## The Keystone VHF Club Holiday Party
Wrap Up

I hope that everyone enjoyed the Holiday party this year. I think that the Victory Athletic Club turned out to be a good choice. It offered plenty of room for everyone to walk around and socialize. The drinks (both High-Test and Soft) were priced at a very reasonable rate, and the dinner was tasty! Joe Imgrund, KB3TCM did the Lion's share of the organizing this year.

Thanks Joe!
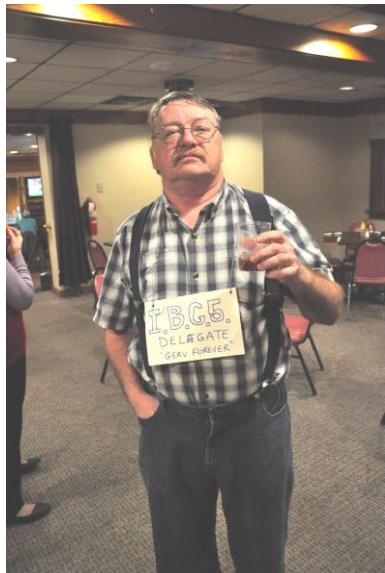
The evening began with Craig Dowling, WA1HEW, President of the infamous *"I've Been Getting S5 signal reports"* (**IBG5**) association wandering around trying to locate his antenna pattern! With the help of a few folded dipole users, and a couple of guys who built verticals, he soon found it heading back into his shack along the sheath of his coax.

"Something's certainly rotten in Denmark" exclaimed fellow IBG5 *Master Member* and G5RV enthusiast Tony McMonagle ! *"Getting an S5 signal report with that antenna seems mighty suspicious to me." I thought that I was getting an S5 from a guy in North York once but found I was looking at the wrong meter, it was my SWR that was a 5 !*

Hey! Only kidding! Both Craig and Tony are making contacts all over the world with their G5RV's! So far Craig is in first place in this year's 40 meter competition. But back to more pictures of the Holiday Party!

On the left, Our President Mike Stackpoole, N3VQH and his XYL Jen, KB3JSJ chat with Tony McMonagle, KC3EED and his XYL Chris.

The January ARRL VHF Contest
By Dick Goodman, WA3USG

It took place on Saturday, January 30th and from what I understand, these guys were Madmen … especially the guy in black in the middle … yes that's you Jim! It was a full day of Ham radio. First the Hamfest in Harrisburg and then the VHF contest until 11:30 PM! Everyone looked like they were having one hell of a good time. This reminded me of why I joined this club back in 1983. We used to fill the place up during the VHF contests & you guys are doing it again.

NEXT MEETING

**Thursday, March 3rd at the York County EOC
Located on Davies Drive**
Slim Jim Building /Soldering Session, Wednesday Feb 10

Schedule of Keystone VHF Club Sponsored VE Testing for 2016

Laurel VE Group Testing sponsored by the Keystone VHF Club are held the second Saturday of the odd months. All tests are at 10 AM, pre-registration is appreciated except at the Hamfest. Contact, Ralph Brandt at ralph.brandt@comcast.net or phone 717-792-1017.

Locations are York EMA Office at 120 Davies Road, York, or Keystone VHF Club on Deininger Road, York, near the Rocky Ridge Park

Testing dates: Mar 12   May 14   Jul 9   Sep 10   Nov 12

Keystone VHF Club sponsored testing by the Laurel V.E. Group. These sessions are held in the Training Room at the York County EOC, 120 Davies Rd., York, PA. Testing starts at 10:00 AM. Preregistration is appreciated. *Contact Ralph Brandt at: Ralph.brandt@comcast.net or phone 717-792-1017 to register.*

VE exams will be sponsored by Southern Pennsylvania Communications Group (SPCG)**.** These sessions are held held at the Shrewsbury Borough Building, 35 Railroad Ave., Shrewsbury, PA. Testing starts at 9:30 AM. *The point of contact for these sessions is Nate, WN3I at wn3i@comcast.net.*

Feb 13   Apr 9   Jun 11   Aug 13   Oct 8   Dec 10

Local area nets:

Capitol Area Traffic Net starts **Monday at 8 PM** on the South Mountain Radio Amateurs (SMRA) repeater on 146.46 (67.0 tone), 1 MHz offset.

The Combined Club ARES/RACES Net meets **Monday at 8:30 PM** on the Keystone 146.97 Repeater (Tone: 123 Hz).

