Digging the Graveyard (Frequencies)

#1 • OP •

Hey All,

Some interesting Dx last night.I decided to try some listening on some of the so called "Graveyard" frequencies (1340,1400,1450 and 1490 Kc). I may go for 1230,1240 Kc later on, these four were plenty for now. When I was a kid (50 years ago !) I used to scan around on them during the day and copied local stations only. I have never tried a serious night time effort until last night. All between 8 PM and 11 PM . Using Select-A-Tenna loop, Panasonic 840, Sangean 803a and a temporary (ancient) Eico 324 signal generator to line up the analog 840. FWIW, I am almost done building a home brew tone/ marker transmitter covering the B'cast band to replace the Eico.

1340 WHAP Hopewell, VA with Fox Sports football. 1 Kw, omni antenna.
1400 WICK Scranton , PA . Music. 1 Kw, omni antenna .
1450 WKIP Poughkeepsie , NY. Talk. 1 Kw omni antenna
1490 Numerous stations , but no hard id's after an hour on frequency

Signals often very fluttery. Often a din of 4 or 5 stations on frequency. Stations would rise up into good copy, but NOT for long. Maybe 30 seconds up and then 2 to 3 + minutes back down in the mud with everyone else. This made Id'ing super tough : I had to hit a bullet with a bullet of the short period of a signal being up ALONG with getting a good Id. All seemed to be about at the same approximate range , nothing super far. Very interesting "micro lobes" from loop : 4 or 5 different ultra weak signals brought up a bit all within only 45 degrees of loop movement. A TINY swing made a BIG difference.

Some of the toughest Dxing I've done in years, a great challenge and lots of fun.

I will go for 1230/1240- maybe tonight.

Then perhaps on to the "Regional" class of frequencies focusing in from 1150 to 1590. Regional class has MANY more frequencies and may be easier going (we'll see)

K
Edited

TJM70
Member
2032
December 31, 1969, 7:00 pm
Greensburg, PA

Re: Digging the Graveyard (Frequencies)

#2 •

If you pickup streaming Christmas music on 1230, that's my home transmitter!

Cool DXing and nice report. I might give this a try.

Tom
"The 21st Century is a nice place to visit - but I sure wouldn't want to live there."



Chas
Member
23721
December 31, 1969, 7:00 pm
S. Dartmouth MA USA

Re: Digging the Graveyard (Frequencies)

#3 •

K,

I thought I would ask

Is the radio/loop setup in less than ideal conditions?

What is the "aperture" (area enclosed) of the loop and is it passive?

Chas

Pliny the younger
“nihil novum nihil varium nihil quod non semel spectasse sufficiat”
krystallo
Member
2454
July 12, 2007, 4:36 am
Boston, Ma

Re: Digging the Graveyard (Frequencies)

#4 • OP •

Hey Chas,

A funny thing about the 11 " diameter Select- A Tenna. I've seen pictures of one sliced open . Nothing special - just an ordinary bakelite var cap with magnet wire wound up against plastic.
In theory, NOT a very good design that should violate a few fundamental rules of tank /loop design . Yet for some reason (that escapes me) performance is VERY good and the Q "seems" fairly high. So much so that peaking can be a bit difficult at times.

The windings are fully enclosed , so no exposed wire to snag or get bent out of being straight. I have it built into a home made base that has an axial screw drilled right through the bedside table. So aiming is very easy. I have two S-A-T's and wouldn't sell them for three times the price I paid for them .

The radio (s) are set on a layer of thick cloth and rotate and /or slide into position very smoothly. A 1/4" or sometimes even 1/8" (!) can make a BIG difference between getting good copy or near nothing. Things are THAT tight ! I also encounter some really weird and unexpected geometries that work well. Both the 840 and 803a are pretty sensitive.The entire set up is sweet and easy to use , even in complete darkness when the other half is asleep.

