

Sonoma County Radio Amateurs, Inc.

Club Station
W6LFJ

P.O. Box 116
Santa Rosa, CA 95402

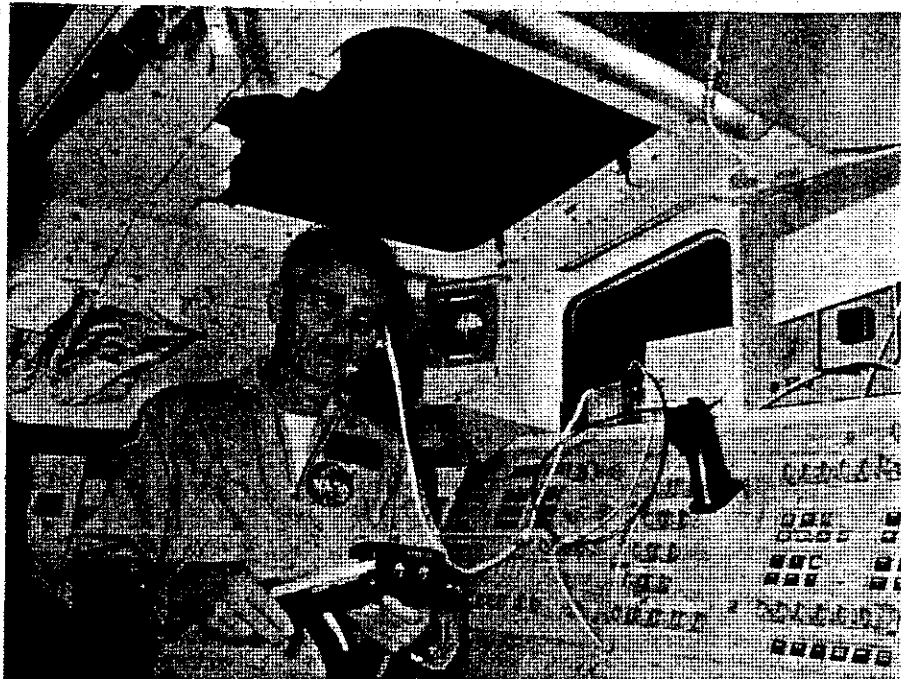
Repeater Station
WB6PVS



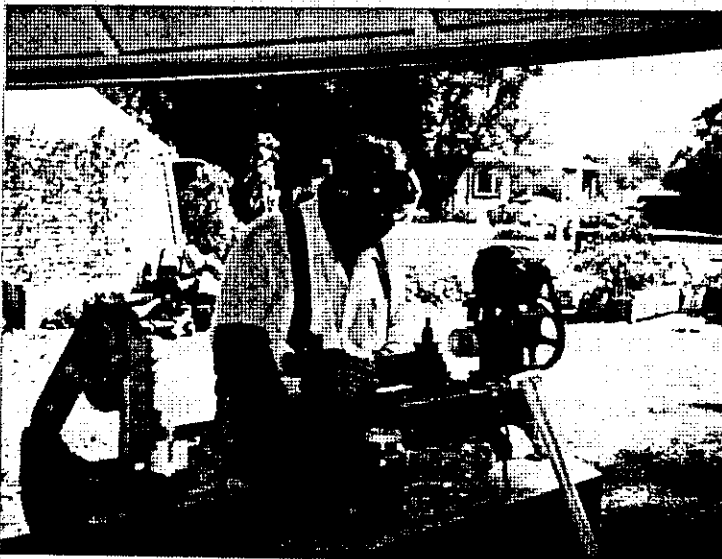
AFFILIATED IN 1939

VOL. 8 #10 OCT. 83

A FIRST



Aboard the Space Shuttle Trainer at Johnson Space Center in Houston, Astronaut Owen Garriott, W5LFL, goes through a trial run with the specially designed equipment he will use when he becomes the first radio amateur to operate from an orbiting spacecraft. (NASA photo)



ANT. CONST.



OPR. PR.

President's Column

Well, the flea market was a big success. I say this based on the turnout (estimated 200 people), "ambiance" (everyone commented on what a great event it was) and financial return -- the preliminary rough estimate indicates the club made over \$300. I think we did a darn good job for a first effort and I think we can pat ourselves on the back.

