MAD RIVER RADIO CLUB
DX CONTEST GUIDE

OCTOBER 1985

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INTRODUCTION

With the constant urging of Mike Socha, W8UA, the Mad River Radio Club has undertaken the preparation of a DX CONTEST GUIDE following the format used for the past five years by The Yankee Clipper Contest Club in its YCCC CONTEST HANDBOOK. Their handbook has been successful in maximizing the club score--getting the most possible out of each member and each station in the club territory.

This document will stick to the basics. Some sections are lifted directly from the YCCC handbook; some are original and credit has been given to the authors of the various sections. It is essential that all MRRC members assist in the updating and improvement of this GUIDE. It can only be as good as we make it, collectively.

Although we don't have the need to possess the knowledge of N4XX or KH6BZF, it is important to have some basic appreciation, from a practical point of view, of propagation and some of the tricks it allows experienced DXers. There are a number of fine *prediction aides* available, such as the old slide rule version of 'The DX Edge', its up-to-date C64 based successor, the KI Edge by K1KI, and a variety of micro processed items which give you everything from beam headings to prefixes to watch for on Grey-line. Each of these tools will provide you with a few hints about where, when and how to expect openings to particular parts of the world.

We have attempted to fold some of this infomation into each section of the Band by Band analysis. If, as a club, we could agree on a particular piece of software or other common denominator it should make the discussion process easier and perhaps allow for creation of a data base as another predicting tool. For now we'll just wing it.

The strategy section is directed toward helping each member maximize their contribution to the club score based upon available time for contesting but without too much regard for personal award goals. The approach is team oriented. Prima donnas may now lay down the GUIDE and go back to developing a winning strategy for 10 meters when the spots are down to 45.

Sample log sheets and dupe sheets are included. The layout of these forms, especially the dupe sheets, is often a matter of personal preference. You should use whatever you are comforatable with, the object of the duping process being to help, not hinder the operator. Many operators tape the dupe sheets in a folder along with the multiplier checkoff for that band and perhaps a separate JA dupe sheet for any band where that may become a reality. A great YCCC hint is to redupe your logs using a yellow 'high lighter'. It is faster and may give you a few clues as to how avoid dupes in the future.

The MRRC rate sheet form helps you analyze your performance after the contest, to find strengths and weaknesses in your strategy, antennas, etc. Send the Breakdown sheet to W8LNO for Flash publication and a copy of your summary sheet to The Big Fish, W8FN, to allow him to properly advise the contest sponsor of our participation.

A final section has been included which will help little pistols improve their contribution to the club effort. Getting some sort of signal out on 80 and 160, or developing a way to run Europeans or JA's on 40 can make a BIG difference in your final score. It is in this final section that your help will be most appreciated and supportive of the purpose of the GUIDE.

STRATEGY

It would not be worthwhile to attempt to address the ramifications of strategy for each mode (s/o, m/s, m/m, m/d etc.). Nuiances of station layout, antenna selection, and less esoteric factors will prohibit such an effort. In concentrating on the single op situation we will ofter cross lines which will apply to *ANY* situation. Multi's overcome human failure by doing more things with more frequency. The Single op must concentrate on not missing the important things. The underlying factor is HF propagation on the Winter side of the Spring and Fall equinoxes.

Winning efforts result from QSO volume and Multipliers. Even with a very stron signal on all bands a station may pull up short in the final tally because too little time was spent ferreting out those so-important mults. The oft referred to CQ (running) vs. Search and Pounce modes of operating will always come in to play in a DX contest. With 1,500 watts out and a tribander at 70 feet it is possible to have very fine european and JA (with good spots) runs. The little pistol should take all available runs.

If, however, the 20 meter log is full of Eu QSOs but no SA mults, it may be best to turn the beam south and pounce on everything you hear. Late in the contest one mult can be worth several thousand points. Overall time available and watching that Q/Mult ratio are essential.

The trick to sucessful search and pounce is organization. A good dupe sheet is a must. Systematic frequency sweeping is very important. An orderly inspection of each band is effective to generating Q'S AND MULTS -- random tuning is next to worthless. Most ops will tune bottom up, pausing ocassionally and going back to determine the cause of splatter or clicks. Keep a *spot list or 'band map'* of stations and their frequencies if the pile was too big or too tough to crack. Go back and pick those on a subsequent sweep of the band or specifically. It will cut down greatly on waiting time and will keep you out of big piles which you have already broken.

Success in a DX contest is determined in large measure by your discipline. It is the factor which will allow you to maximize the capability of your station. Here are some strategies for achieving maximum scores with less than full-time efforts.

Less than 5 hours:

Run Europoeans for a couple hours each morning. Pick the band where you are most effective and push for rate ,try to set a personal record or challenge your buddy. Then search and pounce for a half hour each afternoon. Hit all the open bands. Look for easy-to-work DXpeditions, and for big-gun Europeans on 14 Mhz to build your mult total. Try for 250 QSOs and 80 countries.

5 to 15 hours:

Run Europeans in the morning hours on 14 and 21 Mhz, 28 Mhz if we're all lucky. In the afternons, search and pounce on Africa/South America/Caribbean mults. Later on, try running JA on 14 (slim chance on 21) or Europeans on 14 Mhz. Build your multiplier with an hour of search and pounce each evening concentrating on 40 meters during CW tests and 3.8 Mhz

for SSB. A 15 hour effort can produce 500 Q's and 175 countries.

