph W9NEL QST-July 1956

"CONTROL SHAFTS FOR SURPLUS-TYPE APC CAPACITORS" Herman W. Gross W9ITT QST-December 1955 (Hints and Kinks)

"A BROAD-BAND BANDSWITCHING CONVERTER/PRESELECTOR" Robert F, Latter QST-September 1954

"RATING POWER TRANSFORMERS" Darwin H. Harris Radio-Electronics-December 1953

"THE SILICON CRYSTAL NOISE GENERATOR" William L. Orr W6SAI CQ-June 1952 Surplus diodes are mounted with electron tube hardware.

General discussion of modulator requirements for surplus equipment with schematic diagrams of suitable units.

Surplus assemblies are used in these instruments which cover 135 to 1,000 MC in two ranges.

A discussion of Q multiplier use and a listing of component changes required to adapt the Heath QF-1 to IF frequencies from 85 to 2830 KC.

Test procedure is described for finding the ratings of those unmarked surplus power chokes.

A shaft extension method for using short-shaft APC units with knobs.

How to use those odd size jacks.

Another idea on how to use these surplus bargains.

A device to extend the range of surplus receivers.

Simple, rule of thumb formula for finding ratings on those unmarked surplus power transformers.

All about noise generators and how to use them. Instructions on how to use them. Instructions on how to make one using a surplus diode. "CIRCUIT VARIATIONS FOR SURPLUS DRY DISK RECTIFIERS" Evert Rodenhouse W7TQ QST-January 1952 How to identify and use those surplus rectifiers.

"IMPROVED PERFORMANCE IN SURPLUS RECEIVERS" Paul E. Griffith W2SOY QST-February 1951 (Hints and Kinks) Practical hints on how to restore performance of war-weary equipment.

"SUGGESTIONS ON HOW TO DRESS UP YOUR STATION" Charles Welch W5MHK CQ-October 1950 Has application to surplus gear where new panels and mechanical additions are often required.

"DEPENDABLE VFO FOR 80-METER BAND" Richard L. Parmenter W1JXF Radio-Electronics-September 1950 This "solid" VFO is constructed in an old Navy CAY tuning unit case.

"GANGING SURPLUS TUNING CONDENSERS" Peter J. Saveskie W2JFE CQ-March 1950 Mechanical details on how to solve a difficult problem.

"PUTTING SURPLUS METERS TO WORK" R. L. Parmenter W1JXF CQ-March 1950 How to find the characteristics of surplus meters and how to apply them.

"TUNING DEVICE FOR SURPLUS GEAR" F. H. Maley W1GZH QST-December 1949 (Hints and Kinks) A mechanical arrangement for tuning those knobless controls.

"HAND DRIVEN GENERATOR HINTS" Russ Robinson W4JGS QST-October 1949 Simplified operation of these surplus muscle builders.

"ON A CYCLE RIGHT FOR YOU" W. H. Anderson VE3AAZ CO-September 1949 How to find the 60 cycle operating voltage of components designed for other power frequencies.

"STILL MORE ON THE 'SUPER-SELECTIVE' C.W. RECEIVER" Byron Goodman W1DX QST-June 1949 Listing of surplus equipment sources of cup-core, low frequency IF transformer materials.

"PEAKED AUDIO" Eugene Black W2ESO CQ-June 1948 Variable audio selectivity with modified surplus filter units.

"OPERATING 28-VOLT RECEIVERS FROM 115-VOLT SOURCE" R. R. Rosenberg W3NCJ CQ-May 1948 Lamp dropping resistors for 115 volt filament operation.

