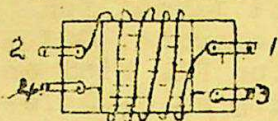


- MRL -

18 DIFFERENT CRYSTAL SET CIRCUITS (Revised 11-40)

BP-17

MRL QRM COIL.



Use our 1XM celluloid forms or a Bakelite tube 1" in dia. x 1-7/8" long.

Drill 2 small holes in each end for Eyelet lugs

Wind 110 Ts #32 Enam. wire, and secure by painting with MRL LOW-LOSS LIGHT COIL CEMENT.

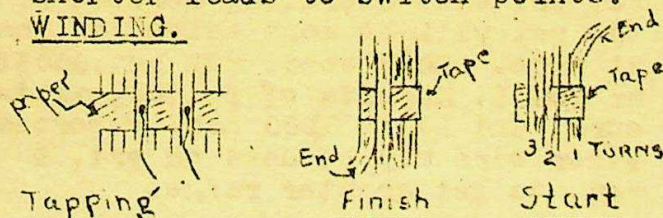
Then, over this, space-wind 15 Ts #24 DCC arranging it neatly. Then paint again. We usually cement a strip of paper over last winding to make marks on. It is better to buy your QRM coil from us, as we make many up at once, and have a machine for winding fine wire.

wind 2nd turn over flap to hold. Continue winding, holding handkerchief so wire runs thru it to keep clean. When making taps cut pc. of wrapping paper 1" wide and let it drop under each "tapped" turn as U wind. At end of winding, leave 6" for loose end. Holding coil firmly, unwind last turn. Make loop from other pc. of tape and pass the next to last turn over this flap of tape. Pass the last turn around again & thru the loop. Cinch tape and wire up firmly. Take 1" pc. of Celluloid (Scotch) tape and secure flap down to make a neat job. Cement edges of winding ONLY with Coil cement. See our literature for other sizes of Coil forms.

MRL TYPE 2XM CELLULOID COIL FORMS.

These are specified in most MRL Xtal circuits. They may also be used for winding Transmitter coils Made from 15/1000" celluloid, 2" in dia. x 4 1/2" long. Engineers have long stressed the low-loss properties of Celluloid, due mostly to its thin wall, which does not add dielectric losses encountered in fibre, Bakelite, etc. Re-inforced at each end with fibre rings, which may bend but not break. May be wound with up to #14 Enam. wire without buckling. The end with a small ring is considered the "hot" end, and this is the starting pt. of all windings. A bracket and a bottle of Coil cement is furnished with each form. If desiring to mt. parallel to panel, use a long fh-screw and 3 nuts to hold it away from panel. This usually makes shorter leads to switch points.

WINDING.



Take 2 pcs. of Friction tape 1" long. Loop one around starting wire, leaving 6" of loose end. Hold tape flap over the seam and

MRL TYPE P2XM CELL. COIL FORMS.

Same as 2XM except 2" long instead of 4 1/2". Furn. with bottle cement

MRL TYPE 1XM CELL. COIL FORMS.

Designed for QRM coils, or for making Midget BC coils. Same dimensions. 1" dia. x 1-7/8" long. With

MRL LOW-LOSS LIGHT COIL CEMENT.

Will not cause loss at any freq. in Radio cir. Dries about 1/2 hr. Transparent when dry. Holds wires in place.

MRL DETAIL PRINTS. (DPs) 5¢; 6/25¢; 15/50¢. Add 2¢ post. per bunch.

Give more details of each cir. Essential if building cir. Latest kinks, variations of cir., etc. Reproduced on 20# white paper. Necessary for any radio library, or Experimenter's Laboratory.

MRL BIG PLANS (BPs). 25¢ Each

Add 2¢ post. per bunch. Usually 6 or more pages of "hot" dope, giving all details, etc. or as much as possible. Not to be confused with other's plans with very SCANT details.

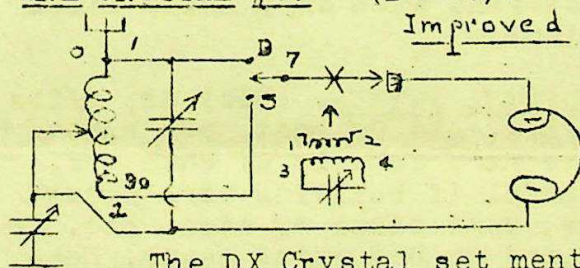
MRL CRYSTAL #1.. (DP-26)

This is the set that started us in the Mail/ order biz.

We were so surprised at its performance, we figured others would be glad to have it. Over 1" of reports, running to 2000 miles on phones and 500 on a magnetic speaker at night under good conditions.

Wind QRM coil (p.1) or purchase from us, - for 1-2-3-4 on circuit. Wind on 2XM form (p.1) 75 Ts #22 DCC wire, tapping same at 3-6-9-12-15-20-25-30-35-40-45-50 (12 places). (See WINDING, p.1). Cond. 5-6 & 10-11 may be .00035 or .0005. Fixed Cond. 7-8 is usually .002, mica, altho .0001 to .01 may be used. Higher cap. the broader the tuning. Mount QRM Coil at right angles to Coil 8-9. May be mounted on end of coil if desired. MRL Steel Galena Crystal is best.

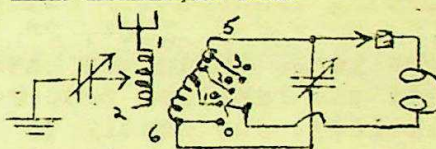
Tune station not wanted - OUT at 5-6 Cond. Leave it set, and tune balance of set with 10-11 Cond. - adjusting switch & Xtal for best response. DP-26 has a pictorial diagram & Cabinet layout, in addition to details, etc.

