

KNOW YOUR DXer

ALAN FISCHER K8CW
 EX- W8BDO, W5ODJ, AC8BDO, AD8CW,
 K8CW/KH6, K8CW/TG5, TG9NX,
 K8CW/NP4, K8CW/Desecheo,
 K8CW/KP1, KP2A, KP2A/Desecheo,
 K8CW/NP2, KP2A/KP1, K8CW/6Y5,
 K8CW/C9A, G5EEJ, GU5EEJ, GJ5EEJ,
 GU3HEN, PY0ZSC, F0CCW, F88XAB,
 VK0CW, VK6AHI



I have been an amateur since 1954. Inspired by my father who became K8AII after the bootlegging days..

The fun trips were TG9NX (contest) and GJ5EEJ. Agony is the word for PY0ZSC and lonely fits VK0CW.

I believe the foundations, IDXF, NCDXF and YASME have put credibility back into DX. The foundations track records are world class. All donations are handled professionally and all are applied to reputable DX-peditions or DX individuals. A foundation has many individuals that it may use for obtaining correct information about DX operations and they can screen the use of the DX community's monies.

Heard Is.

I worried about my shop at home and if it could stand my absence of 4 months. Of course it could'nt! Hi

But yes it did survive thanks to my new bride Ann, K8TKB, and my son Dusty.

DX Hints.

Use a MOV on the generator or at least one at the rig input. This prevents spikes from reaching the tender solid state parts. They even work at home ! Also use LPUs (lightning protection units) such as Murf's (W4WMQ)

This prevents wind static or charge clouds from discharging through the finals of the transceiver. Take a first aid kit and tie it to the key. You never forget your key so you won't forget the first aid kit. For you phone operators, tie it to the mic..

If you are single, always get married just before a major DX-pedition. This helps to establish a lasting raport with her. (Especially the missed skeds due to radio blackouts)

73's

Alan K8CW

GROUNDING CONSIDERATIONS

Ground? Yeah, I got one. Had some wire left over when I built the shop and I also saved a good piece of conduit and picked up a pipe strap at the hardware. Didn't take but about 15 minutes to get it tied down.

How many times have we heard something along the lines of the above remark. If it is 1 in 1000, that is 1 too many. Also how many stations actually have a GOOD ground and then periodically check for corroded, loose or missing connections?

A good ground is insurance for your family, home and equipment and in that order !

The following principles are for commercial sites but when we put an antenna up 50 to 100 feet on a metal tower, lightning could care less . . .

Refer to figures 1, 2 & 3

1. Ground rods should be 5/8 inch minimum dia, 5' to 8' long and galvanized. Buried copper tends to corrode and this changes the resistance path.
2. Buried wire should be tinned if possible. Same reason as above.
3. If your ground passes over or near another ground or even a water line, bond to it. The discharge could arc and go another direction to cause damage.
4. Use the minimum size wire even if two or more smaller wires are paralleled. Studies have proven that you need at least a 2 (two) ohm ground to safely carry the high current discharge.

In figure 1 the rod should be at least 1' from the base underground and 1' below the grade. If you have an under cut in the base as shown in note 1, the rod should be 1' from this point. One rod is shown but three are driven at each base.

Figure 2 illustrates how the rods are spaced around the tower and bonded together. This allows the discharge to stay in the bond circle to earth or to travel to the main ground. Without the circle bond, it is possible for the discharge to pass from one leg of the tower, thru the tower leg brace to another leg on it's way to the main ground.

Figure 3 note 3 is an easy way to ground your station and it also saves a lot of wire. But you may have set yourself up for a loss. Assume a strike comes in on unit 2 or 3, it will pass unit 1 headed for the main ground.

Figure 3 note 2 will discharge in the safest way. It takes more wire and time but it works. The wire from the units to the common ground bus, should be short if possible. The ground buss will discharge to the multi-neutral ground (MNG) with the least possible damage, if any at all.