Special thanks to those who helped out: (in alphabetical order) WA6ACX, N1AL, W6CYM, N6DBZ, W6DTV, WD6DXW, N6FAX, KF6FX, KD6GC, N6IRJ, WA6IXC, WAOJRB/Pam, KD6NT, WA6RNF, WB6SMY, KE6WL. I probably left out a couple of the hardest workers; if so, heartfelt apologies. Thanks also to Karen, KA6ZBD, director of the Sebastopol Community Center for her excellent cooperation and help. The Center worked out very well, and I'm sure we'll be back again next year. Finally thanks to all the club members and others who helped by showing up and either renting a table or buying some of the "junque".

Next year I think we should plan the auction for earlier than 1:00 -- people were starting to leave. Perhaps 12:00 would be better. (We want to keep people at least through the lunch hour so we can sell more hot dogs!) We netted about \$116 on the food -- our best money-maker. The raffle might have brought in more money if we'd had a PA system set up to hawk tickets -- another improvement for next year. Anyone with other suggestions on how to make the flea market better contact me, N1AL, as I'm typing up a pamphlet of instructions for next year's flea market committee.

New subject -- The Member of the Year selection is coming up soon. I hope to make an announcement of the selection committee chairman by next meeting, so start thinking of names to submit to the committee. When you do make a submission, include a list of the person's accomplishments in the past year so the committee will have something to go on.

The program for next meeting will be a tour of Hewlett Packard. We will meet at the usual place, and then all drive up together after the business meeting. For those who have not seen the plant recently, it should be interesting. See you there, 73.

N1AL..

SPACE SHUTTLE BY STEVE WA8LLY.....

SORKING W5LFL ON THE SPACE SHUTTLE COLUMBIA CAN BE ONE OF THE MOST EXCITING DX.PEDITIONS IN AMATEUR RADIO HISTORY AND WILL BE TAKING PLACE AT THE END OF THE MONTH OF OCTOBER. W5LFL, OWEN GARRIOTT WILL BE OPERATING OR 2M FM FROM THE SPACE SHUTTLE COLUMBIA.

IF THE SCHEDULE HOLDS THE LAUNCH WILL BE ON 28 OCTOBER. W5LFL WILL BE ALL OWED TO OPERATE 1 HOUR PER DAY. THE MOST LIKELY PERIODS FOR NORTHERN CALIFORNIA WILL BE ON THE 29 OR 30 OCTOBER AROUND 8PM.

DURING THE EVEN MINUTES W5LFL WILL BE TRANSMITTING ON 145.550 MHZ. DURING THIS PERIOD HE WILL IDENTIFY ALL CALLING STATIONS HE HAS IDENTIFIED. CALL HIM DURING THE ODD MINUTES BY SENDING YOUR CALL SIGN ONLY. OVER CALIFORNIA, I DOUBT, THAT ANY RAGCHEWING WILL TAKE PLACE. TO DOWN THE PILE UP.QRM, W5LFL WILL BE SCANNING 144.650--144-850 IN 25KHZ STEPS AND 144.910-145.090IN 20KHZ STEPS. LIKE ANY DX PEDITION LISTEN TO HIS INSTRUCTIONS.

IN ANTENNAS THOSE USING CIRCULAR POLARIZATION WILL HAVE AN ADVANTAGE.

CONT. ON CLUB MINUTES PAGE.

MINUTES OF THE SEPTEMBER 1983 GENERAL MEETING

(subject to approval at the October meeting)

The General Club meeting was held September 7, 1983 in the EOC of the County Administration Center and called to order at 7:40 pm by Al, N1AL. Minutes of the last meeting were read & approved. Last month's treasurer's report for August 1st was corrected to read \$1056.07 by Bill, WD6DXN. He also reported the General Fund balance for September 1 to be \$1084.08 and the Repeater Fund to be \$479.18.

Committee reports:

REPEATER: Terry, WA6RNF reported that the new repeater was put into operation on the hill on August 20. It worked fine with few complaints until September 2. The old machine was put back on the air Sunday, the 4th. Thus, the committee will first repair the new machine, then pull the old machine down for a complete tube replacement and duplexer refurbishment.

ACTIVITIES: Al, KD6NT had three items:

- 1) Steve, WABLLY will be on the 13/73 machine, Friday, October 28, at 7 pm for assisting anyone in communicating with the Space Shuttle astronaut, Owen, W5LFL.
- 2) Concerning the PEP Wattmeter project, Al, KD6NT is talking with the FCC on their policy regarding PEP measurement.
- 3) The ANNUAL CHRISTMAS PARTY will be held on Saturday, December 10. The location will be formalized.

