DRAKE PARTS, MATERIALS & RESOURCES

DRAKE WEB PAGES:

- WB4HFN, Ronald Baker: http://wb4hfn.com
- K3HRN, Thom LaCosta: http://www.zerobeat.net/drakelist/
- Ham Manuals: http://www.hamanuals.com/
- Ham Manuals: http://bama.edebris.com/manuals/drake/
- Ham Manuals: http://www.hamradiomanuals.com/
- Ham Manuals: http://www.dxzone.com/cgi-bin/jump2.cgi?ID=7140
- Ham Manuals: http://www.mods.dk/

GROUP.IO DRAKE RADIO GROUP:
The group.io has over 1,700 active members. Lots of technical questions are asked and answered daily. https://groups.io/g/DRAKE-RADIO

DRAKE INTERNET EMAIL REFLECTOR:
The reflector is a vehicle for sending a receiving email messages to the entire Drake group. You will start seeing email that other Drake users are sending the group. You can submit email to the group by using the joining the group.

- To Subscribe: groups.io/g/DRAKE-RADIO

BLUE FILTER MATERIAL: (Lee #172 Lagoon Blue Gel Filter)
- LEE Filters – Web: http://www.leefilters.com/lighting/colour-details.html#172

Replacement Injection Cable for Twins:
To make your own cable, you can use the following types and length of cables. Cable lengths are measured tip-to-tip.
- RG6 = 39 inches
- RG58AU = 36 inches

REPLACEMENT INTERCONNECTING CABLES FOR T-4X – R-4 SERIES:
Cables are used to interconnect the receiver and transmitter or other station accessories, like the MS-4 speaker. The cables are 36 inches long with molded RCA style connectors on both ends.
- MS-4 Speaker cable, Mouser P/N 172-1103.
- Gray interconnecting cables (Not the Injection cable), Mouser P/N 17FH101,
  - Black interconnecting cables (Not the Injection cable), Mouser P/N 17-1101

1) Nationwide Radio & Eq. Sales LLC, Mark Olson “President”, 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com
2) Mouser Electronics, Phone 800-346-6873, Part Number: 606-CM53 Web: http://www.mouser.com/
REPLACEMENT AC POWER CORDS FOR 2B, 2C, R4, R4A AND R4B:
A/C Power cord, Custom made for vintage radios. Brown or Black, Matte finish, 8 foot length, high quality, non-polarized. Bob’s Antique Radio & Electronics, 111 East 29th Street, LaGrange Park, IL 60525, email: RadioBob1@sbcglobal.net, Web: http://www.radioantiques.com/

CABINET SCREWS:
2. Allen Martin / W7APM, P.O Box 4177, Palmer, Ak. 99645. Packages of 25 at $10.00, or packages of 50 at $20.00, price includes shipping. For more information or to place an order by e-mail: w7apm@mtaonline.net, Allen Martin / W7APM, P.O Box 4177, Palmer, Ak. 99645

CABINET SCREWS FIBER WASHER:
McMaster-Carr Supply Company, P.O. Box 7690, Chicago, IL 60680-7690, Made from plant-based fiber, these washers withstand compression better than washers made from leather and soft fibers such as felt, yet they won’t mar surfaces. Color is black. (P/N 95225a320). Phone: 330-995-5500, http://www.mcmaster-carr.com/

RUBBER CABINET BUMPER FEET:
1. McMaster-Carr Supply Company, P.O. Box 7690, Chicago, IL 60680-7690, Adhesive-Backed Bumpers, (P/N 95495K121). http://www.mcmaster-carr.com/, Phone: 330-995-5500
2. Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

PANEL LAMP, #53, 14.4 Volt: ( #1815 last longer & is recommended replacement for #53 )
TR-7 & TR-5: Both the VFO and S-meter lamps are #53's....
2. Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

PANEL LAMP, #1815, 14 Volt ( Last longer than a standard #53 )
TR-7 & TR-5: Both the VFO and S-meter lamps are #53's....
Mouser Electronics, Phone 800-346-6873, Part Number: 606-CM1815 http://www.mouser.com/

PANEL LAMP, #1850, 5 Volt for the L4B: (also #755)
4. 1000 bulbs, Phone: 800-624-4488, https://www.1000bulbs.com/search/?q=1850
PANEL LAMP, #47, 6.3Volt:
4. **Antique electronic supply**, 6221 S. Maple Ave, Tempe, AZ  85283, Phone 800-706-6789, E-mail: info@tubesandmore.com, Part Number: P47, [http://www.tubesandmore.com](http://www.tubesandmore.com)

FLAT DOME BLUE LED LAMP, #47, 6.3Volt:  
*Titan Pinball*, p/n: LEDFlat, Web: [https://www.titanpinball.com/](https://www.titanpinball.com/)

PANEL LAMP, #1847, 6.3Volt: (Longer Life #47)

TR-4 RECEIVE CIRCUIT PROTECT LAMP:  
(#12 Indicator Lamp, Bulb G-3 1/2, Miniature 2 Pin Base, 6.30 Volts, 0.150 Amps, 0.35 MSCP, C-6 Filament, Length 0.94 in., Dia. 0.43 in.)