South Mountain Radio Amateurs (SMRA) Net on **Monday at 9 PM** on the 145.43 (Tone: 67 Hz) repeater located in Mt. Holly Springs. *After the normal FM net, a group moves off to 144.210 MHz operates SSB*

The Keystone VHF Club Digital Net on **Tuesday at 8 PM** on the York 146.97 Repeater.

The Keystone VJF Club ELMER Net on **Tuesday at 9 PM** on the York 146.97 Repeater right after the Digital net

A local FM Simplex Net runs **Thursday at 8:30 PM** on 146.55 MHz.

South Central PA 10 Meter Net **Friday at 8 PM** 28.495 MHz USB

** Listed below are some local 10 meter nets **

Ham Shack Talk Net - Monday at 9 PM: 28.335 MHZ.

Delaware Lehigh Valley ARC Net - Sunday 4:00 PM: 28.430 MHZ

Do Drop In net - Sunday 8:30 PM: 28.450 MHZ

Penn- Mar Club net - Friday. 8:30 PM: 28.495 MHZ.

10 Meter Ragchew Net - Every evening starting 7:30PM: 28.600 Mhz

Trustee's Report

The club is having the most use of any Winter that we remember. Please be careful in the parking lot and walking to the club house. The parking lot generally gets a layer of ice beneath the snow. Be especially careful if you use the outhouse! When exiting in conditions like these it's easy to slip & come sliding out totally out of control. A couple of folks have done it this year. Just ask the guy on the far left!!

Scheduled Club P.S. Events for 2016

* **December 24 (still 2015) - Glen Rock Carolers**
  POC: Stan Walters, AB3EM   abacuspc@comcast.net
* **April 10, 2016 - Buckridge Burn Hike Pine Grove ***SJ**
  POC: Dick Goodman, WA3USG   wa3usg@verizon.net
* **Date TBA, 2016 - Peach Bottom Nuclear Power Drill**
  POC: Sandy Goodman, N3ECF   slgoodman1@verizon.net
* **April 17, 2016 - York MS Walk**
  POC: Sandy Goodman, N3ECF   slgoodman1@verizon.net
* **April 24 2016 - Ironmasters Challenge Hike   *** SJ**
  POC: Dick Goodman, WA3USG   wa3usg@verizon.net
* **May 1, 2016 - March of Dimes March for Babies**
  POC: Jack Dellinger, KC3JD   jkdelli@aol.com
* **Date TBA - The York Marathon   *** SJ**
  POC: Jack Dellinger, KC3JD   jdelli@aol.com
* **Aug 13, 2016 - Red Lion Street Fair**
  POC: Jack Dellinger, KC3JD   jdelli@aol.com
* **Aug 6-7, 2016 - MS Bike Tour Gettysburg   *** SJ**
  POC: Sandy Goodman, N3ECF   slgoodman1@verizon.net
* **Sept 3, 2016 - Kings Gap Time Trials**
  POC: (Micah Neff, KB3TGY   tortmentor@aol.com
* **Sept 10, 2016 - KTA Superhike   *** SJ**
  POC: Ken Wiggens, N2DYK   n2dyk1940@yahoo.com
* **Sept 18, 2016 - Three Creek Century Bike Tour   *** SJ**
  POC: Dick Goodman, WA3USG   wa3usg@verizon.net
* **Oct 30, 2016 - Michaux Team Challenge   *** SJ**
  POC: Dan McGlothin   kb3mun@mcglothin.us)
* **Dec 24-25, 2016 - Glen Rock Carolers**
  POC: Stan Walters, AB3EM   abacuspc@comcast.net

*** SJ (Your Slim Jim will work here)

I believe that the final tally was 187 contacts with 25 Grid squares resulting in a score of 5,694 points. The best part about all of this was the participation by so many of our new Ham's … you guys rocked!!

What else is going on? We are getting an average of over 30 people checking into the weekly Club & ARES/RACES Net. Our weekly digital net has been getting over 10 check in's and our ELMER net is getting about 15 - 20 check in's with lot's of great questions. Dan Melato, KB3JSV is planning a backpacking trip to the Annapolis Rocks area in Maryland. From there we will be making contacts back to club members using different modes (voice, digital, SSTV, etc) but the lion's share of this will be done on good old 2 meter FM. There will be several categories of prizes for working us … stand by for adventure! We're trying to fit in more Tech sessions and even if you don't want to build anything, come on up to the club & talk Ham radio! Finally, everyone has been **active**! I think that we probably have the most busy repeater in the state of Pennsylvania. Let's keep it that way.

