



CATALOG No. 56-1

With this, our 1956 catalog, we wish to extend our deepest thanks. Your purchases during the past year, have enabled us to buy in large quantities. This has allowed us to get savings which we are happy to pass on to you. You will note many price reductions as well as a variety of new components and kits.

May we suggest you remove the staple and insert the catalog in your $5\frac{1}{2} \times 8\frac{1}{2}$ " binder. As new products and kits are announced during the year, they will be brought to you on pages this size, so that your catalog may be constantly expanded and kept up to date.

When Ace Radio Control was founded, it was with the idea that the R/C fan would respond to fast, friendly and personalized service. Your reaction has borne this out. Although we have grown, and time is a problem, we have been able to answer the hundreds of questions asked. We intend to continue to do so, be the good Lord willing.

The majority of orders were shipped within 24 hours of receipt. However, production stoppages and slowdowns from certain manufacturers made this impossible on a few items.

Raytheon stopped production on their "new" RK61, since it was giving entirely too much trouble. It was slow in response to signal in some instances, and in two tube receivers would not hold second stage down. Their production resumes by the time you receive this catalog, with a "burned in" RK61, which they state cures all of the troubles and makes it again sensitive and reliable.

Neomatic and Price relays were held up due to defense contracts, but they are expanding and hope to meet future orders faster.

All in all, 1955 saw much R/C progress. New circuits were developed. More manufacturers went to printed circuit receivers with excellent results. More transistor circuits were developed with practical R/C applications.

It is our belief that 1956 will see an even greater progress. Audio receivers and transmitters, both single and multi-channel will find increasing favor. Simplified multi channel audio equipment will come shortly. The 50-54 mc. band will see much use with the relaxation by the FCC which allows the Technician class to use the band. We will endeavor to keep ahead of the new developments, so that we may fill your needs in these fields.

Hope we may serve you again, soon.

Paul F. Runge

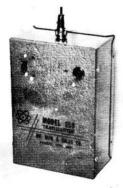
COMMERCIALLY BUILT RECEIVERS AND TRANSMITTERS 27.255 MC.

For the R/C fan who is a bit reluctant about building his own equipment just yet, or for the fan who wants some "extra" gear, Ace offers three of the best lines of commercially built and guaranteed units available today.

On the next five pages you will find equipment from MC Manufacturing Sales, CG Electronics, and Badaco Manufacturing. We have tested all of the products shown, and are convinced that dollar for dollar they offer BEST BUYS" for the purchaser.

We can also secure other commercial equipment for you from the respective manufacturers. Write us your needs on anything not listed.

MC MANUFACTURING & SALES CO.



MC 250 TRANSMITTER

3A4 tube in a simple, yet very stable and rugged circuit. 2.5 watt input.

Crystal controlled 271 megacycles.

Green hammertone cabinet. 3x5 2x8".

54" antenna, collapses to 28". Detachable.

Uses two Burgess XX45 and one X4F or their equivalents.

Completely built up, tested and guaranteed Only \$19.95 With assembled 20-250 Power Pack \$30.95



MC 350 TRANSMITTER

MOPA using 3A4 oscillator and 3D6 amplifier.

3.6 watts input when using 20-250 power pack.

May be operated with batteries. Uses same battery complement as 250 above.

Cabinet and antenna same as for 250.

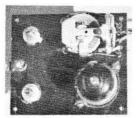
Completely built up, tested and guaranteed. Only \$24.95

With assembled 20-250 Power Pack





MC 100 RECEIVER



3S4 for long life, economical replacement

Current change from 2.4 ma to .6 ma with 45v.

Sensitivity set to any installation with slug coil. Long range, not critical.

Furnished with Gem submini relay.

Completely built up, tested and guaranteed only \$14.95

MC POWER SUPPLIES

Here is the finest 2 volt power supply on the market. Its versatility will mean that it will not be outmoded for any of your RC needs in the future. Output is 180 or 150 volts at 40 mils. Either voltage may be selected by a switch. voltage is also variable and will supply for from 1 to 5 tubes. Completely filtered. Is Model 20 is for large available in two sizes. ground based cabinets. Model 20-250 is for the MC250 or MC350 transmitter cabinet. Price does not include wet cell.

