



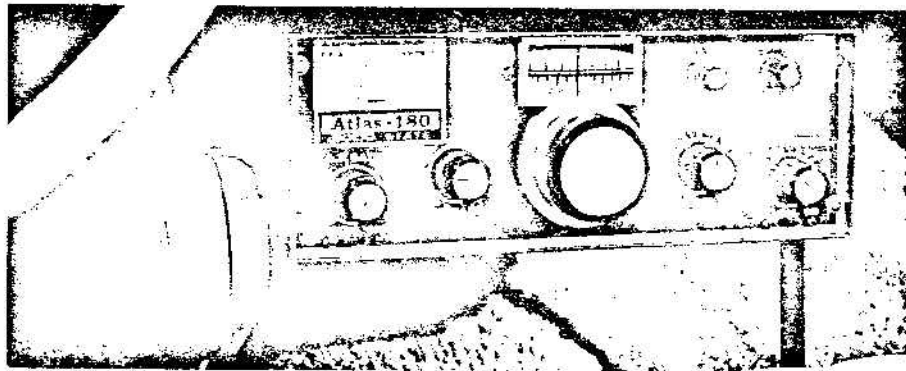
ORANGE COUNTY AMATEUR RADIO CLUB

VOLUME XV, NO. 9

P.O. BOX 95, ORANGE, CALIF. 92668

SEPTEMBER, 1974

# SEPTEMBER MEETING:



ATLAS - 180  
BY RAY HODGES  
W6AQP

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— 1974 CLUB OFFICERS —

PRESIDENT	KEN KONECHY	W6HHC	541-6249
V. PRESIDENT	ART SHELDON	WA6LHB	832-9676
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	BOB ECKWEILER	WB6QJU	639-5074

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EDITOR	NEIL VADNAIS	WA6TZA	839-7378
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OCARC ACTIVITIES

MEETING 3rd Friday of each month, 7:30 PM at:

Mercury Savings and Loan  
1095 Irvine Blvd. (4th Avenue)  
Tustin, California

GUESTS ARE ALWAYS WELCOME

BREAKFAST 1st Saturday of each month, 8:30 AM at:

SAMBO'S RESTURANT  
2101 E. First Street (1-block west of Tustin Ave.)  
Santa Ana, California

MEETS IN THE BACK OF THE ROOM

15M NET Club station W6ZE meets every Wednesday at 8:00 PM on 21.375 MHz. All amateurs are welcome to check in. Club and ARRL bulletins read.

15M CW NET Club station W6ZE meets every Wednesday evening from 7PM to 8PM on 21.175 MHz. All amateurs are welcome to check in. Lots of CW practice for everyone.

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CALLBOOK SERVICE

The club has copies of the latest callbooks which are available at each meeting. Also, you can contact Martin-WB6PEX on Monday and Thursday evenings between 7:00 PM and 9:00 PM if you need addresses. If you have more than one call for Martin to check, he'll get them all and call you back the same night. Also, look for Martin after the Wednesday evening net.

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THE PREZ SEZ:

The August meeting was a great success. John Griggs - W6KW, ARRL Director of the Southwestern Division, was the guest speaker and held a "Standing Room Only" audience captive for the entire evening. It was good to see so many turn out to hear John. And John was able to once again turn on an endless series of information on new happenings, new trends, significant legislation, and problems to ponder. John, thanks again for visiting our club, we enjoyed hearing you very much.

In two months (October Meeting) will be the annual OCARC Auction. So start cleaning out your garage and shack. Full details will be in your October paper.

Our Membership Chairman, Ted - K6LJA, has also updated the roster to add new members and correct mistakes. You'll find your copy of the latest roster on pages 5 and 6. Additional copies will be available at the September meeting.

Ken = W6HHC

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Minutes of the Board Meeting

A Board Meeting was held at the QTH of Fried - WA6WZO on September 3, 1974. The main order of business was to discuss the upcoming October auction. The board decided to change the fee system to be 10% of the bid plus a one dollar seller's fee. Again it is asked that all sellers have their call and minimum acceptable bid listed on each item. Also, items should be limited to electronics and please "NO JUNK"!!!