"MOUNTING FOR FIXED-CRYSTALS" Felix W. Mullings W5BVF CQ-May 1947

"IMPROVED RECEIVER SELECTIVITY" Commander E. H. Conklin, USNR W3JVX CQ-March 1946

MN-26Y RADIO COMPASS

"A BARGAIN (?) NOVICE STATION"
J. B. Work WN7RMP

QST-December 1952

PE-73 DYNAMOTOR
"HIGH POWER MOBILE"
Joseph Marshall W3SNA
CQ-May 1957

PE-101 DYNAMOTOR
"NOTES ON THE PE-101-C
DYNAMOTOR"
L. R. Langley W8DSX
QST-March 1957 (Hints and Kinks)

"CONVERTING THE PE-101-C" Leslie A. Venne WØCBW CQ-May 1955

"MORE ON THE PE-101-C" Howard A. Bowman W6QIR CQ-May 1955

"MORE POWER FOR THE MOBILE" William C. Ryder W1JNM CQ-May 1954

"MORE ON THE PE-101-C" Gordon H. Miller W9KUX/8 CQ-December 1952

"CONVERTING THE PE-101-C DYNAMOTOR" Gordon H. Millar W9KUZ and William Wollin W9GWK CQ-August 1952

PE-103 DYNAMOTOR

"HOMEMADE POWER PLUG FOR
THE PE-103"

C. A. Thunen W6ACT
QST-July 1953 (Hints and Kinks)

How to use fuse holders to mount surplus radar diodes.

Using those surplus audio filters to sharpen up old receivers.

Converting this surplus radio compass to AC operation and installing an 80 transmitter in the case.

A fan-belt driven PE-73 and BC-375 components team up for high power mobile operation.

How to reconnect the high voltage windings for various output voltages.

Operating this surplus power house on 6 volts.

Reduced output voltage, with high efficiency, by reconnecting the output windings.

A complete two battery mobile power system using the PE-101-C dynamotor.

Discussion of questions arising from the original article: "CONVERTING THE PE-101-C DYNAMOTOR", CQ-August 1952

Conversion information and application data for the PE-101-C dynamotor. Winding information is given.

Solution to the non-availability of connectors for this dynamotor.

"MORE ABOUT THE PE-103 DYNAMOTOR" George Hart W1NJM QST-December 1952 (Hints and Kinks)

"ALL ABOUT THE PE-103" Richard Shongut W2QFR QST-April 1951

"FILTER AND CONTROL CIRCUIT FOR THE PE-103" George Hart W1NJM QST-October 1949 (Hints and Kinks)

"MOBILE IN MINIATURE"
M. Joffe W2BNY
OST-December 1948

"A MODIFICATION OF THE PE-103-A" William L. Smith W3GKP QST-August 1948

"LET'S GO MOBILE" Sheldon W. Gates W8VWK CQ-June 1948

PE-237 VIBRATOR POWER SUPPLY
"HYBRID 10 METER TRANSMITTER"
John A. Meissner K5CXN,
John Guerrero KL7BNJ and
Lloyd Crawford K5OVE
CQ-November 1960

PROP-PITCH MOTORS

"BACK TO THE PROP PITCH ROTOR"

E. H. Marriner W6BLZ

CQ-July 1959

"SIMPLIFIED APPROACH TO ROTARY BEAM CONSTRUCTION" Emmett P. Bonner W5RCA QST-November 1950

"TOWER AND ROTATOR TECHNIQUES" Louis H. Hippe W6APQ QST-June 1950

"A QUICK CHANGE OF PACE FOR THE PROP-PITCH MOTOR" Dick Saunders W6MUO CQ-August 1949 Operation of the PE-103 with negative ground systems.

Practical details on amateur use of the PE-103.

This dynamotor is used, less the base, with external control circuitry.

Construction details for a 10 meter transmitter built into and powered by the PE-103.

A method of obtaining half-voltage output from the PE-103-A for use with receivers.

An all-band, 80 watt, portable or mobile transmitter built around the PE-103 dynamotor.

The PE-237 power transformer finds a very unique application in this transmitter.

Mechanical details and diagrams on how to convert the prop-pitch motor to a heavy duty beam rotator.

Details on mounting the B-29 proppitch motor.

