DEC GBARC FILE COPY

Feed Back

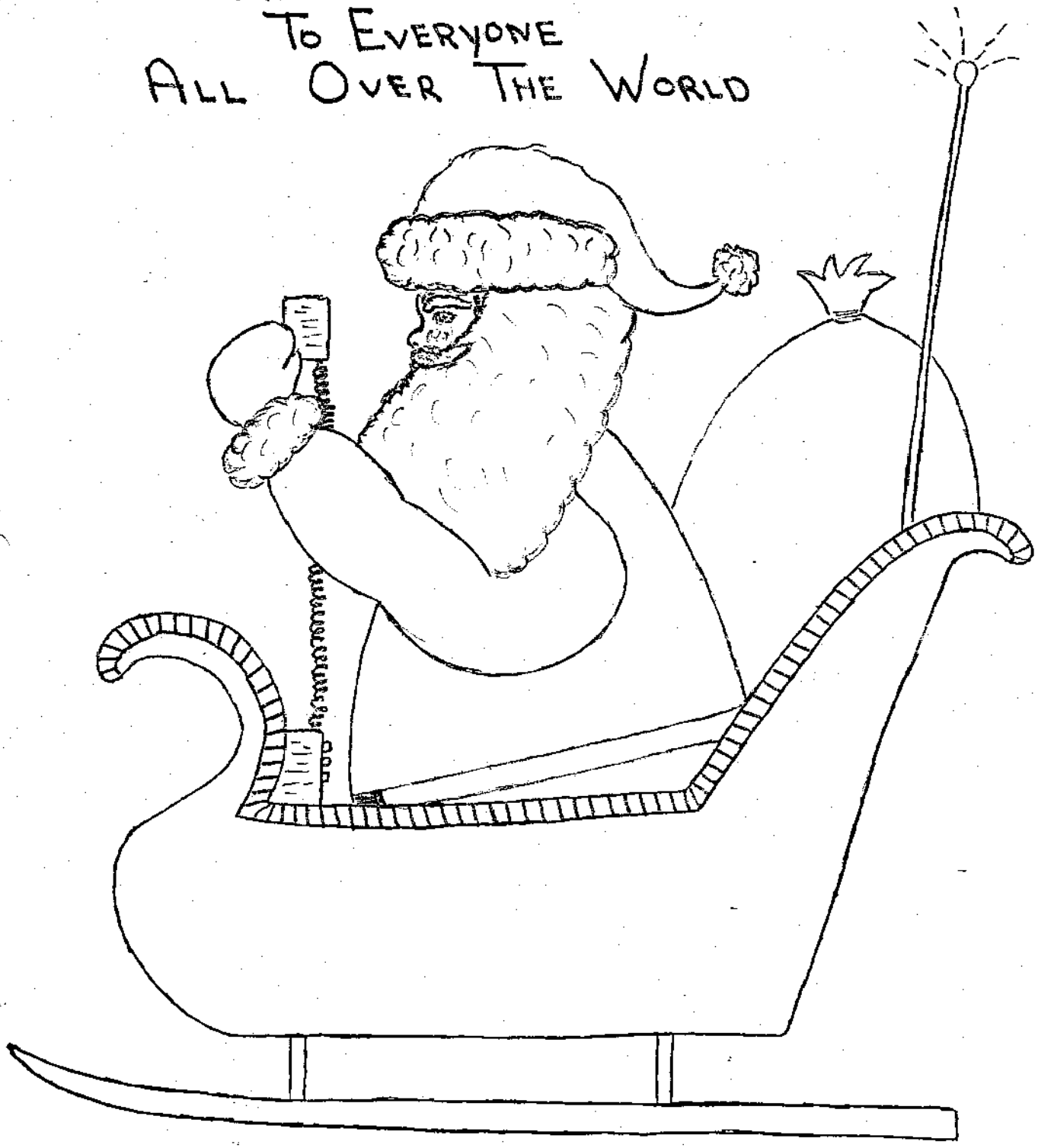
VE3OSR

146.34 - 146-94

President: Laverne Wyville VE3LPD
Vice. Pres: Moe Hurlbut VE3LPT
Sec.-Treas: Don Richards VE3IDS
Editor: Dick Shave VE3BIS
Technical Director: Don Rowe VE3LXZ