BADGES: 4 are now on order, 2 pending; expect delivery by next meeting.

Old Business:

The September 17 Swap Meet and Flea Market. The following committees have been formed:

- 1) Refreshments: Spence, WA6IXC and Doug, WAOJRB.
- 2) Auction: Terry, WA6RNF.
- 3) Publicity: Al, N1AL.
- 4) Prizes: Lyman, WB6SMY.
- 5) Radio Clinic: Brian, KE6WL.
- 6) Table Procurement: Hank, W6DTV.
- 7) Old Time Radio Collections: Woody, WA6KVN.
- 8) Still needed: Talk-in operator. 2nd Auctioneer. Auction assistants. 2 people for registration table.

New Business:

- 1) Watch the mail for the Pacific Division Director Election.
- 2) If you plan on purchasing a 1984 Callbook soon, contact Steve, WABLLY first. He would like to make a large quantity buy for a discounted price.
- 3) Remember, the club gets \$2 on every ARRL membership, if you join or renew through the club.

The meeting adjourned at 9:05 pm. The program was a very interesting slide show presented by Blaine Moore of the California Department of Forestry. He discussed the "Air Attack" system used to put out wildfires throughout the state. ...- Doug, WAOJRB, Secretary.

CONT. SHUTTLE INFO.

LOOK IN THE HANDBOOK UNDER TURNSTILE ANT.

IF YOU WANT TO GET SOME PRACTICE IN YOU MIGHT LISTEN TO THE VO9 BEACON ON 145.825 MHZ, YOU MAY HAVE SOME QRM FROM LOCAL SIMPLEX 2METER FM. WE HAVE AN OVERHEAD PASS BETWEEN 3:30 AND 5:00 PM DAILY. ON SATURDAY AND SUNDAY THE TELEMETRY IS BROADCAST USING A VOICE SYNTHESIZER WITH A BRITISH ACCENT. I WOULD EXPECT W5LFL SIGNALS TO BE STRONGER THAN THOSE FROM VO9.

QSL IS FROM ARRL. SWL ALSO RECEIVE QSL. AS SOON AS I GET GOOD LAUNCH INFORMATION I WILL TRY TO ANNOUNCE THE EXPECTED AOS TIMES OVER THE 146.73 REPEATER. GOOD LUCK.....STEVE WABLLY.

A FIRST FOR AMATEUR RADIO.

WE HAVE A CHALLENGE BEFORE US THAT MAY NOT RETURN IN THE FUTURE. I AM THINKING OF THE OCTOBER 28TH 1983 SHUTTLE FLIGHT. W5LGL DR. OWEN GARRIOTT, ONE OF THE CREW MEMBERS ABOARD THE BIRD HAS BEEN GRANTED THE PRIVILEGE OF DX TYPE CONTACTS WITH AMATEURS AROUND THE WORLD

THIS IS DIFFERENT THAN SATELLITE COMMUNICATIONS IN THAT REGULAR FM 2 METER GEAR CAN BE USED. YOU MAY HAVE TO MAKE A SPECIAL ANTENNA BUT THIS IS AN EASY CONSTRUCTION PROJECT FOR MOST AMATEURS. THE LAST TWO ISSUES OF QST AND W5YI, AND ARRL BULETINS HAVE COVERED NEARLY EVERY ASPECT OF THIS EXPERIMENT.