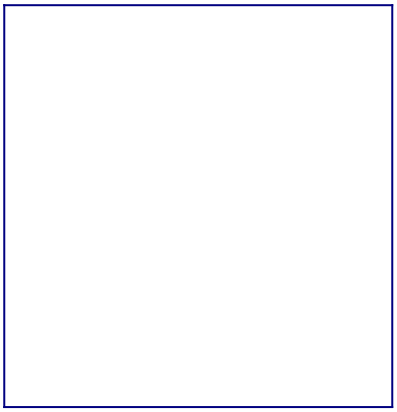
Re "conditions" : Having an antenna INSIDE the apartment is both good and bad. I used to have a high long wire up on the roof (long gone). GREAT for shortwave ,but it was not directional and at times could pick up noise. Being able to null noise /peak signal through the combination of receiver placement AND loop direction can be a real plus.Noise can be "moderate" at times , but maybe 80% + of the time it can be tamed.

I consider 750 WSB Atlanta to be my "fringe" station.It's up maybe 80 % of the time, even in Summer. 640 CMLA Cuba rolls in fair or better at times, especially during winter. I can separate whimpy 1020 KDKA PA from monster 1030 WBZ and band bully 101 WINS NYC.At times I can even slice regional flea 580 WTAG MA from near line of sight big gun WEZE 590.It's tough but I still consider it VERY good to be able to even get a peep out of TAG. I also can get Dx on first adjacent to local flamethrowers and even some co channel Dx on a few.

Overall, "not bad".

FWIW, In my shop I just found an old loop pulled from a junk set. It uses (around) # 24 Double cotton wound side by side and "glued" in place to form a one piece secure ribbon. Maybe 14 " diameter. In quick tests the Q seems very good, but I need to add a turn or two from my #24 DCC roll to get to the inductance I want. I have 4 gang ceramic var caps that can be wired "wiperless" using all gangs to net around 450 or 500 pf. Otherwise put, a high Q tank . Size is important. The ribbon loop could fit by bedside and may do better than the S-A-T. Ball drive on the four gang will help the ribbon loop a lot. I am not sure what built in ball drive the S-A-T has , but it is only so-so. I recently built an extremely rectangular open wire loop to try and fit bedside. Even with a four gang, it was kind of turkey and really no better than the S-A-T. It was a LOT more clunky too . I scrapped it and recycled the parts .

K



fifties

Member
51656
December 31, 1969, 7:00 pm
Canyon Country, CA

Re: Digging the Graveyard (Frequencies)

#5 •

Take a look at my thread on building a 23" loop using a quilting hoop for the frame. I too have a pair of Selec-A-Tenna's, and a Grundig AN200, but in this realm, size does matter. The home brew loop outperforms the smaller commercially built ones, and is equal in RF gain to my 240' random length long wire on my back acre.

https://antiqueradios.com/forums/vi ... 4#p2024254

Also, I use one of these little beauties when DXing to easily swivel a receiver around for best gain;

https://www.amazon.com/gp/product/B0195 ... =UTF8&th=1

\\\\\\\\\\\\\\\\\\HE WHO DIES WITH THE MOST RADIOS WINS //////////////////



Chas

Member
23721
December 31, 1969, 7:00 pm
S. Dartmouth MA USA

Re: Digging the Graveyard (Frequencies)

#6 •

I have added several loops both replica and original to my collection.

I have a Select-A-Tenna I bough from an ARF member. It seems to work well with the G-E Super Radio 1. It does experience either fighting or enhancing the internal loop. It does not have the internal link nor does the internal antenna connections on the SR-1 IMHO are optimized, as that still fights the internal loop. That requires both rotating the SR-1 and the SAT in different but associative directions.

I have retrofitted my Zenith 53 for an external loop and made it switch select-able. That works as the rotating antenna trimmer condenser is across the external loop when the switch is selected. My problem is I am using an ACME style diamond loop and it awkwardly hits the wall. Though the 53 needs more work because the OEM resistors are drifting, it does work well with the loop and should do better with either an RCA loop or a Bodine loop, both of which have a narrower profile. The choice to mod the Zenith is predicated by the fact that the home is somewhat electrically noisy any external around the room wire would make that worse and ground is or would have to be through the wall to the outside earth, also awkward. The loop gives the radio a sort of portability, I can move it around without concerns for antenna and ground.