15 to 30 hours:

Here, the question is when *NOT* to operate. You will miss the least if you take your breaks during normal sleeping hours. Get up early enough to be on 20 meters when it opens to Eu and hit 15 meters when it opens. you will need to expend a considerable effort in building your QSO total on 20 meters by working Europeans, and you will run out of easy multipliers. Dig for those weak signals. Hit the roaring pileups on Sunday after the big guns have cleared the way. Be sure to comb 40 and 80 for mults each evening and check 1.8 Mhz for easy mults too. If you have tested your 3.5Mhz antenna to JA and VK/ZL be sure to give them a shot at your sunrise. Almost any antenna will work those countries on 40 meters. The presence of a small 2 element 40 meter beam will guarantee many additional mults on that band with minimum effort. Use of those Grey-line operating aides to get the neat long-path stuff becomes critical. An MRRC station with a tribander at 60/70 feet and reasonable antennas for 80 and 40 can count on 750 Q's and perhaps 230 countries in the 15 to 30 hour span.

FULL BORE

If you are going for the all out effort in an attempt to finally run off your wife, impress your radio friends or just get over the crazies you will need to spend more time preparing your station for operating comfort and convenience. The 1,000 QSO mark is very tough to crack from MRRC country: but it can be done. Follow the Band by Band guide, make necessary changes to maximize mults and be prepared to have a lot of fun.

BAND BY BAND

1.8 MHZ, Jeff Briggs, K1ZM, YCCC

With sunspots having fallen like a rock, Top Band takes on renewed importance to single-ops and multis during the contests, so make sure to optimize your given location to take full advantage of this challenging band.

Dipoles and inverted vees will work on 160; quite effectively if they are up 100' or so. If you have only a 60-70 foot tower with yagis on the top, try running some #12 wire to the top. Keep the wire off the tower about 24 inches or so and feed the system through an L network. With 30 to 40 radials, this system is a real performer! 130 footers are best, but 60-70' will do if at least three or four are 130 feet long to resonate the antenna properly. If you don't have the real estate to run 130' in a straight line, don't be afraid to make a few bends here and there. It dosen't seem to be all that important as long as the length is there.

There really isn't much difference between the CQWW and The ARRL tests on 160 except that CQ seems to bring out more multipliers - especially from Africa. Perhaps due to expeditions and the fact that "winter" static hasn't fully set in yet. Because of improved conditions, this band is worth serious effort.

What's new about the band? Well, over the past year a major change has occurred on 160. There has been a significant migration to transceive on-frequency operation and a corresponding decresae in the importance of the "DX window". It is now the exception on 160 to transmit down and listen up in the window. Many DX stations may go there, but a lot of them also work transceive there as well, which, at times, creates a bit of anxiety for some of the old 160 meter buffs. Fortunately, most DX operation is now concentrated between 1830 and 1845Khz during the contests with 15-25 mults readily available to those with good stations (high dipole, 1,500 watts out, and long beverage receiving antennas).

If you are a single-op, start checking the band about 0300Z and then hourly thereafter until 1000Z. If conditions are good, be sure to give European sunrise a shot on CW and even on SSB if conditions are above normal. The best way to work this band is to come and go often, usually staying for no more than 5 to ten minutes at a time. It is usually a waste of time to call CQ unless you are a multi and can afford the time.

Easiest pickings on 160 are the big Caribbean DXpeditions. After that, look out for loud Europeans and Africans at their sunrise. Many of these are quite easy to work once the big multis get through and are out of the way. Concentrate primarily on new multipliers - contact total contributions will have to come from the higher bands.

Once Europe goes out, 160 gets really slow, but new stations down South and West often check the band on the hour for 5 minutes or so. Again, hourly band checks are the way to go, but don't stay for more than 5 minutes without working somebody. With propagation on this band improving and with all the new countries that have come on the band in the past 18 months, you'll find your investment in 160 well worth the effort. Good hunting!

BAND BY BAND
3.5 Mhz JOE WARDEN, W8LNO

From the Heart of Mad River country you can expect to collect 40 to 50 multipliers and add to your contact total with only modest antennas. But it takes a lot of patience and possibly a separate receiving antenna, depending on how quiet your QTH is and the Weather.

You and expect to work the Caribbean and Latin America from sunset to sunrise. They will be loud and attract large piles, so don't try to be the first to work the new arrivals -- but don't count on them being there for too long either. If it is a single op show he will probably not rely on 80 for volume and be there to catch Eu and Af mults.

Although I have often worked ZB2EO at our sunset, as a rule, all of Africa is best worked at their sunrise. We MRRCers seem to have some advantage to the Dark Continent. When The band opens up (not always) you will get through. Always remember, you are only on 80 for the mults!!

It will not be easy to work Europeans during the CQWW because of their own QRM. Plan on working them on Saturday night after they have worked each other and have to catch up with the Western hemisphere stations. Your results should start to improve around 0100Z AND PEAK during the hour before their sunrise.

During the hours between 0800 and 1100Z it is possible to pick up a few multipliers, although you may prefer to sleep. KH6 and ZL will probably still be available at 1100; however, it is easier to work them earlier. At 1100 you will be listening for JA, VK and KL7, right up to sunrise.

On 80 during the WW it is important to watch for VE's. They can add significantly to your contact total without taking a lot of time from your search for mults.

