

Scanner Magic for Heath's 2036

— grab your October '79 issue for part I of this project

Parts List

- R1 90k (value varies, depending on level of threshold signal—see text)
- R2, R3 1 meg
- R4 1k
- C1 0.01- μ F disc
- Q1 2N2222
- IC1-3 SN74LS163
- IC4 NE555
- misc. DPDT scan operate switch, push-to-scan switch, 2" x 3" perfboard

In the October, 1979, issue of 73, an article entitled, "An LED Display for the HW-2036" really excited a number of Heathkit® 2036 and 2036A users. As mentioned in the article, a scan board circuit could be piggybacked to the 2036-DB Display Board. Below are a few hints on how to build this board and check it out.

Acquire a 2" x 3" piece of perforated board and mount it for sizing on the forward 2 1/4" screw above the 2036-DB. With the board piggyback on the 2036-DB, position all three 74LS163 chips and also the NE555; don't forget to leave a little bit of room for Q1 and R1 through R3. After marking the parts locations, remove the board. The components then can be inserted, leads bent, and all required connections made with wire-wrap as shown in Fig. 1.

R1 is a threshold-setting resistor and its value is dependent on what signal strength you wish the scanner to lock. The higher its value, the more signal is required to lock the scanner on a carrier. A trimpot here would make adjustment easier.

Clock Out from the NE555 will go to the new scan operate switch (0/5 kHz), to provide a strobe pulse for the SN74LS298s. Install the push-to-scan switch on your mike at some place convenient (best location is on top) and use one of the extra wires in