If I can get some of my "Great Room" picked up, I "should" be able to claim a few square feet for a sofa table and a radio setup for both display and operation. In that room I have the clearance to swing the Admiralty replica loop, a near seven foot monster that stores folded and takes some 10 minutes to deploy, it is quite the dust catcher...

My home is single story, concrete pad, wood frame construction. My design for that room did not include foil barriers in the wall like my electronics lab has.

I do want to do the DX as you are doing, that has been a long term goal but other projects and household have priority.

Thanks for the adventure...

Chas

Pliny the younger
“nihil novum nihil varium nihil quod non semel spectasse sufficiat”

Renton481
Member
1992
March 27, 2012, 8:24 am
Seattle, WA

Re: Digging the Graveyard (Frequencies)

#7 •

I don't understand how a tuned antenna coil, which is what a Select-A-Tenna is, could violate any tank circuit fundamentals, but that aside, I use a Select-A-Tenna, Eton AN200 (same thing in a different enclosure, basically), and my old Radio Shack Loop (needs a new tuner cap because the original one is messed up between 600-540 khz).

I also have a box crate loop I built, which boost signals more than the ones just mentioned.

I've found the best radios to use on Graveyard frequencies are ones that have good fidelity. Superadios are good, and the DX-440 / Sangean 803A is wide enough in fidelity to be food on GY frequencies, too. The reason you want the fidelity is because the channel is usually strong enough in signal to not have to deal with adjacent channel splash, and the extra fidelity helps in IDing stations in the mush.

Sometimes stations will appear for only a few seconds, and then dive, never to be heard again.

I IDed positively a GY station Great Falls, MT, that very way. It just boosted on top and then disappeared, after a TOH ID.

Very bizarre. That was on a Realistic TRF, and I was using headphones.

Also, when using a Superadio, I've found that one can DX well with the radio in one, stationary position, where you're rotating the external loop to DF instead. Or you find the sweet spot the Superadio prefers for external loop coupling. Most radios have a favorite side or position.

krystallo
Member
2454
July 12, 2007, 4:36 am
Boston, Ma

Re: Digging the Graveyard (Frequencies)

#8 • OP •

Hey All,

Last nights effort :

1230 WESX local, LOUD , stable. Doesn't "count."

1240 : WJTN Jamestown , NY . 1 kw omni. Same deal - LONG periods down , only sporadic up up, but finally got an ID after around 45 mi.

An enjoyable effort, haunting the Grave Yard was fun.

Fifities : I have seen your quilt loop here. A beautiful design. My problem is that any bedside loop has to be SMALL, otherwise it hits the wall. Per the above, I built a 5 : 1 square loop . But I knew going in that such a design would violate the "Ousterhoudt" rule - do not exceed 2:1 . I wasn't sure HOW much it would compromise though. It turned out to be a LOT. Doing everything else "right" didn't salvage squashing the loop so badly. It worked around the same as the S-A-T, so off it went to "Scrap City".

I do have one of those plastic "Lazy Susans" but the radio not only needs to rotate, but also needs to slide around as well since the S-A- T is screwed to the table .It can rotate in place but cannot move around on the table. . I still like it screwed down just as is. Again , sometimes placement of X AND Y axis is critical. Some of these nulls are ridiculously tight. So the radio has to move all over the place.

Renton : Perhaps the word "violation " re S-A-T design was a bit strong.I hearken back to the old saying we used during super high end crystal set design /building :" Yards by inches ". Otherwise put, a single small loss may not be a big deal, but multiple loss points start to add up in super weak signal work.Perhaps I get too hung up on the theoretical too much, but it's just a habit. Will you actually HEAR the difference - not sure.

A theoretical well designed loop is large diameter with the laid wire in free air , round , properly spaced for it's diameter, uses ceramic var caps, omits using the wiper ,etc . The S-A-T has some of these attributes and lacks some others.OVERALL though , it is still a good piece of gear .

A good ratio of reduction is also needed to avoid blowing by super weak stations. Sometimes I have to shave the S-A-T slightly off frequency in order to peak a desired station vs a strong local first adjacent. The ball drive in the S-A-T is kind of touchy , especially at the high end of the band were it seems to bunch up. I home spin my own large diameter wooden knobs. I have been tempted to put a shaft extender on the loop , but I might just deal with the original knob for now , despite it coming up a bit short.

