THE PREZ SEZ

Well, Field Day is over and we can put the emergency gear away 'til next year, (or at least until a future need for emergency communications.) All-in-all, I would say our FD venture was quite a success, even though we had less membership participation than last year. At times it was a strain to keep all our rigs manned, but those that turned out did a superb job and are to be commended for virtually a trouble-free exercise. Those that didn't participate really missed something for our new site was ideal.

Our Social Committee Chairman, Ron Cadle, WA6FLT, has arranged for a club visit to the Atomic Energy Commission building followed by some fun at Doheny Beach. This is to be a family affair - the XYL and kids will love it - and anyone else you want to bring. The venture was voted on at our June meeting and the date set for Sunday, August 10th. Mark that date on your calendar now! Let's all get together for a real clambake. Ron will have more details elsewhere in this edition of "RF."

As most of you know, my first operating love is CW and I often think of writing a lil something on the subject. I noted an interesting writeup in the April issue of "The Chewed Rag," of the Hayward, California Radio Club. Allow me to indulge and quote from portions of it here.

"Among the stranger people around our CW ops. A CW man is a person to watch with a very close eye. Contrary to popular belief, a CW opr is not crazy! A CW man has two brains: One perfectly normal brain which is destroyed during the process known as learning "The Code" and completely remade to process only "dits and dahs." The other brain is usually in a state of turmoil, like the remainder of the HAMS.

"Sitting at his position, a CW man receives an endless story of the world flowing through his stick or mind. The stuff that flows is such stuff as: Tko fb om es hpe to cuagb, hr rning abt a gal of bb dat cost abt 40 bubs to build es fb all the way, etc. Certain things are very much annoyng to CW ops: XYL's yelling at harmonics, fone calls during Fb QSO's, teenage harmonics listening to solid state devices spurtout "music," XYL's yelling-period, etc., etc., etc.

"Tko net oprs are also very sensitive to such talk as DX contests, ratty QSO's on net frequencies, and watching the boob tube. When conversing with a net man never refer or try to point out your story without using numbers cuz all your efforts will be replied with "what NR was it, who sent it and if it's a non-del, it didn't happen on my log."

"CW ops are found in all walks of life, they are usually harmless if fed often, given occasional loving, not interrupted during QSO's, and excused from lawn mowing during Field Day and Sweepstakes. The ideal XYL is found to be rich, know the code, and her father a retired ship-board operator now selling Ham supplies. Another good prerequisite for XYL's is having a steady hand for the "third hand" when soldering and a good log "man" on Field Day. Do you know anyone like this? Try Ol Charlie Whiskey, you meet the nicest guys on CW!"

Vy 73, Jerry WA6ROF
THIS MONTH'S MEETING

This month's meeting will again be held on the third Friday of the month at the regular spot. So, let's see everyone show up at 7:30 PM on Friday, July 18 at the Lincoln Savings & Loan Fldg. located at Seventeenth St and Bristol in Santa Ana. Our president, Jerry WA6RFP, tells me we will have a real fascinating movie entitled -- "THE COMMUNICATIONS EXPLOSION". This movie is one of the "21st CENTURY" series of documentations and should prove to be quite entertaining. I hope we will see all the members there.

FAMILY SOCIAL EVENT

A social event will be held on August 3 at 2:00 PM at the Atomic Energy Plant in San Onofre. It is located south of San Clemente, just off the Santa Ana Freeway. The program will last about ½ hours. Afterwards, we will meet for a picnic at the Doheny State Beach. Don't forget that this is a family affair, so bring along the XYL and harmonics. If there are any questions please contact Ron Cade, WA6FIT.

Minutes of Meeting - June 20, 1969

The meeting was called to order at 1945 hours by our President, Jerry WA6ROF. The officers of the club were introduced by Frank, WB6TBU. New members in the club are Glenn Wisniewski WB6YWQ, and Woody Hill WB6ZCO.

Ron WB6FIT, spoke about an outing planned for August 3rd. to the San Onofre Nuclear Power Plant, with swimming and a wiener roast afterwards. The majority of the members present were in favor of this outing, and it should be very interesting.

The future ham fest was discussed. Jack, WB6UDC, and Kay, W6NGO, are lining up some manufacturers for donations of ham gear to be raffled.