MRL CRYSTAL #2.. (DP-22).

The DX Crystal set mentioned in our ads, and praised by MRL and FANS since 1933. Old customers are long familiar with this cir.. For newcomers, we find it the best DX Xtal cir. you ever used. Easy to build. Very selective - controlled by switch (7). A new addition has just been made - of adding a QRM coil and cond. between 7 and Xtal (X). This is not usually necessary, unless across the street

from a hi-power station. Some stns. have a strong ground wave which causes them to spread on some sets. The switch (added last year) has taken care of selectivity.

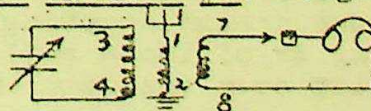
DP-22 gives correct layout for panel, etc. Easy to operate. COIL: 2XM form ESSENTIAL for DX. Wind on 90 Ts #22 DCC, tapping at 5-10-16-23-31-40-50-61-73-90. Both cond. in cir. are .00035 (or .0005). New are preferred. Be sure to use new spdt switch at 7, or set may tune broadly due to leakage across it. MRL Steel Galena essential. Ground cond. may be bent on the rotor plate tip to short out when closed if desired. Aerial of 50' in cities or 100' or more in country seems most popular. Short ground is best. If on a 2nd floor, you may use a ground wire around baseboard - not hooked to a pipe - for sharp tuning. Over 4800 miles reported several times. We have over 4" of testimonials on this set - & more coming in.

MRL CRYSTAL #3. Selecto-dyne. DP-64

While this set was designed for old-time

spider-web coils, it is better to use a loose-coupler, as there is less loss in the coils. However, a basket-wound coil set may be used if desired, as characteristics are the same as for single layer coil. DP-64 shows how to wind both basket and spiderweb coils, & layouts.

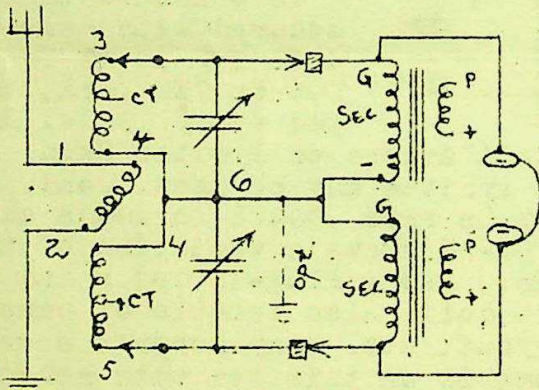
Tap primary every 10 Ts and sec. at 0-10-20-30 and bring flexible leads out rear of coupler thru a hole. Flex. leads may be made from old phone cords. A large primary of say 100 Ts with taps will tune better. When operating sec. at 30 the set will be more selective than at zero. Both cond. may be .00035 or .0005. Reports of police, amateurs, and DX to 1000 mls. reported. Finer wire may be used on pri. & sec. to get greater range.

MRL CRYSTAL #4. Single dial (DP-58)

Cir. developed for ship use by the old German Telefunken Co. May be made single dial. DP-58 shows method of making this set play police, by addition of a spdt switch. Also addition of a loading coil. A QRM Coil may be added to primary if desired. Uses the absorption method of tuning whereby unwanted stations are 'frozen' out. Supposed to be a local set, but we have reports of 1500 miles on it. Used with about 100' of antenna, or less.

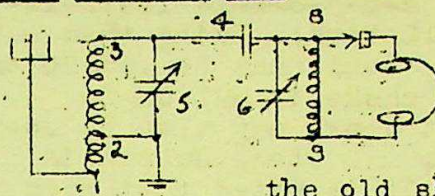
On MRL 2XM form, wind and secure 75 Ts #22 DCC wire (3-4). Then, place pc. of wrapping paper over this. Wind 7-8 of 20 Ts #22 DCC & secure. Paint end of windings with cement. Over this another pc. paper. Wind 1-2 of 10 Ts #22 DCC & secure. Mark #s near each lead to distinguish them. Cond. is .00035 or .0005 MRL Steel Galena or Iron Pyrites. A fixed pyrites may be used for local reception if desired.

MRL CRYSTAL # 5 . Double. (DP-32)



Many Fans have tried to make 2 Xtals work together, but, without success. By using crystals reversed as shown, it can be done. We have reports of this set receiving across the Atlantic from East Coast. We suggest using 2 2XM forms raised above a baseboard, placed end to end, so the primary (1-2) rotor may swing between them. This varies the selectivity. 2 var. cond. may be .00035 or .0005. Use secondaries (G & -) of 2 audio transformers as audio chokes as shown. Taps on the 75 Ts #22 may be made every 25 Ts or, on the 35th Turn for SW. Make each coil identical. Be sure to reverse crystals. 2 Cond. may be ganged if desired, -frame connection at 6. DP-32 shows all details.

MRL CRYSTAL #6. (DP-62)

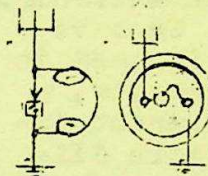


A variation of this cir. was used in some of

the old ship-board installations. It may also be used ahead of a large Radio for increasing the selectivity of tuning.