K

BobWeaver
Member
3274
December 31, 1969, 7:00 pm
Saskatoon, Canada

Re: Digging the Graveyard (Frequencies)

#9 •

> *krystallo wrote:* Per the above, I built a 5 : 1 square loop . But I knew going in that such a design would violate the "Ousterhoudt" rule - do not exceed 2:1 .

Hi Krystallo, could you elaborate on what you mean by 2:1 and 5:1? Unless I'm blind (quite possible, BTW) I didn't see any other reference to this in any of the other posts.

My own experience with the graveyard frequencies is that patience is a virtue. Clamp the headphones to your ears. Tune the radio accurately to a frequency you want to hear, and then wait. Read a book or surf the net, knit a sweater, etc., while you're listening. Eventually, something will fade in long enough to ID, and then go to the next frequency. Repeat.

Avoid syndicated programs at all cost. Chances of station ID are next to nil, and your brain will be destroyed by the mindless babbling of the talk show hosts.

It is that season again, and the DX contests will be starting up. I'll be dragging out one of my homebrew receivers, and getting it ready.

I have a 24" hexagonal loop antenna that works well with my one tube superhet. Actually, that receiver is so sensitive, I've never found any benefit using any other antenna with it.

I also built a shielded 8-1/2 foot loop antenna this past summer, mainly intended for VLF, but I think should work well for BCB. Trouble is, it's too big for inside the house, and weather will soon be too cold for me to go outside to point it at the stations.

krystallo
Member
2454
July 12, 2007, 4:36 am
Boston, Ma

Re: Digging the Graveyard (Frequencies)

#10 • OP •

Hey Bob,

The numbers refer to the ratio.For example, 2:1 could be a 2 foot by 1 foot square loop, 5:1 could be a 5 foot by 1 foot square loop, etc. According to Elmer Ostershoudt, a square loop should be built 1:1. If not possible , it should not exceed 2:1.

I expected to encounter "issues" when I built my recent 5:1. But they were much worse than anticipated (Elmer was right) , so I took it apart.

Things can be very tough in the Graveyard. As you see in my post above, Id's are extremely tough to copy due to propagation and the stations carrying talk radio. A syndicated talk feed is cheap, easy and supposedly more "popular". Music stations (if you can find one) are a better bet to Id more frequently. I HAVE heard legitimate (NOT pirate) music and /or talk stations that simply don't identify well before, AT or well after the hour. I am also aware of folks who don't adhere to their pattern / power requirements. No enforcement on anything from the FCC anymore, they can't be bothered.

I have been fooling around with radio for around 53 years, yet I STILL learned a few new things during my trip to the Graveyard.

Your Hex loop sounds cool. I have built bigger broadcast band loops in the past. But size is an issue, anything too big is really not practical for me anymore. I USED to be the type that would go on Dxpedition (to beach, parks, etc), set up a crystal set long wire (or big loops) for B'cast /SW and listen there. But "life" has changed and I am now not as keen to go out in the night like I used to.

RE VLF , the 8 footer sound neat ! I have an LF Engineering L-600S loop for whistlers, etc. But it really kind of useless in the apt because I live on a corner and have 13.8 Kv power lines on TWO sides - distance is around 15 or 20 ft to both power poles. So getting a null in the apt is not possible, I am getting slammed 90 degrees from two sides. In the past when I had the big long wire up high on the roof , I'd get all sorts of VLF, sfreics, etc - North America during the DAY and South America / possibly the Indonesia area at night. I used a HUGE amount of graphic equalizer attenuation to get rid of 60 Hz. It worked GREAT ! Lightning crashes /other phenomena etc were free of local trash noise.

I am not as hopeful with my current indoor antenna(s). I still want to try and get some type of 7 Kc / sferic system working (to cover at least "SOME" of the U.S. at night), but kind of lower priority now. For now I just get my lighting "warning" and Direction Finding done on 520 or 1710 Kc (or I simply look at my phone).