On SSB Extra class licensees will work most Europeans transceive as well as the Caribbean and North and South America. Watch for the rest of the world as follows:

3640-3650	USSR
3690-3700	VK
3740-3750	CE, LU
3793-3803	JA
3790-3810	AFRICA, ASIA

BAND BY BAND
7 Mhz, PAUL YOUNG, K1XM, YCCC

This is the year to think about 40 meters. It is likely to be more important than 10, and may even be more important than 15 on CW if

conditions are lousy. For the single operator station, on CW, there are two reasons to be on 40 meters: to run Europeans and to pick up multipliers. On SSB, the QSOs become less important.

When trying to run Eastern Europeans on CW, try and keep the bandwidth of your receiver fairly wide, and use the RIT. Most Europeans call off frequency. These are your bread and butter, so you'd better find them. It's ok to go up above 7010. Frequencies to avoid are 7010, because there are ragchewers who congregate there, and because of South American SSB QRM, and 7025 because thee is an AM broadcast station which sometimes operates there, and because stations without Extra class licenses like to fight over this frequency. Sometimes it pays to move up as high as 7035, and you can hear some multi-multis do this. Don't bother going above 7040 as there is a gentlemans agreement in Eu which says "phone above 7040".

Although you can frequently hear Europeans on 40 as early as 1600Z you usually cannot work them that early, especially during the CQWW when they are working each other, and JA. Unless the other bands are totally dead, go somewhere else for a while.

By 2100Z forty is usually open. If you have a beam or conditions are especially good, you may be able to work long path JAs which come in at about 150 degrees. This could be a good time to pick up Eastern Asiatic Russians, such as UF6 and UL7. On phone, especially during CQWW, this can be a very frustrating time. You will hear multipliers you need but will never work because they don't go split. Make sure you look for Africans; they will be in from now until after European sunrise.

You want to work Europeans as early as you can. The Europeans will get real loud, and there should be plenty of YUs and LZs to work. Work them now, before they go to bed. Also take an occasional tune around, and work HZ1AB, and the DXpeditions in the Carribean. On phone, you may find several Europeans using the same listening frequency. If you are not getting through, try using the DX station's callsign when calling him. On Phone, don't forget to check the American band: there are a few stations who don't operate split.

At European Sunrise, a new crop of loud Europeans show up. Concentrate on the Western Europeans and don't be surprised if you start working JAs during your European run. There is an ocassional opening, about 15 minutes long, at around Japanese sunset.

After European sunrise, long path Asians may show up. Western Asiatic Russians, and sometimes Eastern Russians will usually peak Southwest. You will get another shot at YB, probably coming from almost due south. Also the South Pacific will start to come in, getting louder up until after our sunrise. Don't think that the morning JA opening will be poor if the Evening European opening was; it's usually the other way around.

After sunrise, the JAs tend to be coming form the Northwest, and the South Pacific stations start of fade. You probably don't want to be on 40 any more.

On phone, many american stations try to get DX stations to listen split.

Many of the European stations don't understand what's being asked of them. People who go "listen up" or "listen for Stateside", frequently get a response like "the LU station please again". The people who do this most sucessfully look for a clear frequency in the American band, and then tell the DX station "listen seven-two-oh-three" or somesuch. When you hear someone do this, quickly get on the frequency he announced, and beat him out to the DX station!

BAND BY BAND
14 Mhz, TOM FRENAYE, K1KI, YCCC

If you have been avoiding 20 meters during the past few years by running up big QSO and multiplier totals on 15 and 10 meters, this is the year you will pay the price and learn to milk 20 meters for all it's worth.

Unlike the last 5 or 6 yers, 20 meters will stay open for DX through the middle of the day. When sunspots were numerous, the MUF was often in the 30-50 Mhz range, and absorption during the day made 20 and sometimes even 15 meters pretty poor at mid-day. These days the MUF may not even make it to 10 meters. During the night the MUF will drop below 14 Mhz so 20 meters will not be a 24 hour-a-day band. But watch out from just before sunrise until several hours after sunset!

There should be no question about which band is the one to give you the most QSOs and multipliers this year. You may even find that 50% of your QSOs come from 20 meters.

o Start the contest on 20 meters. Stay for no more than one hour unless rates are exceptional. Second choice is 40 meters if you have an antenna with more gain than a dipole.

o Never let more than an hour or two go by without checking for multipliers on 20 meters.

o Plan to spend 17-2200Z on 20 meters for the prime European runs (with an occasional check of other bands for multipliers).

o Pay close attention to sunrise/sunset times for areas you need to work for multipliers.

o Keep an accurate multiplier checksheet, even if you can't keep up the dupe sheet. You should be able to find five new multipliers on 20 meters in each of the last two hours of the contest.

o On SSB try out your high school Spanish with the beam south in the evenings. you will be surprised at the number of eager South and Central American stations glad to hear a gringo at least trying to speak Spanish -

it may be worth five multipliers (try it on 40 meters also).

o Long path openings may be possible during the hour or two after sunrise to southwestern Asia (HZ, UL, 4X) and eastern Africa (VQ9, 5Z4, ZS). Also watch for long path in the late afternoon (again, an hour or two before sunset) to the Pacific and VK/ZL.

o Except for the mandatory ten minutes per hour for multiplier hunting, spend your time trying to run the European stations. There is no other area with such a high concentration of stations to work.

o Don't hesitate to move high up in the band when it gets crowded, or you begin to run out of people to work. A lot of stations move up as the QRM gets bad - and as the QRM gets bad you will hear fewer of the stations calling you! On SSB try not to give the nets and ragchewers too much to gripe about, but a clear spot at 14,305 is 100% better than one with QRM at 14,200.

