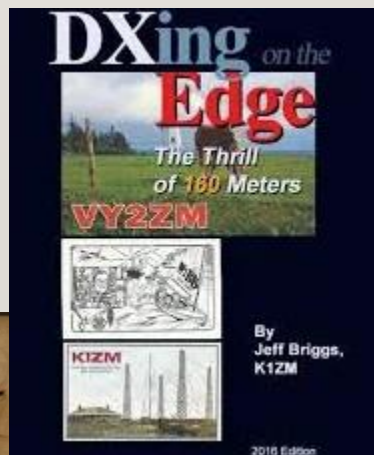




DX'ING ON THE EDGE THE THRILL OF 160M!

JEFF BRIGGS, K1ZM/VY2ZM



2 TONIGHT'S AGENDA

- **The Early Years 1930 – 1939**
- **Post WWII 1949 – Cycle 25**
- **Looking Ahead to the coming solar minimum years**
- **Examples of what can be worked at the bottom of the cycle**
- **What to consider to get ready for 2030/2031**

3 LET'S REVIEW SOME HISTORY

- **It all began in the early 1930's**
- **Transatlantic tests organized between the UK and North America**
- **Stew Perry W1BB a principal player**
- **Ern Orchard G3PU an early participant**
- **W1DBM, VE1EA and W2EQS also QRV**

4 1930'S TRANSATLANTIC TESTS

- **These were NOT contests like today!**
- **Usually Conducted in Winter Months**
- **USA/EU Stations Xmitted At Sked Times**
- **Heard Rx Reports Mailed to W1BB who Acted as a “Clearing House”**
- **W1BB Compiled Results in his 160m Bulletins, then mailed to participants**
- **These “tests” led to initial 160m Qso's**

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W1DBM LEADS THE WAY

December 1932	W1DBM Phil Rand at the tip of Cape Cod with 400W is heard until 0800z
February 1933	W1DBM makes the First 160m QSO into Europe with G6FO who runs 9W
February 1936	W1BB works FA8BG – First NA/Africa
January 1939	Fifty European QSO's made by NA stations
1939	W1BB has worked less than 10 DXCC entities on 3 continents
WWII Closes the Band	

6

POST WORLD WAR II

- **After WWII ended, W1BB lobbied tirelessly until 1949 to re-open the band**
- **As things resumed, the FCC assigned various segments to US amateurs**
- **Eastern states operated at the low end**
- **Output power limits were assigned almost by state and region**
- **Daytime and night-time limits existed**
- **December 1949: First Postwar Dx crossing to EU between G3PU/W4NNN (W0NWX/W0DX)**

7

SOME REALLY EXCITING DX'ING BEGINS

VE1EA-Clarry Roach- works HZ1KE	W1BB works an early WAC 1953
W1BB soon follows with a QSO	W1BB completes 1st 160m DXCC (twice!)
W1BB/G2PL First 160M Phone Qso in 1950	W1HGT-Ralph Green-soon follows
1951 DXCC totals W1BB (11) VE1EA (10)	KV4FZ and W8LRL share #3 160m DXCC
DL1FF-Armin- is very active	K1PBW-Ernie Hemingway- is number 5
Others include W9PNE, W8GDQ, W1DBM	

8 **SOME EARLY 160M DX'PEDITIONS**

- **DL9KR – Jan – 6W8/CE0/CE3**
- **G3PQA – John – 4W1/MP4/5N0**
- **W0GTA – Bob – EP2BK/VS1LP/9M4LP**
- **G3LET – Peter – VP8GQ**
- **G3UPK – Roger – ST2AY/TJ9AY**
- **G3REP – Bob – A4/P29PR/4S7RPG**

9 **W1BB DXCC BLUES #1**

- **Stew Works CEO for his #100 late 1960's**
- **Three Entities Worked Prior to WWII**

Note: DXCC is a Post WWII Program!!

- a) OZ (Not Eligible!)**
- b) FA8BG (Not Eligible!)**
- c) EK1AO (Not Eligible!)**

Quiz: Where is EK1AO??

10 **W1BB DXCC BLUES #2**

- **HK0TU Activation Possible #100**
- **160m Ops are W4DQS/W0NWX**
- **Stew's SWR is INFINITE!!**
- **Feedline Section full of Water**
- **Climbs Tower in Darkness to Replace Bad Coax Section**
- **Works HK0 as Band Closes!!**

160M BEACONS VERY USEFUL!

