

WORLD'S FINEST ELECTRONIC SURPLUS

30 ANNIVERSARY TH



1947 1986

CATLAOG WS-86
MANY NEW ITEMS
CHECK EVERY PAGE!



SONOBUOY RECEIVER

R-1170/ARR-52A VHF RECEIVER 162.5-173.5 MHz AM, FM and video using 31 crystal-controlled channels. Solid-state sonobuoy receiver consists of five plug-in modules; 26 MHz 1st IF, 5 MHz 2nd IF. Conversion possibilities for 2 meters, VHF weather, satellite TV, etc. (See Oct '74 CQ Mag.) Requires external control and 18 VDC. 7.5x2.5 x10, 9 lbs. Used, \$39.95; SCHEMATIC \$4 w/set MANUAL for R-1170, partial repro, \$15 w/set.

CABINET & CARD RACK

CONTINUITY SCANNER, General Engineering BSR Dual 192; has 5 VDC power supply with Signal #241-7-16 16 VCT 3.5 A transformer, adjustable card rack, 8 circuit cards which contain 170 (50 socketed) CD4000 /74LS-Series IC's including 52 UHP-400-1 Quad 2 input power driver, five miniature toggle switches, and nice modern cabinet. Interesting experimenter item and/or good parts source. No further info. Panel 8.75x19 x13, o/a 11x20.5x14.5; 35 lbs. Used, \$49.50



TEKTRONIX 5103N

TEKTRONIX 5103N-D10 SINGLE-BEAM SCOPE, recent solid-state unit has 6.5" diagonal display, 5A15N single-trace vertical and 5B10N time base plug-ins; space for third 5000-series plug-in allowing multi-trace capability. Response DC to at least 2 MHz. Vertical deflection 1 mv-5 v/div in 12 steps, 1-2-5 sequence; input 1 Megohm shunted by 47 pf. Calibrated sweep: 1 usec-5 sec/div in 21 steps 1-2-5 sequence plus X10 magnifier; alternate or chopped sweep. Trigger 0.6 div at 2 MHz; external triggering at least 200 mv, DC-2 MHz. Maximum safe input 350 VDC. Requires 115/230 VAC 50-60 Hz. 11.6x8.4x19.9, 30 lbs. Used-checked with manuals, \$395.00

GRID DIP METER

AN/PRM-10 TEST OSCILLATOR a grid dip meter designed to determine resonant frequencies of tuned circuits or the frequency of RF signals. Uses seven plug-in coils covering 2 to 400 MHz in ranges 2-5, 5-10, 10-22, 22-45, 45-100, 100-250, and 250-400 MHz. External amplitude modulation about 30%. Functions as miniature receiver or transmitter when tuning head and coil are placed near circuit under test. Results indicated on tuning head meter or audible in earphones. Includes set of coils, tuning head, power supply, and transit case. Requires 115 VAC 50-1000 Hz. 8.3x11.5x5.5, 20 lbs. Used-reparable, \$95. Checked, \$135. MANUAL, partial repro, \$8.50



4 CAVITY DUPLEXER



CELWAVE FOUR CAVITY DUPLEXER low power unit usable for 70 cm Amateur band. Factory preset frequencies 459.1625 (Tx) and 454.1625 MHz (Rx) but can be tuned from 400 to 500 MHz. One notch approx 650 KHz wide @ 40 db points; other approx 5.5 MHz wide @ 40 db points. Two RCA plugs; 4.1x 1.1x8, 4 lbs sh. GE #19C307182P9, NEW \$24.95

DATA COMMUNICATIONS

COMMUNICATIONS PC ASSEMBLY from a premier U.S. mfg; appears to be a high power modem deck featuring socketed PP34C132 & PP34C-103 special EPROM and five 2716's plus soldered 8085 CPU and 8155 I/O-timer. Has 7 push switches, 8-LED indicators, and two 8-pos DIP switches on front and five DEC-9S connections on rear. Also 70+ Cmos, 74LS, and misc soldered IC's, 4-transformers, 3-inductors, three 24 VDC relays, and 18.432 MHz xtal. Sold for experimental use only; no info available. 7.3x11 x3, 5 lbs. #RM-4401-246AE, used, \$14.95

COLLINS FILTER

COLLINS MECHANICAL FILTERS, unused: #F250-AB5 (S26-9049-009) for radios with final I.F.'s of 250 KHz such as RT-311/ARC-3B, 8.5 KHz bandwidth; 3.5x1x0.9, \$14.95 #F500-B14 (S26-9030-009) for sets with 500 KHz final IF's such as Collins 51J4 and R-64B/ARR-41; 1.4 KHz bandwidth, \$29.95

WESTON 370

WESTON MODEL 370 PORTABLE AC-DC METER, scale 0 to 5 amps AC or DC with rated accuracy of 0.25%. Large 5" mirrored scale; nice cherry-finished wood case. 8.3x10.5x5.5, 10 lbs. #370-5ACDC, used, \$45.



H-P WAVE ANALYZERS

HEWLETT-PACKARD 302A WAVE ANALYZER, covers 20 Hz to 50 KHz with operational modes AFC-normal-BFO; 6 Hz selective bandwidth. Resolution: 10 Hz per division. Meter range 30 uv to 300 Vrms full scale in 15 ranges; dynamic range >75 DB. BFO output 0-2 Vrms open circuit. Requires 115/230 VAC 60 Hz; 12.5x20.8 x14.5, 50 lbs. Used-reparable w/book, \$175.



HEWLETT-PACKARD 310A WAVE ANALYZER, 1 KHz to 1.5 MHz with selective bandwidths 200, 1000, and 2000 Hz; resolution 200 Hz per division. Operational modes AFC-normal-BFO-USB-LSB-AM. Amplitude ranges 10 uv to 100 V full scale in 16 ranges. AFC; dynamic hold-in +/-3 KHz min @ 100 KHz; tracking 100 Hz/sec. Restored signal freq max output 0.25 V across 135 ohms. Requires 115/230 VAC 60 Hz; 10.8x16.8 x18.4, 50 lbs. Used-reparable w/book, \$295.00



30 A POWERSTAT

POWERSTAT TYPE 146 VARIABLE TRANSFORMER, 0-140 volts 30 amps 4.2 KVA from 120 VAC 50-60 Hz input; Powerkote coil withstands overloads. Enclosed with dial plate & knob. 9.5x5.8x10, 36 lbs. NEW factory-boxed, \$125.



BELDEN TV WIRE

BELDEN "CITY COLOR" SHIELDED TWIN-LEAD TV WIRE; two 26 AWG 7x34 stranded copper-covered steel conductors with Beldfoil shield. Recommended for VHF-UHF-FM use in high interference metro areas. 75 ft (3#), \$8. 100 ft (4#), \$10.00



ORDERING
INFORMATION
SEE PAGE 2

MINIMUM
ORDER \$5.00
+ SHIPPING

Fair Radio Sales Co.

P.O. Box 1105 - - 1016 E. Eureka St.

Lima, Ohio 45802

419/223-2196

419/227-6573

CATALOG
INFORMATION


This IS the only
catalog we will
issue this year.

A supplement will
be sent in the Fall.

FAIR RADIO SALES CO., INC.

1016 E. EUREKA, BOX 1105, LIMA, OHIO 45802
TELEPHONE: AREA CODE 419 227-6573

LIQUID TEMP
40-140 F WATER
TEMP-METER,
3.8" dia; ex-
panded scale.
15" capillary
threads into
0.6" or 0.7"
orifice; also
18" capillary
pipe. Iile #21223, \$9.95



WATER TEMPERA-
TURE METER,
3" dia with
80-240 F
expanded
scale. W/6 ft
copper
capillary.
#261-9858, NEW \$14.



LP-GAS METER, 0-1
VDC full scale.
Mounts in 2" dia.
hole. Chrome
finish #48560-2,
\$1.50 ea.



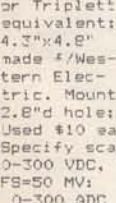
DC AMMETERS by
Mercer Electronics, 3 1/2 x 3 1/2; fits
in 2 1/2" dia hole.
FS=50 MV; NEW.
0-300 ADC \$7.95
0-600 ADC \$7.95



0-50 KV DC &
0-20 VDC scale
FS=1 MA DC;
4 1/2 x 4 blk face.
Mercer Elec
mfg. NEW
#MER-50KV-20V, \$20-95 \$4.95




WESTON 1941
or Triplett
equivalent;
4.3"x4.8"
made in West-
ern Elec-
tric. Mount
2.8" hole;
Used \$10 ea
Specify scale: 0-20 VDC,
0-300 VDC, 0-5 ADC (FS=5 A)
FS=50 MV; 0-50 amps DC,
0-300 ADC 0-500 ADC



CLEAR PLASTIC
METERS, 2-3/8"
sq. fit 2-1/8"
dia. hole. EMI
mfg. Unused.
#D1145-2, 0-5-
50 MADC, FS=5 ma, \$4.95



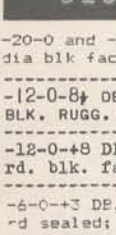
MICROMHOS DYNAMIC
MUTUAL CONDUCTANCE
USED IN I-177 TUBE
CHECKER BASIC 0-1.4
MA. HICKOK #M547A
STK# 3F1350 \$4.95



TV-2 REPLACEMENT
METER, 0-250
SCREEN VOLTS,
FS=1 ma. 2 1/2" RD.
SEALED. NEW \$6.95




DECIBELS
-20-0 and -15-0+5 DB 3.5"
dia blk face; FS=100 ua, \$6
-12-0-8 1/2 DB 100 ua FS 3 1/2" RD
BLK. RUGG. WAC4586 N \$7.95
-12-0+8 DB, FS=100 ua, 3 1/2"
rd. blk. face. Used, \$5.95
-6-0+3 DB, FS=200 ua 2.5"
rd sealed; used, \$4.95



OTHER VALUES IN STOCK, WRITE
POWER SET +6 TO 0 TO-3
2 1/2" RD. FS=200 UA, WAJLINE
1496/400 RUGG/SEAL U \$3.95

WESTON 431
4.3"Hx4"W indus-
trial quality
meters. Used:
15-30 VDC, \$9.
0-500 RF AMP #15
0-150 ADC (FS=
50 mv), \$7.95



47-84 METER ASSORTMENT,
five U.S. mfg met-
ers 2 1/2"-3 1/2"-up;
mixed odd scales, FS=100 ua
and up--no choice \$10/asst

PRESSURE METER
0-30-60 in in-
crements of 10;
electrical type
as used in mil-
vehicles. 2 1/2" dia
O.D. green rim; #6620-514
-4662, unused, \$4.50 ea



OIL PRESSURE, 0-50 incre-
ments of 2; 2.5" rd, off-
white face. #4250 NEW \$4.

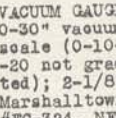
ROENTGENS
PER HOUR METER
50 MICROAMPERE
D.C FULL SCALE
3 1/2" RUGGEDIZED
REMOVABLE
PLASTIC LENSE,
BLACK FACE.
Top SCALE 0-500, LOWER 0-10
#300-10764 UNUSED \$3.95



BALLENTINE
V.T.V.M.
METER
ONLY
AC VOLTS
1-10
DECIBELS
0-20
WESTON 643
4 1/2" OR EQ.
MFG. PT. NO. 205007 NEW
STK#6625-557-0899 \$8.95



VACUUM GAUGE
0-30" vacuum
scale (0-10-15
-20 not gradu-
ated); 2-1/8" dia
Marshalltown mfg
#EC-324, NEW, \$4.50

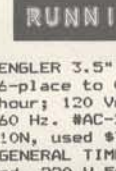


ME-68/PRC-14
0-200 UA meter
consists of
1 1/2" dia meter
in rubberized
housing w/U-77
plug on rear. Meter easily
removed. 3x1 1/2 dia; NEW \$5.




Other SMALL METERS, 1 1/2" sq
sealed types; used, \$6 ea:
#20UAL0 0-20 ua FS=200 ua.
#8719 -20-0+20 ua FS=1 ma.
#M/618S, 0-10 scale FS=2 MA
white face; used.
#BA/T195, FS=25 ma, 0-500
scale; black face, used.
#ME/GRC, FS=1 ma black
face; p/o RT66-7A8, used.

RUNNING TIME
ENGLER 3.5" rd
6-place to 0.1
hour; 120 VAC
60 Hz. #AC-200-
10N, used \$7.95
GENERAL TIME 2.5"
rd, 220 V 50 Hz; unused \$8.



AC CURRENT TRANS-
FORMERS for AC
ammeters with FS=
5 amp movements;
#IA-20053, 200 A
5 VA 50-125 Hz; 3.7", \$8.
#GM-1010, 200 A rated 600 V
3.7" dia, 2 lbs sh. \$8.95
WESTON 607 500/5 ratio, 25-
800 Hz, 5 VA @ 60 Hz; 4.6x
4.6x1.6; 3 lbs. NEW, \$20.



STORE HOURS
9 A.M. to 5:30 P.M.
MONDAY THRU FRIDAY
9 A.M. TO 1 P.M. SATURDAY

TERMS
PRICES NET, F.O.B. LIMA, OHIO
SEND MONEY ORDER, CER-
TIFIED CHECK, VISA, or
MASTERCARD with PURCHASE
ORDER for IMMEDIATE SER-
VICE.

We reserve the right to hold an
order accompanied by personal
or company check until after
check clears the banks.

MINIMUM ORDER \$5.00
PLUS SHIPPING CHARGES

Include sufficient money for
shipping charges. (UNUSED
PAYMENTS RETURNED AT
ONCE.) Otherwise we will send
shipping charges collect.

C.O.D. ORDERS, SEND 50% of
PURCHASE with ORDER. CASH
BALANCE will be COLLECTED
UPON DELIVERY.

When writing for information
PLEASE state what specific
information you desire.

DESCRIPTIONS
ALL MATERIAL OFFERED IN
THIS CATALOG IS IN "USED-
COMPLETE" CONDITION, UN-
LESS QUALIFIED AND/OR
NOTED AS "RECONDITIONED,"
"UNUSED," OR "NEW."
MERCHANDISE IS NOT OPER-
ATIONALLY CHECKED UNLESS
SPECIFIED AS "CHECKED."
EQUIPMENT DESCRIBED AS
"REPARABLE"--MEANING "A-
BLE TO BE REPAIRED"--IS
ELECTRO-MECHANICALLY COM-
PLETE, BUT REQUIRES SOME
TROUBLESHOOTING BY THE
CUSTOMER.

AC VOLTMETERS

- 0-2 VAC 2 1/2" dia; Simpson
Model 125, used, \$4.95
- 0-8 VAC, 3 1/2" rd; various
manufacturers, used \$6.95
- 0-10 VAC 2 1/2" rd. \$4.95
3 1/2" rd or sq \$5.95 var.mfg.
- 0-30 VAC 400 Hz 3 1/2" rd;
Weston 476, unused, \$5.95
- 30-150 VAC 60 Hz, various
mfg; 2 1/2" rd., used, \$6.95
- 0-100 VAC, 3 1/2" rd., Hickok
Model 47M, used, \$5.95
- 0-15 VAC, 3 1/2" rd., various
mfg., used, \$5.95
- 0-150 VAC, 1 1/2" sq clear
plastic; Face mfg. NEW \$7.

AC AMMETERS

- 0-150 AC AMMETER, FS=5 amp
AC; 3.5" rd. Unused, \$9.95
- 0-125 ACA FS=5 A for 400
Hz; 3 1/2" rd. Hickok \$9.95
- 3.5" ROUND AC
AMMETERS, full
scale=indicat-
ed scale. U.S.
mfg. UNUSED:
0-50 ACA, \$12
0-75 ACA, \$12
0-125 ACA Triplett 331, \$14
0-120 AC amp, FS=3 ACA, \$8.

D.C. MILLIAMPS D.C. VOLTMETERS

- FS=1 MADC, 0-1.0-50 scale,
3 1/2" rd clear case; Used \$5.
- 0-3 MA-DC, 3 1/2" rd. sealed.
#4081, unused, \$6.95
- 0-15 DC MA, 3 1/2" rd sealed;
various mfg. Used, \$5.95
- 0-100DCMA 100MA. MOVE.
3 1/2" RD. RUGG. #4265 N \$6.95
- 0-800 MA DC, 3.5" sq; vari-
ous mfg. Unused, \$6.95
- 0-200 DCMA SC. 2 1/2" RD. USED
#MR25200DCMA \$3.95
- 0-200 ma dc, 3 1/2" rd, vari-
ous mfg. Used, \$5.95
- 0-20 MA-DC, 3 1/2" rd. Various
mfg. Used, \$5.50 Unused \$7.
- 0-500 ma dc 3 1/2" sq, bent
pointer tip; used \$4.95
- 0-300 MA DC, 3 1/2" rd, clear
plastic case. Used \$5.95
- 1-0-1 MADC, 2 1/2" rd sealed;
various mfg., used, \$5.95
- 0-50 MADC, 3 1/2" rd., various
mfg., used, \$6.95
- 100-0-100 MA DC, 3 1/2" rd
Weston 301; Used, \$5.95
- 0-100 VDC, 3 1/2" rd clear
plastic case; used, \$5.95
- 0-15-600 VDC, 2 1/2" rd black
face; w/mult. code-Used \$6.
- 0-1.5 VDC 2.5" round; DeJur
R230 sealed. Unused, \$5.95
- 0-3 VDC 2.5" sq DeJur seal-
ed type. #2688 unused \$5.95
- 0-40 VDC, 2.5" round; vari-
ous mfg. Unused, \$6.95
- 0-30 VDC, 3.5" round clear
plastic; Weston. Used \$7.95
- 0-20 KV DC, FS= 1 ma; 3.5"
rd Weston 301. Unused \$6.95
- 0-200 VDC, 3 1/2" rd. sealed;
various mfg. Used, \$6.95
- 0-300 VDC, 2 1/2" round; vari-
ous mfg. Unused \$5.95
- 0-500vdc sc. 3" sq.
#231-1624 Used \$5.95
- 100-200 VDC Hi-Lo range set
Westn 1093 2.5" rd. Used \$8.
- KILOVOLT DC, FS=1 MA:**
0-3 KVDC, 2 1/2" rd new \$5.95
0-600-1500 2 1/2" rd used \$6.

D.C. MICROAMPS.

- 0-200 UADC, 3 1/2" rd, vari-
ous mfg; used, \$5.95
- 0-200 UADC and -8-0-+6 DB,
2 1/2" rd. sealed, new, \$4.95
- 0-500 UADC, 2 1/2" rd sealed;
various mfg. Used, \$4.95
- 0-100 UADC, 2 1/2" rd sealed;
various mfg. Used, \$4.95
- 50-0-50 UA movement, 0-9
scale; 2.5" rd sealed, \$6.
- 50 UA MOVEMENT, SCALE -30,
0, 150, POINTER AT ZERO, SEAL
ED, 2 1/2" RD USED TRC30150 \$4
- 0-5-10-20 Peak Volts, FS=
500 ua; 2 1/2" rd Weston 1021
sealed. Used, \$4.50
- 0-1000 VDC FS=1 ma, 4"x3.5"
Honeywell MS3T. Unused \$10.
- CLEAR PLASTIC**
FS=100 UA METER
with non-linear
SWR and 0-20 W
scales; 2-3/8"
sq face 1/2" dia
hole. #SWR-020, NEW \$4.95

FAN-SHAPED ME-
TERS, plastic w/
zero adj. 3" top
2 1/2" bottom; 3" H.
Fits 2" dia. hole
EMI mfg. Unused.



- #EMI-5VDC, 0-5 VDC, \$5.95
- #EMI-25VAC, 0-25-250 VAC
scale, FS=25 VAC, \$5.95

JEWELL MODEL
73T METERS,
3 1/2 x 3 1/2"
dia hole-NEW
0-15 VDC \$7.
0-20 VDC
scale, FS=50 mv, \$6.95
0-200 ADC, FS=50 mv, \$7.95
200 AMP DC SHUNT for 50 mv
meter movements; 6x1 1/2, 1 lb
GE#200A-SOMV, NEW, \$8.00

JEWELL 73T 0-200 ADC meter
w/GE 200 amp shunt, \$15.00



R.F. AMMETERS

- 0-1 RF amps, expanded 0.6-1
3.5" rd Triplett. NEW, \$12.
- ART-13 0-5 ANTENNA CURRENT,
FS=250 ma; external trans-
former coil not available;
2 1/2" rd black face. Used \$5.
- 0-10 ANTENNA CURRENT, 2 1/2"
rd black face w/thermocoup-
le; p/o BC-442. Used \$9.95
- 2.5" ROUND BLACK
FACE RF AMMETERS:
0-3 RF A, \$8.95
0-9 RF A expan-
ded 2-6 RF A por-
tion scale, \$10.

DC AMMETERS

- 0-100 AMPS DC
FS=50 mv, zero
adjust; 2.5"
high X 2.9" W.
WESTON 1921,
NEW, \$8.95
- DC AMMETERS, FS=indicated:
0-3 ADC, 3.5" rd NEW \$7.95
20-0-20 ADC, 3.5" rd, \$10.
0-30 ADC, 2.5" rd, NEW \$9.
- BATTERY CHARGE FS=10 A, & A
redline; 2.5" rd. Unused \$4
- 0-15 AMPS DC
FULL SCALE,
2-3/8" square;
2-hole flange
mount 3-3/16"
across. Emico
#D2877, NEW, \$6.95 \$4.95
- WESTERN ELECTRIC 3 1/2" round
clear plastic case; used:
0-10 ADC \$10. 0-15 ADC \$10.
- DC AMMETERS, FS=50 mv:
0-30 ADC 3.5" rd used \$7.95
0-200 ADC 2 1/2" rd NEW \$6.95
0-1500 ADC 3 1/2" rd used \$7.
- 0-150 A/0-75 V
DC DUAL SCALE,
0-150 ADC/0-75
VDC FS= 50 mv;
zero adjust.
2.3x2.8. #JB-
15075 NEW \$5.95

**TAKE 25% OFF
PRICES IN THIS COLUMN**

400 WATT REGULATOR



SOLID-STATE LINE REGULATOR, use to protect your valuable equipment from line variances and spikes. Input 96-132 VAC 50-60 Hz; output 115 VAC +5% 0.75 to 3.5 amps. Harmonic distortion 12% total max; circuit breaker. MIL-spec quality; 11x 6.5x11, 70 lbs sh. #102-5675, unused, \$49.50

TEMPERATURE CONTROLLER

LFE 238 TEMPERATURE CONTROLLER designed for temperature control in industrial furnaces, environmental chambers, ovens, molding machines, etc where precise control of temperature is necessary. Model 238 is solid-state, has digital set point, and +/- 50 degree deviation indicator; also solid state relay output. Features include Rate Time adjustment 0.05 to 3 minutes, Cycle Time adjust 6 to 60 sec, Proportional Band adjust 1 to 50X, Reset adjust 0.1 to 16 minutes, and Set Point Range 0-800 F. Power input: 120v 50/60Hz. Requires thermocouple sensors which we cannot supply. 3.8x3.8x6.5"D, 3 lbs. Unused w/book \$49.95



SOLDERING STAND



SOLDERING STAND, handy item for the builder-hobbyist; has 2.6"x 5.3" cast iron base with sponge tray and 5" coil with insulating funnel. 3 lbs sh; #SS-IS-101, NEW, \$2.95

**D O L L A R
D A Z E**

PLEASE ORDER BY NUMBER. Unit prices only as indicated. Look for more DOLLAR DAZE throughout this catalog.

3AG 1 amp FUSES 10/11;
45-85 SLD-BLD 3AG 1 amp, 10/11.25;
In-line FUSEHOLDERS for 3AG, 5/11

41-81 LOUD BUZZER HORN as used
in smoke alarms; 2" dia
x1 1/4". 6 VDC \$1.25 ea;
12 VDC \$1.35 ea; 115 VAC \$1.45 ea

46-86 DRILL BITS for PC board works;
1/8" shanks. Specify size #59 or
#75. 2/11.50; 10/65 (one size).

43-83 LINE CORD, 2-conductor #18 gauge
as on appliances; 6 feet long,
white. NEW, 3 for \$1.25

23-77 BRASS COUPLINGS for 3/8" dia. x
3/4" long shafts. 3 for \$1.00

25-77 MOBILE RADIO PLATE w/switch
light, jack, 6' 10-cond.
cable. Plate 3 1/2 x 3 1/2. \$1.00

44-83 49 Mhz WALKIE-TALKIE
PC BOARD, no speaker
or mic; 9 VDC req.
\$1.50 ea, 3 for \$3.

30 MIXED HARDWARE: screws, nuts, washers
removed f/equip. Usable; 3 lbs. \$1.00

42-82 RUBBER EQUIPMENT FEET 1-1/8"
dia rubber with 1" L #2 x 20
bolt; w/o nut. 8/32.00

47-86 RUBBER EQUIPMENT PADS, 5/16" dia
self-adhesive; 40 per sheet.
2 sheets for \$1.50

38-79 SPEAKER, 3" dia. 8 , 1 watt.
Sanpo SP024, new, \$1.00

R-390A/URR HF RECEIVER



R-390A/URR RECEIVER famous military set covers 0.5 to 32 MHz AM-CW-MCW in 31 one MHz bands read directly on mechanical digital counter. 455 KHz final IF; has four Collins mechanical filters allowing 2-4-8-16 KHz selectable bandwidth. Calibration points every 100 KHz; also BFO, AGC, dial locks, 600 ohm audio out, Line and Carrier Level meters. Rackmount; no covers. Requires 115/230 VAC 60 Hz. 10.5x19x16.8, 95 lbs (UPS in 2 pkgs). Used-repairable, \$215.00 Checked, \$335.00; MANUAL partial repro, \$15.

R-390A "AS-IS", less meters, JTF7, BFO, and covers; "visually inspected" only, \$135.00
+ + + + +
Good used REPLACEMENT PARTS for R-390A.
Specify chassis part numbers when ordering:
AUDIO AMP, repairable \$18. Checked, \$30.
CLAMPS for gears (specify gear), \$1.50 ea
COUNTER DIAL, mechanical, \$15.00
CRYSTALS, 200 KHz (when available), \$18.
CRYSTALS, specify frequency \$10 ea; 5/#35
CAPACITOR C-603 or C-606, \$4.00 each
DIAL LOCK assembly with knob, \$10.00
DIAL ZERO shaft with knob, \$10.00
FILTER, BANDPASS FL-601, \$10.00
FILTER, MECHANICAL, checked: 2 or 4 KHz \$35
8 KHz, \$27. 16 KHz, \$20. SET of four, \$85
GEARS, #39 or #21, \$6.00 ea
GEARS, other than above, \$3 ea; 5/#10.00
KNOBS, Megacycle or Kilocycle, \$6.00 ea
KNOBS for RF, IF, Audio etc., \$1.50 ea
KNOBS f/Ant Trim, Dial Lock, etc, \$1.25 ea
POTS for RF/IF, Audio, Meter Level, \$2 ea
PTD/VFO assembly (not Collins), checked \$40
POWER SUPPLY less 2675 tubes, \$30.00
PTD/VFO if Collins manufacture, \$60.
RELAY, ANTENNA, \$15.00
RESISTOR TUBE, RT510/3TF7/3TF4/3TFV4, \$12.
SLUGS for RF transformers, \$4.00 ea
SLUG RACKS with springs, \$3.00 ea
SWITCH, On/Off/Standby, \$5.00
SWITCHES f/front panel except above, \$3 ea
TRANSFORMER, audio output, \$9.00 ea
TRANSFORMERS, RF or IF, \$8.00 ea
IF AMPLIFIER DECK, checked, \$150.00
Meters and complete RF decks not available.

CV-157 SSB CONVERTER



CV-157/URR SINGLE SIDEBAND CONVERTER, dual channel converter designed for use with R-390 and R-390A receivers but is usable with any receiver having 455 KHz final IF. Unit will deliver single channel output to operate teletypewriter or facsimile. When twin single sideband emission is used, CV-157 will provide two separate channels of output. one channel can handle RTTY and the other FAX and voice. Input frequency adjustable 450-510 KHz; converter IF center and carrier filter bypass 100 KHz. Separate VU and Carrier meters, SB Select "A-LSB-B/B-USB-A", AGC Select "REC-CAR-LSB-USB-TSB", squelch and drift alarms, and 44 tubes. Requires 105-125/210-250 VAC 50-60 Hz; 15.8x19 x15, 125 lbs sh. Used-repairable, \$195.00 MANUAL for CV-157, partial repro, \$15.00

LINEAR AMPLIFIER

AM-6154/GRT-21 LINEAR POWER AMPLIFIER (ITT Model 3211), conservatively rated for 50 watt output from 10 W exciter input over 118 to 149.95 MHz. Uses Eimac X651Z/B930 or Amperex DX393 tetrode in silver-plated cavity in removable drawer; 175-turn tuning counter dial. Main chassis has solid-state power supply and buffer amp/multiplier; test meter on panel monitors voltages. Requires 105/120/210/240 VAC 50-400 Hz and +20 V reg 60 ma, +20 V keyed. 7x19x18.5, 80 lbs in 2 packages (UPS). Schematic pack included. Used-excellent-not tested, \$209.50

LAP-TOP PROCESSOR



LEXICON LAP-TOP WORD PROCESSOR, true 5.3x 10.5x1.8 lap-size unit features 14KB usable word processor memory, 300 baud modem, and nicad battery power or 115 VAC. also has calculator and digital clock functions, single-line LCD display, "chicklet"-style query keyboard, and peripheral output DB-25 connection. User can create, store, and search up to 20 separate files; battery power can maintain files for over two weeks if necessary. The onboard modem allows data to be transferred over the phone to a remote computer and also permits to access subscription information services such as Western Union's EasyLink and the Dow Jones Financial news. The lap-top word processor is not a computer in that it cannot be used to develop and run programs. However, for most of us who are "on the go" and who's primary computer usage is word processing, the Lexicon is a convenient and simple tool. With modem cable, batteries, battery charger, and operation book; 30 day warranty for purchase price refund. 4 lbs; #LEX-LT-WP, NEW \$109.50

HOSPITAL INTERCOM BOX



INTERCOM CONTROL BOX an experimenters delight, this item was part of hospital desk-patient communications system. 8x5.6x2 aluminum box has Lipon 10 amp lighted-push switches; two SP momentary 0.8" sq, one DP mom 0.8" sq and one SP mom 0.8"x1.5", and 1.5" dia 8 ohm speaker, volume control, and 7x4.5 circuit board. PC board has socketed Sigma 70R-Series 2 amp relays 2/4PDT and 1/DPDT, two Triad TY-47X 2000 ct; 16/8/4 ohm AF transformers, and socketed IC's LM324, 2/LM339, MC14001, MC14011, MC14028, MC14042, MC14585, 3/MOC319 ULN20D4; 4 lbs sh. #MID-IC-BX, used, \$9.95

48 TPI DS-DD DRIVE

MAGNETIC PERIPHERALS 9428 DISC DRIVE, 1 1/2 height 48 TPI double-sided double-density; usable with the IBM PC and its many clones. Black front plate; 4 lbs #CDC-MPI-9428, NEW, \$95.00 #CDC-MPI-9408, full HT 48 TPI DS-DD \$99.00 #CDC-MPI-9409, 1/2 HT 96 TPI DS-DD, \$99.50

TELESCOPING STAND

PROFESSIONAL QUALITY TELESCOPING STAND two 20" long chromed sections; bottom 1.1" dia, upper 0.9" dia. Steel triangular base has 2" dia casters and is 20" across caster to caster. Removable 7" long bracket can be used to mount small item such as speaker, test instrument, etc. (A third telescoping section could be added to really increase possible uses.) 27 lbs. #2020-TST, used-good \$24.95;

PLASTIC CASH DRAWER

RUGGED PLASTIC CASH DRAWER with keylock; a good item for the small business man or flea marketeer who wants to better organize and protect his or her receipts. Brown slide-out drawer has black removable tray with 15 compartments for currency, coins, checks, receipts, etc., adjustable dividers, and five spring-loaded currency retainers. Handsome textured black case has reinforced top. 5x19x21.8, 18 lbs sh. #PL-CD-685, NEW, \$59.50

ARN-6 RADIO COMPASS



R-101/ARN-6 RADIO COMPASS RECEIVER 10-1750 KHz in four bands; frequency selection controlled remotely. Tubes 6/12SK7, 4/12SX7, 2/26A7, 2/2050 12SY7, 12SW7; 24 VDC required. 11.5x7.3x15.5, 44 lbs sh.

Used, \$45.00; Gov't reconditioned, \$65.00
 MANUAL FOR ARN-6, partial repro, \$15.00
 AS-313/ARN-6 LOOP ANTENNA, used, \$15.00
 ID-91/ARN-6 3" INDICATOR, unused, \$12.95
 PD-5/ARA-19 TUNING DRIVE, used, \$14.95
 AM-203B/ARA-19 AMPLIFIER, used, \$12.95
 C-149/ARN-6 CONTROL PANEL, used, \$9.95
 C-423/ARN-6 CONTROL PANEL, used, \$8.95
 MC-124 FLEXIBLE TUNING SPLINE, WRITE
 MC-136 RIGHT ANGLE ADAPTER, used, \$2.50
 MC-203 "T" ADAPTER, used, \$2.50

PHANTOM ANTENNA



GP PHANTOM ANTENNA as used with WW-II 350-9050 KHz aircraft transmitters to monitor RF at remote point. Has 3 1/2" rd 0-10 RF ammeter, 10 KV 0.0002 and 0.0003 mf G2 mica xmitting capacitors, 12-nickel-plated terminal posts in 14x12x3 1/2 aluminum case w/hinged top; 22 lbs. Unused \$28.

