



ORANGE COUNTY AMATEUR RADIO CLUB

P.O. BOX 1074, ORANGE, CA., 92668

PACKET RADIO PACKET RADIO PACKET RADIO

APRIL PROGRAM:

April 19, 1985 - Harold Price, NK6K will be making an excellent presentation on Packet Radio. Harold is one of the pioneers of packet radio, having been closely involved in its early development. In addition to his talk, we hope to have some live demonstrations, with some hands on opportunities for the club members. New packet stations are coming on the air each day, and you can get in on it too. Come to this meeting to find out all about it.

73's and DUL AR de KG6OK- Herb SK

UPCOMING EXAM DATES:

Local volunteer examiners will be giving Amateur Radio tests on the following dates and places. See page 6 for further details.

LONG BEACH APRIL 25th
FULLERTON MAY 18th

L.A.R.A. FUNDRAISER

The Ladies Amateur Radio Assoc. is holding a fundraiser on Sunday April 14th at Crackers in Anaheim. For further information contact:

Sandra, KA6WAH (714) 671-0760

-or-

Kathy, KA6NLP (714) 991-8929

1985 CLUB BOARD of DIRECTORS

President	Bob Eckweiler	AF6C	639-5074
Vice President	Herb Rosenberg	KG6OK	857-2032
Secretary	Frank Smith	WA6VKZ XNEWX	492-7215
Treasurer	Chris Breller	KA6IMP (WK) (Rm4)	651-2505 651-3911
Activities Chairman	Joe Partlow	KB6FZV	542-3122
Membership Chairman	John Meacham	N6LMX	842-4702
Public Relations O. T.V.I. Chairman	Al Watts Ken Konechy	W6IBR W6HHC	531-6245 541-6249
Member At Large	Kei Yamachika	W6NGO	538-8942
Member At Large	Dottie Watts	W6IBP	531-6245

CLUB APPOINTMENTS

Club Historian	Bob Evans	WB6IXN	543-9111
W6ZE Trustee	Bob Eckweiler	AF6C	639-5074
R.F. Editor (Acting)	Bob Eckweiler	AF6C	639-5074
Teen Representative	<open>		

CLUB FUNCTIONS

MONTHLY MEETING: 3rd Friday of each month, 7:30PM at:
MERCURY SAVINGS & LOAN
1095 Irvine Blvd. (4th St becomes Irvine)
Tustin, Ca.

Apr 19th
May 17th
Jun 21st

(Take the 4th St. exit to the 55 FREEWAY
and head east. Continue about two blocks
past Newport Blvd. on the left.)

CLUB BREAKFAST: 1st Saturday of each month, 8:00AM at:
MIMI's CAFE
17231 17th Street
Tustin, Ca. (714) 544-5522

May 4th
Jun 1st

(55 FREEWAY at 17th Street east.)

CLUB NETS

BAND	MODE	DAY OF WEEK	LOCAL TIME	FREQ MHz
2 Meters	FM	Wednesday	2100 hrs.	146.550
15 Meters	SSB	Wednesday	2000 hrs.	21.375
15 Meters	CW	Sunday	2000 hrs.	21.175

(Listen for W6ZE, net control)

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THE PREZ SEZ

Last month's Pizza Bash was a real success. Thank you all for turning out. The location was great, the pizza tasty, the beer & pop cold, the room ideal and the crowd large. Let's look into holding another one in the future. I was pleased to see that the event was a real family gathering. Good job Mr. Activities!

In a few months the club will be participating in the 1985 Field Day competition. This is one of the big club events of the year. Last year was a lot of fun, but many participants had the feeling it would have been a lot more fun if there were more members out and active. Often the stations were shut down due to lack of operators. Let's face it, operating is fun, but only the real contest buffs can go at it solid for a long period. Relief is nice and it gives a chance for all to get into the activities. If you can't participate fully in the Field Day activity, feel free to drop by for a short time to operate, log, look around or even just share in the food. The dates are June 22nd and 23rd. Mark your calendar now!

Indiana Joe, (Mr. Activities), is setting up the plans for this years Field Day. We have some tentative sites, but if you have a suggestion for a possible site let him know. Also, he is looking for band captains. Most spots are filled, but an opening for 80 meters still exists. Joe's phone number can be found on page 2 of RF under activities chairman. Don't let his answering machine intimidate you!



