



## The Multiquad

Mel Noe, W6IMW

The two meter antenna at W6IMW is a sixteen element beam of which each element is a quad having one-quarter wavelength sides. The driven elements are arranged in a vertical plane, four high and two wide, with one-half and three-quarters wavelength spacing respectively. Eight reflector elements are arranged in a plane directly behind the driven elements at 0.2 wavelength spacing.

The construction is such that the supports for the elements are quarter

wave transformers for two elements in each deck. These transformers supports for the driven elements are fed in the center from a conventional phasing line system. The same supports for the reflector elements are shorted one-eighth wavelength in from the quads.

The beam has approximately 15 db gain with the smallest beamwidth in the vertical plane. The horizontal beam width is approximately 30 degrees.

Mel Noe, W6IMW  
RTTY, (I hope)

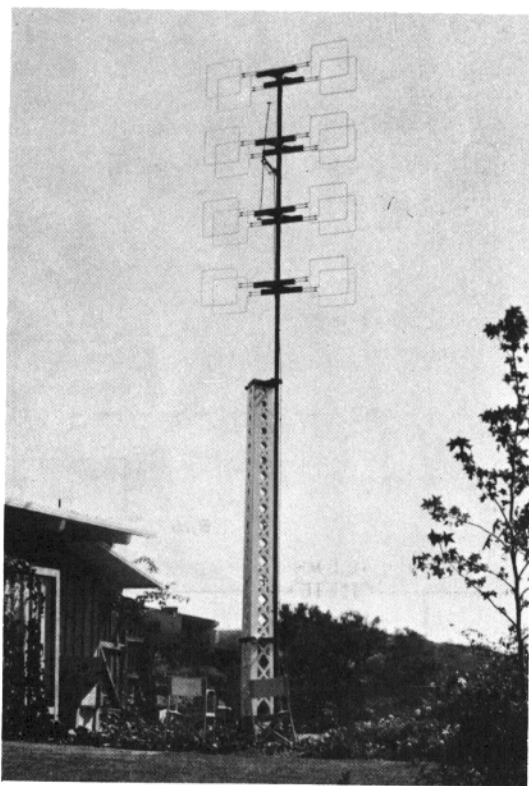


Photo by Grant A. Wilson

## FSK For The Viking Ranger

Phil Catona, W2JAV, Hammonton, N. J.

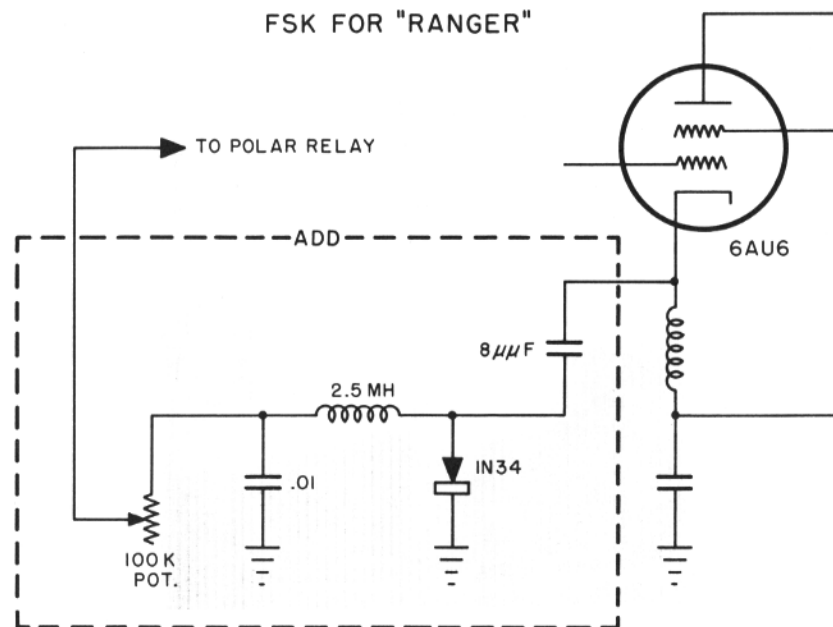
In order to provide drive to a pair of 304-THs in Class B,I purchased a Johnson Viking Ranger to have a simple and effective shift for all bands. Contrasted to some of the other popular VFO's on the market, the Ranger has the VFO and regulator tubes in the same compartment. Also in the same space are some of the resistors for the VFO. Drift due this placement of parts can be helped by moving some of the resistors. Another source of drift lies in the capacitor used to tune the VFO. The bearing are not as good as one would wish.