COMMAND TRANSMITTERS

Command transmitters with proper use can put out 50 watts CW and 30 watts phone. Modulation is obtained from either of two separate units, BC-456 for single tube modulation or MD-7 for push-pull. The 575-600 VDC 175-200 MA and 24 volt power requirements were originally satisfied by the 24 VDC DM-33 dynamotor which mounted on either modulator. The transmitters use a 1629 "eye" tube for tuning and crystal calibration plus tubes 2/1625 and 1626. Size: 5x7x12, 17 lbs. sh.



BC-457/T-20, 4-5.3 Mhz, reconditioned \$19.95
 BC-458/T-21, 5.3-7 Mhz, \$19.95
 BC-459/T-22, 7-9.1 Mhz, without dial, \$21.00



BC-456 MODULATOR for use with Command Transmitters; single tube modulation with tubes 1625, 1275, 0D3. Has provision for mounting DM-33 dynamotor. 7x8x10, 11 lbs. sh. Used \$12.95

PUSH-ON TUNING KNOB f/Command Receivers, \$3.
 MC-215 SPLINE for remote tuning, 6 ft., \$1.50
 DM-32 DYNAMOTOR, 25 VDC f/receivers, \$4.95
 MT-77 MOUNT for BC-442/RE-2 relay box, \$3.00
 FT-232 SHOCKMOUNT for FT-234 rack, \$5.00
 FT-233/MT-7 single receiver rack, \$3.00
 FT-234/ single transmitter rack, \$3.25
 FT-227/MT-70 SHOCKMOUNT f/FT-226 rack, \$2.50
 C-48 TUNING CONTROL, panel style for ARC receivers 190-550 KHz; MC-215 required, \$8.
 C-22 TUNING CONTROL, 108-15 Mhz, used, \$7.95
 BC-451 TRANSMITTER CONTROL, 1 to 4 xmitters; built-in key, mode, mic jack, unused, \$5.00
 BC-496 DUAL CONTROL, 3-6 and 6-9 Mhz dials for BC-454/BC-455 pair; unused, \$7.95
 BC-450 TRIFLE CONTROL, 190-550 KHz, 3-6, and 6-9 Mhz dials for BC-453-454-455; unused \$8.

R-19/ARC AIRCRAFT RECEIVER, 118 to 148 Mhz continuously tuneable. No dial; designed for remote tuning with spline shaft. IF-15 Mhz. With tubes 9002, 3/9003, 14A7, 2/14R7, 14F7, and 12A6. Uses accessories similar to ARC-5 Series. Requires 250 VDC 60 ma and 24 VDC. 6 1/2x5 1/2x1 1/2; 13 lbs. sh. Used, \$18.95



R-11A RECEIVER, 190-550 KHz. Similar to R-19 but has 85 KHz IF and tubes 2/14A7, 14R7, 14F7, and 12A6. Used, \$12.95

R-22 BROADCAST BAND RECEIVER, 550-1500 KHz. Similar to R-11. Used, \$24.95

ARC-39 RECEIVER-XMITTER



RT-427/ARC-39 RECEIVER-TRANSMITTER, REPLACES COMMAND SETS; COVERS 2.0 TO 9.1 Mhz IN TWO BANDS; SIX CRYSTAL-CONTROLLED FREQUENCIES PER BAND. RF OUTPUT: 10 WATTS MIN. INTO 10 OHM LOAD (100 PF). 100% AMPLITUDE MODULATION; AUDIO OUTPUT: 200 MW WITH 1000 UV 30% MODULATED INPUT; 800 MW MAX. BANDWIDTH: 8 KHz 3 1/2 DB DOWN. METER INDICATES RELATIVE RF OUTPUT TO THE ANTENNA. WITH TUBES 0B2, 2/12AT7, 4/5749, 5750, 3/5686, 4/5814, & 3/6159. POWER REQUIRED: 28 VDC 4.4 AMPS WHEN RECEIVING; 8.5 AMPS TRANSMITTING. SIZE: 7 1/2x10 1/2x2 1/2; SHPG. WT: 42 LBS. PRICE: USED, COMPLETE, \$49.50
 MANUAL FOR RT-427/ARC-39, REPRODUCTION, \$10.

225-400 MHZ CONVERTER



AM-914/TRC AMPLIFIER-CONVERTER, originally used with military R-417 recel-as plug-in for the 225-400 Mhz range. Continuous tuning of RF and oscillator; 30 Mhz I.F. Unit has conversion possibilities as discussed in R. Grove's article in 10/80 issue of CQ magazine. With tubes 5870 and 4/6J4. 7 1/2x6 1/2x9 1/2, 17 lbs sh. Used, \$34.95
 AM-1179/GRC, 50 to 100 Mhz, \$39.50
 AM-913/GRC, 100 to 225 Mhz, \$39.95
 AM-1177/GRC, 400 to 600 Mhz, \$44.50
 AM-3203A/GRC, 1.35 to 1.875 Ghz, \$49.50



AM-1179/GRC AMPLIFIER-MULTIPLIER, used in T-302 transmitter for 400-600 Mhz FM range. 100 W out f/4X150A and 4X150G. 12x6x14, 45 lbs. Used \$75.
 AM-1180/GRC, 50-100 Mhz, one 4X150A, \$49.50

CV-1275/ARN (ARC B-18) DATA CONVERTER, solid-state unit processes VOR or localizer navigation signals; 28 VDC, 6x2 1/2x6. Used, \$30.

SCR-522 RECEIVER-TRANSMITTER

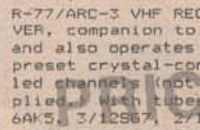
AM CRYSTAL CONTROL, 30 WATT, 4 CHANNEL ON ANY FREQ. IN THE 100-156 MC RANGE. TUBES TRANS. 2/832, 6SS7, 3/12A6, 6G6 REC. 1/9002, 9003, 12C6, 12H6, 3/12SG7, 12A6 & 2/12AH7. UNITS CAN BE RE-MOVED FROM CABINET CASE SEPARATELY. REQUIRES POWER SUPPLY. SIZE: 16x12x10 1/2; WT: 50 LBS. Used, \$29.95
 CONNECTOR PLUGS, \$1.50 EA. OTHER ITEMS AVAILAB.



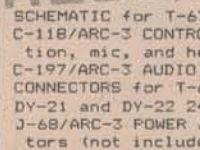
ARC-3 AIRCRAFT RADIO



T-67/ARC-3 TRANSMITTER, post-WW-II VHF set covers 100-156 Mhz AM using 8 preset crystal-controlled channels; 8 W power output. Uses BC 11-14-2 or CR-1 type crystals (not included). With tubes 2/832, 2/6L6, 3/506, 6J5, 12SH7. Requires 24 VDC and 410 VDC 325 ma. 7.5x12.3x15.3, 24 lbs sh. Used, \$24.95. \$19.95



R-77/ARC-3 VHF RECEIVER, companion to T-67 and also operates on 8 preset crystal-controlled channels (not supplied). With tubes 6XAK5, 3/12SE7, 2/12SH7, 12SH7, 12SL7, 12A6, 12H6, 9001, 9002. Requires 24 VDC and 210 VDC 310 ma. 6x11x14.3, 24 lbs sh. Used, \$22.95. \$18.95



SCHEMATIC for T-67 or R-77, \$1.50 each.
 C-118/ARC-3 CONTROL BOX, for channel selection, mic, and headset jacks; \$8 w/set.
 C-197/ARC-3 AUDIO CONTROL, unused, \$4.00
 CONNECTORS for T-67 and R-77, \$2.50 each.
 DY-21 and DY-22 24 VDC DYNAMOTORS, WRITE.
 J-68/ARC-3 POWER JUNCTION BOX, holds dynamotors (not included); 9 lbs sh. Used, \$9.95

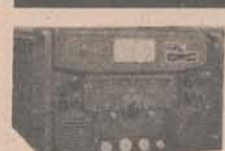
T-363/ARC VHF TRANSMITTER, 132 to 148 Mhz AM five channel crystal-controlled; operates from 24 VDC input. 5 W output; companion to R-19 receiver. 4.5x4.5x6, 6 lbs; used, \$16.

ANTENNA COUPLER



CU-872 ANTENNA COUPLER, handles upto eight receivers in the 2-32 Mhz range. Gains 0 to 3 db. Noise figure: 6 db or better. Has 0-50 microammeter test indicator and circuit selector switch on front. 70 ohm input; type N connections. With tubes 20/6922, 0B2. Requires 115/230 VAC 50-60 Hz. 7x19x16.5, 40 lbs sh. Used-reparable, \$49.50
 MANUAL for CU-872, partial repro, \$8.50

225-399.9 MHZ RECEIVER



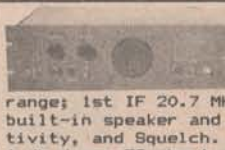
R-278 RECEIVER, 225 to 399.9 Mhz AM; crystal frequency control for 1750 channels in 100 KHz steps; ten preset channels. Audio freq response: 200 Hz-20 KHz (wide), 200-5 KHz (narrow). Has AVC, squelch, and 44 tubes; unitized chassis, rackmount. 12 1/2x19 1/2x20, 115 lbs sh wt. Used, less guard channel, reparable, \$125. \$100
 MANUAL, partial repro, \$15. Schematic, \$2.50



R-876/ARN-59 DIRECTION FINDER RECEIVER, same as Aircraft Radio Corp R-30A DF receiver used in light aircraft. Covers 190-1750 KHz in bands 190-400, 400-840, and 840-1750 KHz; replaces AN/ARN-6 radio compass system. Can be tuned using push-on knob or remotely using C-2275 control box (not available) and MC-215 spline. IF 142.5 KHz; with tubes 2/5718, 5896, 5/5899, 3/5902, 2/6021, 6112. Requires 24 VDC 1 amp, 110 VDC 90 ma, 125 VDC 20 ma; also 13 V 100 Hz for loop selsyns if used for DF. Voltages originally supplied by DY-107 dynamotor (not available) 4.5x4.5x10.3, 9 lbs sh. Used, \$19.95
 OPERATOR'S MANUAL, \$3. SCHEMATIC, \$2 w/set.
 MC-215 SPLINE, 6', \$1.50; SPIN KNOB, \$3.00
 ID-637/ARN 3" dia COMPASS INDICATOR, \$8 w/set

R-518 VHF RECEIVER

R-518/FRR-27 VHF RECEIVER, single-channel crystal-controlled reception of AM or tone signals in the 100 to 156 Mhz range. Double conversion with IF's of 23 Mhz and 3 Mhz. Audio output: 1.5 watts into 200-600 ohms; 50 ohms balanced antenna input. W/squelch and tubes 3/12AT7, 2/6AU6, 5654, 2/6AV6, and 6005. Requires 115 VAC 60 Hz; 6x19.5x18.8, 45 lbs. Used, \$40. Manual partial repro, \$10.



R-748/TRC VHF RECEIVER, single channel crystal-controlled in the 132-150 Mhz AM range; 1st IF 20.7 Mhz, 2nd IF 5 Mhz. Has built-in speaker and controls Volume, Sensitivity, and Squelch. Selectivity +/-20 KHz 6 db down; 52 ohm input impedance. Front panel hinged for access to RF chassis; tubes 2/0B2, 4/6AK5, 6AD5, 6AX5, 2/6BA6, 2/6J6, 12AT7, 12AX7. 115/230 VAC 50-400 Hz; 5.3x19 1/2x13.3, 34 lbs sh. Used \$29.95; Schematic \$2.

'ANTIQUE' TRANSMITTER

RCA RT-8003 LF TELEGRAPH TRANSMITTER, "antique" unit transmits 700 Hz tone over 355-500 KHz; 30 watts output. Designed to operate from 1500 VCT 100 ma 350 Hz power input. Keying circuit is in-line with the power input so that keying makes or breaks the power circuit. The four #10 tubes are then modulated by the line frequency and produce the 700 Hz tone. Antenna coupling set by moving plug into any one of six coil tap jacks. Has two National Velvet Vernier dials, two varimeters, and 0-5 RF ammeter. 21x16x11, 30 lbs sh wt. Government-reconditioned, \$79.50



PAGING HORN

OUTDOOR PAGING HORN with sealed voice coil and 5" dia aluminum horn. Rated 15 watts 8 ohms. Includes mounting bracket. O/a 4 1/2" deep, 4 lbs sh. #BZL-0518, NEW, \$9.95

GYROSCOPE ASSEMBLY

HONEYWELL VERTICAL GYRO ASSEMBLY #JG-7044-A17, single pitch and roll gyro with 400 Hz motors, mercury switches, etc. Gimbal freedom: ±360° (outer axis, longitudinal), ±85° (inner axis, transversal). Erection rate 2°-6° min. Also 400 Hz 1 Ø motors 26 V (torque), 115 V (caging solenoid), and 115 V 21000 RPM (power motor). Pick-up pots: 30K² ohm ±168° (roll), 30K² ohm ±80° (pitch). Angular momentum: 4.75x10⁶ gm cm/sec. Unit has "line of flight" monitors for normal loft or alternate O/S. 7.5x9x6; 11 lbs. Used, \$25.00

NASA CONTROL PANELS

GROUND/GROUND INTER-COMMUNICATIONS PANEL appears to be high quality NASA surplus; has twenty-four 0.8"x1.2" Microswitch AML Hall-effect switches w/28 V lamps, 6-16 V sink. These switches are bounce-free type for use in digital circuits. Also has mechanical matrix 16-key keypad, 1.75" dia speaker, three Bourns 90-Series pots (25K/25K, 10K/10K, 25K/500) w/knobs; 6.3x11.5, 4 lbs sh. #66-COM-PL, removed, \$12.95

GROUND/AIR/GROUND CONTROL PANEL, has Microswitch AML Hall-effect switches; four 0.8" sq and four 0.8x1.2" single circuit, eight 0.8x1.2" dual circuit switches, plus four red and four red/green-dual LED's. Display/driver board has sixteen HP-50B2-7740 7-seg 0.3" socketed displays, 3/U1N2004, 2/74C14, 14511, 14514 IC's. Button inscriptions can be re-worked. 4.3x11.5, 2 lbs sh. #GAG-PL, removed, \$9.95

DUAL RUNNING TIME

Two ENGLER 2.9" dia 115 VAC running time meters with 3 digits + tenth hour indication. Sodeco 115 VAC 7 digit counter and three red LEDs all in 3.5x8.3 black metal box; 3 lbs. #2RTM-CB, used, good-condition \$14.95

PROJECT ENCLOSURES

#SA-1499 TERMINAL BOX, usable as 3.5x7x5 project box; has two conduit holes one end, two connectors on other. Inside 15-term 3/4" barrier strip and P&B MH230D 12 VDC sealed relay; steel, 5 lbs. Used, \$2.95

#JB-416161 STEEL JUNCTION BOX, 4.1x6.1x6.1 with three knockout holes on each side for conduit. Dark gray; 5 lbs sh. NEW, \$4.50

#ENC/ROMII ENCLOSURE, designed for portable test instrument; cover telescopes and slide-snaps over slant-style bottom. Top handle and rubber feet on back and bottom. Slanted section 2"D min to 3.8"D max; o/a 8x8.5x5.3, 3 lbs. Unused, \$5.95

ALUMINUM ENCLOSURE and frame from antenna coupler. Adapt as-is or re-work; 7.5"H x 10"W x 10"D. Front has cut-outs for 1-3/4" sq meter and two connectors. Also removable 4.5"x2.5" insulator. 8 lbs sh. #ENC/180L, \$6.00

SPEAKERS

BOOKSHELF SPEAKER in walnut-grained vinyl-covered 7x10x2 1/2 enclosure. Has 4" dia 16 ohm 1 W speaker and 6 foot cord with RCA plug; 2 lbs sh. #ER-WD-SPK NEW \$4.50 ea 2/\$6.

SPEAKER PAIR in PLASTIC ENCLOSURES, each 4" dia 16 ohm 1 W speaker in attractive 6 1/2x6 1/2x5 1/2 enclosure with 6' cord and RCA plug. White & black plastic per pic; 4 lbs sh wt. #ER-PL-SPK-FR NEW \$3.95/pr

SPEAKER WRAP for assembling 10x20x4 walnut-grained vinyl-covered enclosure; no grill cloth. 7 lbs sh. #ER-SPK-ENC, 2/\$2.00

3 X 5 SPEAKER, 2 watts with 1 1/2" dia magnet. Specify 8 or 16 Ω 1 W; 1 lb, 1.35; \$95/100 *****

100 - 500 LOT PRICING available on all above.

PAGING MIC

MUZAK MBL MULTI PAGE MICROPHONE, dynamic 150 ohm mic is designed for paging and features switching for three page zones plus one "all-call" switch. Usable with amplifiers having input impedance of 50 to 250 ohms; 60-10000 Hz frequency response. With four SPDT rocker switches and 10 foot 8-conductor cord; 3 lbs sh. #MBL-MIC, NEW, \$24.95

3-WAY FOOT SWITCH

MOLLENSACK DELUXE 3-WAY FOOT CONTROL, large "play" pedal switch has two smaller bar-type switches for "rewind" and "fast forward". Switches are each rated 15 amp 115/230 VAC or 0.5/0.25 A 115/230 VDC; 6 foot four-conductor cord included. 1.5x7x5.5, 2 lbs sh wt. #FSW-A0548, NEW, \$8.95

FULL RANGE

4" DIA HIGH QUALITY 8 OHM FULL RANGE SPEAKER, heavy 3" dia x 0.9"H magnet for cone. Excellent sound; 1 lb 10 oz net, 3 lbs sh. #AST-180-040, NEW, \$8.95-\$7.50

20 HZ STATIC RINGER

20 HZ INVERTER MODULE, used in telephone equipment to produce 20 Hz 65 volt 50 ma ringing signal from 110 VDC 65 ma input. 3.4x2x3, 2 lbs. #E10/TA182 used \$7.95

JOHNSON DESK MIC

BASE STATION MIC, push-to-talk; wire for 600 or 50K ohm impedance. Black cast metal; shielded coil cord for you to install. 9.3H, 3.8x6 base; 3 lbs. #JHNS-DM-BLK, NEW, \$12.95

NIC COIL CORD only, one shielded conductor plus two without shield; black, extends 30" to 42". Surplus from famous U.S. mic manufacturer; #SH-CC3042, \$3.00; 2/\$5.

H-K FM TUNERS

HARMON KARDON FM TUNERS with AM capacitors (no AM component) 75 ohm antenna, and 300 ohm IF jacks; 1/2" dia tune shafts. With diagram, NEW. #00331591A, two MOSFET RF stages, MOSFET mixer, two transistor oscillator; 3:1 gear reduction. Requires 13 VDC; 4 1/2x2 1/2. \$9.95

#00234339 (Alps), two MOSFET RF stages, MOSFET mixer, IC oscillator; 3-gang variable capacitor, 3:1 gear reduction. 5 1/2x2 1/2. \$7.95

#FB118U13 (Alps), one FET, one transistor oscillator; requires -12 VDC. 3 1/2x2 1/2. 2 lbs sh. \$4.95

TRANSISTOR AUDIO AMP

TRANSISTOR AUDIO AMPLIFIER w/5-transistors, on-off-volume and tone controls. Inputs for ceramic or crystal phono cartridges. Other possible uses as homebrew receiver, intercoms, child's projects. Use with 8 or 16 ohm 3" or 4" speaker. Req 6-9 V AC or DC; with schematic. 1 1/2x2 1/2x3 1/2. #ER-10-1231 NEW \$2.95; 2/\$5.00 -100, 500, 1K LOT QUANTITY PRICES AVAILABLE-

ENCLOSURES

STEEL CABINET with lift top for 7"Hx14"Wx8"D panel. O/a 8x16x8 1/2, 7 lbs. #SK-CAB7148, used, \$5.95

PANEL with miscellaneous parts f/above, \$1.50

#1313/60 CABINET, 13x19x13 for 12"H panel; top door, 38 lbs sh. Used-good, \$14.00

#34-PYE CABINET, 34"Hx21.5"Wx15.5"D f/31.5"H panel; rear door. Steel; 80 lbs. Used, \$22.

CY-2126/TRC CABINET w/115 VAC 5" fan on rear; f/panel 19.3"Hx19"Wx14.5"D, 30 lbs. Used \$22.

FYE/CAB CABINET, 16x19x14 space o/a 17x21x14 blue, used \$13.

FILE CABINET for items upto 9 1/2" wide X 8 1/2"H; o/a depth 24". Steel, O.D. green; 14 lbs. \$6.

CS-618S1 CASE w/CHASSIS, 15 1/2"Wx8"Hx23 1/2"D (20"D behind panel). Some cut-outs on front; may be usable for antenna tuner or transmatch project. Aluminum; 20 lbs. Used \$12.

CS-1060 CASE w/CHASSIS, p/o small scope; o/a 8"Wx7 1/2"Hx13"D. Front has cut-out for 3"CRT; some parts on chassis. Handle on top; 10 lbs. Used, \$8.95

CASES & ENCLOSURES

#CS/1-193 PLYWOOD CHEST w/hinged top, side handles and hasp fasteners; interior 8"H x 21.8"W x 11.5"D w/2.3"D top. O/a 11.8x23x12.8, 26 lbs sh. Used, \$10.

CV-425 ALUMINUM CASE with rounded corners; sturdy single compartment construction with hasp-type fasteners. Interior 9.3x11x5.8, 6 lbs sh. Used \$6.00

CY-693/PDR ALUMINUM CASE, four compartments 3.5x4, 7.5x4, 1.8x4, and 13x6.5; may be removed for 13x10 size 9" deep. Hinged top with hasp fasteners; may need repainting. 12 lbs sh; used, \$6.00

FIBERGLASS CASE with carrying handle and six hasp fasteners; lid not hinged. Lower section 13.5x8x9; cover 3.5" deep. Has fittings and rubber shocks to be removed. #FIB-6R-684 11 lbs sh; used, \$7 ea; 3/\$15.

SLANT-FRONT ENCLOSURE, front hinged at bottom; 8.3Hx14W x8D tapers to 5"D top. Panel drilled; used. #SLF-ENC85 \$10

CY-1210 SPARE TUBE case w/hasp fasteners. Removable insert has space for tubes & vibrators 4.3x10x3.5, 3 lbs. Used \$4. BX-40 XTAL BOX \$10. BX-53/GRC-9 BOX, used \$7

CY1091/PDR ALUMINUM CASE, compartments 11 1/2x7 1/2W and 2 1/2x7 1/2W; o/a 14 1/2x7 1/2x9 1/2H. Cover hinged w/fasteners and top handle. 11 lbs. \$7.

#CS-TH-14 ALUMINUM TRANSIT CASE with hasp fasteners; interior 17.5x19.5x8. 22 lbs sh wt; used, \$10.00

#CS-URM11 METAL-CLAD CASE, top hinged, side handles and fasteners. 10x15.5x12.5, 18 lbs. \$12

#CS-15x12 TRANSIT CASE, o/a 19.8"Hx19.8"W x14"D; interior usable 18x12 plus 3.5"H space in cover. Aluminum; 40 lbs sh, \$15.00

3 TO 4.5 MHZ TUNER



TU-6 TUNING UNIT covered 3 to 4.5 MHz band for the well-known WM-II BC-191/BC-375 100 W transmitters. These tuners

feature quality components which are difficult to find nowadays such as 19-116 pf, 15-77 pf, and 8-26 pf variable capacitors each with 0.06" spacing (see page 28), 2.5" dia vernier dial (p 27), 6-position ceramic RF tap switch (p 11), and right angle drive (p 26). Also grid, tank, and antenna coils, brown mica capacitors, nice aluminum chassis, etc. 7.5x17x9, 15 lbs. Gov't-recond, \$18.95

4CX250B CAVITY

VHF/UHF TUNABLE CAVITY with 4CX250B PA tube and 6B1B driver; originally used in of FAA TV-36/TU-9 and/or military FSO-75/GRT-20



Collins mfg 50 watt transmitters. Silver-plated cavity has 4-plate PA TUNE FREQ INCR counter, MIN-MAX Output Coupling, and 0-15 FREQ INCR control. Requires 6 V (fil), +300 V, +850 V, +2000 V, and external PA and driver bias V. 5.3x16.8x8, 10 lbs sh. #A5-TUN-CAV, used w/schematic, \$95.00

TURRET ATTENUATOR



VARIABLE COAXIAL TURRET ATTENUATOR, 0 to 60 DB in six DB steps. Utilizes individual silver plated attenuation elements for each range engaged with a pull-rotate-push movement of the knob; 5.5" dia dial and female "N" connections. 7"Lx5" dia.; 6 lbs sh. Lorch #VA 112-6, used, \$49.50

REMOTE SIGNALLER

REMOTE SIGNALLER RECEIVER & TRANSMITTER, intended use was for the transmitter to be actuated by a telephone bell. The transmitter would then signal the receiver via the power line and activate the receiver's outlet to which a lamp or other appliance could be connected. Maximum outlet load 200 watts. Transmitter has telephone pick-up coil, op-amp, and tone oscillator. Receiver has 567 tone decoder circuit and triac control circuit for the outlet. Each has On-Off switch, 5' cord, and measures 3x4x1 1/2; 3 lbs sh. Schematic included, may need minor repair. #RMS-R/T, \$8.95



RT-5010 TRANSCEIVER



RT-5010/PRC-510 CANADIAN PORTABLE TRANSCEIVER, Canadian version of U.S. RT-176A/PRC-10A transceiver. Covers 38-54.9 MHz FM continuously tunable. Receiver IF 4.3 Mhz; audio output 600 ohms. Transmitter power output 900 MW with normal range of about five miles. Microphone input 150 ohms. Controls for volume, tuning, squelch, pointer adjust, and dial lock. Can be used with either U.S. or Canadian versions of H-33/PT handset. With tubes 9/5678, 1A4, 2/5672, 3/5678, 5A5. Requires 135 VDC, 67 V, and 1.5 VDC. (BA-279 battery see page 18.) Units shipped less 4300 KHz calibrator crystal which is not essential for operation. 9x3x10 1/2, 9 lbs; used-not checked, \$20.95

AT-5001/PRC WHIP ANTENNA, 11"-47"L, \$3.00 ea
CY-5007/PRC BATTERY BOX, \$3 w/set purchase.
H-33/PT (U.S.) HANDSET, \$15 w/set purchase.
MANUAL for PRC-9A,-10A (U.S.), \$7.50

FACSIMILE TRANSCEIVER



STEWART-WARNER MODEL 180 DATAFAX TRANSCEIVER, facsimile machine designed to send and receive printed matter and images over telephone lines or private wire. Produces up to six shades of gray. Drum scanner speed: 180 RPM; 6 minute transmission time for 8x11 message. Receives 1500-2500 Hz signal; 2150 Hz required to activate modulator. Select manual or automatic operation modes. Uses 800' rolls of facsimile paper (not available). Units tested for basic send-receive; some adjustments may be necessary. Schematic & info packet included. Requires 100-127 VAC 60 Hz. 16x12x21, 70 lbs USED, \$85.00

WW-II VEHICULAR RADIO

BC-620 TRANSCEIVER, part of SCR-509-510 radio set as used in World War II vehicular communications. Receives and transmits over 20-27.9 Mhz FM range on any two of 80 different crystal channels spaced 100 KHz apart. Transmitter output: 1.2 watts. Has tuning meter and tubes 1L6, 1LH4, 4/1LH5 2/1291, 1294, 4/1299. Uses FT-241 crystal-type (not included) and requires 1.5 VDC 0.7 amp, 90 VDC 45 ma, 7.5 VDC 0.3 A, 150 VDC 45 ma. Size: 12x16x21 1/2, 40 lbs. Used, \$59.50



GS-79 BATTERY BOX for manpack use of BC-620 or BC-659; 17 lbs sh. Used, \$6.
SCR-509/510 MANUAL, partial repro, \$10.
SCR-609/610 (BC-659) MANUAL, \$7.50
TS-13 HANDSET, \$14.00 with purchase of set.

WW-2 BACKPACK RECEIVER



BC-728 RECEIVER, WW-II portable or vehicular unit for the 2 to 6 Mhz AM range; four push-button tuned bands 2-2.6, 2.6-3.5, 3.5-4.5, and 4.5-6 Mhz. Has volume control, phone jack, and built-in speaker. Requires 2 VDC 1.85 amp input originally supplied by BB-54 battery (not available). W/tubes 3/1T4, 1R5, 1B5, 3B4, and vibrators VB-8-9. Radios part of SCR-593; reconditioned for the Italian Army. 11.5x6.3x5.5, 26 lbs sh; \$49.50

AN-75 WHIP ANTENNA for BC-728 w/carrying strap; extends 12"-84", \$12 w/set.
FT-338A VEHICULAR MOUNT, 8 lbs, \$12 w/set.
CD-618A BATTERY CABLE, \$5.00 w/set.
MANUAL for SCR-593, partial repro, \$8.50.
VB-8 or VB-9 VIBRATORS for spares, \$2.00 ea.

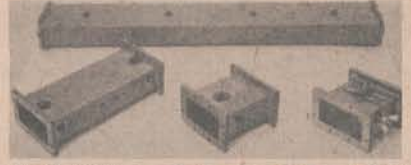
SWR INDICATOR CIRCUIT



STANDING-WAVE RATIO INDICATOR CIRCUIT, assemble a SWR meter using this 1 1/2" square 0-10 scale (FS=2 MA) meter with filters and rectifiers and a modified Schering bridge. One pair of bridge arms is resistive, the other capacitive. In theory the bridge circuit is balanced when the antenna is tuned to 52 ohms resistive resulting in a zero reading on the meter. SO-239 connector. Bridge: 2 1/2x2 1/2; 2 lbs. #M701/CU-991, \$8.95

PHASE AND LOAD DISCRIMINATOR, could be useful in tuning an antennas system, if used in circuit with a sensitive zero-center microammeter. Phasing and loading discriminator produces ±DC voltages proportional to the reactance of a system. Phasing output shows the type of reactance (capacitive or inductive) and the loading's indicates the amplitude of impedance referenced to 52 ohms resistive. In both cases zero DC output is ideal (may not be obtained in practical circuit). A third output is proportional to relative antenna current. 2x3x3; 2 lbs. sh #T201/CU-991 w/diag., \$4.95

3.7-4.17 GHZ WAVEGUIDE



COPPER WAVEGUIDE, 2"x1" size for the 3710 to 4170 Mhz range; Western Electric manufacture, removed from telephone installations. Filters are tuned to preset frequency; adjusting screws can be reset to desired frequency. No further information available.

#1301-Series FILTER with four adjusting screws; 18 1/2" length, \$24.95
#1303-Series FILTER, two top and two side adjust screws; 6-11/32"L, \$17.95
#1300-Series FILTER, one top and one side adjust screw; 3-5/32"L, \$12.95
#400-Series TUNER, two 1/2" dia adjust screws; 2 1/2" long, \$14.95
#EDS1566-30 TUNER/TRANSDUCER, two 1/2" dia adjust screws, one 3/8" dia screw port; 2-7/8" long, \$16.95

#J368330K1 XMTR AMPL, dual section 2-5/32" and 1 1/2" variable internal port; o/a 4 1/2"L, \$19.95

#ED83919-31 AMPLIFIER with 416B tube with 3/8" dia screw port adjacent to tube grid cap; assembly silver-plated brass, o/a 5 1/2x3 1/2x1-3/8, 4 lbs sh. \$27.95
Mating 6-prong connector, \$2.00

WW-II MINE DETECTOR



SCR-625 MINE DETECTOR SET, famous World War II unit designed to detect anti-tank mines buried at depth up to 24". Detection indicated on meter attached to handle or audibly by the M-356 resonator. Set includes C-446 13" dia x 1" search coil, BC-1140 control, BC-1141 amplifier, M-350 handle, M-356 resonator, BG-151 bag, CH-156 transit chest, and manual. With tubes 2/1N5 and 1J6. Requires two "D" cell batteries and BA-38 battery (not available) which supplied 103 and 67 VDC. Units are in good physical condition, but because of their age we do not guarantee their operation. 49 lbs sh wt. Used, \$72.50 \$59.50

CANADIAN TRANSCEIVERS

CRT-1/CFRC-26 CANADIAN PORTABLE TRANSCEIVER, six channel unit for use in the 47 to 55.4 FM Mhz range. Receiver consists of RF amp, xtal oscillator, mixer, 4/IF ampa, limiter, discriminator, and audio amp. Transmitter has master oscillator, modulator, power amp w/3B4, 5/1A4, 5672, and 3/5678 all of which are in sealed plug-in modules except the 3B4's. Modules are repairable Receiver sensitivity about 2 uv, deviation 15 KHz. Transmitter output 300 MW. Receiver requires 1.5 V 550 ma 45 V 12 ma, 90 V 30 ma; transmitter 1.5 V 850 ma, 45 V 8 ma, and 90 V 30 ma. (Battery not available.) With battery box but less crystals. O/a 3x4x10 1/2, 5 lbs used \$12.95 \$9.95



Accessories for CFRC-26: SCHEMATIC, \$1.50
AT-5001/PRC ANTENNA, collapsible with flex base; 11"L folded, 47" extended. \$3.00 ea.
CP-1/PRC COUNTERPOISE, rubber insulated 4 ft long wire w/split pin plug; use as counterpoise and/or trailing wire antenna. 2/\$1.50
CAN-H33/PT HANDSET, \$12. CABLE & PLUG only to change U.S. H-33 to CAN-H33, NEW \$2.50
H-5002/PRC HEADSET, one 300 ohm element, \$4.
MODULE SPARES, unused; specify RF OSCILLATOR, IF AMP, MODULATOR, AF AMP --\$1.50 ea, 10/\$10

LS-166 SPEAKER



LS-166 SPEAKER housed in cast-aluminum case with cable and U-77 audio plug for use with RT-70/AM-65 and similar family GRC/VRC radio equipment. 4" dia speaker has heavy-duty PM magnet; also 600:8 ohm audio transformer and Hi-Lo switch. 5x5x3.3, 5 lbs. Used, \$12.00



TCS SPEAKER-CONTROL UNIT, has 5" dia permanent magnet 6 ohm speaker, 500 to 6 ohm audio transformer, volume control, headphone and mic jacks, and three toggle switches. 5 1/2 x 7 1/2 x 3 1/2, 8 lbs. #TCS-23270, \$12.95

BANDPASS FILTER



F-237/GRC BANDPASS FILTER, designed to operate from 54 to 70.9 Mhz using dial tuning. Bandwidth: 250 KHz @ 3 db points or 4.5 Mhz @ 40 db points. 50 ohm output and input impedance. Unit consists of a 3-gang variable capacitor coupled to 3 sets of three sealed cavities. Type C connections. F-237 has conversion possibilities for 6- and 2-meter amateur applications. An article about these by W. Tucker, W4FKK, appeared in 12/80 Ham Radio. 5x11 1/2 x 11, 17 lbs. \$19.95

CODE PRACTICE SET



AN/GSC-1 CODE PRACTICE SET designed for student practice of Morse code, accommodating up to 10 keys. Hand keying produces either an audio tone with adjustable volume and pitch or a blinker flash. Has effective range of

40 ft. if background noise is less than 60 db. Can be operated from 6, 12, 24, or 115 VDC or 115/230 VAC. With built-in speaker, blinker, volume and pitch controls and tubes 6X5 and 2/6AK6. Keys not included. 13x11x11, 58 lbs sh. Used, \$14.95; MANUAL, \$7.50

PHONE JACK STRIPS

TELEPHONE JACK STRIP. 24 jack pairs plus a monitor jack/pair; adjustable 6x26 terminal block on chassis rear. 3.5x19x15, 15 lbs. #J-2098, used, \$28.95 \$22.