Harold - WA6BJO reported the OCARC has \$340 in the checking account. Of this amount \$112 is income from the yearly raffle.

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FOR SALE: Swan FM2X 2 MTR XCVR. AC P/S. Mic. 12 channel capability, 6 channels installed. Cush-Craft AR-2 Ringo Ant. Cush-Craft ASP-556 magnetic mount 1/4 wave mobil ant. Hustler 5/8 wave mobil ant. DC connectors. \$200.00. Contact Art - WA6LHB 832-9676.

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FOR SALE: 2 each: 40 foot push-up masts and 1 each 50 foot push-up mast ( with gin pole) \$10.00 each. Hustler 4BTV with 75 mtr. resonator. \$35.00. 3 pieces of RG-8U coax approx 200 feet in all. 10¢ a foot. Contact Steve Wiggins - WA6BKS at 994-0087.

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TRANSISTOR SWITCHING - by Bob, WB6QNU

With the advent of TTL integrated circuits, hams are building sophisticated keyers. Many designs, however, lose their 'state of the art' by using a relay to key the transmitter. Relays have many disadvantages and can be a major source of trouble in keyers.

A transistor can be used in place of the relay, however, many hams tend to shy away because of all the associated problems that are rumored. But, when properly done, a transistor will give excellent results with superior solid state reliability. Before we discuss the interfacing lets look at how a typical transmitter is keyed. Most transmitters of the past decade use grid block keying. Figure 1 shows a typical simplified circuit. A negative voltage of between 50 and 125 volts is applied through a pull up resistor  $R_{p1}$  to the control grids of various stages of the transmitter biasing these stages into cutoff. When the key is closed, it shorts this voltage to ground removing the bias and allowing the stages to conduct.  $R_{p1}$  acts to limit the current through the key. (5ma is typical.)

To key the transmitter with a transistor the transistor must be able to switch a high negative voltage at low current. Figure 2 shows the use of a common high voltage PNP germanium transistor to key a grid block transmitter.  $R_2$  and  $D_1$ , which must be a silicon diode, bias the emitter at about 0.7 volts. As long as the input voltage through  $R_1$  to the base is at TTL (or RTL) high level (+2 to 5V) the transistor is reverse biased and won't conduct. But when the input drops to low the base emitter junction become forward biased and the transistor conducts bringing the keying line from its high negative voltage beyond zero to +0.7 V keying the transmitter.

Germanium transistors were used in this circuit because of the scarcity of high voltage PNP silicon transistors. However, Fairchild now makes the 2N4888 which is superior to the 2N397 in many ways. Figure 3 shows a schematic of the circuit using the 2N4888. Two silicon diodes are required in the emitter circuit to assure turning on the silicon transistor because of the greater forward biased junction voltage drop.

This circuit has given me years of uneventful operation keying first my Heath Apache (110 V across the key) and now my Heath SB-401. The 2N4888 can be had for around \$1.50.