COMBO KIT, prefabbed chassis, all parts, either model 20 or 20-250

CUSTOM BUILT, tested, guaranteed, either model--\$12.95

SPECIAL OFFER Deduct \$2.00 from above prices if purchased with any Ace Transmitter Combo.

NEW---Model 20-BC power supply has just been developed. Chassis will fit into a Berkely or 271 mc. Citizenship transmitter. Puts out 150 volts at 30 ma. Price is the same as for model 20 for either combo kit or custom built.



MC BATTERY CHARGER

Keep your 2 or 6 volt battery in the best shape. The MC charger will charge either 2 or 6 volts at 2 amperes. Will also charge NT6 batteries at .5 amp which is important to their long life. Simply plug MC charger into 110 volt AC socket Completely built, tested and guaranteed



6 VOLT POWER SUPPLY

In response to many requests we kit a 6 volt power supply for use with your 6 volt car battery. Simply plug into cigarette lighter of your car Chassis measures and you are in business. and is 42 inches tall with vibrator and electrolytic. Filament is fully adjustable for 12v for Can be fitted into Lorenz 3A4 1 to 5 tubes. cabinet. Features high grade transformer and 1st grade components. Output 160 volts 35 ma.

COMBO KIT contains prefabbed chassis, transformer, vibrator, rectifier, rheostat, electro and all necessary parts \$8.25







POWER SUPPLY COMPONENTS

BB54, 2 volt 20 ampere hour storage 6 volt transformer, 160 volt seconbattery. Dry charged. Fill with 1.275 electrolyte. \$3.45

\$1.00 2 volt synchronous vibrator

2 volt transformer, 150 or 180 volt \$4.95 secondary

2 volt transformer, 150 volt secon-\$3.50

\$3.95 dary

30-30--450 volt electrolytic. Metal can houses both

.008 2000 volt buffer condenser .30

6 volt non-synch vibrator

NT6, 6 volt storage battery \$2.45

\$2.00



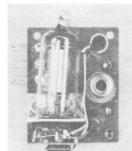
ELECTRONICS CORPORATION



T-11 Transmitter



Crystal controlled 274 mc. transmitter for use with any CW receiver. Has a tuned antenna for maximum radiation. Filament drain is 200 ma. Plate drain is 17 to 20 ma. at 135 volts when key is pressed. Grey rugged case of compact design, yet houses standard size batteries. 3½ pounds. Antenna is 60 inch telescoping type and is quickly and easily detachable. adjustment is available from outside the cabinet. Can be used for bench checking since circuit will not harm crystal when antenna is removed. Complete with tube, xtal and antenna, tested and guaranteed.



4-A Receiver

Super-regenerative circuit utilizing Colpitts oscillator in quench circuit. Filament drain is 100 ma. through 3S4. Plate current at 45 with 5K relay is 2.4 ma. dropping to .75 ma. with CW signal. Antenna length is not critical and may be from 12 to 24 inches. Compensator is to adjust for differences in installation. Weight is 14 ounces less relay. Reliable operation may be had using $22\frac{1}{2}$ to $67\frac{1}{2}$ volts of B. Does not include relay, which must be purchased seperately. Gem 5K relay is recommended. Completely built, with tube, less relay, tested and guaranteed.





T-12 Tone Transmitter

Single channel audio transmitter, is the perfect companion for receiver below. Grey hand held cabinet, with 54" telescoping detachable antenna. Power input is 12 watts, which gives extra ground range, and even more in the air. easy on B batteries since drain is only 10 Crystal is damage proof. Rugged construction. Weight is 32 pounds. 274 mc. Complete. tested and guaranteed.



R-1 Receiver

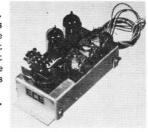


Single channel non-selective audio receiver which uses a printed base for long life. Stray carrier will not operate receiver, which assures you that receiver cannot be accidentally operated. Weight is only 32 ounces. Uses 3 tubes of the miniature type for ruggedness. Draws 11 ma. with no signal, which jumps to 6 ma. when signal is received. As easy to tune as a portable. No critical adjustments, antenna length is not touchy. Comes with tubes and relay, pretested and tuned.