A Computer to radio Interface we can build at a Club Tech Session

By Dick Goodman, WA3USG

I think that many of our members would like to get on the digital modes. The only requirements are a computer and a radio … and here's the catch … some way to interconnect them. There is a device necessary to do this, it is called an "Interface" When this is mentioned many folks cringe at having to spend more $$$. I also think a lot of folks don't realize how simple connecting a computer to a radio can be.

There are three (3) things that have to be transferred between your computer and the radio for digital communication.

1. **Audio tones from the computer to the radio** - When you type or send a file, each character is converted into a stream of audio tones. The communications program that you are using and the soundcard in your computer generate these tones. They are routed to your radio by a simple cable. The cable may go to your microphone connector or some radios have a special port on the back for this. On the receiving end, these tones are routed from the other persons receiver, to the computer where they are converted back to characters on their screen.

2. **A signal to automatically energize your transmitter** - When you start sending these tones to your radio, you must key the transmitter for them to actually be sent on the air. There are a variety of ways to do this but I think that the simplest way is to build a circuit that will close a switch (relay) when ever the computer soundcard generates a tone. This relay switch will then key your transmitter and keep it on line until the computer stops sending tones. This switch may be connected to the pin on your microphone connector that your microphone uses when you press the "Push to Talk" button. Some radios have a special connector on the back for this.

3. **Received audio tones from the radio to the computer** - We talked a little about this at the end of item 1. When you receive tones from someone sending you data, the tones are routed to you computers soundcard with a simple cable. The cable runs from the audio output of your radios receiver to your computer. This can be from the external speaker jack or some radios have a special connector on the back.for this. ** *Note: get a radio with this special connector!*

So what do we really need to connect our computer to our radio? We need a cable to route the tones we want transmitted from our computer to our radio. We need a circuit to generate a contact closure when the soundcard generates these tones and a cable to route this contact closure to our radios transmitter keying pin. Finally, we need a cable to route the tones being received back to your soundcards audio input to be displayed on your computer. If we hook all of this stuff up, the communications software will do the rest!
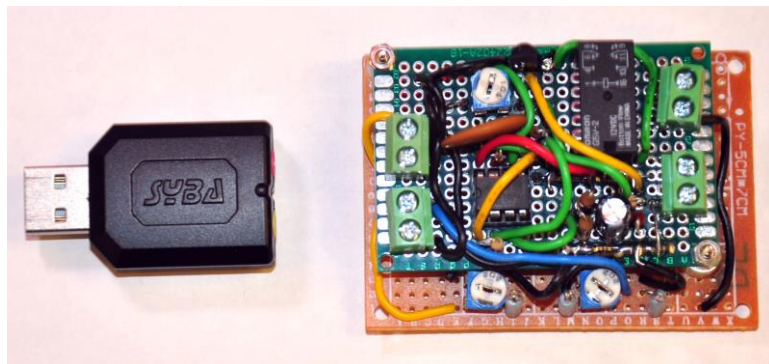
The two items above will do all of this for you. The item on the left is a $5 USB soundcard. We will use this instead of your internal soundcard. The circuit on the right is what will give you a contact closure whenever that soundcard generates any tones. It is about 2 X 3 inches in size and consists of about 20 components that will cost you about $15. You will need two cables to connect between the little external soundcard and the circuit board (Audio in & audio out). You will need three cables to connect between the circuit board and your radio (audio in, audio out, and a contact closure for transmitter keying).

A comparable commercial interface unit will cost you about $100. That is a considerable savings but the important factor is that after you build this, you will have a much better understanding of how the radio & computer communicate with each other than if you simply purchased a turnkey system.

I am also getting the impression that many of our new members want to heat up soldering pencils and start building things.