1960's-1970's	DHJ – 1830kHz Wilhemshaven, Germany
1970-1980's	WCC – 2036khz Chatham, Mass
1980's	OSN – 1832kHz Belgium
1990s	LFI – 1930khz Stavenger, Norway
2010	ZL Digis – Around 1818kHz
Still Active Today	Baltic Navigation Beacons – 1817 down to 1803.5 region

PYIRO & WIBB & WIHGT 1976



13 EARLY ANTENNAS ARE A MIXED BAG

- **W1BB uses his water tower Inv Vee**
- **K1PBW runs a pair of $\frac{1}{4}$ wave spaced verticals from Western Mass**
- **W8LRL likes a $\frac{5}{8}$ wave single radiator**
- **Rx Ants vary until the Beverage is popularized during a CEO activation**
- **W1BB uses Air Mail letters to make skeds to work new DXCC entities**

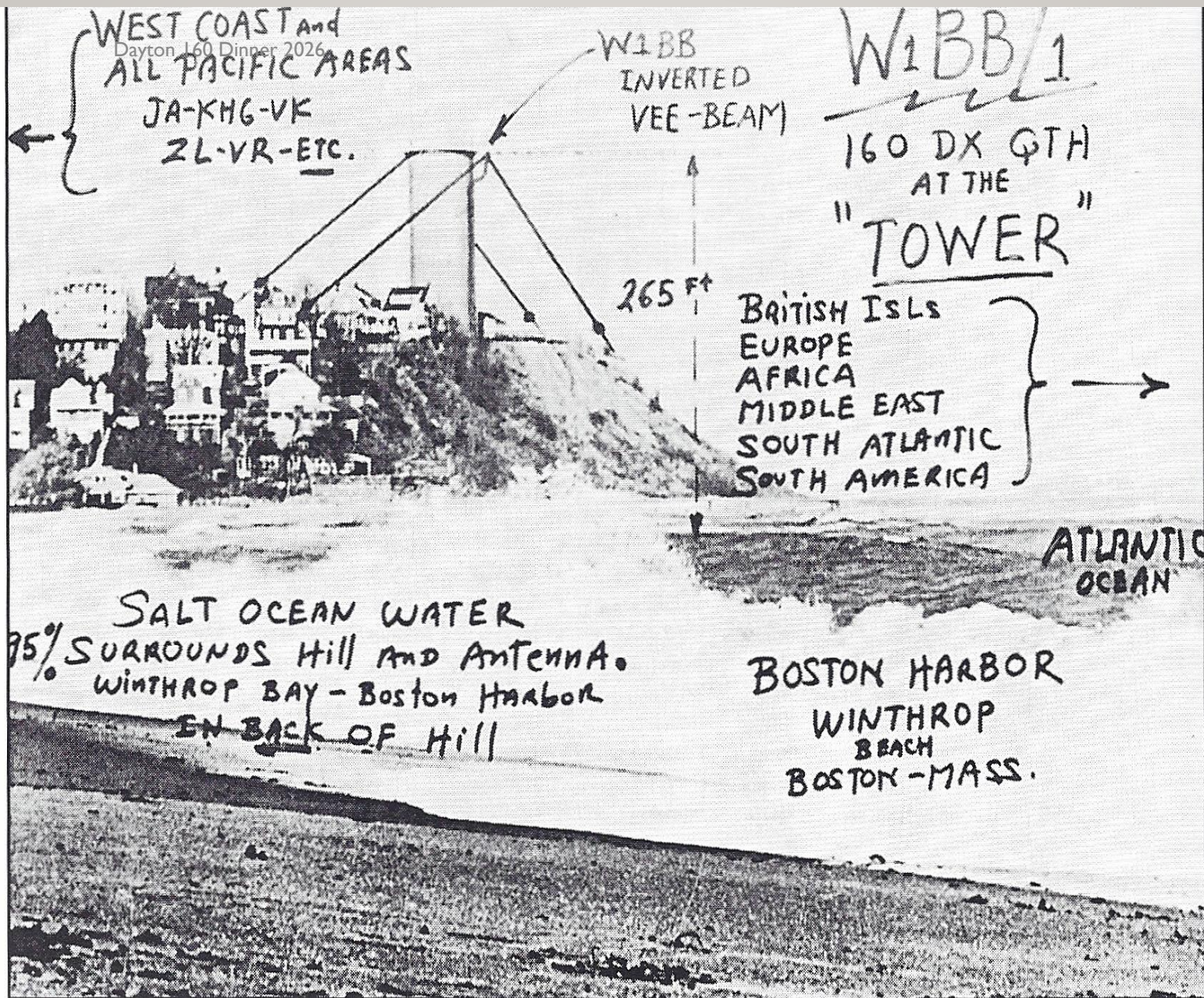


Fig 2-3—The famous W1BB/1 Point Shirley Site, as annotated by Stew Perry.