BAND BY BAND

15 Mhz , DOUG GRANT, K1DG, YCCC

Fifteen meters could be the most important band for both QSOs and multipliers, depending on solar flux. Contrary to popular belief, you don't have to be a big gun to do well on 15. You can get the most out of fifteen, sunspots or no, if you are careful and plan according to conditions.

If you are hearing signals on the band just before the start of the contest, it's a good idea to start there. If you're not hearing anything, forget about it until morning.

Start by listening with your beam South, and don't forget to listen out West also. Very often, 15 is open to South America and Oceania at the same time. If by chance you hear a JA, work him. You may not hear another all weekend, the way things have been. According to the Institute for Telecommunications Sciences, you need a solar plux of 125 or so in order to get a 15 meter opening to JA at 0000Z. Listen to WWV before the contest.

The Saturday morning European opening can be the most important few hours of the contest. If the band is good, it will open between 1200 and 1300Z. If the band is lousy, the opening will be a little later, and signals will be weaker. You'll have to judge by experience with your station whether the band is good or not. Pay some atttention to how loud the big stations from Eu sound. If G3FXB, I5NPH, I3MAU, YU4EY, HG5A and guys like that are puny weak, the band's probably lousy.

Another tip: listen to the Caribbean DXpeditions in the morning on 15. They always have propagation to Europe. See if you can hear the stations calling them. Many of the caribbean guys stay just outside the US phone band so listen for them. And remember, our band now goes all the way down

to 21,200.

If the band is open well, find a clear frequency and call CQ. If the band is open, but not "wide open" then call CQ, but listen very carefully to make sure your frequency is clear in Europe.

If 15 is very late opening (15-1600Z), stick with it as long as you can work people. Don't get discouraged and go mono 20. The rates into Europe can be high when the band opens late, since all the guys in Europe who've been waiting for the band to open are eager to work you.

Of course, if the band is lousy to Europe, you can still point the antenna south and work the Caribbean/south American stations. They will probably have propagation to Europe, but you can probably sneak through the pileup. Also look for Africans, and don't forget that we may get a skew path opening to Europe. If you hear Europeans while beaming South America, don't worry about it, just work 'em!

When 15 goes completely dead to Europe, go to 20 and work all the same guys there. You'll have a while before anything happens on 15. Get back to 15 before it closes, though. Make sure you clean up all the multipliers you can find. On Saturday, run around the band and work everything you can hear. be prepared to turn the beam a lot.

Keep a good eye on your multipliers on all bands. An all-band multiplier check-off sheet will show you quickly on which bands you forgot to work KP4. There's a great feeling of satisfaction in working a multiplier on all the bands. It's like putting a puzzle together. And you won't be scratching your head after the contest wondering how you missed zone 5 on 15.

Late in the GMT day (2200-0000Z), you should at least listen around on fifteen. You may find all the same guys you worked earlier from South America, but you may also find new ones from the Pacific. If the KH6s get loud, it's a good indication that you might get a JA opening. If the South Americans fade away and no Pacific or KL7 stations show up, then kiss your JAs goodbye.

BAND BY BAND
28 Mhz, MIKE SOCHA, W8UA

Although ten meters will probably not be open at all before 1500Z, the best opportunities will probably come late in the afternoon to the Caribbean, Central and South America. Your hourly checks of the band should include a CQ just in case some timid sole is listening for someone to answer.

An unexpected increase in the sunspot level could allow a few Africans or even southern Europeans to sneak through. When you work big gun stations in the southern hemisphere on 15 ask them when they are going to ten meters.

There ia almost no chance of openings to Europe or the Pacific; however, be sure you don't miss anything major that hits the band.

STATION IMPROVEMENTS FOR LITTLE PISTOLS AND ALLIGATORS

For purposes of definition and in an effort to add perspective to basic station requirements we should assume that a MRRCer who wishes to operate single op in a DX contest will have available a KW amplifier and a tribander at, say, 50 feet. Although many gifted operators do very well with less, the assumption of some minimum eliminates discuission of three bands and allows us to concentrate on those facets of the event which are the most difficult to improve upon.

FORTY METERS

Some may say that it is outrageous; however, the most cost effective way to deal with this band is to put up a 2 element shortened beam. The tower which supports that TA-33 will probably also hold a 40 meter beam. You're concerned about your rotor? You never know till you try. There have been lots of CD-44's which have survived more abuse than a 40/tribander stack! Phased verticals and delta loops are fine, but you spend a lot of money on switching, long coax runs, etc. They also get in the way of what you may plan to do for 80 and 160 meters.

Assuming I have failed to convince you in favor of my 2 element beam lets go on to the alternatives. W8CAR and WD8LLD have had excellent results with phased 40 meter verticals. There are any number of good articles on the subject and enough knowledge within MRRC to avoid going into explanations here. If you don't have the ability to use suspended wires (cheap!) you must use some sort of tubing, either self supporting or guyed, which gets you back to the beam argument. Additionally, verticals are more suseptible to interference from surrounding objects, such as towers and houses with aluminum siding or stucco,than are other antennas.

If you have the space, a better alternative seems to be phased delta loops. Two can be suspended from a single rope, height above ground is not *TOO* critical, and they make a good receiving antenna for 160 meters. Such an antenna will allow you to run Europeans on 40, to work deep Russians long path and to pick out South Pacific stations with no difficulty. With 1/4 wave spacing and fed in phase, you can get JA and South America.