#J-2097 JACK STRIP, 24 pairs, 3x26 terminal block; 2.8x19x15, 12 lbs. Used, \$26.95 \$15. #24-SWB-PP, similar to J-2097 except no chassis or 3x26 terminal block; 2.1x17.8 x 3.8, 6 lbs sh. Used, \$18.00 \$14.00

BANDPASS CAVITIES



FULL-LENGTH TWIN-CAVITY BANDPASS FILTERS, 9-1/8" length; gold-plated. Similar to filters described in W4FKK's article in 2/80 Ham Radio Magazine. 8 lbs sh wt. \$22.00 each

F-192/U (100-121 Mhz)
F-239/U (58.5-67 Mhz)
F-242/U (84-92.5 Mhz)

SHORT-LENGTH twin-cavities, \$17.50 each.
F-195/U (163-184 Mhz) F-201/U (284-314 Mhz)
F-196/U (184-205 ") F-202/U (314-344 ")
F-199/U (224-254 ") F-203/U (344-374 ")
F-200/U (254-284 ") F-204/U (374-404 ")

TA-1/PT TELEPHONE



SOUNDPOWERED TELEPHONE SET WITH AUDIBLE AND VISUAL CALL SYSTEM. PALM OPERATED GENERATOR PUTS OUT APPROX. 100 V. THAT SOUNDS BUZZER IN OTHER PHONE AND ACTUATES VISUAL INDICATOR. COILED CORD WITH PUSH TYPE BINDING POSTS FOR INTERCONNECTING WIRES TO BE FASTENED TO. COMES WITH FIBER CARRING CASE. SIZE: 8x3x3 1/2; WT: ACT 2LB USED \$25.00 EACH

OSCILLATOR



TRANSISTORIZED CRYSTAL OSCILLATOR AND BUFFER, 56 to 99 Mhz with 75 C temperature controlled oven. Requires 5th overtone HG-6 (20 pf) x-tal (not incld). Has external oscillator input and tuning meter and oven output. Requires 12-18 VDC reg. for osc., 22-39 VDC 1 amp for heater. W/BNC and two submini 27 (UG-1465) connectors, power input DEC 9P connector, and schematic. 6x2x3 1/2, #OSC99828, \$6.

MAGNETO PHONES

MAGNETO TELEPHONES for two-wire communications from a fixed location to another. Desk and wall types available; each with handcrank ringing generator, bells, and standard handset w/common U-1 and T-1 elements. 3 V required for voice circuit; Northern Electric mfg. Blacks; used-checked.



#D-NE-MPH, desk-type; 6x6.5x8, 9 lbs. \$44.50
#W-NE-MPH, wall-type; 5.8x9x4.5, 9 lbs. \$45.

WW-2 INTERPHONE KIT



RC-298 ARMORED TANK INTERPHONE EXTENSION KIT, used with BC-605 interphone in conjunction with BC-603/604 & BC-683/684 radio sets in WW-II tanks.

Includes BC-1362 steel explosion-proof phone box with H-22 handset, BC-1361 remote call box, 30' 7-cond cable, rubber tape, 125 pcs hardware kit, manual, and other items. 85 lbs sh; 2 pkgs UPS or in original wood crate motor freight collect. Unused, \$25.00

EE-8 FIELD PHONE

EE-8 FIELD TELEPHONE, portable hand-ringing magneto type. Operates from two "D" cell batteries (not incld). Two or more can be used in a two wire system up to 17 miles in length. With carrying case and strap. 8x10x3.5, 19 lbs. Used, \$50.00 MANUAL \$5.



RM-39 FIELD CONTROL

RM-39 CONTROL UNIT, designed to allow EE-8 or similar field phone to remotely transmit and receive AM and CW radio communications. RM-39 is placed between field phone and radio set; also provides ringing circuit. Has GN-38 hand crank generator, MC-131 bell, selector for Telephone-Through-Radio-CW, and plugs & jacks for Headset, Key, and Mic. Part of RC-289 remote set. Requires 4.5 V, 15 V, and 3 V originally supplied by batteries (not available). 5x6.4x9.3, 16 lbs sh. Unused, \$22.95
MANUAL for RC-289 including RM-39, \$7.50



'O' GAUGE CABLE

2-CONDUCTOR "O" GAUGE COPPER CABLE in PVC jacket. Use for welder or jumper cables or generator hook-up. Each 2-conductor at length indicated: #8369-25, 25 feet, \$25.00
#8369-50, 50', \$42. #8369-100, 100', \$70.
LESS than 25 ft, \$1.25/ft; (Weight 1 lb/ft.)

8 OHM 400 WATTS

POWER LOAD RESISTOR PAIR, each 8 ohms 400 watts 8 1/2" lg X 1 1/2" dia; usable for audio when non-inductive loads are not required. Includes mounting bracket; 3 lbs. #RES-8-400FR, NEW \$16 \$9.



DALE 8 OHM 100 W 5% RESISTOR, 6 1/2 x 1/2, \$2.00 ea
2 OHM 200 WATT SLIDER ADJUST, 10 1/2 x 1 1/2, \$1.95

LANGUAGE LAB RECORDER



LANGUAGE LAB TAPE RECORDER, solid-state design; made by General Electronics Lab. Has three heads: one playback only master head on one track and the other two, playback and record, on a second student track. Uses standard 1/2" audio tape on up to 7" reels at speeds 3 1/2 and 7 1/2 ips. In practice, one can monitor the master "instructor's" track while recording responses on the student track. The student track can be played back simultaneously or separately from the master track depending upon control selection. The master track, which plays in one direction only, can be recorded upon or erased by switching plug-in wires from the student track heads. Besides its original usage, the recorder could be useful for code practice of for sound-on-sound sound audio experimentation. Audio response approx. 300-8000 Hz. Controls for student and master volume, playback-practice select, pause, and the other standard recording functions. Also three motors for very rapid fast forward/rewind, audio level meter, footage counter, 4" built-in speaker, and four plug-in circuit cards for audio, master audio, student audio, and bias oscillator. Uses common 2N2836 and 2N3702 transistors. Tape and reels not included; microphone and schematic not available. Requires 115 VAC 60 Hz. 18x16x8 1/2, 36 lbs sh. Schematic included. Used, repairable, \$19.95; Checked, \$45.00

TELEPHONE TEST SET




I-142/PTM-6 TELEPHONE TEST SET, measures characteristics of telephone and related equipment including these operations: 1. Sound source for mics and receivers; 2. Efficiency test for mics and receivers; 3. Capacitor test for leakage resistance; 4. Generator test; 5. Ringer test; 6. Insulation test; 7. Dial test indicating percent of pulse period; 8. Continuity test; 9. Instrument tests such as 600 ohm circuit for sound-powered equipment; 24 V. DC-AC res. circuit for common battery phones; impedance matching circuits for carbon and magnetic mics and receivers. Meter has scales -10 to +6 DB and 0-100 VDC. Requires external batteries for 3, 12, 24, and 135 VDC. Batteries not available. 19x12 x9, 46 lbs sh. I-142, used, \$39.50 \$49.50
TS-903/PTM-6A, more recent; 65 lbs., \$65.00

AM-4531 POWER AMP



AM-4531/GR VHF LINEAR POWER AMPLIFIER by Granger Associates; designed for 120 to 152 MHz range to deliver 50 watt output from 10 W input. Uses 6122 tube in P-A. Has 2.5" rd multimeter with seven position switch to monitor Plate to 2 KV, Screen to 1 KV, Plate RF Peak to 1 KV, Bias to -100 V, Forward Power to 100 W, and Reflected Power to 100 W. Also 2.5" rd 0-300 ma Plate Current meter. Loading and Coupling controls each with lock, and Bias Adjust. Requires 105/135/150/210/230/260 VAC 47-400 Hz. 7x19x14.5, 50 lbs. Used-not tested, \$150.

Headsets — Telephone Equipment — Microphones — Handsets



HS-23 HEADSET, 2K ohm using R-14 elements and unused grey plastic headband; 4 1/2' cord w/plug. Less cushions, \$9.25

HS-23 w/HB-7 brown headband (not U.S. mfg), 18" cord and PL-354 plug, WRITE

4" CHAMOIS CUSHIONS for use with HS-23 or HS-33, #M301 NEW \$4.00 RUBBER CUSHIONS #MC-162 2 1/2" \$1.00 MK-41 2 1/2" \$1.25 HB-7 HEADBANDS: Grey \$3.25; Br \$3

CX-1334 CABLE, adapts H-113 or CW49505 to CRC-equip (JK-26 jack and U77 plug, \$4.



#2A/CAN3538 dynamic headphones, 125 ohm impeded; MOVING COIL-TYPE, QUALITY REPRODUCTION. ADJUSTABLE CANVAS STRAP FITS ON TOP THE HEAD; STEEL-BAND BEHIND. WITH CHAMOIS CUSHIONS, "Y" CORD, AND PHONE PLUG. UNUSED, \$5.95

T-17 MIC. CARBON 35 TO 90 OHM PUSH-TO-TALK; PL-68 ON 5' CORD. Reconditioned, \$12.00


HS-250 HEADSET w/250 ohm elements as used in HS-30; soft 3 1/2" velour cushions, leather headband, & 16" cord w/PL-54 plug. Unused, \$9.95

SOUND-POWERED INTRUSION MICROPHONE 225 ohms with 6" stake for pushing into ground for artillery use. T-56 USI element 1614-11 unused \$3.75

Western Electric Sound-Powered 1024 ohms D-173016 trans. D-173012 receiver new \$3.00 ea.

Carbon Elements F-1 Mic. \$1.50 Lip Mics: M-51 M-6 M419 etc. \$1.50 Telephone elements: U-1 or T-1, \$2.00

RS-38 MIC. 100 ohm carbon; w/PL-68 4' cord NEW \$8. Used w/coil cord \$7. Now, not U.S. \$6.



H-113/U HEADSET 600 OHM SOFT PLASTIC EAR CUSHIONS 18" CORD w/PL-54 PLUG THAT FITS JK-26 JACK (SEE CD-307)

EXTENSION CORD ELSEWHERE ON THIS PAGE) WT: 3LBS. USED-EX \$5.95

CW49505 HEADSET like H-113 except black and has provision for snap-on CW-51071 lip mic listed below. Used-excellent \$4.95

CW-51071 LIP MICROPHONE 100 OHMS IMPEDANCE w/2 SNAPS FOR FASTENING TO H-62 HEADSET, 14" CORD w/PL-291 PLUG INTO EXTENSION CORD CD-318 LISTED ON THIS PAGE OR CW-49561 EXTENSION CORD LISTED BELOW USED \$1.00

JK-38 PHONE JACK FOR IN-LINE USE, TAKES TWO PL-55 PHONE PLUGS \$1

PUSH BUTTON SWITCHES FOR HANDSETS THAT USE BUTTERFLY TYPES. DIRECT REPLACEMENT. #5930-327-7308 \$1.25



SOUND-POWER CHEST SET, RCA MI-2045 headset and chestplate with W.E. D173197 mic; 5 lbs sh. Used-checked \$18.00

CARBON MICROPHONES 50 OHM F-I TYPE PRESS TO TALK No. C-3 (LEFT) 4' CORD PL-55 PLUG UNUSED \$4.95 M-2/10A/1422 (RIGHT) 4 1/2 FT. CORD PL-68 \$3.95

CO-78 HEADSET "Y" CORD 7' LG. RUBBER COVER NO PLUGS, TERM. \$1.50

AN/GSA-6 CHEST GROUP for use with H-63 headset. Includes SA-142 switch and CX-1077 cord w/U-77 plug. Used, \$8.00

SWITCHBOARD CORD 4 1/2' w/PL-47 #80-96 \$1.50



WESTERN ELECTRIC D173213 CHEST SET 50 ohm mic, 250 ohm HS-30 headset, 7' cord w/PL-58 plug; 3 lbs. Unused, \$15.

HS-30 HEADSET 250 OHM IMPEDANCE hearing aid type light weight headband 7 1/2" cord w/apade lugs that wire into CD-604 or CD-605 cord for 4000 ohm Used, \$7.50

J-47 KEY

J-47 KEY & LEGIRON, has J-37 key on 3x4.5 base marked "J-47," key leg clamp, 65" cord w/PL-55. 3 lbs; unused, \$15.95 J-47 key only, \$11.00 #M-236-6A SOUND-POWERED CHEST NIC, push-to-talk, 18' cable; 6#. Unused \$10.

TS-9 HANDSET with butterfly switch as used on EE-8 and similar field phone equipment; 2 lbs. Used, \$9.95

H-23 HANDSET, push-to-talk; cord w/PL-68 & -55. Like TS-13; unused, \$16.



T-45 LIP MIC



J-45 LEG IRON w/ J-37 KEY includes 5.5' cord w/PL-55 plug, 4 lbs sh. Used \$14. Leg iron only, NEW \$5.



T-30 THROAT MIC.

CONTEMPRA PHONE

Modern CONTEMPRA PHONE, quality Northern Telecom manufactured with key pad, ringer, coil cord, and module jack. Low profile; looks sharp on desk or wall. Specify 1st-2nd-3rd color choice: Gold, yellow, brown, beige, almond, white, green, blue, red, and orange. Nice phones at a nice price "as removed from service." 6 lbs sh. #NE-COM-PH, complete-not checked, \$14. 2/#25.





A. TELEX 510-01 HEADSET, 500 ohms; blue vinyl-covered cushions, 4' cord w/mini-plug. Used, \$4.95

B. H/88 LANGUAGE LAB HEADSET, 600 ohm; blue vinyl cushions, 4' cord w/phone plug. Used, \$4.95

C. HS-16 or similar HEADSET, 2000 ohm with six foot "Y" cord with metal tips; unused, \$5.95

FLAMEPROOF KEY

J-5A FLAMEPROOF KEY, early U.S. WW-II vintage; 3-1/8x2-5/8x3/8 phenolic base. Ball-style button; 2 lbs sh. Unused-boxed, \$9.95

T-45 MICROPHONE CARBON TYPE 1000MM 500B BELOW 1 MILL-VOLT, FLAT RESPONDS WITH PL-291 2 CONT MALE PLUG, 11" CORD Used, \$4.00

CD-508 CORD ASSY for headsets w/ SW-141 switch, PL-68 plug, and JK-48 jack; like CD-318 but SW-141 does not "lock". Unused, \$4.50



CD-307 CORD EXTENSION FOR CORDS WITH PL-54 PLUG AS USED ON HEADSETS, 65" LG WITH JK-26 JACK & PL-55 PLUG. Used, \$2.00

T-30 MICROPHONE CARBON TYPE, 75 OHM 500B BELOW 1 MILL-VOLT, FLAT RESPONDS WITH PL-291 2 CONT MALE PLUG, 11" CORD PRICE: Used, \$4.00



CALL COMMANDER SWITCHBOARDS, NE-6340-1 or similar with plug; gray, green, or beige colors: 11-line 1-hold \$22.95 \$14 17-line 1-hold \$28.95 \$16

AE 87 DESK PHONE

3-LINE 3-HOLD

3-lines each with "hold" buttons; buzzer-type call signaler using 5823 tubes. With handset, coil cord, 5' cable w/terminal lugs, mount hardware; black, 6 lbs. Unused \$22.95 \$22.95



HS-33 HEADSET WITH 600 ohm ANHB-1 elements, grey plastic HB-7 headband and 4.5' cord. Used, \$15. (See HS-23 for cushions.)

WW-2 ITEMS

TD-3 new \$7. TD-4 new \$7. T-26 new \$7. T-39 new \$8. T-46 new \$7. H-12 new \$7. H-18 un \$8. H-19 un \$15. SE74 used \$7.



JEN-20 HANDSET w/AMPLIFIED receiver for the hearing impaired; Black, white, or beige. NEW \$15.

CX-2950 CORD, 10' PL-55 one end and PL-68 on other. Unused, \$2.50

CX-2951 CORD, 10' with PL-68 on both ends, \$2.65

PL-68 MIC PLUG 30" Used, \$1.00

JK-33 JACK TO FIT PL-68 MIC. PLUG. Used, 3 for \$1.00



CD-604 CORD WITH IMPEDANCE MATCHING TRANSFORMER 500OHM TO 4000, USED WITH HS-30 HEADSET, 6" CORD & PL-54 PLUG. Unused \$1. Used 60¢

CD-605 CORD SAME AS CD-604 ONLY 30" LG. WITH PL-55 PLG Used, \$2.00

PL-55 PHONE PLUG 30" CORD \$1.00



H-113/AIC HEADSET with noise-shielded mic; sound-powered set designed for aircraft inter communications. Has 24" cord with U-93A plug; David Clark mfg, 4 lbs. Used-checked, \$40. Less mic, \$27.50



BLACK STANDARD TELEPHONE HANDSET & CORD, old style, Used \$5. Newer-style used \$3.00

DOUBLE PLUG D178542 for headset; similar to type 289 and 298. Unused \$2.50

OPERATOR HEADSET

WESTERN ELECTRIC TYPE 52 OPERATOR'S HEADSET w/BOOM MIC, has single 150 ohm DC res. receive element and 50 ohm mic on 8" boom; 5' cord has WE396A dual PL-55 style plug, 2 lbs sh. Used-excellent, \$17.00 \$15.

OSLO TELEPHONE, sleek European 1940's phone suggests Art-Deco period; can be used as desk phone or invert for wall mount. Rotary dial, ringer, and cord with terminal lug connections. Not FCC registered; 6 lbs sh. Used. #OSLO-BK, black, \$14.95;



H-60 HANDSET f/TA-43-312 phones. used \$14.

H-189 HANDSET f/PRC-25, VRC-12 Used \$12.

M-80 MICROPHONE with U-229 plug. used \$10

M-29 MICROPHONE with U-77 plug. used \$5

COILED CORD SET

COILED CORD SETS

Three conductor, 24" to 72" 75¢ 12" to 36" 50¢

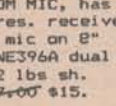
5-cond. in colors 18"-36"; green, red, lt. blue 50¢ Grey or pink, 3/1

MIC CORD, 1-wire shielded, 2-wire not; 30"-42", \$3.

JK-34 PHONE JACK TO FIT PL-55 PLUG Used, 3 for \$1.

"EXTRA-STRETCH" PHONE COIL CORDS: #7425-MDD, 4 ft to 25 ft extension with modular jacks; tan. NEW, \$3.95 #8212-LUG, 2 ft to 12 ft with terminal lugs; 4-cond., black. NEW, \$2.50






H-251 HEADSET w/U-229, used, \$14

H-63 HEADSET & BOOM MIC used \$12.

H-91 HEAD & BOOM MIC w/U-77, \$14.

H-144 HEAD & BOOM MIC w/U-77, \$10.

H-161 HEAD & BOOM MIC w/U229, \$25.


H-182 HEAD & BOOM MIC w/U-77, \$18.

GENERAL TIMERS
TM-506 to right, 0-14 second indicator 110 volt 60 Hz. motor repeat cycle used \$5.50
TM-229 same as above, no face plate, knob or dial. For 10 seconds oper. max. U \$4.

1820-2520 MHz

LOCAL OSCILLATOR
w/6BM Klystron in tunable reflex cavity; three probe coupled outputs; requires -300--600 V ref., -300--475 V grid, -300 V beam, & 6.3 VAC fil. 3-BNC conn & info; 12x4x4, 5#. #DSC/R41B, \$65.


HONEYWELL HUMIDIFIER CONTROL as used on home humidifiers. Plastic element tape senses 10%-70% humidity and closes normally open 120 VAC contacts depending on setting of variable control. Shaft 1/2 dia; o/a 1 1/2x4 1/2. #H46B1150 NEW \$1.95

AUDIO

AUDIO RECORDING TAPE on 7.5" plastic reels; 1 mil 1800 ft. Major manufacturers; bulk e-rased. 2 lbs sh. #AST7586. Used, \$1.00 ea; 5 for \$4.

I-82 RADIO COMPASS INDICATOR, 5" dia, 0-360 increments, and AY-54 autosyn. Use in antenna position projects (see 9/79 QST). 4 lbs sh; used-good, \$22.00

TIMER BONANZA
CARTRI-VISION TIMER CONTROL, 115 VAC 60 Hz motor w/SPDT contacts; upto 8 hr delay. Also 18 V 200 ma transformer, 12 VDC SPDT relay, SPDT & 4PDT center-off slide switches, transistors, rectifiers. \$1.35

TIME-O-MATIC SIGN CONTROL, 115 VAC 60 Hz. THREE CONTACTS RATED 15 AMP EACH. TWO ALTERNATELY MAKE AND BREAK ONCE PER SECOND FOR 15 SEC; OTHER BREAKS FOR 20 SEC. AT THE SAME TIME. THEN ALL THREE MAKE AND THE CYCLE REPEATS. SIZE: 3x5x6; SHPG. WT.: 5 LBS. #53 K-155, \$4.95

HEAD MOUNT MASK masks extraneous light during low light viewing of instruments--nice Halloween mask, too! Rigid rubber w/welcro adjusting straps. #5855-179-8583, unused, \$4.95

PARTS GALORE


MC-507 SIKESYN-INDICATOR, transmitter unit usable in wind direction and beam locator systems. Has 3" dia 0-360° scale 5° steps; 12-24 VAC 60 Hz req. 2 lbs. \$8.95 2/\$15.

STOVE TIMER CLOCK MECHANISM w/start-stop control dials. Grey face 5x4; style may vary. 115 VAC 60 Hz w/switch rated 230 VAC 30 amps. Knobs not original, but usable. 2 lbs; #Q15760, \$3.50

CARD SCANNER

CREDIT CARD SCANNER, uses optical system to read raised numbers of credit cards into a photo array. Small AC motor drives card through reader; w/connector diagram. 5x5x4, 3 lbs. #ECR2020, used \$4.95

OVERHEAD LIGHT FIXTURE for RV van or trailer. Automotive double contact lamp socket for 6-12-24 VDC 25W max lamp; also 5/8x3/8 diffuser lens. Outer 8x5; fits in 7x3 1/2. 4 lbs. #174-OL NEW \$4.

TELEMETER PROGRAM SELECTOR part of an obsolete pay TV system which featured pre-recorded tape program review, coin deposit register mechanism, and audio amplifier-power supply with 4" speaker. Generates 8 Mhz signal to trigger mechanism and 35 Mhz video output. Tape magazine has recording head and plays 66" or 1" tape in continuous loop. Mechanism has 5 RPM Cramer 115 VAC motor plus other motor, gears, etc. Power supply output 150 VDC 100 ma and 6.3 V 3 amps. Tube line-up 3/6U8, 6B66, 6BA8, and 12BH7. Cabinet 15x7x7, 21 lbs sh. Our bargain price is worth the tape magazine, coin mechanism, power supply, or tubes alone. NEW, \$6.95

I-91(*) RADIO COMPASS INDICATOR 3" 360 deg. sc. used w/ARN-6 sys. 3/8"x3", (can be used with wind direction system) used \$9.95 NEW \$14.95

CANVAS BAGS, STRAPS AND COVERS, MAY BE USED OR UNUSED. ALL ARE CLEAN WITHOUT TEARS. SHOULDER STRAPS ARE ADJUSTABLE AND MADE OF COTTON WEBBING.

SYNCHRON CLOCK MECHANISM, No.610 110 V. 60 CYCLE 3 WATT 1 RPM #EC-129RB, WITH GEAR ASSY, NO RESET OR COVER. 2x2x2 1/2; 4oz. \$1.35

HEATING ELEMENTS
NICHROME 650 WATT HEATER WIRE-COIL, 8 ft long; 2 lbs. #NHC-650W, NEW, \$3.95

KEY ALARM
ALARM CONTROL PANEL w/5-position key lock wafer switch, SC628 Sonalert 6-28 V 3-14 ma, and five panel lights. 11.3x4x8 2 lbs. #ALRM-SC628 w/key, \$7

I-91(*) RADIO COMPASS INDICATOR, 3" DIA 0-360 INDICATORS, usable for QST antenna position project. I-81, 5 marks, used \$8.95 ID-537/ARN, 2 marks and VAR knob, unused, \$10.95

CW-216 ACCESSORY BAG f/PRC-8-9-10; holds antennas & handset. O/a 19"Hx5"W (tapers to 3"W at bottom) #3.5" deep; w/snap cover and clip for ammo belt. Used, \$6.

MOTOR DRIVEN RELAY SPST norm. open 115 v. 60 Hz. 10 amps. cont. MOTOR 115v 60 Hz. non. sync. 3.8 w. 4/5 rpm. Cams can be set to set to make cont 30 to 60 seconds. Also has provision to bring out a shaft. size 2x4x2, 1 lb. #N17K-68292 unused \$6.00

BRYANT STRIP HEATING ELEMENT, 120 VAC 150 watts; 1 1/2"W x 8"L including mounting flanges. 2 lbs sh. #6115-921-7883, NEW, \$8.95

205 MM
COPY LENS apertures F4.5 -5.6 6.3-8-16 on mtg board. O.D. 3" x 3 1/2"; 2 lbs sh. #AA-L205, used, \$8.

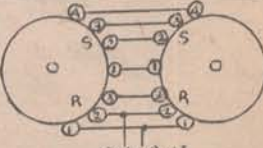
I-101 CROSSPOINT INDICATOR, 3" dia f/glidepath Good movements/ no glass, \$3.00

CW-206 ROLL BAG for MS-116 -117-118 mast sections and related; snap and web strap closure. O/a 40" long x 3" high x 5" deep. Used, \$7.50

CRAMER TIMER SWITCH ASSY. MODEL TC-60SEC, 230 V 60 CYC, SWITCH 5 AMP. CONT. 3.8 W. 4/5 RPM MOTOR. \$1.95

LONG DURATION TIMER WITH 115v RESET RELAY. 115v 60 Hz 1/16 RPM MOTOR. CAM ACTUATES SPDT MICRO SWITCH. 3 1/2x2 1/2. UNUS \$2.95

ID-66/APA-44 AIR SPEED INDICATOR; CONTAINS A KOLLSMAN TRUE AIR SPEED METER AND A INDICATING WITH A RANGE OF 84 TO 434 KNOTS. HAS OSTER MOTOR AV-240, RELAY, 1/6AK5 TUBE, COMPENSATING DEVICE PLUS MANY OTHER COMPONENTS. 15x7x6; 20 LBS. USED \$10

WIND DIRECTION

WIND DIRECTION INDICATOR using Bendix AY-100 autosyn xmitter. Design a wind vane and indicator so that you can monitor wind direction from inside your house. #3969-AY100 NEW \$9.

MAST BASE COVERS, unused: BG-108, for MP-48, \$3.00 BG-67, for MP-37-57, \$2.75

THERMAL SWITCH opens 30 sec. after cooling. Operate 130 vac. 2m ohm res. 1x1ft, 20" leads. M-4199 \$2.50

ILLUMINATED CLOCK MECHANISM ISM as USED ON CLOCK RADIOS. CLEAR PLASTIC FRONT TO TRANSMIT LIGHT, NO HANDS. HAS 60 MIN TIMER ALSO HAS ON-OFF-AUTO ALARM 2"sq FACE. 115v 60 HZ. SH WT 2 LB. UNUS \$1.50

RHODES 60 SEC TIMER, times from 2 to 60 seconds; bell signals time elapsed. 3" dia plastic case; 1 lb sh. #56414, NEW, \$2.50 each.

WIND SPEED INDICATOR using a 24 VDC FM motor as a generator, a 1 milliammeter and a resistor range scaler so that wind speed can be monitored indoors. We will supply the FM motor and a 3 1/2" rd 0-1.0=50 scale (FS-1 ma) meter; you design the rest. #WS-MOTOR & METER, \$7.95

ST-19 CARRYING STRAP, 65" LG. X 2 1/2"W; w/2" SWIVEL-EYE SNAP HOOK AND TONGUELESS-BAR BUCKLE NEAR ONE END TO ADJUST LENGTH. \$3.00

12-DIGIT FLUORESCENT DISPLAY, 3/8" digits 0 thru 9, -, ., and decimal point. Tubes 2"H plus IC's, transistors, etc. 9x8.5x2.5, 4 lbs sh. #POS-2, \$6.95 \$7.50

WARNING LIGHT
CROUSE HINDS HAZARD LIGHT, 5"Hx4" dia red glass dome on cast aluminum base w/mounting clamp f 0.5" dia rod; standard light bulb socket. Has weatherproofing seals. O/a 7.5" high; 5 lbs sh wt. #EOL-44527, unused, \$22.95

24 V BELL
ALARM BELL, 3" dia bell operates from 24-36 VAC or DC; o/a 5.3x3x1.3, 2 lbs Western Electric #7-AW, unused \$6.95

AY-1 AUTOSYN MOTOR AS USED IN I-81, I-82 ETC. DIRECT REPLACEMENT. \$5.95

ST-42 CARRYING STRAP, AS ABOVE, NO SWIVEL, \$2.50

INDUCTOR PC BOARD has 3 200 uH and 2 1200 uH inductors 3/4"H x 1-3/8" dia; also 3/4000 mf 20 V, 3/3000 mf 25 V axial caps, xistors etc. 3 lbs. #54-014535, \$2.

T-X-R-X CASE LEATHER CASE for handheld transceiver; snap-flap for attaching to belt. Interior 8" deep X 3"W top tapers to 2.75"W bottom X 1.5" thick; right-side cutaway for control access. Quality made in USA by Merzon; o/a 10.5"L, 2 lbs. #19430217P11 NEW \$7.50

I-81 & I-82 ARMATURES ONLY #3H2716/A1, unused, \$3.95 I-82 GLASS ONLY, \$2.00

PRC-25/77 CANVAS, used: ST-138 HARNESS, \$12.00 CW-503 ACCESSORY BAG, \$6.
GRV/VRC EQUIPMENT COVERS: CW-329, adjustable for GRV-3-8, NEW \$8. CW-330 f/VRC-8-9-10 NEW \$7 96-75 f/BC-312-342, \$7.50

TALLY OSCILLATOR with ferrite coils, 81.9-72.5-44.7-42.9-35.6-34.9-30.2 mH and 39/ 50 V caps 0.001-0.47 mf and 9/2N3565 xistors. \$2.00

CRAMER INDUSTRIAL TIMER, 115 VAC 15 amp contacts; 3.8" dia x 5.5"D. #412E-30M, 3C min; unused \$10.

ANTENNAS

HY-GAIN ANTENNAS

HY-GAIN MOBILE-COM ANTENNAS, new:
760-SERIES antennas include 52" whip, 2.5"H spring base, 18" RG-58 coax cable, PL-259 connector, & U6-175 reducer; 5 lbs NEW, \$9.95 ea: #761 (30-33 MHz) #762 (36-42 MHz) #767 (33-36 MHz)

280-SERIES mobile coil antenna w/ 52" lg whip & 2" dia loading coil: #280 10 meters, 2-3/4"H coil \$9.95 #281 15 meters, 2-3/4"H coil \$9.95 #284 75/80 meters 8.5"H coil \$9.95

3 FOOT MAST SECTIONS (left), painted copper-coated steel; sequentially screw into each other with 3/16" dia MS-49 top section smallest thru 5/8" dia MS-54 largest. Sections self-supporting to 15'H; MS-53 can fit into another MS-53. 1 lb sh. May need paint. MS-49-50-51-52-53, used \$1 ea. Unused \$1.50 ea. MS-54 used \$2.50; Un \$4.

CW-206 ROLL BAG for MS-116-117-118 mast sections; 40"Lx3"Hx5"W, used, \$6.00.



8 FOOT DISH ANTENNA

AS-554/TRC 8' dia ANTENNA with aluminum mesh paraboloid surface. Designed for 1700-2400 Mhz with 30 db gain; 4.5 Mhz bandwidth. 20 db major to minor lobe ratio. Rugged military construction; looks like one can add onto and extend the cast aluminum supports to increase dish diameter. 36" feedhorn focal length; 16" fall from edge to center. Shipped in sections with feedhorn and yoke. Mesh may have minor but repairable breaks. 425 lbs sh wt. Used \$285, \$285.