W1BB TOWER STATION 1965



W1BB HOME STATION 1974



17 A FEW STORIES ABOUT W1BB

- **Stew actually had (5) 160m stations**
- **One at home in Winthrop/Another in Maine**
- **One in his Car**
- **Another on his Boat**
- **And the LEGENDARY station at the Tower!**
- **The HB0 story...**
- **The Pacific Dx'Pedition Story**
- **The Auto Accident at the End of his Driveway**
- **Being locked into the Tower at Eu Sunrise!**

| 8 W1BB WORKS #150

- **W1BB in QSO with UK2PCR
(Most Likely 1979/1980 – from
DJ8WL)**

December 28 1962

PYswl/Rolf

W1BB
STEWART S. PERRY
36 Pleasant Street
Winthrop, Mass.

Here is all the latest on 160 O.M.!!!!

Nothing on 160 this morning - see log - sorry

Starting New Year will make Wed and Fri at 0600

And as soon as OK with you

Make it Tue and Thursday at 0600 instead Wed/Fri - OK????

CONGRATULATIONS your fine work there on 160

K9GZK also reported to me your hearing him - VFB!!!

Am waiting to hear from you re crystals - tolerances

S00000000000 again Rolf - HAPPY NEW YEAR

And here's to a contact REEL SOON NOW!!!!