The circuit of the shift network is shown below. It works very well. All

of the parts are contained in the base of the VFO compartment, that is except the adjustment potentiometer and the keying jack. The pot is mounted in place of the "dummy" Jewel on the left hand side of the front panel. The jack is on the rear chassis skirt in place of the "Ground" post, (enlarged hole) thus the resale value of the rig should not be effected. The shift is keyed in reverse and I like it that way . . . with an inductance in the circuit, it might reverse the shift when changing bands.

Operation has been quite good, and hope to have a photograph of it later for you . . . 73 Phil.W2JAV

FSK FOR "RANGER"



## Detroit, Michigan CD

An emergency radio truck operated by the Inter County Amateur Radio Club stands ready 24 hours each day to provide valuable communications assistance in any disaster in the Detroit area.

The Dodge Route-Van was donated to the alert and active radio club by Dodge Division of Chrysler Corporation to serve as a mobile unit for amateur radio station W8GIS. Both the Detroit Office of Civilian Defense and the American Red Cross consider the amateurs so important in civilian defense and disaster work that they are associated with the project.

William C. Newberg, president of the Dodge Division, became interested in the radio club when he saw the radio communications work some members employed at Dodge were doing with radio equipment in the personal cars. Gift of the Dodge Route-Van followed. Multi-Elmac Co. of Hazel Park, Mich., donated much of the radio equipment and provided technical advice.

The mobile unit is equipped with a generator and three complete radio stations including a 2-meter TELETYPEWRITER. Many East Coast and Midwest stations have been contacted on the 10-meter band transmitter.

The unit has room for five operators in the 12½-foot body with 462 cubic feet of working space. The 6 feet 4 inches of headroom permits tall operators to stand erect. A heating unit keeps the unit comfortable in cold weather.

The mobile unit has attracted considerable attention during its participation in recent events in the Detroit area. The work it did in radio communications in a recent simulated bomb test and also in a flood at Fairhaven proved to the Office of Civilian Defense and

the American Red Cross that it will give valuable aid in any disaster in this part of the country.

During the 1954 national press preview of the Chrysler Corporation proving grounds near Chelsea for 600 editors the mobile unit was used to contact a helicopter used by cameramen.

John Sauer, who is employed in the Dodge Main plant and who holds a license for amateur radio station W8LSQ, is co-ordinator on the mobile unit for the American Radio Relay League. He has equipped his car with a radio transmitting and receiving set to work with the mobile unit.

The Inter County Amateur Radio Club has built 104 walkie-talkies at a cost of about \$25 each for use with the mobile unit and in other radio communication work.

Members of the club are trained and ready to provide vital aid in any emergency or disaster in this part of the nation.