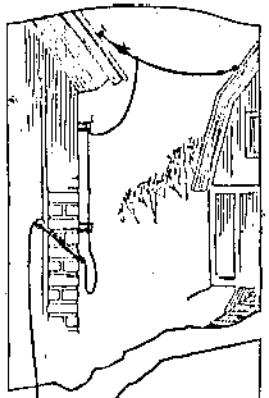
Send Feedback correspondence to- Dick Shave VE3BIS
Box 351,
SOUTHAMPTON, Ont. N0H 2L0

MERRY CHRISTMAS
and HAPPY NEW YEAR
FROM VE HO HO
TO EVERYONE
ALL OVER THE WORLD



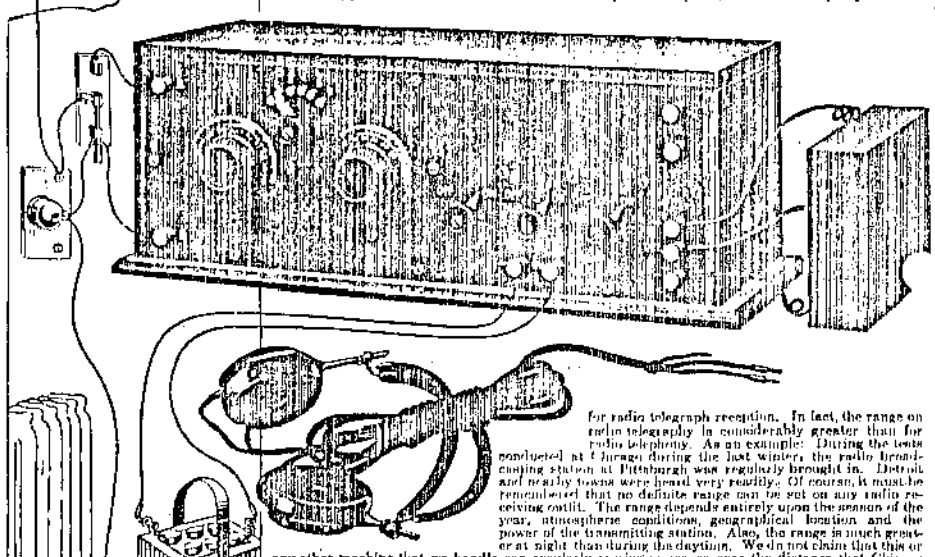
The Tuska Complete Radio Receiving Set

Including Regenerative Tuner, Detector and Two-Stage Amplifier
Easily Handled—Equal in Results to the Best Radio Receiver



If you are looking for the best outfit that you can get at a reasonable price, this is the outfit you will want. We have selected it as being the best value offered today, after a thorough investigation of all radio sets on the market. The receiving instrument has been very carefully designed by several of the leading radio engineers in the country, and the result is an instrument equal in results to the best radio receiver of its type on the market.

A special effort was made to keep the instrument as simple as possible and yet incorporate the best features of the more complicated sets. The result is an outfit that is easy to handle, yet makes use of the new wonderful radio developments, such as the Armstrong regenerative circuit and vacuum tube detectors and amplifiers. With this receiver, signals more than 100 times louder than those obtainable with any ordinary circuit and a single audion detector can be produced. This means that the instrument will pick up and reproduce distinctly messages from distant transmitting stations. It also means that you can use either a single or a series of telephone headsets; or, if you wish, you can connect to the instrument a loud speaker, so that an audience of any size can be entertained by the incoming radio program. While designed particularly for radiophone reception, the outfit is equally effective for radio telegraph reception. In fact, the range on radio telegraphy is considerably greater than for radio telephony. As an example: During the tests conducted at Chicago during the last winter, the radio broadcasting station at Pittsburgh was regularly brought in. Detroit and nearby towns were heard very readily. Of course, it must be remembered that no definite range can be set on any radio receiving outfit. The range depends entirely upon the season of the year, atmospheric conditions, geographical location and the power of the transmitting station. Also, the range is much greater at night than during the daytime. We do not claim that this or any other machine that we handle can regularly receive messages over the distance that Chicago is from Pittsburgh. In fact, we know that such a condition is not possible, and we merely cite the instance to show what may be done.



This outfit is especially intended for home entertainment or for use in clubs and halls, and the separate parts were selected with this in mind. Wavelengths from 180 to 600 meters can be tuned in, which means that broadcasting, amateur and commercial ship and land stations can be heard.

