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THE BULLSHEET

Official News Bulletin of the
Texas DX Society
An ARRL Affiliated Club



March, 1987
Volume XI
Number 3

IT SEEMS TO ME (de K5TU)

Have you looked at the changes introduced by the FCC for Novice class licensees? Frankly, I have mixed emotions about them. Giving Novice class licensees 10M privileges create more TVI/RFI headaches that, in my opinion, these novices aren't capable of solving.

Looking at the rest of the "enhancements", it appears that the FCC has finally conceded to the high pressure lobbying from the EIA, giving Novices VHF privileges that translate into a new market for radios and accessories. So much for incentive licensing.

One change I can wholeheartedly agree with is the change in testing for Technicians and Generals. I think the exam content should be in line with the privileges. A Technician should know more about VHF/UHF theory and techniques, since that's where the majority of his privileges are.

IF YOU'VE BEEN LISTENING, YOU'VE HEARD...K5DX will retire from the Ethyl Corp. in April...CW Sprint scores were great, maybe another winner for TDXS Team 1..."Dispatcher Dave", WR5N, was introduced for membership at the February meeting...Your 1987 dues are past due. Bribe KG5U and postdate your check... Guess you noticed the 3 biggest pileups in ARRL-CW were all TDXSers. KSNA/KPI, XE2FU and K5KG/LU...K5KG/LU is QRV 160 now. He worked a VE3 in ARRL-CW. He's going single band 15 for ARRL phone...The NR5M 24 element 20M array is a LASER. In ARRL-CW they were Q for Q and mult for mult with N2AA on 20. The next project is phased bobtail curtains on 80 M...K5MA bought a new Henry 3K Classic amp, complete with 160M...N5EA sez the VU4 can only QLF on CW.

NOVICES GET 10 METER PHONE PRIVILEGES (de KE5FI)

The FCC has announced the new Novice enhancement frequencies. The major new privilege will be phone between 28.3 and 28.5 Mhz. They will have all CW and digital modes from 28.1 to 28.5. This means life to a portion of the 10 meter band that has been seldom used. It also will give us a nice pool of new stations to contact during contests. The new privileges take effect March 21.



DX Report
(de WI5P)

ANDAMAN and NICOBAR ISLANDS --- VU4APR & VU4NRO
NOW - March 31 -- By as many as 20 VU ops.
Should be active in ARRL contest.

GALAPAGOS - HD8G
NOW - March 9 -- CW/RTTY + ARRL DX SSB -- by HC5KA - QSL - KT1N

LORD HOWE ISLAND ---- VK9LM, Rudi (DJ5CQ)
NOW - March 15 -- 80 & 40 Mtrs --- Sunrise 1910Z - Sunset 0800Z
QSL - OE1ZL (Donations requested)

AVES ISLAND (YVO) --- 4MOARV by NP4NX
March 13 - 22 --- 20, 15 & 10 Mtrs --- Pse. put it out on 36!

MALDIVES (8Q)
Lloyd & Iris (out of hospital) NOW active as 8Q7QL
Joe, WA6VNR & Nancy, KB6MME begin a three week stay in March and have applied for licenses to operate. Also plan to go to the Seychelles, and the ANDAMANS.

MARION ISLAND (2S2)
George, VE3FXT hopes to obtain permission & license for an APRIL operation. There are two Israeli hams are on Marion Is. working on an airport construction job, hopefully they will be able to operate. (Eleven people show this on their NFED LIST, call me FIRST and I'll call them. OK?)

SOUTH GEORGIA & SOUTH SANDWICH (VP8)
Rumored that G3SEJ is on his way for a MARCH operation. LISTEN for updates on the TDXS DX & CONTEST NET - Thursday 2100

OTHER ACTIVITIES
MARCH/APRIL

SUDAN - ST by PAOGAM
DOMINICA - J7OA 3/1-3/10
CHATHAM - ZL7DE 3506 1400Z
MALDIVES - 8Q7CH 14004 1700Z
TROMELIN - FR5AI/T 3/3 - 4/3

BELIZE - V31JQ 3/27-4/7
FAROES - W7AWA/OY on 160
EGYPT - SU1ER 14227 1800Z
MACQUARIE - VK0GC on 160
THAILAND - HSOA in CONTESTS