AS-1729 ANTENNA SET

AS-1729/VRC ANTENNA SET, consists of MX-6707 matching unit-antenna base, AS-1730, and AT-1095 fiberglass mast sections; designed to be used with RT-246-524/VRC transceivers and vehicular installations of PRC-25-77 radio sets. MX-6707 has automatic or manually tunable frequency ranges 30-33, 33-37, 37-42, 42-47.5, 47.5-53, 53-56, 56-60, 60-65, 65-70.5, and 70.5-76 MHz FM; also BNC connection for RF. Bottom mast section AS-1730 is 52.5"L, upper AT-1095, 64"L; MX-6707 14.3x5.5" dia. 15 lbs; used, \$49.95 MANUAL for AS-1729, partial repro, \$8.50 MX-6707 MATCHING UNIT only, used, \$29.95 AT-1095 or AS-1730 masts only, \$12.50 each.



FIXED STATION BASE for AT-291/PRC antenna; black phenolic 3 1/2" dia base w/ silver-plated receptacle; BNC connection, and load coil 2 lbs. #CAN-100-7555 \$4.

AS-1320/PRC-47 15 ft WHIP ANTENNA, 9-section for 100 W 2-12 MHz xmitter; Includes MT-2786 with ground plane wire and canvas carrying bags. 12 lbs. Used, \$27.50

MP-47A MAST BASE, similar to MP-57 but 20" long and 8 1/2" dia insulator. 33 lbs sh wt. Used, \$25.00

AS-1721/PRC-47 LONG-WIRE ANTENNA, 45 ft vinyl-covered with insulators at 15' and 25'; clips at insulators adjust length. 4 lbs sh. Used, \$12.

AB-243 CORNER BRACKET f/ MP-48-57 and AB-15 bases. (Pictured w/AB-15 below.) 8 lbs sh. Used, \$7.00

MOUNTINGS f/MX-6707 used: #SC-D-189023 f/base, \$10. #SC-D-446058 corner, \$10. EXTENDER f/SC-D-446058 \$6.

AB-15 BASE FOR WHIP ANTENNA SECTIONS MS-116-117 118 ALSO AB-21-22-23-24. SPRING ACTION WITH INSULATOR 3 1/2"x3" AND COAXIAL CONNECTOR FOR USE WITH PL-259, REQUIRES 2" HOLE FOR MOUNTING, SIZE 1 1/2 X 3 WT: 2 LBS. \$4.95

AT-339/PRC-6 HOMING ANTENNA 38-55.4 MHz range. Hand-held folding loop; 5-step output attenuator, 4' cord w/BNC connector. Loop 24"H; 12.5x5x2.5 collapsed. W/canvas bag, 6#. \$10.

WHIP ANTENNA MAST SECTIONS FOR USE WITH AB-15. MS-116 is LARGEST, 39 1/2" X .393" DIA; CAN BE STACKED. MS-117 & -118 TAPER 39 1/2" L. MS-116 OR MS-117. WRITE. MS-118, \$3.50

ANDREWS #83799 similar to 87P connector for HJ7-50A Helian cable; 1-5/8" EIA flange, 50 ohm. With installation kit; 6 lbs. NEW, \$20.00

CU-92/APN ANTENNA COUPLING UNIT is a impedance matching device enabling the operation of 2 receivers from one ant. has one SO-239 & 2-binding posts and tuning adjustment 500 KHz-4 Mhz. \$3.95

TM-218 TERMINAL, p/o BC-659, unused, \$9 W-128 wire, 2 ft. \$2.50; 6 feet, \$6.00

AS-27A/ARN-5 Horizontal folded dipole used on BC-733, ARN-5 Receivers 108-110 mhz etc. \$10 AT-2/APN-2 DIPOLE ANTENNA, 150-180 Mhz \$5.00 AT-438/GR DIPOLE ANTENNA 15" folded, takes PL-259 coax. conn on insulated bracket. \$15

ANTENNA WIRE SOLID COPPER #10 VINLY COVERED, 250ft #4884C \$25



AS-2108 ADF LOOP, 100-3000 KHz; 28 VDC, FROM BASE 11.8x11.8 CTR. 1 1/2" H. \$7.95

AS-2108 ADF LOOP, 100-3000 KHz; 28 VDC, FROM BASE 11.8x11.8 CTR. 1 1/2" H. \$7.95

VIS-O-GLOW NEON LIGHTNING ARRESTORS, #4392, \$1.00 EA.

ARA-31 HOMING SYSTEM



For use in the 24 to 49 Mhz FM range. Complete system consists of four AT-624 24" antenna elements, two CU-459 ant. element connectors, a KY-149 keying unit w/mtg. and one SA-474 switch box. BNC connections except for one reverse pole BNC. An/ARA-31 w/manual, new, \$50. AT-624 antenna element, \$8.00 each. CU-459 antenna connector, \$5.00 each. SA-474 switching box, \$6.00 each. KY-149 keying unit, \$25.00 each \$18.95

LP-21 LOOP ANTENNA, used with 200-1500 Hz motor for rotating loop and autosyn to transmit to I-B2 or similar indicator Teardrop shape for aircraft; 30 lbs. \$25

AS-578/ARA ANTENNA for ARC-27-34-55 direction finding sets; 15 lbs. Used, \$25.

AS-313/ARN-6 ANTENNA LOOP for AN/ARN-6 radio compass system; 18 lbs. Used, \$15.

MAGNACRAFT #122RX-16 COAXIAL RELAY, 12-24 VDC SPST w/aux SPST n.o. 10 amp contact; 100 W 50 ohm. 2-RCA plugs & SO-239 connector; w/cover. 2 1/2"x2 1/2", 2 lbs. Unused \$6.

SPDT ANTENNA RELAY, with unused contact grounded; part of 30 W 225-400 MHz transmitter. Coil 60 VDC 15 ma 4000 ohm; 3-BNC connections 2x1x2. #D-0089, unused \$9.95

SPDT ANTENNA CHANGEOVER RELAY, 6 vdc 20 ohm. Contacts appear to be good to 100 watts. BNC type conn 3x1x2. #5945-539-3025 unused \$7.95

DOUBLE POLE ANTENNA TRANSFER RELAY ASSEMBLY, two-ganged Amphenol 360-11896-1003 SPDT antenna relays which are separable; each rated 500 watts CW (0-0.5 GHz), 100 W (0.5-3 GHz), or 50 W (3-6 GHz). 115 VAC coils; each has N and 2-BNC connections. 5x3.5x1.5, 2 lbs. #GR-0017094, \$24.95



BUDWIG HYE-QUE antenna insulators and strain connector for long-wire installations; full legal power capacity and weather-tight polymer construction. NEW! #HD-COHN strain assembly with PL-259 connection for lead-in wire drop, \$5.50 #HD-INS-PR, insulator pair, \$1.25/pr

40-100 MHZ YAGI ARRAY

AS-756/TRC TWO 3-ELEMENT YAGI ARRAY for 40-100 MHz range, 5 db gain; vertical or horizontal polarization. Consists of array spacer bar, two antenna booms, and 12 each long, short, and subassembly antenna elements. Component lengths adjust according to frequency: spacer 58"-112", booms 72", elements 40"-58". Matching transformer built into each boom. 95 lbs sh (UPE in 4 pkgs); AS-756, \$79.50 #YA-756, single 3-element array f/AS-756 \$36.



AB-101 MAST SECTIONS for ANTENNA SUPPORT, steel mast 2" dia X 68" long with swaged end and locking device; sold in sets of 7 only. 100 lbs sh - no UPS. Used, \$38.00

AB-318 GINPOLE swivel base a/stake; 1-3/8" dia. Slips into mast section. Used \$5. MX-378 GUY RING for 1-3/8" masts; attach guy rope or wire at corners, \$.75 ea GR-325 GUY RING for 3 1/2" dia masts, \$1.25 ea

MX- Guy Ropes are 3/16" dia nylon, 800 lb test; w/adjust hardware, hook & insulator MX-382 31 ft used \$2.

GP-2 GUY STAKE, steel 1 1/2"x2" dia; 1-1/8" head, 1-3/8" point. 2 lbs, 85¢ ea 4/\$3.

ANTENNA WIRE & REEL

AS-207/CRT-3 WIRE & PEEL ASSEMBLY, 300 ft #16 strand-braided cadmium alloy copper wire on RL-49 reel and crank; mounted to aluminum door with adjustable brake and snap swivel. Part of CRT-3 "Sibson Girl" transmitter antenna which attached to kite or balloon. 2x4.5" dia, 3 lbs. Unused-complete wire, reel, door, \$9.95; Wire and reel only, \$7.50





HANDCRANK

HANDCRANK MAGNETO GENERATOR removed from telephone equipment; features long crank with shaft which extends 2.5" from the generator and versatile mounting plate that allows left or right side or bottom mounting. Use to replace "dead" generator in your antique phone, or as remote signaler (ring bells/buzzers), or as "worm shocker"; 4 lbs sh. #MAG-GEN-1085, used-checked, \$15.00

100 RPM 1/5 HP MOTOR



BODINE ECCI-35E2, 115 VAC 2.2 amp, 1/5 HP 1700 RPM motor with 100 RPM reduction gearhead; 100 lbs-in torque. 2"L x 5/8" dia shaft with 3/16" square key; motor 4.5x4.5 x8.8. With capacitor; 12 lbs sh. Used \$18.95

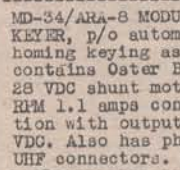
6 RPM SLO-SYN



SUPERIOR ELECTRIC SLO-SYN 6 RPM SYNCHRONOUS STEPPING MOTOR, 120 VAC 60 Hz 0.5 A 50 oz-in running torque. Reversible instant start-stop. 3/8" dia stainless steel shaft; on mounting plate with capacitor. 7.3x4.5x5.3, 7 lbs sh. #SS50-1292BU, used, \$17.95



GE MINOGEAR MOTOR, 328 RPM 3/8" dia right angle output shaft; other 3500 RPM 5/16" dia shaft, 5 in-lb torque. Requires 115 VAC 60 Hz and 7 mf 220 VAC capacitor; o/a 4x10x3, 8 lbs sh. GE #5KCM499G, used, \$8.95 CAPACITOR for above, 7 mf 330 VAC, \$1.35



MD-34/ARA-8 MODULATOR-KEYER, p/o automatic homing keying assembly; contains Oster BT-2-18 28 VDC shunt motor, 12000 RPM 1.1 amps connected to double worm reduction with output of 32 to 50 RPM over 10-26 VDC. Also has phase shift capacitor and RF UHF connectors. 5x10x4 1/2, 5 lbs. Used, \$3.95



28 VDC 12000 RPM MOTOR f/ARC-3 set. Removable worm gear; shaft 1"x3/16" dia. O/A 3" x 1 1/2" dia. #697-2644, \$5.95



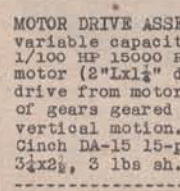
HAND CRANK GENERATOR AS USED IN GIESON GIRL RESCUE TRANSMITTERS OUTPUT 28 VDC @ 175 mA & 300 V @ 30 MA. WHEN CRANKED AT 60 RPM GEAR RATIO APPROX. 72 TO 1. NO LEGS SEAT OR MOUNTING. #GEN/CRT-3 RE-MOVED \$12.00



VARIABLE SPEED DRIVE CONTROL USED WITH MOTOR AM No. E-85-132. GE#3S750R/750A1, FIELD 100 VDC ARM., 140 VDC, 2.6 A INPUT 230 V. 50/60 Hz. 5 LBS. Unused w/schematic \$15.00



DC MOTOR, operates over 10-15 VDC 100 ma 2375-2425 RPM with governor. Shaft 5/16"L x 1/16" dia; o/a 2-7/8x1-1/8. #AST-CK26 \$7.95



MOTOR DRIVE ASSEMBLY f/vacuum variable capacitor. Uses 1/100 HP 15000 RPM 28 VDC motor (2"Lx1 1/2" dia.) Has worm drive from motor to a series of gears geared to a 2" lever arm with 1/2" vertical motion. Also has limit switches and Cinch DA-15 15-pin connector. O/A size: 8x 3 1/2x2 1/2, 3 lbs sh. #DRV501/CU991, used, \$9.95



WE KS-5871-LOI MOTOR, 28.8 VDC @ 3.3 A. 5600 RPM, 0.04 HP SERIES WOUND. CONTINUOUS DUTY; REVERSIBLE WITH SPEED GOVERNOR. (MAY ALSO OPERATE AT 12 VDC AT REDUCED SPEED. SHAFT 5/8"x3/4", OVERALL SIZE: 6 1/2x3 1/2 DIA. SHPG. WT: 7 LBS. Used \$7.95

GLOBE DC MOTOR, 27.5 VDC 2.4 A 0.035 HP 7400 RPM; 2 1/2"L x 1-5/8" dia plus 1/2"Lx3/16" dia shaft. #621-6822 unused \$7.95



#A7155 DELCO DC MOTOR, 28 VDC 2.4 A 1/30 HP 3600 RPM. Size: 5x2 1/2" dia; shaft 1" x 1/2" dia, 2 lbs. Unused \$4.

INDUCTION MOTOR, Eastern Air Devices J71-B, 115 VAC 60 Hz 0.25 amp input for 1/40 HP 3100 RPM output. Quiet running; good replacement motor for blowers. 3.1"x3.5" dia, shaft 0.9"x0.3" dia; 3 lbs sh. External capacitor required. #548-2239, unused \$4.95; 4 mf CAPACITOR, \$1.

28 VOLT MOTOR, 135 RPM; HP: 1 oz/IN. WITH 5/16"x2" DIA. GEARED SHAFT; HAS 4 SOLDER TERMINALS ON 1x1 1/2"x8" BLOCK. MOTOR SIZE: 5x1-7/8 DIA. WT: 1 LB. GE#5BA10FJ444 Used, \$7.95

DC STEPPER MOTOR

PM DC STEPPER MOTOR, dual coil--CW and CCW rotation; each coil 5-pole (72°). Motor has gear box resulting in 180 2° steps for each rotation of output shaft. Coil 17 VDC 29 ohms but works well on 5 VDC at reduced speed and torque. Motor 1.4x.6", shaft .4"x.1" dia O/A 3.3"x1.5"; Airpax #AB2302, \$4 ea 3/\$10.

0.7 RPM GEARMOTOR, 115 VAC 60 Hz, 110 oz-in torque; 3/4"L x 1/4" dia shaft; w/shaft coupler and microswitch assy. 2.3x2.3x2.3, 5.5"L w/assy; 3#. #RBH2505-14 used \$15.

BARBER COLEMAN AC GEAR MOTOR, 230 VAC 60 Hz; approx 3 1/2 RPM. 5/16" dia shaft X 7/8" long; Size: 2 1/2x3 1/2x3, 2 lbs sh. B-C #1081344E3 NEW, \$3.95

MOTOR W/RIGHT ANGLE SHAFT & MOUNT, 1/8 HP 230 RPM. SHAFT SIZE: 5/16" LONG X 3/8" DIA. CLEARANCE BETWEEN SHAFT AND MOUNTING ABOUT 1" REQUIRES 115 VAC 60 Hz @ 1.9 AMPS. SIZE: 7x3 1/2 DIA. WT: 15 LBS. ROBBINS & MEYERS #KL-H330, \$12.95

SA-28 AIRCRAFT INSTRUMENT ASSEMBLY with 27 VDC PM motor, 10000 RPM with worm gear assembly and other parts. Motor size 1 1/2x1 1/2, 3/16" dia shaft; o/a 6"Lx3 1/2" dia, 2 lbs. Unused \$6.95

MULTI-SPEED PM MOTOR

MULTI-SPEED 24 VDC PM MOTOR can be wired for 11500 RPM 0.012 HP 0.7 amp or 3000 RPM 0.035 HP 2.3 amp operation; motor starts to turn at 9 VDC and is reversible. 6"x2.3" dia with 3.5" dia collar; geared shaft 0.6x0.4" dia. 3 lbs sh. Sperry #2960031, used, \$12.95

JOHN OSTER TYPE C-24A-1B KS-5829 SERIES MOTOR; 27 VDC, 0.01 HP, 7000 RPM. Size: 3x2 DIA.; SHAFT: 1x1/2 DIA. WT: 1 LB. Unused, \$2.95

200 RPM 32 V 60 Hz GEAR MOTOR, has shaft 1"x1 1/2" dia and 3/16" dia shaft for fan. For intermittent use, increased voltage increases torque. O/a 5 1/2x5x2 1/2, 3 lbs. #MOL-2460, unused, \$3.25

26 V 400 Hz 2750 RPM MOTOR will operate from 12 VAC 60 Hz; 3x2.8x3, 2#. #B701/R107 \$2.

12 VDC MOTOR, 3000/5000 RPM clockwise rotation; 40 oz-in torque. 4"L x 3" dia plus 3/4"Lx5/16" dia shaft. 4 lbs. #C65010-12, \$7.95

CONTROL TRANSMITTER SELSYNS, similar to AY201 rotor 28 V 1 phi, stator 11.8 V 3 phi 400 Hz; usable in wind direction and antenna position projects. Various mfg; 1 lb. #WD-CX-SEL \$6.

AY-165 AUTOSYN DIFFERENTIAL, 400 CYCLE, 11.8 V. 3 PHASE ONE TO ONE RATIO. BENDIX & OTHERS. SIZE: 1 1/2x1 1/2. PRICE: REMOVED FROM EQUIP. \$2.95
AY-231 AND AY-232 SAME SPECS, AS ABOVE.
15CX4 TRANSMIT 115 VAC 400 Hz, used, \$4.95
15RS4L RESOLVER 26/11.8 V 400 Hz, used \$4.95

23TR4 RECEIVER, 115 VAC 400 Hz, used, \$10.00

23CT6 TRANSFORMER 90/1 V per degree 60 Hz \$10

SELSYNS

2JI1G1 SELSYN CONTROL TRANSFORMER, 57.5 VAC 400 Hz; usable in pairs for remote position indication and light duty turning applications. Operable from 24 V 60 Hz with good resolution and torque. 1/2" long shaft tapered 1", then threaded 1". O/a 4 1/2x2 1/2 dia; 2 lbs. #2JI1G1, less connector cap \$7.50; w/cap \$9.50
MK II SIZE 6 SELSYNS, 115 VAC 60 Hz; sold in mated pairs for rotational and position-indication uses. 7 1/2x4 1/2 dia, 12 lbs/pair. Used-checked, various manufacturers, \$45/pair
SIZE 5 SYNCHRO DIFFERENTIAL RECEIVER, 115 VAC 60 Hz; used to show the sum or difference of two angular motions. 5 1/2x3 1/2 dia, 5 lbs. \$10.
OTHER SELSYNS AVAILABLE. WRITE YOUR NEEDS.

2JIH1 SELSYN DIFFERENTIAL GENERATOR NORMALLY OPERATES FROM 57.5/57.5 VOLTS 400 CYCLE BUT WILL OPERATE FROM 26 VOLT 60 CYCLE AS SHOWN IN WIRING DIAGRAM ON PAGE 31. SIZE: 2 1/2x4 1/2; WT: 8oz. PRICE WITH CONNECTOR CAPS.....\$3.95

DAYSTROM TRANSCOIL CONTROL MOTOR 115 VOLT 60 CYCLE, 1 PHASE, 2 PHASE 200 VOLT CT., 3200 RPM. SIZE: 2 1/2x2, SHAFT SIZE: 1/16"x1/8" WITH GEAR. REMOVED FROM NEW EQUIPMENT. PRICE: \$5.00

TACHOMETER GENERATOR, motor 26 V 400 Hz 2 phi; generator 18V 400 Hz 0.3 V/1000 RPM. No load speed 10000 RPM. 2-1/8"Lx1" dia 3/16"Lx1/8" dia shaft. #TACH-SKL-MOD, \$7.95

GAST PUMP & MOTOR

VACUUM PUMP & MOTOR, East #0440-V119 oil-less rotary vane pump and GE 115 VAC 60 Hz 1/3 HP 1625 RPM motor. Pump rated 4.0 CFM @ zero vacuum; 15" Hg continuous, 26" intermittent. Flex coupling thermally protects 7.4"x5.4" dia motor; mounted on 5.8x0.6x14.4 steel base. Inlet and outlet filters not available. 40 lbs sh. Used-as removed from service, \$45.00

AIR COMPRESSOR

AIR COMPRESSOR rated 30 PSIG, 0.6 CFM max; suitable for air-brush work or light duty inflating. Diaphragm-type unit uses 7 mf 330 VAC capacitor and operates from 115 VAC 60 Hz. Inlet 5/8" NPT; outlet 1/2". 8.3x4.6" dia, 15 lbs sh. #127P321, excellent, \$22.95

CHILD'S PHONOGRAPH TURNTABLE, 7" dia plastic platter with 115 VAC 60 Hz motor; selector switch for 33-1/3 or 45 RPM. Designed for child's record player. 2 lbs. BSR #M143AC37, NEW, \$2.95 \$3.

SMALL RECORDER PM MOTOR, operates 4 to 12 VDC, reversible. 1/8x3/32" dia shaft; O/A 1 1/2x1 1/2 dia, 1 lb. #R-357141, NEW \$2.; w/pulley \$2.25

PRR-9 RECEIVER

AN/PRR-9 FM HELMET RECEIVER, extremely lightweight single channel radio in the 47-57 Mhz FM range; 5 mw nominal power output. Uses CR-61 type crystal (not available); 455 KHz IF. Requires 5 V 25 ma originally supplied by BA-505 battery (not available).

With AS-1998 antenna and H-264 headset. 7x3½ x1½, 2 lbs. Used \$38. Less AS-1998/H-264 \$25. OPERATOR'S MANUAL for PRR-9, \$7.50

ID-1189/FR CHANNEL ALIGNMENT INDICATOR

designed to test AN/PRR-9 and AN/FRT-4 transmitter. Has 47-57 Mhz signal generator; checks both sets' batteries. Instructions, probes, and transit case included. 12x11x6, 15 lbs sh. Used, \$45.00



RT-68/GRC TRANSCEIVER

RT-68/GRC TRANSCEIVER, 38-54.9 Mhz FM continuously tunable or 100 KHz-step channels. Receives and transmits both voice and 1600 Hz ringing FM; range 10-15 miles. Receiver circuit has variable 1st IF 4.45-5.45 Mhz and fixed 1.4 Mhz 2nd IF; also squelch and 600 ohm audio output. Transmitter uses crystal-controlled oscillator and oscillator power amp; power output 2 watts (LO) or 15 W (HI). Also meter to monitor xmitter filaments and 90 V input. Requires external power supply available separately. With tubes 4/1U4, 2E24, 2/1A3, 2/1L4, 4/1R5, 2/1E4, 1B5, 4/3Q4, 3A4, 3/3A5, 2/3B4, 6AK5. 9x13x11.3, 42 lbs sh wt. Gov't-reconditioned, \$85.00; used, \$55.00 RT-66, as above but 20-27.9 Mhz; unused \$40.



2 TO 12 MHZ TRANSCEIVERS

RT-77/GRC-9 BACKPACK TRANSCEIVER, covers 2-12 Mhz AM CW in bands 2-3.6, 3.6-6.6, and 6.6-12 Mhz; HI-LO outputs 7/1 watt (AM), 15/5 W (CW). Receiver section has 456 KHz IF and calibration points every 200 KHz. Transmitter can be continuously tuned or two preset channels; uses 2E22 tube in power amp. Set also includes tubes 2/1L4, 3/1R5, 1B5, 3/3A4, 3Q4; requires



580 vdc 100 ma, 6.6 vdc 2 amp, 120 vdc 45 ma, 1.5 vdc 500 ma, 6.9 vdc 575 ma. RT-77 was used in field and vehicular installations with a number of power supplies designed for it such as GN-58 handcrank generator available below, PE-237 6-12-24 VDC vibrator supply, DY-88 (12 VDC) & DY-105 (24 VDC) dynamotor supplies, PP-327 115 VAC supply, 16x13 x8, 35 lbs sh. Used, \$45.00 MANUAL, \$8.50

GN-58 HANDCRANK GENERATOR, with legs, seat, two cranks; powers RT-77 at reduced outputs 3.6 W (AM), 10 W (CW). 39 lbs sh. Used \$35.

CONNECTOR for GRC-9 as available, \$4 w/set.

HS-30 HEADSET w/CD-604 cord, used, \$7.50

AB-129 MICROPHONE used \$6.95; reconditioned \$9.

J-45 LEG IRON w/J-37 KEY, used, \$14.00

***** TRANSMITTER only from RT-77. #XMT/GRC-9, \$25.

38 TO 54 MHZ RECEIVER



R-110 RECEIVER 38 TO 54 MHZ FM CONTINUOUSLY TUNEABLE, VARIABLE SQUELCH AND AUDIO, OUTPUT IMPEDANCE 600 OHMS, 4-3 MHZ. I.F. WITH TUBES 3/1U4, 2/1L4, 1A3, 2/3A5, 1B5, 2/3Q4, 2/6AK5 & OB2. VOLTAGES REQ. 135 VDC @ 70 MA. AND 6.3 VDC 2 AMPS.

SIZE: 9x13x7½; WT: 32 LBS. USED \$35.95

R-108

RECEIVER, SAME AS R-110 ABOVE EXCEPT 20-28 MHZ. USED \$21.95

R-109

RECEIVER, SAME AS R-110 ABOVE EXCEPT 27-39 MHZ. USED \$27.95

PP-282 POWER SUPPLY 24 VDC FOR R-108-109-110 RECEIVERS. MOUNTS INSIDE REC. USED \$5.95



SHOCKED-MOUNTINGS FOR GRC SERIES RADIO SETS ALL HAVE APPROPRIATE CABLES & CONNECTORS

THAT GO FROM THE MTG. TO THE SET & BATTERY, BUT THEY DO NOT HAVE JUMPER CABLE UNIT-UNIT. MT-297/U HOLDS R/T, PS, REC., RT-70, AM-65, C434 SIZE: 33x13x4½; WT: 75 LBS. UNUSED WRITE MT-298/U HOLDS TWO (2) R/T & TWO (2) PS. SIZE: 37x13x4½; WT: 85 LBS. USED WRITE MT-299/U HOLDS ONE RT-66, 67, OR 68 & ONE PS SIZE: 18x13x4; WT: 50 LBS. UNUSED \$25.00 MT-300/U HOLDS (1) RT-70 & AM-65 (PIGGYBACK) SIZE: 8x13x3¾; WT: 25 LBS. USED \$22.00 MT-327/U HOLDS ONE RT-66-67-68, ONE R-108-109-110, ONE PP-109-110; 32 lbs sh. Unused, \$25

PRC-6 WALKIE-TALKIE



RT-196/PRC-6 FM TRANSCEIVER, single channel crystal-controlled in the 47 to 55.4 Mhz range. Range: approx. 1 mile depending on terrain and conditions. Handheld unit has push-to-talk switch, volume control, ribbon antenna, carrying strap, and provision for H-33/PT handset. Uses type CR-23 crystal (not included or available). With tubes 6/5678, 3B4, 3/5672, 2/5676, and 2Q21. Requires 1.5, 45, and 90 VDC. 15x5x4½, 6 lbs sh. Used, \$18.95; MANUAL, \$7.50

CY-853/PRC-6 CASE, space and padding for 42 crystals; 6½x6½x1, 2 lbs. Used, \$3.00

ID-292/PRC-6 CHANNEL ALIGNMENT INDICATOR, plugs into RT-196 and indicates relative level voltages for B+ filament, osc. injection, limiter, discriminator output, and P-A grid. Also P-A current and calibrate adjust. Unit is basic VTVM with 1½" sq. FS-500 ua-meter and 5678 tube. Power from set under test. ID-292/PRC, used, \$14.95

GRC/PRC BATTERY TEST

AN/PSM-13 BATTERY TEST SET;

DESIGNED TO CHECK GRC AND PRC-TYPE BATTERY PACKS INCLUDING BA-270, -279, -376, -377, -386/PRC-25, -398/PRC-25, -399, AND -505. METER INDICATES BAD-GOOD (FS=1 MA). WITH ADAPTERS U-240, -241, -242, -297, -314, -315, -346 AND CANVAS CASE. SHPG. WT: 7 LBS. PRICE: USED, EXCELLENT, \$24.95



PRC-8-9-10 TEST SET

AN/URM-113 RADIO TEST SET,

consists of TS-997 and accessories; designed to align and test modules of backpack transceivers AN/PRC-8-BA-9-9A-10-10A. Modules AM-427-427A, TF-132, or TF-204 from the radio under test simply plug into TS-997 and 3.5" round meter indicates the "quality" of the respective modules. Also checks crystal frequencies 4.26, 4.3, and 4.34 Mhz. Operator info incld: 8.6x13x9.7. 23 lbs. Unused, \$40.



XMITTER MODULATOR



MD-203/GRC MODULATOR, converts a transmitter's CW signals into frequency shift for RTTY transmission. Designed for use with T-195/GRC-19 xmitter, MD-203 is usable with any xmitter with 1.5 to 3 Mhz fundamental frequency. Shifts 850 Hz (1.5-3 Mhz), 425 Hz (3-6), 212 Hz (6-12), and 106 Hz (12-20). 1 volt min signal input; requires 24-28 VDC 1.8 amp. W/tubes 2A6T, 2B6A, 5/26A6. 9.3x7.3x13.3, 25 lbs sh. Used, \$24.50; power conn, \$5 w/set. MANUAL for MD-203, partial repro, \$8.50

AM-6669/PRC RF POWER AMP-LIFIER, designed for use

with PRC-41 backpack transceiver, but usable with other 225-400 Mhz xmitters such as PRC-66, ARC-45, etc. Power output: 10 watts from 2-3 W input; "N" connections. Solid-state; 24 VDC required. 5.3x6x9.8, 10 lbs sh. Used, \$95.00



ACCESSORIES

CY-5007 BATTERY BOX fit PRC-8-9-10, used \$3.

AT-272A goose-neck antenna base, unused, \$2.

AT/PRC6 FLAT RIBBON ANTENNA for PRC-6, \$4.00

AB-129 RUBBER BASE f/AT-271 (PRC-8-9-10) \$3.

AB-591 TUBBER BASE f/AT-271 (PRC-25-77), \$4.

AM-598 SHOCKMOUNT \$5. H-189 handset, \$12.

M-29 MIC w/UG-77, \$5. M-80 MIC w/UG-229 \$10

AT-271/PRC 7.5" TELESCOPING ANTENNA used \$10

LS-166/U LOUDSPEAKER Used \$12 w/set purchase

GRC/VRC CONNECTORS, specify type and with what equipment used, \$3 each w/set purchase.

FLUGS, used UG-77, metal bak \$3. UG-229 \$4.

CX-1211 CONN. ASSY. f/RT66-7-8 to PPI12, \$6.

Connector assy. sold only with set purchase.

PP-281/GRC 12 VDC POWER SUPPLY, allows 12 VDC power f/R-108-109-110 & RT-70/AM-65; 68. UNUSED \$22.95; PP-282 24 V SUPPLY unused \$8.

TECH MANUALS WITH SCHEMATICS FOR:

RT-196/PRC-6...\$7.50
PRC-9A-10A REP \$10.00
RT-66, 67 & 68...\$5.00
RT-70...\$5.00
R-108, 109 & 110...\$7.50
AM-598...\$3.00
PP-109 & 112...\$5.00
AM-65...\$5.00
R-108, 109 & 110...\$7.50
AN/VRC 13-15 OR AN/VRC 16-18, CONTAIN INFO & SCHEMATICS ON RT-66, 67, 68, R-108, 109, 110, PP-109, 112. VAR. MTG. CONTROL BOX ES. \$7.50



R-394/U RECEIVER, 152-172 Mhz FM single channel crystal-controlled. Dual conversion unit has first IF 7.8 Mhz and 455 KHz second IF; also squelch and muting circuits. 8 ohm output impedance. Set features modular construction with plug-in units 1st RF amp, local oscillator, 1st IF amp, 2nd IF and discriminator, and audio/squelch. 455 KHz selective filter is wired in. Also has compartment for modular power supply which is listed elsewhere on this page. Includes tubes 14/5678, 4/1AD4, 5672, 5840, 5783, and 6AK6. 8 1/2 x 5 1/2 x 14 1/2 lbs. Used \$149.95; Gov't-recond \$209.95.

R-257 RECEIVER, same as R-394 except covers 25 to 50 Mhz FM, used, \$12.95



T-278/U TRANSMITTER F.M. 152 to 174 MC APPROX. 30 WATTS, CRYSTAL CONTROL ON ANY TWO (2) PRESET FREQ. PHASE SHIFT MODULATION 15 KC DEVIATION, CR-27/U CRYSTAL UNIT FREQ. RANGE 4750-5437.5 KC. MULTIPLIED 32 TIMES. WITH TUBES 2/384, 3/2E24, 4/5678, 2/5672 AND 2/1AD4.

VOLTAGES REQUIRED AS SHOWN WITH DY-93 DYNAMOTOR POWER SUPPLY FOR USE WITH T-208-278-417 TRANSMITTERS. USED \$14.95
 SIZE: 8 1/2 x 4 1/2 x 14 1/2; WT: 12 LBS. UNUSED \$19.95
 AN/VRC-19 6 VDC RADIO SET, includes R-394, T-278, DY-100, CY-938, C-847; 100 lbs. #40.



VIBRATOR POWER SUPPLIES for R-394 and R-257 receivers; fits inside receivers; 10 lb PP-867, 24 VDC input, \$4.95
 PP-868, 12 VDC input, \$5.95
 PP-846, 115 VAC 60 Hz input, \$29.95

DY-93 DYNAMOTOR POWER SUPPLY for use with T-208-278-417 transmitters. Input: 12 VDC 280 ma, 225 VDC 45 ma, -25 VDC 5 ma. 8 1/2 x 7 x 14, 29 lbs. Used \$9.95

CHASSIS CONNECTORS to fit R-394-257, T-208-278-416-417, DY-93-98

Specify for receiver (P252), transmitter (P401), or power supply (P1203), \$2.50 each.