Technical Description and Specifications: Receiving instrument consists of a single tuning circuit made up of a variable condenser in series with an antenna inductance with six taps controlled by a switch lever. Regeneration is obtained by a tickler coil in the detector plate circuit. Three one-piece knobs and dials are mounted on both the condenser and tickler coil shafts. The perfectly engraved scales make it possible to set condenser and tickler very accurately. Plainly marked binding posts for all connections. Molded tube sockets. Highly efficient amplifying transformers. Filament circuits each controlled separately by finely graduated rheostats. Satin finish, machine engraved formica panel, fine quality mahogany finished cabinet, inside dimensions 8 by 6¾ by 17½ inches.

The Outfit Complete Includes:

The tuner and detector two-stage amplifier, as described above; one detector; two amplifier tubes; 48-volt "B" battery with taps for detector circuit tube; 6-volt 40-ampere hour radio storage battery; high grade 2000-ohm headset; complete antenna equipment, consisting of 150 feet of bare copper aerial wire, 25 feet insulated wire for connecting to the ground, a single pole double-throw switch, a lightning arrester, 4 porcelain insulating knobs with screws, 2 aerial wire insulators, 2 screweyes, a porcelain wall tube and a ground clamp

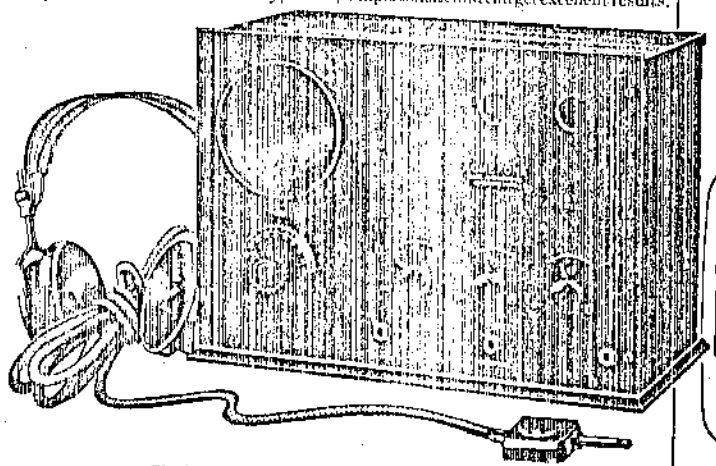
Shipping weight, 45 pounds.

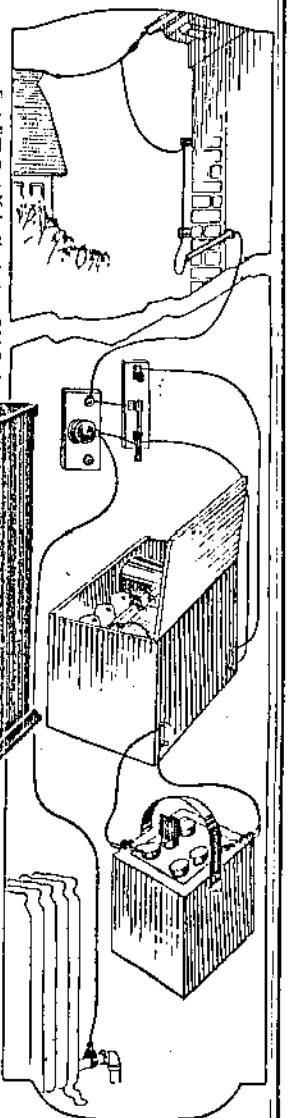
63 J 636—Complete Outfit **$115.00**

The equipment as listed above does not include a loud speaker. A complete line of loud speakers is listed on Page 20, and any of those shown will give very satisfactory results with this receiving outfit.

Acmefone Loud Speaking Radio Receiving Set

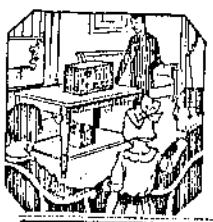
This receiver is fitted with a loud speaking device built right into the cabinet, which reproduces radio messages so that they can be distinctly heard all over any ordinary size room. This special feature makes this an excellent outfit to entertain small audiences in the home, club, church, hall, etc. Without any other attachments you can get music, lectures, news items, reports of sporting events, market reports, etc., from any transmitting station within the range of the instrument, which ordinarily is from 50 to 75 miles. However, we wish to make clear the fact that this instrument does not have as broad a range as some of the other types of instruments, such as the Westinghouse R. C. and combination R. A. and D. A. sets, or the Tuska instruments. While we consider that this instrument will work satisfactorily at a range of from 50 to 75 miles and even farther, it must be understood that no definite receiving range can be stated on any radio receiving set—as geographical location, atmospheric conditions, the season of the year, the time of day and the power of the transmitting station entirely determine the receiving range. However, if you live nearby a transmitting station you will find this a very complete and satisfactory instrument. The control is so simple that a child can get excellent results.