1. 1000 bulbs, Phone: 800-624-4488, (You have to call to order this part)
2. donsbulbs.com, [http://www.donsbulbs.com/cgi-bin/r/b.pl/12|6.3v|0.15a~usa.html](http://www.donsbulbs.com/cgi-bin/r/b.pl/12|6.3v|0.15a~usa.html)

R-4B – T- 4XB NE-2E VFO LIGHT : (A9A SUBSTITUTE)

1. **Payless 4 lighting**, Phone: 216-533-9786 Email: paylesslighting@gmail.com Web: [https://payless-4-lighting.com/search?type=product&q=A9A](https://payless-4-lighting.com/search?type=product&q=A9A)
3. **Jackson Electric Supply Co.**, Phone: 800-413-9847, Email: jackson@jacksonelectricsupply.com Web: [https://www.jacksonelectricsupply.com/searchresults.asp?Search=a1a&Submit=Submit](https://www.jacksonelectricsupply.com/searchresults.asp?Search=a1a&Submit=Submit)

MS-4 SPEAKER REPLACEMENT ( Misco #JC57CD ) Sold as a Collins Replacement:  
**Surplus Sales of Nebraska**, 1218 Nicholas Street, Omaha, NE 68102, Phone: (402) 346-4750, Part #: (COL) SPKR-4-57, Web: [https://www.surplussales.com/Microphones-Audio/MicroAudio-8.html](https://www.surplussales.com/Microphones-Audio/MicroAudio-8.html)

DRAKE SERVICE CD’S by K4OAH (SK):  
Service Parts Locator for Drake 2B, 2-C/2-NT, B-Line, C-Line, TR-4, and TR-4C. Each radio comes on it’s own CD. Go to Garey’s web site for more detail. Garey Barrell (SK) K4OAH, 10912 Virginia Forest Ct, Glen Allen, VA  23060-6503. e-mail: k4oah@mindspring.com, Web: [http://www.k4oah.com/](http://www.k4oah.com/)

2B, 4 Line Twins & TR-4 Parts: Kevin Kampman, Springfield, OH, Email: k8kvn.oh@gmail.com, Phone: 937-470-4048
R4C PLASTIC DIAL SET:
\textit{RADIO DAZE}, Phone: 877-653-8823 or 585-270-8178, Email: info@radiodaze.com, SKU#: DS-A834

2B PLASTIC DIAL SET:
\textit{RADIO DAZE}, Phone: 877-653-8823 or 585-270-8178, Email: info@radiodaze.com, Web: https://www.radiodaze.com/drake-2b-dial/, SKU#: DS-A589

TR4C ANTENNA RELAY (AMF/POTTER & BRUMFIELD #R10-E1Y4-V2.5K):
1. \textit{Harbach Electronics}, Jeff Weinberg - W8CQ, P/N RY-T4RC/T4XC, Phone: 419-945-2359, email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/
4. \textit{Nationwide Radio & Eq. Sales LLC}, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com, Phone: (920) 434-8097 Web: http://www.ke9pq.com

C & 7 LINE SPUN ALUMINUM CENTER INSERTS FOR MAIN TUNING KNOB:
1. \textit{Charlie Talbott / K3ICH}, I have a large quantity of spun aluminum inserts with clear epoxy coating available to fit several different radios. I have all of the various sizes to fit the Collins S-Line as well as the main tuning sizes for the Drake C-Line and Heath S-B Series. They are all new production and are in perfect condition, individually wrapped for shipment. I have shipped many of them and everyone is very happy with their appearance and ease of installation. For the Drake C-Line main tuning are $3.00 each. Charlie Talbot, 13192 Pinnacle Lane, Leesburg, VA 20176-6146 Phone: 540-822-5643 Email: k3ich@arrl.net
2. \textit{Fred Freeman / N8BX}, The original Drake R-4 and TR-7 Plastic knobs weigh in around 1 ounce. These premium USA made knobs weigh 8 ounces and they tune just wonderful. A spinner makes for fast and easy QSY. It actually makes frequent band changes pleasant and you soon forget how long it takes going from each end of the VFO. This knob is for the ham that uses his radios daily and wants a beautiful weighted knob with a luxurious feel. Installation is easy and all hardware is Stainless Steel. Everything is CNC Machined from billet stock right here in the USA. The set screw that holds the knob in place is a flat tip style (no marring of your VFO shaft) and the spinner is long lasting Delrin. P.O. Box 249, Caledonia, OH 43314 Phone: (419) 688-1505 Email: n8bx@73cnc.com Web: http://www.73cnc.com/
3. \textit{Nationwide Radio & Eq. Sales LLC}, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com, Phone: (920) 434-8097 Web: http://www.ke9pq.com

Dial Skits A, B, & C line:
\textit{Nationwide Radio & Eq. Sales LLC}, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com, Phone: (920) 434-8097 Web: http://www.ke9pq.com

TUNING KNOBS for C line:
\textit{Nationwide Radio & Eq. Sales LLC}, Mark Olson "President", Email: ke9pq@new.rr.com, Phone: (920) 434-8097 Web: http://www.ke9pq.com
VFO Rubber Bushing Replacement C line:
Over time the rubber bushing that resides under the VFO knob skirt will get hard. When this happens it no longer serves its purpose, which is to enable the user to slip the dial to get it into calibration. This part is no longer available, but using the following procedure, the user will be able to restore his dial to full function.


TUNING KNOBS FINGER DIVOT for C line:
Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

R-4A & R-4B FILTER CAPACITORS:
HAYSEED HAMFEST CO. - e-mail: sales@hayseedhamfest.com Web: http://www.hayseedhamfest.com/

POINTER KNOB FOR 4-LINE EQUIPMENT:
Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

L7 AMPLIFIER PLATE LOAD AND BAND KNOBS:
Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

MN2700 TUNER KNOBS:
Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

L4B TUNER KNOBS with Pointers:
Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

CABINETS FOR R4A, R4B, R4C, T4X, T4XB, and T4XC:
Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