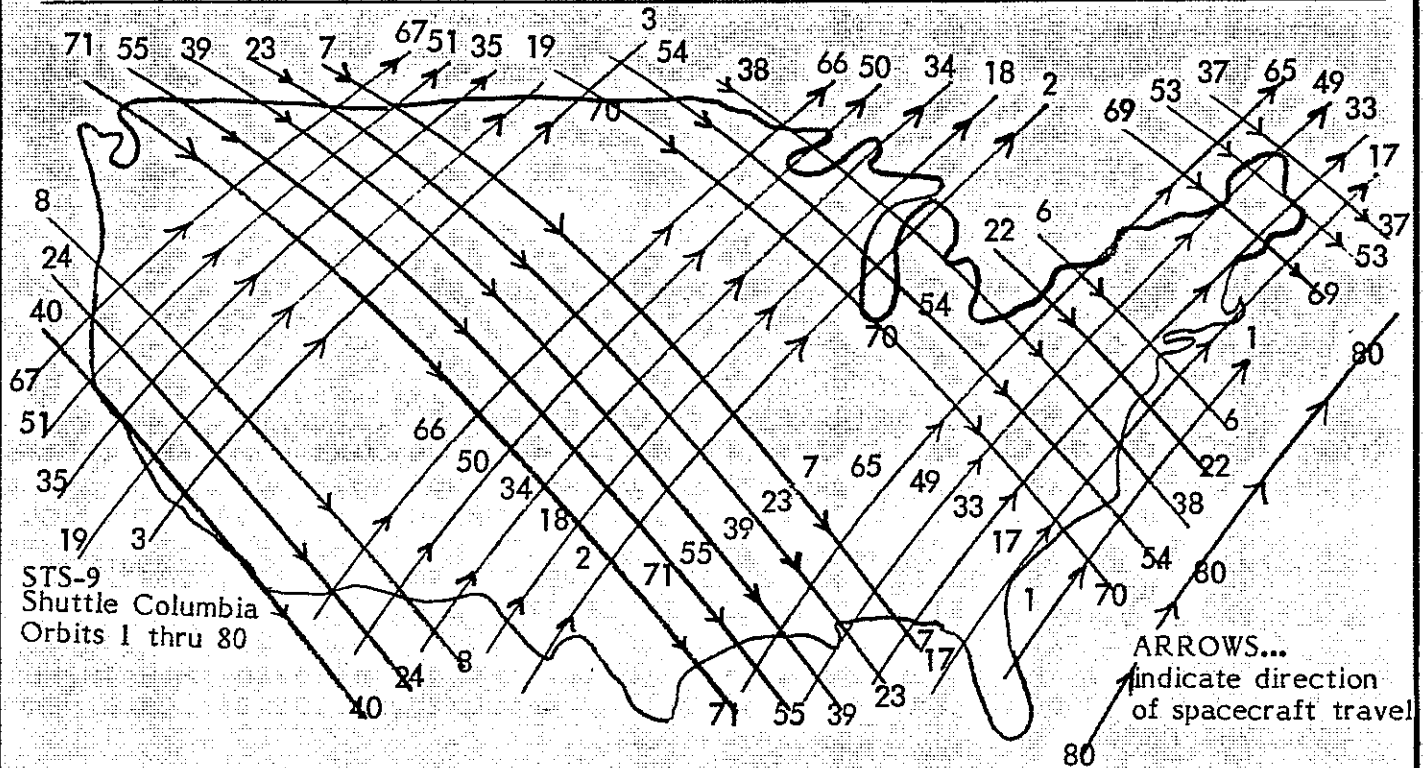
SONOMA COUNTY IS ONE COUNTY GEARED UP TO THIS EXPERIENCE. AFTER SEEING THE FILM OF THE PROJECT AT THE PACIFIC DIVISIONN CONVENTION AT RENO. N6BLN CAME HOME ALL FIRED UP AND IMMEDIATELY WENT INTO ACTION. HE MADE ARRANGMENTS FOR A VHS TAPE OF THE RENO SHOWING SO COPIES COULD BE MADE. THEN VISITS TO NEWS PAPERS AND TV AND RADIO. TO BE SURE THAT THERE WAS PLENTY OF COVERAGE FOR AMATEUR RADIO.

THREE CLOORDINATED STATIONS WITH TURNSTILE TYPE ANTENNA WILL BE SET UP AND WITH HELP FROM STEVE WABLLY, A SPECIALIST IN ORBITING ANALYSIS, THE CORRECT LISTENING TIME CAN BE FOUND.

WHY NOT TRY YOUR HAND AT THIS SPACE AGE STYLE OF COMMUNICATIONS. YOU MAY LIKE IT SO WELL THAT THE SATELLITE ACTIVITY COULD BE NEXT.