Audio Out from soundcard (TX tones)   TX keying threshhold Adjust   PTT contact closure

Audio In to soundcard (RX tones)   TX Audio output Level Adjust   RX Audio input Level Adjust   12 VDC Power
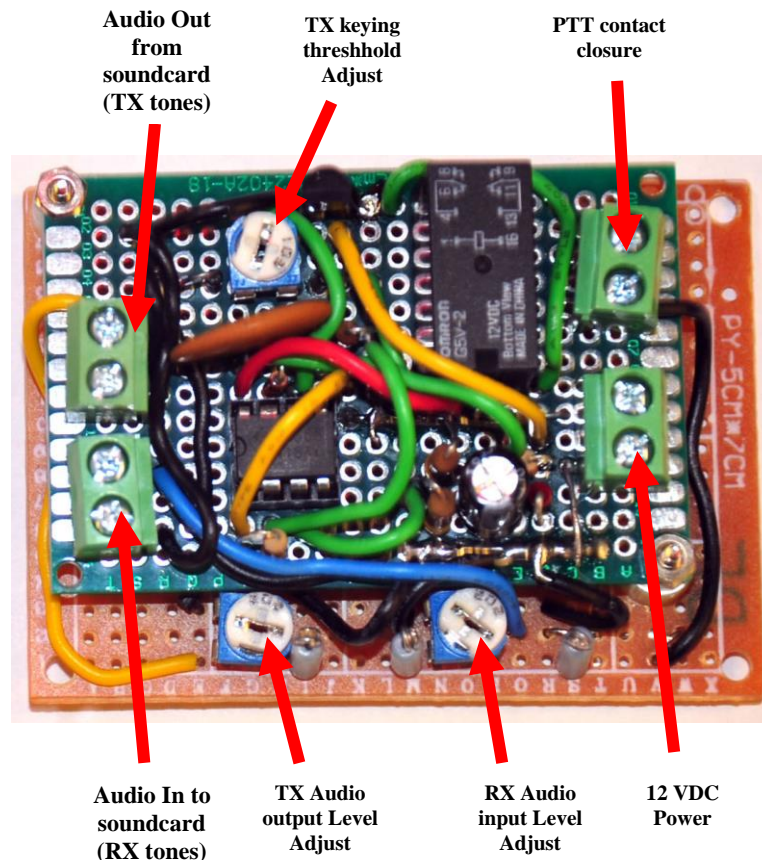
I think that it would be fun to build these as a group at a tech session. I could mount the four green terminal blocks, the IC socket, the relay, the relay keying transistor, and the 3 trim pots to the circuit board. I would have these ready at the beginning. You would cut, route and solder the interconnecting wiring, install the 8 resistors, 2 capacitors, and 2 diodes. You would also make up the cables that interconnect this unit to the little external soundcard and the radio. Naturally, if you want to mount all the parts yourself, that would be fine. Having the key components all already mounted & positioned would make the tech session go a little faster … it's your decision. If you look at the figure above, you will notice that the circuit is built on a smaller perf board which is mounted on a larger board. *Continued on page 5*
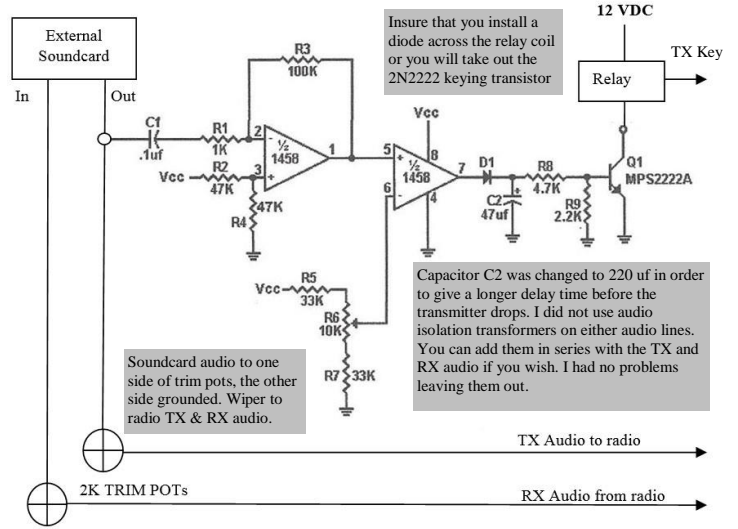
We won't take this approach. Everything may be built on to the larger board. This will make the height of the unit less and it will be easier to install in a smaller enclosure. I also accidently ordered too many of the larger boards (about 30) so I can provide these.