Technical Description and Specifications:

To operate the Acmefone the three small knobs which control the "tubes" are turned clockwise until the tubes light up. After that all adjusting is done by means of the dial located beneath the loud speaker opening. This dial is simply rotated back and forth until the message wanted is plainly heard. The volume of sound can be easily controlled so that the music, speech, etc., comes through the speaking horn loud enough to be distinctly heard by every one in the room.



The receiver has a single tuning circuit, with a variable condenser in series with an antenna inductance. This circuit is directly connected to the detector circuit, to which is added two stages of amplification. The best grade tube sockets are used, and the transformers are the Acme make, which are recognized as among the most efficient. The loud speaker is connected to the second stage of amplification and has for its working unit a Baldwin type C amplifying unit directly connected to a sounding horn, which is very carefully molded not to give clear, pure tones. Provision is made to mount the "B" battery inside of the cabinet, so that the external connections are those that lead to the aerial, ground and storage battery. Genuine mahogany cabinet, size, 8½ by 16 by 10½ inches. Satin finish, machine engraved formica panel. Jacks are provided in the detector, first and second amplifier circuits, so that any standard telephone headset can be plugged in either one of the three circuits; and when a receiver is in circuit the loud speaker is automatically disconnected.

The Complete Outfit Includes:

The Acmefone receiver as described; one detector tube; two amplifier tubes; two small size "B" batteries; one 6-volt 40-ampere hour "A" radio storage battery; one high grade 2000-ohm telephone headset with Universal plug, and 6 feet flexible connecting cord. Also a complete antenna equipment consisting of 150 feet of bare copper aerial wire, 25 feet insulated wire for connecting to the ground, a single pole double-throw switch, a lightning arrester, 4 porcelain insulating knobs with screws, 2 aerial wire insulators, 2 screweyes, a porcelain wall tube and a ground clamp.

Shipping weight, 45 pounds.

563 J 626—Complete outfit **$119.50**

PRESIDENTS REPORT

DEC 81

The November meeting was well attended and the film was very interesting as it was a carry on of the film presented last year on semiconductors. Teds new keyer was demonstrated and will take a lot of the work out of CW, however I have heard him say it can not spell very well.

One of our new members got more than he bargained for when he installed his new rotor, a spare washer stopped it in its tracks, glad to hear no damage was done, a breath of relief for JUO.

Three early Christmas presents have arrived for BFU, LPT, LPD and I hear that KPK is expecting a visit from Mr. Stork or should I say Mr. Drake.

Hope we have a good turn out for the Xmas party, see you there.

73's
Laverne

****

CHRISTMAS PARTY

Come on out to a super party at the OWEN SOUND YACHT CLUB.
Coffee, Crackers, Cheese and Munchies will be supplied.
Bring Disc's or Tapes if you want to add to the music.
DEC. 11, 1981. 8:00p.m. $12.00 per couple.

****

MINUTES OF NOV. 19/81 MEETING

At 8:13 P.M. President LPD, called the meeting to order. Two guest were present, Bill Kohlman VE3NEG and Tom Merner VE3NEM. An omission in the October meeting was determined. A show of hands was taken to see how much interest there would be for an auto-patch on OSR. The vote was not in favour of an auto-patch. Balance of minutes were moved an adopted as read by LPG, and seconded by FOT. VE3IDS offered for sale a camper trailer for field day use. VE3BFV made a motion not to proceed with a purchase of the trailer. VE3WF seconded the motion - carried. VE3JUO moved that the senior citizen and student rate be increased to $5.00. Secended by VE3FOT - carried. VE3LPK moved that the business meeting be adjourned at 9:02.