R-6 Receiver



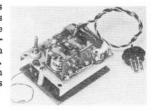
A rugged three channel tone receiver using reeds. Small, the unit weighs 8 ounces, and installs through a plug connection. Reeds operate at tone frequencies between 225 and 500 cps. Filament requires 1½ volts at 270 ma. Plate: 45 volts at 2.5 ma idle, 6 ma when signal is sent. Reliable range, high sensitivity. Relatively unfussy as to installation. Tunes in as easily as a portable radio receiver. Complete in every respect. Pre-tested and tuned.





RT-2 Receiver

Compact 2 channel receiver, the RT2 uses 1AG4 as a detector backed up by two transistor amplifiers cutting A drain down to 40 ma which allows the use of small A battery. Because of the transistors it is possible to use 30 volts of B, which makes a 1/2 A two channel plane quite feasible. Utilizes printed circuitry for a rugged job which is crash resistant. Weight is only 32 ounces Complete in every detail. Pretested and tuned.





T-15 Transmitter

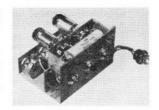
As designed, this transmitter may easily be converted to audio operation by using the M-3 modulator shown below. It, along with the M-3, is recommended for use with either the R-6, or RT-2 With this transmitter you will have a strong CW transmitter for use with your single channel CW receivers, but you can convert in minutes to multichannel operation. CW power input is 3 watts. Uses standard size A and B batteries. Complete and pretested.





M-3 Modulator

Modulator to fit into the T15 transmitter shown above. Makes the perfect choice for the two multichannel receivers shown. Oscillator is of modern design...unusual stability....once tuned, it maintains audio frequency. Frequency ranges of modulator designed for reed use, variable from 220 to 600 cps. 85% minimum modulation to prevent receiver blocking. Exceptionally good waveform. Complete, pre-tested. \$29.95



CG's two and three reed relays are available now for the first time to the home builders. Exceptionally well designed, they are small in size. Weight is 4 ounce and less than 1 cubic inch. Reed contacts are adjustable by bending, which is done easily. 7,000 ohms resistance, require a 2.5 volts RMS drive. Preadjusted and tested RT-2 receiver schematic is included.

AR-2 (2 reeds) AR-3 (3 reeds) \$11.95



BADACO



180 T TRANSMITTER



Three-In-One Transmitter. 271 megacycles.

- 1. With Scotchman plug in, it transmits a 95% modulated tone of 200 cps. It is capable of operating most commercial and home made re-
- With Scotchman plug out, it transmits straight carrier signal and can be used with any commercial or home made carrier receiver
- 3. For multi-channel operation, you simply plug in the Badaco model 180 MC control only 10 seconds to switch from carrier tone to multi-channel operation.

Operates without continuous carrier for maximum savings on expensive B batteries. Almost triples their life. Also minimizes modulator drift when used for multichannel operation. Grey hammertone case, 32x42x7". 2.4 watts input

on CW, 2 watts on audio. 52" telescoping antenna Uses standard batteries.

\$34.95



180 MC CONTROL BOX

The Badaco Model 180MC control box simply plugs into the Model 180T transmitter and immediately converts to multi-channel operation. It is small Comes in two models. The 180MC3 and hand held. three channel and the 180MC5 five channel. Two, four and six channel boxes available on special order.

> 180MC3 180MC5

\$18.95 \$21.95



180 R RECEIVER



The Badaco 180R operates on 271 mc. operated, 100 to 600 cps. at 90 to 100% modulation. Will operate on lower percentage of mod-ulation when the "blue" condenser is removed as described in instructions. Weight is 3.3 oz. Measures 32x12x 1 3/8". Tubes protrude 1 3/4' Completely enclosed in spot welded above case. aluminum case to keep dust out of relay and protect parts. Practically crash proof. Only one simple tuning adjustment -- as easy as your portable radio. Not sensitive to body capacity. Uses 3A5 and 1U5. Requires 672 volts of b and 12 volts of a. Idles at 2.9 ma. On tone signal relay current drops to 0. Completely wired and ready for any type of R/C application.