A comprehensive treatment of proppitch motors and surplus indicators.

A simple machine operation increases the output shaft speed to 1 RPM with a motor speed of 1,000 RPM. Only 9 volts AC is required for power. "SPEEDING UP 'PROP-PITCH' BEAM ROTATORS" David G. Vanderhoek W2VLL QST-June 1949

"SUPPRESSION OF ELECTRICAL NOISE FROM PROPELLER PITCH-CHANGING MOTORS" C. C. Miller W2RDK QST-November 1948

"DIRECTION INDICATOR FOR THE PROP PITCH-CHANGE MECHANISM" George M. Brown W2CVV CQ-April 1948

RAO - RAS - RBJ - RCK - RCL RADIO RECEIVERS

"MORE BANDSPREAD ON NATIONAL MILITARY MODELS" Robert J. Murray W1FSN CQ-August 1956

RBC RADIO RECEIVER
"RECEIVER S-METER OPERATION"
Commander E. H. Conklin, USN W3VQ
CQ-July 1947

RDZ RADIO RECEIVER
"THE RDZ ON 220 MC"
Kenneth B, Grayson W2HDM
CQ-April 1960 (Surplus Column)

R-44/ARR-5 RADIO RECEIVER
"MODIFYING THE R-44/ARR-5"
L. W. May, Jr. W5AJG
Radio-Craft-September 1948

R-48/TRC-8 .... See: AN/TRC-8

R-89/ARN-5 GLIDE PATH RECEIVER
"A TEN-TUBE FM RECEIVER FOR
ONLY \$10.00"
Robert C. Minnick
Radio-Electronics-March 1950

R-257/U RADIO RECEIVER
"CONVERTING THE R-257/U"
Kenneth B. Grayson W2HDM
CQ-October 1960 (Surplus Column)

Gear modification gives up to 5 RPM at the output shaft.

Details on disassembly and suppression of noise on both the 12 and 24 volt versions of these motors.

How to couple a selsyn to the output gear for remote indication of antenna bearing.

Notes on making the surplus National receivers more suitable for amateur band use. Changes are minor.

A general discussion of S meter calibration, Circuit of Navy RBC receiver is shown as an example.

Lots of detail on converting the Navy RDZ receiver for amateur use.

The aircraft version of the Hallicrafters S-36 (S-27) makes a very worth-while conversion.

How to convert this navigation receiver to an FM broadcast tuner.

Converting the preamplifier from this receiver to 6 meter converter use.

R-320/FRC RADIO RECEIVER
"WORTHWHILE IMPROVEMENTS FOR
THAT OLD RECEIVER"
Paul H. Lee W3JHR
CQ-February 1957

The RCA AR-88 gets a new front end, audio circuit changes and a product detector.

RL-42 ANTENNA REEL

"MOTOR DRIVEN LOADING COIL"

Charles T. Miser W9MDC

CQ-May 1955

The drive motor from the RL-42 reel and the loading coil from a Command Set transmitter do the job remotely.

RM-52 REMOTE CONTROL UNIT Will A. Connelly W6QID CQ-October 1958 A super-simple patch, of good design, from the RM-52 remote unit.

RT-18/ARC-1 ..... See: AN/ARC-1

RELAYS

"USING SURPLUS 24-28 VOLT RELAYS" George P. Oberto K4GRY Radio-Electronics-May 1960 Application tips for those surplus units.

"CATHODE OPERATED RELAYS" Richard T. Van Wickle W6TKA CQ-February 1960 Notes on designing your circuits to use surplus relays.

"USING DC RELAYS ON AC" Joseph L. Reiffin W5CWP CQ-November 1959 How to make your mobile equipment relays work on AC for home station use.

"SCREEN-GRID PROTECTION WITH A SURPLUS RELAY" I. S. Simpson W1FYN QST-July 1958 (Hints and Kinks) Dual-winding, surplus relay provides a latching protective circuit.