The remainder of the meeting was devoted to plans for Field Day.

Respectfully submitted

Frank O'Leary - WB6TBU
Secretary
USING INTEGRATED CIRCUITS
by
W6HHC

This month I will attempt to acquaint you with some Integrated Circuits (IC's), how to use them, and what to be careful of. Basically, an integrated circuit is any special purpose circuit that has been completely fabricated in a single package. For example, an audio amplifier circuit might be comprised of 14 transistors, one diode, and 15 resistors. If all these parts were "grown" on a single crystal "chip", this would be an IC. All you would have to do is connect the power supply, the microphone, and speaker.

THE OPERATIONAL AMPLIFIER

The μA709 amplifier (available from several manufacturers) is representative of the many general-purpose "operational" amplifiers on the market today. It is inexpensive (costing about $3 - $5 each) and can be readily used by hams for experimentation or homebrew equipment.

The "operational" amplifier is a ultra-high audio amplifier capable of amplifying signals from DC to about one megacycle. The term "operational" means it can be connected in different modes to perform different functions. The list below shows just a few of the things you can do with these amplifiers:

1) NON-INVERTING GAIN AMPLIFIER
2) INVERTING GAIN AMPLIFIER
3) DIFFERENTIAL AMPLIFIER
4) VOLTAGE FOLLOWER (non-inverting, unity gain amplifier)
5) INTEGRATOR
6) TRIGGER CIRCUIT
7) OSCILLATOR

USING THE "709"

The schematic and base diagram for a "709" IC are shown in FIGURE 1. The "709" requires two power supply voltages: both should be equal in magnitude, but one is positive and the other is negative. The power supplies can be from 8 to 18VDC, depending on how much output voltage swing you need (the output voltage can swing positive and negative to about 80% of the supply voltage). The amplifier only dissipates about 1/2 watt by itself and can deliver about 8 ma of output current. The current is small because the circuit is mainly a volt-
using integrated circuits—continued

... amplifier; however, external transistors can be connected to boost the output current to well over one amperes. The "input compensation" and "output compensation" networks are necessary to prevent the amplifier from going into high frequency oscillations. The values of the compensation components depend on the gain of the circuit be used. A table of values is given at the end of the article.

**Circuits Using the "709"**

**Inverting Gain Amplifier**

\[
\text{Gain} = \frac{e_o}{e_{in}} = -\frac{R_f}{R_{in}}
\]

**Non-inverting Hi-Z Gain Amplifier**

\[
\text{Gain} = -\frac{R_{in} + R_f}{R_{in}}
\]

**Unity Gain Amplifier**

\[
e_o = e_{in}
\]

**Squaring Amplifier**

*(no compensation needed)*

**Trigger Circuit**

**High Current Buffered Amplifier**

**Important Notes**

1) Generally, the input and feedback resistors \((R_{in} \text{ and } R_f)\) can be any value between 100 and 200 K.

2) Design your circuits so that the voltages appearing on either input terminal (pins 2 and 3) do not exceed 5 VDCs peak.

3) To prevent oscillations of these circuits, compensation networks must be connected to the "709". The value of \(C_1, R_1,\) and \(C_2\) depends on the gain you use in your particular circuit. Below is a list of values for the compensation components:

<table>
<thead>
<tr>
<th>Gain</th>
<th>(C_1)</th>
<th>(R_1)</th>
<th>(C_2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5000 pf</td>
<td>1.5K</td>
<td>300 pf</td>
</tr>
<tr>
<td>10</td>
<td>500 pf</td>
<td>1.5K</td>
<td>100 pf</td>
</tr>
<tr>
<td>30</td>
<td>330 pf</td>
<td>1.5K</td>
<td>68 pf</td>
</tr>
<tr>
<td>100</td>
<td>220 pf</td>
<td>1.5K</td>
<td>33 pf</td>
</tr>
</tbody>
</table>
Band conditions this month were pretty fair during the past month. Several DXpeditions were active also. Gus, W4BD, was active from two locations in the Indian Ocean. His first stop was VQ9/A/EC, Ettole Cay which is a reef! The second stop was at VQ9/A/BC, Baudouine Cay which is also a reef! There are some question being raised as to whether these will be counted by the ARRL DXCC award group as acceptable countries. So we work, em and worry about that detail later! The other DXpedition heard was T8NM/T9 Cocos Isle in the Pacific off the coast of Costa Rica. This one was a surprise.