Subscription Rate \$2.50 Per Year

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of the

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of Southern California**

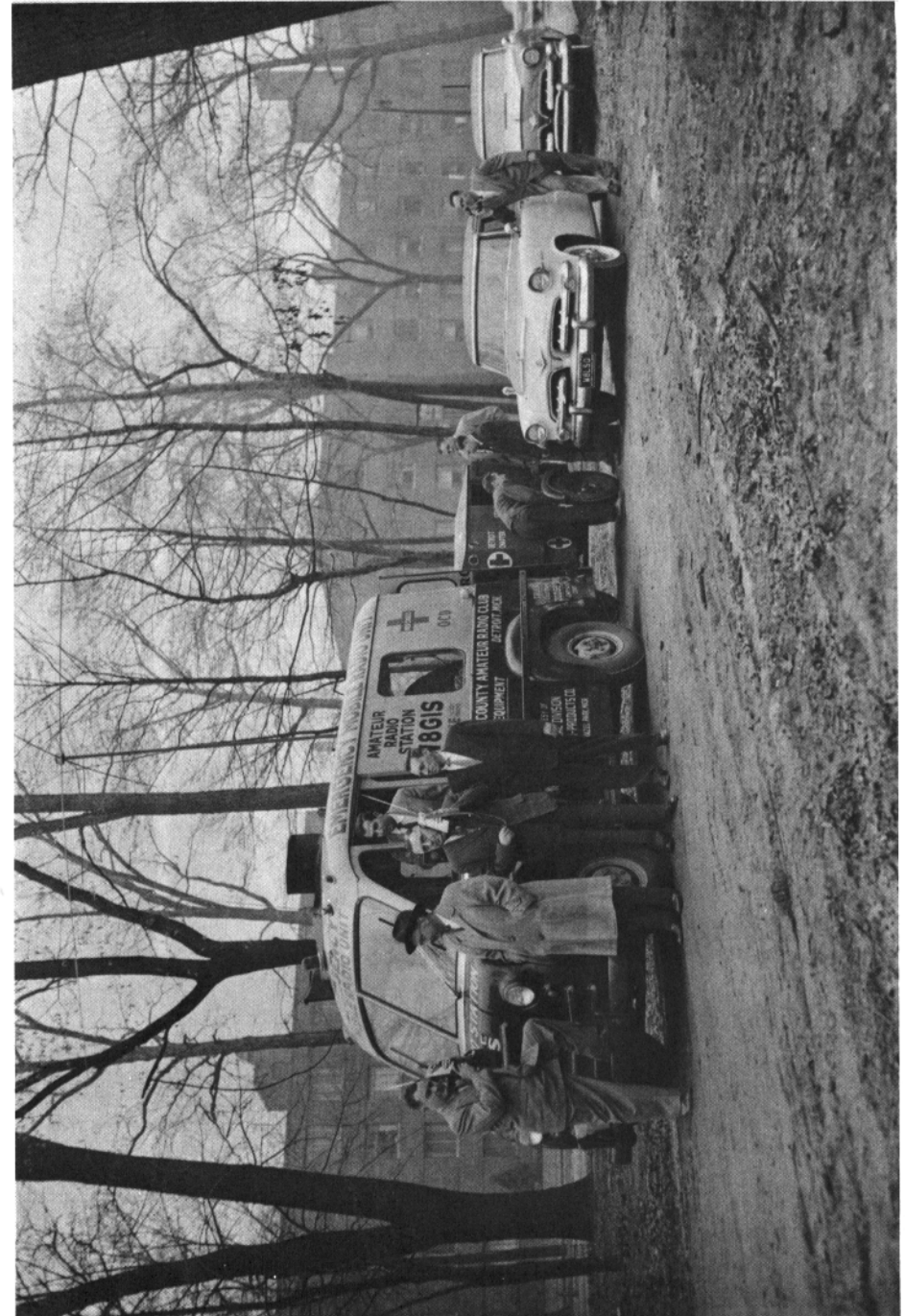
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For Information Regarding the  
Society Contact the Following:

W6CLW—Ed Simmons  
W6AEE—Merrill Swan  
W6SCQ—Lewis Rogerson

For Traffic Net Information:  
W6FLW W6IZJ

For "RTTY" Information:  
W6CL W6DEO W6AEE





## High Speed Tuning Indicator

Bruce Meyer, WØHZR; Boyd Phelps, WØBP

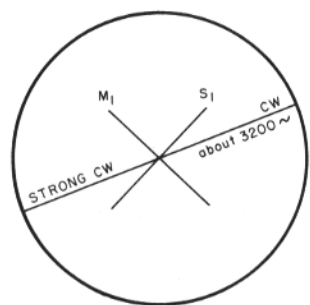
There was one imperfection in your otherwise excellent report on the meetings and that was the omission of Bruce Meyer WØHZR, and his brief presentation of his "High Speed Tuning Indicator" as described in November 1954 RTTY. Really it is nothing but a coil and a condenser in a scope and it took but a few moments to describe it, yet I do not think enough hams realize what it does. Many still use the scope pattern which is only a cross or plus sign. But his shows all this and in addition gives a story as to whether the shift is too wide or too narrow, and best of all it shows up frequency drift in transmitter and/or receiver and which way the drift is taking place. In my own operation when the cross gets tilted one way or the other it is corrected before misprints get bad and it so happens that the receiver vernier turns in the same way as the pattern in my station, so there is no fumbling around returning the wrong way at first try in correction. If you have occasion to mention it in print again I would like to point out that on commercial stations with 425 cycle shift, one line is vertical and the other at 45 degrees, and on 170 cycle shift there is a narrow "V" pattern, while the multiple shift jingle bells we can't print show up like spokes of a wheel. Then on CW interference it acts like the "panadapter" for frequencies below 2 and above 3 kcs show

up beyond the "X" of the RTTY mark and space and can be thrown into disfavor further down the selectivity skirts by slight receiver tuning to put RTTY off from the center of the filters to one side of their flat top response curve. But best of all, with the advent of any shift from zero to 900 cycles, we need a quick device to show instantly what shift the other fellow is using, and this will do it to a close approximation at a glance. At WØBP I use a cheap surplus 5 inch scope tube in a surplus radar box and with the mark frequency of 2125 cps as reference line, I have sketched on the tube face with crayon where the space frequency lines occur for a shift of 170, 425, and 850 cps. I offer the attached sketch as an addendum to those on the front cover of November 1954 RTTY, and point out that far from becoming obsolete the following month I consider the original article still very valuable especially in its new application to short shift.

