

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

CHEESE BITS



SCANNED TO PDF BY BERT, K3IUV.

MT. AIRY VHF RADIO CLUB., "THE PACK RATS", PHILADELPHIA, PENNSYLVANIA W3CCX
 NET FREQUENCIES: 50.125, 144.150, 220.125, 224.58/222.98, 432.110, 903.100, 1296.100 MHz
 AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE ARNS
 Meetings: Third Thursday of each month at 8:00 PM
 Southampton Free Library, 947 E. Street Road
 Southampton, Pennsylvania 19866

VOLUME XXXII

JUNE 1990

NUMBER 6

THE PREZ SEZ

Hope everyone enjoyed ARRL night as much as I did. The Pack Rats hope that the League officials keep their efforts up on planning for the upcoming WARC. Thanks to Heru, W3WV for his informative demonstration of construction techniques and HV safety.

This month includes a very important club meeting. We will hold our election of Club officers. If you would like to be a part of the administration of the Mt. Airy VHF Club, please advise one of the current club officers listed on page 2 of this news letter. Don't be shy. You have much to add to the operation of the organization and we are always seeking new and healthy ideas.

If you want to come to FN01, let me know. We will leave at 5:30 AM on Friday June 8. Call me if you have any questions concerning the expedition.

Finally, hope to see all of you at Ladies Night, Saturday evening, June 2.

73, and listen for W3CCX/FN01!
 Dave Hackford, N3CX

VISITORS AT THE MAY 17 GENERAL MEETING

KC3LM - KAY CRAIGIE, PAOLI, PA	W3ABC - HUGH TURNBULL, COLLEGE PARK, PA
W3WCQ - BOB BENNETT, TOWSON, MD	W3WV - HERU, FERNDAL, MD
W3AJS - ED KEENER, ORELAND, PA	N3EVV - WALT RAUSCHER, NORRISTOWN, PA
K3BPL - RICH, DUBLIN, PA	

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DEADLINE FOR ARTICLES AND SWAP SHOP IS THE 20TH DAY OF THE MONTH. NON-COMMERCIAL SWAP SHOP ITEMS - FREE OF CHARGE.

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<u>MONDAY NIGHT NETS</u>	<u>NET CONTROL</u>
7:30 PM - 50.125	W3CL
8:00 PM - 144.150	W2EIF
8:30 PM - 220.125	WC2K
8:30 PM - 224.58/R	K3ACR
9:00 PM - 432.110	WA3AXV
9:30 PM - 1296.100	WA3NUF
10:00 PM - 903.100	N3CX

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W3ZD, DAVE ZIMMERMAN
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CALENDAR OF COMING EVENTS

By Harry Brown, W3IIT

JUNE

- 2 LADIES' NIGHT will be held at the Warrington Motor Lodge. Bring your best gal and show her that hams do more than talk on the radio, (they talk about radio at banquets too).
- 3 The Hall of Science ARC Hamfest will be held at the New York Hall of Science parking lot in Flushing Meadow Park in Queens, NY. Talk-in: 145.300 and 223.60.
- 6-12 WA4VCC, K4MQC, WA4UNZ, and AA4SC and XYL's will be operating from Treasure Cay on the Great Abaco Island in the Bahamas in FL16. Operation will be on 50, 144, and 432 MHz. as well as HF. They will operate a beacon on 50.085 and intercom on 28.885. Look for them in the contest; they have requested a C6 callsign.
- 7 The Arietids meteor shower. Predicted peak - 1408. Duration - 2 days.
- 9-11 ARRL JUNE VHF QSO PARTY. W3CCX WILL OPERATE FROM GRID FN01, CHESTNUT RIDGE IN WESTERN PENNSYLVANIA ON ALL BANDS 50 MHZ THROUGH 24 GHZ. See May QST page 85 for rules.
- 14 Pack Rat Board of Directors meeting at the QTH of Dave, W3ZD at 8:00 PM. Board members and interested parties invited. Call (215) 675-4539 for directions.
- 14 Flag Day
- 16 The Raritan Valley (Warren) Hamfest will be held at the Watchung Hills High School, Warren, NJ. Talk-in: 146.025/.625 and 146.52
- 16 The Skyline ARC Hamfest will be held at the Cortland County Fairgrounds in Cortland, NY. Talk-in: 147.825/.225
- 16-17 SMIRK 6-Meter QSO Party from 0000z 16 June until 2400z 17 June. The exchange is callsign, SMIRK number, and grid square. See June QST page 83 for rules.
- 17 Fathers Day
- 17 The Frederick Amateur Radio Club Hamfest will be held at the Frederick County Fairgrounds in Frederick, Md. For information, write: K3VVV.
- 21 Pack Rat meeting at the Southampton Free Library on Street Road in Southampton, Pa. Annual election of club officers. Refreshments will be served. All interested VHFers welcome.
- 21 +/-one month. Look for DX propagation to Europe on 6-meters.
- 23-24 ARRL Field Day. See May QST page 84 for rules.,
- 30 White Elephant Sale and clean-out detail at QTH K3GAS (SK). A vast collection of radio gear, parts, tools, and junk must go.