"USING THOSE SURPLUS RELAYS" E. B. Blett W8CBM QST-May 1956 Hints on adapting 28 volt DC relays to amateur use.

"CONVERTING 28 VOLT RELAYS TO 6 AND 12 VOLTS" Lloyd Mallet W7GRG CQ-January 1956 An easy way to convert these surplus dogs. Must be read to be appreciated.

"MODIFYING COMMAND TRANSMITTER RELAYS FOR 6-VOLT OPERATION" K. M. Isbell W6BOQ QST-April 1955 Just what the title says.

"BANDSWITCHING YOUR LOADING COILS BY REMOTE CONTROL" Leon A. Wortman W2LJU Radio & Television News-June 1954 Surplus, rotary relays do this job with no fuss and at low cost.

"CONVERTING 12-VOLT RELAYS TO 6-VOLT OPERATION" Hartland B. Smith W8VVD CQ-February 1949 This short item describes a simple answer to a common problem.

"OPERATING 28-VOLT SURPLUS RELAYS" Felix W. Mullings W5BVF CQ-February 1949 This little article describes the minimum AC power supply for satisfactory operation of these relays.

"CONVERTING DC RELAYS"
Robert B. Tomer W1PIM
Radio & Television News-December 1948

Details on rewinding surplus relays.

"PUTTING SURPLUS 28-VOLT D-C RELAYS TO WORK" Edward A. Whitlock W5LYH CQ-December 1947

How to install these relays in tube circuits to obtain the required operating currents.

## SELSYNS

4

"THE BEAM POINTER" Tom Lamb K8ERV CQ-July 1959

A neat beam direction indicator using surplus selsyn units.

"SYNCHROS — SELSYNS"
Wayne Green W2NSD
CQ-September 1956

General information on these units and how to use them in amateur applications.

"ANTENNA ROTATION WITH A SERVO-MECHANISM" Henry G, Elwell W2JKH CQ-November 1953

Surplus selsyn units and an aircraft controller are used in this automated beam control system.

"WIRE-SAVING KINK FOR 'SELSYN'
USERS"
Roy A. Long W6YBL

Diagram of a method for using 4 conductor cable between selsyn units.

"DIRECTION INDICATOR FOR THE PROP PITCH-CHANGE MECHANISM" George M. Brown W2CVV CQ-April 1948 How to couple a selsyn to the output gear for remote indication of antenna bearing.

"A SELSYN DRIVEN V.F.O." Robert V. McGraw W2LYH CQ-March 1948

Selsyn control permits remote location of the VFO.

"SELSYN BEAM ROTATOR" C. V. Hayes W6RTP CQ-February 1948

How to use the larger size selsyn units as rotator motors.

"BASIC PRINCIPLES OF SELF-SYNCHRONOUS REPEATERS" John K. Gossland W2BJK QST-May 1947

"PUTTING THE SELSYN TO WORK" Merle C. Worster W1KVV CQ-May 1946

SCR-211 .... See: BC-221

SCR-274-N .... See: COMMAND SET

SCR-284 RADIO SET
"THE SCR-284 CAR INSTALLATION"
Charles W. Boegel, Jr. WØCVU
CQ-March 1947

"TAILOR-MADE PORTABLE FOR 75" Charles W. Boegel, Jr. WØCVU CQ-October 1946

SCR-515 ..... See: BC-645

SCR-522 RADIO SET
"S,S,B, ON 144 MC WITH THE 522"
Edward P. Tilton W1HDQ
QST-November 1956 (The World Above
50 MC)

"PUTTING THE BC-625 ON 220 MC" L. W. May, Jr. W5AJG CQ-November 1953

"IMPROVED BC-624 NOISE LIMITER" Donald H. Rogers W2MLF CQ-July 1949

"BETTER RESULTS WITH THE 522" Robert E. Fairbrother W1PYO QST-April 1949

"CRYSTALS FOR BC-625 TRANSMITTERS" John B. Riley CQ-October 1948

"A B.F.O. FOR THE 522 RECEIVER"
E. P. Tilton W1HDQ
QST-June 1948 (The World Above 50 MC.)