L4B AMPLIFIER REDUCTION DRIVE RED POINTER FOR TUNING CONTROL:
Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

EXTENDER FEET FOR ALL RADIO'S & ACCESSORIES:
Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com
**TR-4C SSB FILTERS:**
Replacement SSB filters can be obtained from *International Crystal (INRAD)*, 13620 Tyee Road, Umpqua, OR 97486, P/N #1902 (Lower Sideband), #1992 (Upper Sideband), phone#: 541-459-5623, Web: [www.inrad.net/home.php](http://www.inrad.net/home.php), email: sales@inrad.net. An article covering SSB filter replacement was written by: WA8SAJ, and are located at: [http://www.wb4hfn.com](http://www.wb4hfn.com)

**R-4C FILTERS: (CW, SSB, & AM)**
1. *INTERNATIONAL RADIO (INRAD)*, 13620 Tyee Road, Umpqua, OR 97486, Phone: 1-541-459-5623, Web: [http://www.inrad.net/home.php](http://www.inrad.net/home.php), email: sales@inrad.netWeb: http://www.coulee.com/inrad/
2. *Noble Radio*, P.O. Box 509, Ridge, NY 11961, USA, e-mail: info@nobleradio.com, Web: [https://nobleradio.com/index.html](https://nobleradio.com/index.html)

**TR-7 FILTERS:** (8 POLE CW, SSB, & AM)
1. *Noble Radio*, P.O. Box 509, Ridge, NY 11961, USA, e-mail: info@nobleradio.com, Web: [https://nobleradio.com/index.html](https://nobleradio.com/index.html)

**TR-4C AM EXPERIMENTAL FILTERS:**
AM 9 mhz. filters Part # 1906 can be obtained from *International Crystal (INRAD)*, 13620 Tyee Road, Umpqua, OR 97486 phone#: 541-459-5623, Web: [http://www.inrad.net/home.php](http://www.inrad.net/home.php), email: sales@inrad.net An article covering AM filter replacement was written by WA8SAJ, and are located at: [http://www.wb4hfn.com](http://www.wb4hfn.com) See Jeff Covelli’ article in Electric Radio #147.

**MN-2700 Tuner Slide Switch Tips (Fender Telecaster “Barrel” Switch Tips):**
1. Amazon: Web: [https://www.amazon.com/Fender-Telecaster-Barrel-Switch-Tips/dp/B000B5L4E0/ref=asc_df_B000B5L4E0/?tag=hyprod-20&linkCode=df0&hvadid=312255370219&hvpos=1o2&hvnetw=g&hvrand=18033859714761813806&hvlocint=&hvlocphy=9015507&hvtargid=pla-461393603683&psc=1](https://www.amazon.com/Fender-Telecaster-Barrel-Switch-Tips/dp/B000B5L4E0/ref=asc_df_B000B5L4E0/?tag=hyprod-20&linkCode=df0&hvadid=312255370219&hvpos=1o2&hvnetw=g&hvrand=18033859714761813806&hvlocint=&hvlocphy=9015507&hvtargid=pla-461393603683&psc=1)

**MICROPHONE PLUGS, .206 INCH, STRAIGHT: (Switchcraft S-260)**
1. *Mouser Electronics*, Phone 800-346-6873, E-mail: SALES@MOUSER.COM, Part Number:502-S260, Web: [http://www.mouser.com/](http://www.mouser.com/)
2. *Nationwide Radio & Eq. Sales LLC*, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@newrr.com Phone: (920) 434-8097 Web: [http://www.ke9pq.com](http://www.ke9pq.com)

**MICROPHONE PLUGS, .206 INCH, RIGHT ANGLE: (Switchcraft S-230)**
4. *Nationwide Radio & Eq. Sales LLC*, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@newrr.com Phone: (920) 434-8097 Web: [http://www.ke9pq.com](http://www.ke9pq.com)
MICROPHONE PANEL JACK .210 INCH: (Switchcraft TRS)

**Elliott Electronics Supply**, Phone: 520-884-7394, WEB: https://www.elliottelectronicsupply.com/catalogsearch/result/?q=SWITCHCRAFT+TRS

ASTATIC D-104 MICROPHONE CRYSTAL CARTRIDGES:
- Astatic D-104 elements are no longer manufactured.
- **W2ENY HiFi Mic Element**: Robert Langston, 286 Hudson Street, Cornwall-on-Hudson, N.Y. 12520, Web: http://w2eny.com/D104UpgradeKit/
- **DX Engineering**, Heil HC-5.1 Microphone Element Conversion Kit, Part No: HC51RETROKIT, Phone: 800-777-0703, Web: http://www.dxengineering.com/parts/hls-hc51retrokit/

BURNISHING TOOL (Used to clean relay contacts):
3. **Newark**, Item: 50F5449, 50F5448, Web: www.newark.com
4. **Neuses Tools**, 1401 Rohling Rd., Rolling Meadows, IL 60008. Phone: 847-253-6555, Fax: 847-253-6652. Web: http://www.pkneuses.com/index.html (CB-5 Contact Burnisher with 6 (No.266B) .007” (.178mm) thick blades. (Included in the TK-18 Tool Kit. CB-54 Same as CB-5 except has 6 (No. 465B) .0035” (.089 mm) thick blades. CB-6 Same as CB-54 except also contains 6 (No. 266C) round ended abrasive rods. CB-7 Same as CB-5 except has 6 (No. 566B) smooth satin finished blades )

CONTACT CLEANER (DEOXIT D5):
- **Antique electronic supply**, 6221 S. Maple Ave, Tempe, AZ 85283, Phone 800-706-6789, E-mail: info@tubesandmore.com, Part Number: S-CDD5S-6, http://www.tubesandmore.com
- **CAIG Laboratories**, Inc., 12200 Thatcher Court, Poway, CA 92064, Part No. DN5S-6N, or the needle dispenser D100L Part No. D100L-25C Phone: 800-224-412, Email: caig123@caig.com, Web: http://www.caig.com/
- Amazon, Web: http://www.amazon.com/