A good 40 meter antenna is the easiest way to improve your all band single op score in a DX contest. I've left out slopers. Save the tower for other bands if you're not going to listen to my beam argument.

EIGHTY METERS

That inverted vee which you use for SS and the Sprints just isn't going to cut it. It will work, but you are going to be the last out of the box most of the time. Besides slowing you down, it isn't good for your ego.

Several alternatives exist: shunt feed your tower (see K8CC article re: HR1DAP antenna), hang vertical wires from trees and phase them- or use just one; put up an inverted L. The key is to get some vertical polarization.

I won't consider loops or slopers. Our tower just isn't tall enough and the trees are short.

W8LNO had phased 80 meter verticals in 1980/81 before the tower went up. They were great! Working JA on 75 SSB during that part of the sunspot cycle was a real thrill. The tower destroyed the pattern and almost all contact with the South Pacific. The pattern to Eu was squewed to North Africa. It is fun to work ZB2EO at 4:00pm Eastern, but that is just one Mult.

The all-around simplest and best antenna for 3.5Mhz at W8LNO has been a 3/8 wave inverted L. With a very casual effort it rolled up 51 countries in the 1983 CQWW. An article on matching the wire will be forthcoming in the 'Flash'. Earlier inquirey will be accepted.

Results using shunt fed towers varies. Some say they kill earth worms. Other ops say they kill the competition. If your tower is located close to your house it will be very difficult to install radials in sufficient numbers.

On the subject of grounding, the installation and use of many, many vertical antennas has shown W8LNO that you need a minimum of 15 radials, 5% longer than a quarter wave. Now remember, this is the practical radio amateur talking, not some damn broadcast engineer. The objective is to work DX, not create a monument to the art. Tie your radial system to anything that looks like metal or appears to be grounded.

As you add radials, the SWR will most likely increase. That's good! It demonstrates that you have lowered the ground resistance associated with your 1/4 wave radiator and no longer have a composite of 50 ohms. Don't worry about it!

TOP BAND RADIATORS

In addition to the thoughts expressed by Jeff Briggs, K1ZM, in his piece about 1.8 Mhz contesting, you may wish to consider using a 1/4 inverted L for 160 which doubles as an ultra-low-angle radiator for 80 meters. Remote switching of a Matching Network is no big trick, see the August 1985 'QST' article by W1FB.

Us little guys aren't going to run up big contact and multiplier totals on Top Band but you can load your 80 meter dipole with a tuner and hope to get six mults with no big effort. Remember, with a base QSO total of 500 in the ARRL test you just picked up 9,000 points! In the CQWW the effect is even greater.

With a 1/4 wave inverted L the limiting factor will be your ability to hear the DX. It has often been reported to the author that he can't hear, or dosen't listen. But, from a city lot with lots of electrical noise it is just not possible to eliminate all sources of interference, and you must be willing to live with that failing. Even with poor receiving locations, if you can get up an Inverted L you should be able to pick up 10 or more mults in the DX tests this winter.

RECEIVING ANTENNAS

Earlier I mentioned that a 40 meter loop makes a great Rx antenna for 160. Similarly, I have used a 70 foot loop for 80 meters with very good results. You must discover what will work for you; however, you can be assured of improved results if you use some type of receiving antenna for 80 and 160. The 'Big Ear' article by W0JLC which appeared in the last MRRC Flash was also published in the National Contest Journal. Here at W8LNO it will run down the street across the tops of the Bartlett Pear Trees which line Hemstead Road. The Street Sign post will serve as the termination and grounding point.

The various coaxial and other forms of shielded loops that have been described do work. Not as well as some other things that I've tried, but they are better than a noisey Tx antenna. Experiement and find out what will work for you. It isn't hard work, and good results are very satisfying. More ideas are needed from the MRRC membership on this topic. It is the weak link in most of our stations and one which will provide big returns on a very small investment. When using a separate receiving antenna always be sure to protect your receiver/transceiver during transmit.

Year

CQ World Wide DX Contest CQ

Last Full Weekend of October (Phone) & November (CW)

Call Sign _____ Country _____

Mode:

☐ Phone ☐ Single Op., All Band ☐ Multi-Op. Single Transmitter ☐ QRPp [5W or Less]

☐ CW ☐ Single Op. ____ MHz ☐ Multi-Op. Multi-Transmitter

	QSO's (minus duplicates)		QSO Points		Zone Multiplier		Country Multiplier		Score	
1.8 MHz		→		X		+		=		1.8 MHz
3.5 MHz		→		X		+		=		3.5 MHz
7.0 MHz		→		X		+		=		7.0 MHz
14 MHz		→		X		+		=		14 MHz
21 MHz		→		X		+		=		21 MHz
28 MHz		→		X		+		=		28 MHz
All Bands		→		X		+		=		All Bands

How to score: QSO Points X (Zones + Countries) = FINAL SCORE

EXAMPLE: 1000 QSO Points X (30 Zones + 70 Countries) = 100,000 points

Station Description: _____

Antenna(s) _____

Operators _____

Remarks (Biggest thrill in Contest, funniest story, comments, etc.) _____

Club Competition / Minimum 3 logs MAD RIVER RADIO CLUB

This is to certify that in this contest I have operated my transmitter within the limitations of my license and have observed fully the rules and regulations of the contest.

Signature _____

TYPE or PRINT

Name _____ Call _____

Address _____

City _____

State or Country _____ Zip _____

Logs must be postmarked no later than December 1st for PHONE and January 15th for CW. Indicate PHONE or CW on envelope.