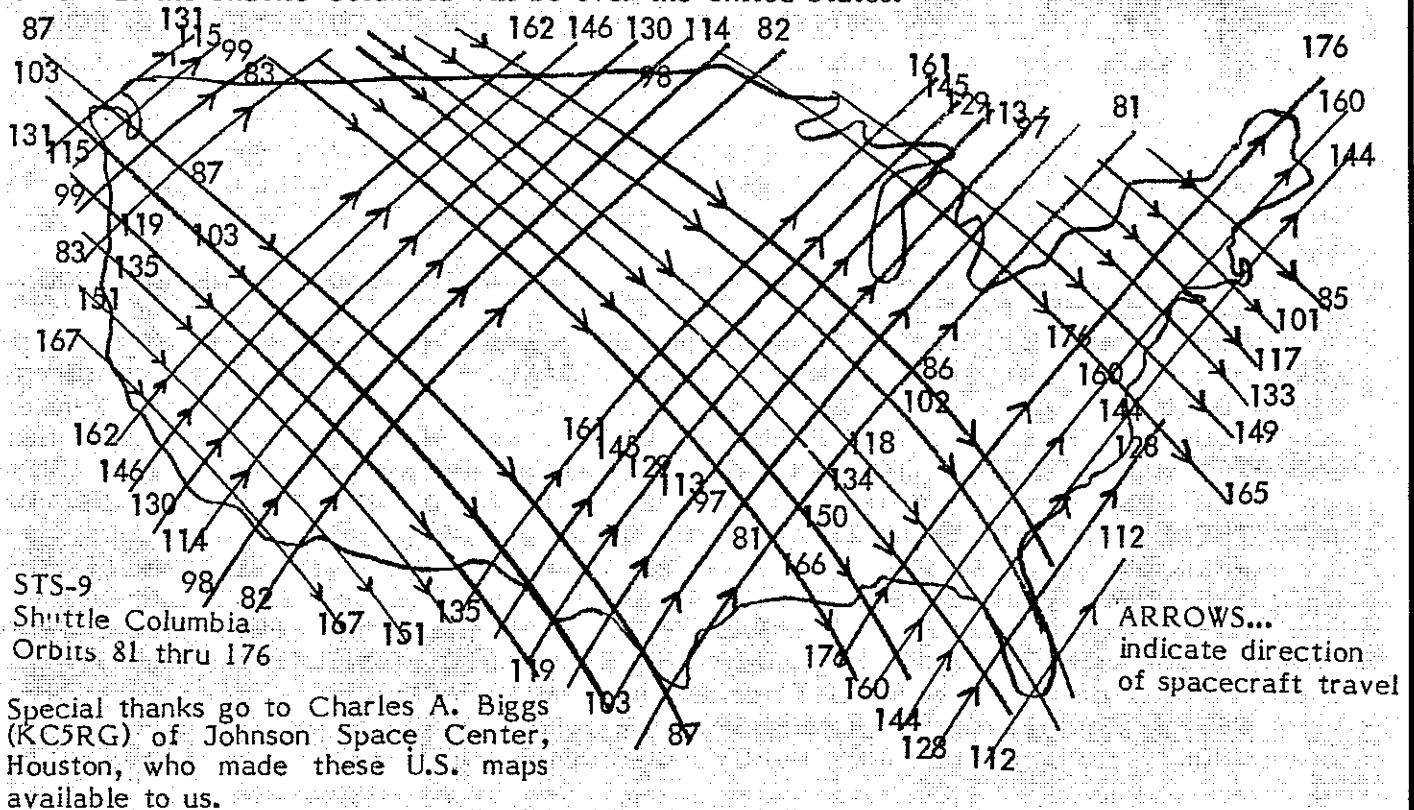
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	DAY	HOURS	MINUTES			DAY	HOURS	MINUTES	
2	0	1	26	+9-14	83	5	2	4	+11-17
3	0	2	55	+11-14	85	5	5	3	+30-32
6	0	7	23	+30-32	86	5	6	32	+28-36
7	0	8	53	+28-36	87	5	8	1	+28-36
8	0	10	22	+30-36	97	5	22	54	+9-17
17	0	23	47	+9-15	98	6	0	23	+9-17
18	1	1	17	+9-17	99	6	1	52	+11-17
19	1	2	46	+10-17	101	6	4	51	+30-32
22	1	7	14	+30-34	102	6	6	20	+28-36
23	1	8	44	+28-36	103	6	7	49	+28-36
24	1	10	13	+30-36	117	7	4	39	+30-34
33	1	23	37	+9-15	118	7	6	8	+28-36
34	2	1	7	+9-15	119	7	7	37	+28-36
35	2	2	36	+11-17	128	7	21	0	+7-9
37	2	5	35	+30-32	129	7	22	29	+9-15
38	2	7	4	+28-32	130	7	23	59	+11-17
39	2	8	34	+28-36	131	8	1	28	+15-17
40	2	10	3	+32-36	133	8	4	26	+30-32
49	2	23	27	+9-15	134	8	5	55	+28-36
50	3	0	57	+9-17	135	8	7	25	+32-36
51	3	2	26	+11-17	144	8	20	47	+9-15
53	3	5	25	+30-32	145	8	22	16	+9-15
54	3	6	54	+28-34	146	8	23	45	+11-17
55	3	8	23	+28-36	149	9	4	13	+30-34
65	3	23	17	+9-17	150	9	5	42	+28-36
66	4	0	46	+9-17	151	9	7	11	+32-36
67	4	2	15	+11-17	160	9	20	33	+9-15
69	4	5	14	+30-32	161	9	22	2	+9-15
70	4	6	43	+28-34	162	9	23	32	+11-17
71	4	8	12	+28-36	165	10	3	59	+28-34
80	4	21	36	+7-16	166	10	5	28	+28-36
81	4	23	5	+9-17	167	10	6	57	+32-36
82	5	0	35	+9-17	176	10	20	19	+9-15