Use 2XM forms. Coil 1-2-3 is 110 Ts #22 DCC, tapped at 20 Ts for 2. Cement edges. For coil 8-9 wind 90 Ts #22 DCC and cement. Taps may be made on secondaries if desired. Both Cond. 5 & 6 are .00035 or .0005. Fixed tubular cond. is .1 (4), paper bypass. MRL Steel galena is recommended, altho Pyrites is OK. DP-62 gives further details.

MRL CRYSTAL #7. Pocket Radio (DP-33)



A Pocket Radio that is very simple to build.

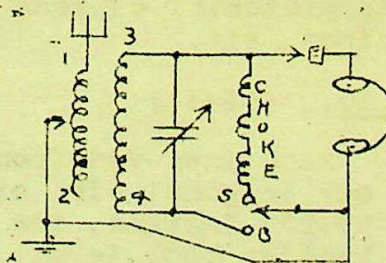
When used near a station, it will come in the loudest. DP-33

shows a tuning system for this set, so other stations may be tuned in. Also shows #19 Pocket radio; #32 Pencil set, etc.

Iron Pyrites Xtal may be placed inside the headphone, if enough room. Be sure to insulate it well with pc. of tissue paper. We prefer placing it across terminals of phone on the outside, so adjustments may be made easier.

A longer or shorter Ant. will change station tuning. Surprisingly, we have reports of over 500 miles with this 'rig.' Tuning is an essential requisite of this set.

MRL CRYSTAL # 8. (DP-23).



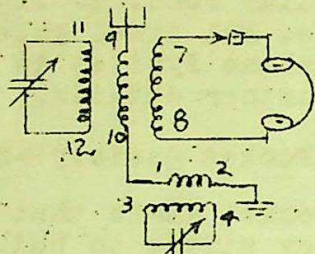
Using a 2XM form, wind on 70 Ts #22 DCC. Over this, a pc. of heavy wrapping paper. Then, space-wind 20 Ts #22 DCC - arran-

ging it neatly. Cement down to avoid slipping around. When dry, scrape the turns - alternating back and forth so wires won't in-

interfere with each other. Solder taps on at 4-6-7-8-9-10-11-12-14-16-18-20 (12 taps). Bring them out to Sw. pts. Cond. may be .00035 or .0005. The choke is MRL CH-2½. A Broadcast choke may also be used if desired. MRL Steel Galena is preferred. It is noted that when sw. is on choke it is more selective than when on cond.

DP-23 shows pictorial diagram & also cabinet layout, panel & rear-panel wiring. This set was originated by us for a more selective Xtal set. Reports over 1850 miles.

MRL CRYSTAL #9. (DP-24).



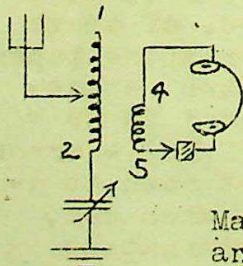
This is similar to #4 set, except the QRM in the ground cir. It may be used in the Ant. cir. also. We have seen it used in

both Ant. and Ground circuits, each QRM tuned to a different interfering station! A little different winding is used than #4. On 2XM form wind 11-12 of 75 Ts #22 DCC and secure. Over this, wind a pc. of wrapping paper. Then, 7-8 coil of 30 Ts #22 DCC and secure. More paper, and then 9-10 of 15 Ts #22 DCC and secure. Mark ends of wire on paper to identify when ur hooking up. Both cond. are .00035 or .0005 mfd. Any layout is Okeh.

When tuning, find your most interfering station, and set 5-6 on this and leave it. Then, tune bal. of set by cond. 13-14. Around S.F. we usually play 14 stns. with this set. We also have reports of over 1750 miles.

DP-24 shows details of layout of parts on panel; pictorial diagram of wiring, cabinet, etc.

MRL CRYSTAL #10. (DP-34)



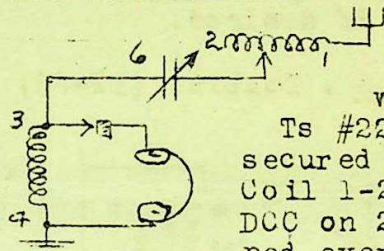
Much improved from our original cir. on BP#17. Instead, the loading coil is all contained in the original primary coil. Many reports of 1000 mls and over, with Police, Amateurs, etc. logged.

It tunes fairly sharp. In the far country it is a 'whiz.' It has a 'wollup' when hitting a DX station. On 2XM form, wind 40 Ts #22 DCC. Over this, a piece of wrapping paper, and secure. Then, start winding 160 Ts #28 DCC, tapping at 20-60-100 and 160. Other taps may be made if cond. is less than .00035. Be sure to connect crystal as shown. Pointer is always cat-whis.

This is a simple set to work - having only a switch & Cond. and Xtal to operate from panel. The secondary tunes aperiodically. If desired, a loose-coupler may be used - wound with finer wire - & tapped, say, every 25 Ts. The sec. may be varied, but we prefer the close coupling as shown ..

DP-34 shows panel layout, pictorial, cabinet details & operation.

MRL CRYSTAL #11. (DP-56).



Coil 3-4 is 2XM form - wound with 35

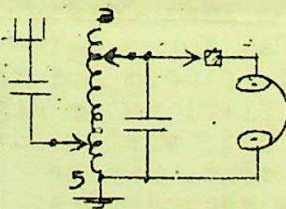
Ts #22 DCC with ends secured with cement.

Coil 1-2 is 80 Ts #22 DCC on 2XM form, tapped every 10 Ts. MRL

Steel Galena or Pyrites Okeh. Fixed Pyrites may be used. Cond. at 6 may be from .00025 to .0005 cap.