Mail all logs to the appropriate addresses indicated in the current contest rules. Do not mail logs to CQ Headquarters.

CQ Form 1057B 1980

CQ World Wide DX Contest

Last Full Weekend of October (Phone) & November (CW)

_____ Pages

Call Sign [ ]   [ ] Phone   [ ] CW   (Use separate log for each band.)   Log for [ ] MHz Band

TIME GMT	STATION	SERIAL NUMBER SENT	SERIAL NUMBER RCVD	New Multipliers Only: Zone	New Multipliers Only: PX of Country	QSO POINTS

TIME GMT	STATION	SERIAL NUMBER SENT	SERIAL NUMBER RCVD	New Multipliers Only: Zone	New Multipliers Only: PX of Country	QSO POINTS

QSO's (minus duplicates)   TOTALS   (Zones, Countries, Points)

QSO's (minus duplicates)   TOTALS   (Zones, Countries, Points)

TOTALS THIS PAGE _____ _____ _____

Note: Duplicate QSO's can mean disqualification!

Country-Zone Multiplier Sheet

	160	80	40	20	15	10
A2						
A35						
A4X						
A51						
A6X						
A7X						
[illegible]						
[illegible]						
BV						
BY						
C21						
C31						
C5A						
C6						
C9M						
CE						
CEØA						
CEØZ						
CEØX						
CO						
CU						
CP						
CR9						
CT						
CT2						
CT3						
CX						
D2A						
D4C						
D6A						
DJ						
DU						
EA						
EA6						
EA8						
EA9						
EI						
EL						
EP						
ET						
F						
[illegible]8W						
[illegible]1X						
[illegible]8Z						
FC						
FG7						
FH8						
FK8						
FM7						
FO8						
FOØX						
FP8						
FR7						
FR7G						
FR7J						
FR7T						
FS7						
FW8						
FY7						
G						
GD						
GI						
GJ						
GM						
GM/s						
GU						
GW						
H44						
HA						
HB9						
HBØ						
HC						
HC8						
HH						
HI						
[illegible]						
CE						
[illegible]4,8J1						
Total						

	160	80	40	20	15	10
HK						
HKØD						
HKØm						
HKØs						
HL						
HP						
HR						
HS						
HV						
HZ						
I						
IS0						
IT9						
J2						
J3						
J5						
J6						
J7						
J8						
JA						
JD1m						
JD1o						
JT						
JW						
JW b						
JX						
JY						
K/N						
KC6e						
KC6w						
KG4						
KH1						
KH2						
KH3						
KH4						
KH5						
KH5k						
KH6						
KH7						
KH8						
KH9						
KHØ						
KL7						
KP1						
KP2						
KP4						
KP4D						
KX6						
LA						
LU						
LU3Z						
LX						
LZ						
OA						
OD5						
OE						
OH						
OHØ						
OJØ						
OK						
ON						
OX						
OY						
OZ						
P29						
PA						
PJ						
PJ7/B						
PY						
PYØf						
PYØs						
PYØc						
PZ						
S2						
S79						
KP3						
Total						

	160	80	40	20	15	10
S9						
SM						
SP						
ST						
STØ						
SU						
SV						
SV/A						
SV/c						
SV/d						
T2						
T31						
T32						
T3p						
TA						
TF						
TG						
TI						
TI9						
TJ1						
TL8						
TN8						
TR8						
TT8						
TU2						
TY						
TZ						
UA						
UK1P						
UA2						
UAØ						
UB5						
UC2						
UD6						
UF6						
UG6						
UH8						
UI8						
UJ8						
UL7						
UM8						
UN1						
UO5						
UP2						
UQ2						
UR2						
V2						
V3						
VE						
VE1p						
VE1s						
VK						
VK21						
VK9X						
VK9Y						
VK9Z						
VK9m						
VK9N						
VKØh						
VKØm						
VP2E						
VP2K						
VP2M						
VP2V						
VP5						
VP8						
VP8g						
VP8o						
VP9						
VQ9						
VR6						
VS5						
VS6						
VU						
VU/a						
VU/1						
Total						

	160	80	40	20	15	10
XE						
XF4						
XT2						
XU						
XV						
XW8						
XZ						
Y2-9						
YA						
YB						
YI						
YJ8						
YK						
YN						
YO						
YS						
YU						
YV						
YVØ						
ZA						
ZB2						
ZD7						
ZD8						
ZD9						
ZZ						
ZF						
ZK1						
ZK1M						
ZK2						
ZL						
ZL/A						
ZL/C						
ZL/K						
ZM7						
ZP						
ZS						
ZS2M						
ZS3						
1AØ						
1S						
3A						
3B6						
3B8						
3B9						
3C						
3CØ						
3D2						
3D6						
3V8						
3X						
3Y						
4S7						
9U1TU						
9U1UN						
4W						
4X						
5A						
5B						
5H3						
5N						
5R8						
5T5						
5U7						
5V						
5W1						
5X5						
5Z4						
6O						
6W8						
6Y5						
7O						
7P8						
7Q7						
7X						
Total						

	160	80	40	20	15	10
8P6						
8Q7						
8R1						
8Z4						
9A						
9G1						
9H						
9J2						
9K2						
9L1						
9M2						
9M8						
9N1						
9Q5						
9U5						
9V1						
9X5						
9Y4						
ET/A						