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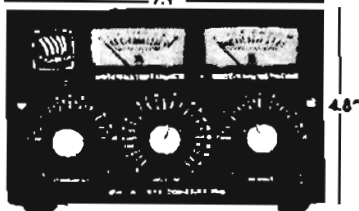
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8267 RG213	55c/ft
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9405 Heavy duty 2-16 Ga 6-18 Ga	56c/ft
9258 RG8x	20c/ft
9269 RG-62A/U	16c/ft
8403 Mic Cable 3 condct & shield	45c/ft
100 feet 8214 w/ends installed	54.00
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50 watts	50A	50A	50C	50C	50D	50F
100 watts	100A	100A	100C	100C	100D	100F
150 watts	150A	150A	150C	150C	150D	150F
1000 watts	1000A	1000A	1000C	1000C	1000D	1000F
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THE CONTEST ADVISORY COMMITTEE

(de Steve, KN5H)

The purpose of the ARRL Contest Advisory Committee (CAC) is to provide an effective interface between the contester and the ARRL. Although its effectiveness is often questioned, the CAC still tries to improve ARRL sponsored contesting. The following is a synopsis of the CAC's inputs to the 1987 ARRL Board meeting and the recommendations to the ARRL Awards Committee.

Topic 1: Club Competition- The CAC voted to preserve the present three-tier club competition system with the following changes:

A. The meeting attendance requirement should apply to all club members regardless of their distance from the club center.

B. The meeting attendance requirement should be changed from 50% to 2 meetings per year. (The present rule states that you must live within a 50 mile radius of the club center and attend 50% of the club meetings.)

C. DX clubs should be able to submit club aggregate scores.

D. Apply membership limits to the "Local" club category in order to prevent large clubs from submitting only their top ten scores.

Topic 2: Operating Frequencies, the CAC voted as follows:

A. Opposed to "off-limits" frequencies being mandated in contest rules.

B. Voted against disqualification of 1825-1830 khz "DX window violators".

Topic 3: DX Contest

A. Voted against trying a "world-works-world" (CQ WW) format again.

B. Voted in favor of moving the CW DX Contest at least one weekend earlier, to better separate the two modes. This would allow more time to repair station equipment, modify antennas during bad weather, etc.

C. Voted in favor of classifying VY1 a separate multiplier from VE8 in the DX contest (as it is in the 10 meter contest) thus making the multipliers for a DX station the 48 states plus the District of Columbia plus VE1-8, VO, and VY1, for a total of 59.

Topic 4: Sweepstakes

A. Voted against separating VY1 and VE8 because the multipliers are ARRL sections and VY1 is not a section.

B. Voted in favor of establishing a QRP category in the SS.

Topic 5: VHF/UHF Contests

A. The CAC voted in favor of of permitting advance publicity and establishing the portable-QRP category.

B. Voted against returning to the pre-1985 practice of counting multipliers once regardless of band in the VHF SS.

C. Voted against spotting VHF SS entrants 25 grids. (free mults!)

D. Voted in favor of retaining grid squares as the multiplier in all existing VHF/UHF Contests.

E. Voted in favor of establishing one or more VHF/UHF contests where score is based on QSO distance.

Topic 6: Other Contests

A. The CAC voted in favor of counting multipliers separately on phone and cw in the 10 meter contest.

Topic 7: Miscellaneous

A. The CAC voted to eliminate the infamous "no-telephone" rule from VHF/UHF contests, but in favor of retaining it for HF contests.

B. There is a consensus that multiple single-band entries should be permitted in contests where single-band categories exist, by either one station or by one operator. (the present rules are unclear).

C. The CAC voted in favor of publication of all time records for each of the major contests.

D. They voted against permitting single-op stations to use spotting nets.

E. They voted against the creation of a "Seniors" category.

F. The CAC voted against replacing RST with serial numbers in contest exchanges.

G. They voted against shorter time limits for single operators in 48 hour contests.

Summary: Those items voted upon favorably went to the Awards Committee as recommendations. Whether or not the Awards Committee incorporates them is unknown. They have had a history of doing things on their own without the Advisory Committee's opinions being included.

If you have an opinion about any of these subjects, put them in writing and give them to me. However, you already had one chance to reply to these issues and only one TDXS op bothered to make his opinion known.