PROPAGATION REPORT
By Paul Drexler, WB3JYO

Propagation has continued to be less than exciting during most of the past month. Although the SFI has at times been above 200, the K index has also been high, indicating a disturbed geomagnetic field, hindering the possibility of 50 Mhz. F2 openings.

Both 6 and 10 meters have been quiet during most of the past month. Watch for strong, short-hop openings on 10 meters, or monitor 28.885, the "VHF net" frequency. If 6 is hot in any part of the country, you'll likely hear of it on 28.885. Bill, W3VIR, has heard via CULAC that CULEZ (Azores) will be active on 6 within the next few weeks - as soon as an antenna can be put up. Bill also notes of some propagation from last month, working CX8BE (Uruguay) on April 7th.

About the only significant opening occurred on Memorial Day weekend, when 6 was open all day on Sunday the 27th. WC2K reports working several Cubans around 1200z via some good, widespread E-skip. The opening continued throughout the day, improving as it spread into call districts W4 - W0. Many stations kept a watch for E-skip to move to 144 MHz, and WA3HMK reports catching a 2 minute opening to work CO2KK, in Cuba! Some of the upstate New York boys reportedly worked into South America, but I don't have any details. Usually sporadic E propagation fades away shortly after sundown, but Sunday's opening lasted well past midnight with strong signals from the Midwest. The band didn't die until around 0230 local time! On Monday the 28th, 6 opened again from morning to noon with strong E-skip into Florida and along the Gulf. The band rebounded at around 2200z with some double-hop E-skip into Southern California and Arizona which lasted until 2300. Tropo conditions were notably above average on the Monday evening nets, but didn't appear to extend more than 100 miles or so; enhancement may have been due to the storm front moving into our area at the time. Look for more good tropo in the near future!

Remember to get on for the June QSO party during the weekend of June 9th and 10th! W3CCX will be active from FN01 with BIG signals on all bands - we expect to work all of the Pack Rats that can't make it out to the site. Good luck in the contest!

JUNE VHF CONTEST ACTION

- YOU CAN PLAY A BIG PART IN THE SUCCESS OF W3CCX by taking time out on June 9 + 10 to work the group on as many bands as you have. When you locate W3CCX on a band, be certain to obtain information concerning where they're operating on the other bands you have. The 'CCX shacks are wired with intercom phones and they can inform each operating position to listen for you. If we could get those 49 stations which operated in the January contest on the air, it would be a big boost to the Pack Rat score! Please take the time!!
- Starting June 6, 1990, through June 12th WA4VCC, K4MOC, WA4UNZ, and AA4SC and their XYL's will be operating from Treasure Cay on the Great Abaco Island in the Bahamas, about 175 miles east of Palm Beach, Florida, Grid FL16. They will operate 6, 2, and 432. Look for WA4VCC/C6 or possibly a special C6 callsign.
- K3LNZ/8 will operate portable from FM09 on 50 - 1296 MHz. They always have good signals into this area.
- N2WK and crew will operate from FN12 at Gannett Hill, WNY. They will be equipped with 50 - 3456 MHz as well as 10 GHz.
- K1TR/3 will be on from FN20, operating on Blue Mountain in Palmerton, Pa. This multiop group will activate the bands 50 - 3456 MHz and recently installed permanent tower bases on the property. Looks like they've secured a long-term lease!