General information on selsyn units with circuits and data for operation of 400 cycle units on 60 cycles.

General information, along with a trouble chart in case things don't work out.

Helpful hints on making the SCR-284 mobile installation.

General information on this major component of the SCR-284, the BC-654.

A Central Electronics 20A excites the surplus SCR-522 in this circuit of W5HHU and W5AJG.

This article carries the standard conversion of the BC-625 through to operation on 220 MC.

Simple change in the noise limiter circuit greatly improves this SCR-522 receiver.

Circuit refinements give better sensitivity and improved signal to noise ratio.

Simple modification to the crystal socket makes the surplus FT-243 crystal usable in this equipment.

Circuit of the BFO used by WØCCY.

"CONVERTING THE SCR-522 (BC-625A) FOR 10" Lem Smeltzer W4KZF CQ-June 1948 Coil data for reaching 10 meters with this popular 2 meter rig.

"FM RECEIVER FROM WAR SURPLUS RADIO BC-624" Robert C. Paine Radio-Craft-June 1948 This article describes an FM broadcast conversion of the SCR-522 receiver.

"CONVERSION OF THE SCR-522 FOR 28 MC" Bertram D. Aaron W4JXH and Clyde E. Clark QST-May 1948 A different approach to 10 meter operation of the BC-625-AM transmitter.

"CONVERSION OF THE SCR-522 FOR 28 MC" Leonard H. Smeltzer W4KZF QST-May 1948 Conversion details for 10 meter operation of this transmitter.

"INCREASING THE AUDIO OUTPUT OF THE SCR-522" Herbert S. Brier W9EGQ CQ-May 1948 Circuit changes to increase the receiver audio gain.

"PUTTING THE 522 TRANSMITTER ON 6 AND 10 METERS" H. S. Brier W9EGQ Radio News-April 1948

A very simple conversion puts the BC-625A transmitter on 6 meters.

"A BANDPASS CONVERTER FOR 144 MC" John E. Williams W2BFD QST-March 1948 A new front end for the BC-624 receiver.

"BC-624 ON 2 METERS" L. W. May, Jr. W5AJG Radio-Craft-September 1947 Continuous tuning and rack panel mounting are features of this receiver conversion.

"MODIFICATION OF THE SCR-522 FOR 2 METERS" M, J, Gonda W2JBM CQ-July 1947 A neat, rack mounted conversion of SCR-522 transmitter and receiver for 2 meter operation.

"BC-625 ON 144 MC" L. W. May, Jr. W5AJG Radio-Craft-April 1947 A neat, rack mounted conversion of the SCR-522 transmitter.

"CONVERTING THE SCR-522 TRANSMITTER" Ray Frank W9JU Radio News-November 1946 A rack and panel mounted conversion of the BC-625 which requires external AC power supply.

"CONVERTING THE SCR-522 RECEIVER"

Ray Frank W9JU

Radio News-October 1946

SCR-602 . . . . See: BC-1284

SCR-610 ..... See: BC-659

SCR-619 ..... See: BC-1335

SCR-718 .... See: BC-788

TBS RADIO RECEIVER

"CONVERTING THE TBS"
Kenneth B. Grayson W2HDM

CQ-May 1958 (Surplus Column)

TBX-8 RADIO SET

"TBX-8 SCHEMATIC DIAGRAM"
Kenneth B. Grayson W2HDM
CQ-September 1958 (Surplus Column)

"CONVERTING THE TBX-8" Kenneth B. Grayson W2HDM CQ-July 1958 (Surplus Column)

TBY RADIO TRANSMITTER-RECEIVER
"THE TBY CONVERSION"
Donald L. Stoner W6TNS
CQ-September 1957 (Surplus Column)