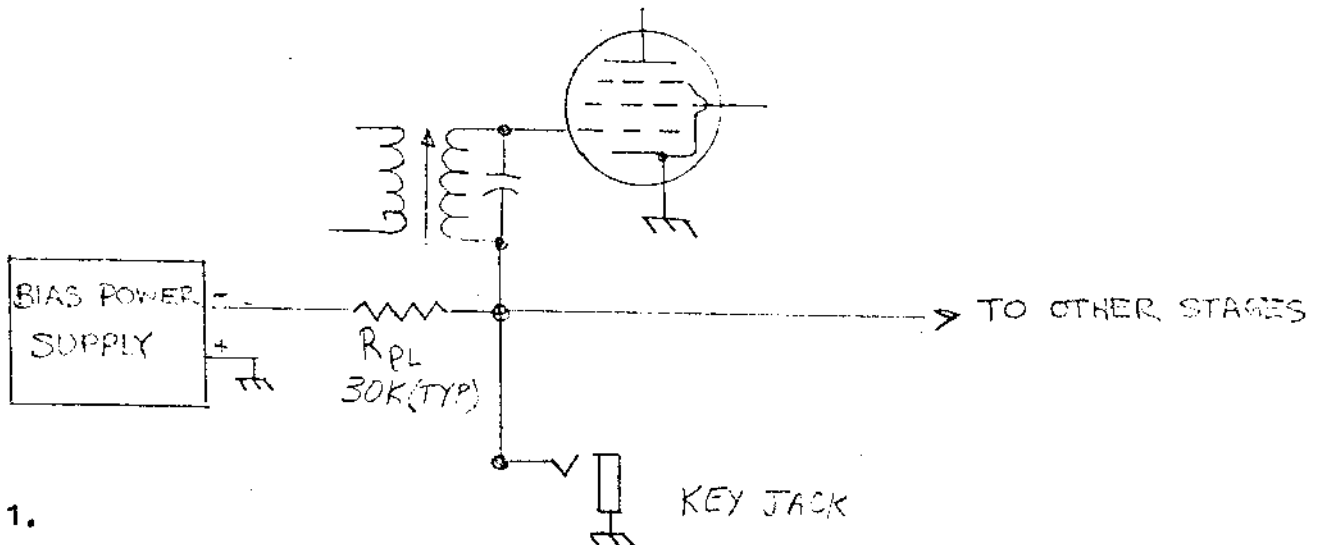


Figure 1.

Continued on page 7.

"RF"

ORANGE COUNTY AMATEUR RADIO CLUB

SEPT, 1974

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OCARC Membership Roster as of August 1974

WA6TCB Richard Ahlefeld, 2020 West Maple, Orange.92668 #438-3767  
WB6USF Herb Bartlett, 4548 Obispo Ave. Lakewood.#429-8998  
WA6BPX Wyatt Berry, 10182 Imperial Ave.,Garden Grove #537-6863  
WB6FRF Mel Bittner, 13096 Blackbird #3, Garden Grove, #638-0116  
WA6IHQ J.Robert Bjorkman, 2745 Canary Dr. Costa Mesa, #545-1549  
WB6BYZ Jim Buck, 13222 Loretta Dr. Santa Ana, #544-7628  
WB6YNR William Calvert, 8861 Swordfish Ave., F. Valley # 847-5055  
WA6UCS Abe Collins, 5571 Abraham Ave. Westminster, #894-8892  
WB6PEW Ozzie Colonna, 401 So. Cooper, Santa Ana, # 531-5480  
K6RQD Wayne Cutshall, 853 So. Clemintine Ave.Anaheim, #774-7484  
WB6ARK Roger Denny, 5372 Santa Barbara, Garden Grove, #894-0416  
WB6VOV Ernie Duebendorfer, 9292 Vons Drive, Garden Grove, #539-6469  
WB6QNU Bob Eckweiler, 667 Coate Rd. Orange, # 639-5074  
WB6IXN Robert Evans, 701 So. Kilson Dr. Santa Ana, #639-5074  
WB6RXH Foothill A.R.C. 12851 Dodge, Santa Ana,  
WA6GXV Ernie Fuerte, 513 N. Rosita, Santa Ana #839-7107  
WB6FMV Richard W. Gehle, 1592 N. Handy, Orange # 532-4876  
K6LJA Ted Glick, 1009 Riverlane, Santa Ana, #542-1390  
W6KW John Griggs, 1273 - 13th St. Baywood Pk. San Luis Obispo  
WB6CQR Billy Hall, 12542 Sally St., Garden Grove, #539-2660  
WN6S JL Jay Hall, 10491 Mast Ave., Westminster # 531-8448  
WB6VOU Dan Hanson, 8421 Trinetta Rd. Garden Grove, 539-2660  
WB6ULU Lloyd Harwood, 459 N. Handy, Orange, #538-7081  
WA6WZO Fried Heyn, 962 Cheyenne, Costa Mesa, # 549-8516  
WA6WZN Sandi Heyn, 962 Cheyenne, Costa Mesa, # 549-8516  
W6COJ Dave Hollander, 225 S. Prospect, Orange, # 541-9133  
WB6UDC Jack Hollander, 13521 Malena Dr. Tustin # 544-5369  
WA6PPQ John Hunter, 1000 W. La Veta, Orange, #835-5874  
W6OOH Donald Klos, 13562 Loretta Dr. Tustin # 832-9682