K



N0NB
Member
510
December 21, 2014, 8:28 am
Bremen, KS

Re: Digging the Graveyard (Frequencies)

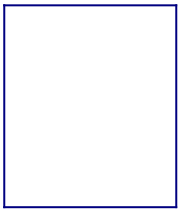
#11 •

A couple of "locals" that I can think of are KLMS, 1400, Lincoln, NE which has a cardioid pattern to the west for daytime and two lobes night to the west and north. Neither would be favorable to the east so this one would be very hard to catch, I would think.

The other is KWBE, 1450, Beatrice, NE which is 530 Watts non directional and should be an easier catch.

Not a "graveyard" but the closest is KNDY, 1570, Marysville, KS, 250 Watts day and 35 Watts night non-directional.

- Nate



Thewasp
Member
2113
November 18, 2008, 2:34 am
Hutchinson - Kansas - USA

Re: Digging the Graveyard (Frequencies)

#12 •

I listen to WHO 1040 in Des Moines when I can here in Kansas. Like to listen to my home town news and such when I can. Saturday at 3pm it was coming in perfect on my car radio when I left work. It finally faded away this morning about 9am. ALways fun to see what you can hear out there!

Todd

krystallo
Member
2454
July 12, 2007, 4:36 am
Boston, Ma

Re: Digging the Graveyard (Frequencies)

#13 • OP •

Hey Guys,

Interesting stuff.

FWIW, WHO is an occasional visitor here on the S-A-T/ ferrite rigs.

K

BobWeaver
Member
3274
December 31, 1969, 7:00 pm
Saskatoon, Canada

Re: Digging the Graveyard (Frequencies)

#14 •

> *krystallo wrote:*Hey Bob,
>
> The numbers refer to the ratio.For example, 2:1 could be a 2 foot by 1 foot square loop, 5:1 could be a 5 foot by 1 foot square loop, etc. According to Elmer Ostershoudt, a square loop should be built 1:1. If not possible , it should not exceed 2:1.
>
> ...
>
> Your Hex loop sounds cool.
>
> ...
>
> RE VLF , the 8 footer sound neat !

Thanks for the ratio explanation. Makes perfect sense. A high ratio uses a lot of wire but you get a small aperture.

Here are a couple of pics of my loop antenna.





The 8-1/2 foot loop is made from cable TV coax. Shield is broken at the top of the loop, and connections are at the bottom. It's mounted on a 6 spoke frame that disassembles so that I can travel with it. I took it out of town, away from interference, last summer to see if I could pick up the July SAQ transmission (17 kHz). No luck though. There wasn't much atmospheric noise that night, but my pre-amp was noisy and it needs a major rework.



krystallo
Member
2454
July 12, 2007, 4:36 am
Boston, Ma

Re: Digging the Graveyard (Frequencies)

#15 • OP •

Hey Bob,

REALLY nice loops !

SAQ (!!!).

I made a NUMBER of attempts (2000 ft wire laid on beach, 500 ft bare copper counterpoise in ocean). I only got them ONCE (barely) out of all attempts. One time it was SO cold (at Marconi Beach , Cape Cod) that my receiver kept dying from the cold, it simply stopped working. When brought back into the car to warm up it would come back to life.I went through several cycles of this ! No permanent damage though. To make it WORSE, I didn't even copy them that night !

And despite being bundled up, I still got minor frost bite. THAT'S cold .

It seems SAQ does NOT cover North America very well. Reports are few and far between and then only to very well equipped stations.

SAQ is by FAR the toughest Dx I have ever pulled out in 50 + years in radio

K
Edited

Renton481
Member
1992
March 27, 2012, 8:24 am
Seattle, WA

Re: Digging the Graveyard (Frequencies)

#16 •

Krystallo:
Understood on your previous comment about loops.

I also have used the side-tuning technique to attempt to reduce splash / signal from strong adjacents. Sometimes it works better than others. Also, moving the radio further from the external loop seems to make the reception more selective.

I used the further-distance technique to DX MW extensively with a black, 1990's Sony Walkman in the 2010s. It worked fairly well.
Edited



Tim Tress
Member
14750
December 31, 1969, 7:00 pm
Beaver Falls, PA

Re: Digging the Graveyard (Frequencies)

#17 •

1230 is my local AM station, WBVP. It would be a nice DX catch it you could get it in Boston.