DP-56 shows a variation of this cir., using Plug-in coils and a QRM coil. Also details of panel layout, etc. Many reports have come in on this set with reception from all over U.S., Mexico & Canada. Best DX 1500 mls. One reported 750 miles 1st night it was tried out.

MRL CRYSTAL #12. (DP-69)



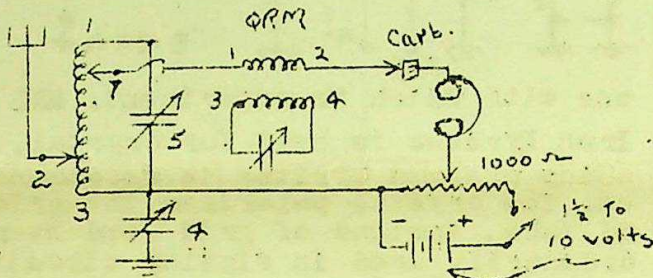
Good reports on this set - for the fellow desiring a 2-slider coil & baseboard set.

If spring on the slider isn't too strong, you may use a 2XM form. Or, you may use a 2" Bakelite tube. Raise sliders up 1/4" from winding. Coil is about 100 Ts #22 Enamel wire. Sandpaper where slider touches the winding. Both cond. are .0001 fixed mica, altho Ant. one may be elimin-

ated if desired. They tend to add capacity to the set which makes for sharper tuning.

DP-69 shows details in layout of sliders, -----, etc.

MRL CRYSTAL #13. 200 Miler. (DP-52)

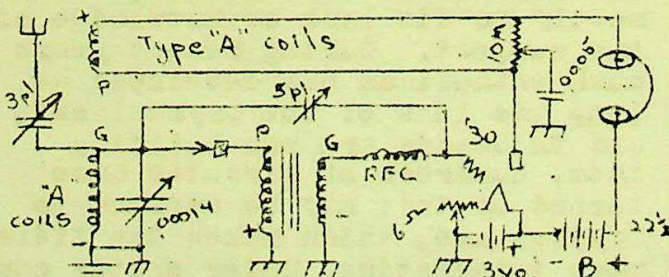


DP-52 shows cir. with or without Carborundum Xtal. Also shows how slider-coils are controlled from front of panel. Instead of previous 7-8 coil, we now use a QRM as it's simpler to build. With the Carborundum Xtal, the set is more stable. The 2 sliders give proper control of antenna and selectivity.

Coil 1-3 is a 2XM or Bakelite 2" in dia. x 4 1/2" long, wound with 90 Ts #22 Enamel wire. Scrape with sandpaper where sliders touch. Cond 4, 5 & 6 are each .00035 or .0005. Use 1000 ohm pot. to control the Carborundum Xtal. Be sure you disconnect batts. or use switch as shown to preserve batts.

When operating, tune cond. 5 to station wanted. Adjust sliders for best response, and selectivity. If station bothers, bring Cond. for QRM coil into play and cut it out. Cond. 4 is optional. You may bend tip of rotor plate so it shorts when clear in if desired. We have had several write in saying "200 miles" is too conservative!!

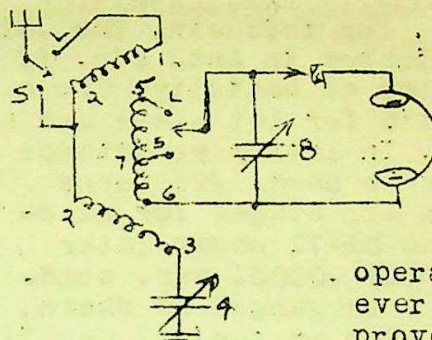
MRL CRYSTAL #14. (DP-70)



This is a novel stabilized detector unit for the Experimenter. Use 3 plate for ant. cond. Tuning cond is a .00014. Coupling condenser is

5 plate midget. Regeneration control is a 10,000 ohm volume control, with center tap running to .0005 mica cond. Audio transformer preferably, hi-ratio. (5-1). RFC is MRL CH-2 1/2 choke (25Z). Iron Pyrites crystal is best, as a little current runs thru it. Use MRL type A or MA coils (plug-in). A good cir. to work on during a rainy afternoon??

MRL CRYSTAL #15. (DP-27).



Hundreds of this type of set were sold around S.F. for \$12.50 each, and still in

operation. However, we have improved it in many

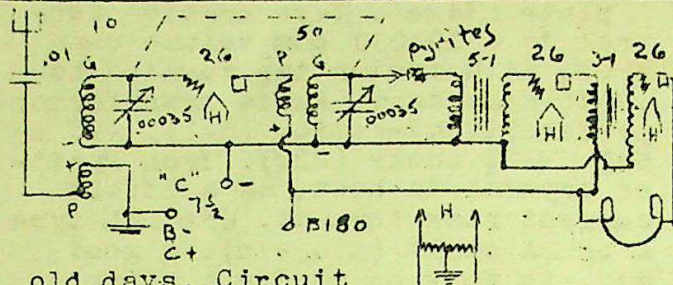
ways. Original used a basket-wound coil for 5-6-7 but we prefer a single layer coil, as they have same characteristics. A new addition is also a SW-tap on the primary at 2.