The common ground bus can be any large copper plate. The shape can be almost anything you happen to have. Remember its purpose is a safe way to connect many wires of different size. It should have a means of insulation from whatever you attach it to unless it is at least 6" from your sill supports. Do not attach it to a sill. Normally the wire is large enough to support the bus without attaching it

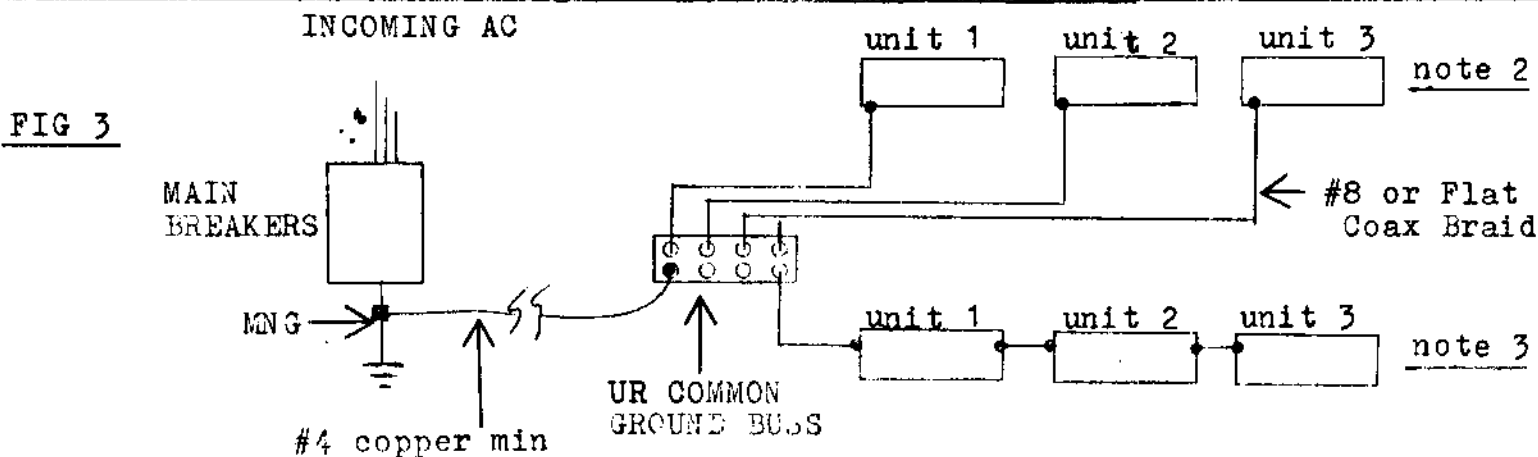
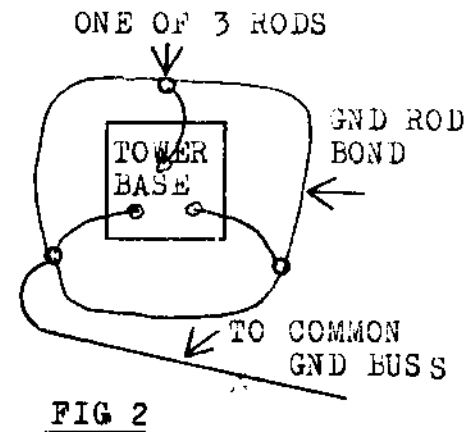
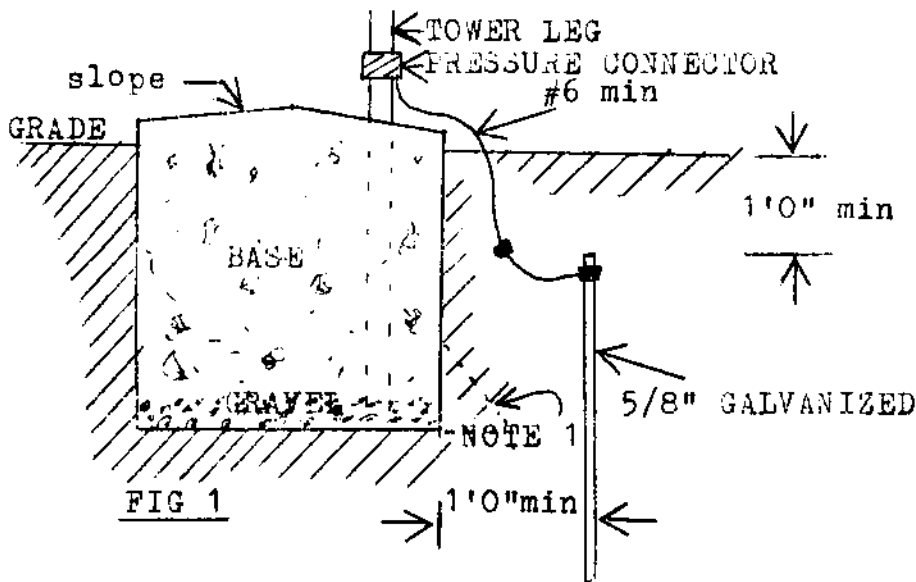
There should be enough $\frac{1}{4}$ " holes in the plate to firmly bolt the heavy connectors. Locate the bus in a central area to make it easy for you but also to keep the runs fairly straight without sharp bends. Under the floor of the shack is a good spot.