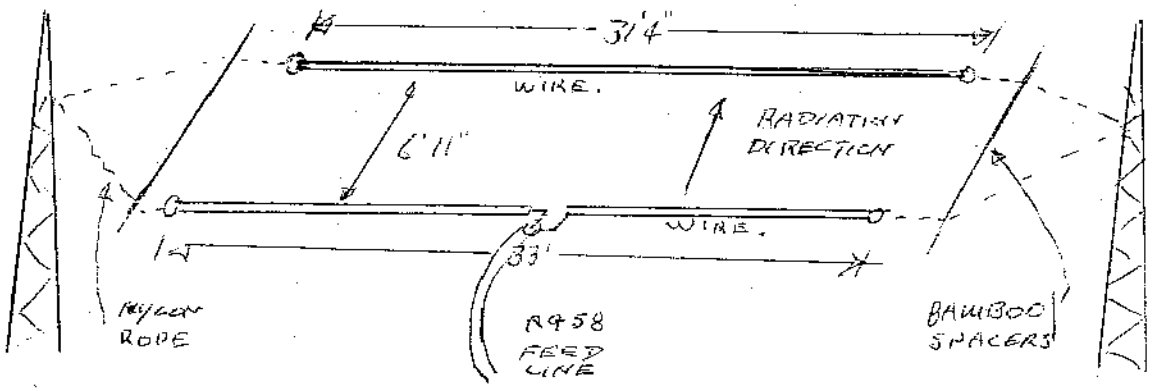
25 members were present. There was a video tape on transistor circuit design, followed by coffee and donuts.

73's
Don VE3IDS

TECHNICAL TOPICS

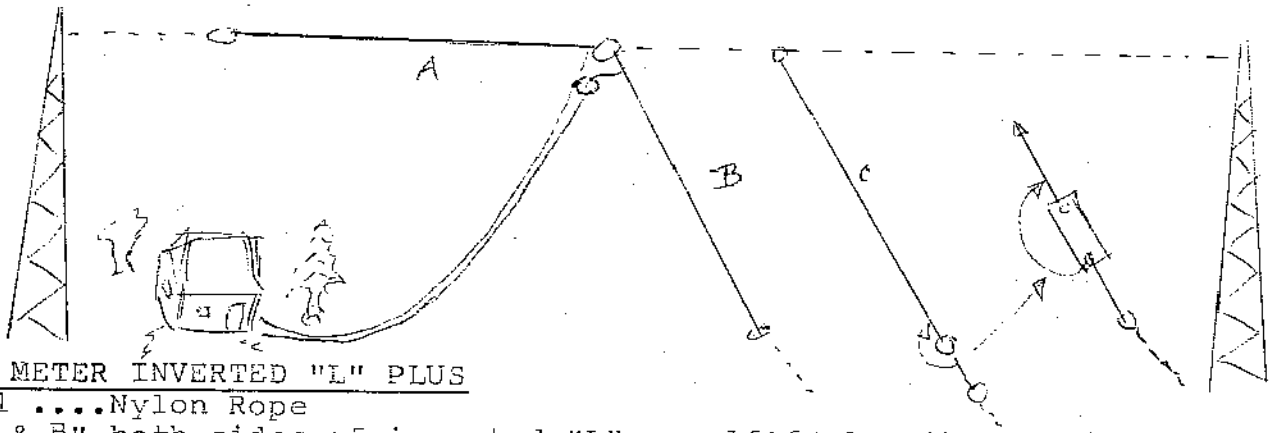
ANTENNAS

These Antennas were tried at the cottage this past summer and they worked very well. - The Beam was super. -



I used this arrangement - driven element and director. If you attach a nylon line to one end of a bamboo spreader, you can easily flip the whole issue over so it will fire in the opposite direction. Hi

Formula 1 used: Driven element 234/f in KCS for each side of center.
Reflector 492/f Director 450/f
½ wave spacing 98.4/f



20 METER INVERTED "L" PLUS

All ....Nylon Rope

"A & B" both sides of inverted "L" are 16'6" lengths of wire ---
--separated at center by an insulator where coax feed line is attached.

Reflector - Director "C" 1s 15'9" wire.

"D" is a piece of wire 19" long that can be attached to "C" by means of a battery clip thereby turning "C" into a reflector so you can fire your signal in the opposite direction.

Inverted L is just a dipole so length is 234/f. in kcs for each leg or each side of center insulator. Coax feed line usually multiples of ½ wave.

Reflector length is 492/f. in kcs.

Director 468 x .96/f. in kcs.

Spacing ¼ wave is 246/f.in kcs.