Coils 1-2 and 2-3 are each wound on P2XM celluloid forms, and raised from base by 1 1/2" brackets, furnished with the forms by us. They tilt at about 60 degrees, or as near the rotating coil of 5-6-7 as possible. Each have (1-2 & 2-3) 55 Ts # 24 Enam. wire. Center rotating coil is 3 1/2" in diameter and 2 1/2" long. We prefer to wind it in 2 sections, as 6-7 for SW is 25 Ts # 20 DCC. Then balance is wound with 40 Ts. #24 DCC This gives better response to SW stations. Use 3 pcs. of old phone cords for leads to 5-6-7. Cond. 8 & 4 are each .00035 or .0005. Mount rotor to control from front of panel

Many good reports on DX and selectivity. DP-27 shows proper layout. MRL Steel Galena or Pyrites best. Fixed Pyrites may be mounted on the front of panel if desired. One of the most selective crystal sets known.

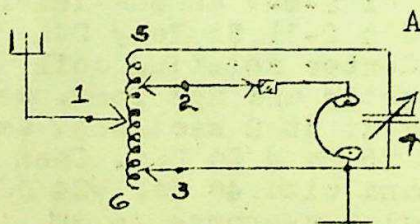
MRL CRYSTAL #16. (BP-71)

Very interesting cir. Uses a Xtal detector in a novel audio circuit. We built and sold over 75 of these in Los Angeles for \$60 each in the



old days. Circuit is explanatory to Fil. 1 1/2 v. - 3 Amps one familiar with radio building. We suggest using our 2 matched RF-Detector coils (2/35%), used in midget sets, for this cir. The .01 may be eliminated in Ant. cir. if not needed for selectivity. Use a hi-ratio audio for 1st stage and a 3:1 for 2nd. In latter resistance coupling may be used. #26 tubes are shown in all stages for simplicity, altho DP-71 shows later type tubes. (2) .00035 var. cond. may be used - or ganged as shown, which makes simpler tuning. Use 7 1/2 volts of "C" battery for bias when using #26 tubes. Be sure when laying the set out to use Compo. panel when using the 7 1/2 v. "C" so the Cond. won't be grounded. A 1 1/2 v. 3 amp. fil. trans. lights the tubes. We used to play all over the U.S. with this circuit at one time.

MRL CRYSTAL #17. (DP-65)

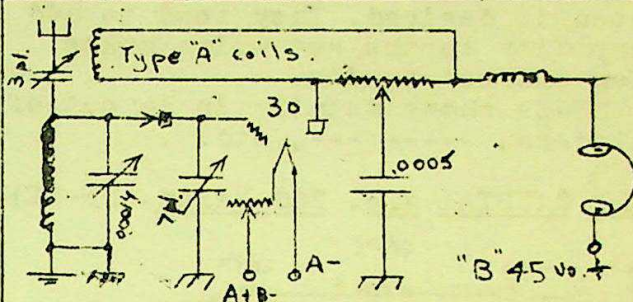


An unusual set using 3 sets of switch pts. and 1 Variable Condenser. Coil is 111

Is #24 DCC on 2XM form. Start winding from 5. Make following taps for both #1 and #2 switches - as follows: 20-36-46-56-66-76. Then, continue winding and make taps at turns 83-89-96-111 for #3 switch. Cond. #4 is .0005 mfd. Good results on DX - and plenty of selectivity, which is controlled at #2.

MRL CIRCUIT #18. Interflex. (DP-72)

This cir. was used for reception of certain sideband transmissions in transoceanic phones, where the voice was made up of a series of peculiar sounds or "hash." Circuit is pretty well shown, and a good



one with which to experiment. MRL Iron Pyrites is best for crystal, altho a fixed pyrites is recommended. The crystal polarizes the grid of tube, instead of grid condenser ordinarily used in similar circuit.

Removing the crystal and hooking ground side of 7 pl. cond. to an Oscillator, makes a super-heterodyne out of this circuit. Reversing polarity of crystal also makes a change in circuit.

AERIALS & GROUNDS.

Most Xtal circuits work best on about 100' of aerial in the country. In the city, they work best on 25' to 50'. Hooking to a telephone box, lighting fixture, etc. often makes a good aerial temporarily. Water pipe is usually a good type of ground. If on the 2nd or higher floor of apartment - often a ground hooked to pipe is too long. It is then a good idea to run wire along the baseboard, and hook ground post of set to this. This acts then as a counterpoise. It also improves the selectivity of many sets.

WHY CRYSTAL SETS?

Few radio dealers and technicians (so-called) give the average Crystal fan much encouragement. He usually sidetracks the subject, due mostly to his lack of knowledge of the subject. During recent years much enthusiasm has developed along the line of the Crystal set, and thousands are now building them. Hundreds of circuits have turned up that may be applied to Crystal use, which makes the field more interesting. Under proper conditions, crystal sets have received up to 7000 miles. Longer aerials, up to 500' may be experimented on when in the far country.

MRL "BIG PLAN N° 2"

Our little 1-tube D.C. Set, with over a 7,000 mile record. Many letters on file show fine results on this 1-tube set, a flashlight cell and small 'B'-battery. 6 neat pages show full-scale plans and all details so that a beginner can build it. Plug-in coils available from 15 to 800 meters. Broadcast stations come in fine. Long-wave and Short-wave work equally well. Send 27¢ now for your copy of this plan. Get ready to build this DX set.

MRL "RADIO BUILDER"

By means of our "Radio Builder" we try to give you a lot of good info. on Radios and their problems from the Crystal up to the larger sets. Also lots of kinks and Radio gossip. Most of all we keep U posted on Radio bargains and hard-to-get items of interest to the Experimenter, as our complete parts list is included. "RB" is sent free to customers making reasonably large purchases, and to others 4 issues 25¢.