Steve Nace KN5H
CAC West Gulf Division

Officers and Contributors

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Contributors: K5TU, KN5H, WI5P, W5DOZ and KE5FI

ANNOUNCEMENTS

MEETING NOTICE- The Texas DX Society meets the second Friday of each month at the Bellaire Hospital Professional Building, 6550 Maple Ridge at 7:30 P.M.

BULLSHEET MAILING LIST- The Club provides the Bullsheat free of charge to all amateurs with an interest in DX and Contests. To subscribe, send your name and address to TDXS, P.O. Box 540291, Houston, Texas 77254-0291.

BULLSHEET ARTICLES- Articles and other newsworthy items are hereby solicited by the editor. Please send them to Chuck Dietz, KE5FI, 1520 Geosource Plaza, 2700 Post Oak Blvd., Houston, Texas 77056. The Bullsheat is assembled on an IBM computer using the "Wordstar" word processing program. If articles can be submitted on a disk it would be greatly appreciated. (Format is 79 columns wide.)

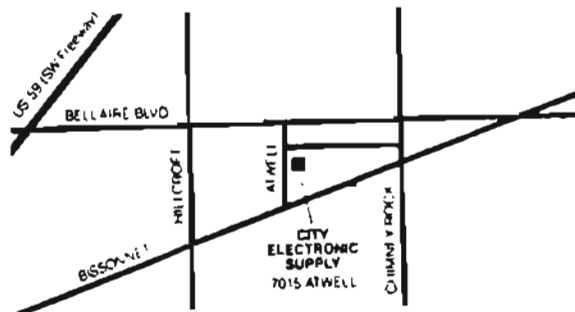
WEEKLY DX AND CONTEST NET- TDXS sponsors a weekly DX and Contest net on our 147.36/147.96 repeater each Thursday night at 9:00 P.M. The purpose of the net is to exchange DX, contest and club information. Participation is welcomed from non-members as well as members. Your active support of this net is welcomed.

Adolph

Alex-WASUMT

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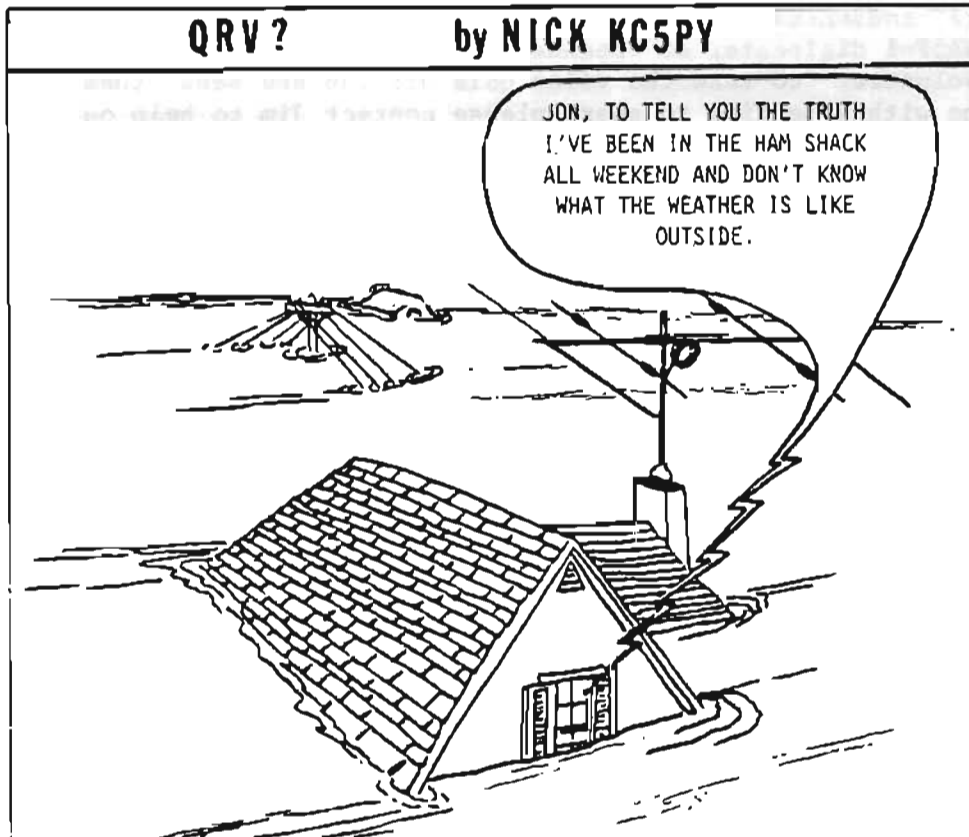
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We have been invited to attend the Houston Business Systems and Electronics Show to be held at the Houston West Convention Center at 10950 Old Katy Rd. on March 12 - 13 from 10 AM - 7 PM. A complimentary ticket is reproduced herein for your use. More complimentary tickets can be obtained by placing this one in the Xerox and pressing the button!