AC3, AC4, SAFETY CAPACITORS FOR C11 & C12 .01UF:

AC3, AC4, POWER SUPPLY FILTER REPLACEMENT BOARD:
Mike Bryce, of the “TheHeathKitShop” makes a universal replacement kits for the AC-4 and AC-3. The Part number is: AC4r. You can obtain just the board if desired. Web: http://www.theheathkitshop.com

AC4, Step-Start:
Mike Bryce, of the “TheHeathKitShop”. The step-start comes fully assembled and tested. Web: http://www.theheathkitshop.com

AC3, AC4, POWER SUPPLY FILTER REPLACEMENT BOARDs:
1. **Harbach Electronics**, Jeff Weinberg - W8CQ, Phone: 419-945-2359, email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/
2. **Nationwide Radio & Eq. Sales LLC**, Mark Olson “President”, 1490 Norfield Rd, Suamico, WI. 54173, Email: ke9pq@new.rr.com, Phone: (920) 434-8097 Web: http://www.ke9pq.com
AC3, AC4, Power Supply Filter Replacement Board:

3. **Harbach Electronics**, Jeff Weinberg - W8CQ, Phone: 419-945-2359, email: info@harbachelectronics.com, Web: [http://www.HARBACHELECTRONICS.COM/](http://www.HARBACHELECTRONICS.COM/)

4. **Nationwide Radio & Eq. Sales LLC**, Mark Olson "President", 1490 Norfield Rd, Suamico, WI. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: [http://www.ke9pq.com](http://www.ke9pq.com)

R-4C Filter Capacitors:

1. **Hayseed Hamfest Co.**, e-mail: sales@hayseedhamfest.com Web: [http://www.hayseedhamfest.com](http://www.hayseedhamfest.com)

2. **Nationwide Radio & Eq. Sales LLC**, Mark Olson "President", 1490 Norfield Rd, Suamico, WI. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: [http://www.ke9pq.com](http://www.ke9pq.com)

Electrolytic Can Capacitors for 2B, 2C, R4 series, T4 series, TR-4 series:

1. **Hayseed Hamfest Co.**, Fredericksburg, Iowa. Hayseed Hamfest is your supplier of metal can-type and tubular electrolytic capacitors. e-mail: sales@hayseedhamfest.com Web: [http://www.hayseedhamfest.com](http://www.hayseedhamfest.com)

2. **Nationwide Radio & Eq. Sales LLC**, Mark Olson "President", 1490 Norfield Rd, Suamico, WI. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: [http://www.ke9pq.com](http://www.ke9pq.com)

R4B Crystal Calibrator:

**Semi Conductor Museum** [http://www.transistormuseum.com](http://www.transistormuseum.com) sells the IC1 and IC2 UL923 IC’s that are used on the Crystal Calibrator PCB. Email, transistormuseum@aol.com to determine payments options (Paypal or Check) [http://semiconductormuseum.com/MuseumStore/MuseumStore_Fairchild_923_Index.htm](http://semiconductormuseum.com/MuseumStore/MuseumStore_Fairchild_923_Index.htm)

Crystal Calibrator, 2A, 2B, 2C:

**Nationwide Radio & Eq. Sales LLC**, Mark Olson "President", 1490 Norfield Rd, Suamico, WI. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: [http://www.ke9pq.com](http://www.ke9pq.com)

Crystal Calibrator, 2A, 2B, 2C, R4B:

**TheHeathKitShop** Mike Bryce, makes a universal calibrator kit that will work with any receiver, including the 2A, 2B, 2C, R4B, etc., receiver. It’s a 100kHz and 25 kHz and you can pulse the marker on and off to find it on a busy band. Web: [http://www.theheathkitshop.com](http://www.theheathkitshop.com)

Amplifier Interface UKA-2:

1. **HamGadgets.com**, Dale Botkin, 16624 Elm St., Omaha, NE 68130-1826 [http://www.hamgadgets.com](http://www.hamgadgets.com) Use this to key *nearly any* solid state, grid-block or even cathode keyed rig transmitter, transceiver or amplifier. This totally silent solid state relay is rated for a whopping **400V DC**, at 400 mA! Use it to key your tube amp from a solid state rig, or keep that high voltage off your straight key - no more getting zapped when you accidentally touch the wrong part of the key!

2. **TheHeathKitShop**, Mike Bryce, keying interface for the drake L4. Instead of your radio seeing 30 volts at 75 ma, with this interface, it will see 12 volt at 5 ma An optical coupler connected the radio to the amp. Two LED’s for instant verification of operation. The operation is totally automatic and is transparent to the operator. NO holes are drilled. Preassembled wiring harness simply plugs into the assembled PCB. You need to solder four wires, and remount a diode (included) onto a new terminal strip (included) a heavy 1.5A relay does the labor.

Web: [http://www.theheathkitshop.com](http://www.theheathkitshop.com)
L4 / L4B SOFT-KEY PCB KIT W8CQ:

Harbach Electronics, Jeff Weinberg - W8CQ, Phone: 419-945-2359, email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/

The ES4L4-B is a combination soft-start/soft-key/bias board for the L4-B amplifier. This all-in-one board limits inrush current during amplifier start-up by placing a small resistive load in series with the AC mains. The load resistor is switched out of the circuit by a relay approximately 2.5 seconds after power-on. It also features a opto-isolated soft-key circuit that reduces the voltage on the keying line to 12 VDC at less than 10 mA current that is also interlocked with the soft-start.