CY-938 EQUIPMENT CABINET houses receiver R-257 or R-394, transmitter T-208 or T-278, power supply DY-93, -98, or -100. Aluminum; 17 1/2 x 11 1/2 x 25, 40 lbs sh wt. Used \$9.95

URC-68 DISTRESS RADIO

AN/URC-68 DISTRESS TRANSMITTER, handheld unit designed as an emergency radio for aircraft pilots; operates over 38-42 Mhz FM and 230-250 Mhz using 4 preset channels, voice, MCW, and beacon. All have 40.5 Mhz FM and 243 Mhz UHF channels; other three frequencies depend on selected crystals (not available), 50 KHz spacing. Power output 500 MW (FM), 200 MW (UHF); range 19 miles line of site or 3-5 miles over varied terrain. Includes squelch, built-in microphone, speaker, and antenna. Requires 11-16 VDC originally supplied by BA-1112 battery (not available). 6 1/2 x 3 1/2 x 12, 3 lbs sh. Used-reparable with receiver and transmitter output, \$79.50 AS-IS, no output but good modules, \$59.50 MANUAL, partial reproduction, \$10.00



CV-278 FREQUENCY SHIFT CONVERTER designed for RTTY operation of R-392 receiver and T-195 xmitter; usable with any receiver having 450-500 KHz IF. Signal Input and Discriminator meters; 28 VDC 2 A required. 9 1/2 x 7 1/2 x 13 1/2, 25 lbs sh. Used \$40. Power connect \$6 w/set.

GE 'PROGRESS-LINE'

GE PROGRESS-LINE 50 WATT MOBILE TRANSCIEVER, single channel crystal-controlled in the 144-174 Mhz band Has #4R25C2 receive, #4ET-21A2 transmit, and #4R25B vibrator power supply sections. Transmit deck uses two 6146 tubes in P-A. Power supply requires two vibrators (not available) for 12 VDC operation. Internal trimmers for antenna tuning, coupling, and P-A plate; 21 tubes. 6 1/2 x 14 1/2 x 15 1/2, 34 lbs sh. #MA E/36N, used less xtal & cover, \$25.95. \$318-COT CONTROL PLUG, \$3. POWER PLUG, \$2.50



GE CONTROL HEAD for Progress-Line sets; with push-to-talk mic, squelch, volume control, and coil cord. 5 lbs sh wt; used, \$13. Less mic, \$4.95

MOTOROLA CONTROL HEADS, 1950's styles; similar features as above; used with mic, \$11.95

MOTOROLA TRANSCIEVER

MOTOROLA FM MOBILE TRANSCIEVER, transmits in 144-174 Mhz range, receives between 450-470 Mhz. #TD6050AB transmitter section has output of 25 watts min. (144-167 Mhz), 20 W min. (167-174 Mhz) using single crystal-controlled channel. Crystal multiplication 24 times; 50 ohm output impedance. Has nine tubes including 6146 in power amp. #XRE1000-AH receiver has dual squelch "Private Line" or separate tone-controlled and carrier squelch circuits. Two crystal-controlled channels; 455 KHz final I.F. Audio output 2 watts into 3.2 ohms. With 14 tubes. #XPN-6003B transistorized power supply requires 12 VDC input to supply voltages for transmitter and receiver. Crystals and accessories not available. 6 1/2 x 10 1/2 x 19 1/2, 28 lbs. Used less 6146 tube \$17.50 \$12.50; Schematic set, \$5.



BA-279 BATTERY PACK

BA-279/U BATTERY, intended to power AN/PRC-8-9-10 or Canadian PRC-509-510 backpack transceivers. However, pack can be readily disassembled to utilize the different cell voltages for other power uses. Cell outputs: +1.5 V 675 ma (A1), -1.5 V 250 ma (A2), +67 V 25 ma (B1) +125 V 50 ma (B2), and -5 V 400 ma (C). Batteries have 2/79 date and have been in cold storage thru 3/84, not rechargeable. 8 1/2 x 8 1/2 x 2 1/2, 7 lbs sh. Unused, \$7.95 each; Case of 12, \$72

BA-4386 LONG-LIFE MAGNESIUM BATTERY for backpack radios AN/PRC-35-77; output (as supplied to PRC-25-77): 12.5 VDC 600 ma (receive), 12.5 VDC 1.4 amp and 3 VDC 400 ma (transmit) Estimated battery life: 30 hours 9:1 R/T ratio. 4/80 date code; cold storage thru 3/84. 3 1/2 x 9 1/2 x 2, 3 lbs. Unused, \$5.95; B#36.

PRC-25 AC SUPPLY

C-7673/PCC-1 RECTIFIER CONTROL UNIT, intended for use with two RT-505/PRC-25 transceivers and TH-81 terminal as controller for telegraph-telephone repeater system. Also functions as 115 VAC 60 Hz or 24 VDC supply for two RT-505's. Control one or both RT-unit, power DRY BAT-9B451-OFF-VEH-115 VAC, handset connection, cables, two 3 A fuses for AC and two 5 A for DC. 2.1 x 9.7 x 6.6, 10 lbs. UNUSED, \$100.00 Used, \$75.00; Used "AS-IS not working", \$40.



0.5-32 MHZ RECEIVER

R-392/URR RECEIVER, 0.5 to 32 Mhz AM-CW in 32 one Mhz bands using mechanical digital tuning. Triple conversion on lower 8 bands, double on others. Selective bandwidth 2-4-8 KHz; 100 KHz crystal calibrator points. With 25 tubes of 26A7, 26A6, 26C6, 26D6, 6AJ5, 12AU7. Requires 24-28 VDC 5 amps. Rugged vehicular version of the famous R-390 receiver, 11 1/2 x 14 1/2 x 11; 58 lb sh wt. Used-reparable, \$165. Checked, \$235. MANUAL for R-392, partial repro, \$15.00 IS-166 SPEAKER for R-392, used, \$12. w/set. 115 VAC POWER SUPPLY I/R392-no connector \$25.



RT-70/GRC TRANSCIEVER

RT-70 TRANSCIEVER, 47 to 58.4 Mhz FM with 500 MW transmitter output. Continuous tuning or two preset channel selection. Receiver circuit has 15 Mhz IF and 1.4 Mhz final; 600 ohm audio out with variable squelch. Built-in crystal calibrator every 1 Mhz. Requires 90 VDC 80 ma, 6.3 V V 360 ma, and 6.3 V 160 ma. Tubes 6/1U4, 3/1L4, 2/1R5, 1A6A, 4/304, 3A5, 3B4. 4.8 x 8 x 13, 22 lbs. Gov't reconditioned \$37.50



AM-65/GRC AUDIO AMPLIFIER, 3-channel audio for RT-70; also functions as power supply when used with a PP-281 or PP-282 modular supply which plugs inside AM-65. 4.4 x 13 x 8, 17 lbs. Used, \$14.95



PP-281 Power supply; allows 12 VDC operation of RT-70/AM-65. 6 lbs sh. Unused, \$22.95
 PP-282, as above but for 24 VDC; unused, \$8.
 CX-1213 CABLE, connect RT-70/AM-65, used \$9.
 POWER INPUT CONNECTOR for AM-65, used, \$3.00
 M-29 MIC for use with above, used, \$5.00
 MANUALS for RT-70 or AM-65, \$5.00 each.
 MANUAL for AN/URC-7 (RT-70/AM-65 system) \$7.50

GRC-3--8 CONTROLS

C-433 REMOTE CONTROL, used with GRC-3 thru -8 radio equipment allowing remote operation of the radio sets from up to 2 miles away. Also allowed two-way field telephone communication when used with H-33/H-156 handsets. Has 6-25 ringing generator and VP-2 bell. Uses two "D" cells (not included) for phone operation; 45 VDC required for remote radio use. 3.5 x 8.3 x 7.2, 9 lbs sh. Used, \$16.00



C-434 LOCAL CONTROL, similar to C-433 except used at radio site; connects to Rx-Tx audio allowing remote use by C-433 and duplex phone. 3.5 x 8.6 x 10.1, 12 lbs. Used, WRITE MANUAL for C-433-434 (AN/GRA-6), \$7.50

C-435/GRC CONTROL, plugs into RT-297 mount and allows duplex use and retransmission of GRC-3 thru -8; functions as junction for control and audio lines of Rx-Tx and aux-Rx. Has 1.75" sq meter; no generator. 3.5 x 8.8 x 7.3, 7 lbs sh. Used, \$15.



PRT-4 XMITTER

AN/PRT-4 MINIATURE TRANSMITTER, designed to operate on two preset channels between 47 and 57 Mhz. Output 450 mw (Ch 1), 50-350 mw (Ch 2); also 150 Hz tone. Has built-in speaker and clips onto belt or pocket. Requires 12 VDC originally supplied by BA-399 battery (not available). Units sold "as-is" less antenna crystals, battery box. 2 1/2 x 2 1/2 x 2, 2 lbs. \$16.95



VERY HIGH VOLTAGE

DC POWER SUPPLY WITH 107-125 VAC 60 Hz PRIMARY. TWO OUTPUTS: +5.4 to 5.75 Kv. @ 140 to 300 u-A. ONE OUTPUT: -5.1 to 5.3 Kv. @ 100 to 270 u-A. SIZE: 12 $\frac{1}{2}$ x2 $\frac{1}{2}$ x4 $\frac{1}{2}$ WT: 10 lbs. GE#9T6Y202966, Used, \$10.95

HIGH VOLTAGE SUPPLIES

HIGH VOLTAGE DC-DC CONVERTERS originally a CRT HV supply module; use in HV experiments or in bug zappers.
#ULC-14-07C, input 5-15 VDC 100; output 4.5 to 13.5 KV. Also 135-402 V and 70-93 VDC. Potted; PTK mfg. 3.2x4.2x1.4, 3#, NEW \$9.95
#B2-10B41-01, input 10-20 VDC 100-300 ma produces output of 10-20 KVDC; aux outputs of 64-135 V and 35-39 V. Greater current output than above supply; components accessible-not potted. 5.3x5.3x1.8, 2#, NEW \$12.95

FP-2054/GRC POWER SUPPLY for T-893/GRC-50 30 W SHF xmitter; regulated outputs +250 V 200 ma, +150 V 80 ma, +105 V 15 ma and unregulated +800 V 100 ma, +650 V 60 ma, +654 V 60 ma, +360 V 80 ma, 115 VAC 2.2 amps. Has transformers 1000 V 300 ma and 435 V 370 ma, 2/6080 tubes, frc nt circuit breaker, AC outlet, and cooling fan. Requires 115 VAC 47-63 Hz; 7 $\frac{1}{2}$ x1 $\frac{1}{2}$ x1 $\frac{1}{2}$, 67 lbs. Used, \$54.95

COMPUTER SUPPLY

COMPUTER POWER SUPPLY with popular outputs 28 VDC 9.6 amps and regulated 5 VDC 5 A, 12 VDC 5 A, -12 V 2 A, -6.8 V 0.8 A. Operates from 100-125 VAC 60 Hz. Supply has many useful components such as transformer rated 39.8 VCT 8.5 A and 22.7 V 12 A, front panel w/(4) 10x2-7/8x1 $\frac{1}{2}$ heatsinks and six 2N3055 transistors, (2) K825005 bridge rectifiers, capacitors (3) 51000 mf and one 19000 mf 40 VDC, regulator PC card, other parts. Made in Canada for NCR. 10 $\frac{1}{2}$ x14x12, 65 lbs sh. #M32-01-775, \$29.95; 2/\$50.

SOLID STATE POWER SUPPLIES rated conservatively and constructed on rugged steel frames. Units have front voltage adjust \pm 10% running light, AC reset. Also adjustable current limiting and overvoltage protection. Power input: 115 VAC 60 Hz. Removed from equipment. Add \$10.00 to prices for "checked" units.

RATING	SIZE	Sh	Wt	No.	PRICE
4 V 30 A	13.5x7x15.5	65#	92#		\$30. \$24
20-24 V 5.5 A	9.5x7x20	47#	332		\$40. \$32
30 V 3 A	15.5x7x19.5	38#	889		\$27. \$21

DUAL POWER SUPPLY, same style as above, -32-36 V 14.7 A and -32-36 V 10.3 A; two independent regulators w/common buss. 20x12x14, 125 lbs sh. #450, \$40 \$45

HFE CRT POWER SUPPLY; HAS 6.5 KV LOW CURRENT OUTPUT WHEN USED WITH 10 VDC 1.75 AMPS DC-TO-DC INPUT CONVERTER. WILL PRODUCE 7.5 KV FROM 12 VDC INPUT. OTHER LOW CURRENT OUTPUTS OF -2500 AND -1500 VDC. TRANSISTORIZED WITH COVER AND CONNECTORS. 11x6x5 $\frac{1}{2}$, 10 LBS. USED, EXC., \$15.95
HFE LOW VOLTAGE POWER SUPPLY; OUTPUT: 10 VDC 1.75 AMPS, ADJUSTABLE -1 V. INPUT: 115 VAC 60 HZ. TRANSISTORIZED WITH FUSE AND CONNECTOR. 10x6x4; 12 LBS. REMOVED F/EQUIP., \$7.95
HFE CRT AND LV POWER SUPPLIES AS SET, \$20.00

COMPUTER SUPPLIES

COMPUTER POWER SUPPLY, outputs +5 VDC 15 amps and \pm 12 V 1 A from 115 VAC 60 Hz input. Uses IC regulator to drive 2N3055; also LED status indicators, 4 $\frac{1}{2}$ " axial fan, and cover. 6x6 $\frac{1}{2}$ x19 30 lbs. #MA-2149, used \$19.95
#TD-2266 DISK DRIVE SUPPLY as above but +5 V 5 A, +24 V 5 A, -5 V 1 A; Wilton mfg. \$24.95

DC REGULATOR BOARD

POWER SUPPLY REGULATOR BOARD for supplies +5/-5 regulated 3 amp and upto 24vdc unregulated. W/capacitors 2/15000 mfd 15 V, 33000 mfd 30 vdc, 2/KBPC bridge rectifiers, two 2N6576, 2/2N4441 SCR. Regulators fixed encapsulated circuit boards and replaceable. 7.75x6x4; 7 lbs sh. #MEND-REG-5V, NEW, \$6.50

MODULAR SUPPLIES

AC DC #ECV5N6-1 5 VDC 6 AMP MODULAR SUPPLY, +0.05 line and load regulation from 100/117/220/23/240 VAC 47-440 Hz input; 4.9x5.6x2.5, 5 lbs. NEW \$17.95

ACME ELECTRIC 15 VDC 6.5 AMP SUPPLY, voltage adjust +0.75 V; +0.1% line and load regulation from 115/220/230 VAC 47-440 Hz input. Also remote sensing and adjustable OLP. 9x4.9x3, 8 lbs. #APH15-6.5, NEW \$22.95

PRINTER POWER SUPPLY

Has AC outputs 2/24, 6, 18, 42-14-0-14-42 V from 115 VAC 60 Hz input. DC rectification required for proper voltages. Also has line filter for external fan, relay for cover interlock, and two fuses. 11x6x4, 18 lbs sh wt. #803-101, \$14.95 \$9

FGC-29/1640 POWER SUPPLY, rated output 40 VDC 30 ma or 35 VDC 40 ma from 115/230 VAC 60 Hz input. However, the transformer is rated 180 VDC 40 ma and 6.3 V 1.7 A out. Also has 10 Hy 55 ma choke, 450 mf 50 VDC capacitor, 6X4 tube. 5x4 $\frac{1}{2}$ x4 $\frac{1}{2}$, 5 lbs sh. Used, \$9.95

10/4.5 VDC 15/3.5 AMP

DC POWER SUPPLY provides 10 VDC 15 amp and 4.5 VDC 3.5 A outputs from 100 to 127 VAC 60 Hz input. Wire output in series for 14.5 VDC at 3.5 A. 7x12x4.5, 17 lbs. #PX-2939, \$14.95

CASH REGISTER POWER SUPPLY has outputs +6, +10, +15, -24 VDC from 115 VAC in. Also 6 V gel-cel battery, 6x4.8x1.5 heatsink with 4/TD-3 transistors, and regulator board. 8x8.5x7.3, 22 lbs sh. Origin #202550A unused 48-18 \$25 \$14

120 V 20 KHZ SUPPLY

LAMP POWER SUPPLY, an item for the experimenter who finds the 120 VAC 20000 Hz out from 120 VAC 60 Hz input intriguing or finds the supply a good source of usable parts. Consists of two 6x4x1 heatsinks each w/2N3055, transformer w/2-4 VCT 500 ma outputs, ferrite core autotransformers, PC board. 4.8x2.5x3.5, 9 lbs. GE#9T6Y1500-G4, \$6.95

UNUSUAL TUBES for collectors and experimenters. Filaments checked but not guaranteed.

JAN 218 RECTIFIER TUBE, 1/2 wave high vacuum; jumbo 3-pin base. 15 $\frac{1}{2}$ "Hx5" dia \$10.
250TH-R TRIODE w/bad filament 4-pin base; 10"Hx5 $\frac{1}{2}$ " dia, \$8.
JAN 705A RECTIFIER, 4-pin base. 5"H x 2 $\frac{1}{2}$ " dia. \$5.
JAN 715B PULSE AMP TETRODE 4-pin base, similar shape as 705A; 5 $\frac{1}{2}$ "Hx2 $\frac{1}{2}$ " dia. \$6.
WESTINGHOUSE OL-2 TUBE WITH-IN-A-TUBE, 12 $\frac{1}{2}$ "Hx2" dia \$7.

SAL-219 RADAR MAGNETRON unused \$500.

EIMAC 2-450A high vacuum HV rectifier, 30 KV peak 7.5 V 25 A fil; 7 lbs. "As-Is" not guaranteed, \$17.50; or guaranteed, \$125.

R4330 PHOTOFLASH TUBE Operates at 2250 volts, 6 flashes per minute 100 watt-sec/flash maximum. 12,000,000 lumen peak light output; integrated light output 3500 lumen sec flash. Sylvania, NEW, \$10.00

500 MHZ TRANSMITTING TUBE 8012-A TRIODE

DIRECT WIRE FILAMENT: 6.3 V, 1.92 AMPS. MAX. PLATE: 1000 V, 80 MA, 40 W CAP: G-F 2.7; P-F 0.4; G-P 2.5 MU 18; GRID CURRENT 20 MA CLASS "C". TELEGRAPHY 35 W W/DATA, UNUSED, TELEPHONY 20W \$2.00 EA. 4 FOR \$6.
8025 TRIODE, same as 8012 but 4-pin base, \$3.

COLECO DRIVE SUPPLY

COLECO DISK DRIVE POWER SUPPLY for ADAM system; transformer type with outputs +5 V 3 amp, +12 V 2.9 A, -5 V 200 ma, and +18 V inductive 1 A. 115 V 60 Hz input. With cords and On-Off switch. 11x4x8, 10 lbs sh. #COL72559, unused, \$12.95

CIRCUIT SUPPLY MODULE

POWER SUPPLY MODULE with 3-conductor cord, fuse, 100/115 V input switch, and 50% Voltage switch. Outputs: 18 V 350 ma and 30 VCT 600 ma. 50% switch results 9 V 350 ma and 15 VCT 600 ma. 6x4 x2.3, 4 lbs. #PSM-4404-87AD, used, \$4.95

MICROCOMPUTER POWER SUPPLY, uses TWO 3-TERMINAL REGULATORS AND A 723 WITH TIP3055 TRANSISTOR. INPUT: 115 VAC 60 Hz; OUTPUT: -25 VDC 180 MA; -5 VDC 800 MA, -15 VDC 1.25 AMPS. WITH SCHEMATIC. SIZE: 3 $\frac{1}{2}$ x5 $\frac{1}{2}$ x4; SHPG. WT: 10 LBS. #ECRPS-744, \$8.00

24 VDC 6 AMP SUPPLY

24 VDC 6 AMP POWER SUPPLY originally used in Xerox equipment but usable to power R-392 receiver and other equipment. Requires 105-125 VAC 60 Hz input. 4x9 $\frac{1}{2}$ x8 $\frac{1}{2}$, 20 lbs. #AS-59134, used-checke4, \$24.95

BRYANT REGULATED SUPPLY, outputs 5 VDC 1 amp, +20 V 0.6 A, -20 V 0.5 from 115 VAC 60 Hz. Rackmount w/READY and POWER ON lights, power switch, fuse, and B' cord. 5.2x19x5, 14 lbs. #CLC-1, unused, \$15.

230 VDC TRANSISTORIZED POWER SUPPLY, 115 VAC 60 Hz input. Units marked "200 VDC" but they test at 240 VDC 300 ma. 5x4x5, 15 lbs. #3930, NEW, \$28

CATHODE RAY

Table listing various CRT types and their prices, including CRT'S, pull-outs, and various model numbers like 2BP1, 902, 3ACP7, etc.

TUBE SHIELDS & SOCKETS for 3BP1 or 3RP1 CRT's \$5.50 ea. Shield only \$4/Socket \$2.50

SHIELD FOR 5CP1, 5 1/2" FACE, 2 1/2" NECK, 14" LONG, \$5.00. SOCKET 5CP1 \$3; 5BP1, \$2.50. MU-SHIELD FOR 2" CRT, \$6.95

SPECIAL TUBES

Table listing special tubes such as USED, CHECKED, INDUSTRIAL, and various model numbers like 3B2B, 4B32, 6080, etc.

U=USED, CHECKED; UN=UNUSED.

Table listing special tubes with prices, including 1AE4, 2C43, 2C46, 2K25, 3C22, etc.

STANDARD TYPES

Table listing standard tube types like 0A2, 1A3, 1A4, 1A5, 1A6, 1A7, 1B3, 1B4, etc.

Table listing standard tube types like 3A4, 3A5, 3BA, 3C4, 3S4

Table listing standard tube types like 2X2 used, 2E24 or 2E26 used, 2E22 or 5A5 used

Table listing standard tube types like 5R4G, 5T4, 5T8, 5U4G, 5U8, 5V3, 5V4, 5W4, 5Y3G, 5X4, 5Z4

Table listing standard tube types like 6AP4, 6AB7, 6AC5, 6AC7, 6AF3, 6AF4, 6AF5, 6AF9, 6AF11, 6AG5, etc.

Table listing standard tube types like 6AV5, 6AV6, 6AX4, 6AX5, 6BA11, 6BC5, 6BC8, 6BE3, 6BF5, 6BH6, 6BJ3, 6BK4, 6BK5, 6BK7, 6BL7, 6BL8, 6BN4, 6BN6, 6BQ7, 6BQ6, 6BX7, 6BU8, 6BZ5, 6PZ7, 6CB5, 6CB6, 6CF6, 6CG3, 6CG8, 6C67, 6C68, 6CL6, 6CM7, 6CS6, 6CS7, 6CU5, 6CU8, 6CY5, 6CY7, 6CX8, 6D14, 6DE6, 6DN6, 6DK7, 6DG6, 6DQ5, 6DQ6, 6DN6, 6DN7, 6EA4, 6EA7, 6EH4, 6EJ7, 6EM5, 6EM7, 6EU7, 6ES5, 6FC7, 6FY7, 6FY5, 6FM7, 6GF7, 6GH8, 6GK5, 6GJ7, 6GW6, 6GM6, 6HA5, 6HB7, 6HM5, 6JH6, 6JT8, 6JU8, 6KA8, 6KD8, 6KZ8, 6LM8, 6LU8, 6SA7, 6SC7, 6SD7, 6SF5, 6SH7, 6SJ7, 6SK7, 6SL7, 6SN7, 6SR7, 6ST7, 6SU7, 6ZY5

IF YOU DON'T SEE WHAT YOU NEED LISTED, PLEASE WRITE.

Many other tubes in stock. No complete list available. WRITE us your needs. WE WILL SHIP "USED-CHECKED" TUBES IF "UNUSED" SOLD OUT, UNLESS YOU SPECIFY "UNUSED ONLY"

Table listing standard tube types like 6A6, 6A7, 6A8, 6B6, 6B8, 6C4, 6C6, 6F5, 6F8, 6G6, 6H6, 6K4, 6K6, 6K7, 6K8, 6J4, 6J5, 6J6, 6J7, 6J8, 6L4, 6L7, 6N4, 6N7, 6Q7, 6T8, 6T7, 6T4, 6U6, 6U8, 6V6, 6V8, 6V7, 6V3, 6W4, 6W6, 6Y6, 6Z7, 6X5, 6X4, 6X8, 6Z4

OLD TUBES as available USED, \$2.50; UNUSED \$4.00

Table listing old tube prices for various models like 19, 24, 27, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 44, 41, 46, 52, 55, 57, 58, 76, 77, 78, 79, 81, 85, 89/Y

USED-CHEK \$3. UNUSED \$4.50 10/VT-25 42 47 80 71A UNUSED-BOXED, \$5.50 201A/301A used-checked \$12.

ANTIQUE GLOBE TUBES, used-checked, \$7.50 ea: 224/324 226/326 227/327

"EYE" TUBES, used-checked: 6U5, 6E5, or 6AL7, \$7 each

All checked \$7.50

837 USED, CHECKED, \$4.00

POWER AMP tubes, used-chkd unless otherwise noted; (stt) - subject-to-your-test

Table listing power amp tube prices like 2C39A, 6V fil., \$6.00; 3CX100A5, 6V fil., \$7.50; 7289/3CX100A5, unused, \$18; 4X150D, 26V fil., \$10.00; 4X150G, coaxial, (stt) \$22; 4X250F, 26V fil., \$12.50; 4CX250B, 6V fil., \$27.50; 3X2500A3, unused, \$200.00; 4-125A/4D21, (stt), \$28.00; 4E27/5-125B, (stt), \$24.00; 4E27/5-125B, unused, \$30; 5894 or similar, stt, \$22.

SOLID-STATE TUBE REPLACEMENTS, long-life; unused: 1N1239 replaces 5R4, \$5.95 1N2637 f/ 3B2B, 836 \$12.95 88T-4B32 for 4B32, \$18.95



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RELAYS



DELTA 105ML MAGNETIC LATCHING RELAY, one SPST norm open; other SPST norm clsd. Actuates 15 VDC min. Octal base. 2x3 1/2x2, removed \$3.95

2PDT 48 VDC 3700 ohm coil; 5/8x1-7/8. MHX124 used \$1.

4PDT 48 VDC 3700 ohm coil; 1-5/8x2. MHX4069 used \$1.

2PDT 26 VDC 675 ohm coil, 2 amp; sealed, solder hooks. 3/8x1 1/2, #30-010 used \$2.00

2PDT 26 VDC 830 ohm coil, 2 amp; sealed, solder hooks. 3/8x1 1/2x3/8, #J2614H6A \$2.50

OMRON 3PDT RELAY w/24 VDC 650 ohm coil; 2 A contacts. 11-pin solder/plug-in lugs. 1x1 1/2x1 1/2; #OM-MY3 unused \$2.

Sealed **SENSITIVE RELAY**, 50 ohm 28 ma coil; DPDT contacts. Solder hooks; 1x1 1/2x2 1/2. #R400-2B-50, \$2.95

90 V 60 Hz 3PDT octal KA4187 \$2.

DPDT 115 V 60 Hz 5 A contacts; octal. KR5737 \$2.50

4PDT 120 VAC, 3 AMP CONTACTS; 28 VDC 3 A RES. PLUG-IN SOLD-ER. 2 1/2x1 1/2, #KH4695, \$1.50

MIDTEX 4PDT 20 AMP 120/240 VAC or 10 A 480/600 VAC; plastic case w/mount tabs. #197-321200 NEW, \$3.95



ALARM PC BOARDS w/soldered relays, 3-LED's, transistors, etc; 4 1/2x1 1/2x6 #556015, 2-Sigma 70RE23T-1000 DPDT 12 VDC relays w/2 A 28 VDC; 115 VAC contacts; \$3.25

#556168, 2-P&B R10S-E2-24-J500 sensitive relays, 500 ohm 9 ma coil; 4PDT 2 amp contacts, \$3.75

#556-01R, one P&B R10-E49-04-3 4PDT relay, 12 VDC 1000 ohm coil, 2 A; also Klixon 2 A cir-breaker, \$3

12 VDC 4PDT relay similar to P&B KHU-Series. 115 VAC 3 amp contacts; solder or socket-type mount. #4CH12D, NEW, \$2.95


MINIATURE PLUG-IN, 28VDC, 600 OHM, DPDT 2 AMP, FILTERS [06C 6555-1; #5945-987-8401] \$3.00

MAGNACRAFT SPDT, 12 VDC 10 amp contacts, 100 ohms. Open frame; 1 1/2x1 1/2x1. #88X-150A NEW \$2.50 ea.

SENSITIVE RELAY, 6 VDC, ONE POLE MAKE AND BREAK, 600 OHMS. 2 1/2x2 1/2x1 1/2. #ZA/CAN1304 PRICE: \$1.00

SENSITIVE, SPDT 6-12 VDC 1500 ohms, contact adjust. 2 1/2x2 1/2x2 1/2; #RM39-1901, \$1.00

SENSITIVE RELAY, 300 ohm coil res; operates @ 2.05 VDC. #K111801-1, \$2.00



PETER PAUL VALVE w/120 V 60 Hz 9 watt coil; 1/8" orifice, 1 1/2"L hose. SER-GH 90 psi; 2 lbs. #PP-32NFDGW, unused, \$4.95

POLAR RELAY, Type 255A, various manufacturers; black or grey case. 2 1/2x2 1/2x2 1/2, 3 lbs. #D163119A NEW \$3.25

14 VDC CONTACTOR used as starting relay on 14 VDC 40 amp input motor. 2.8x3.8x2.5, 2 lbs sh. #CR2800-384 \$4

SWITCH-GENERATOR CONTROL RELAY, differential type rated 24 VDC 300 amps; 4x4x3, 4 lbs. 6E#36TR72E4, unused, \$10.

12 VDC REED RELAY CIRCUIT BOARD with 3/DPST, 4/SPST, one mercury wetted SPDT reed relays plus resistors, diodes; 3 lbs. #5361, \$2.50

OPEN FRAME 4PST, 24 VDC 67 ohm coil; approx. 10 A N.C. contacts. 3.1x1.4x3.1; Leach #2024-188, new, \$3.50

P&B FR-80164 OPEN FRAME, SPST n.o. 12 VDC; contacts 120 VAC 5 A. 2 1/2x2 1/2x2 1/2, unused, \$2.50



ROTARY RELAY 28 VDC 4-wafer horiz-shaft; 1/2-break, 2/1-make 1-break, 1/3-make 2-break. 3-1/8x2x2 #K101/6 \$3

ROTARY RELAY, 28 VDC; single wafer, no unused contacts. Shaft has 2" arm. 2x1.9 dia. #8002-32, \$3.00

ROTARY, 28 VDC two wafers vert-shaft; 1-make 1-break, 3-make. "AS-IS" only, one wafer cracked or broken; switching not affected. 2.5x2x1.8, #K102-WB, \$2.25

DOUBLE DECK ROTARY RELAY with vertical shaft similar to K102-WB but good wafers; some style variations. #DD-K102, \$3.50

ROTARY STEP-PING SWITCH 115 VAC 60 Hz ratchet-type; can be modified to take upto 17 contacts w/ electric reset. 4.2x3.2x2.5 2 lbs. #SS-109216 NEW \$4.95

115 VAC 60 Hz COIL 25 amp @ 28 VDC/115 VAC contacts; solder terminals. 1 1/2x3 1/2x1 1/2; Kurmelec #26920/2054 used \$4.

JE#38BW1001A2 SPDT 9.6-15.8 VDC relay 206 ohm coil; used in GE mobile transceivers. F/solder or socket connections. 1x1 x 1/2. New, \$1.50. 24/#25.00



ROTARY RELAY 28 VDC, operates at 15 V; holds at 5 V. 2 1/2x1-3/8x2, 2 lb. #5533/HK22, removed, \$2.

SPST 24 VDC OPEN FRAME, 25 amp contacts; 3-1/8x1-3/8x1 1/2. #B-2A-OFF unused \$1.75

#R10-E2-Y2 DPDT, 12 VDC 1 amp contacts; 1000 ohm coil. PC board or socket mt. No socket, \$1.95

DELTA #20765-83 DPDT 12 VDC 5 A; plastic case, PCB mount. 1-1/8x1 1/2x1 1/2, NEW \$2.50

GUARDIAN DPDT 115 VAC 1/2 HP 10 A; solder terminals, plastic case. 1 1/2x1 1/2x1 1/2. #A410-361342, NEW, \$2.50

POWERFUL 12 VDC SOLENOID, 1/2" max draw approx -very strong. Coil res approx 0.75 ohm; we recommend a capacitor discharge-type DC supply for this. Requires 1" threaded dia nut for mount. 4x1 1/2 dia; 2 lbs sh. #12V-SOLWIND unused \$3.

ROWAN CONTACTOR Coil: 110v 50/60Hz FULL LOAD RUNNING CURRENT 10 AMP. LOCKED ROTOR CURRENT 60 AMP. 600 v. MAX. 532934 3 POLE USED \$4.95 532935 4 POLE USED \$5.95

CATALOG STOCK NO.	Page No.	Quantity	DESCRIPTION	Price Each	Total Price Add This Column	Do Not Use

TMC SBT-1K-Q

TECHNICAL MATERIELS CORP SBT-1K-Q (AN/FRT-56) 2-32 MHz 1000 watt CW transmitter; includes RFD-1A (AM-2785A) RF amplifier with PL-172/B295 PA-tube, VOX-5 (0-330) oscillator, PS-4 (PP-2765) LV and PS-5 (PP-2766) HV power supplies, IM-166 SWR meter, and AFP-4 patch panel in 80" rack. System has AM, SSB, ISB, DSB capabilities if used with SBE-3 sideband exciter (not available). 700 lbs sh wt; Used-complete, not tested, \$750.