Have Fun
Ted VE[illegible]

STOP PRESS NEWS

VE3KOI PAUL IS NOW RESIDING IN OWEN SOUND HE WORKS AT WIARTON AIRPORT, RECENTLY TRANSFERED FROM LONDON - WELCOME TO GEORGIAN BAY AREA PAUL.

NOTICE

For the months of January, February and March, Andy and Marlene Kalnins will be looking after the Club News Letter in Dick Shave's Absents.

Send Articles to Box 1177, Port Elgin, Ont. NOH2C0 or deliver to 347 Waterloo St., Port Elgin.

Have a nice vacation Dick.

PROJECT CORNER

The next project I would like to propose is the "ACCU-KEYER" project in the Radio Amateurs Handbook. How many would be interested in placing a group order for parts and boards etc? I would like to try and organize something by the January meeting.

73's
Don VE3IDS

CLUB ACTIVITIES

It has been an interesting year so far and hope we can improve it somewhat in the new year. I would appreciate some volunteers for technical talks or human interest stories for our meetings, so if you have something please let me know.

Since there is no meeting this month we don't have to much to report but always open for any suggestions. 73's
Merry Christmas and Happy New Year to one and all.

Andy VE3LCZ, Marlene, Terry VE3LPK
Tammy and Shelley

ARTICLES FOR SALE

SX190 Modified to Cover 15 and 10 meters. $150.00
Total Coverage 80,40,20,15&10M.
Built in Speaker

Contact - VE3LPD

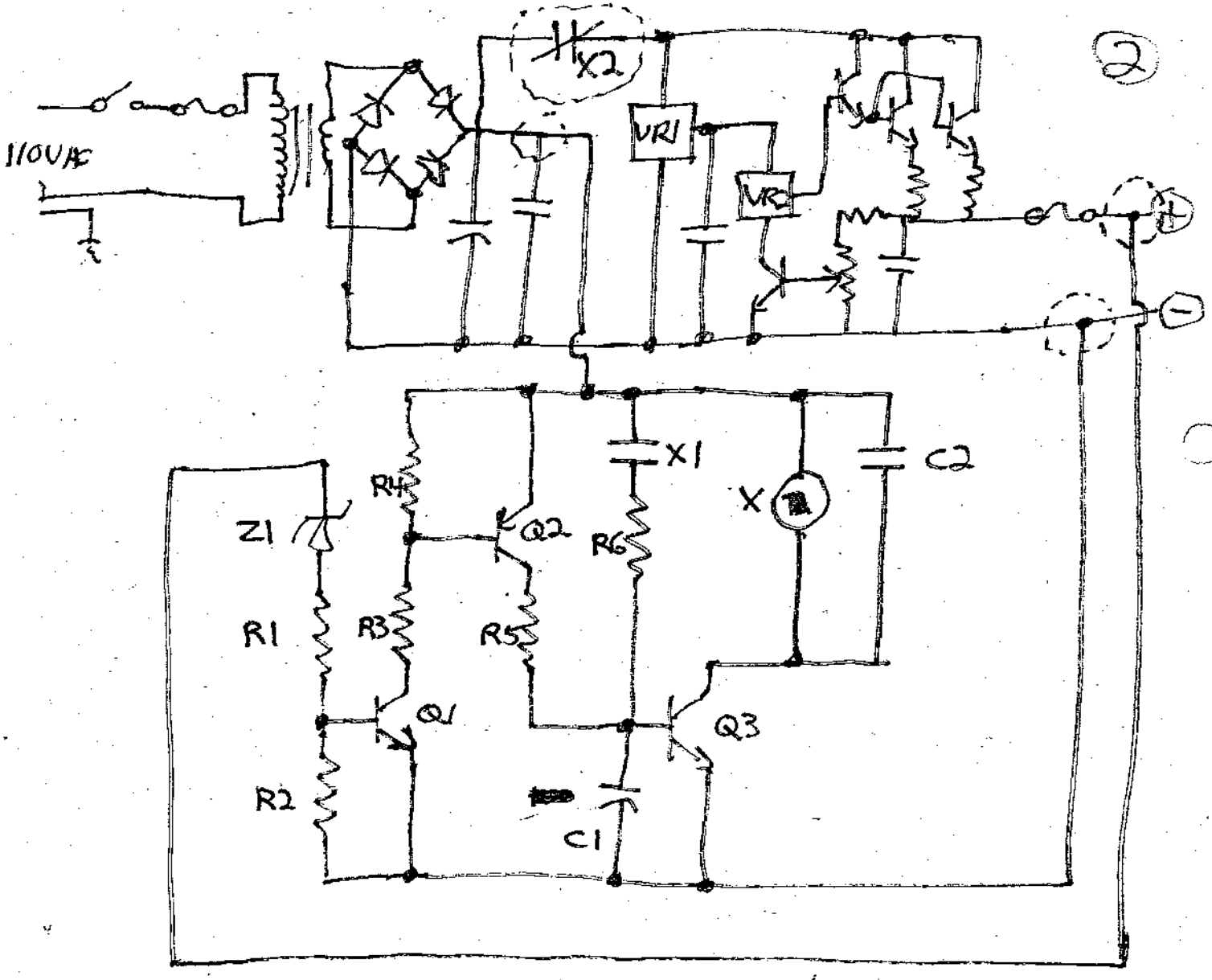
Tamper 1 HP 110&220Volt 60 HZ Motor, $ 80.00
7/8" Shaft, Ball Bearing