USING PACKET RADIO IN CONTESTS
(de KE5FI)

TDXS is planning a bold experiment during the ARRL Phone DX Contest. We will be using packet radio to channel QSTs to the multi-op stations as well as any casual operators looking for new countries. This will be in addition to the regular voice operation on 147.36 as usual.

Packet radio is basically a super-improved version of RTTY. On packet two way, error free communication at high speeds is possible on a single frequency. This is accomplished by sending high speed bursts of information called packets. These packets may be addressed to a particular station or to the general public. They are transmitted to repeaters called digipeaters which store them briefly and then retransmit them when the frequency is clear. Since they are retransmitted rather than repeated like voice repeaters, it does not matter how weak one's signal is to the digipeater. If it can receive it the "digi" retransmits the packet at full power as if it were originating there.

Much discussion has accompanied the decision of what frequency to use for the packet operation. I originally thought the TDXS repeater should be used. The main advantage would be that a station could hear voice QSTs as well as receive the packet QSTs with a single 2 meter rig. The negative aspects include the noise of the packets driving the voice operators off the repeater so that we may miss outside input and the fact that the voice repeater is not capable of allowing packet radio to be used to its fullest potential.

Thus the consensus now is that the packet will be conducted on 145.07 through the WA5F-1 digipeater at Greenway Plaza. Jim Lan², N5DC has been kind enough to volunteer to take the voice QSTs off .36 and send them out over packet. Anyone with some time to spare please contact Jim to help out.

N5DC will be in the digipeat mode through WA5F-1 using the pseudonym "TDXS". All incoming packets should be sent to N5DC in the unproto mode via any route you can get there. They will be retransmitted for all to see. By using "TDXS" one can set the packet parameters to exclude all other stations and thus receive only the QST packets. Slick huh?

I am hoping that with the advent of increasing computer control of contest stations, packet radio can be integrated as an automatic by product of the logging program. Ideally, it could operate like this with existing technology and hardware owned by TDXS members:

A multi-op contest station would have a terminal at each operating position. The terminal would automatically sample the frequency from the rig and the time from the computer's internal clock. The operator has a headset and boom mike and makes a contact. He logs the call on the keyboard and the exchange. If the signal report is "59" he merely pushes "return." Then he logs the number/power etc. All else is done automatically. If its a dupe, the computer tells him when the call is logged. The computer is also keeping track of mults. It knows what mults he has and what he needs on that band. It also will notify him if a mult is needed on an adjoining band.

When the QSO is completed a QST is automatically transmitted over packet for all DX QSOs or rare state/province according to the contest. These QSTs are received at other stations and sorted by the computer there. If it is a new mult it is displayed in the corner of the terminal at the proper operating position. If it is not a new mult, but is an unworked station, it is stored until the operator goes to the "tune the band" mode from the "CQ" mode.

On CW, improved filters might allow the computer to read the call and report directly into the log. If it is correct merely push the return. The computer could also be "trained" to be the keyer control. (Maybe it could be put into the automatic mode for those short breaks that refresh.)

ANTENNAS



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THE BATTLE OF THE HAMS

by BILL LEONARD

The star of CBS-TV's 'Eye on New York' reports on a hobby
—amateur radio—that is distinguished by one of the most
grueling international competitions in all sport

ON the night of February 7, 1958, a few moments before 2 a.m., Canadian Army Sergeant Elvin Veale of the U.N. Emergency Force stepped out of his quarters into the bitter night air of the Gaza Strip. He was tense, excited, braced for the job ahead. At the same moment, in a Tokyo suburb, Haruo Yoneda, a Japanese TV executive, pushed back a final cup of breakfast tea and disappeared into the tiny room from which he emerged 48 hours later, glassy with exhaustion, and utterly happy.