External Soundcard — In / Out

Insure that you install a diode across the relay coil or you will take out the 2N2222 keying transistor

12 VDC

Relay — TX Key

R3 100K
C1 .1uf
R1 1K
½ 1458
Vcc
R2 47K
R4 47K
Vcc
½ 1458
D1
R8 4.7K
Q1 MPS2222A
C2 47uf
R9 2.2K

Capacitor C2 was changed to 220 uf in order to give a longer delay time before the transmitter drops. I did not use audio isolation transformers on either audio lines. You can add them in series with the TX and RX audio if you wish. I had no problems leaving them out.

R5 33K
Vcc
R6 10K
R7 33K

Soundcard audio to one side of trim pots, the other side grounded. Wiper to radio TX & RX audio.

TX Audio to radio

RX Audio from radio

2K TRIM POTs

If we get adequate participation, I have a proposal on how we can get the parts at a very good price. We need:

** 3 Trim Pots (1,10K, 2, 2K)
** 4, 2 input terminal blocks
** 1, 4 pin in-line IC socket
** 1 LM358 OP Amp IC
** 1 2N2222 Transistor
** 1 12 volt relay
** 8 resistors
** 2 Capacitors
** 2 Diodes
** 1 Perf board (I have plenty of these)
** 1 External USB soundcard

All of these components may be ordered cheaply through Amazon. You can purchase sets of components if each person ordered one set, there would be enough for all of us plus a lot left over for the person who ordered them to have for future projects. For example, you can get 20 LM358 Op Amps for $7. You can get 30 of the terminal blocks for $6. You can get a 280 piece Trim Pot set for $14. A 270 piece Electrolytic capacitor set will cost $14. A 600 piece resistor set will cost about $12. The 2N2222 transistors are about $5 for 60 of them. The little USB soundcards are available for $5. Depending again on participation, we will also have to decide on what kind of enclosure we are going to install these in.

We don't necessarily need to use Amazon but once we find out how many participants we would have, we would assign that person to get specific components. Each person would get their own soundcard and then would be responsible for a set of something. At the end, we would probably have a lot of things left over.

This is the first time that we've ever tried anything like this so if you have suggestions on other ways to procure components, please sing out! It seems to me however that getting together to do something like this could be fun.

What other projects would you like to see??

I just spoke with Tim Barefoot, W3TWB. We will be holding the second Soldering & Slim Jim building session on Wednesday, Feb 10th at the club. 7 - 9 PM

Keystone VHF Club
General Meeting Minutes of
January 7, 2016
By Sandy Goodman, N3ECF – Secretary

The General Club Meeting held at York County Emergency Management Center was called to order by Pres. Mike, N3VQH, at 19:04. There were 42 members present, 3 applicants for membership and 2 guests. Alex Smith (Smitty), KC1EWD, advised he passed the General License exam. Cam Baily, KT3A, introduced his son, Caleb, N3AUO. Visitor Bill Rosevear also introduced himself.

TECHNICAL HAPPENINGS:
Mike, N3VQH, showed his Google Cardboard, a 3D virtual reality viewer that can be used with a smart phone.

SECRETARY REPORT: Sandy, N3ECF. Joe, KB3TCM, moved to accept the December minutes as published, 2nd by Steve, WB3EFA. Motion carried.

TREASURER REPORT: Dan, KB3JSV, reported for December 2015: Income: $866.50; Expenses: $416.85 (from Checking) and $483.95 (from Trustees); Balances: Club CD $7,644.59; Checking Acct $3,690.85; Trustee Acct $325.03; Total $11,660.47.
Steve, WB3EFA, moved to accept the report; 2nd by Bob, WB3EAF. Motion carried.

COMMITTEE REPORTS:

TRUSTEE REPORT – We're in winter mode. Wood was brought into the clubhouse. The club is being used a lot.

TECHNICAL COMMITTEE REPORT - Rigs are all working. Computers are fine. Nothing is out of the ordinary.

EMCOMM/PUBLIC SERVICE NEWS – Sandy, N3ECF
Coming up for the spring we have an ARWG Drill on March 19, possibly support for the PEMA Weather drill on March 30, and the Peach Bottom Drill in April.
We've been asked to do demonstrations of our digital communications at the FEMA EMI class on February 24, and at the SCTF Communications Rally in Lancaster.
The Public Service Events list was emailed to all members. There may be 3 new events coming up: A Color Run in Jacobus on April 9, a Tie Dye walk/run on June 10, and the Double Creek Run/Bike event in Dover on June 18. Sandy checked to see if we would get enough volunteers for the Double Creek event in order to confirm our support to Wellspan. The KTA Hike date is now confirmed for September 10.