SWAP SHOP

FOR SALE: 902-905 MHz transverter. Built by W0FPW as illustrated in the 1988 Central States proceedings. 2-meter IF. 7 watts output, GaAs FET front-end, includes self-contained T/R relay. \$330.

CONTACT: Bart Jahnke, KB9NM
(203) 666-1541
(ARRL HQRTS)

FOR SALE: Hallicrafters SX-42 \$50. Heath gear: HW-101 \$75, SB-301 \$100, HW-9 \$50, HD-1420 VLF \$25, HD-1424 \$15, SO-107A scope \$45. Commodore 64 w/ton of extras \$60. Lafayette HA-350 \$35. These items from the K3GAS estate.

CONTACT: Dave Zimmerman, W3ZD
(215) 675-4539

FOR SALE: Two Cushcraft 617-6B 6-meter Boomer yagis, good condx, \$150 each or both for \$275. HP signal generator model 606A, 50 KHz to 65 MHz, meters for modulation and RF out calibrated in dBm with 10 dB step attenuator. \$75.

CONTACT: Gary Hitchner, WA2OMY
(215) 539-6409

FOR SALE: 4', 6', and 15' dishes - were used on 8 GHz.

WANTED: Elliptical waveguide fittings for Andrew 84147 EW90 Heliac.

CONTACT: Warren Whelan, WB2ONA
(201) 257-3871 after 0001z

FLEA MARKET AND YARD SALE NOTICE

Saturday, June 30 at 9AM is scheduled for a yard sale and clean-up of the shack of Doc Outler, K3GAS, a silent key and much beloved member of the Pack Rats. Volunteers are requested to help move materials from the shack and participate in the sale of a huge quantity of hand tools, parts, books, and misc. property. There will be bargains and something for everyone. Please lend a hand. Address: 7815 New Second St., Elkins Park, Pa. Tell your friends.

COMMERCIAL ADS

LOOP YAGIS: 902 MHz 33 element \$89 kit, \$109 assembled and tested. 1296 MHz 45 element \$89 kit, \$109 assembled and tested. 1296 MHz 55 element "Super Looper" \$99 kit, \$124 assembled and tested. 2304 MHz 45 element \$75 kit, \$89 assembled and tested. Also available: element and hardware kits for above. 2 and 4-way power dividers. Discount on complete arrays. Solid state linear power amps, 13 VDC: 1296 - 8W in 35W out \$315, 1W in 20W out \$265, 4W in 70W out \$695. GaAs FET preamps: 902 MHz .8dB NF \$90, 1296 MHz .8dB \$90, 2304 MHz 1 dB max NF \$140. SHF SYSTEMS no-tune transverter kits, w/144 MHz IF now available for 903 through 3456 MHz. Write or call for complete catalog. DOWN EAST MICROWAVE, Bill Olson, W3HQT, Box 2301 RR-1, Troy, Maine 04907. For information and orders telephone (207) 948-3741.

JOBS AVAILABLE/HELP WANTED: Engineers, Technicians and Technical Support. Several openings in the following areas: UHF Circuit Design, Digital Signal Processing, Data Communications Systems (like packet radio), and Change Control. If you would like to put your ham skills to work for you full time in a professional atmosphere, call Woody Peitzer, AK2F, at HEPCO, Inc., (201) 992-8660 between 7:30 AM and 5:30 PM Monday through Friday.