Return Postage Guaranteed by:
MODERN RADIO LABS,
363 HAMPTON ROAD,
HAYWARD, CALIF., U.S.A.

FORM 3547

POSTMASTER: If Addressee has removed, notify on FORM 3547 - postage for which is guaranteed.... MRL

Sec. 1105, U.S. & R.



Ralph L Staley
R.R. #2
Forest, Ohio.

"IT HAS BEEN SAID ABOUT MRL - -"

Columbia, Tenn., W.A.D.: "Adding your Steel Galena to my set has enabled me to get 25 BC stations, up to 950 miles distant."
Spartanburg, S. Car., J.E.H.: "Find your DPs and Products very good."
Gallup, N. Mex., J.L.C.: "I have great success in building Xtal sets from the plans I ordered from you."
Norfolk, Va., R.M.M.: "Certainly obliged for fine info. given in your book "Crystal Detectors."
Salt Lake City, Utah, W.N.: "Crystal Set converter works fine - lots of Police, Amateurs, S.W., etc."
Bethesda, Md., R.W.: "On your Type 'A' coils and 1-#30 tube I get Europe."
Los Angeles, Calif., C.S.G.: "It is a pleasure to do business with you."
Lawrenceville, Ill., Q.M.L.: "You do 'cram' a lot of info. in small space"
Reading, Pa., R.J.S.: "I get what I want from you and get it right."
Grants Pass, Oreg., M.S.: "The used tubes were quite satisfactory."
Chicago, Ill., L.A.: "Your info. has helped my 7-tube set out."
Honolulu, T.H., S.K.: "Last order received - fine. Here's another."
Monrovia, Cal., G.M.: "Like friendly way you treat your customers."
OUR FAMOUS NO.2 CRYSTAL SET - Over 10 pages of condensed testimonials on file. About 6" of letters on its fine performance."
Durango, Mexico, F.M.: "Plays Japan (7000 miles) on 1-tube set built by MRL (BP-2). Also many others - too many to log."
The Bight, Cat Island, BAHAMAS, B.H.L.: "Your set swell, never tried anything like it." (1-tube DC, BP#2.)
Inkster, Mich., C.P.: "#28 Crystal set plays London, Rome and Berlin, etc."
Dayton, O., ES.: "Built sets 1-2-4-8-9-11 and got fine results on all."
Nicholson, Miss., C.L.F.: "Rec'd Xtal plug-in coil and Xtal; work fine."

Just all kinds of testimonials ... However, keep sending them in, we like to hear about your successes.

Chassis, cont.:

MOUNTING STRIPS. Hold parts under subpanel. For easy wiring.

CAT-489. 3-lug type. $\frac{1}{2}$ oz. .05
CAT-458. 5-lug " " .05
CAT-459. 6-lug " " .06

MOUNTING BLOCKS. Hole in center and lugs on corners. Holding parts.

CAT-498. 4 lug; 3 holes $\frac{1}{2}$ oz. .05
CAT-499. " 1 " " .05

MRL TERMINAL SCALE. For BP-2.5/8" x 3-3/8". White cardboard. "ph; bplus; B-; A-; Apos; gnd; ant." Glues on.

CAT-460. (don't short batts) .05

DIALS. 4" new. $\frac{1}{4}$ " shaft. CAT-483. .20

DIAL MARKERS. Used. Fit over Bak. & metal dials. CAT-421. 1 oz. -- .05

VERNIER DIALS. Best obtainable.

CAT-424. 3" 4 oz. ----- .50

MRL DIAL SCALES. White, stiff board. Neatly printed. Radius $1\frac{1}{4}$ ".

CAT-405. 100-0 reading. ----- .05

CAT-406. 0-100 " ----- .05

DIAL LAMPS. Screw type. New.

CAT-434. 2.5 v. long type. -- .08

CAT-435. 6.8 v " " -- .08

CAT-436. 6.8 v. round " -- .08

CAT-437. 3.2 v. long " -- .11

DIAL LAMPS. Bayonet (pins).

CAT-438. 6.8 v. long type --- .08

CAT-439. 6.8 v. round " --- .08

DIAL LAMP. Philco 110 v. 10 watt.

Ins. frost. CAT-440. 4 oz. ----- .15

DIAL LAMP COLORING. 1 dr. bottle.

Light up lamps; dip; let dry. (.10

CAT-441. Red. .10 CAT-442. Green.

DIAL LAMP SOCKETS & Brackets.

Screw type. CAT-432. 1 oz. -- .10

DIAL LAMP SOCKETS & leads. Bayonet

type. CAT-482. 1 oz. ----- .10

DIAL LAMP SOC. & Brax. used.

Screw type. CAT-493. 1 oz. --- .05

DIAL LAMP SHIELDS. Direct light

beam. CAT-433. .03 2 for .05

DIAL CABLE. New. Per foot.

CAT-443. Fine ph. br. linen ctr. .03

CAT-497. Heavy linen ----- .03

CAT-444. Heavy braided ----- .03

CAT-445. " steel line. Tw. -- .03

BARKNOBS. $1\frac{1}{4}$ ". Replace dials.

CAT-404. Black 1 oz. ----- .09

CAT-418. Red. " ----- .11

CAT-484. Ivory. " ----- .11

CAT-485. Walnut. " ----- .11

BAR KNOBS. $1\frac{1}{4}$ " and scale. Black.