L4B REPAIR Youtube Videos:
Amp Repair Guy, https://www.youtube.com/channel/UCLWPeYFn8Hy6WaCSB3e5arw/videos

REMOTE CABLE STRAIN RELIEF:

Harbach Electronics, Jeff Weinberg - W8CQ, Phone: 419-945-2359, email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/

The SRB-400 is a direct replacement for the original strain relief bushing for the Drake L-4/L-4B/L-7 power supply AC cord (flat). The SRB-401 is a direct replacement for the Drake L-4/L-4B/L-7 power supply remote RF deck multi-conductor cable (round).

L4B Blower Wheel Replacement:

L4 - 3-500z GLASS CHIMNEYS & CHIMNEY CLIPS:
- Colman, You can also use Colman’s lantern globes for their propane gas lanterns, part number R214D046C. If shopping at your local sports store, the box has a UPC number of 20071213 and on the globe itself is No. 277C043 3009. Web: http://www.colman.com/coleman/parts/Productimage2.asp?product_id=globe Phone: 800-835-3278, Email: consumerservice@coleman.com.

L4 / L4B PILOT LIGHTS:
4. Nationwide Radio & Eq. Sales LLC, Mark Olson "President", Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

L4 / L4B BEADED CHAIN:
1. Fix My Blinds, Size #10, Bead Spacing 6mm, Bead Diameter 3/16, Email: service@fixmyblinds.com , Web: https://fixmyblinds.com/collections/ bead-chain-size-10/products/plastic-bead-chain-cut-length-size-10-6mm-spacing
L4 / L7 AMPLIFIER CAPACITORS: ( 200 mfd @ 450 VDC )
Axial leads are impossible to find as direct replacements. You will need to get the snap mount variety, or screw lug type and solder appropriated leads to match installation.

1. **Harbach Electronics**, Jeff Weinberg - W8CQ, Phone: 419-945-2359, Par No.: CAP-111, 220mF 450VDC COMPUTER GRADE  email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/


L75 AMPLIFIER CAPACITORS: ( 100 mfd @ 450 VDC )

1. **Newark Electronics**, Part#: 30K6603 (100uf) Part#: 79K3635 (100uf), Phone 800-346-6873, http://www.mouser.com/

2. **Mouser Electronics**, Part#: 75-TVA1718-E3 (100uf), Phone 800-346-6873, https://www.mouser.com/Search/Refine?Keyword=100uf+450v

L4 / L7 HIGH VOLTAGE REPLACEMENT POWER SUPPLY PCB :

1. **Mike Bryce**, of the “HeathKitShop” This handheld PCB assembly will put new life into your old Drake L4 amplifier. Comes in kit form, but an assembled pcb is available.. Web: http://www.theheathkitshop.com

2. **Harbach Electronics**, Jeff Weinberg - W8CQ, Phone: 419-945-2359, Par No.: PM-400 L-4/B/7 POWER SUPPLY. email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/

L4 / L4B / L7 HV SAFETY RESISTOR:
**Harbach Electronics**, Jeff Weinberg - W8CQ, Phone: 419-945-2359, email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/ The RES-400 is a direct replacement for the original IRC SPH-style safety resistors used in the L-4/L-4B/L-7 remote power supply. These resistors are designed to open under conditions of high plate current draw from the power supply (tube arch or power supply short) to protect expense tubes and power supply components.

L4 / L4B / L7 JACKSON BROTHERS REDUCTION DRIVE:
- **Mainline Electronics Ltd.**, 190 Little Glen Road, Glen, parva, Leicester LE2 9TT Email: julie@mainline-group.com  Web: https://www.mainline-group.com/
- **Oren Elliott Products, Inc.** P.O. Box 638, Edgerton, OH 43517 PH: 419-298-2306 Fax: 419-298-3545, Web: http://www.orenelliottproducts.com/purchase-planetary-reduction-drive/bd602-reduction-drive-6-1-ratio-no-dial-flange, e-mail: sales@orenelliottproducts.com
- **MGS Max** Gain Systems, INC. 150 Dodd Street SE, Marietta, GA 30060, Phone: 770-973-6251 email: info@mgs4u.com  Web: https://mgs4u.com/product/vernier-reduction-drive-14-inch-to-14-inch/?gclid=EAIaIQobChMImanMroqU6wIVg8DACH1uVATAEAQYAiABEgK6KfD_BwE&v=7516fd43adaa

L4 / L4B / L7 REPLACEMENT 50k 50 W BIAS RESISTOR:
- **RF Parts**, Phone: 800-737-2787, email: rfp@rfparts.com, Web: http://www.RFPARTS.COM Part: FST05006E50K00JE Description : FST50-06E-50K Fixed Wirewound Resistor, Silicone coated, 50k ohm 50watt, 5%, MFR: Vishay / HEI
- **Mouser Electronics**, Phone: 800-346-6873, email: sales@mouser.com, Web: http://www.MOUER.COM/, Part #: 588-L50J50KE, Description: Wirewound Resistors - Chassis Mount 50watt 50K 5% High Power
**L4 / L4B / L7 REPLACEMENT 5K 10W RESISTOR:**

Harbach Electronics, Jeff Weinberg - W8CQ, Phone: 419-945-2359, email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/ The RES-407 is a replacement for the 5KΩ 7W resistor in the power supply. The new resistor is rated at 10W instead of the original 7W.

**L4B Door Knob Capacitor Set:**

Nationwide Radio & Eq. Sales LLC, Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com

**T4X/B PLUG-IN RELAY ADAPTER KIT:**

Harbach Electronics, Jeff Weinberg - W8CQ, Phone: 419-945-2359, email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/ The RA-160 is a plug-in relay adapter kit for the Drake T4X and T4XB transmitter. The kit allows you to replace the original chassis-mounted relay (no longer available) with a new plug-in style relay. The kit consists of an adapter PC board, relay socket, new plug-in relay, relay clip, hardware, terminal strip, hookup wire, spaghetti tubing and a complete set of step-by-step instructions.