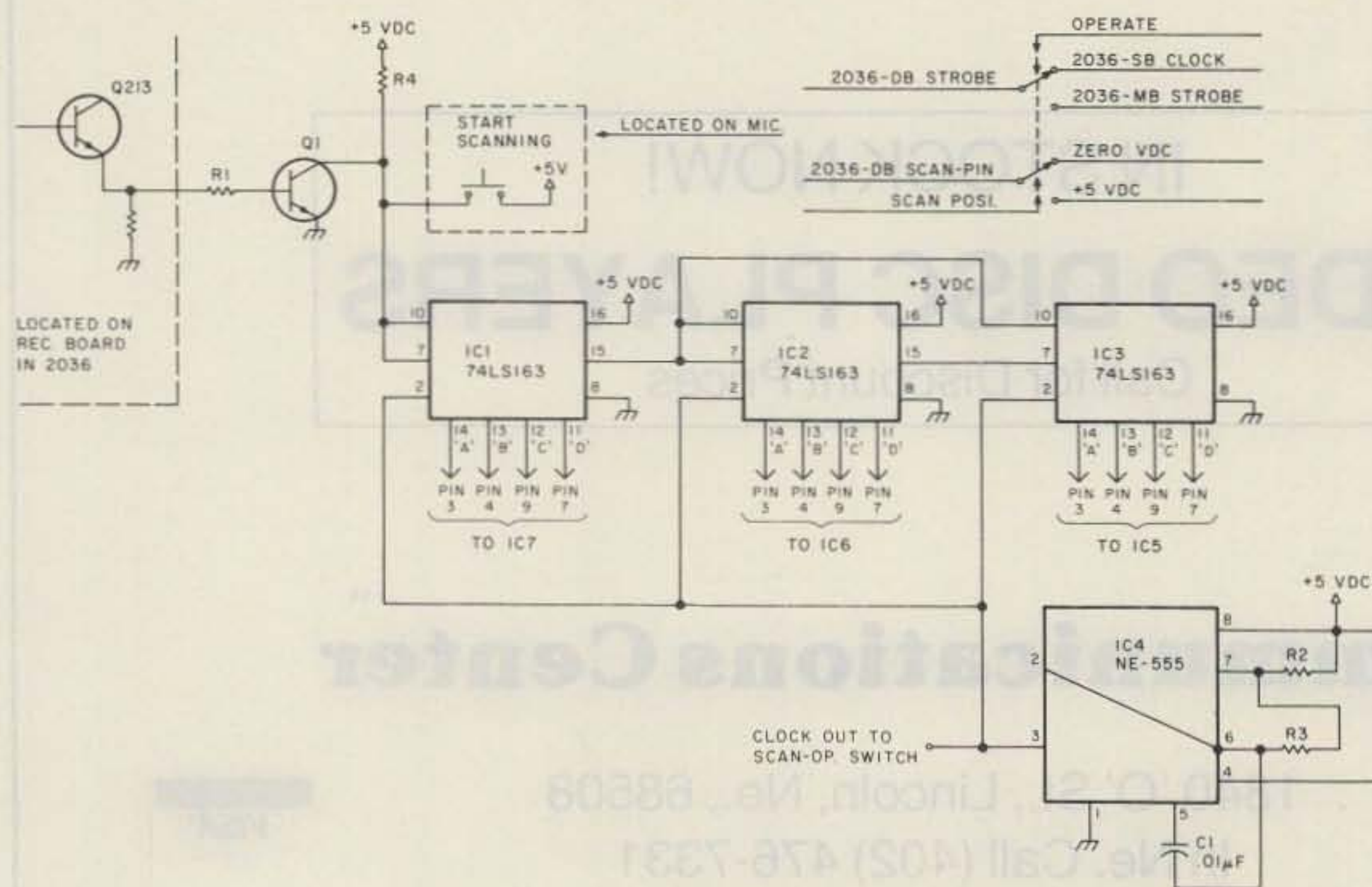


Fig. 1. 2036-SB Scan Board schematic diagram.

the mike cable for the signal back to the 2036-SB.

Next, install the respective wires to IC5 through IC7 from the 2036-DB to the 2036-SB (see Fig. 2). Remove the scan bridge on your 2036-DB and solder in the wire from the scan operate switch. Reassemble your unit and apply power. Throwing the scan operate switch to Scan should cause the display to count from .000 to .999 and cycle again. If this does not occur, check the 2036-SB to verify that the scan clock is active. Also read the signal at the 2036-DB on pin 10 of IC4 through IC7; these should also toggle.

To scan 147.000 to 147.999, key in 7-7-7-7, then switch to scan. The switch should be toggled slowly. This scan modification is used to enable the user to locate new repeaters in a new city, and by no means is it competitive with professional scanners.

