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ZERO BEAT, published monthly by $N\Theta$ ASM/W4NTR, is an UNOFFICIAL newsletter designed for the use and benefit of Marine Corps Amateur Radio Operators and Stations. Contents of ZERO BEAT are the views, opinion, and recommendations only of W4NTR and the various contributors.

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First item of business — my most sincere, humble apologies for the absence of the November issue of ZB. Yours truly got a little involved in a few other matters, not the least of which was an annual IG, and at the moment, I'm more than a little behind in a lot of different projects. Bear with me, and we'll try not to let it happen again.

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Gus, WA4FCS sez: A few good words about the newly formed QTC Net under the guidance of W4LEV. This net has a whole passel of stations all along the East Coast checking in on the two daily sessions, 1300Z and 18002 on 7215 kc. They'll accept AM, SSB, and CW, although they deal primarily in SSB operations. They're ready, willing, and able to handle both QTC and phone patch business, and really keep the traffic moving. These gents at W4LEV have really put their station on the map again, and are to be congratulated for a lot of hard work showing good results. Good show, gang.

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ZERO BEAT and it's staff (?) are trying something new, for ZB that is...We hope to publish a technical article of some sort, each month, and it will be short, to the point, and we hope, helpful to all...They are being written by Bill Simms, K4RUQ, in J'Ville, North Carolina. Bill works for RCA in the electronics field, and is currently working with the Corps at Camp Lejeune. Bill was located in Richmond, where he was elected to the job of Net Manager of the Virginia Fone Net. Two weeks later, he had to resign due to the move to North Carolina. His first article is within, so, read on...

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Hope we can make out with only ten fingers and fifteen toes on the problem of figuring the year-end totals on the traffic reports. I have trouble counting beyond ten until I take my shoes off. Don't have complete reports from all stations, as we've mentioned before, but hope to hear from all hands regularly beginning in January. Should have reports to ZB at 4NTR by the 10th of each month for the preceding months activities. then we hope to have ZB in the mail by the 15th.

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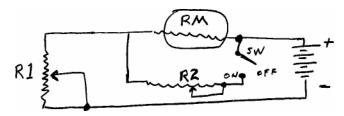
Bill, K4RUQ sends -

You guys with all those old millia meters and voltmeters lying around the shack can now find the internal resistance with hardly any effort at all. You need a battery (a 1.5 bell dry cell will do fine) and a few other components.

In order to find an external shunt for a milliammeter or voltmeter, you must first know the internal resistance. To do this, try these simple formulas and instructions.

The d-c resistance of a milliammeter or voltmeter movement may be determined as follows:

EM - meter under test



- 1. Connect the meter (RM) in series with a suitable battery and variable resistor Rl as shown in the diagram above.
- 2. Vary R1 until a full-scale reading is obtained. If full scale cannot be obtained, change battery to a higher voltage rating.
- 3. Connect another variable resistor R2 across the meter (RM) and vary its value until half-scale reading is obtained.
- 4. Disconnect R2 from the circuit and measure its d-c resistance. The meter resistance is equal to the measured resistance of R2.

Be sure that R1 has sufficient resistance to prevent an off-scale reading of the meter. The correct value depends on the sensitivity of the meter and the voltage of the battery.

The following formula can be used if the full-scale current of the meter is known:

$$R1 = \frac{EB}{IM}$$
 EB is voltage of battery

IM is full-scale current of meter in amperes

For safe results use twice the value computed. Never attempt to measure the resistance of a meter with an ohmmeter. To do so would result in a burned out, or severely damaged meter, since the current required for the operation of some ohmmeters and bridges is far in excess of the full-scale current required by the movement of the average meter you may be checking.

 ${\tt Good\ luck.}$ Hope this helps you some. Next time I wiLL write on OHMS-PER-VOLT and CURRENT SHUNTS.

Bill - K4RUQ/NOWWF

Good job, Bill, and we'll see you on 3835 kc at 0001Z, sez Boso, Gus, and Jim....

4NTR - Hope to get underway as Net Control Station soon, with a New Navy MARS SSB Net. This will be under our station call, NOASM. Have several local CW nets going, plus a couple of AM, so SSB will be another facet in the increasing Navy MARS activities. Come on in, the water's fine.

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TRAFFIC - Follows now the totals for October and November, 1964. Well over 100,000 for the year, and we haven't even started counting the Christmas traffic. Hoo boy....

LATE REPORTS STATION	<u>QTC</u>	<u>PP</u>	<u>TOTAL</u>		STATI ON	<u>QTC</u>	<u>PP</u>	<u>TOTAL</u>
OCTOBER								
W6I AB	4892	977	5869		KR6MD	299	360	659
W4PKS	1906	189	2095		KR6DI	180	338	518
KG4AM	1646	401	2047		KR6MB	88	25	344
W4LEV	1319	302	1621		W4NTR	258	64	322
KH6AJF	1185	199	1385		KR6MH	60	243	303
KP4AZJ	714	305	1019		KH6BGS	14	188	202
W4PFC	748	20	768		KR6GF	<u>64</u>	<u>56</u>	120
				TOTAL	OCTOBER	13445	3911	17356
NOVEMBER								
W6YDK	2827	95	2922		KR6GF	261	323	584
W4LEV	1661	641	2302		KR6DI	194	334	528
KH6AJF	1255	252	1507		KR6FQ	24	475	499
KR6MB	657	308	965		W4NTR	149	79	228
KP4AZJ	307	283	590		KR6MH	22	52	74
				TOTAL	NOVEMBER	7357	2482	10199
					<u>1964:</u>	<u>92201</u>	<u>26936</u>	119237

OK, so that's the traffic story for the past two months, and we hope to keep up with it on a monthly basis from here on. Ship your totals in and help us fill the page.

Be good to yourselves, have a real fine holiday, and we'll see you on the bands, and such.

Best of Christmas Greetings from all of us to all of you. Come see us.

BOSO GUS JI M

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