\$24.95

Badaco will have available for delivery soon, their 3 and 5 channel reed receivers. These will be completely housed in a protective aluminum case, and will offer the finest reed units at a very reasonable price. They will be available from us on special order. interested write for additional information. Prices on both the 3 and 5 channel units make them the most economical yet dependable multichannel equipment available today.

3 channel \$64.95

5 channel \$79.95



R. C. BIBLIOGRAPHY

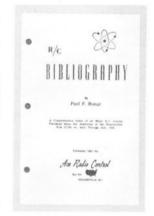
Here is an index to every worthwhile R/C article which has appeared in Air Trails, Flying Models, Flypaper, Model Airplane News, Popular Electronics, Radio & TV News, and Radio-Electronics.

Makes your back issues doubly valuable. Allows you to locate that elusive article quickly. With index tabs, you can turn to any section in the Biblio instantly and find the magazine, date and page number of the article you want. May be kept up to date easily.

Printed on heavy stock, it is punched for your $5\frac{1}{2} \times 8\frac{1}{2}$ " three ring binder.

Due to demand, it has gone into second printing, which allows a price reduction.

NOW only \$1.00





R. C. HANDBOOK

Here's a book that skips theory and gets right down to the business of putting radio control systems together so they will operate your model planes, boats, trucks, etc.

By Howard McEntee, Young Men's R/C editor, it's in his down to earth style and enjoyable reading

Concentrates on construction details of a number of R/C units. It also covers the hitherto neglected field of trouble shooting radio control systems. Whether or not you know radio, this is a book for everyone interested in R/C.

For the first time, it combines the necessary practical information on radio with detail instructions on mechanical construction.

\$2.25



TRANSISTOR APPLICATIONS

Published by Raytheon, this book gives more than 50 transistor circuits. Not an R/C book, but it will give you background on transistor use. Transistors are finding broader R/C applications every day.

SCHEMATIC COLLECTION

NEW and improved. Last year's version was a best seller, but this one outdoes it. Contains schematics of most popular receivers and transmitters we kit. All schematics have been revised and redrawn. Artwork is clear and legible. This is must for the serious R/C fan, and at this price is a Best Buy. $5\frac{1}{2}\times8\frac{1}{2}$ and punched for looseleaf.

\$1.25

DATA SERVICE SHEETS

A new customer service, the data service sheets will offer new circuits, or improvements of old circuits, and a variety of other unpublished information available. Watch for new ones and build a valuable collection.

10¢ each.

- #1--Improved Two Tube Receiver
 Convert your Lorenz two tube
 to an improved design.
- #2-Audio Conversion

 How to convert CG4A receiver
 to two channel.
- #3--Cathode Relaxation Modulator Simple modulator to be added to your present xmitter.
- #4-Transistorized Mini Mac
 Transistor amplifier for
 Mini or other hard tubers.







4 WATTER



Essentially this is a 1 tube version of Mac II transmitter with fixed antenna coupling RF unit is completely drilled and preassembled making wiring an easy matter. May be housed in a variety of cabinets. May also be used with a power pack for maximum output.

BASIC KIT (illustrated) -- RF unit, coils, condensers, resistors, socket, switch key, cable, etc. \$3.95

COMBO--Basic, 5x6x9 crackle case, 3 section, antenna, tube, xtal, less batteries

\$13.95



MACII



This is undoubtedly the most popular transmitter ever offered the R/C fraternity. Simple to build, easy to maintain. Thousands are in use every day. While original featured PE157 power supply, these are no longer available. May be built for battery operation, but most builders prefer power pack since this enables full five watts input with ease. The RF unit is completely prefabbed and preassembled for easy wiring.

BASIC KIT (illustrated) RF unit, coils, condensers, resistors, sockets, switch key, cable, etc.