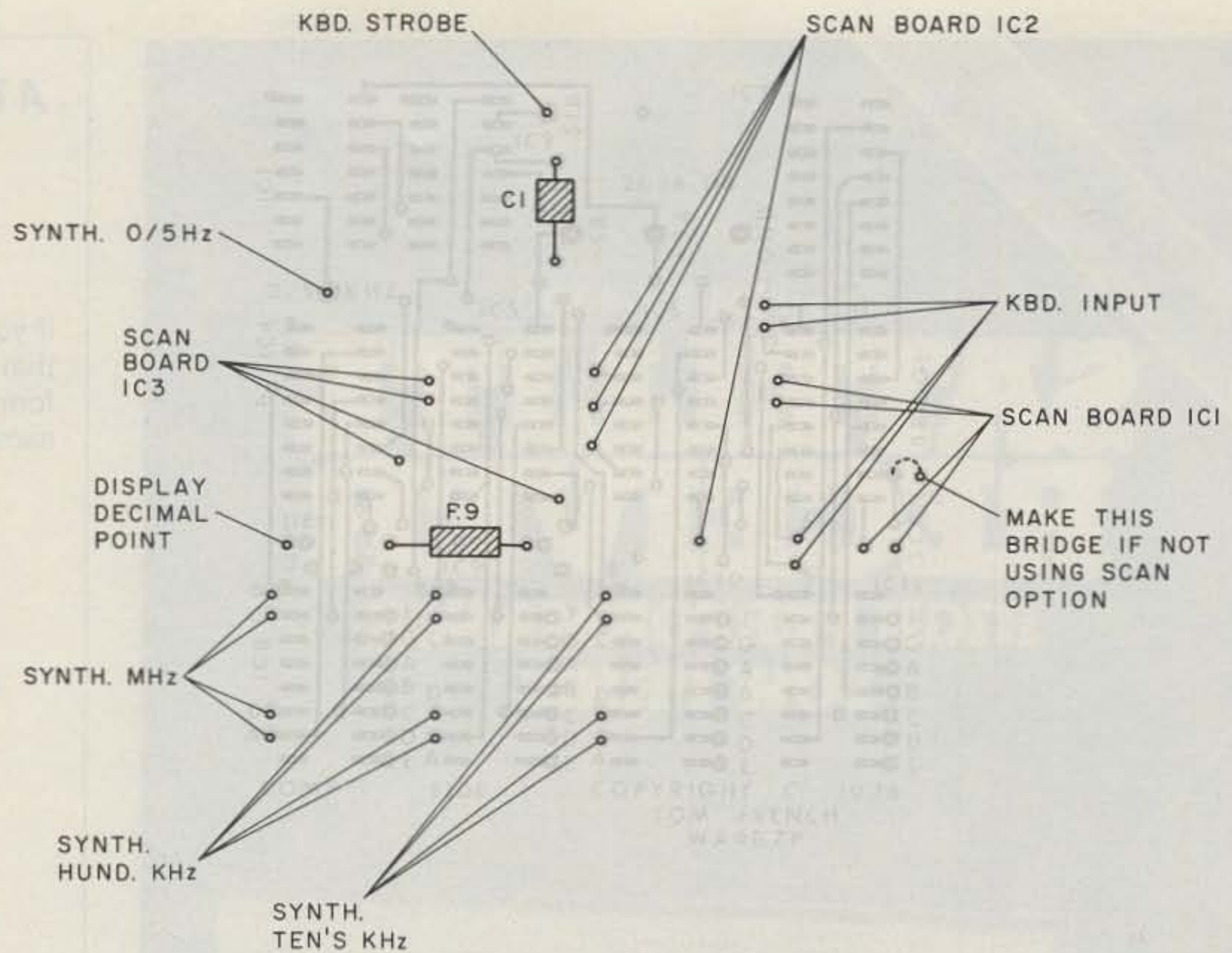


Fig. 2. 2036 Display Board connections.

If your synthesizer is not locking on frequency in the scan mode, it is recom-

mended that the scan clock be slowed down. This is accomplished by increasing

the value of the two 1-megohm resistors, R2 and R3 (see Fig. 1). ■



Organize your shack with a CLUTTERFREE MODULAR CONSOLE \$179.95

- Large, 42" H x 57" W x 29"D
- Strong groove-construction
- Mar-resistant wood grain finish
- Options, drawers & face plate
- For ham or home computer
- Visa and Master Charge

CLUTTERFREE MODULAR CONSOLES

P.O. Box 5103 Tacoma, WA 98405
(206) 759-1611 ✓89

Poly Paks[®] Quality Electronics For Less!