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W6HHC Ken Konechy, 2201 N. Eastwood, Santa Ana, # 541-6249  
 WA6SFK Tom Machulda, 8976 Presedente, F. Valley, #842-5650  
 WA6VNE Tom Maddigan, 2405 Fairmont, Santa Ana, #542-6580  
 WB6AJV Robert Maller, 2292 Coco Palm Dr. Tustin, # 832-6170  
 WN6CNH Joe Mangiameli, 15481 Mary Knoll, Westminister #893-6323  
 \* W6DEY Roy Maxon, 221 Knoll Rd. Vista, Calif. 92083, # 724-5131  
 WB6WFV Tina McCarthy, 475 S. Dunas Rd. Orange # 532-4090  
 WB6FNX Saul Miller, 3237 Gainsborough Rd. Orange #532-3986  
 WA6OBM Rick Nelson, 2541 W, Camden Pl. Santa Ana, # 557-6614  
 WA6ULV Rick Pearson, 16681 Tiber Lane, Hunt. Beach #847-1864  
 WN6FOW Ernie Pritchard, 13461 Mickey St. Garden Grove #530-0738  
 WB6PEX Martin Raymond, 1147 N. Hart, Orange #532-4090  
 WA6BJO Harold Richards, 18802 E. 17th St. Santa Ana, 544-0083  
 WA6LHB Art Sheldon, 12872 Woodlawn Ave. Tustin #832-9676  
 W6ZHD George Schroder, 519 S. Janss St. Anaheim #533-8677  
 WB6AUQ Glen Shepherd, 412 Mendoza Terrane Corona Del Mar, 92625  
 W6OKX Lee Sheridan, 11652 Newport, Santa Ana #838-0086  
 WA6AZW Richard Schumacker, 214 W. Noble Ave. Santa Ana #549-1516  
 WB6MCU Roy Tibbetts, 5251 Heil Ave. Hunt. Beach. #846-6089  
 W6FCT A.R.Van Comperollie, 223 Owens Dr. Santa Ana # 543-1520  
 \* W5TLK Jerry Ver Duft, 10805 Barbara Ellen, Albuquerque, N.M. 87111  
 W6NGO Kei Yamachika, 11671 Santiago, Orange # 538-8942  
 WA6HNI Andy Ziros, 123 Maude Lane, Anaheim #998-0895  
 -----stop press !!!! -----  
 WN6DWC Lyle Adams, 349 N. Magnolia, Orange -- # 639-3635  
 W6POR Henry Bormann, 2767 W. First St, #14, Santa Ana, -- # 543-7300  
 WN6ECR Chuck Feeney, PO BOX 3482, Orange -- # 998-3349  
 WN6CMO Bob Greer, 2526 Locust Ave., Orange -- #633-2559  
 WB6KJS Frank Gregg, 17310 Gum Circle, Fountain Valley -- # 968-1450  
 WA6DBX Greg Hile, 6302 Aney, Garden Grove -- # 897-3747  
 WA6TZA Neil Vadnais, 1818 N. Fairview, Santa Ana -- # 839-7378

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TRANSISTOR SWITCHING - cont'd

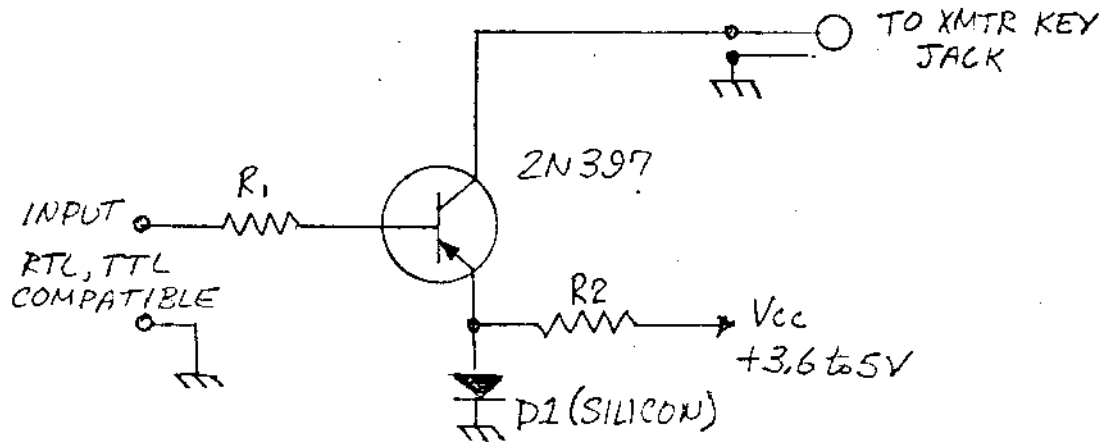


Figure 2.