W5YI
Sept 15



STS-9 Groundtrack Chart - Orbits Over United States

These two maps indicate every orbit that the STS-9 will be over the United States, the direction of travel and the orbit number. The chart on the left indicates the equatorial crossing time that each orbit begins after lift-off. You must add the appropriate minutes to obtain the time that the Shuttle Columbia will be over the United States.



PRESIDENT AL BLOOM N1AL 838-4524, V. PRES. SPENSER BARNES WA6IXC 526-1514, SECT. DOUG BENDER WA0JRB 526-5131, TRES. BILL THOMAS WD6DXW 823-9429, TRAILER MGR. TOM BEVIL JR. 778-7226, ACTIVITIES AL SCHMIDT, KD6NT 542-4793, RPTR. CHAIRMAN TERRY LADUKE 526-6412, BOARD MEMBER DON OSBORNE WA6ACX 829-0565, SHORT SKIP ED. HANK DAVIS W6DTV 823-7885, EXPLORER POST 599 MIKE TER SARKISSOFF N6DBZ 823-8977, BADGES DOUG BENDER, CLUB QSL MGR. JIM TOMER W6CYM 838-9464, P. R. NEWS VAN GROSS W6GFY 544-3485, SCRA INC. P. O. BOX 116, SANTA ROSA, CA. 95402.
CLUB MEETS 1ST WEDNESDAY EACH MONTH AT COUNTY EOC PLANNING ROOM.

SWAP-----SALE-----WANT-----ETC.....
ESTATE SALE TO GIVE AN OFFER PHONE HANK DAVIS AT 823-7885. KENWOOD 820S, VFO-820, ANTENNA TUNER HT-200. COST \$800.00.
KENWOOD TS-830 COST \$839.00, KENWOOD VFO 230, COST \$273.00, KENWOOD TS 530S, COST \$627.90, ANTENNA TUNER AT-230, COST \$175.45, KENWOOD EXT. SPK. SP 230 MATCHES 830, COST \$89.50, HEADPHONES HS5 DELUX COST \$43.00, MIRAGE MP1-SWR-HF WATTMETER, COST \$100.00, DUMMY LOAD WATTMETER B&W MOD. 374, 2000 W, COST \$208.00. NEVER USED STATION MONITOR KENWOOD SM 220, SCOPE TO 10 MHZ, COST \$319.90. 2-TY 3300LP FILTERS, BOTH \$35.00. SKYTEC CW1, CODE SPEAKER \$10.00. TH6DXCC 6 ELEMENT BEAM, TRI BANDER, COST \$247.50. TAILTWISTERL ROTOR ED-T2X COMPASS CONTROL, COST \$269.00, 35 FOOT WOODEN TOWER CRANKS TO 35', COST \$150.00 COAX AND FITTINGS COST \$100.00..IF INTERESTED CALL.
K6WE-942-4768 KLM 70CM SSB-CW, CALISTOGA. SALE. WB6NBR-545-3813, FT-901 BUILT IN KEYER PLUS NYE KEY. SALE. KA6DJY-544-5330, HIGAIN METAL QUAD, TRI BANDER, GAMMA FED, SALE. WA6LLY-526-6197, 84 CALL BOOKS DISCOUNT PRICE, CALL.