Keep in mind that units 1, 2 & 3 can be towers, radio equipment, water heaters, heat pump, vertical radials etc. .

In case you have a wooden pole for a support, use the same rod pattern except the rods should be 18" from the base of the pole. Run a #2 from the rods up the pole, stapled, and firmly attach to the antenna support. This can be a separate hole drilled in the support or use an extra nut and washer on the bolt thru the pole. It is not safe to just put the wire between the pole and the attachment before you tighten the bolt. Without the #2 wire, the coax braid is the best path up there.

If you have a long run of conduit with your ground in it, make sure the wire is bonded to it at both ends. Without the bond, the conduit has a choke effect when passing heavy currents through it. The effect is an increase in impedance of the wire which will restrict the flow of current thru the pipe. The end result of no bond in this case is normally a hole in the wall or the ground wire burnt into.

If your present ground system is snaky or you have doubts about it, read your publications or check with your friend.



40 METER DXING

THE 40 METER BAND WILL PLAY A BIGGER ROLE IN THE DXERS' GAME PLAN AS THE SUNSPOTS SLIDE INTO THE DEPTHS. THERE WILL BE TIMES IN THE FUTURE THAT 40 WILL BE THE ONLY BAND OPEN ON SOME PATHS. HERE ARE A FEW THOUGHTS ON HOW YOU CAN MAKE THE BAND WORK FOR YOU.

THE BAND IS ACTUALLY TWO BANDS NEAR TO EACH OTHER IN FREQUENCY, BUT WORLDS APART IN CHARACTER. LETS LOOK AT CW AND THE BAND IN GENERAL FIRST. CW DXING WILL BE TRANCEIVE EXCEPT FOR THE MORE RARE STATIONS, WHICH WILL LISTEN UP A FEW KHZ. YOUR "RIT" WILL TAKE CARE OF MOST OF THESE OPERATIONS. OPERATION OF 40 CW WITHOUT A CW FILTER IS REALLY DOING IT THE HARD WAY. WELL OVER HALF OF THE GOOD DX WILL BE JAMMED UP IN THE BOTTOM 10 KHZ OF THE BAND. DX CONTESTS AND WEEKENDS WILL CAUSE SOME DX TO SPILL OVER INTO THE AREA ABOVE 7025. THE TWO MARJOR CONTESTS (CQ WW & ARRL) WILL DRIVE SOME DX AS HIGH AS 7075 KHZ BUT IN GENERAL, OPERATION OUTSIDE A CONTEST TENDS TO BE AN EXTRA CLASS SPORT ON CW.