ZONE

	160	80	40	20	15	10
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Total						

CE9=S.Shetlands =HFØPOL,LU-Z, VP8,4K1GM
KC4A=Antarctica

C5 =ZD3
C6 =VP7
C9M =CR7
D2A =CR6

J5 =CR3
J6L =VP2L
J7D =VP2D
J8S =VP2S

KH4 =KH6
KH5 =KP6
KH5K=KP6K
KH7 =KH6k

KP1 =KC4n
KP2 =KV4
KP3 =KS4sb =HKØ

T2 =VR8
T3Ø =VR1
T31 =VR1P
T32 =VR3

Z2 =ZE
9A1 =M1

ET/A=Abu Ail

EUROPE

	1.8	3.5	7	14	21	28
C3						
CT						
CT2						
DJ						
EA						
EA6						
EI						
F						
FC						
G						
GD						
GI						
GJ						
GM						
GM-S						
GU						
GW						
HA						
HB						
HBØ						
HV						
I						
IS						
IT						
LA						
LX						
LZ						
OE						
OH						
OHØ						
OK						
ON						
OZ						

	1.8	3.5	7	14	21	28
PA						
SM						
SP						
SV						
SV5						
SV9						
T7						
UA1						
UA2						
UB						
UC						
UD						
UF						
UG						
UN						
UO						
UP						
UQ						
UR						
Y						
YO						
YU						
ZB						
4U1ITU						
4U1VIC						
5B						
9H						

AFRICA

	1.8	3.5	7	14	21	28
A2						
CN						
CT3						
D4						
EA8						
EA9						
EL						
FR						
J2						
ST2						
SU						
TR						
TR						
TU						
ZD7						
ZD8						
Z2						
ZS						
ZS3						
3B						
3D6						
5H						
5N						
5T						
5Z						
6W						
7X						
9L						

N. AMERICA

	1.8	3.5	7	14	21	28
C6						
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FG						
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FP						
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HH						
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HR						
J3						
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J8						
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KP2						
KP4						
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PJ7						
TF						
TG						
TI						
V2						
V3						
V4						
VE						
VP2E						
VP2M						
VP2V						
VP5						
VP9						
XE9						
XE						
YS						
ZF						
6Y						
8P						

ASIA

	1.8	3.5	7	14	21	28
AP						
HL						
HS						
HZ						
JA						
JD						
JT						
TA						
UA9						
UH						
UI						
UJ						
UL						
UM						
VQ9						
VS6						
VU						
YK						
4X						
9V						

OCEANIA

	1.8	3.5	7	14	21	28
A35						
DU						
FK						
FO						
H4						
KG6						
KH6						
KX6						
P2						
T32						
T3Ø						
VK						
YB						
YJ						
ZK						
ZL						
3D2						
5W						

ZONES

	1.8	3.5	7	14	21	28
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40						

SOUTH AMERICA

	1.8	3.5	7	14	21	28
CE						
CEØA						
CP						
CX						
CX						
FY						
HC						
HK						
HKØ						

	1.8	3.5	7	14	21	28
KC4						
LU						
OA						
PJ2						
PY						
PZ						
VP8-F						
VP8-S						

	1.8	3.5	7	14	21	28
YV						
ZP						
8R						
9Y						

These are the common mults. Add others in the blank rows

YCCC3.0

A
B
C
C6
CE
CH
CP
CT1
CT2
CT3
CT4
CX
D
DA1
DA2
DF1
DF2
DF3
DF4
DF5
DF6
DF7
DF8
DF9
DFØ

DH
DJ1
DJ2
DJ3
DJ4
DJ5
DJ6
DJ7
DJ8
DJ9
DJØ
DK1
DK2
DK3
DK4
DK5
DK6

DK7
DK8
DK9
DKØ
DL1
DL2
DL3
DL4
DL5
DL6
DL7
DL8
DL9
DLØ
E
EA
EI

F
F2
F3
F5
F6
F8
F9
FØ
FC
FG
FM
FO
FP
FY
G2
G3A
G3B
G3C
G3D
G3E
G3F
G3G
G3H
G3I
G3J
G3K
G3L
G3M

G3N
G3O
G3P
G3Q
G3R
G3S
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G3U
G3V
G3W
G3X
G3Y
G3Z
G4A
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G4D
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G4K
G4L
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G4O
G4P
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HA8
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HB9
HBØ
HC
HH
HI
HK
HP
HR
HZ
I1
I2
I3
I4
I5