### Flash!

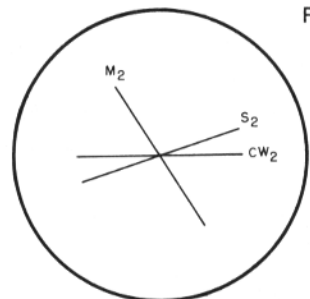
**F.C.C. Authorizes Action  
Under Docket 11501  
Effective March 16th.**



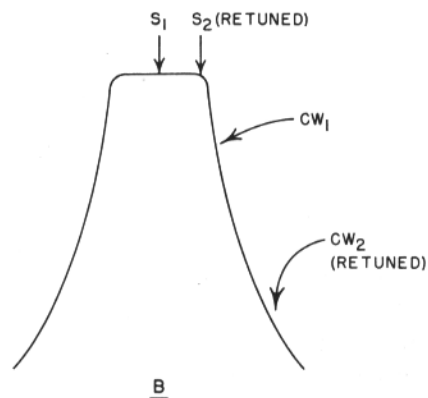


A

FIG. 1



C



B

A—Customary evening pattern display on WØHZR type scope with close-by CW/QRM.

B— $S_1$  is point of customary "Space" frequency tuning on its response curve.  $CW_1$  is down a bit in attenuation but the source being much stronger it jams the RTTY. Retuning to  $S_2$  and  $CW_2$  is quickly recognized from pattern presentation as necessary.

C—Resultant tilted pattern if scope is used after filters.

Equivalent rejection on CW signals below the "Mark" frequency. Even in the 2550 notch.

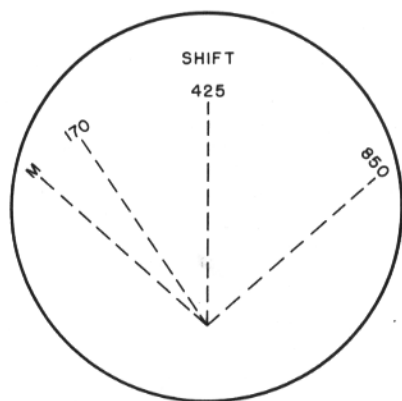


FIG. 2

Additional sketch to be added to those on front cover of Nov. 1954 RTTY, (showing vertical centering depressed if desired). Using the "Mark" line at left as in the original article for the reference line, by receiver tuning, the frequency shift in cycles of the transmitting station is instantly presented.

— WØBP—W9BP

## W9JGJ/5 Portable Set Up

McDonald Observatory, Texas



## W9JGJ/6 Costa Mesa, California







“. . . W6QIV, Hugh quit RTTY for a while and he is fooling around with model airplanes. He said if he got a job with Tel. Co., he thinks he would buy a printer. He was on the air and QSO'd me with his model 12 printer and he can't stand the noises . . . de Frank W6ZNU”

RYRYRYRYRY

“It was indeed a pleasure to get all those RTTY journals that you so kindly furnished. The whole subject was new to me, OM. It was an aspect of ham radio that I guess had never occurred to me before. However, I enjoyed reading “RTTY” and look forward to receiving a copy regularly . . . VE3AYE”

RYRYRYRYRY

“If I miss you this Saturday, We'll see you the following Saturday though I'll be out of town in Kansas City from Monday to Thursday and won't have much time to work on the rog . . . Frank W3PYW”

RYRYRYRYRY

“Clifton Oliver W6SXKMN has advised me to write directly to you concerning RTTY equipment for amateur use. He told me several months ago about it, but was too busy to settle

down and write you. Upon reading the August 1955 issue of CQ concerning RTTY activities and who's who on RTTY, I'm enclosing a subscription for RTTY . . . KH6ZD”

RYRYRYRYRY

“1:30 PM, clear in from the big city of Los Angeles, W6GFI and spouse. Why don't you stay home? Roy”

RYRYRYRYRY

“You were telling me at the Fresno convention that you had additional information on the converter that Gates had made up or that some of the RCA boys had made some worth while additions would sure like to get this information . . . Don W6QIE”

RYRYRYRYRY

“Please send me information on the Model 26 machines that are available in the midwest. Afraid wife will throw myself and the Model 12 out soon. 73. Robert Kuhn, W8TJY” . . . “Those interested in the 26's, write to Ray Morrison, W9GRW, 8029 Keeler Avenue, Skokie, Illinois, who is taking care of the machines RTTY, INC., has there at this time. Price is approx. \$55.00 plus crating and shipping costs . . . Ed . . .”