TBY-7 RADIO TRANSMITTER-RECEIVER
"ADAPTING THE TBY-7 FOR AMATEUR
USE"
W. B. Ford W6YT
Radio News-October 1947

TCS RADIO TRANSMITTER
"MODIFICATION OF THE TCS TRANSMITTER FOR COAXIAL LINE"
Henry Meiseles K2UOC
CQ-November 1960

"TCS CONVERSION" Berden O. Bretz W7GQR CQ-September 1959

T-17 MICROPHONE
"A VERSATILE SWITCH FROM SURPLUS"
Roy E. Pafenberg W4WKM
73 Magazine-January 1961

The original published conversion of the BC-624. A neat job with rack panel mounting.

This conversion puts the receiver portion of the TBS on 2 meters and provides continuous tuning.

Just that.

Conversion details for this Navy transmitter-receiver. It covers 80 with 8 watts on CW and 2.5 on phone.

Conversion of this Navy transmitterreceiver to 6 meters. Transmitter is crystal controlled.

Putting this portable, Navy transmitter-receiver to use in the 28 and 50 MC bands.

Modification of the antenna circuit of this Navy transmitter for standard 50 ohm output.

This conversion covers AC operation and provision for crystal microphone. A 150 watt conversion is discussed.

Push-to-talk switch from the T-17 microphone has many construction uses.

"MODERNING THE T-17" Chuck Schauers W6QLV CQ-September 1958

"ANOTHER T-17 CONVERSION" Ben T. Wade W4GHB CQ-May 1952

"SOUPING UP THE T-17"
Carl C. Drumeller W5EHC/AF5EHC
CQ-February 1952

"INCREASING THE OUTPUT OF THE T-MICROPHONE" Joe L. Pryor W5MJD CQ-February 1949

T-39/APQ-9 RADAR TRANSMITTER
"PUTTING SURPLUS TO WORK ON
THE 420-MC HAM BAND"
T. R. Davis
CQ-February 1950

T-47/ART-13 ..... See: AN/ART-13

TG-34-A KEYER
"TRANSMITTER KEYING WITH THE
SURPLUS TG-34-A KEYER"

Lee Dilno W8DAP QST-September 1957 (Hints and Kinks)

TS-1/ARR-1 TEST OSCILLATOR
"COAXIAL GRID CIRCUIT FOR
THE 4X-150A AMPLIFIER"
E. P. Tilton W1HDQ
QST-August 1953 (The World Above
50 MC.)

"A 432-MC CONVERTER FROM THE GOLD PLATED TEST OSCILLATOR" E. P. Tilton W1HDQ QST-June 1952

TS-47/APR TEST OSCILLATOR
"TEST OSCILLATOR TS-47/APR"
David W. Moore, Jr.
Radio News-May 1946

TU-75 ..... See: BC-1158

How to get more sock from this surplus carbon mike.

Another method of installing the F1 button in the T-17 case.

Mounting the modern F1 button in the T-17 case for higher output and better quality.

Simple change increases output of the T-17 microphone.

This conversion results in a modulated oscillator with 10 watts output.

A circuit for DC keying from a keyed tone input.

Use of the "Gold Plated Special" cavity as a grid tank circuit for 432 MC.

High performance converter using components of the "Gold Plated Special".

Full description and circuit of this test oscillator which covers 40 to 500 MC in two calibrated bands.