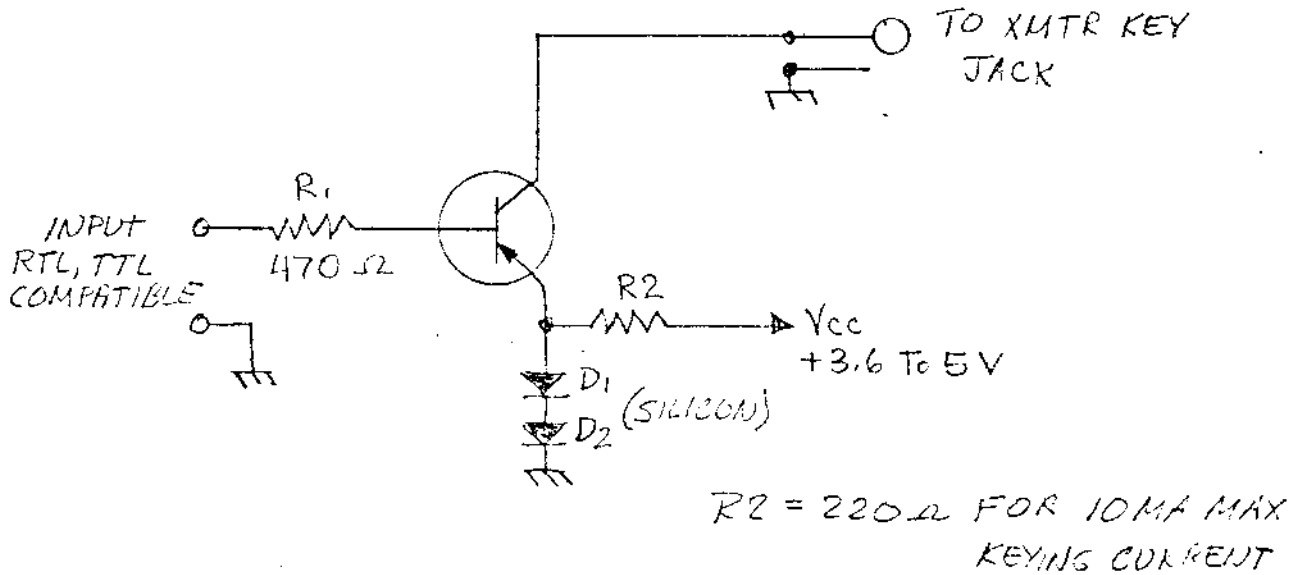


Figure 3.

Bob - WB6QNU

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SEPTEMBER OCARC PROGRAM:

RAY HODGES - W6AQP will be on hand to give a demonstration of the Atlas - 180 Solid-State Sideband XCVR. Ray will also answer any questions pertaining to the gear. Looks like an interesting program, so be there!!!

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FOR SALE: Hallicrafters SX-101 MK-3, HT-32A, plus an 800 watt linear with P/S. Complete: \$225.00  
Contact: Paul K6INQ Phone: 539-5025

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BE SURE TO PICK UP AN I.C. ELECTRONICS FLYER AT THE SEPTEMBER OCARC MEETING, AND GET A FREE GIFT UPON PRESENTATION OF IT AT THEIR STORE, 619 W. KATELLA, ORANGE.

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ORANGE COUNTY AMATEUR RADIO CLUB, INC.  
POST OFFICE BOX 95  
ORANGE, CALIFORNIA 92688

VOL. XV, NO. 9 - SEPTEMBER, 1974

FIRST CLASS !!!

DATED MATERIAL !!!