CAT-407. 100-0 & knob ----- .12

CAT-408. 0-100 " ----- .12

(sub. for 3 - 4 - 2" dials)

BAR KNOBS. $2\frac{1}{4}$ ".

CAT-417. Black. 2 oz. ---- .12

CAT-473. Red. " ---- .12

#KNOBS. Hard to get.

CAT-494. Used. $3/16$ " shaft. .04

CAT-400-2. same. $3/16$ " shaft .08

CAT-431. Arrow. New. $\frac{1}{4}$ shaft. - .10

CAT-428. Push-on. $\frac{1}{4}$ shaft --- .09

CAT-430. New $1\frac{1}{2}$ " pointer. $3/16$. 04

CAT-429. Large $2\frac{1}{2}$ " used. 2oz .05

SWITCHES - panel. Used & new.

CAT-446. SPST. new. 2 oz. --- .25

CAT-409. SPDT - new. 2 oz. -- .30

CAT-478. " rotary. new --- .30

CAT-448. DPDT. new. 4 oz. -- .55

CAT-490. 3-posn. rotary. 4oz -- .30

CAT-488. 4-pole. 2 posn. 4 oz .50

SELECTOR SWITCHES. Used. CAT-400-2.

2 pole 5 cir. 6 oz. ----- 1.00

3 pole cond. shorting sw. 4oz. 25

MRL COILS, CHOKES, FORMS -

MRL TYPE A CELLULOID PLUG-IN COILS

Per set of 4 (20-40-80-160m

6 oz. with plan. ----- 1.50

Any 20, 40, 80, 160 m. coil 20 .40

Any Standard BC coil 2 oz. .40

Any Lo-BC band 2100-950 kc .40

Any Hi-BC band 100-436 kc. 2 .40

Any Long wave coil. 500-836 .50

Any following types.

MRL TYPE A CELL. COILS. Uses reg-

ular tickler feedback from plate.

Standard as used in most sets.

MRL TYPE C CELL. COILS. Sec. is

tapped and runs to cathode of

tube - in E.C. regeneration.

MRL TYPE RG CELL. COILS. Reversed

feedback to cathode. Gainer.

MRL TYPE O CELL. COILS. EC regen-

eration. Detector stage with RF

ahead. Very efficient.

MRL TYPE RE CELL. COILS. RF stage

ahead of "O" coils. Helps DX.

NOTE: ALL TUNE with .00014 mfd.

All are 4 prong except "O" - 5 pr.

Coils - cont.:

MRL MA Plug-in coils: Tick.regen.
 .00014 cap. 4 prong. With DP-63.
 CAT-509 Set 4 SW coils 6 oz.

In sets of 4 only, with DP 1.00

CAT-514. MA-Broadcast 2 oz. .30

NOTE: For an RF stage, use regular MA coils, with tick. to pri.

MRL CELL. PLUG-IN FORMS. Dia. $1\frac{1}{2}$ "
 x $2\frac{1}{2}$ " winding space & cement.

CAT-558. Set 4 4pr. & Cm. 4oz. 50

CAT-560. " 4 5 pr. " 50

NOTE: Sold sets 4 only----

MRL LONG CELL. PLUG-IN FORMS. $1\frac{1}{2}$ "

dia. x $3\frac{1}{2}$ " w. space. & cement.

CAT-566. 4 prong & cem. 4 oz. .20

CAT-567. 5 " " .20

Ea.

MRL 1XM CELL. COIL FORM: $1\frac{1}{2}$ " x $2\frac{1}{2}$ " lg.

CAT-571. 3 coils & cement. 4oz. .25

NOTE: No less than 3 sold.

MRL 2XM CELL. COIL FORM: 2" x $4\frac{1}{2}$ "

long. with cem. & bracket. Used

in most MRL Xtal circuits. Hi-C

CAT-569. Form & cement. 6oz. .25

MRL p2XM CELL. COIL FORM. 2" dia.

x 2" long. With cement.

CAT-570. 2 forms & cem. 6oz. .25

NOTE: No less than 2 sold.

COIL FORMS. Used bakelite, or HRV

Min. of holes. About $2\frac{1}{2}$ " long.

CAT-572. Dia. $2\frac{1}{4}$; $2\frac{1}{2}$; $2\frac{3}{4}$; 3;

$5\frac{1}{2}$ " (state which). 4 oz. .10

NOTE: No 1" or 2" in diameter.

SPIDERWEB COIL FORMS. Used. small.

CAT-594. 1 oz. each. Few left .04

MRL LIGHT COIL CEMENT. Holds down

wires on coils, etc. CAT-580. 1

fl. oz. (6 oz. ship)----- .10

(Note) None less sold.

MRL HEAVY COIL CEMENT. Wood, leather,

fibre, etc. OK for models.

CAT-518. 1 fl. oz. (6 oz. sh. wt). .10

MRL CEMENT THINNER. For light or hvy

CAT-581. 1 fl. oz. (6oz. sh)--- .10

MRL ANTENNA COUPLER. Typ CD. Cell.

For doublets, Zepps., or reg. RF.

A, C or RG coils plug inside. Bet-

ter selectivity and volume.

CAT-517. 4 oz. with plan. .40

MRL QRM COIL. with DP-18. Cuts out

or down interference. FB in ser-

ies with #2 aerial & set.

CAT-516. 4 oz. .50

MRL No. 2 CRYSTAL SET. COIL. Wound &
 tapped off. CAT-515. 8 oz.

NOTE: For other Xtal coils, see
 back of BP-17. Prices OK for now.

#MIDGET TRF SET COILS. .00035 tuning.
 For AC-DC radios.