BITS AROUND THE CIRCUIT

JETTIE B. HILL, W6RFF ANNOUNCES HIS CANDIDACY FOR THE OFFICE OF DIRECTOR PACIFIC DIVISION. GOOD LUCK FROM THE ED. I THINK HE WILL MAKE A FINE DIRECTOR.

THERE IS A CONTEST ON FOR A LOGO FOR THE SPECIAL SERVICE CLUB PROGRAM. IF YOU ARE AN ARTIST AND WOULD LIKE TO COMPETE LOOK IT UP IN QST.

THOSE OF YOU THAT DID NOT ATTEND THE CLUBS FIRST FLEA MARKET MISSED A FINE SHOW. WOODY, WA6KVV, SHOWED HIS FINE DISPLAY OF ANTIQUE RADIOS.

JIM BOYETT, WA6UBA, AND DOUG BENDER, WA0JRB, WILL FORM A TEAM SEPTEMBER 21 AT 7 PM TO SET UP A NETWORK FOR THE BLOOD BANKS OF THE STATE.

YE ED. HAS COMPLETED THE 5 COUNTY AWARD FOUNDED BY THE REDWOOD DX ASSN., HOPE TO GET IT SOON.

DON, WA6ACX, THE OLD WAGON MASTER HAS HIS GROUP OUT FOR ANOTHER WEEK END OF FUN AT SALT POINT LSLTATE PARK. IF INTERESTED PLEASE GIVE HIM A CALL.

YOUR ED. HAS NOW COMPLETED THE CYCLE. HE HAD AN EYE BALL WITH W6AM AND AT THE FLEA MARKET HAD AN EYE BALL WITH W6PM. WHAT NEXT?

THE FLEA MARKET PROVIDED AN OPERTUNITY TO MEET OLD FRIENDS, MANY WERE THERE. YOU ALL SHOULD HAVE BEEN THERE.

WELL GET YOUR CARDS READY, STEVE WA6LLY AND HIS WIFE WILL BRING INTO THE WORLD TWIN BOYS SOON. CONGRATS.

WA6ACX AND KF6FX JUST BACK FROM 3800 MILES UP INTO CANADA HAD A FINE TIME. WORKED BACK HOME VIA AMATEUR RADIO. DON LIKED THE STATE OF WASHINGTON, IRMA HAD A HARD TIME GETTING HIM BACK HOME.

N6FYV, CONNIE, FORMER MEMBER, JUST RETURNED FROM THE LARGE ISLAND DOWN UNDER. DON, KB6LO AND N6FCV, GOT DOWN TO TAHITI THIS SUMMER. NICE TO TRAVEL.

Stephen Mendelsohn, WA2DHF
 ARRL Hudson Division
 Vice Director
 64 Maiden Lane
 Little Ferry, NJ 07643

June 28, 1983

A Simple Resistive Audio Multiple Distribution System
 By Stephen Mendelsohn, WA2DHF

The time comes in any ham's life when he is called on to do public service work of one type or another. If he is public relations oriented he may want to take the audio from his receiver and feed it to several broadcast audio tape recorders, or the audio input to a commercial video tape recorder. These devices all use a 600 ohm balanced input. The receiver frequently has an output that is 8 ohms, unbalanced. The trick of designing an audio multiple output distribution system, or "mult box" as it is known in the broadcast trade, is to match the drive impedance (the receiver) to the load impedance for the broadcast equipment. Levels are the second thing that one must match. The input to most of the broadcast equipment is either "mic" level which is -45 to -60 dB at 600 ohms, or "line" level which is -10 to -25 dB at 600 ohms. The output of the average receiver, whether 2-meter fm or low bands, will vary between +6 and -10 dB at 8 ohms. Now that we have all of the required data, how do we make it all work together?

If you take the output of your headphone jack and connect it to the line input jack on a piece of professional equipment, you may wind up with lots of hum and distortion. This is because the impedances are badly mismatched. To use an antenna term, the SWR is too high. The hum will be from a lack of isolation. What we need is a resistive device that will perform three functions.
 1) Isolation of the source from the load; 2) Match different impedances and drop the line level output of the receiver to a mic level satisfactory for the broadcast equipment. This requires the design of two different types of audio pads. Each pad is designed using common resistors that could be assembled on a standard perf board using "flea" clips to allow connections to be made to the equipment.