Sergeant Veale, Mr. Yoneda, Ludvik Kloucek of the Mongolian People's Republic, Empty in Johannesburg, Eva and Alex in Casablanca, Nose in Hawaii, this reporter and a multitude of others—from Pitcairn Island to Punxsutawney, Pa.—were about to begin play in the oddest, toughest and by any standards the most international of all sporting competitions. This was the start of the 24th annual DX contest for ra-

dio amateurs of the world, sponsored by the American Radio Relay League.

DX means distance in the abbreviated jargon of hams (amateur radio operators)—and the object of a DX contest is for one station to talk to as many other stations in as many other places as possible in a prescribed length of time. The Grand National of the many DX contests sponsored annually by clubs, organizations and magazines in dozens of countries (including Russia) is the ARRL's affair. There are more American hams (140,000) than in all the rest of the world combined (60,000), and in this biggest of electronic scrambles operators in the U.S. and Canada compete against each other and talk only to foreign stations. Overseas hams contact only Americans and Canadians.

It takes about six months before logs, sent from the six continents, can be tabulated and checked. So this year's winners won't be officially known until the results are published

SOME HAM TERMS AND ABBREVIATIONS

CW: Continental code.
DX: Literally, distance. A distant or difficult-to-reach station.
OM: Old man. Any male ham operator.
YL: Young lady. Girl ham operator.
XYL: Wife [sic].
CQ: General call to any station.
73: Best regards.
QRM: Interference.
QSO: A conversation between hams.
QSL: A confirmation of contact between stations.
Rig: Transmitter.
Skywire: Antenna.
Phone: Voice (as distinct from code).
To work: To contact a station.
Cans: Headphones.

in an early autumn issue of *QST*, the official magazine of ham radio. But on the basis of claimed scores, still subject to cross-checking, George Morrow, W8BKP, of Washingtonville, Ohio, and Robert Cheek, W3LOE, of Catonsville, Md., may be the U.S. high scorers for voice and code respectively. Outside the U.S. Katashi Nose, KH6IJ, of Hawaii swept both the voice and code contests for the first time ever.

These, and the other winners in foreign countries and various sections of the United States and Canada, cart away no cash or golden wassail cups. Certificates (suitable for framing—but barely) are the only visible rewards of this tense and exhausting competition. The thrills are not in the prizes or the honors but in a kind

continued

◀ **COLORFUL QSL CARDS** from every corner of the globe are exchanged by hams as proof that they have talked to each other. This sample from the author's collection is representative. Reading clockwise from upper left: one of the rarest DX catches, JT1AA, only ham voice of Outer Mongolia; a llama from Lima—Peru's OA4AS; two GIs report from Saudi Arabia (note also USMC in Japan, KA2MA, at lower

left); next, a rare and lovely card from remote Laos; a scenic depiction of Reg Tibbetts' home area in the West Indies; SVØWT's card from "sunny Athens"; a typical Russian QSL, UI8KAE from the republic of Uzbek; KAØSC—yes, there are even hams on Iwo Jima; and, center, an Argentine patriot on LU8AAT's card. Background is page from *Radio Amateur Call Book Magazine*, which lists all hams.

Photograph by Richard Meek

Reprinted from *Sports Illustrated*, June 30, 1958

of fish-and-hunt excitement, with a voice 6,000 miles away in Rarotonga or Rio de Oro as the quarry.

Depending on just how serious he is on the subject, the DX contest man will not only kill himself in a contest, but he will spend the better part of a year getting ready for the exquisite torture of 48 hours of almost continuous operating. He will plan, assemble and erect, usually at considerable cost and occasional risk of limb, an endless succession of antennas, designed to make his station sound just a little louder in Minsk than the fellow who beat him out last year. He will memorize (if he doesn't know them all to begin with) the names and call-letter prefixes of every "country" in the world (there are nearly 300 "countries," for hams count many islands and possessions as well as motherlands). He probably has written or talked previously on the air with a hundred hams half a world away arranging crucial schedules for the contest period. He has experimented with diet and sleep habits, stay-awake pills and coffee strengths and has literally gone into training for the contest ordeal.