Tim KA3JRT



processhead
Member
15179
July 15, 2008, 1:13 pm
Gretna, Nebraska

Re: Digging the Graveyard (Frequencies)

#18 •

KHUB 1340 Fremont, Nebraska is another.
Local for me.

500 watts daytime

250 watts nightime
Both omni.

Paul
..... how hard can it be?
krystallo
Member
2454
July 12, 2007, 4:36 am
Boston, Ma

Re: Digging the Graveyard (Frequencies)

#19 • OP •

Hey Guys,

WBVP seems to be at the "average" range that I received these stations . One kilowatt seems to be a "prerequisite" . Every station that I logged was 1 Kw. Anything lower powered would probably get wiped out by the "high " power stations .

KHUB sounds cool, I LOVE small stations.

Renton : Yes, quite often I have to tune the loop from either the high side or the low side of a strong adjacent local station. Also on a super heterodyne rig the S-A-T can "take over" and "drag" the receiver at least 10 Kc. Without touching the radio's tuning ! It can actually often tune past the desired station and start to peak the UNDESIRED station .

My 2 transistor reflex "Boy"s" pocket transistor radio gets yanked around for maybe a THIRD or more of the entire broadcast band !

K

BobWeaver
Member
3274
December 31, 1969, 7:00 pm
Saskatoon, Canada

Re: Digging the Graveyard (Frequencies)

#20 •

Over the years, I've managed to log at least one station on every MW broadcast frequency. Here is a list of the most distant stations I've logged on the 1200-1290 and 1400-1490 frequencies. Obviously some

don't really count as low power locals, because there are a few 10kW and higher.

Code: Select all

```
Seq              Local                 Dist  Power
No.  Date        Time   Freq  CAll    (km) (Watts) Location
---  ----------  -----  ----  ----    ----  -----  --------

035  2008-02-16  04:20  1210  KHAT    1209   1000  LARAMIE, WY, US
088  2009-02-15  01:00  1210  KHAT    1209   1000  LARAMIE, WY, US
102  2009-02-15  06:40  1250  KKDZ    1214   5000  SEATTLE, WA, US
090  2009-02-15  02:06  1270  KTFI    1215   1000  TWIN FALLS, ID, US
026  2016-01-25  00:18  1280  KBNO    1235   5000  DENVER, CO, US
120  2009-02-16  21:08  1280  KZNS    1315    670  SALT LAKE CITY, UT, US
119  2009-02-16  21:03  1280  KBNO    1396   5000  DENVER, CO, US
046  2016-08-07  03:29  1280  KBNO    1396   5000  DENVER, CO, US
050  2020-01-21  20:10  1280  KBNO    1396   5000  DENVER, CO, US
101  2008-02-22  23:45  1250  WSSP    1719   5000  MILWAUKEE, WI, US
029  2008-02-16  03:03  1210  KGYN    1765  10000  OKLAHOMA CITY, OK, US
018  2011-01-30  04:57  1210  KGYN    1765  10000  OKLAHOMA CITY, OK, US
003  2008-08-01  04:20  1220  KDOW    2071  50000  PALO ALTO, CA, US
109  2008-02-23  03:32  1200  WOAI    2610  50000  SAN ANTONIO, TX, US
101  2015-03-01  03:06  1220  XEB     3702 100000  Mexico, DF, MX

128  2009-02-16  23:18  1430  KEZW    1401   5000  AURORA, CO, US
135  2015-02-07  21:47  1430  KEZW    1401   5000  AURORA, CO, US
075  2018-01-29  00:25  1430  KEZW    1401   5000  AURORA, CO, US
135  2009-02-17  02:40  1480  WLMV    1634   5000  MADISON, WI, US
076  2009-10-12  05:04  1480  WLMV    1634   5000  MADISON, WI, US
```

The transmitter power is what I got from the FCC database. Some are highly suspect (for example KZNS at 670 watts?).
My toughest catch over the years was to log anything on 1610 kHz. It took many years but I eventually got CHHA Toronto about 2200km away.