Section A of the pad is a standard "O pad". It acts to give isolation, and match impedances. Because not all receivers give the same audio output, several values of resistors (listed in table 1), which will give various levels of attenuation. In all cases the driving impedance is 8 ohms, and the load impedance is 600 ohms.

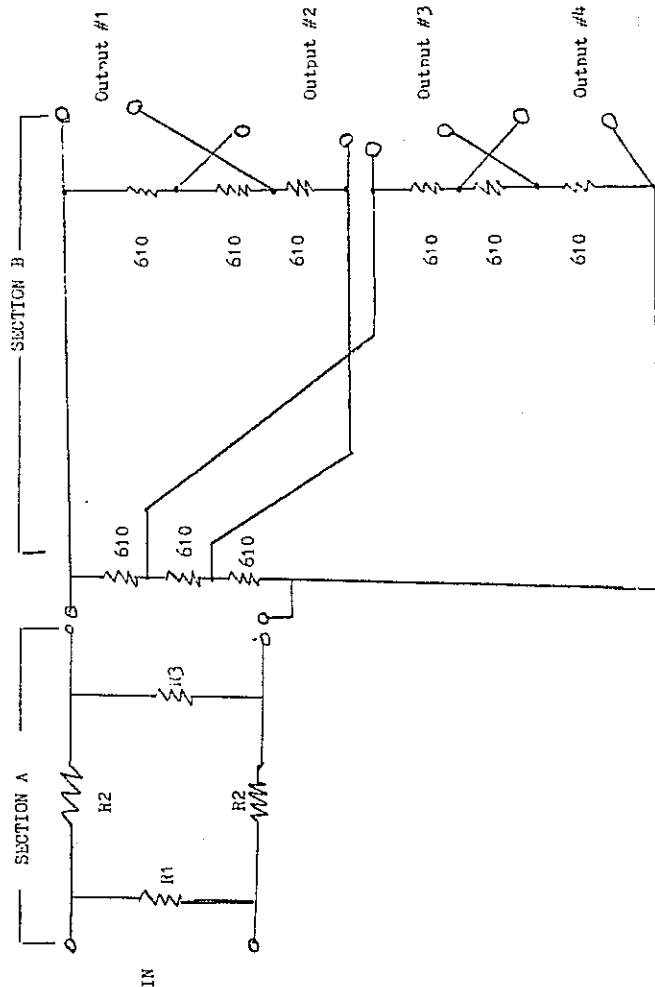
Section B of the pad is designed to take a single input and produce 4 outputs at 600 ohms with a 12 dB loss between input and output. In each case the four outputs will be isolated from each other, and provide correct level. All resistance values are 610 ohms for this section.

The resistors are all standard value half-watt types that can be found in a junk box or purchased at a parts store for a dollar or two. The resistors may be laid out in any fashion within reason. Keep the leads short since RF can creep into anything. In most cases, the broadcast equipment will be clipped on with small alligator clips provided by the reporter, but it doesn't hurt to have a Sony type mini-plug connected to one of the outputs. If you can save the reporter even one step, it will help to assure your story getting on the air. And getting the story on the air is the name of the game in the public relations business.

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Table 1 Section A "O Pad" values
 Input=8 ohms Output=600 ohms

Attenuation	R1	R2	R3
10dB	6.8 ohms	51 ohms	620 ohms
20dB	8.2 ohms	180 ohms	620 ohms
30dB	8.2 ohms	560 ohms	620 ohms
40dB	8.2 ohms	1.8k ohms	620 ohms



INPUT=8 Ohms from receiver
 Outputs=600 Ohms to recording equipment

OCTOBER 83

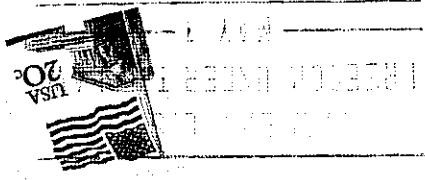
FIRST CLASS

BOB OLSTEN
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SANTA ROSA CA 95405

SANTA ROSA, CA. 95402

P. O. BOX 116

SONOMA COUNTY RADIO AMATEURS, Inc.



LATE ISSUE.....

WANTED..15 and 40 COILS FOR HUSSLER MOBIL ANTENNA SYSTEM..N6HRU ..545i575.

AWARD...

KB6OK RECEIVED HID 5 BAND DXCC AWARD FROM ARRL ON AUGUST 18, 1983..CONGRATS FRANK.