He does all these things and, in addition, takes a lot of perfectly sensible abuse from what are laughingly referred to as loved ones, because ham radio in general, and a DX contest in particular, is more fun than beating Yale. It may indeed be true that while golf is a game, bridge a

hobby and girls an avocation—ham radio is a passion. Like most passions, it is pretty much a mystery to those who are not in love.

Amateur radio, like the airplane, is no longer a crude Kitty Hawk baby. Once it did take a garage full of fairly frightening equipment to say almost nothing to almost nobody almost no distance away. And it took an odd breed of nose-in-the-formula duck to master the intricacies of the spark gaps, tickler coils and reflex audions, to say nothing of the dots and dashes. Today, a transmitter-receiver combination no bigger than a portable typewriter is on the market, easily capable of regular communication with all parts of the world. It is about as difficult to operate as a home hair-tinse kit.

A great deal has been written about the work of hams in national and local emergencies—floods, wrecks and hurricanes. Hams are proud of their public-service record. Perhaps just as important, and frequently overlooked, is the fact that hams are among the nation's best ambassadors abroad. An estimated 10,000 conversations between U.S. and foreign hams take place every day. The Voice of America considers ham radio of such vital international interest that one of its few programs in English, beamed to Europe and Asia, is a weekly ham show.

There are hams who are housewives (girls allowed) and bandleaders (Gene Krupa), politicians (Herbert Hoover Jr.) and comedians (Arthur Godfrey),

kings (Prince Abdullah Feisal of Saudi Arabia) and writers (Ernest Sweet *Smell of Success* Lehman), ship captains (Kurt Carlsen of the ill-fated *Flying Enterprise*) and captains of industry (Hazard Reeves, president of Cinerama), guardians of the air (Air Force Vice-Chief of Staff, General Curtis LeMay) and of the seedy (New York Prison Warden Ed Dros). There are hams who are doctors, lawyers, and a sprinkling of Indian chiefs, in India.

Of course, every American knows how radio works, just as he understands television, refrigerators, reciprocating engines, women's minds and other everyday miracles. But we shall risk a word about how amateur radio fits into the broadcasting scheme.

RADIO energy can be pictured as waves, all traveling at the same speed, the speed of light (light, incidentally, is just very, very short radio waves, and our eyes a remarkable radio receiver that tunes in on light waves). Some radio waves are long, only a few of them passing a given point each second. Others are short waves, hardly any distance between crests, but many waves passing a given point each second. The wave lengths used for regular broadcasting are quite long (around a quarter mile from trough to trough). TV uses much, much shorter wave lengths, its channels falling in the so-called VHF (very high frequency) and UHF (ultra high frequency) range. Most of the bands assigned to hams fall in the wave lengths in between, where almost all long-distance radio transmission takes place, not only amateur but military, plane to plane, ship to shore, commercial services, international broadcasting and overseas radio telephone. In the range between 10 and 100 meters the radio waves exhibit the remarkable property of bouncing off a vast electrified layer of the upper atmosphere, called the ionosphere, and returning to earth thousands of miles away. It is a tricky business predicting just how and when which waves will bounce how far, for conditions change violently almost minute to minute, according to a dozen factors, including the season of year, light, darkness and sunspot activity.

Hams can operate in seven narrow ranges, the so-called 10, 11, 15, 20, 40, 80 and 160 meter bands where international DX is common. In addition other VHF and UHF bands are set

HOW TO BECOME A HAM

The Federal Government favors ham operations and has made it relatively easy to become a licensed radio amateur.

TO GET YOUR LICENSE: You must be an American citizen, must pass an FCC exam (about as hard as learning to drive). Cost: nothing. To prepare for exam get in touch with a local ham club for details, or write the American Radio Relay League, La Salle Road, W. Hartford, Conn. and ask for *How to Become a Radio Amateur* and *The Radio Amateur's License Manual*. Each costs 50¢. Most newcomers to amateur radio start with the novice license (code speed five words per minute), good for one year only, then progress to the "general" classification (code speed 13 words per minute), good for five years and renewable indefinitely.

TO OUTFIT A STATION: You will need a receiver capable of covering popular near bands (1.5-29.7 mc). Cost \$29.95 (Heath

kit AR-3, assemble and wire at home) to \$695 (Collins 75A-4). You will need a transmitter. Cost: \$35.95 (Heathkit DX-20, assemble and wire at home) to \$2,095 (Collins KWS-1). You will need one or more antennas. A piece of wire between two trees with ordinary TV lead-in will work. Cost: pennies. Or it can be as elaborate as rotating beams for each band on a special tower. Cost: up to \$2,000. Finally, you will need basic home tools such as a screwdriver, a pair of pliers, a knife, a soldering iron.