**TR 3/4 PLUG-IN RELAY ADAPTER KIT:**

Harbach Electronics, Jeff Weinberg - W8CQ, Phone: 419-945-2359, email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/ The RA-150 is a plug-in relay adapter kit for the Drake TR-3 and TR-4 transceivers. The kit allows you to replace the original chassis-mounted relay (no longer available) with a new plug-in style relay. The kit consists of an adapter PC board, relay socket, new plug-in relay, relay clip, hookup wire, spaghetti tubing and a complete set of step-by-step instructions.

**L4 / L4B / L7 QSK BOARD KIT W8ZR:**

Harbach Electronics, Jeff Weinberg - W8CQ, The QSK Amplifier Controller is a build-it-yourself QSK controller that can be retrofitted into most existing linear amplifiers and for incorporating QSK T/R switching into a homebrew amplifier. Phone: 419-945-2359, email: info@harbachelectronics.com, Web: http://www.HARBACHELECTRONICS.COM/

**CRYSTALS:**

1. **2B, 4 Line Twins & TR-4 Crystals:**  Kevin Kampman, Springfield, OH, Email: k8kvn.oh@gmail.com. Phone: 937-470-4048 (Purchased remainder of WA8SAJ’s Inventory)
2. **AF4K Crystals:** (New Mgmt), Email: orders@af4k-crystals.com, Web: https://yhst-172765969-1.stores.yahoo.net/replacement-crystals.html
3. **Nationwide Radio & Eq. Sales LLC,** Mark Olson "President", 1490 Norfield Rd, Suamico, Wi. 54173, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: http://www.ke9pq.com
4. **Bomar Crystals,** Phone: 1-800-526-3935 email: WWW.sales@bomarcrystal.com, Web: http://bomarcrystal.com/crystals.html
5. **QuartSLab,** 68 London Road, Dunton Green, Sevenoaks, Kent, TN13 2UG, United Kingdom Email: sales2@quartslab.com, Web Site: http://www.quartslab.com/ Phone: Tel from United Kingdom 020 7100 6357, Tel International: +44 20 7100 6357
6. **Crystal Supplier (Czech Republic):** krystaly@krystaly.cz, Krystaly, Hradec Kralove A.S., Okruzunzni 1144 500 03 Hardec Kralove, Czech Republic, Web: http://www.krystaly.cz/en/Products/Crystals
7. **QRP Labs,** ProgRock - triple GPS-disciplined programmable crystal. It is intended as a programmable crystal replacement. It has three independent outputs with frequency range 3.5kHz to approx 300MHz, and can be optionally GPS disciplined. Web: https://www.qrp-labs.com/ progrock.html

**DRAKE 9.000mhz CRYSTAL SPECIFICATIONS:**

+/- 0.003% Freq. tol., Parallel Resonant, 20pf load cap., HC-32/U wire leads, Hermetic seal.
**METER REPAIR:**

Meters for Drake equipment are no longer available. The following sources will repair meters.

<table>
<thead>
<tr>
<th><strong>Standard Meter Labs</strong></th>
<th><strong>Charles Jobs</strong></th>
<th><strong>Eldad Benary</strong></th>
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</thead>
<tbody>
<tr>
<td>Phone: (925) 449-0220</td>
<td>Phone: (828) 891-4355</td>
<td>Phone: (845) 246-2466</td>
</tr>
<tr>
<td>236 Rickenbacker Circle</td>
<td>125 Denmar Lane</td>
<td>129 George Sickle Rd</td>
</tr>
<tr>
<td>Livermore CA 94550</td>
<td>Hendersonville NC 28791</td>
<td>Saugerties, NY 12477</td>
</tr>
</tbody>
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**Industrial Instrument Works**

**Larson Metercraft, Inc.**

Phone: 800-435-2254
5745 Salmen Ave.
New Orleans, LA 70123
Phone: 619-258-8990 [http://www.larsonmetercraft.com](http://www.larsonmetercraft.com)

**NEW & REWINDING:**

Newly manufactured and rebuilt transformers for many radios and audio equipment. Custom transformers and rewinding - including power, plate, bias, filament, modulation, output and audio transformers, power supply chokes. Rewinds are warranted for one year for manufacturing defects.

- **HEYBOAR TRANSFORMERS** – Michigan, 17382 Hayes St., Grand Haven, Michigan 49417, Phone: 616 - 842-5830
  Web: [http://heyboertransformers.com/](http://heyboertransformers.com/)

- **Quality Transformer and Electronics** – Northern California, 963 Ames Avenue, Milpitas, CA 95035 Phone: 408 – 263-8444 Web: [www.qte.com/](http://www.qte.com/)

- **Peter Dahl Transformer** - Phone:716-630-7030, Web: [http://www.pwdahl.com/PWDnews.html](http://www.pwdahl.com/PWDnews.html)

- **Hammond Manufacturing**, 475 Cayuga Rd, Cheektowaga, NY 14225, Phone: (716) 630-7030, WEB: [https://www.hammfg.com/electronics/transformers/power](https://www.hammfg.com/electronics/transformers/power)


**W4 WATTMETER CONVERSION TO A PEAK READING METER:**

1. **Hi-RES Communications** offers the famous PDC-1 kit to convert ANY Average Reading wattmeter to true Peak Reading! Other kits will join the PDC-1 in our kit line soon! HI-RES Communications, Inc., 8232 Woodview Dr., Clarkston, MI 48348-4058 USA, E-mail orders: orders@hi-rescom.com, Phone: (248) 391-6660 Web: [http://hi-rescom.com/html/pdc-1.html](http://hi-rescom.com/html/pdc-1.html)