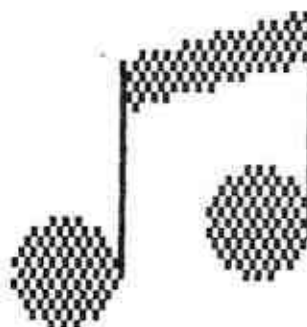
"Hey look! His check really is in the mail!"

There is a possibility that the club will be running Field Day with power being generated by the club's own generator. A 3.5KW gasoline generator has been offered to the club at a good price. The board, at the April board meeting, decided to go ahead with the purchase pending further examination. Kei, W6NGO, did a preliminary test and reported that it started and ran well, and did not strain when he kicked on a 1200 watt load. The money to purchase the generator will come out of the generator fund donations, and not the club general funds.

de Bob, AF6C

DIGITAL MUSIC

It is said that music is the universal language. A family that 'speaks' music is the LSI (large scale integration) digital family. An LSI music chip is currently on sale at local Radio Shack stores. The chip is made by General Instrument and carries the designation AY-3-1350 Melody Synthesizer IC; (Radio Shack #276-1758). Normally it costs about \$6.00, but the sale price is \$2.99.



The diagram on page 5 shows the pin configuration for this chip. It was designed for fancy doorbells and comes programmed to support three chimes as well as a short series of notes from 25 popular tunes, including The Colonel Bogey March, Star Wars, William Tell, Star Spangled Banner and many more. Radio Shack supplies a data sheet with the chip that gives all the necessary information to make it perform, but it doesn't mention that you can add your own tunes with the addition of an external PROM and a few extra chips.

There are two ways the chip can be programmed with music you want to here. First, you can supply the music to General Instrument and they will produce custom programmed chips for you. This is a good way to go if you want a large quantity, but if you just want one, or even only a hundred, then there is a less expensive way to go. The chip can be wired to an external PROM (Programmable Read Only Memory) chip, such as the 2716, and can be programmed with anything you want to put in it. In a future article we'll discuss custom programming further, but for now let's take a closer look at the AY-3-1350 Melody Synthesizer chip.

Two pins are used for audio output, 13 & 14. While pin 13 has the normal audio on it, pin 14 is called the 'Envelope' output and is used to give a musical instrument quality when correctly connected to the audio stage. Unfortunately, neither the G.I. nor Radio Shack data sheets provide much info on the 'envelope' output. However, both data sheets give a simple two-transistor circuit to drive an 8 ohm speaker utilizing both outputs. The parts are readily available (and some currently on sale) at Radio Shack.

To run the circuit a source of about 9 volts is required. The chip itself is run at 5 volts supplied from the nine volt source. The chip contains special off-on circuitry that allows it, and it's associated circuitry, to draw virtually no power until activated. (Such as pushing a door bell)!

Tune selection is done by two multi-position switches. The chip also has a mode that allows it to switch to the next tune automatically after a tune is played. If used as a doorbell, up to four separate doors can be monitored, with the different chimes being played for the second thru fourth doors.

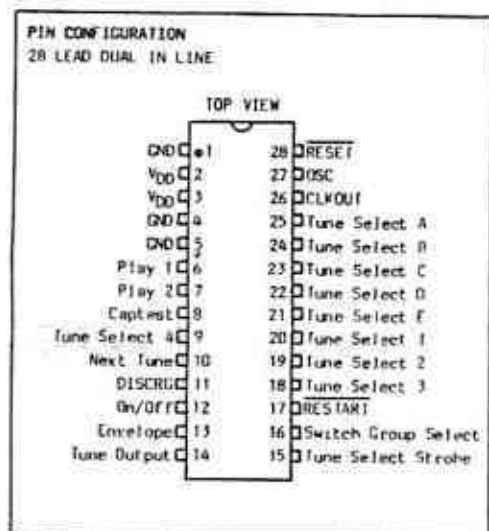
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DIGITAL MUSIC cont.

What good is this chip to a ham?? Well, that's a good question. It's hoped that nobody uses it to play music on the air. It does, however, offer a good opportunity to experiment and gain some knowledge. You can use it for its intended purpose and build a new doorbell for your house or you can just build a breadboard circuit and later add other features. The use is up to you, but if you find a special one be sure to document it in the pages of "RF".