WHERE TO BUY EQUIPMENT: If you cannot obtain the above-listed essentials, they can be ordered by mail from Harrison Radio Corp., 225 Greenwich Street, or Harvey Radio Co., 103 W. 43rd Street, both New York; from Allied Radio, 109 N. Western Avenue in Chicago; or from Hony Radio Stores, 11240 West Olympic Boulevard in Los Angeles.



PROPAGATION FORECAST

(DE KE5FI)

So far "Clogan's Nifty Solar Flux Predictions" chart published last month has batted 500. The flux for January was 73 as predicted, however, February's average was only 72, one point below the prediction. I just hope the error is that close in the future! The way it looks now, March will be right on the money at 74. Each January I will try to publish the predicted and actual numbers.

February saw some extremely high magnetic levels as we had several days of magnetic storms. The worst of these occurred on the 8th, 12th and 20th, but several other days had brief storms which caused poor conditions for a few hours. During the ARRL DX CW weekend of 21-22 February there were several minor storms. The first occurred on the first day between 0600 and 0900 Z. Magnetic activity had been building up since the start of the contest playing havoc with the low bands. Strangely enough, the high levels reversed and there was a period of exceptionally low magnetic activity from 1200 to 1500 Z.

Another storm occurred from 0300 to 0900 on Sunday, but things finally settled down to normal from 1200 until 2100. With the solar flux sitting at 72 both days 20 meters was the band to be on. This low flux was some help to the lower bands, however, since it helped to reduce absorption and thus contributed to higher than average signal levels. The guys at NR5M picked the perfect time to go multi-2.

The ARRL DX Phone contest will see a flux level of 74 on both days. While this does not seem much higher than the 72 we had for CW, the extra two points could contribute an extra 100 QSO's to the multi-ops on 10 meters and possibly mean a fair JA run on 15. With flux levels in the 74-75 range a good station with a high 10 meter beam will find DX on 10 from about 7:00 A.M. to 7:00 P.M. local time. I wouldn't expect Europeans or JAs short path, but I would expect a couple of each at 105 degrees and 240 degrees respectively.

Both days of the Phone contest should be relatively quiet so the low bands will be humming and long path openings should be checked at the normal times on 20 and 40. This one will be fun!

The rest of the month:

Worst days: 9, 14 and 22-23

Best days: 4-8, 13, 15-17, 19-21 and 27-29.

Gray Line for ARRL:

7-8 Mar. Sunrise: 12:43 UTC UL7, 4S, VU, JM8
Sunset: 00:19 UTC YS, TC, S2, HC8, VU, UAO

March 1987

SUN MON TUE WED THU FRI SAT

1 RSGB 7 MHz CW W6TI DX Report 7815 @ 8288Z	2 YV8 - Aves ST - SUDAN FR/Tromelin THIS MONTH:	3 DX & Contest Net - Moved To Thursday	4	5 DX & Contest Net - 9 PM	6 WIAW DX Report	7 ARRL DX Phone Contest
8 ARRL DX Phone Contest W6TI DX Report 7815 @ 8288Z	9	10 DX & Contest Net - Moved To Thursday	11	12 DX & Contest Net - 9 PM	13 TOXS Meeting 7:30 PM Bellaire Hosp. Professional Bldg. - 6550 Maple Ridge WIAW DX Report	14 Ham Exams - 8:30 AM Friendswood W15P - 482- 8874
15 W6TI DX Report 7815 @ 8288Z	16	17 DX & Contest Net - Moved To Thursday	18	19 DX & Contest Net - 9 PM	20 WIAW DX Report	21
22 W6TI DX Report 7815 @ 8288Z	23	24 DX & Contest Net - Moved To Thursday	25	26 DX & Contest Net - 9 PM	27 WIAW DX Report	28 CO WJ WPX SSB Contest
29 CO WJ WPX SSB Contest W6TI DX Report 7815 @ 8288Z	30	31 DX & Contest Net - Moved To Thursday				

February 1987

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

April 1987

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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

March 1987



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