200-PRECISION RESISTORS, 1/4W, 1%, axial (2428)	2.99	400 for \$3
10-QUAD PHONO JACKS, 4 RCA jacks on 2 x 1 1/2" Bakelite strip, (6249)	2.99	20 for \$3
25-RCA PHONO PLUGS, popular audio/speaker plugs, 100% material, (3293)	2.99	50 for \$3
65-PLASTIC TRANSISTORS, untested, TO-92, asst. types (2604)	2.99	130 for \$3
25-SLIDE SWITCHES, various shapes, sizes, and types (2726)	2.99	50 for \$3
50-TRANSISTOR ELECTROLYTICS, epoxy encapsulated, asst. values, (2747)	2.99	100 for \$3
175-HALF WATTERS, 100%, color-coded resistors, asst. values, (3046)	2.99	350 for \$3
20-SLIDE VOLUME CONTROLS, various values & types, for Hi-Fi, etc. (3057)	2.99	40 for \$3
50-UPRIGHT ELECTROS, 100%, assorted values & voltages, marked, (3226)	2.99	100 for \$3
20-PANEL SWITCHES, assorted rotary, micro, slide, etc. (6629)	2.99	40 for \$3
20-PAIRS-RCA PLUGS & JACKS, popular for Hi-Fi speakers, etc. (6630)	2.99	40 for \$3
60-IN914 SWITCHING DIODES, 4 nsec. axial, glass, untested, (6632)	2.99	120 for \$3
4-2N3055 NPN TRANSISTORS, 115 watts, 15 amps, TO 3, 100% material, (6633)	2.99	8 for \$3
50-PLASTIC LENSES, assorted styles, & colors, (6266)	2.99	100 for \$3
250-CERAMIC CAPS, asst. tubulars, NPO's, temp. coefficient, etc. (5839)	2.99	500 for \$3
50-THERMISTORS, various types & styles, neg. coefficient, 100%, (4089)	2.99	100 for \$3
30-INSTRUMENT KNOBS, for half round shafts, some w/pointers, (6498)	2.99	60 for \$3
10-LINE CORDS, heavy-duty, 18 gauge, 6', molded plug, 2-cond., (6499)	2.99	20 for \$3
10-2N3055 HOBBY TRANSISTORS, manuf. fallout, TO 3, U-test, (6624)	2.99	20 for \$3
100-DTL IC's, mostly dual JK flip flops, marked, 100% prime, (6444)	2.99	200 for \$3
35-STEREO INDICATORS, tiny red 1.5V bulbs, for Hi-Fi replacement, (6244)	2.99	70 for \$3
40-800V 1A RECTIFIERS, type IN4006, epoxy, axial leads, (6245)	2.99	80 for \$3
9-DIGIT READOUTS, flat pak w/bubble mag., 120 high, 14 pin, (5558)	2.99	18 for \$3
100-PREFORMED 1/4 WATTERS, assorted values, precut for PC appl., (6622)	2.99	200 for \$3
20-NE-2 BULBS W/RESISTOR, neon, plugs right into 110 VAC, (6620)	2.99	40 for \$3
15-RCA PHONO JACKS, popular Hi-Fi jack on a Bakelite strip, (6230)	2.99	30 for \$3
200-HI-QUALITY RESISTORS, asst. carbons, some metallic, some 5W's, (6527)	2.99	400 for \$3
150-4000V RECTIFIERS, IN4000 series, may include: 50 to 1000V, (2417)	2.99	300 for \$3
50-AXIAL ELECTROS, asst. values, volts, sizes, What a buy! (3227)	2.99	100 for \$3
3-SHIELDED AUDIO CABLES, 2 cond., with RCA plugs at each end, (6412)	2.99	6 for \$3
200-PC-SEMICON SPECIAL, assorted semis of all types, Untested material, (3300)	2.99	400 for \$3
200-PRE-FORMED 1/4 WATTERS, popular values, some 5 & 10W's, (6246)	2.99	400 for \$3
30-SCRs & TRIACS, assorted values, 10 Amp TO-220, untested, (6337)	2.99	60 for \$3
25-TINY SLIDE SWITCH, only 3/7" cube, SPDT, PC leads, (6385)	2.99	50 for \$3
40-EDGE CONNECTORS, asst. 4 & 6 pin, 2-sided, pc leads, (6364)	2.99	80 for \$3
6-MINI-MOTORS, Type RE56, 1.5-6 VDC, color-coded wire leads, (6718)	2.99	12 for \$3
24-MINI BULBS, asst. voltages & base styles, some colored, (6757)	2.99	48 for \$3
40-STRAIN RELIEFS, asst. types, styles, & sizes, (6756)	2.99	80 for \$3
6-TIME DELAYS, solid state, asst. from 450 mSec to 8 Sec. (6758)	2.99	12 for \$3
3-HEAVY DUTY AUTO CHOKE, filters 12 VDC @ 5A, open frame, (6750)	2.99	6 for \$3
10-5K CONTROLS, thumbwheel type, single-turn, vert. mt. (6705)	2.99	20 for \$3
4-CHROME PLATED ALARM SWITCH, spst, N.C. momentary, (6742)	2.99	8 for \$3
8-LED LAMPS, 2V red LED in chrome-colored assembly, w/hardware, (5702)	2.99	16 for \$3
8-BAR LIGHTS, GaAsP on LED chip, 1.5-3 volts, wire leads, (6158)	2.99	16 for \$3
4-TAPE HEADS, record/play, stereo & mono, w/plugs, 11 leads, (5973)	2.99	8 for \$3
10-RESISTOR LEDS, asst. red, green, & yellow jumbos, 5V, (6761)	2.99	20 for \$3

PENNY SALE

Buy One \$2.99er, Get 2nd (same cat. no.) For 1 Penny More!

- ORDERING INSTRUCTIONS**
- Check boxes in front of 2.99ers desired
 - Indicate QTY Desired On Line To Left Of Box
 - Complete coupon section
 - Cut out ad along dotted line and mail to:

Poly Paks[®]
P.O. BOX 942 73 12
SOUTH LYNNFIELD,
MA. 01940

Send For Our FREE Catalog Today!

Featuring sensational savings on Computer Peripherals, Speakers, Transformers, Solar Products, Fans, Stereo Equipment, Relays, and a wide variety of other diverse electronic components. Take advantage of our 25 years as America's foremost supplier of discount electronics.

Total Amount of Order \$ _____
Please Add \$3 for Postage & Handling

NAME _____
ADDRESS _____
CITY _____
STATE _____

Enclosed is CHECK, MONEY ORDER
Charge my MASTERCARD VISA
ACCT. # _____ EXP. DATE _____
 Send me your FREE catalog

For Faster Service Order By Phone 1-617-245-3828