I6
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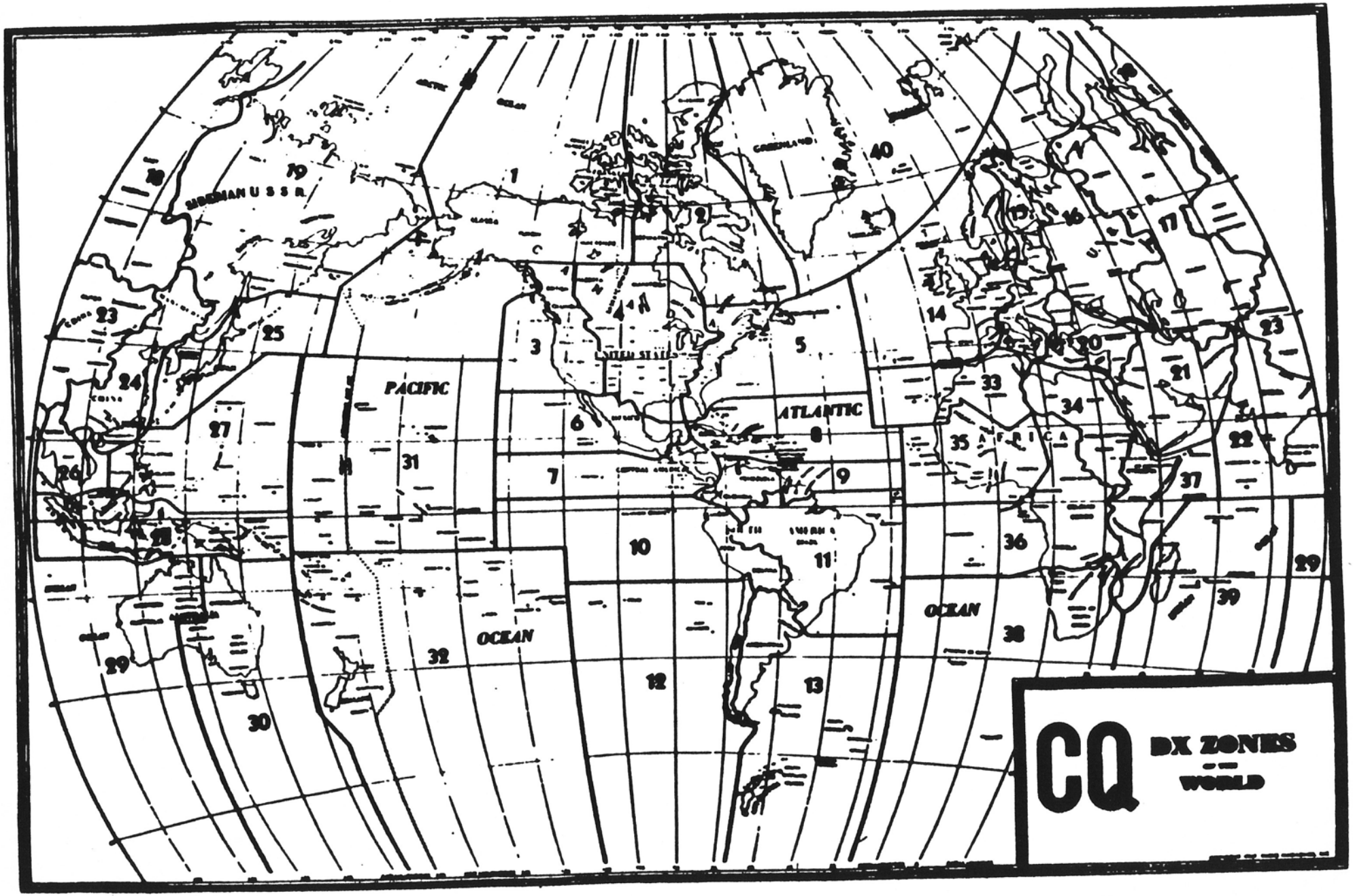
KH6
KL7
KP2
KP4
LA
LU
LX
LZ1
LZ2

YCCC1.Φ

O		P		T		UB-P		UZ1		V		YU1		Z	
OA		PA2		TF				UZ2		V2				ZD	
OE1				TG						V3				ZF	
		PA3		TI						V4				ZK	
				UA1						VE				ZL1	
		PAØ				UB-U								ZL2	
OH1								UZ3							
				UA2										ZL3	
OH2		PJ2		UA3								YU2			
		PJ7												ZL4	
		PP				UC				VK					
OH3		PR						UZ4						ZL	
		PS													
OH4		PT													
		PU		UA4											
OH5		PY				UO									
						UF								ZP	
						UG		UZ5						ZS	
OH6						UH				VP2E					
		S				UI				VP2M					
OH7				UA6		UJ				VP2V					
						UL				VP5		YU3			
OH8						UM				VP8					
		SK				UN				VP9					
OH9		SL				UO				VS6				3	
		SM1		UA9				UZ6		VU					
OHØ		SM2				UP				X					
OK1		SM3													
		SM4								XE				4	
		SM5													
		SM6		UAØ		UQ									
		SM7								Y					
		SMØ						UZ7							
		SP1								Y2		YU4		5	
OK2		SP2		UB-A		UR									
		SP3													
		SP4						UZ8		Y3					
		SP5				UT								6	
												YU5			
										Y4					
OK3		SP6										YU6			
				UB-F		UV		UZ9						7	
										Y5		YU7			
		SP7				UW				Y6					
		SP8								Y7				8	
ON		SP9								Y8					
				UB-K		UX		UZØ		Y9		YU8			
		SPØ								YO				9	
OZ						UY						YV			
		SV													

YCCC2.D



ADDENDUM TO WAZ MAP—All Sakhalin Island and the Soviet Kuriles are now in Zone 19. Zone 19—Eastern Siberian Zone: UAØ Khabarovsk, Amur, Yakutsk, Primorsky, Sakhalin Island, Wrangle Island, and the Soviet Kuriles. Zone 25 -Japanese Zone: HL/HM, JA/KA, and KR6.

MRRC RATE SHEET 19___ _____

☐ SSB
☐ CW

☐ S/O
☐ M/S
☐ M/M

CALL _____ OPERATORS _____

SCORE _____ QSO's _____ MULTIPLIER _____

160	80	40	20	15	10	RATE	TOTAL	Z	160	80	40	20	15	10	RATE	TOTAL
								00								
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								20								
								21								
								22								
								23								

COMMENTS

TOTAL Q's								
DUPES								
NET QSO's								
MULT'S								
TIME								
RATE								