73 de Stew/W1BB

Stew

73! de W1BB/Stew

W1BB & PY1RO 1965



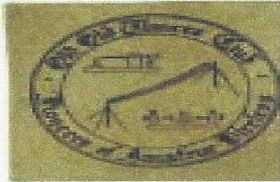
PY1RO WITH K6SE (W5RTQ) 1965



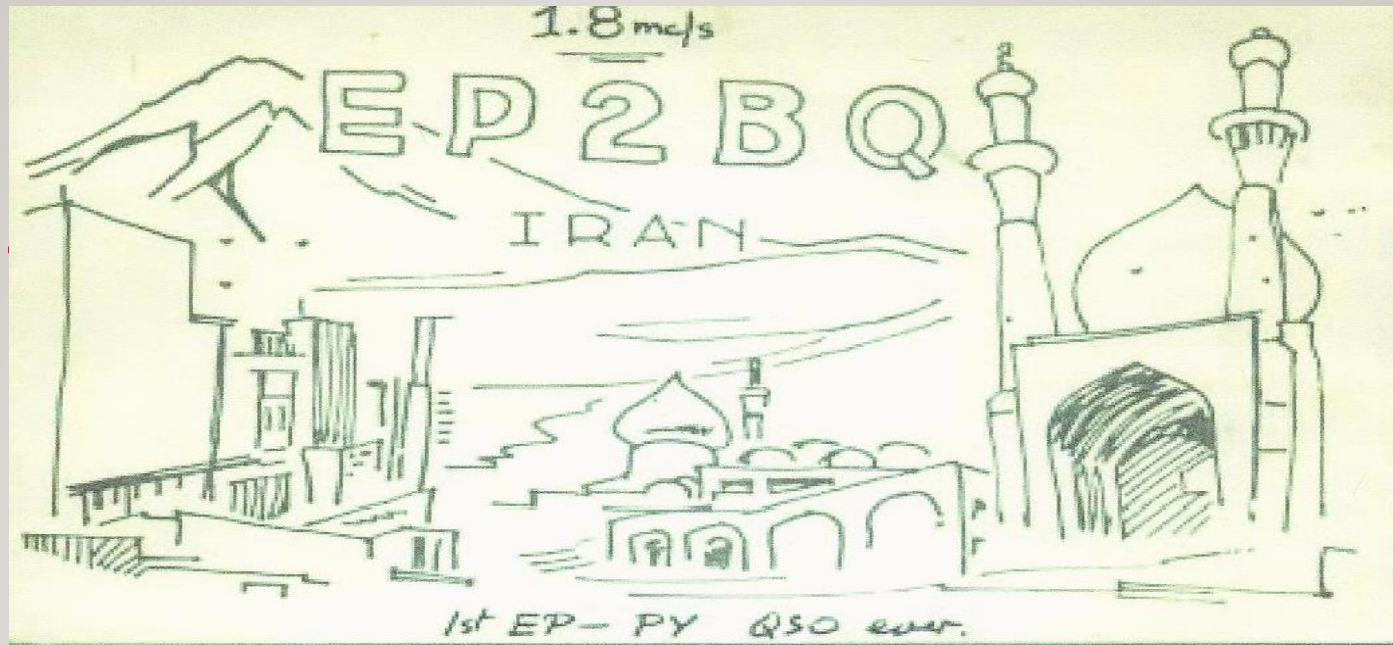
W1BB QSL TO PY2FUS 1974



to PY2 FUS "Ron" 160
QSL OUR 160 QSO #1
Date 30 Dec 74 W1BB / 1 "Tower"
QTH Boston (Winthrop) MASS STEWART S. PERRY
Time/s 0922 Band/e 160 CW
our RST 569 My RST 589
our Fy 1826 My Fy 1803
x/w Valparaiso 100
x RAC
nt 100.000 26.5 MHz Apex
ime/f 0930 Time/std GMT
sd Ron
u u -VPB
160 -VPB
congrats
and
keep up the
Good
work
73!
490
Happy Holidays
Always
"Ed"



PY1RO QSL FROM EP2BQ 1972



RADIO PY1DVG
THIS CONFIRMS OUR CONTACT
DATE 7/7/72 TIME 0106 GMT.
FREQ. 1.8 MC/S CW/~~SSB~~

RST 459.

HARRY McQUILLAN
c/o DEPT. OF GEOLOGY,
PAHLAVI UNIVERSITY,
SHIRAZ, IRAN

73, Harry.

ca ZLATA G3CWM V851A

I believe this may be the
first ever South-America to
Asia QSO on 1.8 mc/s.

Hope we can do it on
SSB next time Rolf.

73 - Harry -

de W1BB/General Remarks ----- Fellows, if things have been a bit late, or some of your reports and letters not acknowledged or answered as promptly as usual - Please Excuse - Alice/W1DQF, and myself were called home from 12 days vacation in KP4/KV4 lands, when very recently, Dec7th, we had the second death in our immediate family with the passing of our Son's wife, 30, leaving two little children, which we are now helping to care for - all of this upset us and our normal activities in many ways - however, we expect to be back "on the beam" again real soon - thanks for your patience and understanding!!!

DX this fall was good up to October 1st, with the earliest Transatlantic crossing on record. Then, rather suddenly from Oct1 to ~~Nov25~~ Nov25 Dx was Nil - since there has been Dx but spotty - no real good openings only a couple "fair" ones - Why conditions which started out so promising, have been so much poorer than expected, no one knows - some feel the Pacific Nuclear and USS tests might have been responsible - others that it is just the "Way the ball bounces", normal unpredictableness of 1.8 - which incidentally makes it interesting and all intriguing. The First scheduled TRANSATLANTIC DX TEST Dec2 washed out - the 2nd Dec 18th only fair although participants were not lacking on either side!!! - At any rate the frequency of openings lately has improved a wee bit, and lets hope for the best

Dont forget the CQ/WW Contest on 160 Jan26/27 and best of luck!!! This should be a grand event!!! S000000000000000 Best wishes to all for a HAPPY NEW YEAR, with lots of HAPPY HAMMING - especially if it is on 160!!!!

W1BB/Summary LOG of 160 Meter DX Activities!!!!

Oct21 --- Poor morning to Europe-fair to South - medium w/vc activity - Wx- VFB/warm/clear/calm -felt like gang just "warming-up" for the real DX ahead!! Altho WP8CQ put on a fine performance!!! W/Vc p/W1BB,ME,2E0S,UWD,IU,3GQF,CEM,FBV,40MM,8G0Q,K810Q,MRB,9FNE,0CDP,RHI,GDH,VE2UQ,3QU ---(p/ etc stands for Participants!!!)