### THE VHF GROUP

Even though the Christmas season did cut into the time available for experimenting and building their has been a new sound added to the 2 meter band. The unmistakable rolling chirp of 'RY' (the teletype test signal) has been on many an evening. KH6ZD and KH6LD were busy adjusting their printers and associated equipment and later AED joined them. These three are cooking up a demonstration for the February meeting. While radioteletype on the Ham bands is not new in the Islands we believe that this is the first time it has been set up on a permanent basis with privately owned equipment.

The 2 meter band still holds out as the best band for local rag-chewing. Four megacycles of room and easily built low power gear for home rig and mobile use is plenty good. A real friendly bunch show up regularly in the early evenings. Try it sometime. “HARC NEWS JAN. '56”

“My activity in ham radio has been continuous since 1933 with considerable effort in Civil Defense. The opportunity of assisting in building up a local Teletype net, particularly in its CD opportunities, appears a worthy effort . . . F. D. Arnes W2FAN”

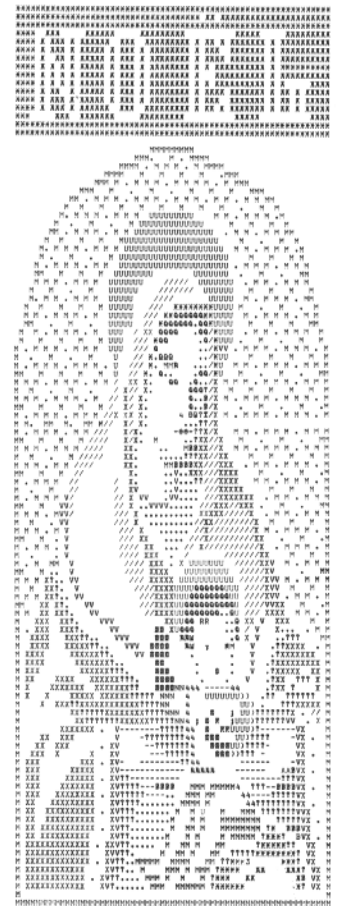
RYRYRYRYRY

“I have in some way, misplaced or lost my July issue of RTTY. Would sure like to get another . . . Loren, W9LKK”

“Well I guess I am ready to get back in the swing of things here after getting married and all . . . I am really into work thick and up to my ears but think I will be on about one week after you hear from me . . . Art W7NVY”

RYRYRYRYRY

“Got the Health Kit together and lined up, the RTTY keyer works FB and followed instructions as shown in RTTY, with a few minor modifications . . . Frank W7CGA”





## TAPE OFF THE FLOOR

... ERE ENG LOG ERE ENG LOG  
FM CONTROL OTTAWA TO CON-  
TROLACCRA. I'm so tired, punching,  
you take it a while Ernie, W7AXJ de  
K6GZ WØBP de WØUVL Pierre South  
Dakota

\* \* \* \*

... W5APH de W9ROQ Rich before  
you go, will you get a transmission  
from Tom in Maplewood La. He broke  
in and wants to say a word. .

\* \* \* \*

... Well Byron what are you using?  
Whats the QTH? and the rest of the  
dope? Back to you ... W2PBGesW2JTP  
de W9ROQ Sharland Illinois

\* \* \* \*

... Merrill what are you using at the  
present don't think that came thru  
if you gave it. Weather today just  
above zero and a beautiful bright day  
with fleecy clouds in a blue sky. Over  
to you. W6AEE de W9DPY AR K K

\* \* \* \*

... Ve3BAD VE3BAD de WØBP  
WØBP Well fine again George. Not  
land line but can understand the drift.  
Sure FB for such low power and your  
first contact. . If you need a monitor,  
hope you get one fixed up this week  
end and OK on using the Sweet Pota-  
toe for tuning. . . That sure is a hot  
one. , you win the hand autographed  
chad. . .

... W6PYM de W6CMQ Sure I am  
here just listening all the time. The  
children just came into the shack with  
the grand son. He is not too interested  
as yet as he is only 8 months old. . . Hi.

\* \* \* \*

... W6CMQ and W6ZBV de W6BJR  
In the interest of getting better ac-  
quainted Ted, I too am a grandfather. . .