CAT-556. Antenna coil 2 oz. .30

CAT-557. Detector coil 2 oz. .30

NO VAR IOMETERS OR COUPLERS. Maybe
 later - made from celluloid.

VAR IOMETER ROTORS. Dia. $3\frac{3}{4}$ ". Em

mld. bakelite. CAT-599. 1 lb. .25

TRANSFORMERS, RF, untuned. Var. types.

CAT-579. 4 oz. .25

TRANSFORMERS, IF. Used. About 175

kc. Remler #600; 10. SM 210; 211.

CAT-578. 6 oz. wt. .25

MRL $2\frac{1}{2}$ mhy RF CHOKE. 3 sections;

pigtails. CAT-573. 2 oz. .40

CHOKES, RF, used. Var. kinds $2\frac{1}{2}$ to

50 mhy. OK. CAT-574. size? 2oz. .40

CLIPS, Tiny Fannstock. For coils.

$\frac{1}{4}$ " x $3\frac{1}{4}$ ". (See CAT-1200 for eye-

lets to fit). CAT-589. 6 for .05

BANANA PLUGS. CAT-585. $\frac{1}{2}$ oz. .10

SPADE BOLTS. Hold coils upright.

CAT-598. New, four for .05

WIRE - SOLDER - SPAG. ETC.

CMP allotment symbol V-3

You can't buy wire, unless you copy
 and sign following; send with order:

"The undersigned certifies subject
 to criminal penalties of sec. 35(a)
 of the U.S. Criminal code, that he
 is a retailer or repairman entitl-
 ed under CMP Regulation No. 9 to
 buy the copper wire covered by
 this order. Sign _____ Date _____"

Note: If you repair 1 set or 100
 we can see no comment on this.

MAGNET WIRE. None for sale now,
 but send your requirements for
 coils and we will wind them. As
 soon as we can get more info. on
 this, will pass it along to you.

HOOKEUP WIRE - Solid. Now in stock
 in limited quan. (sign V-3 above)

CAT-601. #18 solid. ft. .01 $\frac{1}{4}$

CAT-603. #22 " .01

HOOKEUP WIRE - Stranded. Push-back.

##CAT-606. #18 str. (out now). 01 $\frac{1}{4}$

CAT-603. #20 stranded. ft. .01

CAT-604. #22 " .01

BUSBAR, Tinned

CAT-608. Per foot: #12 round .01 $\frac{1}{2}$

CAT 607. #14 Rnd or square .01

CAT-610. #16 Busbar ft. .02 $\frac{1}{2}$

MRL MEMORANDUM

As following is a routine matter, pardon us for not writing a letter. NOTE check mark. ✓

ABOUT OUR ADS.

1. For 25¢, to new customers answering our ads in various National magazines; - we give -
(a) BP#17 "18 Crystal Set circuits" including our Famous #2 DX set. (b) "Radio Builder" ~~and~~ price sheets ~~for a year (4 issues)~~. Please send 25¢ for BP (or other order) and get on our Mailing list at once. On inquiries not sending in an order, we send only our current issue of "RB" & price sheets. No future issues will be sent unless an order is forthcoming, due to our large mailing list. We hope you will understand.
2. No CODs on BPs, Plans, etc. It would cost U 18¢ more on a COD, so please remit 25¢ as the ad specifies and we will ship upon receipt. Cash, stamps, M/O, etc. Okeh.
3. We do not send our Plans, etc. FREE of charge. As cost is small, please remit.

EXCHANGES.

4. We do not buy used Phones or parts at present, unless specified in latest "RB."
5. We do not exchange BPs, or other plans.

INFORMATION.

6. When writing for information, be sure to enclose stamp for reply postage. Thanks.
7. Information you desire is on page of "RB" No. - which was mailed you.
8. Letter or card following this order.

MAILING.

9. Be sure to check up on our address; last letter addressed wrong. See "RB" top page 1.
10. Always put return address on outside of envelope, or upper left of face of postcard,
(over)

(over)

so we can double-check our files.

11. Be sure your letters are sealed so money doesn't shift around. See "RB" for details.
12. Your envelope enclosed. You evidently forgot to seal it -or insert money. Pls. send over.
13. Letter & cash rec'd. Thanks. For future issues of "RB" send name on postal. U 4 got it.
14. Letter & cash rec'd -unsealed. Watch this next time - you may not be so lucky!

ORDERS:

15. Plans, etc. sent you soon as ready.
16. Order shipped. Advise if not received.
17. Part of your order to be shipped in few days.
18. We cannot supply balance of your order - credit is being given you.

OUT OF PRINT.

19. Present issue of "Radio Builder" has been all distributed. New issue sent you soon.
20. Current "R B" out of print. More will be run off soon, and will be mailed you then.
21. Catalog sheets enclosed with, or contained in "RB"...If separate catalog is printed, you will receive one.

MORE SPEEDY SERVICE.

22. Saving our time, also saves yours! As far as practicable, - all orders shipped within 24 hrs of receipt. Occasionally an order is held up a few days, waiting for a shipment, so entire order may go at once. Exceptions are sets, kits, etc. which must be made up for shipment. In latter case, we notify you by a postal card. Every corner is being cut to give you FASTER service. Use AIR MAIL when sending in orders for speedier service. Usually 1 day from Chicago; 2 days from NYC; etc.
23. Give CATALOG numbers when possible. See our latest "Radio Builder" for latest prices, as they often change. Sincerely, - Mod. Radio Labs.