THE BAND STARTS TO OPEN ABOUT TWO TO THREE HOURS BEFORE SUNSET, BUT WITHOUT A KW AND GOOD ANTENNA IT WILL BE VERY HARD TO GET THROUGH AT FIRST. LOCAL SUNSET IS ABOUT 2300Z THIS TIME OF YEAR. BY 2200Z THE BAND WILL BE FULL OF EASY-TO-WORK EUROPEANS. THE PERIOD FROM AN HOUR BEFORE TO AN HOUR AFTER SUNSET CAN BRING GREAT SURPRISES FROM THE OTHER SIDE OF THE WORLD. A COPY OF "THE DX EDGE" IS VERY HANDY TO CHECK OUT POSSIBILITIES. AS WITH 80 METERS THE PEAK SIMES ARE AROUND SUNSET AND SUNRISE BUT LASTING MUCH LONGER THEN THE 80 METER PEAKS. A CHECK OF THE DX EDGE THROUGH THE NIGHT WILL SHOW WHAT AREAS OF THE WORLD ARE IN OR NEAR DARKNESS. STATIONS CAN BE WORKED THROUGHOUT THE DARKNESS AREAS AT ANY TIME, BUT YOU WILL NOTICE THE PEAKS AS THE SUN SWEEPS AROUND THE WORLD. THE INDIAN OCEAN AREA GIVES A GOOD EXAMPLE FOR MID OCT. CHECK THE FOLLOWING ACTIVE STATION PEAKING TIMES. VK6'S 2200Z, FB8ZQ 0020Z, 3B9FK 0135Z, 3B8CF OR FRØFLO 0200Z, 5Z4'S 0330Z, AND ZS'S 0400Z. THESE PEAKS WILL EXTEND WELL OVER AN HOUR IF THE DX STATION WILL JUST STAY ON THE BAND. THE PROBLEM IS THAT WHEN MOST HAMS SEE THE SUN COME UP THEY JUST AUTOMATICALLY THINK "TIME TO QSY TO THE HIGHER BANDS; SO THEY LEAVE RIGHT AT THE PEAK.

JUST AFTER OUR LOCAL SUNRISE LOOK FOR LONG PATH ASIATIC RUSSIANS, VU'S, 4S7'S AND ALL POINTS BETWEEN. IF YOU HAVE A DIRECTIONAL ANTENNA, YOU MAY BE SURPRISED TO FIND THINGS LIKE VS6DO, KH2'S AND EVEN JA'S PEAKING CROOKED PATH TO THE SW ALONG WITH THE RUSSIANS. BY MID WINTER YOU WILL FIND THE MORNING LONG PATH EXTENDING TO EUROPE AS SUNSET IN LENINGRAD MATCHES SUNRISE HERE.

NOW FOR YOU PEOPLE THAT DON'T LIKE TO TALK WITH YOUR FINGERS WE'LL TALK ABOUT 40 METER PHONE OPERATION. EVERYTHING I'VE SAID BEFORE APPLIES ON PHONE DX, BUT NOW YOU HAVE THE PROBLEM OF FOREIGN BROADCASTERS - ESPECIALLY IN EUROPE. EVERY COUNTRY IN EUROPE AND AFRICA HAS TO UPHOLD ITS NATIONAL HONOR BY PUTTING AT LEAST ONE 100 KW STATION OF 40. OF COURSE THE BIGGER THE COUNTRY THE MORE TRANSMITTERS AND HIGHER POWER. EVEN OUR OWN VOICE OF AMERICA HAS MANY HIGH POWER STATIONS OPERATING IN EUROPE AND AFRICA. THIS MAKES FINDING A CLEAR FREQUENCY FOR A DX STATION TO LISTEN TO YOUR LITTLE