TMC PAL-1K, RFD-1A, PS-4 and PS-5 only (no rack); 400 lbs sh. Used, \$495.00

MANUAL for AN/FRT-53, operation-maintenance on PAL-1K, part-repro \$15.00
MANUAL for D-330A, partial repro, \$8.50

HF TUNED RECEIVER

R-1440/WLR-6 HF TUNED RECEIVER, solid-state unit operating over 1.5-19.0 Mhz AM-CW on 36 crystal-controlled channels; uses three plug-in band modules with 12 channels each to cover portions of the range. Each module is fully enclosed and shielded and has 12 adjustable antenna circuits, 12 adjustable RF amp



circuits, crystal oscillator (uses CR-18 crystals - not available), mixer, 455 KHz IF with Cleveite filter, detector, AGC, BFO; controls for BFO, RF Gain, AM/AGC-AM/Man-CW, Channel select. Mainframe which holds three modules, serves as 115 VAC 60 Hz power supply and audio amp; has Volume, Band select 600 ohm Audio Jack. Band modules available: Band 1 (1.5-3.5 Mhz) Band 2 (2.3-5.1 Mhz) Band 3 (3.4-7.2 Mhz) Band 4 (5.2-11.8 Mhz) Band 5 (7.9-19.0 Mhz). Our tests have found that the modules can be operated as independent receivers on 12 VDC input and with addition of an audio amp. Also sensitivity less than 1 microvolt and that modules may be tuned over broader range than specified band limits.

We will ship three different modules of your choice with each mainframe; please specify your second choice. 81x61x161, 23 lbs sh. Used-reparable, \$150.

MANUAL for R-1440, partial repro, \$10 w/set.

SURVEILLANCE RECEIVERS



G175F SURVEILLANCE RECEIVER, 30-260 MHz AM-FM-CW in bands 30-90 and 60-260 MHz; IF's

0.455-2.5-21.4 MHz for bandwidths 10-40-300 KHz. Sensitivity 1 uv (AM), 2 uv (FM) min. @ 10 KHz bandwidth. Also controls BFO, AF-RF Gain, Squelch, CDRS Sens, Fine Tune. Nu- vistor 13/7587, 6/6CW4, 2/7077; some transistors. Requires 115 VAC 60 Hz; 24 VDC for lights. No further info: 4x18.3x17.5, 27 lbs. Used-operational/not to specs, \$325.00

S166C RECEIVER, companion to G175F except 235-1000 MHz AM-FM-CW in bands 235-500 and 460-1000 MHz; 40 and 300 KHz bandwidth. Used-operational/not to specs, \$400.00

R-482/URR-35 UHF RECEIVER, 225-400 MHz AM-CW in one continuous band; 115 VAC 60 Hz; 65 lbs. Used-reparable \$105. Checked, \$135.

R-648/ARR-41 RECEIVER

R-648/ARR-41 RECEIVER

190-550 KHz and 2-25 MHz AM-CW in five bands. Mechanical digital-type tuning in 1 KHz steps. 500 KHz final IF; mechanical filters 1.4



dbd 5.0 KHz. Controls for BFO, Sensitivity, Broad-Sharp Voice on CW, and Dial Lock. With tubes 2/5726, 7/5749, 2/5750, 2/5814, 5654, 5686, 6AU6, and 0A2. Requires 24 VDC 4 amps input for dynamotor. 7.5x16x13.3, 35 lbs sh. Used, reparable, \$145.00; Checked, \$220.00
MANUAL, partial repro, \$15. Schematic, \$2.50
Power input connector, \$3.00 w/set purchase.

30-300 MHZ RECEIVER



R-1420/URR (CBI 905A) UHF RECEIVER, covers 30 to 300 Mhz AM,

FM, CW in bands 30-90 and 60-300 Mhz; band- width selective 20 or 300 KHz. IF 21.4 Mhz; IF reject @ 30 Mhz is 54 db, above 50 Mhz is 80 db. Sensitivity: 1 uv/4 uv (AM) and 2 uv/ 6 uv (FM) for bandwidths 20 KHz/300 KHz @ modulated 1 KHz. Video output 5 v rms across 10K ohm load. Meters for Tuning and Signal, separate band tuning knobs and dials, BFO, RF/IF Gain, Audio Gain, Video Gain, Cor Sens, 600 ohm auto out. Partially transistorized; has 2/6CW6, 8058, 7587 nuvistor tubes. Re- quires 115/230 VAC 50-400 Hz; partial repro manual from microfiche included. 31x19x15, 25 lbs sh. Used-operational/not to specs \$395

5186B SPECTRUM DISPLAY for receivers having 500 KHz IF's; sweepwidths 5-20-50 KHz. Center Freq-control varies +10 KHz. Variable gain; full height deflection with 10 uv input. Linear or log response. Nuvisitors 6/7587, 4/6CW4; xistors 2/2N335, 3XP2 1"x3" CRT. Requires 115 VAC 60 Hz; 5.3; 9x16, 17 lbs sh. Used-reparable, \$99.50



COUNTERMEASURES



R-1125/R-1230 COUNTERMEASURES RECEIVER for 2-32 MHz in bands 2-4, 4-8, 8-16, 16-32 MHz. Designed for direction finding purposes and fea- tures frequency stability of 3 parts/10⁶

Hz. Sensitivity 3.5 uv max input for 10 db signal + noise/noise. First IF 1625-1725 KHz, 2nd 220 KHz, and 3rd 65 KHz. Separate Megacycle and Kilocycle 3-digit mechanical tuning counters in 100 KHz increments plus VFO for continuous tune. Meters for Signal Strength and 100 KHz Tune and controls for AGC, Output Level, and Hi-Lo DF. Unit has 65 KHz output with 60 KHz bandwidth only; does not have onboard detector or audio amplifier. External 100 KHz reference signal required for tuning control. With tubes 6/5654, 5670, 3/5749, 4/5750, 6005, 13/7586 nuvisitors, and 13 semiconductors. Requires 175 VDC, 5 V (lights), 6.3 V (fil.), 18 V (reg-circuit), and 115 V (100 KHz) osc originally supplied by O-928/FLR oscillator power supply (not available). 6.2x19x24.5, 70 lbs. Used-reparable w/repro book, \$115.00

BC-AS-229 RECEIVER, 201 to 398 KHz and 2500 to 7850 KHz using plug-in coil sets. Uses tubes 37, 38, & 4/39's. Requires 230 VDC 60 ma and 12 V, 6x7x16, 15 lbs sh wt. Used, less tubes & coils \$9. With tubes/no coils, \$16.95
PLUG \$2. TUNING KNOB, \$2.
MANUAL, partial repro, \$8.50



COLLINS 180L-3



COLLINS 180L-3 AUTOMATIC ANTENNA COUPLER, usable with transceivers in the 2-25 Mhz range, 50-180 watts. Automatically resonates an antenna to a transceiver's frequency and couples the RF signal between the transceiver and antenna. Also trans- and antenna. Also transfers antenna to re- ceiver or receiver section after the trans- mitter is unkeyed. Coupler has 7-970 pf 3 KV vacuum variable capacitor and variable ribbon 32 uHY inductor; also smaller roller in- ductor and SWR meter circuit. Requires 28 V- DC 3 amps, 250 or 400 VDC 35 ma, and 115 VAC 40 Hz 20 VA. 10x7x11.1, 24 lbs sh wt. Used, \$109.50; Manual, partial repro, \$10.

RT-311 TRANSCEIVER

RT-311/ARC-38 AM TRANSCEIVER, 2.0 to 25 Mhz from 20 preset channels. Frequency interval: 500 Hz (2.0-7.25 Mhz) and 1000 Hz (7.25-25.0 Mhz). Has autotune from channel to channel. Minimum peak output 100 watts (2-14.25 Mhz), 90 watts (14.25-25 Mhz). Antenna tune power: 50 watts. 40 db carrier suppression. Receives AM or CW; sensitivity 5 uv for 6 db signal (phone). Selectivity: 7.5 KHz min @ 6 db, 20 KHz max @ 60 db or 1.8 KHz min @ 6 db, 5 KHz max @ 60 db when in CW sharp position. Unit has VFO and 25 tubes including three 6159's in power amp. Requires 28 VDC, 600 VDC, 250 VDC, -50 VDC, -65 VDC and 6.3 VAC. Also 115 VAC 400 Hz for selsyn on PA inductor. 15x18x23, 65 lbs sh. Used, not checked, \$85.00



MANUAL, partial repro, \$15. w/set purchase. COLLINS 618S-1 TRANSCEIVER, similar to RT-311/ARC-38 but without VFO. Crystal-controlled AM receiver, \$54.50. Schematic, \$3.00

618S-1/MC TRANSCEIVER, modified for SSB by RCA, xtal-controlled, WRITE Schematic, \$8.

RT-594/ARC-38A SINGLE SIDEBAND TRANSCEIVER, similar to RT-311/ARC-38 except has SSB capabilities. Used, not checked, \$210.00
RT-311/ARC-38 or RT-594/ARC-38A replacement modules removed from sets. Write your needs.



C-1398/ARC-38 CONTROL BOX for control and frequency selection of ARC-38. Twenty preset channels or manual in 500 Hz steps. With code book. Most functions operable with ARC-38A SSB set except for function switch which would have to be dis- abled and provision for side band reception added. 7x5x6, 14 lbs.

Used, less frequency-set code book, \$15.00
CODE BOOK, 8x11.5 repro, \$10 w/set purchase
SCHEMATIC for C-1398 or C-3428/ARC-38A, \$3.

R-390/URR RECEIVER, used-reparable, \$210.00

AIRCRAFT TRANSCEIVER

RT-524M AIRBORNE TRANSCEIVER

mfg. by Aircraft Radio; covers 136.00 to 149.95 Mhz AM in 50 KHz crystal-controlled steps. 15 watts output. Has volume and squelch controls. Requires 24 VDC 6 amps. With tubes 6156, 2/8102, 6/6CW4, and



2/7587. Schematic included. Size: 6.5x3.5 x14, 10 lbs sh. Used, no cover, \$24.95 \$40.
MANUAL for RT524M, partial repro, \$10.00

COLLINS VHF RECEIVER



COLLINS 51X2-B VHF RECEI- VER, 108 to 135.95 MHz AM with possible 880 channels in 50 KHz steps. Compact aircraft set has selectivity of 40 KHz @ 6 db and 3 uv sensitivity for 6 db S+N:N ratio. Also 500 ohm phone jack, squelch, freq indicator, 5168-3 24 vdc solid-state power supply.

Channel selection originally performed by 514U remote control which we do not stock. Tubes 6/5654, 3/5670; some transistors. 7.8x 3.8x13.5, 12 lbs. Used w/schematic, \$39.95



AM-1955/GRC AMPLIFIER CONVERTER USED WITH R-1148/GRC-55 RECEIVER FOR 600-1000 MHZ BAND. 17 Mhz IF. Has 115 V 60 Hz MOTOR AS PART OF AFC SYSTEM. WITH TUBES 2C40A, 2/5842, 5654, IN21B, IN21WE. 150 VDC AND 6.3 VAC REQUIRED. SIZE: 15x9x8; 30 LBS. SH. USED, \$50.00 \$38.

CANADIAN REMOTE STATION



CANADIAN CHANNEL CONTROL BOX, originally used as a four channel remote unit for a transmitter; looks like it might be adaptable as part of an intercom system. Has push-to-talk handset, 3/4" 600 ohm FM speaker, audio transformers 600 ohm to 8 ohm and 50 ohm to 600 ohm CT, volume control, channel selector (2-deck, 6-pole 4-position each), phone and key jacks, two pilot lights, and other parts. Heavy aluminum cast case. 15 1/2 x 13 1/2 x 6 1/2, 34 lbs. #CAN-4C-RC used \$22.95

VFO - EXCITER - MOD

VFO-MASTER OSCILLATOR FROM THE T-195 TRANSMITTER; GENERATES FREQUENCY OF 1.5 TO 3 MHz. HAS 5749 OSCILLATOR TUBE AND 5749 BUFFER-AMP TUBE. WITH 1/2 x 3/16" DIA. SHAFT. 2 1/2 x 3 1/2 x 7, WT: 5 LBS. VFO/T-195, REMOVED F/EQUIPMENT,



\$7.95



MODULATOR F/T-195, DESIGNED TO PROVIDE PROPER AUDIO POWER TO MODULATE POWER AMP AND SUPPLY SIDETONE. 300 HZ AND 3500 HZ BANDPASS. W/TUBES 5726, 2/12AT7, 5814. LESS 4X150 TUBES AND SOCKETS. 8 1/2 x 6 x 4 1/2, 6 LBS. \$10.95



TRANSISTORIZED GUARD RECEIVER f/ modified RT-178/ARC-27; one channel in 238-248 Mhz range. IF's 25.1/3.45 Mhz; has detector, noise limiter, AVC, 4/2N1745 transistors, and 25.1 Mhz filter. 8x4 1/2 x 4, 6 lbs sh. #5821-953-9695 used \$12.95

AM-777 AMPLIFIER DETECTOR, p/o RT-128A/ARC-21 2-24 Mhz transceiver; IF's 1800/300 Khz. Slug tuned; w/tubes 4/5838, 3/5896 3/5899, 3/8021, 5840, 5902, and 5719. Schematic included. 13 1/2 x 2 x 3 1/2, 5 lbs. Used, \$10.00



HYDROGEN GENERATOR

M315B HYDROGEN GENERATOR, used to provide hydrogen for 4' balloon p/o CRT-3 Gibson Girl rescue radio. Has 1200 grams of calcium hydride crystals in long can which, when immersed in water, produces hydrogen gas. (EXTREME CAUTION must be exercised in the performance of this process because hydrogen gas is dangerously flammable and the liquid calcium by-product is very caustic!) The M315B cans are dented; suitable only for the recovery of calcium hydride. 11.6" x 4.3" dia, 4 lbs sh. Unused-dented, \$6.95 ea; 2/\$12.00 INFLATION TUBES for M315B, \$3.00 ea



TRANSISTOR RADIOSONDE

TRANSISTORIZED RADIOSONDE WITH CLOCKWORK TIMING MECHANISM (NO KEY); USED IN METEOROLOGICAL OBSERVATION OR SIMILAR APPLICATIONS REQUIRING AN EXTREMELY LIGHT-WEIGHT TRANSMITTER. UTILIZES A 2-TRANSISTOR MODULATOR AND A 2-TRANSISTOR TRANSMITTER CIRCUIT. TRANSMITTER HAS A 7533 INTEGRAL CAVITY TUBE WHICH FUNCTIONS AS THE TUNED CIRCUIT FOR THE OUTPUT: 1660-1700 Mhz, 575 MW (NO FURTHER DATA). WITH HUMIDITY ELEMENT. TRANSMITTER SIZE: 2 1/2" DIA. X 6"; OVERALL SIZE: 7" x 4 1/2" x 5 1/2". SHPG. WT: 4 LBS. FRIEZ #3002, UNUSED, \$9.95



AN/AMT-4A RADIOSONDE, consist of T-304A xmitter and MD-147C modulator; unit is similar to Friez 3002 except uses tubes 5794 and 5875 and operates at 1680 Mhz. Requires 1.5, 6, & 15 VDC. 2 lbs sh wt. #T-304A transmitter only, \$4.95; 2/\$8. MD-147C modulator only less humidity and pressure elements, \$3.00; 2/\$5. T-69Y/AMT-2 RADIOSONDE XMITTER only, 590-410 Mhz; 5703, 5910 tubes--\$2. BB208 battery, \$2.

TELE COSTER I

TELE COSTER I TELEPHONE METER, cost-effective device for the individual or business who wants to keep "tabs" on the length and costs of long-distance and, perhaps soon, local telephone calls. Initial and secondary rates/period are programmable using the numeric plus 6-function keyboard. LED display shows cost/period plus elapsed time hr-min-sec. Also display flashes 15 sec before rate change and has X60 speed-up time so maximum acceptable charges could be determined before the call. In sturdy, handsome beige plastic case. Requires 115 VAC 60 Hz; 2 lbs. NEW w/info \$8.



TAIL LIGHT ASSEMBLY

TAIL LIGHT ASSEMBLY with red tail/brake light and back-up light; also license plate bracket and one each GE1156 and 1157 bulbs. 13x6.5x3.5; 3 lbs sh. Peterson #M418LBL, NEW, \$6.95 ea; 2/\$12.00



OFFICE CASTER SET

OFFICE EQUIPMENT-STYLE CASTER SET, includes four 2.3" dia dual-wheeled black plastic casters with 3/8" dia threaded 1/2" long metal shaft. Two of the casters have a brake lever. Designed for copy machines but usable for similar light equipment where "good looks" is a consideration. With hardware and instructions; 2 lbs sh. #7381234, NEW, \$7.50



VASCAR II SPEED TRAP



VASCAR II DISTANCE/TIME COMPUTER-INDICATOR origi-

nally used by police agencies for clocking speed of vehicles while the police car was in motion or stopped. Speed of unknown vehicle determined by referencing a pre-measured distance or the distance can be set while both vehicles are moving. VASCAR can determine speed of vehicle in front of, behind, in opposite direction of, or across the path of the police car. Displays average speed in tenths of miles per hour upto 199.9 MPH. Computer module consists of four circuit boards with 5 VDC logic and transistors. Operates from 12 VDC 3.4 amps. Includes computer module, control/indicator module with cable and plug, power plug, and manuals. "AS-18" transducer is now included. 2.5x13.5 x7.5, 18 lbs sh. Used-not calibrated, \$60.00

MX-991/U FLASHLIGHT

MX-991/U FLASHLIGHT, official rugged, right angle military type made in U.S.A. Operate from two "D" cell batteries (not included). Has clear diffuser, red signal, and white opaque spare lenses which store in handle; metal belt clip. O.D. green plastic. 8.3" x 2" dia. Unused, \$5.75



GRAB BOX ASSORTMENT OF USED AND UNUSED MANUFACTURERS AND GOVERNMENT SURPLUS ELECTRONIC PARTS SUCH AS ASSEMBLIES, MOTORS, COILS, TRANSFORMERS, CHOKES, CIRCUIT BOARDS, CAPACITORS, RESISTORS, AND OTHER USABLE ITEMS. PACKED IN 50 LBS. CARTONS, \$7.50 EA. OR TWO CARTONS FOR \$13.00.

Shipped via UPS with freight charges varying from \$6 to \$24 per carton. Allow for charges. GRAB BOX IS GOOD FILLER TO TAKE ADVANTAGE OF MOTOR FREIGHT 150 LBS. MINIMUM WEIGHT RATES.

PDR-27 RADIAC SET

AN/PDR-27 PORTABLE RADIATION DETECTOR consisting of IM-74 radiac meter and DT-53 or similar detector or probe with BS-1 Geiger-Mueller tube. Meter indicates amount of beta and gamma radiation in milliroentgens per hour. Range scale 0.5, 5, 50, and 500 M-rntgs/hour. BNC connection for headset monitoring. Requires 135, 22.5, and 1.5 VDC originally supplied by batteries (not available). 8x6 x12.5; 15 lbs sh. Used, \$29.95 MANUAL for PDR-27, original, \$5.00 SPARE GM TUBES, BS-2, \$6.00 TRANSIT CASE for PDR-27, \$6.00 H-43 HEADSET for PDR-27, \$5.95



HY-GAIN CB BOARD



HY-GAIN CB TRANSCEIVER BOARD: 3 x tals, IF transformers, RF coils. Similar to Hy-Gain boards converted to 10 meters (73 Mag, 2/84) and 6 M (73, 2/85); no further info. 5.4x6, 2 lbs. Unused AS-18 \$3.95 2/\$7

AMT-6 RADIOSONDE

AN/AMT-6C RADIOSONDE WEATHER ANALYSIS SET, designed to be released from high-flying aircraft to transmit temperature, humidity, and pressure data on its descent. Transmits pulse signals in 399-403 Mhz range at repetition rate of 20-550 Hz, 140 watts peak. Includes 18" dia drogue and 48" dia vented parachutes, humidity-temperature-pressure elements, and tubes 5696, 5875, 6026. Requires 1.5, 6, 135 VDC. Looks like an interesting experimenter's item. 5 1/2" dia X 21 1/2" H, 9 lbs sh. Unused, \$14.95



WEBCOR RECORDER



WEBCOR TAPE RECORDER plays and records 3-3/4 or 7-1/2 ips on upto 7" dia reels; has fast forward/rewind, edit lever, footage counter, and 20-0-20 record level meter. Built-in speaker; jacks for mic, bridge and external speaker. Monaural use only; 100-10000 Hz response @ 7-1/2 ips. 500K mic impedance; tubes 12AU7, 12AX7, 6X4, 6BQ5, 6HU6, 7025. Requires 115 VAC 60 Hz. 13.5x12.3x7, 32 lbs. Used-checked for basic playback/record; may need further adjustment. Without mic & reels. #WEB-173B \$35. MIC \$6. MANUAL-partial \$8.50

ANTI-JAMMING TRAINERS

AN/ULT-T2 (15X12) X-BAND INTERFERENCE TRAINER, a low power transmitter in the 8500-9600 Mhz range designed to train radar operators in anti-jamming techniques. Unit can be manually tuned and modulated by a sine or square wave, pulse, noise, or modulation from an external source. Has controls for CW, 5-16 Mhz/sec sweep, 250-500-1100 Mhz sweep sector, percent modulation, and pulse width 1-5 usec. Frequency modulation 15 Hz-15 Khz variable and fixed 50 or 100 Khz. Audio output impedance 600 ohms. Designed to be used within 50 feet of radar. Uses 2K45 klystron. Requires 115 VAC 50-400 Hz; with antenna horn and transit case. 13 1/2 x 19 1/2 x 18 1/2, 110 lbs sh wt. Used, \$80.



AN/ULT-T4 (15X18) INTERFERENCE TRAINER, similar to ULT-T2 except covers L-Band (1220-1350 Mhz) and uses 2C36 klystron. With antenna horn and transit case. 17 1/2 x 23 1/2 x 18 1/2, 100 lbs sh. Used, \$105.00 \$85.

MANUALS for ULT-T2 or ULT-T4, \$10 each w/set.

INSULATORS



STAND-OFF, CROWS FOOT, 7" Hx1 1/2" O. CAST BASE, 2 1/2" CTRS. TOP CAST W/3/16"-20 SCREW #5970-405-8992 \$4.00 SIMILAR, ABOVE 3" 3.00

FEED-THRU INSULATOR (Fig 2)

1/2" HOLE 7/8" DIA. W/NECK 3" LONG 30¢
6" LONG 50¢ 8" LONG 60¢
STOCK NO. 1014-(LENGTH)
SAME AS ABOVE OVAL TWIN-

PORCELAIN STAND-OFF INSULATORS, SCREW THREADED.

#P-4H-.75D, 8-24 THRD, \$.50
#P-5H-.75D, 8-24 THRD, .65
#P-6.75H-1D, 10-24 THRD, .85

STRAIN INSULATOR, 3x2 1/2" dia; 1/2" to 1" dia taper feed-thru core. 1 lb sh, #STR-84 \$3.95

14" LONG SPREADER INSULATOR

brown porcelain 1 1/2"x1 1/2"x1 1/2" 3 lbs sh. #361100-192, \$2.75

SPREADER, brown porcelain 8.5"Lx1.8"Hx1"D reinforced 0.5" dia hole on ends; 3#. #SPI-85181, \$1.95; 2/#3.

GLASS-BONDED MICALEX STRIPS

10"Lx1"Wx5/8"Th. Five holes .2" dia. #3G110-180, \$1.50

GE #K7102788P1, same as above, 7-3/8"Lx3 1/2"Wx3/8"Th. Ten holes, \$3.00 ea.



INSULATOR THREADED BRASS EACH END FOR 1/4" SCREW. " 1 1/2-3 1/2"x2 " \$3.

INSULATOR STANDOFF FEED-THRU, THREADED ONE END; 3/8" HOLE. ACE-3"Hx1 1/2" \$1.

STRAIN INSULATOR, 4 1/2"x2 1/2" dia; 1" dia core feed-thru

1 lb. #STR-1610, \$1.95 ea

STRAIN INSULATORS Brown porcelain 2.1"H x 2.3" dia with 0.7" dia center hole; 1 lb. #STI-2123D, \$.65 ea; 4/#2. Brown 2.5"x1.5" with 1/2" dia hole each end, opposite sides; 1 lb sh. #36100, unused, \$1.25 each

IN-86 SPREADER INSULATOR, 3"Lx1.3"W porcelain, 1" dia eyelets; o/a 5"L, \$1.50

7" DIA PORCELAIN BOWL INSULATOR with mount hardware Plastic insert on top has 3/16" dia hole; can be drilled to 5/8" dia. #7D-B1. \$4.95

SELECTOR SWITCH 15 BUTTON, MAKE ONE BREAK ONE, RELAY RELEASES ALL BUTTONS WHEN ACTIVATED, 115 VAC OR 24VDC

Size: 1 1/2"x7 1/2"x2; WT: 7 LBS. URC#1524115 NEW \$3.95

STAND-OFF'S

STAND-OFF INSULATORS, CROWS FEET TYPE. BRASS AND PLATED BRASS BASES AND TERMINALS.



D=DIAMETER
H=HEIGHT
M=MOUNT BASE HOLES' CENTER DISTANCES
ST=SCREW TERMINALS
CT=CLAMP TERMINALS

#B-H3-D1.25-ST3, BROWN CERAMIC; M=2.25" TERM. CAP SIZE: 7/8x1-5/8" DIA. SHPG. WT: 2 LBS. \$2.75
#B-H4-D1.25-ST2, WHITE; M=2.25" TERM CAP: 1x1-5/8" DIA. 3 LBS. \$3.25
#XW-H5-D1-ST, WHITE; M=2.25" TERM CAP: 2x1" DIA. \$3.00
#W-H5-D1.25-ST, WHITE; M=2.625" TERM CAP: 3/8x1 1/2" DIA. 3 LBS. \$3.75
#B-H5-D1.25-CT, WHITE; M=2.25" TERM CAP: 1x1-5/8" DIA. 3 LBS. \$4.00
#BL-H6-D1.25-ST2, BLACK PAINT ON BRASS; M=2.625" TERM CAP: 1 1/2x1 1/2" DIA. SHPG. WT: 4 LBS. \$4.25
#B-H6-D1.25-ST2, brown; M=2.625". Term cap 1x1 1/2" dia; 3 lbs sh. \$5.50
#B-H7-D1.25-ST, BROWN; M=2.25" TERM CAP: 5/8x1-5/8 SHPG. WT: 3 LBS. \$4.75

FLEXIBLE COUPLING

CERAMIC FLEX COUPLING, 1.3"x1.3" X-style for 1/4" dia shaft. COUN012, \$.75

1" dia coupling for 1/4" dia shafts; #COUN013, \$.65

#COUN008; 2-5/8" dia x 2", for 3/8" dia shft. 79¢ ea

#COUN009; 2X2 CERAMIC COUPLING FOR 3/8" dia shaft. 69¢ ea

#COUN010; 3 1/2" dia x 1 1/2", for 3/8" dia shft. \$1.25

AC LINE CORDS

3-COND. GROUNDED equipment cord, 8' #18 wire. Molded plug; black. #FW-3CG \$1.25

3-COND #14 wire, 6 ft gray w/molded plug. #W14-65, \$2.

3-COND w/business machine plug, fits most Hewlett-Packard equip. Without AC plug; 5 1/2'. #HP-3CG \$1.50

*** DOLLAR DAZE ***

TOGGLE SWITCHES, SPST out-offs, 5/\$1.00

PUSH SWITCHES, SPST norm-open, 5/\$1.00

SLIDE SWITCHES, 2PDT and SPDT, 5/\$1.00

SPST ROCKER DIP SWITCHES FOR PC BOARD USE.

Can be soldered or fit in socket. Grayhill mfg. NEW #763E04, 4 sw, \$.75; 5/35.

SELECTOR SWITCH 15 BUTTON, MAKE ONE BREAK ONE, RELAY RELEASES ALL BUTTONS WHEN ACTIVATED, 115 VAC OR 24VDC

Size: 1 1/2"x7 1/2"x2; WT: 7 LBS. URC#1524115 NEW \$3.95

MICRO SWITCHES



SPST MICROSWITCHES 1-7/8x 5/8x1 1/2, 30¢ ea unless otherwise noted. Normally open-n.o. Norm closed-n.c.

#WBT349A-1 n.o. lever
#YZ-3RLTC n.o. lever 15A

#SW-186 n.o. ext-pin
#WZ-RS9 n.o. ext-pin

#2MCS-1A n.c. pin; 1-5/8x 1/2 size.
#V3-23 n.o or #V3-21 n.c. pin; 9/16x1x1-3/8 size.

MU-SWITCH Type D in split dye cast housing; 1" tap conduit hub. 17/8.5 amp 125/250 VAC, new, 75¢

SPDT, one side n.o./other n.c.; 1-7/8x5/8x1 1/2, 40¢ ea

#3Z-3R244T4, pin style
#WBT349B-1, lever style
#BZ-2R, button w/mtg 50¢
#V3-1 9/16x1x3/8 size

ARROW-HART

100 AMP 600 V AC tap switch 2-deck 2-pos on-off. 8 1/2x6 1/2 x4 1/2, 15 lbs. #8944 NEW \$12.

TAP SWITCHES

TAP SWITCHES, 120/240 VAC 10/5 amps unless otherwise noted; 2 1/2" d. Used.

#AHH-23-10; 2-deck 3-pos w/knob \$3.
#AHH-230; 2-deck 3-pos and OFF. Cont. turn; 15/10 A. No knob; 3/16" d shft. \$2.25
#AHH-33-10; 3-deck, 3-pos with knob, \$2.50

6-POSITION CERAMIC TAP SWITCH

for 100 W BE-375 switcher; 2.3x2.3 x1.8, 1 lb. New #329605 \$3.95 ea 10 for \$32. 100 for \$265.

AC CORD

3-CONDUCTOR CORD, 8' #16 wires grey moulded plug. #W16-3C \$1.65 HEATER CORD type HSJ, 3-conductor 7.5' #16 wire; grey moulded R-A plug. #HSJ-16 \$2

3-CONDUCTOR CORD, 8' #16 wires grey

moulded plug. #W16-3C \$1.65 HEATER CORD type HSJ, 3-conductor 7.5' #16 wire; grey moulded R-A plug. #HSJ-16 \$2

PUSH SWITCHES



DPST normally open, 1 amp 250 VAC; #PSW004 35¢

DPST interlock n.o., (3Z-9825/254), #PSW006 65¢

SPST pull switch, normally open, #PSW007 35¢

SPST normally closed case ground; #PSW008 35¢

SPST normally closed, Grayhill #4002 50¢

2-BUTTON momentary; red breaks, black makes. 3gx 1-5/8x1-1/8; #RE-EM \$1.50

MULTI PUSH



SWITCHCRAFT DW-Type, each section DPDT 3 amps AC; 0.5 A DC 125 V non-inductive. Can use T-1 1/2 size lamp. NEW

#67097-506, 9-button Push-on/Push-off; 1x6 1/2x1 1/2 \$7.75
#67091K-506, 9-button interlocked, \$6.50
#67137-506, 15-button Push-on/Push-off; 8 1/2"W. \$9.75
#67131K-506, 13-button interlocked, \$7.95

WESTINGHOUSE THERMAL MAGNETIC TRIP UNIT, 3 poles 250 VDC 75 A normal; 450-525 trip amps @ 50 C ambient 150%-225% of rating. Type AQ8-A100; 4.5x3.8x4, 5 lbs sh. #248-1371, unused, \$14.95

CUTLER-HAMMER mini-toggles, all 120 VAC 6 amp; NEW:

DPDT center-off \$1.50 3/\$4
3PDT on-on, \$1.65, 3/\$4.25
4PDT on-on, \$1.75, 3/\$4.50

MINIATURE SWITCHES, all new. Black: blk. White: wh.

DPDT momentary, blk or wh button (a); C&K #8221 \$.65
SPDT on-off-on, wh. toggle (b); Alco #MLD106E, 75¢
SPDT on-on, blk. rocker (c) JBT #MR2-123, 65¢
SPDT on-on, blk. push-type Alco #SP105D, 60¢
SPDT on-on 1-side momentary blk or wh push; CK8168 65¢
SPST black rocker; not mini Carling #123, \$.60
SPDT mini-toggle, baton throw; on-on. #7101T 55¢

DPST one side mom. (f) toggle; Alco #CST-023TA, 2/\$1

DPDT on-on slide (h), 5/\$1.
DPST sub-mini slide switch; Chicago EIA 50, 5/\$1.

200/400 AMP TAP

#3288 3PDT TAP SWITCH with "off"; rated 200 amp 250 VDC or 500 VAC. 6x9x9, 20 lbs; ES mfg. New \$19.95
#0279 3PDT TAP SWITCH, no "off"; rated 400 amps 600 VAC. 9x9x9, 25 lb. \$29.95

SWITCHES



AIRCRAFT TYPE SWITCH TWO HOLE MOUNTING FIG. #1

CIR. CON. RATING NO. PR

SPST NEW 5/125 B-15 .65
ABOVE MOMENTARY N/CLOSED
SPDT rem 5/125 B-9A .50 (above center-off)
SPDT NEW 15/125 B-1B .30

SPDT REM 5/125 B-7A .55 (CENTER OFF, MOM ONE SIDE)

TOGGLE SWITCHES

TOGGLE SWITCHES SINGLE HOLE MOUNTINGS: CONDITION NEW & "REM" REMOVED FROM EQUIPMENT, ALL GUARANTEED.