ALABAMA HAM KILLED IN TOWER FALL

We regret to have another tragedy involving a ham tower accident to report. This editor is not at all interested in collecting and printing sensational news reports. However, as we get into the nice weather of the summer season, many of us take to the sky to repair, install, and erect our VHF/UHF antenna systems. Please be careful when working and use proper, safe climbing equipment and techniques. This story comes via Dave Black, KB4KCH, and WESTLINK Report:

A March 31 tower accident in Enterprise, Alabama, has claimed the life of Jack Burns, KA5HNV. Burns was one of two amateurs at the top of a 150 foot tower changing out the club's 2-meter repeater antenna when his safety harness apparently gave way. Club member Jim Ketchum, KA4AFI, was standing about 30 feet away and was witness to the tragedy. "They had already replaced the antenna... and they were just hooking up the pigtail for the coax... apparently Jack's safety strap broke. The other amateur that was on the tower with him said that he was working and looked up and Jack was gone. And, he looked down and could see him falling. It looked obvious that he was dead when he impacted the ground. At that time I went over and found a short piece of the safety belt and you could see where the leather had dry-rotted and cracked. Apparently, this is what caused him to fall."

Ketchum says that the radio club has been badly shaken by Jack Burns' death, and has a plea to other hams: "Don't climb with a leather belt. Their use has been out for several years now. OSHA standards require nylon web type belts and straps." He adds that a lot of hams appear to be relying on the older telephone pole climbing belts, noting, "they are death traps." Jack Burns worked as a pilot instructor. Radio and sailing were his favorite hobbies. He is survived by his wife, a son, and two brothers.

903 & 1296 NO-TUNE XVRTER HINT

Just to supply a little background information, both KK7B type no-tune xvrtrs have been built with .050" x .080" chip caps instead of the normal ceramic disk capacitors as what is called out. I used three different values of bypass capacitors (.001uf and .luf) instead of the recommended two. Additionally, the component placement or location on both transverters is as per the preliminary instruction sheet supplied by Down East Microwave.

During the testing stage of my 902 and 1296 MHz KK7B transverters, I needed to replace a MMIC amp and its associated bias resistor on my 902 unit. By a stroke of luck, I installed the three bypass capacitors (.001uf, .01uf, and .luf) directly inline with the bias resistor to ground. I rechecked the output and found that the gain had improved slightly above what I should have been getting. Thinking that I may have found a solution to some of the gain problems that plagued me, I unsoldered the remaining bypass capacitors and repositioned them directly inline with their respective bias resistors. Performing the power output check again showed an increase of approximately 4 dB above what I previously obtained. If you are having insufficient or low gain from your transverter, it might help to re-position those bypass capacitors.

CENTRAL STATES VHF CONFERENCE 1990

The 24th Annual Central States VHF Society Conference will be held in Wichita, Ks at the Marriott Hotel, July 26 - 29, 1990. The hotel is located near the intersection of I-35 and Highway 54 on the east side of Wichita. John Lock, KF0M, is organizing the technical sessions to be held on Friday and Saturday. Interested speakers should contact John at (316) 651-0333. For additional info on the conference, contact Lonnie Roberts, WD0L at (316) 584-6465.

EQUIPMENT REVIEW OF THE YAESU 736R

By Bill Murphy, WØRSJ

In a new series of articles, I shall attempt to review equipment used in my shack. I will be using a different approach in which the equipment will be measured by contest performance.

The Yaesu FT-736R is a multimode, multiband VHF and UHF fixed station amateur transceiver. The unit incorporates up to four bands at once covering from 50 - 1296 MHz with the exception of the 902 MHz band. The standard model provides 25 watts RF power output on 2-meters and 70cm. Additional modules can be installed to cover 50, 220, and 1296, however the output is only 10 watts on 50 and 1296. The 736R is a multimode transceiver and operates USB, LSB, CW, and FM. For CW work, narrow filters and self-contained keyer options can be installed. The list of features runs on and on and is beyond the scope of this article.

From an operational standpoint, I like to find someone else who has purchased a piece of equipment and get their opinion before I spend the big bucks. Very often, a positive response is heard but when the unit is placed under contest conditions, it fails to perform up to expectations. The reasons why any unit may disappoint a new owner most likely has to do with the conditions under which the unit was tested. For example, the dynamic range of the receiver may hold up well if you operate in the Midwest but may fold up in the "kilowatt alley" of the East Coast. Attempting to relate equipment reviews in QST and other magazines still fails to definitively determine whether a unit will perform well in your particular circumstances.