2. **K4DPK**, PEP Adapter: The Universal PEP circuit board makes about any wattmeter read PEAK ENVELOPE POWER. Works in Bird, Drake, Daiwa, Heathkit, Collins, Swan, Coaxial Dynamics and most others, even in tuners. Quick and easy to install. Meter rises immediately to your Peak Power, and you can adjust the meter "Hang Time". Universal Model is $35 shipped US48 Wired and tested. New Deluxe Model PEP Conversion for the W-4 and WH-7 wattmeters! Includes the PEP adapter mounted on an aluminum plate with switch and connector, wired and tested, shown in picture $55 shipped CONUS.: Phil Chambley, Sr., 28 East Camelia Rd. NE Rome, GA 30161 Email: k4dpk@comcast.net

**TR4 VFO Stabilizer:**

1. **K4DPK**, -The free running VFO's in old or vintage rigs are subject to frequency drift due to temperature variations. Whilst the Drake 4 line Permeability Tuned Oscillator (PTO) is generally very stable for an LC circuit, it still drifts several hundred hertz during a two hour net. To cure this drift, you might want to consider a VFO Stabilizer. Phil Chambley, Sr., 28 East Camelia Rd. NE Rome, GA 30161 Email: k4dpk@comcast.net  Web Page: N/A

2. **Elcon** –3510 Konolfingen, Switzerland, Model: EL-34, Web: [https://shop.elcon.ch/yaesu/universal-fl-vfo-stabilizer-el-34-2.htm](https://shop.elcon.ch/yaesu/universal-fl-vfo-stabilizer-el-34-2.htm)
TUBES:

1. **Vacuum Tubes.net**, 20323 North Hwy 121, PO Box 433, La Crosse, FL 32658  
   Phone: 800-326-4140, Email: sales@vacuumtubes.net, Web: [http://vacuumtubes.net](http://vacuumtubes.net)

2. **W9TEW Tube Sales**, Bob Bieker, 9528 Farmer Dr., Highland, IN 46322 Phone: 219-924-0945, Email: [www.hamtubes.com](http://www.hamtubes.com)

3. **Tube Depot**, 1958 Vanderhorn Drive, Memphis, TN 38134 Phone: Phone: 877-289-7994, Web: [https://tubedepot.com/](https://tubedepot.com/)


6. **SND Tube Sales**, Phone 636-939-9190, Fax 636-922-0601, E-mail: sndtubes@vacuumtubes.com Web: [http://www.vacuumtubesinc.com/](http://www.vacuumtubesinc.com)


8. **Antique electronic supply**, Phone 800-706-6789, E-mail: info@tubesandmore.com Web: [http://www.tubesandmore.com](http://www.tubesandmore.com)

9. **RF Parts** – San Marcos, California, Email: [Terry@rfparts.com](mailto:Terry@rfparts.com), 435 South Pacific Street, San Marcos, California 92078, Phone: (800) 737-2787, 760 – 744-0700 Web: [http://www.rfparts.com](http://www.rfparts.com)

10. **Nationwide Radio & Eq. Sales LLC**, Email: ke9pq@new.rr.com Phone: (920) 434-8097 Web: [http://www.ke9pq.com](http://www.ke9pq.com)

TR-7 ANTENNA RELAY:

1. **Mouser Electronics**, Part Number 655-R10-E1Y4-V185, Phone 800-346-6873, [http://www.mouser.com](http://www.mouser.com)


TR-7 PIN DIODES (MPN3404 & (UM9401 OR MA4P 1200 ) :


Phone: 888-737-2787.

TR-7 Power Supply Control Card:

"HeathkitShop" This is a brand new replacement for the power supply/control board. It is a drop in replacement. All the voltages have been preset. The +10 V has been set as well as current tested at 1 A. New 2N5986 pass transistor is used as well as new LM7805 regulator. Even the plug-in MOLEX connector is new. The wattage of some resistors have been increased from 1/2 W to 1 W. Web: [http://www.theheathkitshop.com](http://www.theheathkitshop.com)

TR-7, SP-7, L-7 PLASTIC END CAPS:

**March Magnetic Paddles**, These are direct replacements for the plastic end caps that are located on both the right and left side of the front panels. Michael March, K4QU, 242 Clay Hill Dr., Winchester, VA 22602, Email: miek4qu@gmail.com, Phone: 540-662-4279, Web: [https://sites.google.com/view/march-magnetic-paddles/home](https://sites.google.com/view/march-magnetic-paddles/home)
TR-7 SERVICE KIT EXTENDER CARDS:  
Mike Bryce, of the “HeathKitShop” This extension board set will allow you to troubleshoot the top boards in your TR-7. It’s almost impossible to do work on this radio without some means of getting to the various boards. This set works on the TOP boards only. The bottom set is on the drawing board. Instead of building each board like the original Drake extensions, these extension boards are specific to each plug in circuit board. This handheld PCB assembly will put new life into your old Drake L4 amplifier. Comes in kit form, but an assembled PCB is available.  
Web: [http://www.theheathkitshop.com](http://www.theheathkitshop.com)

TR-7 / PS-7 FAN Replacement:  
ROTRON Sprite Model SU2C1 115V AC Muffin Fan, Length: 3 1/8" Width: 3 1/8"  
[https://www.amazon.com/Rotron-SU2C1-Sprite-115V-0-07A/dp/B00OPH7HJ6](https://www.amazon.com/Rotron-SU2C1-Sprite-115V-0-07A/dp/B00OPH7HJ6)  
AC Infinity AXIAL 8038 or 8025, Quiet Muffin Fan, 120V AC 80mm x 38mm Low Speed, UL-Certified. Amazon sells these: [https://www.amazon.com/AC-Infinity-Cooling-Ventilation-Projects/dp/B009OXSFBAB/ref=sr_1_3?dchild=1&keywords=Infinity+axial+8025+fan&qid=1620866130&sr=8-3](https://www.amazon.com/AC-Infinity-Cooling-Ventilation-Projects/dp/B009OXSFBAB/ref=sr_1_3?dchild=1&keywords=Infinity+axial+8025+fan&qid=1620866130&sr=8-3)

Communication Concepts, Inc., 508 Millstone Dr., Beavercreek, Oh., 45434-5840  
MRF421MP TR7(A) final output transistors, the MP on the end of the part number means “Match Pair”.  
MRF455MP TR5 final transistors  
2SC2879 or 2SC2879A TR7(A) final transistors. No longer available  
MRF475MP TR7(A) amplifier driver transistors.