SPST rem 8/125 8817K2 (above momentary)
SPDT rem 8/125 ST-13D (ON-ON)
DPDT rem 5/125 ST-22R .45
DPST rem 10/125 ST-52K .60
DPDT rem 10/125 ST-52N .50 (ON-ON)
DPDT rem 10/125 ST-52P 1.00 (ON-OFF-ON)
DPDT rem 10/125 ST-52R .45 (ON-ON momentary)
DPDT new 10/125 ST-52S 1.00 (momentary ON-OFF-mom ON)
4PST rem 15/125 7661KS 1.00

TEN PUSH SWITCH STRIP EACH D.P.D.T. INDIVIDUAL HOLD OR COLLECTIVE OR RELEASE, NEW 12x4x3/4; NO.4C5231 \$2.25

ROCKER SWITCHES

0319 SPST 39¢ 3 FOR \$1.00

0348 DPDT 59¢ 2 FOR \$1.00

0320 SPDT MOMENTARY BOTH SIDES. 65¢ EA. 2 FOR \$1.20

PUSH BUTTON SELECTOR

WHITE BUTTONS, 1 THRU 4 SEPARATE CONTACTS, 5, 6, 7 MAKE 2, 3, 4 RESPECTIVELY W/COMMON. RED BUTTON RELEASES ALL. RATED @ 120/240VAC 8/ SIZE: 4 1/2x1 1/2x2 1/2; WT: 2 LBS. GE#ASP8128-417 UNUSED \$7.75

LEVER SWITCHES

4PDT ONE SIDE 2PDT OTHER SIDE, BOTH SIDES MOM. # 1155 NEW \$2.00

TV-2 tube test P1 lever sw; make 2-break 2. Removed \$2.

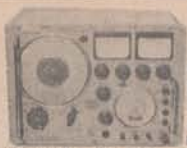
2PDT ONE SIDE, OTHER 2 MAKE, P/O EE-2, USED \$1.00

SPDT make before break and 2/SPST normally closed; single hole mount. Tele-type #129596 (FSN #5930-259-6880), unused, \$1.50

2PST ONE SIDE ONLY HOLD, OFF, ONE HOLE MTG. SWITCHCRAFT 513148 NEW \$1

200/400 AMP TAP

#3288 3PDT TAP SWITCH with "off"; rated 200 amp 250 VDC or 500 VAC. 6x9x9, 20 lbs; ES mfg. New \$19.95
#0279 3PDT TAP SWITCH, no "off"; rated 400 amps 600 VAC. 9x9x9, 25 lb. \$29.95



MARCONI FM

MARCONI TF1066B/1 SIGNAL GENERATOR, 10-470 MHz AM-FM in five bands; output 0.2 uv to 200 mv. Modulation 1 KHz or 5 KHz; FM deviation SCALES -20 AND -100 KHz. Requires 115 VAC 60 Hz; 14x19x9, 60 lbs sh. Used-reparable with book, rackmount \$425.00; w/cabinet \$440.00 TF1066B/6, similar to TF1066B/1 except has built-in 1 and 10 MHz crystal calibrator. Used-reparable w/cabinet, \$525.00

TS-418/URM-49, 400-1000 Mhz AM, CW, pulse. Output: 0.2 to 200K uv into 50 ohms. 12x17x13, 70 lbs sh. Used, reparable, \$175.00

TS-419/URM-64, 900-2100 Mhz CW and pulse @ 1 MW max. into 50 ohms. Repetition rate between 40 and 4000 pulse/sec. Delay: 3 to 300 u-sec. 14x17x11, 50 lbs sh. Used, reparable, \$165.



AUDIO OSCILLATOR

TS-382* AUDIO OSCILLATOR, 20 Hz to 20 KHz in FOUR BANDS. OUTPUT: 0 to 10 VOLTS ACROSS 1000 OHMS. WITH BUILT-IN 60 AND 400 HZ REED FREQUENCY METER. SIZE: 10x12x18, SHPG. WT: 50 LBS. NET: 45 LBS. PRICE: USED, REPARABLE, \$49.50. CHECKED, \$65.



TS-382F AUDIO OSCILLATOR, MOST RECENT VERSION OF TS-382. USED, REPARABLE, \$60. CHECKED, \$75.

TEST OSCILLATOR



SG-71/FCC CARRIER TEST OSCILLATOR, similar to Hewlett-Packard 233A and used to check carrier current systems; 50 Hz to 500 KHz in four bands. High power output: 3 watts into 500

ohms balanced load makes test loops 100 to 200 miles long. 6 V 600 ohm output for audio tests. W/50 VDC output meter; provision for carrier modulation. Requires 115/230 VAC 50-1000 Hz. 11x17x15, 46 lbs. Used-reparable \$65. Checked, \$105. MANUAL, partial repro, \$10.00 1000 Hz. 11x17x15, 46 lbs. Used-reparable, \$50. Checked, \$85. MANUAL, partial repro, \$10.00

KLYSTRON POWER SUPPLY

HEWLETT-PACKARD 715A KLYSTRON POWER SUPPLY for low power klystron tubes. Output -250 to -400 VDC regulated 30 to 50 ma for the beam electrodes and 0-900 VDC regulated for the reflector electrode. Reflector volts can be modulated by internal 1 KHz square wave or externally; square wave modulation adjustable up to 120 V peak-to-peak. Frequency modulation for 60 Hz sine wave 0-350 V p-p. Requires 115/230 VAC 50-60 Hz. 7x11x13, 26 lbs sh. Used, Less output cable, \$39.50



VOLTMETER-VLF RECEIVER



ME-71/FCC AUDIO LEVEL METER, COVERS 20 TO 500 KHz CONTINUOUSLY TUNABLE. AS SELECTIVE DETECTOR, IT MEASURES RF CARRIER ACROSS A 135 OHM BALANCED OR 600 OHM UNBALANCED LINE. VARIABLE ATTENUATOR PROVIDES INPUT SENSITIVITIES FROM -70 TO -42 DBM INDICATED ON 3/8" DIA. METER. INCLUDES 100 KHz CALIBRATOR. INPUT IMPEDANCE: 10K OHMS. AUDIO GAIN AND TWO PHONE JACKS. VARIOUS MODELS (NOT PICTURED). POWER REQUIRED: 115 VAC 60 Hz. 17x14x9; 40 LBS SH.

ME-71, w/NATIONAL-TYPE DIAL, USED, \$40.00 ME-71B, USED, REPARABLE, \$45. ME-71C, \$50. OPERATIONAL, ADD \$30. MANUAL, REPRO, \$8.50

DISTORTION ANALYZER



HEWLETT-PACKARD DISTORTION ANALYZER MODEL 3308R.

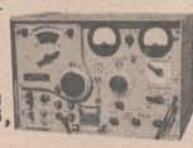
WILL GIVE QUICK ACCURATE MEASUREMENTS OF DISTORTION AS LOW AS 0.1% AT ANY FREQ FROM 20 CPS TO 20,000 CPS

IT WILL MAKE NOISE MEASUREMENTS OF VOLTAGES AS SMALL AS 100 MICROVOLTS. THE ANALYZER HAS HIGH SENSITIVITY AND HIGH STABILITY. ITS CIRCUIT 20 DB AMPLIFIER, OSCILLOSCOPE TERMINALS, AND PRECISION VACUUM TUBE VOLTMETER WHICH IS USEABLE SEPARATELY. EXCEPTIONALLY USEFUL FOR ALL KINDS OF AUDIO MEASUREMENTS IN RECORDING, BROADCAST, MOTION PICTURE, LABORATORY ETC. SIZE: 8x19x13 (RACK MOUNT) WT: SHPG. 40 LBS. PRICES: USED REPARABLE \$185. CHECKED \$225.

TS-723-C SPECTRUM ANALYZER, MILITARY VERSION OF HP-3308; USED, REP, \$165. CHECKED, \$210

FM SIGNAL GENERATOR

SG-12/URM- FM SIGNAL GENERATOR, 19.5 to 102 MHz FM IN FIVE BANDS WITH DEVIATION RANGES 0 TO 25, 50, AND 100 KHz; 1000 Hz MODULATION. ALSO IF OUTPUTS ON 1.4, 2.515, 2.65, 2.88, 4.3, 4.45, 5.0, 5.35, 15 MHz, PLUS TWO SPARE POSITIONS. CALIBRATED OUTPUT VOLTAGES: 0.5 UV TO .01 VOLTS (RF); 0.5 UV TO 1.0 V (IF). OUTPUT IMPEDANCES: 10 OHMS (RF); 25 OHMS (IF). WITH 1 MHz AND/OR 2 MHz CRYSTAL CALIBRATOR MARKERS. POWER REQUIRED: 115/230 VAC 50-1000 Hz. SIZE: 12x18x12; SHPG WT: 85 LBS.



Used, reparable, \$65.00; Checked, \$125.00 MANUAL, partial repro, \$12. TRANSIT CASE \$15.

10 KHZ TO 50 MHZ



AN/URM-25F SIGNAL GENERATOR, covers 10 KHz to 50 MHz AM in nine bands. RF output: 0.1 to 100K microvolts into 50 ohms; 2 V adjustable across high load impedance. Modulation 0-50%, 400 or 1000 Hz internal. 1 Mhz calibrator; designed accuracy ±0.05% above 10 Mhz. Requires 115 VAC 50-100 Hz. 11x14x10, 44 lbs. Used, reparable, \$145. Checked, \$210.00

ACCESSORIES available w/purchase of URM-25F: BOOK-partial repro, \$10. DA-109 Dummy Load \$6 CK-2919 Test Lead Adapter, \$7.50 CU-408 Impedance Matcher, 500 ohms up, \$7.50 CU-408 Impedance Matcher, 70 ohms, \$7.50 ENC Cables, 6", \$1.00; 4 feet, \$1.50

VTVM SALE!



BALLENTINE 310B SENSITIVE VIDET VTVM, six full scale ranges from 1 mv to 100 V; response 10 Hz-6 MHz. 13x7.5x10, 22 lbs sh. Used-reparable, \$29.95

RCA WV-98C SENIOR VOLTOHMST, popular reliable and economical VTVM has DC ranges 0.5-1.5-5-15-50-150-500-1500 V; AC ranges 4-14-4-140-400-1400-4000 V. Ohm ranges from X1 to X1 Megohm. Unfortunately units are missing the probe. 6.3x7x4, 7 lbs sh. Used-reparable, \$17.95



TS-505/U, ranges 0 to 2.5-5-10-25-50-100-250-500 Vrms plus 1000 VDC scale. Also X1 ohm thru X1 Megohm ranges. Response: 30 Hz to 5 MHz. With AC, DC, and Ohm probes. 9.8x9x6, 17 lbs sh; Used. Repairable, \$20. Checked \$45. MANUAL, partial repro, \$10.

ME-180/USM-116, features 20 Hz to 100 MHz response (700 MHz using optional T-connector) and full scale ranges 1-3-10-30-100-300 Vrms plus 1000 VDC. 0.02 to 1000 MA DC ranges; resistance 1 ohm thru 1 Megohm. High frequency AC probe has 6923/EAS2 tube. 7x8.3x9, 21 lbs sh. Used-reparable, \$45. Checked, \$75.00 T-CONNECTOR \$10 w/set. MANUAL, par-repro \$10.



FREQUENCY COMPARATOR

CM-212/USM-144 FREQUENCY COMPARATOR, used with frequency counters to determine with high accuracy frequencies from 10 Mhz to 12.4 GHz; similar to Hewlett-Packard 540A oscillator. Measures CW, FM, and pulse modulated RF signals. Unknown signal is fed into USM-144 and is compared to a mixed frequency generated



from a stable, continuously adjustable fundamental from 100 to 220 Mhz. Difference in the unknown is shown on 2" dia CRT (2EP1) display. Final determination of the input signal made by the zero beat of the fundamental multiplied by the appropriate harmonic. Requires 115 VAC 50-440 Hz; 13x19x13, 65 lbs sh wt. Used, reparable, \$99.50 TRANSIT CASE \$10 w/purchase. MANUAL \$10 w/set

AUDIO POWER METER



TS-585 AUDIO POWER OUTPUT METER, reads audio frequency power in milliwatts or in decibels referred to 1 MW in 600 ohms. Range: 0.1-5 MW (-10-47 db), 1-50 MW (-10-47 db), 10-500 MW (-10-47 db), and 100-500 MW (-10-47 db). read on 3.5" meter. Input impedance: 2.5 to 20000 ohms in 40 steps. 2.5-3.4-5.6-8-10-12.5-15-20-25 sequence. Freq range: 30-10000 Hz. 8.5x11.5x5.5, 16 lbs sh. Used-reparable, \$50. MANUAL for TS-585, partial repro, \$8.50

TRANSIENT VOLTAGE

SREIBACH V200 TRANSIENT VOLTAGE INDICATOR, portable unit will monitor AC or DC line and indicate if a previously set voltage level has been exceeded. Ranges 0-100-300-1000-3000 volts and controls Meter Set, Reset, Transient Level Set, Polarity Pos/Neg, Charge On/Off. Requires six "D" cell batteries plus 115 VAC 60 Hz for battery recharge circuit. Batteries not available. With test leads, HV probe and front cover. 6x9x6, 9 lbs. Unused \$45.00



ELECTRONIC FILTER



SKL 302 DUAL VARIABLE ELECTRONIC FILTER has dual filter sections each with high and low pass

filtering with high-low cut-off frequency range of 20 Hz to 200 KHz using decade scales X10-X100-X1K-X10K. High pass greater than 90 db limited by hum and noise; Low pass 60 db on X10K range, 90 db below 1 MHz, 60 db above. Insertion loss: 0 db ±1 db for 20-20K Hz cut-off; 0 db ±2 db for 20K-200 KHz. Input impedance 2 Megohms shunted by 32 pf. Dut imp: 300 ohms. Max signal in: 6 V peak. W/tubes 10/12AT7, 0A2, 6AV6, 2/6AV5 or 6AQ5. Requires 105-125 VAC 50-60 Hz; 5.2x19x13.6, 26 lbs. Used-reparable w/partial manual, \$75

7 TO 11 GHz GENERATOR

POLARAD 1108 SIGNAL GENERATOR, 6.95 to 11.0 GHz CW, square wave, and sawtooth FM; has three place mechanical digital tuning. Output attenuator continuously tunable from 0.1 u-volt to 300K uv; uncalibrated outputs of 20 mw (6.95-8 GHz) and 10 mw (8-11 GHz). Internal square wave and FM rate 800-1200 Hz; FM sweep adjustable over 5 MHz most of band. 2/A713441 transistors and tubes EL34, 2/0A2, B068, A160034 Polarad klystron. Requires 115 /230 VAC 50-60 Hz. 5.3x16.8x18.3, 50 lbs sh. Used-reparable with book, \$365.00



DUAL-TRACE PRICE-CUTS



AN/USM-140C OSCILLOSCOPE, DC to 30 MHz mainframe, similar to H-P 170A. Includes MX-2930 dual-trace vertical plug-in with DC to 22 MHz passband. Input impedance: 1 MEG-OHM SHUNTED BY 30 PF. INPUT SENSITIVITY: 0.02 VOLT/CM TO 20 V./CM. FUNCTIONS: CHANNEL A, CHOPPED, A-B, AND ALTERNATE. HORIZONTAL MX-3078 PLUG-IN SWEEP RATE: 0.1 u-sec/CM TO 5 SEC/CM. HORIZ. SENSITIVITY: 0.1 V/CM TO 10 V/CM. MAGNIFIER X1 TO X100 IN SEVEN STEPS. CALIBRATOR: 0.2 MV TO 100 V. IN NINE RANGES. POWER REQUIRED: 115/230 VAC 50-1000 Hz. 14.5x19x22, 100 lbs. Used-reparable \$150. Checked, \$235. MANUAL, partial repro, \$17.

TRANSISTOR TESTER

HICKOK MODEL 1890M TRANSISTOR TESTER, checks transistors in and out of circuit. Collector leakage current (I_{cbo}) ranges: 0-50-500 ua and 50 ma. Collector current (I_c) 0-1-10-100 ma. Current gain Beta: 0-50-100-200-400. AC test signal 1000 Hz. Transistor input resistance range 50-10000 ohms; circuit input impedance 25-10000 ohms. Collector voltages 0-1.5-3-4.5 VDC. Has transistors 4/2N651A, 2N650A. Requires batteries (not supplied) Eveready 763 (22.5 V) and two Burgess 2370-ST (4.5-3-1.5 V). With partial repro of manual. 10x10x9 1/2, 18 lbs. Used-reparable, \$54.50



50 TO 400 MHZ FM

SG-3/URM-70 FM SIGNAL GENERATOR, 50-400 MHz in three bands. Internal modulation @ 100, 1500, or 20000 Hz. External: 250 to 75 KHz. FM deviation: 0-15-75-150 KHz (50-100 MHz), 0-30-150-300 KHz (100-200 MHz), and 0-60-300-600 KHz (200-400 MHz). Output: 0.1 to 100K u-volts \pm 25%. 50 ohms output. Requires 115 VAC 60 Hz. 15x11.5x17.3; 90 lbs. Gov't-reconditioned, \$275.00; Used-reparable, \$150. MANUAL, partial repro, \$10.



SG-923/URM-144 TWO-TONE REFERENCE GENERATOR for measuring receiver sensitivity and SSB transmitter distortion. Has two RF outputs usable independently or in combination without intermodulation effects. Outputs 2, 3.6, 4, 7.2, 8, 14.4, 16, 28.8 MHz at 100K u-volts max into 50 ohms. Freq adjust \pm 0.05% (A), \pm 0.025% (B). Requires 115 VAC 60 or 400 Hz. 5.5x19x11, 35 lbs sh wt. Used-reparable \$90. Checked \$145. MANUAL \$10



VLF TEST SETS

TS-2669 ENVELOPE DELAY DISTORTION MEASURING SET. Acton mfg; multi-function w/5-digit frequency counter & signal generator over 0.1-600 KHz 10 db max. Provides carrier, reference, & sweep signals; 25, 83-1/3, 250 Hz modulation. Delay Millisecond and % Modulation meters; solid-state. Repairable, \$250.



ME-6D VOLTMETER

ME-6D/U VTVM, covers 0.005 to 500 V-rms in six ranges and -65 to 57 db. Built-in 15 Hz-250 KHz wide-band amplifier with max. voltage gain of 4500; minimal distortion to 23 VAC output. 115 VAC 50-400 Hz. 11x6x5 1/2, 14 lbs sh wt. Used-reparable, \$20. Checked, \$40. MANUAL r/ME-6D, partial repro \$8.50



8500-9600 MHZ TEST SET

TS-148/UP SPECTRUM ANALYZER, 8470-9630 Mhz with 3" CRT (5BP1) display. Measures frequencies of cavities, echo boxes, magnetrons, and local oscillators. Receives CW and pulse; transmits CW and FM carrier. 1 MW power output (2K25). Max. spectra dispersion: 1.5 Mhz/in. Requires 115 VAC 60 Hz. 19x13 1/2x25, 45 lbs sh. Used, \$50.00

AN/UFM-33 TEST SET, includes TS-148/UP, wave guides, horn antenna, cables, transit case, and manual; 80 lbs sh. Used, \$85.00



4 GHz TEST EQUIPMENT

TS-403 SIGNAL GENERATOR similar to Hewlett-Packard 616B; 1.8 to 4.2 GHz directly calibrated. Output 0.1 uv to 200K uv into 50 ohm load monitored on 3 1/2" round Power Level meter. Internal modulation 40 to 4000 Hz. External pulse-mod requires -40-+70 V; width 1 to 2500 usec squarewave or modulated. Requires 115/230 VAC 50-1000 Hz. 17x13 1/2x13 1/2, 70 lbs. Used-reparable \$185-\$185. MANUAL, repro \$10.



SG-557/TS-621 SIGNAL GENERATOR, 3.8-7.5 GHz; similar to HP-618. FM, CW, pulse or square-wave modulation. Pulse rate varies 40-4000 pps; width 0.5-10 usec. Output 1 MW into 50 ohms; 17.5x14x19.5, 110 lbs. Used-reparable with output, \$215.00

MANUAL f/SG-557/TS-610, partial repro, \$12.



HP-614A UHF SIGNAL GENERATOR, 800-2100 MHz CW, FM or pulsed in single band. Attenuator range: 0 - -127 db (0.223 V to 0.1 uv); output 0.5 mw into 50 ohms. Internal pulse modulation 40-4K per sec variable repetition rate; length 1-10 usec, delay 3-300 usec. Requires 115/230 VAC 50-1000 Hz. 13.6x17.3x13.5; 70 lbs sh. Used-reparable, \$250.00



2400-3400 MHZ WAVEMETER

TS-117/QP WAVEMETER TEST SET designed for frequency measurements between 2400 and 3400 MHz. Used to measure antenna radiation, local oscillator frequencies, relative field strength, and relative output. Q from 1800 to 2000. Includes 50 u-mmeter, sensitivity vernier, and frequency micrometer with conversion tables. Accessories AS-23 directive antenna, UG-183 cable, UG-57 and UG-131 adapters and transit case. Uses N connectors. 5x6x3, 15 lbs sh. Used w/transit case, but less accessories AS-23, UG-57-131-183, \$28.



FR-149 FREQUENCY METER

FR-149/USM-159 TRANSISTORIZED FREQUENCY METER, covers 125 KHz TO 1000 MHz IN THREE RANGES: 125 KHz-2.5 MHz, 2.5-65 MHz, AND 65-1000 MHz. CAN BE USED AS A SIGNAL GENERATOR BY PROVIDING EITHER MODULATED OR UNMODULATED SIGNALS. FREQUENCY FUNDAMENTALS READ DIRECTLY FROM MAGNIFIED AND ILLUMINATED CALIBRATED FILM STRIP AND THEN INTERPOLATED IN ACCOMPANYING CALIBRATION BOOK. OPERATES FROM EITHER SIX "D" CELL BATTERIES OR FROM 115/230 VAC 50-450 Hz. SIZE: 11x11x13; SHPG. WT: 33 LBS. Used-reparable \$29.50 \$75. Checked \$280 \$115



SOLID-STATE SCOPE

OS-106/USM-117 TRANSISTORIZED OSCILLOSCOPE, DC to 5 Mhz bandwidth, 4QP2 rectangular CRT, and is very compact. Includes MX-2996 high gain vertical plug-in plus has dual-trace capabilities when used with MX-2995 plug-in (not included). Sweep range 0.1 usec to 0.1 sec in 19 calibrated steps in 1-2-5-10 sequence. Vertical sensitivity: 0.01 V/div to 20 V/div in 11 calibrated steps in 1-2-5-10 sequence, variable to 50 V/div. Input impedance 1 Megohm shunted by 47 pf. Calibrator generates 1 KHz square wave at either 0.04 or 0.4 V p-p. Probe not available. Requires 115 VAC 50-60 or 400 Hz. 8.5x9.8x15; 20 lbs sh. Used-reparable, \$165.00. Checked, \$225.00; Manual-partial repro, \$15.



SPECTRUM ANALYZER

TS-1010/UFM-84 SPECTRUM ANALYZER, covers 10 MHz to 44.88 GHz in eight bands; 5" 5ADP7 CRT display. Resolution at 3 db points: 20 KHz over range. Dispersion: 500 KHz-5 MHz adjustable (10-55 MHz); 500 KHz-25 MHz (55 MHz and up). Spectrum calibrator 160 MHz center freq \pm 12.5 MHz. Sensitivity as low as -63 db (10-150 MHz); 40 db (2.0 GHz up.) RF attenuation 100 db uncalibrated internal 10 MHz to 12.4 GHz; external attenuators required above. IF attenuation 0-60 db in 6 db steps. Requires 115 VAC 60 Hz. 17.3x19x26; 180 lbs sh, 145 lbs net. Used-reparable, \$425. \$265. TRANSIT CASE, 75 lbs, \$15 w/set purchase. MANUAL, partial reproduction, \$15.00



ACCESSORY KIT including five bandpass filters for segments of 0.75-11.8 GHz range, three variable attenuators and three coax-to-waveguide adapters for 12.4-44.88 GHz, transit case \$85.00 w/set purchase.

UNIVERSAL BRIDGE

ZM-11 TEST SET, portable bridge unit designed to measure capacitance, inductance, resistance, transformer turn ratio, dissipation factors of inductors and capacitors, and storage factors of inductors--all at 1 KHz test frequency. Also insulation and leakage of electrolytics in circuit using 10.75 Mhz test frequency. Capacitance ranges: 10 pf-10 mf, 1 mf-100 mf, 10 mf-1100 mf. Inductances: 0.1 mH-1 H, 1 H-10 H, 10 H-110 H. Insulation DC res: 200-500 megohm, 5K-10K meg ohm. Transformer turn ratio: 0.01-110 (K=1). DC leakage: 0-1-5-25 ma. Dissipation: 0-0.06 (10 pf-0.1 mf), 0-0.6 (0.1 mf-1100 mf). Storage: 0.5-20. DC applied to electrolytics is 500 VDC. Uses test leads with standard banana jacks. (Leads not available.) W/tubes 6ES, 6J6, 2/6AV6, 6AG5, 6AL5, 6AQ5, and 6X4. Requires 115 VAC 50-1000 Hz. 5.8x9x9.8, 18 lbs. Used-reparable, \$85. Checked, \$115.00. MANUAL for ZM-11, partial repro, \$8.50



AUDIO TEST GENERATOR

HEWLETT-PACKARD 205AG AUDIO SIGNAL GENERATOR, has two voltmeters to measure input and output of unit under test plus 0-40 db in 5 db step input attenuator and 0-110 db in 1 db steps. Response: 20 Hz-20 KHz; output 5 watts max into selectable 50, 200, 600 or 5K ohm loads. Requires 115/230 VAC 50-1000 Hz. 12.8x20.8x15.5, 63 lbs. Used-reparable w/book, \$125.



HICKOK MULTIMETER



HICKOK 1604M SOLID-STATE MULTI-METER, achieves high gain by using chopper to allow use of AC-coupled amplifiers. AC response to 700 KHz and AC volt ranges 0-0.5-1.5-5-15-50-150-300 VAC. Eleven DC volts full scale ranges from 0-0.5 V to 1500 V in 15-50-150 sequence. Fourteen DC current ranges 0 to 1.5 nanoamp to 150 ma in 1.5-50-15 sequence. Resistance ranges from 0-500 ohms to 500 megohms in seven steps. AC probe uses 6A53 tube. Includes AC and DC probes, two test leads, and partial repro of manual. Requires 115/230 VAC 50-400 Hz. 7 1/2 x 5 1/2 x 1 1/2, 13 lb sh. Used-reparable, \$85. Checked, \$125.00

OS-8 OSCILLOSCOPE

OS-8/U OSCILLOSCOPE with 3RP1 CRT; small portable unit has DC to 2 Mhz response. Vertical and horizontal sensitivity: 0.075 v-rms per 1" deflection. Sweep range: 5 to 50 KHz. Input impedance: 9 megohms shunted by 11 pf DC. Direct access to vertical and horizontal plates. Requires 115 VAC 50-1000 Hz. 9 1/2 x 13 1/2, 20 lbs sh. Used-reparable, \$49.50; Checked \$75.00 MANUAL for OS-8, partial repro, \$8.50



TELETYPEWRITER SCOPE

TDA-2N TS-1060 TELETYPEWRITER TEST SCOPE, MEASURES BIAS AND DISTORTION OF START-STOP AND SYNCHRONOUS TELEGRAPH SIGNAL ON A 3" CRT. INPUT SPEEDS APPROX. 60 WPM (5 UNIT CODE), 60,75,100 WPM 7.42 CODE, ANI BAUD SPEED EQUIVALENTS TO 60,75,100 WPM (10.42 UNIT CODE). INPUT IMP. 100 OHMS FOR 60MA NEUTRAL; 300 OHMS FOR 20MA NEUTRAL AND 30MA POLAR. MEASUREMENT RANGE 0-50% MARKING, OR SPACING BIAS AND DISTORTION. TUBES: 3KP1, 5651, 0A2, 3/12AT7, 6X4, 0B2, 3/5963, 5726. POWER REQUIRED 115/230V 60Hz. 8x8x15 SHPG. WT: 24 LBS. USED REPARABLE \$34.95 (FOUNDATION UNIT) LESS C.R. TUBE \$17.95



MULTIMETER

ME-297/USM-223 FET MULTIMETER measures volts AC and DC to 5000 V in sequential ranges 2.5-10-50 to 5 KV, AC/DC 1000 ohm/v or DC 20K ohm/v. Also DC current to 10 amps in full scale ranges 0.25-2.5-10-50-100-500 MA DC and 2.5-10 amps. Resistance scales x1K-10K-100K-1M-10M ohms. Includes rugged plastic case, 4.5" dia FS-50 ua meter, red-black test leads and front cover. Requires 6-FXB1 1.3 V and 1-"C" batteries (not included). 6x 7.4x8.8, 7 lbs sh. Used-reparable, \$34.95; Checked \$54.95; Manual partial repro, \$8.50

MULTI-PURPOSE TEST SET

AN/TRM-1 SIGNAL GENERATOR, covers 0.19-400 Mhz AM using two RF oscillators SG-32 (0.19-30 Mhz in 5-bands) and SG-33 (30-400 Mhz). Internal modulation 0-60% @ 1 KHz or 200-6000 Hz external. Output: 2.5 to 100K u-volts in nine steps; 50 ohm impedance. Built-in voltmeter measures 0-3-30-600 VDC, 0-3-30-300 VAC, and 0-10-100-1000 MW. Also tests performance of 3 to 100 watt transmitters over freq. range when proper coupler and dummy load (not included) is used. Write for availability/price of accessories. Requires 115 VAC 60 Hz. 18x13x8; 65 lbs. Shipped UPS in two cartons. Used, repairable \$135. Checked, \$225. MANUAL, partial repro, \$10.



TEKTRONIX SCOPES



TEKTRONIX 545B OSCILLOSCOPE w/ 1A1 DUAL-TRACE PLUG-IN; DC to 33 Mhz, sweep delay, two time bases, and 6x10 cm display. Sweep 0.1 usec to 5 sec/cm in 24 calibrated steps, variable 12 sec/cm (Time Base A); 2 usec to 1 sec/cm in 18 steps (B). Delay 2 usec to 1 sec/cm in 18 steps. 5X magnifier; uses "letter" and "1"-series plug-ins. 17x13.3x24, 80 lbs sh. Used-reparable, \$275. Checked, \$365. *****
TEK 545A W/CA PLUG-IN, similar to 545B but DC-24 Mhz. Used-reparable \$225. Checked \$315. *****
TEK 585A SCOPE w/TYPER B2 dual-trace plug-in, DC to 80 Mhz. Used-reparable, \$315. Checked w/reparable B2, \$395. MANUAL part-repro \$17.

Other TEKTRONIX SCOPES, all used-reparable:
 TYPE 511AD 5 Hz to 10 Mhz, 85 lbs sh \$60.00
 514AD 10 Mhz TV SCOPE w/markers, \$75.00
 RM15 DC-15 Mhz single trace; rackmt \$150
 516 DC-15 Mhz dual trace; portable, 13.5x10x21.5, 50 lbs. Checked \$235.
 551 DUAL BEAM to 15 Mhz, used two plug-ins; w/external supply, \$175.

TEKTRONIX 1A1 DUAL-TRACE PLUG-IN, DC to 33 Mhz for 545B; DC to 50 Mhz for 547A, \$145.00

TEK TYPE CA DUAL-TRACE, DC to 24 Mhz for 541-543-545A, \$95.
TEK TYPE B2 DUAL-TRACE, DC to 80 Mhz f/585A, repairable \$150.



Other plug-ins for TEK and similar scopes. Add \$10 for Tektronix manufactured units. All "used-reparable."
 TYPE C Dual-trace (Hickok only), \$80.00
 TYPE D High-gain, DC differential, \$25.00
 TYPE G Wide-band, DC differential, \$20.00
 TEK TYPE 53/54K, Fast-rise, \$35.00
 TEK TYPE L Fast-rise, high gain, \$50.00
 TEK TYPE Q Strain Gauge, \$115.00
 TEK TYPE R Transistor rise time, \$100.00
 TEK TYPE W Differential Comparator, \$125.00
 TEK TYPE Z Differential Comparator, \$100.00
 TEK 1L20 Analyzer, 10 Mhz-4.2 GHz, \$450.00
 TEK 2B67 Time base for 560-Series, \$85.00
 TEK 10A2A DC-100 Mhz dual-trace f/647, \$135.

HENLETT-PACKARD SCOPES, used-reparable:
 HP-122AR DC-200 KHz Dual Trace, \$145.00
 HP-130C DC-500 KHz single trace, \$145.00
 HP-175A DC-50 Mhz Dual Trace, \$245.00
 HP-180A SOLID-STATE w/1801A DC-50 Mhz Dual Trace & 1821A Delay plug-ins, \$495.00
 HP-851B/8551B SPECTRUM ANALYZER, 10.1 Mhz-40 GHz; sensitivity to -100 db, WRITE
 FAIRCHILD 76-08 50 Mhz Dual Trace plug-in for 765-766-767-777 scopes, \$100.00
 FAIRCHILD 74-13A DELAY SWEEP plug-in, \$125.