Contact - Newt VE3CY
Waterloo

****

TECH SECTION

Here is a circuit that you can add to a power supply that will give protection to your 12V equipment, should anything fail in your power supply. There are two likely conditions that will appear if a power supply fails: no voltage or high voltage (25 - 40V). If there is no voltage, there will be no damage to the 12V equipment. If there is a high voltage condition, there can be some anxious moments (VE3MAI can attest to this fact. Hi) The following circuit will immediately shut off the output of the power supply if the voltage tries to exceed 18V DC. It will stay shut off untill the fault is corrected.



Z1 - 12V Zener ½ or 1W
R1, R3, R5, R6 - 10K ½W
R2, R4 - 820OHM ½ W
C1 - 100 uf /4V Electrolytic
C2 - .1 uf 01SC Ceramic

Q1 - 2N2222 or EQUIV.
Q2 - 2N390G or EQUIV.
Q3 - MJE 3055 or EQUIV.
X - 24VDC Relay SPDT or DPOT

CIRCUIT DESCRIPTION

If for any reason, the power supply delivers more than about 18V DC, the voltage will cause the Zener Z1 to conduct through R1 and R2. This voltage divider provides bias for Q1 which conducts through R3 & R4. This in turn provides bias for Q2 which conducts through R5 and the base-emitter junction of Q3. This turns Q3 on which provides a negative feed for relay "X" which energizes. When this happens, the normally closed contact in the positive bus of the power supply (x2) opens and disconnects the voltage from the regulator.

Meanwhile normally open contact "X1", closes and gives a solid bias feed to Q3, latching the relay on. To reset the relay, the power supply must be turned off and the filter capacitor must drain off its voltage. If the fault is still present when the supply is turned back on, the disconnected circuit will immediately lock up again. The lockup time is very quick and is equal to, or less than the time required for a traditional "crowbar circuit".

The main reason I chose this approach was to get away from a large current SCR which is costly and scarce here in the backwoods Hi. Q1 & Q2 stages are used to provide isolation and increased sensitivity. C1 is necessary to ensure reliable latching of Q3 and the relay. When Q3 conducts and starts to energize the relay, the relay contact X2 breaks the feed to the circuit and it would chatter. With C1 in place, it charges up and keeps providing bias for Q3 while the relay finishes its travel and closes contact X1.

Although this modification was designed for the GBARC supply, it could be added to most any other power supply. To test your circuit, remove the connection between Z1 and the + terminal and take a pot across the filter capacitor and hook the wiper to Z1. Start with the pot at the negative side of its rotation and hook a voltmeter from Z1 to negative. Slowly turn the pot up while observing the voltmeter. At about 18V the relay should energize and shut off the supply output and stay shut off even when the pot is turned back down.

73's
Don VE3IDS

ARTICLES FOR SALE

1	-	Multi 11 + 120 AC P/S + Mag Mount 5/8 Ant.	$300.00
2	-	11 Element 2 MTR Beam With Stacking Kit	$100.00
1	-	Yaesu FT101E SOLD	$800.00
1	-	4 Element 2 MTR 100 Ft. RG8 Ant Spec.	$ 65.00
1	-	FV101B VFO Filter	$125.00
1	-	MFJ Electronic Keyer	$ 85.00
1	-	Yaesu 601 Digital	$200.00
1	-	Dual Paddel "Ham Key"	$ 35.00
1	-	High Mound Straight Key	$ 15.00
1	-	Speaker & Patch SOLD	$ 75.00
1	-	SWR Field Strength Meter	$ 15.00
1	-	KW107 Supermatch SOLD	$175.00
1	-	FT101E Maint. Manual SOLD	$ 20.00
1	-	11 Meter Match Box	$ 15.00

Contact - Larry Coutch
1780 - 9 Ave E.,
Owen Sound, Ont.