TR7 / R-7 REPLACEMENT DISPLAY:  
For orders in the US and Canada contact,  
Jim Pruitt - WA7DUY, 1916 Tolman Rd., Ellensburg, WA 98926., USA.  
E-mail: wa7duy@charter.net, to: [http://www.df4nw.de](http://www.df4nw.de), Willi Rass, Richard-Strauss-Str. 56, D-91315 Hoechstadt, Germany. Phone: +49-9193-1826, E-mail: willibald.rass@t-online.de

TR7 Pre-Amplifier:  
[http://www.df4nw.de/44.html](http://www.df4nw.de/44.html)  
A simple Pre-Amplifier for the TR-7 to improve receiver sensitivity on the higher short wave bands. Gain: ~ 15 db, Frequency range: 1 to 30 MHz, Size (HWL): 14x48x58 mm  
For orders in the US and Canada contact, Jim Pruitt - WA7DUY, 1916 Tolman Rd., Ellensburg, WA 98926., USA. E-mail: wa7duy@charter.net, to: [http://www.df4nw.de](http://www.df4nw.de), Willi Rass, Richard-Strauss-Str. 56, D-91315 Hoechstadt, Germany. Phone: +49-9193-1826, E-mail: willibald.rass@t-online.de
**Misc. Items of Interest:**

**INRUSH CURRENT LIMITERS**
How to protect old electronics using these devices in series with the AC power line to give a "soft-start" when powering up, protecting filaments, bulbs, transformers, etc.

Amphenol CL-90 - Mouser Part #527-CL90 inrush current limiter 2A 120ohm. Good for radios that draw 50-200W from the AC line.
https://www.mouser.com/ProductDetail/Amphenol-Advanced-Sensors/CL-90?qs=sGAEpIMZZMuqZeNK75brD%2FrjMwDFP8q44mfeB5jiKPE%3D

Amphenol CL-80 - Mouser Part #527-CL80 inrush current limiter 3A 47ohm. Good for radios that draw 150-400W from the AC line.
https://www.mouser.com/ProductDetail/Amphenol-Advanced-Sensors/CL-80?qs=sGAEpIMZZMuqZeNK75brD%2FrjMwDFP8q41yDjpP0Kskl%3D

Amphenol CL-70 - Mouser Part #527-CL70 inrush current limiter 4A 16ohm. Good for radios and transmitters that draw 300-600W from the AC line.
https://www.mouser.com/ProductDetail/Amphenol-Advanced-Sensors/CL-70?qs=sGAEpIMZZMuqZeNK75brD%2FrjMwDFP8q4RH7wnG9KSE8%3D

Amphenol CL-60 - Mouser Part #527-CL60 inrush current limiter 5A 10ohm. Good for radios and transmitters that draw 450-700W from the AC line.
https://www.mouser.com/ProductDetail/Amphenol-Advanced-Sensors/CL-60?qs=sGAEpIMZZMuqZeNK75brD%2FrjMwDFP8g4OlkeLoshPUk%3D

**VARISTORS**
These devices in parallel with the primary of power transformers are used to "snub" out spikes in AC voltages. When powering down a radio or transmitter, the collapsing magnetic field in the power transformer, with it's primary now an open circuit, can develop several thousand volts, potentially damaging the transformer winding insulation causing shorted turns. Or, more commonly, creating an arc in the power switch, eroding the contacts. They also protect a transformer from high AC line voltage spikes.

Littlefuse V150LA20AP Varistors - Mouser Part #576-V150LA20AP varistor 150VAC. Good for radios and transmitters that draw 450-700W from the AC line.
https://www.mouser.com/ProductDetail/Littelfuse/V150LA20AP?qs=sGAEpIMZZMuQmL5N8lqpx7FeRK4mwJ%252B3nkm7f4odzzo%3D

**RFI SAFETY CAPACITORS**
These capacitors fail-safe in the open mode compared to the older capacitors that fail shorted. https://www.mouser.com/new/vishay/vishay-safety-caps-resistors/

https://www.mouser.com/ProductDetail/Vishay-BC-Components/AY2472M49Y5US63L7?qs=TLSWro6K1ZB47iRZMX68Pg%3D%3D
RFI SAFETY CAPACITORS
These capacitors fail-safe in the open mode compared to the older capacitors that fail shorted. [https://www.mouser.com/new/vishay/vishay-safety-caps-resistors/](https://www.mouser.com/new/vishay/vishay-safety-caps-resistors/)


Radio Repairs:
Steve Wedge, W1ES/4, Phone: 1-919-638-1428  E-Mail: w1es@arrl.net
John Kriner, KA8GSP, Phone: 513-422-9059, Email: jkriner@cinci.rr.com  (Limiting repairs to R8’s)
T&T Repair, 630 Copano Cove Rd., Rockport, TX 78382, 1-800-687-9161  E-Mail: ltaft@2fords.net