DUMONT 304 SCOPE



DUMONT 304H OSCILLOSCOPE, has big 5" CRT (5CP1). DC to 100 KHz response; usable to 300 KHz. 100 MV full scale vertical sensitivity. Sweep: 2-30 KHz. Max. sweep rate: 1" per u-sec. Input impedance: 2 megohms paralleled by 50 pf. Graticule not included. Power required: 115/230 VAC 50-60 Hz 9x13 1/2 x 19; 65 lbs. sh. Used, repairable, \$45.
304H SCOPE shipped with 5CP7 CRT, \$49.50
DUMONT 304A SCOPE, same as "H" model, but uses 5ADP1 flat-faced CRT. Used, rep., \$50. MANUAL for 304A or H, partial repro., \$8.50

LATE ARRIVALS! used-reparable:
 ALFRED 652A MICROWAVE AMP, 4-8 GHz, \$295.00
 HENLETT-PACKARD 412A DC VOLTMETER, 1 uV to 1000 V, 1 uA-1 amp, 1 ohm-100 Mohms, \$100.
 LEEDS & NORTHROP 4232-A1 PRECISION GUARDED RESISTANCE SET, includes 4232B Standard, DC Power Supply, DC Null Meter; 0.1 ohm to 11111.1 Megohms, 10 PPM. 150 lbs sh; \$395.00
 RFL 1605 AC-DC CALIBRATION-TRANSFER STANDARD volts-amps-ohms-standard cell, etc, \$450.
TEKTRONIX 5103N-10 SCOPE, DC-2 Mhz single trace; solid-state w/book, WRITE
 TEK 154-0183 CRT for TEK545A, HEN, \$95.00
 TEK 154-0221 CRT for TEK 555, HEN, \$100.00

LM FREQUENCY METER



LM FREQUENCY METER, crystal calibrated unit covers 125 to 20,000 KHz in two bands. Design accuracy better than 0.02%. Output 250 uv minimum; 600 ohm impedance. 40% AM modulation at 500 Hz. With calibration book, 1000 KHz crystal, and tubes 6A7, 76, 77, 2/991. Requires 12 V 600 ma AC, 280-475 VDC 20 ma. 8 1/2 x 8 x 2 1/2, 14 lbs sh wt. Gov't-reconditioned, \$24.95; MANUAL, \$7.50 w/set. Power input connector for meter, \$3.00

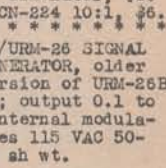
SIGNAL GENERATORS

AN/URM-25 SIGNAL GENERATOR, older version of URM-25F, 10 KHz-50 Mhz AM in nine bands. Output 0-100K uv into 50 ohms. Modulation 0-50% 400 or 1000 Hz internal. One Mhz crystal calibrator. Requires 115 VAC 50-1000 Hz. Less front cover; 11 1/2 x 14 x 10 1/2, 44 lbs sh. Used, repairable, \$85. Checked, \$130. ACCESSORIES available w/purchase of URM-25: MX-1487 impedance adptr \$6. MANUAL, \$10. SM-35 antenna simulator, \$5. CN-225 5:1 attenuator \$5. CN-224 10:1 \$6. *****



3 TO 405 MHZ

AN/URM-26 SIGNAL GENERATOR, older version of URM-26B, 3-405 Mhz AM-CW in six bands; output 0.1 to 50K uv into 50 ohms. 0-50% internal modulation, 400 or 1000 Hz. Requires 115 VAC 50-1000 Hz. 11 1/2 x 15 1/2 x 10 1/2, 42 lbs sh wt. Used, repairable, \$90.00; Checked, \$90.00; MANUAL, partial reproduction, \$10.00
 CN-179 10:1 or MX-1289 adapter, \$7.50 each.



PLUG-INS FOR HP-524 AND SIMILAR COUNTERS, USED, REP. ADD \$10 FOR HP MFG.
 MX-1637 10-100 Mhz, \$35.
 CV-594 100-220 Mhz, \$25.
 HP-525C 100-500 Mhz, \$125.
 HP-526A VIDEO AMP, \$40.
 MX-1636 TIME INTERVAL, \$25.00
 HP-526C PERIOD MULTIPLIER, \$40.00
 TRANSIT CASES F/525-526 PLUG-INS, STEEL (11x 8x8), \$5.00. FIBERGLASS (14x9x9), \$10.00



TV-7 TUBE TESTER

TV-7 TUBE CHECKER, portable unit tests most military and older commercial receiving and low-power transmitting tubes. Indicates dynamic mutual conductance, emissions, gas, noise, and shorts. Test sockets for octal, loctal, 4-,5-,6-,7-pin, 7- and 9-pin miniature, acorn, flat and round subminiature tube base sizes. With tube test data book. Requires 115 VAC 50-1000 Hz. 6.3x8.5x15.8, 22 lbs sh. Used-reparable, \$35.00; Checked, \$59.50

TV-7-D TUBE TESTER, more recent version of above, used-reparable, \$50; Checked, \$75.00
 MANUAL for TV-7-A-B-D, partial repro \$10.00



4 TO 405 MHZ GENERATOR

SE-117/URM-26B SIGNAL GENERATOR, 4.0 to 405.0 Mhz AM-CW-pulse in six bands. Compact unit has 0.1 to 100K uv output @ 50 ohms. Modulation 400 or 1000 Hz 0-50%. External pulse mod requires positive 40 V min. 50-5000 pps; duration 1-40 usec and 70 ohm input impedance. Requires 115 VAC 50-1000 Hz less front cover. 11.3x 10x10.5, 6 lbs. Used-reparable \$175 \$115. Checked, \$225 \$165. MANUAL, partial repro \$10.
ACCESSORIES sold only w/purchase of URM-26B:
 CN-315 2:1 attenuator, 50 ohms, \$8.00
 CN-316 10:1 50 ohm. CN-471 10:1 70 ohm.
 CU-479 impedance matcher, \$10.00
 BNC cords, 4 ft, \$3.00; 6", \$2.00



**TAKE 40% OFF
PRICES IN THIS COLUMN**

**TAKE 30% OFF
PRICES IN THIS COLUMN**

GREEN MONITOR

12" dia-GREEN COMPOSITE MONITOR, high quality unit made for Commodore featured in our Summer '85 Supplement. We bought more at a lower price and are passing on the \$5.00 savings. Has Amperex M31-3346R CRT and fiberglass PC board; sturdy steel frame allows easy attachment of your constructed enclosure. Requires 12 VDC 2 amps; manufactured in late 1984 by Elston Electronics. 10"Hx12.8"Wx11"D; 18 lbs #DM-30-WDSR, NEW w/schematic, \$29.95 \$29.95



MICROFORM DATA 9" MONITOR comprised of Motorola XM227-17 composite black and white monitor suitable for use with video camera or as computer monitor. Hidden control for contrast and brightness; also On/Off switch, 75 Ohm or high impedance input (BNC connector), and ivory case with green base. Requires 115/230 VAC 60 Hz. 16.5x9.5x10.5, 22 lbs. #MD9-MON, used-good condition \$35.00



Z80A GAME BOARD

part of Bally arcade game; has Z80A CPU, Z364, 8/4027, 7416, DM81L895 and 74-Series LS00, 2/LS02, LS04, 2/LS10, 2/LS74, LS174, 2/LS257, LS367; 14.318 MHz xtal, plus other parts. No data; 8.5x11, 2 lbs. #MI-90701-B620, NEW, \$6.95



COLECO JOYSTICK

COLECO JOYSTICK/CONTROLLER, features joystick with two independent fire buttons and 0-9, *, # keypad. One foot coil cord extends to 3 feet, DB-9 connector as on popular joysticks. Output lines are diode matrixed, but may be rewired for popular computer/game machines. 2 lbs sh; Un-#JS-CO-CO, \$3.50 ea. 2/\$6.00



JOYSTICK

HIGH-QUALITY JOYSTICK with removable center return springs. Uses two Bourn 5K ohm pots with trim adjustments for position centering. 1-3/8"H stem above panel surface; 1 1/2" depth required behind. O/a approx 2 1/2 x2 1/2, 1 lb. #JS-14227 NEW \$7.



ARCADE JOYSTICK

Has 1.2" dia ball-control, four microswitches, 4"x4" steel mounting plate. Designed for heavy-duty, fast-action use. 1 lb sh wt. #IL-AR-JS, NEW, \$7.95

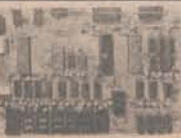


DATA CASSETTE

DATA CASSETTE RECORDER, adaptable for use with most microcomputers having RS-232 input. Functions: Eject, Record, Rewind, Ready, Forward, Stop, Read-from-Tape, and Write-on-Tape. Tape speed 1-7/8 ips, 4-track 2-channel. Similar to Monroe Model 392. Requires -12 -3 4 1/2 V. Includes 3' cable w/DB-25F plug & book. 8x5x3, 4 lbs sh. #DC-REC, unused, \$29.95 \$20.



#217-244 CONTROLLER CPU for printer; has 8085 MPU w/5.7143 MHz xtal, socketed IC's 2/8255A, 8253, 8212 4/8205, 9/3341 FIFO, 4/2111 7400, 3/74LS00, 74LS125, 74LS161. Sockets for 6/2708 Req +5, -5, +12 VDC; \$20.00



'SPACE TOY' MODULE

SPACE WARRIOR MODULE, electronic toy with motor speed and shooting sound effects with flashing LED's. Firing of infra-red LED is detected on aggressor module causing "hit" effects and an inactive period. Requires 9 VDC transistor battery. Sold AS-IS, may have cold solder joints or other problem. 6 1/2x2 1/4x1 1/2, 2 lbs sh. #SPW-MOD, \$3.95 each; 2 for \$6.50 CIRCUIT BOARD only from above module, AS-IS; #SPW-PCB, \$2.50 each or 3 for \$6.00



WHISTLE/SOUND ACTIVATED

WHISTLE/SOUND ACTIVATED SWITCH, alternates on-off latching operation. Can be used to control lights, TV commercials, robots, etc. Ten transistors; 2 1/2x3-1/8 circuit board with microphone and schematic. #AST-968SS, \$2.50 each.



TIME-TEMP SIGN PCB'S

SCR/TRIAC CONTROLLER BOARD with seven each 400 V 4 A SCR's and 200 V 6 A triacs. SCR's trigger the triac gates with a 50 m-sec 16 V pulse that holds all triggered triacs "on" until 24 VDC to SCR's is reset. Originally p/o time-temp sign. 6x6x2, 1 lb. #ASI-CMC27, w/schematic \$5.50



8048 CPU KEYBOARDS

MICROPROCESSOR CONTROLLED KEYBOARDS, features P8048 controller, an 8-bit CPU, ROM, RAM, I/O package with 1K8 ROM, 64K8 RAM, and 27 I/O lines. Compatible with 8000 Series peripherals; 5 V required. With 8048 info.



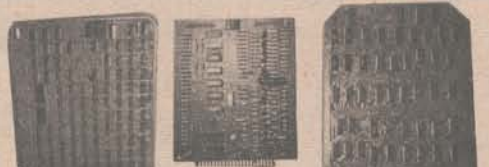
74-KEY MICROSWITCH KEYBOARD, compact unit with case and standard query format plus control functions Erase Display-Home, In Disp

Delete in Line, Insert, EOD Erase -EOL, Char Erase-Xfer, Ctl Page-Print, Unlock Msg-Wait, Cursor direction, etc. IC's 74H04, 7442, 8048 & 5.904 MHz xtal 3' cord w/DEC95. 8.5x15x3, 5 lbs sh. #2825479, NEW, \$24.95

CORTON 110-KEY MULTI-FUNCTION KEYBOARD with query format. 13-key numeric pad, cursor control keys, and 31 function keys: "Delete, Insert, Erase, Xmit, Xfer, Print, Kboard Unlock, Control Page, Tab Set, FCC Clear/Search FCC Renewable/Status, FCC Generate/Msg Wait, Hang Up," and others. IC's CD4051, LM393, 74LS00, 74265, CD4028, MC14028, 8048; 6.00 MHz crystal. One or two keys maybe "reject." 7.3x19x1.5, 5 lbs. #2893916, \$19.95

#113SD30/3137, as above but with KANA character function. 8748 EPROM CPU; Microswitch mfg; grey, black, blue, red keys. \$28.95

#113SD30/3137, as above but with KANA character function. 8748 EPROM CPU; Microswitch mfg; grey, black, blue, red keys. \$28.95



CMOS#84293; 3/4001, 2/4002, 5/4009, 2/4010 4/4011, 2/4012, 7/4013, 4021, 2/4022, 7/4023 2/4025, 2513 a 64x8x5 CHARACTER GENERATOR 7417. 9x7 1/2, SH WT 2LBS #84293 \$7.50

CMOS-K1; 6/4008, 4/4009, 4/4011, 2/4012 7/4013, 9/4016, 5/4022, 2/4023, 4024, 5/4040 9x7 1/2, SH. WT. 2 LBS #CMOS84292 \$6.95 CMOS #14007; 4/4001, 2/4011, 2/4013, 4042, 4558 DUAL OP-AMP, 23 TRANSISTORS, MANY RESISTORS, CAPACITORS. 1 LB #14007 \$2.95

PAPER TAPE READER

TALLY PAPER TAPE READER/TRANSMITTER, consists of oscillator, receiver, logic, and power supply cards. Uses standard one inch paper tape; selectable 5 or 8 channels, A or U mode. Output can be set to 0, -3, -6, -9, -12 dbm. No specific data but believe this to be 300 baud Requires 115 VAC 60 Hz. Size: 9-5/8x12x4 1/2, 11 lbs sh. #PTR-760-328, used, \$14.95 #760-128 TALLY PAPER TAPE READER, similar to above; no selectable output, 100 baud. \$8.95



CONTROL ASSEMBLIES ON 9x4 HEATSINK. USED, EXCELLENT YIELD ON SEMICONDUCTORS. SHPG WT. 4 LBS EA. SIMILAR TO PICTURE ORDER BY NUMBER TRANSISTOR CONTROL ASSEMBLY WITH DIODES.

8/TO-3 60V (SIMILAR TO 2N3055) AND 8/TO-66 (SIMILAR TO 2N3054) 60V TRANSISTORS, 8/0.4 OHM 5W AND 8/30HM 3W RESISTORS, 8/00-4 DIODES WITH INSULATED MOUNTING HARDWARE. #7729 \$4.00 TRANSISTOR CONTROL ASSEMBLY, CONTAINS 8/TO-3 AND 8/TO-66 AND EMITTER RESISTORS AS ABOVE. SMALL DIODES AND RESISTORS #0425 \$3.50

TV GAME SWITCHES

TV GAME SWITCH as used on many TV video games; 300 ohms, RCA jack, 4" twin lead. 2 1/2x1 1/2x1, 1 lb. #TV-TVGS, \$1.95

SHIELDED TV GAME SWITCH, "Game" RCA jack input is shielded from TV inputs; 300 ohms. 2 1/2x3x1 box also has two screw terminals. Other uses possible. #JA-TVGS, \$2.95

FISH TANK

FISHTANK OF ELECTRONIC COMPONENTS, P/O VIDEO TAPE SYSTEM. CONSISTS OF DEMODULATOR, SERVO-AMP, DROPOUT COMPENSATOR, PER/POST PROCESSOR DC POWER SUPPLY (115 V 60 HZ; OUTPUT -12/-12 LAMP REG, 5 VDC 1 AMP UNREG. MANY PARTS, IC's FET, TRANSISTORS, TRANSFORMER VARIABLE RESISTORS, CAPACITOR MORE! SIZE 14x12x6 1/2 WT 15 \$14.95



HARMON-KARDON PCB

POWER SUPPLY/SPEED CONTROL BOARD for record player. Consists of speed control circuit for 33/45 RPM player using 29 VDC motor (not included). Has 22 transistors w/usable lead lengths, two opto couplers (4N27). An interesting gadget board w/schematic. #HK-134450, \$2.25 RECTIFIER-CAPACITOR CIRCUIT BOARD, has capacitors: 7/47 mf 100 V, 2/47 mf 63 V, 2/500 mf 50 V. 6x3x1 1/2, 1 lb. #HK-26239B, \$1.50

50K JOYSTICK

JOYSTICK with four 50K ohm potentiometers having fixed center-taps; smooth ball action. Brushed aluminum handle; 2 1/2x2 1/2x2 1/2. #JS-50K-LIB NEW \$5.95



KEYBOARD ENCLOSURE

KEYBOARD ENCLOSURE for 75-key format including separate numeric pad; unpainted, unassembled. 2 1/2x20x7 1/2, 4 lbs. #ENC-KBD, \$14.95



PRICES SLASHED ON KEYBOARDS!



CPU'S
RAM'S



P8085 CPU, \$3.95 8080A CPU, \$2.25
 8228 control \$2.25 8224 clk gen., \$2.00
 2111 RAM, \$1.00 4804A RAM, \$2.50
 3341 FIFO, \$2.25 FRI-502E02 FIFO, \$3.
 RC4558 2-op-amp 4/#1 MC1489 4-line \$2/#1.
 LM703 RF-IF amp 4/#1 CL903L CdSe foto 4/#1
 FPA103 light reflective transducer, \$7.75

EDITOR KEYBOARD

WORD PROCESSOR KEYBOARD, 93-keys including qwerty format and function keys "Help, Move Text, Buff Add, Search, Save, Indent, Set, Set Tabs, Setup, Cancel, Enter, Options, Quick List, Command, Msg Get, Back Erase, Skip Back, Prev Page, Next Page, Recall Page, Store Page, Skip Forward," etc. IC's 74LS14, 22-950-3B, 23-908-03, P6021H; 3.57945 Mhz crystal, Almond color keys; Keytronic mfg. 5 1/2x11 1/2, 5 lbs. #A65-02181/3767 NEW \$29.50



BETACOM PROJECT BOX

BETACOM PROFESSIONAL COMMUNICATIONS MANAGER BOX, originally when it had all of its circuit boards, unit controlled serial and/or parallel printers, CRT, and 300/1200 baud modems. We are offering the 4.8x10.8x15.8 enclosure only with 5 V 3 amp modular and a small +/-25 V power supply as a project box. Nice clean front panel. Circuit boards available separately; no info. 16 lbs sh. #PCM-BOX, unused, \$24.95



DIODE w/BUILT-IN HEATSINK, approx 100 V 50 amp; 2 1/2 x2" dia plus pig-tail. Removed if equipment. #KS19404, \$2.50

GENERAL INSTRUMENT FULL-WAVE RECTIFIER BRIDGES, new: #KRPC25-02, 25 amp 200 V, \$2.25 #KRPC6005, 6 amp 50 V, \$1.25

LM-340T12 with heatsink \$1.25
 LM317T 2-37 V reg \$1.50 LM318N op-amp \$1.50
 MP5A14 NPN darl 5/31. 2N3055 NPN 10 A, 75¢
 2N2222A NPN 6/32. 2N4126 PNP 10-no 6/31
 2N6346 unijunct 75¢ TIP120 NPN darl. 75¢
 TIP140 NPN darl. 95¢ TIP142 NPN darl. \$1.00
 TIP145 PNP darl \$1.00 7808 8 V reg., 3/31.

1 AMP 50 PIV 20/\$1. 35 AMP 50 PIV \$1.80
 400 PIV 15/\$1. 100 " 2.10
 1000 PIV 10/\$1. 400 " 3.25
 5 AMP 800 PIV, \$1.75 1N3890 100V 12A 4/33.
 MR-series, 6 AMP ZENERS, 1 W: 3.3 3.9
 MR750 50 PIV 85¢ 4.1 10.2 V 4/31.
 11.6 12.0 V 3/31.
 MR752 200 " \$1.10 1N2974B, 10 W 10 V
 MR754 400 " 1.25 5% stud mt. \$1.25
 1N1357RA ZENER, 10 W 18 V 5% rev-polarity \$1.
 VARO VTA200/S 300 V 25 amp bridge rectifier, c.t. cathode, stud mount, \$1.00 ea. 4/33.
 #50-100A RECTIFIER, 50 V 100 A conservative; no hardware or pigtail. House #; 2x1". \$2.
 #300B4-A (-AR=reverse) DIODE, 300 V 84 A, #S.

LED'S RED, T-1 1/2 size 8/\$1. GREEN 6/\$1.
 DARK RED, HP5082-4697, 6/\$1.00
 7-SEGMENT NUMERIC DISPLAY, common anode, lefthand decimal HP5082-7730 \$1.
 SLA-2 DISPLAY; .33", - or -1 and 1, 2/\$1.00

IC SOCKETS 8-pin low-profile 5/\$1.
 14-pin wire wrap 6/\$2.
 14-pin standard 5/\$1.
 16-pin stdn. 4/\$1. 16-pin l.p. 5/\$1.
 18-pin l.p. 4/\$1. 20-pin l.p. 35¢ 3/\$1.
 22-pin l.p. 3/\$1. 24-pin l.p. 40¢ 3/\$1.
 24-pin stdn. 50¢ 28-pin l.p. 45¢ 5/\$2.
 28-pin stdn. 60¢ 40-pin stdn. \$1.00

JUMPERS PCB jumpers, unused.
 44-40P2; two 40-pin, 23" long, \$4.25 \$3.25
 43-16P1; one 16-pin, 12" " 1.50 3/33.
 44-16P2; two 16-pin, 48" " 2.00 2.40
 43-24P1; one 24-pin, 12" " 2.00 1.50
 60-24P2; two 24-pin, 2 1/2" " 2.50 1.75

RS-232 CABLE, 5 ft 25-conductor with male DB-25F and female DB-25S; 3#. #CB-RS232-5 used, \$8.

TEXAS INSTRUMENTS SEMICONDUCTOR MEMORY DATA BOOK (1975), 272 pages, \$1.00

COPPERCLAD PCB Single-side copperclad etching board for making printed circuits. Phenolic (PH) or fiberglass (FIB) backed as noted. Some drilled (d).

PH#	Size	Price	Size	Price	Size	Price
	4x18	\$0.75	11x16(d)	\$2.	16x18	\$2.75
	FIB#	15x12 double-sided,		\$2.65		
* * * * *						
VERY THIN COPPERCLAD, less than half thickness of above; easily flexed to make cylinders, RF shield, or laminates; fiberglass core. Single-sided (SS) or double-sided (DS).						
	Size	Th	Price <td>Size</td> <td>Th</td> <td>Price</td>	Size	Th	Price
#VTC-33	14x18	.019"	\$1.75	18x24	.015"	\$2.25
#VTC-DS	22x28	.006"	2.50			
BUY 5 or more one type, take 20% off price.						

SPERRY KEYBOARDS

84-KEY MICRO-SWITCH KEYBOARD, standard qwerty format with 13-key numeric keypad; 15 red control keys. IC's SW-10667 MC836P, SW-20339K controller. Grey keys and case; 7 1/2x17 1/2x2 1/2 4 lb. #84-SD12-14 used \$27.95 #8120302, same as #84-SD12-14 except with Japanese KANA symbol characters; NEW \$39.95



73-KEY KEYBOARD

CHERRY 73-KEY KEYBOARD #B65-59AB or equal. Standard typewriter keys, 0-9 key pad, Enter, Period, Comma. No electronics on keyboard. Keys can be unsoldered for replacement. Boards are little used in good condition. 15 1/2x6 1/2x1 1/2, 3 lbs sh. #COM-B65-59AB, complete as pictured, \$22.00 #SPA-B65-59AB, as above but no space bar \$12. #MIS-B65-59AB, " " " " and missing 4 to 6 key switches, \$9.00 #PAR-B65-59AB, missing at least 10 key switches; suitable for parts only, \$6 2/10



CORTRON EUROPEAN KEYBOARD, compact size has standard qwerty letters plus "umlaut A, O, U"; numerical keys assigned to "U-I-O-J-K-L-M, " locations. Also function keys Numeric, Alpha, Repeat, Reset, LCA, Delete/Skip, Disp/Auto Off, Field Rel, Char, Field, Rec, Bypass/Prog, Cmd/Rel, Insert/Dup, V Cor/Ax Dup, Hex and other symbols. Grey alpha, black numeric, blue control keys. IC's 1455, DM933, CA3086, 7493, 74145, 741300-02-04-08-11-74, and 80-551276 controller. No further info. 6x12x1 1/2, 4 lbs. #55-500501/2683 NEW \$17.95



KEYTRONICS 5150

KEYTRONICS 5150 KEYBOARD, the "standard" replacement keyboard for IBM PC's and PC clones. (This is "true" Keytronics and not one of its "look-alikes") QWERTY format, numeric pad/cursor, and ten function keys; low profile, almond color plastic with metal bottom and coil cord & connector. 7.5x17.5x2, 7 lbs sh. #KEY-5150, NEW, \$85.00 \$69.



MULTITECH MODEM BOARDS

300 BAUD ORIGINATE/ANSWER MODEM BOARD designed to operate in asynchronous mode 0-300 bps; part of Multitech MT-103J, a quality Bell 103 compatible modem. Has RS-232C interface and LED indicators for Receive Data, Transmit Data, Carrier On, Clear to Send, Data Set Ready, On Hook, Data Terminal Ready, Ring Indicator, and Out of Service. Also toggle switches for Analog Loop/Out of Service, Digital Loop, Half/Full Duplex; DIP switch for Disable Auto Answer, Receive/Send Space Disconnect, Forced DTR, Loss of Carrier Disconnect, ANLB When ODS; FCC registered. Requires +/-20 to 25 VDC and +5 VDC; onboard regulators for +/- 12 V. 11x5.5; 2 lbs sh. #MT103J, NEW w/pinout \$24.95 \$16.



TI-742 PROGRAM TERMINAL

TEXAS INSTRUMENTS 742 PROGRAMMABLE DATA TERMINAL, ASCII terminal with 1200 baud modem card which allows data to be recorded onto digital-grade magnetic tape cassettes and later transmitted to another terminal or central computer. Keyboard has 68 printable and 33 control characters plus key-punch-type numeric cluster. Printer utilizes 5x7 dot matrix head and prints on 8x11 thermal paper. Dual cassette deck storage 288K characters/cassette min; 800 BPI, 86 character block phase-encoding. Off-line playback or record @ 30 char/sec; tape duplication @ 200 char/sec. On-line play/record @ 110, 150, 300, or 1200 baud. Requires 115 VAC 60 Hz; 14.6x21.2x19.5, 70 lbs. Sold "AS-IS" used-complete w/info, \$89.50; less modem card \$55 + + + + + PRINTER TERMINAL only from TI-742 less modem card; modify for stand-alone use. 45#; \$30. DUAL CASSETTE DECK with control panel from TI-742; 32 lbs sh. #2CD-TI742, used, \$35.00 TI-732 KSR DATA TERMINAL, similar to 742 printer but for TTY communications. Five level baudot code, 20 ma neutral loop. Send-receive speeds 50, 75 or 100 baud (6.67-10-13.33 cps). Upper case only 37-key QWERTY keyboard; 55 printable characters & 5 print functions. Adapt to RS232C interface or acoustic couplers; 45 lbs. Unused, \$135.00



9 INCH DISPLAY

9" DIAGONAL GREEN VIDEO DISPLAY made by Elston for the Columbia Data portable; includes CRT and circuit board. Not composite; requires external horizontal drive and vertical sync and reg +12 VDC. M24-3086HP CRT; w/schematic 6 lbs sh. #DM30-0980-415-C31, NEW, \$17.95



28 VDC SWITCHING SUPPLY

28 VDC 1.25 A SWITCHING POWER SUPPLY, also outputs +12 V 1.5 amp, +5 V 4 A, and -12 V 0.5 A; requires 115/230 VAC 50/60 Hz input. Not for RF applications. 5.5x10, 4 lbs. #PS-1486, \$19.95



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TELEPHONE TONE PAD

ITT TONE KEY PAD, can be used for tone control, signaling, and experiments. Each key produces tone output; characters 0 thru 9, \$, #. Requires 9 to 15 VDC; with hook-up info. 3.4x3.3x1.8, 2 lbs sh. ITT #36006, NEW, \$7.95; 2/#15. + + + + +
 WESTERN ELECTRIC #35AF3A TONE PAD, as above, but removed from equipment, \$5.95 ea; 2/#10.



SPARES BOX

CY-4321/GRC109 SPARES BOX, single 5x10x3 compartment; steel with hasp fasteners. 5 lbs sh. Unused, \$5.95



12-14.5 VDC SUPPLY

CB POWER SUPPLY, regulated 12-14.5 VDC 500 ma continuous; 1500 ma intermittent. With 6' cord and replacement ON-Off switch. 6x2x4, 2 lbs sh. #CB-PS-12, unused, \$7.95



RIBBON INDUCTOR

VARIABLE RIBBON INDUCTOR with motor drive; p/o Collins 180L antenna tuner. Consists of two 5.4"L x 3.375" dia coils with 288" of drawn silver ribbon (0.125" w x 0.01" th) wound between; approx 28 uH. Ribbon is transferred from one coil to the other as a 28 VDC motor turns both. D/a 9.3x5.8x5.8, 10 lbs sh. #L401/190L, removed from equipment, \$34.95



MAGNET WIRE

PHELPS DODGE MAGNET WIRE, heavy 16 AWG; on 10 lbs spools, approx 1250 feet. P-D #16701, NEW, \$24.95
 ESSEX 37 AWG MAGNET WIRE, 2# spools; approx 5000'. #61211FG, unused \$10.95



SSB HF TRANSCEIVER

RT-594/ARC-38A AM-LSB-USB HF TRANSCEIVER, 2.0 to 25 MHz using 20 preset channels with autotune channel change. Uses stabilized master oscillator which allows possible 35250 channels in frequency intervals of 500 Hz (2.0-7.25) and 1000 Hz (7.25-25.0 MHz). Transmitter output: 100 watts peak min (2-14.25 MHz) 90 W (14.25-25 MHz). Antenna tune power: 50 W. Receiver SSP sensitivity: 1.5 uv for 10 db signal + noise to noise ratio. Selectivity: 3 KHz min 6 db down, 8 KHz max 60 db. Has 25 tubes including three 6159's in PA. Requires +28, +600, +250, -50, -65 VDC and 6.3 VAC. Also 115 VAC 400 Hz for selsyn on PA inductor. 15.5x8x23.5, 80 lbs sh (UPS in 2 pkg). Used-not checked, \$210.00
 MANUAL partial repro, \$20.00



MT-1415/AR MOUNT ASSEMBLY for ARC-38, -38A; w/shockmounts, connectors for RxTx and noise filtering. 12 lbs. Unused, \$100. Used, \$75.
 C-1398/ARC-38 CONTROL BOX, channel selection for RT-311/ARC-38 but function switch can be modified for use with RT-594; see page 24. Used, less frequency setting book, \$15.00
 SETTING BOOK for C-1398/C-3428, repro, \$10.
 DY-118/ARC-38 DYNAMOTOR for RT-311-594/ARC; provides all DC voltages from 28 VDC 6.6/26 amp Rx/Tx. 4.9x6.8x18.3, 25 lbs. Used, \$35.



CU-351/AR AUTOMATIC ANTENNA COUPLER, companion coupler to RT-594/ARC-38A; similar to Collins 180L3 described on page 24 except has Cannon-style control connector and type N connection instead of UHF. Usable with any 2-30 MHz transceiver in 50-180 watt output range. Automatically resonates an antenna to transceiver's frequency and couples RF signal between the two. Coupler has 7-1000 pf 3 KV vacuum variable capacitor and 28 uH variable ribbon drive inductor. Requires 28 VDC 3 amps, 250 or 400 VDC 35 ma, and 115 VAC 400 Hz 20 VA. 10.5x7.8x11.5, 24 lbs sh. Used, \$115.; Manual 4/180L3, part-repro \$10.

H-P VHF GENERATORS

HEWLETT-PACKARD 608-Series VHF SIGNAL GENERATORS, AM-Pulse-CW emission; 400 or 1000 Hz modulation. External modulation 20 Hz to 20 KHz, 0 to 95%. Large 3.5" dia meters indicate Percent Modulation and Output Volts-DBM. Require 115/230 VAC 50-400 Hz; 16.4x13.3x21, 72#.
 HP-608C, features broad 10-480 MHz range and high output of 0.1 uv to 1 V into 50 ohms; frequency accuracy +/-1%. Repairable, \$265.00
 HP-608F, later model covers 10-455 MHz with 0.1 uv to 0.5 V output. Built-in crystal calibrator provides check points every 1 MHz upto 270 MHz and 5 MHz check points above; accuracy +/-1%. 608F has phase-lock frequency control capability if used with HP-8708A Synchronizer (not available). Checked, \$425.



PLANTRONICS HEADSET

PLANTRONICS StarSet II ultra-light OPERATOR'S HEADSET, improved contoured earpiece, 3-position volume integrated into amplifier plug, and SoundGuard protection from unexpected loud telephone line noise. Also coil cord with PJ-7 dual plug, set of six different sized earplugs, and carrying pouch; almond color. 3 lbs sh. #HS0308-1, NEW, \$44.95
 PLANTRONICS StarSet NOISE-CANCELING HEADSET, earlier version of above; separate push-to-talk switch, black. #NCD-211-2C, NEW, \$34.95



DUAL FANS

DUAL AXIAL FAN ASSEMBLY, one 3-blade 14 W Rotron Muffin and one 5-blade 18 W metal Howard Cyclohm 4.5" sq equipment fans on 11x6.8 metal plate. 115 VAC 60 Hz; 6 lbs sh. #2-AX-FNB6, used-tested, \$10.95



VACUUM CAPACITOR

RF VACUUM VARIABLE CAPACITOR ASSEMBLY, consists of UC5L-1000 7-1000 pf 3 KV max vacuum variable with 28 VDC drive motor and gear assembly. Will run on 6 VDC and up. 8x6.8x3, 7 lbs sh. #C501/180L, used, \$69.95
 + + + + +
 UCS-300-7.5 VACUUM VARIABLE ASSEMBLY with 9-300 pf 7.5 KV max vacuum variable with 115 VAC 400 Hz motor drive; 7 lbs. Used, \$75.00
 UCSF-250-10, 5-250 pf 10 KV max, used, \$85.
 UCS-375-10, 10-375 pf 10 KV max, \$100.



ANSWERING MACHINE

PANASONIC AUTOMATIC TELEPHONE ANSWERING MACHINE features microprocessor controlled double cassette system for incoming and outgoing messages. Also sound coded remote control for monitoring messages over the phone, variable outgoing message length of 30 sec max, and complete voice activation records message as long as caller speaks. Has volume, function selector, start-stop, rewind-fast forward controls. Includes two cassettes and batteries. 7x10.5 x3, 8 lbs sh. #KX-T1515, NEW, \$69.95



TENSION GAUGES

PRECISION GAUGES for measurement of tension or weight:
 CHATILLON #LP-36 SPRING SCALE, 36 oz X 1/2 oz or 1 KG X 20 G scale; spring assembly 5.5"Lx1.5"W, o/a 14.3"L. NEW, \$7.95
 JONARD #6-50 SPRING ARM center-zero, left-right reading; 0-50 grams 5 GM steps. Top quality stainless steel parts; 4.8"Lx1.6"W. NEW \$15
 #6BB SPRING ARM, center-zero left-right reading; 0-70 grams in 5 gm steps. Parts not stainless; 6.1"Lx1.6"W. Unused, \$9.95



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