#### TUBES

"PLATE MODULATION FOR THE TV-SET/SURPLUS TRANSMITTER" Lewis G. McCoy W1ICP QST-July 1961

"THE BIG CANNON"
Jack Holloway W6VVZ
73 Magazine-April 1961

"SURPLUS TUBES + AN OLD TV SET = 150-WATT AMPLIFIER" Lewis G. McCoy W1ICP QST-April 1961

"A USE FOR THE SURPLUS 717A" WA2AKT 73 Magazine-February 1961

"A PARAMETRIC AMPLIFIER FOR 1296 MC."
W. O. Troetschel K6UQH and H. J. Heuer KH6CYI QST-January 1961

"EXPERIMENTAL TRANSCEIVERS FOR 5650 MC." C. J. Prechtel W8DRR QST-August 1960

"MODIFYING 1625'S AND 807'S FOR LINEAR AMPLIFIER USE" C. A. Morgan W9LRM CQ-February 1960

"SOCKETS FOR 1625'S" Richard Niessen K2SRA QST-April 1959 (Hints and Kinks)

"R.F. AND AUDIO RATINGS FOR THE SURPLUS 701A" Stu Rockafellow W8NJH QST-July 1958 (Hints and Kinks)

"LET'S GO MICROWAVE" A. D. Bredon W6BGK QST-June 1958

"MODIFYING 1625'S FOR GROUNDED-GRID OPERATION" Harry W. Land W5ZBF QST-November 1957 The surplus 1625 tube is featured in this modulator.

The 304TL again and still the most for the money.

The surplus 1625 is still providing high performance on a budget.

Some uses for the bargain priced 4717A tube.

The 2K25/723A/B reflex klystron is still available from surplus and provides yeoman service in this state of the art equipment.

The surplus 2K26 klystron tube is the heart of the equipment described.

More on fishing out the beam forming plate leads of these tubes. Notes on using these tubes instead of 837's in grounded grid operation.

A method of remounting Command Set tube sockets.

Just what it says. Tube socket information is also given.

Application data on using surplus klystrons in the amateur microwave bands.

More on fishing out those elusive beam-forming plate leads.

"LIGHTHOUSE TUBE TANK CIRCUITS FOR 432 MC" Edward P. Tilton W1HDQ QST-June 1957

"A 200-WATT GROUNDED-GRID LINEAR AMPLIFIER" E. L. Hoover W9SAR and R. L. Peck W9MOW QST-June 1955

"A TWO BAND FINAL"
R. H. Mitchell W5DWT
Radio & Television News-May 1955

"GETTING STARTED ON SINGLE SIDEBAND" J. N. Brown W3SHY ex-W4OLL CQ-September 1953

"100 WATTS ON THE TABLE"
D. V. R. Drenner WØLQS
Radio & Television News-June 1951

"PUTTING THE 304TL TO WORK"
Guy Dexter
Radio & Television News-September 1950

"USE YOUR 304TL'S" Emmet P. Bonner W5RCA CQ-August 1950

"UTILIZING THE 826" Richard M. Smith W1FTX QST-May 1950

"SOCKETS FOR TYPE 15E TUBES" Tom McMullen W1QFV QST-February 1950 (Hints and Kinks)

"MODULATING A KILOWATT" Robert C. Cheek W3LOE CQ-November 1949

"EFFICIENCY MODULATION DATA FOR SURPLUS TUBES" Radio & Television News Staff Radio & Television News-May 1949

"LOW-COST NEUTRALIZING CONDENSERS FOR 304TL" Marv Gonsior W6VFR CQ-September 1948 Easy to build amplifiers and frequency multipliers using surplus tubes.

1625 tubes are modified by reconnecting the beam forming plates to make efficient, grounded-grid amplifiers.

A 7 and 14 MC, 1 KW final that stars the surplus 304 TL.

Design and operating data is given for use of the surplus power house, the 304TL, as a 1 KW linear amplifier.

A compact rig using surplus 826 tubes. Transmittter features VFO and 80 through 10 meter coverage.

Circuit applications for this low cost surplus tube. High power for pennies.

All about the 304TL and its amateur applications.

A budget 250 watts at VHF.

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Now what do we use them for?

A fine appearing modulator is described and operating data for the 304TL in modulator service is given.

Class B linear data for 20 popular, surplus tubes.