VE/ED REPORT -
This month's exam was cancelled.

CONTEST REPORT -
Jan 30-Jan 31 will be the VHF Contest. A group will be at the club to participate. Dick, WA3USG, and Tim, W3TWB, will provide food.
Everyone was reminded about the 40 meter contest with Red Lion's Hilltoppers.

NEWSLETTER/WEBSITE – Dick, WA3USG
The website is mostly up to date. The newsletter will be out in a day or two.

OLD BUSINESS:
The Elmer activity is going great. At Wednesday's session, 9 slim jim antennas were built and soldering lessons were provided. That will be repeated on January 23 for those who couldn't attend. That day will also include a trip to the Harrisburg HAMFEST.
Ralph, K3HQI, advised he has parts available for anyone interested in building a dummy load in a can. You will have to provide your own can and mineral oil.
Mike talked about the G5RV antenna.
Reminder that the Holiday Party is January 16. Sandy collected money

NEW BUSINESS:
First readings were held for: Patrick Hock, W3CNB, Alex (Smitty) Smith, KC1EWD, Gary Noblit, KC3AKU, Peg Hamm, KB3SCA, Rick Hamm, KB3SCB.
Jack, KC3JD, advised that the club has received a donation of a radio and antenna from Millard Martin (SK). We also have additional equipment that is being tested first, then will be offered for sale to club members. Jack will take bids on the equipment once everything is tested.
Eric, KB3CHN, has a set of a Bell and Howell basic electronic course books. They are available for loan. See the newsletter for details.
Tim, W3TWB, mentioned the SB220 Heathkit amplifier that was donated to the club from Millard's estate. The Technical Committee would like to send that to King Conversions to work on 6 meters. Brad, KO3T, moved to approve $600 convert the amplifier. Dick, WA3USG, seconded the motion. Motion carried.
Tim also mentioned that the back-up repeater is now ready to go. It's in a case for portable use at events. Tim recommended a Diamond Base Station antenna to go with it. Steve, WB3EFA, moved to approve $75 for that antenna, 2nd by Jack, KC3JD. Motion carried.
Tim advised that our portable generator is no longer working. The propane generator is good. Phil Smith, KC3FGE, has a portable generator that he can donate to the club.

GOOD OF THE CLUB –
Anne, KB3ZLJ, had certificates for those who attended the CPR training class.
Steve, WB3EFA, thanked Tim, W3TWB, for his excellent training in soldering.

50-50 - Tim, KC3TIM, won $50

Adjourned at 19:47

How many of you have a Astatic D-104 Microphone?

FROM KB3CNH
Eric John Smyder

Hopefully, you will all be able to hear me a little better with this modification. The pre-amp has been eliminated and is running an Electret element directly. I even used a spare set of contacts to cut off the mic voltage bias when the PTT button isn't depressed, so I don't have to unplug it when running digital modes. Long live the D-104 !

KEYSTONE VHF CLUB OF YORK, PA

W3HZU

Membership Application

Name: _____ Phone: _____ _____ - _____

Address: _____ Callsign: _____ Expires: _____

City: _____ State: _____ Zip: _____ Lic Class: _____

Occupation: _____ E-Mail: _____

Membership Desired

Are you a member of:

Full ⟶ Full Club Privileges
$25.00 annually & one time $5.00 Application fee

ARRL   Y-N

Family ⟶ Sponsoring members call: _____
Privileges same as Full membership
$6.25 annually & a one time $5.00 Application fee

ARES   Y-N

RACES   Y-N

Associate ⟶ Repeater Support
$20.00 annually & a one time $5.00 Application fee

OCWA   Y-N

Special Areas of Interest (circle all that apply)

AM   Antenna building   ATV   Contesting   CW   Digital (Packet, RTTY, PSK-31, etc)
DX   FM   HF   QRP   Satellites   SSB   SSTV   SWL   Tower climbing   LF   DSP
UHF/Microwaves   VHF   Astronomy   Photography   Other: _____

Application & Dues Mailing Address:

Make checks payable to: *Keystone VHF Club Inc*. Mail to: *PO Box 20143*
York, Pa. 17402-0140

FOR CLUB USE ONLY	
First Reading Date: _____	**Second Reading Date:** _____
Date voted IN-OUT: _____	**Date Dues Collected:** _____
Applicant Sponsored by: _____	