KW A REAL PROBLEM. YOU WILL FIND MOST PHONE DX STATIONS BETWEEN 7050 AND 7100 KHZ WITH MOST CROWDED INTO THE UPPER PART OF THE RANGE. DURING MAJOR CONTESTS THEY WILL SPREAD OUT AS LOW AS 7030 KHZ WHEN THE BAND IS REALLY FULL. WHEN YOU FIND A DX STATION YOU WANT TO WORK, FIND THE PILE UP AND ZERO BEAT THE LAST STATION HE WORKED. DON'T PUT ALL YOUR FAITH IN THE FREQUENCY HE SAYS HE IS LISTENING ON - HIS RECEIVER MAY NOT BE CALIBRATED CORRECTLY. HIS LISTENING WINDOW CAN BE VERY SMALL. PERSONAL EXPERIENCE FROM THE OTHER END OF THE PILE UP HAS SHOWN THAT A HALF A KHZ UP OR DOWN CAN BURY YOU IN THE BROADCAST QRM. SINCE THESE LITTLE HOLES ARE SO FEW IN NUMBER YOU MAY FIND MORE THAN ONE DX STATION USING IT AS HIS LISTENING FREQUENCY.

THE ONLY STATIONS THAT CAN WORK IN THE AMERICAN PHONE BAND ON 40 ARE STATIONS IN NORTH & SOUTH AMERICA ALONG WITH KH4, KH6, KH7, VK AND ZL. OTHERS MAY FROM TIME TO TIME OPERATE THERE, BUT THAT'S THEIR PROBLEM, NOT YOURS. YOU WILL OFTEN HEAR DX STATIONS WORKING EACH OTHER BELOW 7100 KHZ. SOME PEOPLE TRY TO TELL THEM THE LEGAL WAY ON CW TO LISTEN UP. OTHERS JUST GO DOWN ON THE DX FREQUENCY ON SSB AND SAY "LISTEN UP" - DON'T SAY I TOLD YOU TO BREAK THE LAW.

MAKE A LIST OF DX STATIONS XMT & REC FREQS AS YOU OPERATE. WHEN YOU HEAR A U.S. STATION WORKING A DX STATION WRITE DOWN THE FREQ, EVEN IF YOU CAN'T FIND THE DX STATION. YOU MAY FIND HIM LATER AND NOT REMEMBER HIS LISTENING FREQUENCY. FROM TIME TO TIME YOU WILL FIND A DX STATION RUNNING U.S. STATIONS AND NOT GIVING HIS LISTENING FREQUENCY BECAUSE HE HAS ALL THE PILE UP HE CAN HANDLE. IT CAN PAY OFF LATER WHEN YOU PUT DOWN ANY INFO AS YOU GET IT. THERE'S SOME GREAT DX ON 40 METERS - GO GET IT.

AS A SERVICE TO MEMBERS WE ARE LISTING THE SUNRISE & SUNSET TIMES OF ONE COUNTRY IN EACH OF THE 40 WAZ ZONES. THE TIMES APPLY TO THE PHONE CQ WW CONTEST. ALL TIMES GMT.

ZONE	COUNTRY	SUNRISE	SUNSET	ZONE	COUNTRY	SUNRISE	SUNSET
1	KL7	1808	0145	21	9K2	0305	1400
2	V02	1050	2055	22	VU	0045	1200
3	K6	1445	0120	23	JT	2345	0930
4	KØ	1330	2400	24	VS6	2240	0940
5	LOCAL	1148	2235	25	JA	2115	0750
6	XE	1300	0010	26	HS	2320	1050
7	TI	1130	2310	27	KH2	2020	0750
8	KP4	1030	2150	28	9M8	2205	0955
9	YV	0940	2120	29	VK6	2120	1020
10	HC	1055	2300	30	VK2	1915	0830
11	PY	0910	2125	31	KH6	1630	0345
12	CE	0955	2300	32	ZK2	1645	0525
13	CX	0850	2205	33	CN8	0656	1730
14	LX	0630	1610	34	ST2	0400	1530
15	SP	0545	1510	35	EL	0630	1820
16	UA3	0440	1245	36	9Q5	0440	1650
17	UL7	0220	1205	37	5Z4	0310	1515
18	UAØ	0000	0930	39	FRØ	0140	1425
19	UAØ	2200	0810	40	TF	0910	1645
20	5B4	0415	1450	38	ZS	0330	1640

by Roger Burt, N4ZC