In a future article we'll look into adding a PROM chip and show how to add your own music. Till then pick one of these chips up and experiment.

de AF6C



- A0 Toreador
- B0 William Tell
- C0 Hallelujah Chorus
- DD Star Spangled Banner
- CO Yankee Doodle
- A1 John Brown's Body
- B1 Clementine
- C1 God Save the Queen
- D1 Colonel Bogey
- E1 Marseillaise
- A2 America, America
- B2 Deutschland Lied
- C3 Wedding March
- D2 Beethoven's 5th
- E2 Augustine

- A5 O Sole Mio
- B3 Santa Lucia
- C3 The End
- D3 Blue Danube
- E3 Brahms' Lullaby
- A4 Hell's Bells
- B4 Jingle Bells
- C4 La Vie en Rose
- D4 Star Wars
- E4 Beethoven's 9th
- Chime 3 Westminster Chime
- Chime Y Simple Chime
- Chime Z Descending Octave Chime

AY-5-1358 TUNES

WANT ADS:

INFO WANTED - Microlog AIR-1 for RTTY, an interface for the Commodore 64 computer. Can original disk drive program be converted to activate data set? Please contact John Christopher, NG7D at (714) 557-6399.

FOR SALE - Beckman 8010 Digital Voltmeter, 0.25% accuracy, 3-1/2 digits, handheld. Like new. Costs \$140, Asking \$75.00. Also Kenwood HS-5 communications headphones, like new, \$15. Contact Howard Atwell, KA6CZI, (714) 779-5797.

FOR SALE: Hammarlund HQ-129X general coverage communications receiver, working, but may need some alignment. Partial batch of spare tubes included. This antique is in good shape. \$50. Contact Bob Eckweiler, AF6C, at (714) 639-5074.

HAM EXAMS SCHEDULE

CAVE
Coastal Area Volunteer Examiners

Exams will be given at the Sea Explorer Base, 5875 Appian Way in Long Beach on April 25th, 1985. Code tests will be given at: Extra - 10:30 AM; General - 11:00 - 11:30 AM; Written tests will be given at: 1:30 PM. Novice code and written tests given only by appointment.

Please Mail: Form 610, Copy of license, and Copy of Code Certificate (if applicable).

To: CAVE, 4441 E. Broadway, Long Beach, Ca., 90803

Limited to 100 people. Walk-ins accepted as testing facilities permit. Reimbursement fee of \$4.00 to be paid at testing site.

For further info call: Gene Stephens, KA6H00 (714) 897-6331.
-or- Reed Caughey, NF6X (213) 434-8278.

The Fullerton Radio Club

will be sponsoring a test session open to all hams who wish to upgrade, or to anyone interested in obtaining an Amateur Radio license. The session will be held:

May 18th 1985 at 9:00 AM

At: St Jude Hospital, Harbor & Bastanchury in Fullerton.

The fee for the exam is \$4.00 (payable to ARRL - VEC). Send it along with an FCC form 610 to the Volunteer Examiner team.

Deadline for registration is April 18th, (See note below).

Contact: Bob Reitzel, KD6DA
1836 Skywood St.
Brea, Ca., 92621
(213) 691-1514

Note: Contact KD6DA for information on walk-in exam requirements.

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ACTIVITIES REPORT:

MARCH RAFFLE:

Our raffle at the March 15th meeting was a big success with the donation of a Metz two meter mobile antenna by Ham Radio Outlet in Anaheim. The grand prize was won by Frank Smith (WA6VKZ). Other prizes included a twenty-four hour clock and an ARRL Handbook from Henry Radio. I would like to remind everyone that when you visit either of these places mention you are a member of the Orange County Amateur Radio Club and you appreciate their participation, by way of discounts and donations, in our club raffle.

One last thing. Any old thing that you have laying around at home collecting dust that you would like to donate to the raffle would be gratefully accepted. Likewise any suggestions as to possible future raffle prizes would be appreciated.