Additionally Sam, W6ZJU was on a business trip to the Netherland Antilles in the Caribbean off of the coast of South America. He operates under the call of PJ5HH and operated from the islands of Curacao, St. Martin and Aruba. Sam was also there when the recent rioting broke out at the Shell Oil refinery and evidently was involved in some assist with his ham gear.

Sam had what he called a "grape smashing contest". He had large piles ups calling him and he made tape recordings of these and will play them at the Southern Cal DX Club meeting July 10.

Some DX was worked on 40 meter phone also. These contacts are listed below.

The first week of July had some excellent openings as late as midnite on 15 meters to Europe as you will see below.

The most known of recent DXpeditions was the Navassa Isle show. These four gent from "us" land conducted a beautiful show and I doubt that any body who tried did not work them on any of the 5 bands.

Let's take a look at other DX activities with contributions from WA6FIT, Ron and WA6DQR.

<table>
<thead>
<tr>
<th>Call</th>
<th>Country</th>
<th>Name</th>
<th>Frequency</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>VP8KO</td>
<td>So. Orkney Isle</td>
<td>Les</td>
<td>28.550 MHz</td>
<td>1640 GMT</td>
</tr>
<tr>
<td>VP8KS</td>
<td>Falkland Isle</td>
<td>John</td>
<td>28.550</td>
<td>1729</td>
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<tr>
<td>EA2TX</td>
<td>Spain</td>
<td>Marcel</td>
<td>21.285</td>
<td>1703</td>
</tr>
<tr>
<td>K41A/KC4</td>
<td>Navassa Isle</td>
<td>Bert</td>
<td>21.280</td>
<td>1438</td>
</tr>
<tr>
<td>CX5BA</td>
<td>Greenland</td>
<td>Jan</td>
<td>14.332</td>
<td>0155</td>
</tr>
<tr>
<td>SM5CER</td>
<td>Sweden</td>
<td>Hugo</td>
<td>28.600</td>
<td>1806</td>
</tr>
<tr>
<td>CX1JM</td>
<td>Uruguay</td>
<td>Jim</td>
<td>21.352</td>
<td>2307</td>
</tr>
<tr>
<td>GT3JTM</td>
<td>Ireland</td>
<td>Chet</td>
<td>14.225</td>
<td>0425</td>
</tr>
<tr>
<td>VR6TC</td>
<td>Pitcairn Isle</td>
<td>Paul</td>
<td>14.220</td>
<td>0451</td>
</tr>
<tr>
<td>98AAS</td>
<td>Malagasy Rep.</td>
<td>Sam</td>
<td>14.209</td>
<td>0455</td>
</tr>
<tr>
<td>SV9WMM</td>
<td>Greece</td>
<td>Dick</td>
<td>7.206</td>
<td>0536</td>
</tr>
<tr>
<td>PJ9HH</td>
<td>Curacao</td>
<td>Ham</td>
<td>21.301</td>
<td>1836</td>
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<tr>
<td>VP6JT</td>
<td>Argentine Isle</td>
<td>Jean</td>
<td>14.055</td>
<td>0518</td>
</tr>
<tr>
<td>VP5AA</td>
<td>Turks</td>
<td>Eric</td>
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<td>1214</td>
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<tr>
<td>F08CQ</td>
<td>Tahiti</td>
<td>Al</td>
<td>14.206</td>
<td>1424</td>
</tr>
<tr>
<td>V55PH</td>
<td>Brunei</td>
<td>Ron</td>
<td>14.205</td>
<td>1052 (this 352AM!!!)</td>
</tr>
<tr>
<td>W3AWL/TB6</td>
<td>Sumatra</td>
<td>Roger</td>
<td>14.203</td>
<td>0633</td>
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<tr>
<td>VE9RY</td>
<td>Papua Terr.</td>
<td>Gilbert</td>
<td>14.203</td>
<td>1137</td>
</tr>
<tr>
<td>FB8ZZ</td>
<td>St. Amsterdam Isle</td>
<td>Roger</td>
<td>14.203</td>
<td>0633</td>
</tr>
<tr>
<td>CN8BB</td>
<td>Morocco</td>
<td>Roger</td>
<td>14.203</td>
<td>0633</td>
</tr>
<tr>
<td>VE9KX</td>
<td>Cocos Isle</td>
<td>??</td>
<td>14.219</td>
<td>1449</td>
</tr>
<tr>
<td>LL2B</td>
<td>Atlantic Ocean</td>
<td>Norman</td>
<td>14.208</td>
<td>0653</td>
</tr>
<tr>
<td>TF2NLW</td>
<td>Iceland</td>
<td>??</td>
<td>14.025</td>
<td>0422</td>
</tr>
<tr>
<td>UA2WJ</td>
<td>Kalingrad</td>
<td>Pavel</td>
<td>14.240</td>
<td>0612</td>
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<tr>
<td>AC5XO</td>
<td>Bhutan</td>
<td>Jaques</td>
<td>14.232</td>
<td>1444</td>
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<tr>
<td>VQ9/A/EC</td>
<td>Ettole Cay</td>
<td>Gus</td>
<td>14.243</td>
<td>1442</td>
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<tr>
<td>EA6EL</td>
<td>Baleine Isle</td>
<td>Pete</td>
<td>21.278</td>
<td>1626</td>
</tr>
</tbody>
</table>