FOR SALE

Drake R4B T4XB P/S and Speakers (negotiate) $1,000.00

Home Brew Electronic Keyer - Vibroplex Paddle $100.00

Heath HM15 S.W.R. Bridge $15.00

GE Pacer 2MTR. Less Xtals
Needs two tubes Rig 15W $50.00

(Assortment of Five) - Marconi - DT34 2 Mtr.
DT75 2 Mtr.- $50.00
— Solid state except 2 final tubes

Shure 444 - Microphone - Desk Mic $50.00

Ten meter Mono band in carton - 3 Elements $100.00

15 Mtr Mono Band in carton - 3 Element $125.00

Wilson Handheld with 3 channels and Battery charger
(Negotiate) $250.00
VE3FFN - Walter Stoyko 519-923-3544

.....

1 - Yaesu FT221 R VFO All Mode Transiever
117V/12V 15W Output $700.00
1 - Kenwood TR7800 FM Synthisized With Memory Readout
SOLD 117V/12V 25W Output ~~$600.00~~

Contact - Wes VE3EPC
Priceville

.....

1 - Motorola 4366T Single Channel Front Mount 25W Price Negotiable
1 - Motorola 4366T Dual Channel Trunk Mount 25W Price Negotiable

Contact - Ken Slack
376-1012

.....

GBARC Crests for your Jacket $ 2.00

Contact - Fred VE3WF

.....

Oscilloscope Tektronix 515A DC-15 MHZ "Excellent Condition" $290.00

Contact - Jim Herron
VE3BFV
519-371-1209

FEEDLINE COAX SWITCH 3 PUSH BUTTON - 3 INPUTS
1 OUTPUT
$12.00

DUMMY LOAD 50 Ω Z 200 W
3 - 150 MHZ
$10.00

VE3 BFV JIM HERRON 371-1209

e.r.p.
effective radiated power

news on yagi antennas

The end product of Sinclair Antenna and Filter Research March 1980

The do's and don'ts of antenna installation

In many cases, when a newly installed antenna is not performing as expected, it may be because the installation was done incorrectly. Not all installers are technically trained in antenna performance theory. As a result, some antennas are installed well mechanically, but inadvertently, they are poorly set up electrically. This causes depreciated antenna performance.

The following precautions can considerably reduce the possibility of antenna malfunction and can drastically affect the performance of an antenna system.

1. When installing a yagi antenna that is supported in the centre, the support pipe should not be in the same plane as the elements. For example, if the support mast is inserted through the elements and fastened to the boom with the boom to mast clamp in this manner, the forward gain can be reduced by half. Installing the pipe through the elements to equal or exceed their height can further distort the radiation pattern to the point where a vertically polarized yagi may have greater gain off the sides than forward.
2. Don't sidemount any vertically polarized antenna within the "cone" of the guy wires without ensuring that the antenna is no closer than a wavelength at its operating frequency from the closest guy wires. Also, the guy wires directly in the field of the antenna must be "broken up" at appropriate intervals with strain insulators to preclude interaction.
3. Don't sidemount an omnidirectional pattern antenna on any tower, guyed or self-supporting, without careful consideration of the effect the spacing of the antenna from the tower will have upon its radiation pattern. If the tower is guyed, the considerations in Point (2) will also apply.
4. Exposed dipole type antennas (omni or offset pattern) should not be installed on top of towers with the bottom of the lowest dipole closer than one half wavelength to the top of the tower or support structure. The antenna support mast should also be clamped to the antenna base pipe on the side away from the lowest dipole.
5. In Canada and locations in the northern United States, don't sidemount antennas on towers without providing protection over the antenna from ice that could fall from the top of the tower during the winter months.
6. Don't install any antenna on top of any tower, mast, or high structure without ensuring that adequate lightning protection has been provided by appropriate grounding either via the grounded structure itself or by an adequate direct grounding of the antenna.
7. When installing coaxial transmission lines and interconnecting cables, always check to ensure that the insides of the mating connectors are free of metal particles and that the connectors themselves are compatible with each other.