25

BAND SEGMENTATION AND LORAN

- **Loran radiolocation signals are HUGE**
- **1900-1925 is basically unusable**
- **Most Dx'ing is worked SPLIT**
- **USA stations congregate around 1801-1803khz and listen between 1825-1830khz**
- **KH6IJ and KH6CC xmit around 1995 and listen down at the low end**
- **There is an SSB Dx Net each night 1812khz**
- **PA0HIP, EI8H, and G's are regulars**

26

160M ALLOCATIONS IN TRANSITION

- **Numerous FCC Mandates due to LORAN requirements**
- **FCC Expands East Coast use to 1825-1850khz (in addition to low end)**
- **FCC Relocates (7) Western States to the Low end of 160m – Others follow**
- **160m US Allocations eventually standardized to those we know today**

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CHANGING DX ALLOCATIONS – SOME EXAMPLES

- **JA – Initial SPOT allocation at 1880**
- **JA – Expansion to 1907.5-1912.5**
- **JA – 1810-1825 Added**
- **JA – Expansion to 1875/SSB Added**
- **OZ – Access granted again in 1981**
- **F – Access granted 1982**
- **ON – Access granted 01 January 1987**
- **Region 1 – No 160m below 1810kHz**

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W1BB HISTORY AND JAPAN

- **W1BB, W1HT, K1PBW copied many times in 1970's in JA**
- **Stew came very close but NOT QUITE!**
- **Why were no W1 Qso's made?**
- **Worked K1KSH/KG6 July 1963**

Quiz: Where was K1KSH/KG6?

29

SOME NOTABLE MILESTONES ON 160

- **Following Loran shutdown, Bill K2GNC on LI manages first East Coast Qso's to Japan in February 1981**
- **First Longpath JA Qso's from W1 made in December 1996**
- **First 160m continental DXCC's are W1BB/PY1RO/G3SZA/ZS5LB/VK6HD/JA5DQH**
- **First 40 Zone WAZ on 160m was HB9AMO**
- **First SSB Qso to JA from East Coast 2024**
 - **Quiz: Who scored this achievement?**

30

SOME 160M DXCC HONOR ROLL DATA

- **W8LRL 344/333 Needs (7)**
- **EA8AK 341/332 Needs (8)**
- **K1ZM 340/332 Needs (8)**
- **W4ZV 339/331 Needs (9)**
- **Political/Environmental issues are real factors today!**
- **Prime examples are P51/BV9/FT5W/BS7**

3 | **GETTING READY FOR THE SOLAR MINIMUM**

- **Options for Xmit? Good/Better and Best!!**
- **Options for Rx? What things are out there?**
- **How to get to 100 DXCC counters (& more)!**
- **What tools are on the internet to assist me?**
- **Examples of what happens at Solar Minimum**
- **Winter of 2030/2031 may be spectacular!**
- **We all have about 4.5 years to get ready!!**

32

THERE ARE SEVERAL TOOLS AVAILABLE TODAY

- **Join ON4KST chat and use it always**
- **The RBN system finds CW Dx much faster than I ever could hope to!**
- **DX Summit or general internet packet systems also are useful**
- **Use the Dx alerting system on your cluster if there is one to spot new ones**
- **Arrange skeds over ON4KST chat**
- **W3UR's Daily Dx can also be useful**
- **Establish local “buddy teams” to help**

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SOLAR MINIMA ARE PRIME TIMES ON 160M

- **Polar paths to JA/UA0/BY/JT are quite common from November to January**
- **Long path from SW at local Sunrise to XU/HS0 also possible**
- **Autumn and Spring Equinox Periods Special**
- **From the Northern Hemisphere late November/December/January brings openings to Asia – VU/YB from SE path**
- **Long Path at 2130z is possible from W1 to JA from about 10 Dec – 10 January**

34 **EXAMPLES OF SOLAR MINIMUM PROP**

- **7J4AAL**
- **BU2AQ**
- **VU2BGS**
- **JT5DX**
- **VU7RG**
- **9M2AX**

35

FT8 CHANGED THE WORLD (ALMOST)

- **160m Propagation Rules Still Apply!**
- **Most 160m Dx is now on 1840khz just waiting for you! You do not even have to TUNE your radio!**
- **Future 160m DXCC's Will include FT8**
- **Dx'Peditions Gravitate toward FT8 rather than the traditional CW focus**
- **Major Contests will continue to bring the band alive on CW and SSB mode**

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A FEW SUMMARY OBSERVATIONS

- **Solar Minimums are FUN!!**
- **Solar Flux mid 60's – A=0 K=0**
- **Over the POLE propagation abounds**
- **You want to be there to experience this!**
- **Get ready for winter season of 2030/2031!!**

37 **MANY THANKS FOR COMING!**

- **And as Stew Perry used to say “Happy Trails on 160m”**
- **160m Dx’ing is not for the “faint-hearted” but it can be mastered w/time**
- **Hope to hear you in the 160m contests this coming season...**

73...de Zulu Mike...