A pair of cold 304TL's serve as neutralizing capacitors for an active pair. No comment except that 304TL's were advertised at 90¢ each in this issue.

"PUTTING THE 826 TO WORK" Richard L. Parmenter W1JXF and C. E. Clark W1KLS Radio News-July 1948

"MODULATING KLYSTRONS" David Lee Thompson W6VQB CQ-May 1948

"THE 829-B AND 832-A AT AUDIO FREQUENCIES" James A. Fred Radio News-September 1947

"DISHING OUT THE MILLIWATTS ON 10 KMC" James A, McGregor W2RJM QST-February 1947

"THE VT-127-A IN AMATEUR TRANSMITTERS" Gomer L. Davies Ex-W8AFW QST-November 1946

VO-4 OSCILLATOR
"SURPLUS FREQUENCY STANDARD"
Roy E. Pafenberg W4WKM
73 Magazine-December 1960

Application details for these surplus bargains.

Simple modulation circuit for surplus klystrons such as the 726A and the 723A/B.

Audio and modulator service operating data for these surplus tubes.

Description of the 2K25/723A tube and the 3-CM equipment it is used in.

Operating characteristics and equipment construction details.

An AC power supply makes a utility, crystal controlled standard of this surplus signal generator.

# AVAILABLE BOOKS ON SURPLUS

These books are currently in print and are kept in stock by Radio Bookshop, 1379 E. 15th Street, Brooklyn 30, N.Y. The three Surplus Manuals are priced at \$2.50 each and the Surplus Handbook is \$3.00.

Surplus Radio Conversion Manual, Volume 1.
This book gives circuit diagrams, photos of most equipment and rather good conversion instructions for the following:

BC-221 BC-342 BC-312 BC-348
BC-412 BC-645 BC-946 SCR-274N/
BC-453A receivers converted to 10M,
SCR-274N/BC-457A transmitters. SCR-522
BC-624 and BC-625 conversion to 2M.
TBY to 10 and 6 meters. PE-103A, BC-1068A/1161A receiver to 2M, Surplus tube index, cross-index of A/N tubes.

Surplus Radio Conversion Manual, Volume II Original and conversion circuits diagrams plus photos of most equipments and full conversion discussion of the following: BC-454/ARC-5 receivers to 10M, AN/APS13 xmtr/rcvr to 420mc, BC-457/ARC-5 xmtrs to 10M, Selenium rectifier power units, ARC-5 VHF, GO-9/TBW, BC-357, TA-12B, AN/ART-13 to AC power and to include 10M, coil data simplified winding charts, AVT-112A, AM-26, LM frequency meter, rotators, power chart, ARB diagram.

Surplus Radio Conversion Manual Volume III Original and conversion diagrams. plus some photos of these equipments:

701A, AN/APN-1, AN/ARC-7, URC-4, ARA, BC-442, 453-455, 456-459, BC-696, 950, 1066 BC-1253, CBY-29125, 50083, 50141, 52208, 52232, 52302-09, FT-241A for xtal filter, MBF (COL-43065), MD-7/ARC-5, R9-APN-4, R23-R28/ARC-5, RAT, RAV, RM-52 (53), RT-19/ARC-4, SCR-274N, SCR-522, T-15/ARC-5 to T-23/ARC-5.

The Surplus Handbook, Volume I (Receivers and Transmitters). This book consists entirely of schematics and photos of the following surplus units: APN-1, APS-13, ARB, ARC-4, ARC-5, ARC-5/VHF, ARR-2, ARN-5, ASB-7, BC-222, -312, -314, -342, -344, -348, -603, -611, -624 (SCR-522), BC-652, -654, -659, -669, -683 -728, -745, -764, -779, -794, -923, -1000, -1004, -1066, -1206, -1306, -1335, BC-AR-231, CRC-7, DAK-3, GF-11, Mark II, MN-26, RAK-5, RAX, Super Pro, TBY, TCS, JAN/VT tube index.