\* \* \* \*

... The rig here is a Viking Ranger,  
Antenna V-37, recvr 75-A-2 and the  
printer a 15 and a 26 and also a 14 perf  
typing, and 14 TD. Converter is a  
W9TCJ. Back to you Fred W7SRU de  
W6ZNU.

\* \* \* \*

... W2PBG DE W4RKQ. . . Ga  
About the scopes that give a cross. I run  
the output of my Mark channel thru  
a condenser to the horizontal of my  
scope and the Space channel to the  
vertical input of the scope. Then se+  
the switch for external sweep and I  
am in business. Its as simple as that  
and a great help in tuning much more  
accurate than the zero center meter  
which I also have in the converter . . .  
There are so many of these model  
twenty-sixes in ham service now with  
TWX keyboard that I am leaving mine  
as is because most hams don't know  
where any of the characters are unless  
they are on the keyboard. . . K6GZ de  
W7AXJ Portland Ore. .

\* \* \* \*

... W2BDI de W2PBG Well not too  
good Ed. . . The signals are so watery  
that the space won't break thru. . .

\* \* \* \*

... Hope you will have those troubles  
straightened out. By the way, we are  
on two meter and have auto start be-  
tween W1BGW, W1FGL, W1WB and  
W1WEW here. . . I will quit now and  
hope to CU AGN Thanks agn and vy 73  
and will kick it back for your final.  
W9TCJ de W1WEW Newton Mass.

## Traffic Net News

By EMILE DUVAL, W6FLW  
The RTTY Society of Southern Cali-  
fornia Net operates every Tuesday eve-  
ning at 8:00 p. m. on 147.85 mc.

### ACTIVITY FOR THE MONTH OF DECEMBER, 1955

#### DEC. 6—W6ZBV, N. C.—25 Checkins

W6AEE	W6FNW
W6AFX	W6ICS
W6BPG	W6IHQ
W6BTK	W6IZJ
W6BWG	W6JAU
W6CHU	W6LDG
W6CK	W6NCP
W6CKS	W6OJF
W6CMQ	W6RCM
W6CZ	W6RL
W6EGZ	W6SCQ
W6EV	W6ZBV
W6FLW	

#### DEC. 13—W6ZBV, N. C.—25 Checkins

W6AEE	W6FLW
W6AFX	W6IEU
W6BPG	W6IZJ
W6BTK	W6JAU
W6BWG	W6KMT
W6CHU	W6LDG
W6CK	W6NWM
W6CKS	W6OJF
W6CMQ	W6RCM
W6CZ	W6SCQ
W6DYB	W6ZBV
W6EGZ	W6ZVO
W6EV	

#### DEC. 20—W6ZBV, N. C.—28 Checkins

W6AEE	W6IEU
W6AFX	W6IZJ
W6BPG	W6KMT
W6BTK	W6LDG
W6BWG	W6NCP
W6CHU	W6NWM
W6CMQ	W6OJF
W6CND	W6RCM
W6CZ	W6RL
W6DYB	W6SCQ
W6EGZ	W6TRX
W6FLW	W6VAD
W6FNW	W6ZVB
W6ICS	W6ZVO

#### DEC. 27—W6ZBV, N. C.—28 Checkins

W6ADD	W6FNW
W6AEE	W6IZJ
W6AFX	W6JAU
W6BJR	W6KMT
W6BPG	W6LDG
W6BTK	W6NCP
W6BWG	W6NWM
W6CHU	W6OJF
W6CKS	W6RCM
W6CMQ	W6RL
W6CZ	W6SCQ
W6EGZ	W6VAD
W6EV	W6ZBV
W6FLW	W6ZVO

## East Coast Traffic Net

The East Coast RTNET meets regu-  
larly on Wednesdays at 8.00 p. m. on  
3620 kcs. At present approximately  
twelve to fifteen have been checking  
in and taking part in the handling of  
traffic.

The Mid Western RTNET also meets  
on Wednesday at 7.00 p. m. on 3630 kcs.  
from information received by RTTY. 10  
to 15 stations have reported in during  
the last few weeks.

Arrangements have been made be-  
tween W3PYW and W9TCJ to take care  
of any traffic originating in either  
RTNET with destination in the other  
RTNET. In half an hour after start of  
RTNET work, contact will be made be-  
tween W3PYW and W9TCJ in respect  
to traffic on hand then will relay on  
any traffic afterwards into their respec-  
tive RTNETS.

Suggestions and ideas will be greatly  
appreciated and adopted if found worth-  
while towards improvement of RTNET  
work.