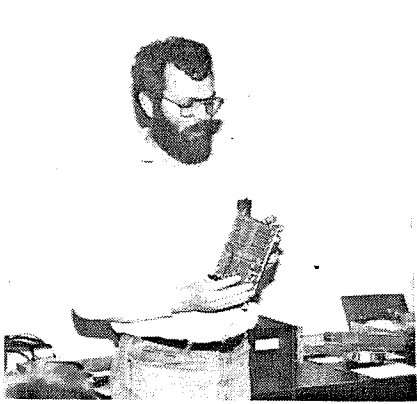
The dynamic range of my 736R appears to exceed any other units which I have used and is far superior to its predecessor, the 726R. On occasion, a station pegging the meter may cause some overload if the noise blanker is activated. The blanker is adequate but not superior in its ability to handle all types of noise. In my immediate neighborhood, I have a commercial FM station running 20 KW and a 500 watt paging transmitter on 152 MHz. As a result, I use filters ahead of the preamplifiers on 6 and 2-meters. The radio station is only 1000 feet away from my shack and caused mixing problems without the use of my filters.

The 736R is a dream to operate in the contest, particularly in quickly changing bands. The microprocessor stores the last frequency operated on any band so you can quickly QSY and then return to your frequency. An accessory jack on the rear panel provides a switched ground during transmit and is split out by band. A built-in sequencer can provide 12VDC to external preamplifiers via the feedlines; I have used this method to power my 1296 mast mounted preamp and key an external 150 watt amplifier.

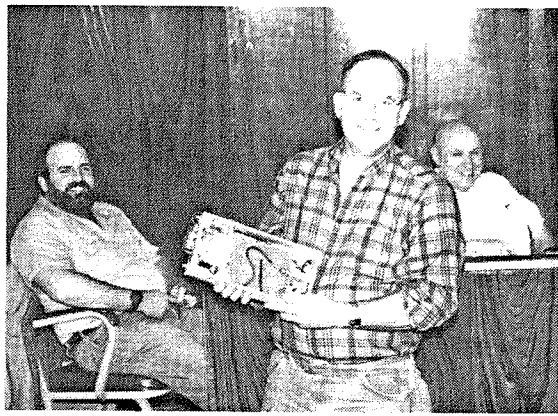
The overall performance of the unit is excellent, however it has had a failure. I had the main tuning knob seize up. The main tuning shaft drives a chopper which varies the frequency through the band. I was able to fix this myself as Yaesu responded quickly with the parts order. However, having installed several minor upgrades, I recommend that modifications and repairs be done by the west coast factory. The components within the rig are so small, they're difficult to see, let alone solder to them.

PLEASE REMEMBER !!

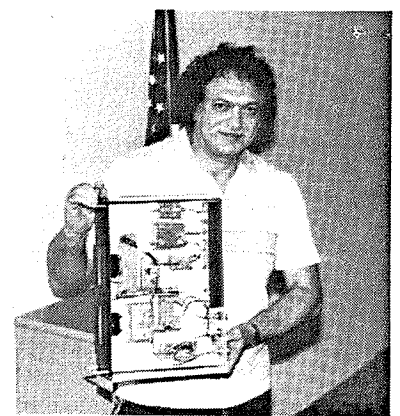
YOU CAN BE A PART OF THE W3CCX/FN01 EXPEDITION SUCCESS BY COMING TO THE SITE, OPERATING AT A HOME STATION VACATED BY ONE OF THE PARTICIPANTS, OR BY WORKING W3CCX ON ALL BANDS THAT YOU ARE EQUIPPED FOR. THE EXPEDITION LOCATION IS WITHIN RANGE OF EVEN THE MODEST STATIONS. AIM YOUR ANTENNAS BETWEEN 300 AND 315 DEGREES FROM THE PHILADELPHIA/SOUTH JERSEY AREA AND FIND A W3CCX OPERATOR. YOUR BRIEF ENDEAVOR WILL BE MOST APPRECIATED BY THE GUYS WHO WILL SWEAT TO DO WELL FOR OUR CLUB. AND YOU KNOW, YOU MIGHT EVEN WORK A RARE ONE IN THE PROCESS!!