FIELD DAY COMMITTEE REPORT:

The first meeting of the Field Day committee took place on March 16th. It was decided to operate three teams; 40 meters, 20 meters, and a combined team on 80 meters and UHF. There is also the possibility of a novice position. Band captains thus far are Al (W6IBR) for 40 and Ken (W6HHC) for 20. We are still looking for a Band captain for the 80/UHF position. A location will be chosen before the next meeting. Kei (W6NGO) is looking into the cost of renting a generator if needed and Frank (WA6VKZ) is in charge of antenna design and placement and will be supplying a solar panel power source. Jane Watts has volunteered to supervise the cooking as well as researching some possible locations. We hope to make this Field Day as exciting as possible.

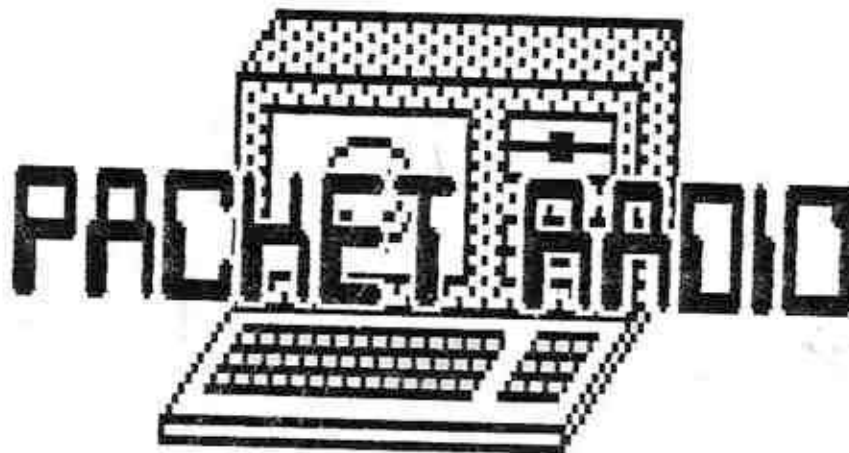
PIZZA BUST EXPLODES:

Well it looks like our March 16th Pizza Bust was a big success. Next time we have one, however, I'll make sure the place has a larger room for us to use. I hope everyone had a good time, I know I did, and if anyone took any pictures let me know. I'm sure Bob Evans would like copies for the club history. If anyone is interested we are currently looking for a club photographer to capture great moments in club history.

Currently in the planning stages is a picnic sometime in May. Possible activities include a transmitter hunt within the confines of whatever park we chose. Anyone who has an idea or would like to help with upcoming events contact me at the next meeting or give me a call anytime.

Joe Partlow (KB6FZU)
(aKa. Indiana Joe - .ed)

APRIL 17th, 1985 PROGRAM...



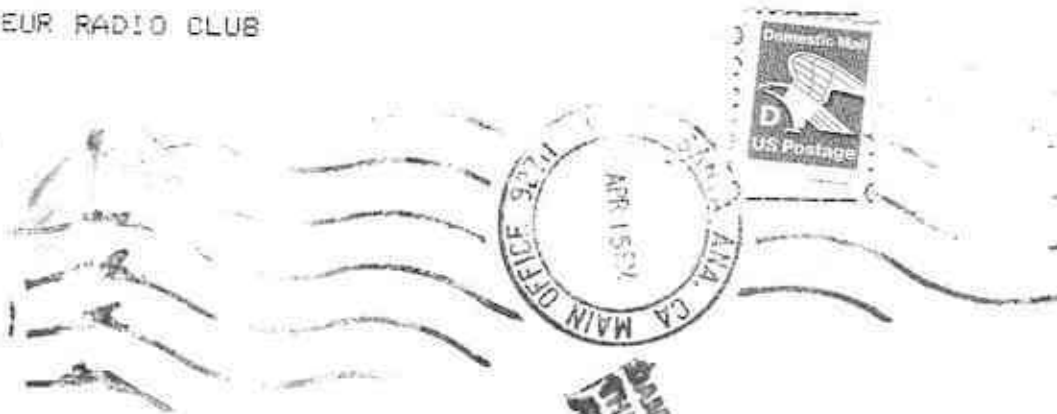
Packet radio is a new communications technique. With your home computer, or even just a terminal, you can communicate with another ham. Transmission is virtually error-free and many stations can share the same packet radio repeater simultaneously and transparently!

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FIRST CLASS!