See comments above Antartica

CW

the drifting reed raft!
So in reality the past month has not been really too bad DX wise.
Incidentally I have recently purchased "The DX Handbook" by Don Miller W9MVN
and regardless of what comments have and will be made about this author the
book is excellent. Aside from how to work DX, propagation and other info on
QSLing he has quite a few useful tables in this book. I think almost any
one no matter how long or how much DXing he has done can learn something
from this book.

Have so many ideas but need more to publish. Hope this extra length of
contacts made by the two contributors and the author have you interested in
DX.

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

Minutes of Board Meeting May 12, 1969

The meeting was held at the home of Jerry, WA6ROF. In
attendance were WB6GRP, WA6ROF, W6HHC, W6BNX, WB6WOO, WB6TBU,
WB6CQR, WB6VDC, and WB6NGO. We also had a visitor from Tokyo,
Japan, JA1DOD, whose handle is Ryo. Ryo is a friend of WB6NGO
and is in the states to attend an RCA school in Indianapolis,
Indiana.

Ken, W6HHC, was elected to be the Club Trustee, as it is
necessary to have a trustee who holds an advanced or extra
class license. Bill, WB6CQR, was instructed to write a check
for $4.00 to cover the license changeover.

The future ham fest was discussed, and it was decided that
we would not conduct it in conjunction with any other club. A
tentative date for this affair will probably be around the mid-
dle of September. Pucilicity, raffles, food, prizes, location,
and estimation of cost, were all discussed and will be discussed
at our regular club meeting.
# Preliminary Field Day Results

<table>
<thead>
<tr>
<th>Band</th>
<th>Mode</th>
<th>No. of QSO's</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Mtrs</td>
<td>SSP</td>
<td>375</td>
</tr>
<tr>
<td>15 Mtrs</td>
<td>SSP</td>
<td>301</td>
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<tr>
<td>40 Mtrs</td>
<td>CW</td>
<td>213</td>
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<tr>
<td>2 Mtrs</td>
<td>AM</td>
<td>169</td>
</tr>
<tr>
<td>75 Mtrs</td>
<td>SSP</td>
<td>98</td>
</tr>
<tr>
<td>40 Mtrs</td>
<td>SSP</td>
<td>50</td>
</tr>
<tr>
<td>20 Mtrs</td>
<td>CW</td>
<td>16</td>
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<tr>
<td>15 Mtrs</td>
<td>CW</td>
<td>4</td>
</tr>
<tr>
<td>80 Mtrs</td>
<td>CW</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 1229 QSO's

---

**For Sale:** HATIONAL SX-111 Receiver and HT-18 Transmitter, both for only $125.

**Contact:** Roy Tebbets — 847-4390 WB6MCU
5241 Heil Ave.
Huntington Beach 92647

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**For Sale:** Collins 75A-3 with SPKR and 3.1 KC MECH. FILT. — $190
75A-4 with SPKR and 3.1 KC FILT. — $300
200-V — $275 contact Jim Gilbeath WA6PRG
600-L — $175 7266 Courthouse Dr.
San Diego, Cal. 92111

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**First Class !!!**

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