WB3DNI



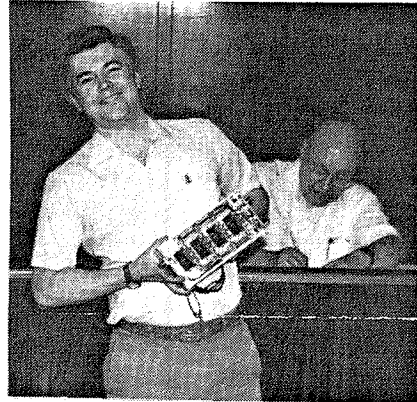
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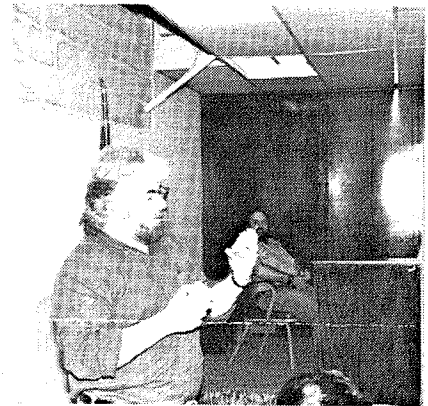
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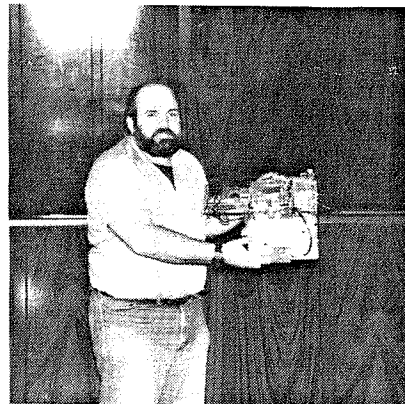
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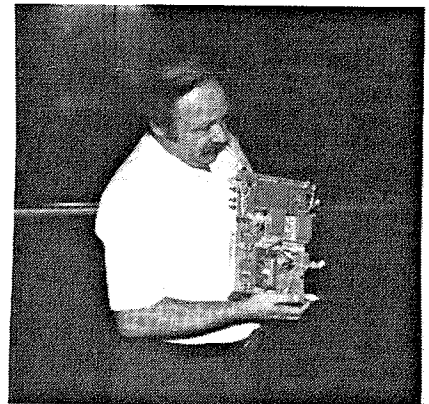
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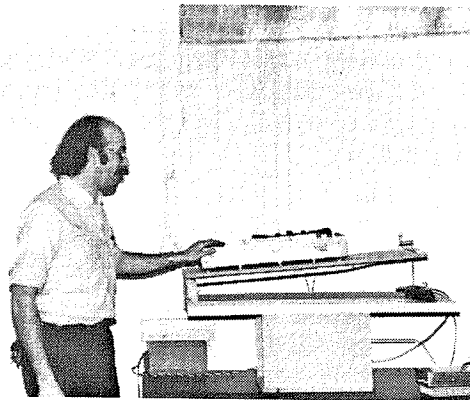
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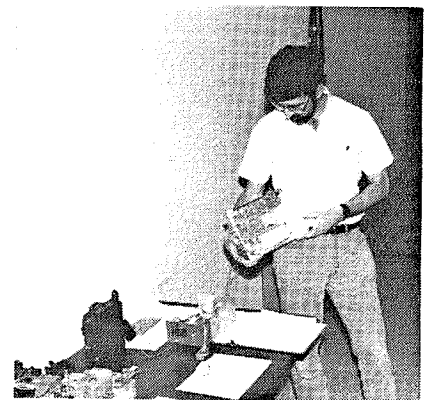
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NPG

TEN-TEC

TRW

TAB BOOKS

Regency

Cushcraft

AMPHENOL

TELEX

SPRAGUE

Xcelite

Wilson Electronics Corp.

BIRD

MISCO

Vector



DATA

HUSTLER

phelps
dodge
Communications

MFJ

AMECO

BOMAR

SWAN

COVER DRAFT



AMP
SPECIAL
INDUSTRIES

BY

ICIR