COMBO #1--Basic, 5x6x9 crackle, xtal tubes, 3 section antenna, less batteries

COMBO #2--Basic, 7x8x10 crackle, xtal, tubes 3 section antenna, vibrator, 2 volt transformer, power supply chassis, choke, electrolytics, resistors, everything except 2 volt cell



LORENZ 3A4



An especially popular hand held transmitter. Low cost, sure fire, and output compares favorably with any of the commercial hand units. RF unit is drilled and pre-assembled for easy wiring.

BASIC KIT (illustrated) -- RF unit, all condensers, resistor, socket, switch, key \$3.25

COMBO includes basic, hammertone 32x6x8" cabnet, xtal, tube, one section antenna, but less batteries \$11.95

LORENZ MOPA

This is another extremely popular transmitter. While not as powerful as the Mac II, it is of the MOPA type. With 3A4 oscillator and 3D6 amplifier it will stay in tune when once tuned, and even touching the antenna will not knock it out of oscillation. It is also easy to modulate for audio, using the Ace Modulator Kit. This will enable it to operate most audio receivers today since modulation may be had up to 100%. Modulation may be decreased if desired.

BASIC KIT, RF unit preassembled, all coils, condensers, resistors, sockets, switches, key, cord, etc. \$6.98

COMBO--Basic, 7x8x10 crackle cabinet, tubes xtal, 3 section antenna \$17.95





WAG AUDIO

The famous audiotone system, featuring a 400 cps. 100% modulation. Audio operation has some advantages over CW. Not nearly the amount of power is required to secure adequate range. Stray carrier signals will not accidentally work the receiver. Basic kit is offered in 3x4x5 cabinet for inclusion in the larger cabinet. RF unit is preassembled, making wiring easier.

BASIC KIT (illustrated) RF unit preassembled, all coils wound, condensers, resistors, sockets, switches, key, cord, hardware, etc. \$10.95

COMBO -- Basic, 8x10x10 crackle cabinet, 2 3V4 and 1 3A5 tubes, xtal, 3 section antenna, less batteries \$23.95





THREE CHANNEL

Improved design using a simple MOPA type transmitter. Old version was a little tricky to tune but that has been cured in improved version. Uses two 3Q4 and 1 3S4 tubes. Audio frequency ranges from 200 to 3500 cps. Makes it adjustable for almost any audio receiver. Stable, with minimum drift. RF unit is preassembled and easy to wire. Designed for hand held case, although it can be put into larger cabinet if desired.

BASIC KIT, (Illustrated) RF unit preassembled, wound coils, condensers, resistors, switches, keys, hardware, etc. \$10.95

COMBO -- Basic, 3½x6x8 hammertone case, 3 tubes, xtal, 1 section antenna \$20.95





THREE CHANNEL MODULATOR

Modulator portion of the transmitter above is available separately. Uses high grade modulation transformer. Has an excellent waveform. Use it to modulate your WAG transmitter or the Lorenz MOPA. Not recommended for 4 Watt or Mac II. Preassembled units may be housed in small case away from grounded transmitter case. With tube less case. \$7.95



ACE CONVENTIONAL RECEIVER KITS 27.255 MC.





A new receiver, designed by Ed Lorenz around the Sigma 26F relay requires much less idling current than conventional single gas tube receivers. This one can be recommended to the beginner who knows very little about radio, since it is one of easiest of receivers to get going. Complete kit contains wound coils, all capacitors, resistors, submini pot, drilled base, hardware, less tubes and relay \$3.75

COMBO -- kit above, with RK61 and 26F relay \$14.95



LORENZ TWO TUBE

This has been the most popular kit in R/C history since more Lorenz two tubers have been sold than all other receivers combined. Offers the ease of assembly of single gas tube, but allows stage (RK61) to idle at .5 ma, which keeps second stage cut off or almost so. When signal is sent, first stage drops to .1 or less, and triggers the second stage to 3 or 4 ma depending on tube and relay used. RK61, XFG1 or 1AG4 may be used second stage. Complete kit of all required parts less tubes and relay \$3.25

COMBO-kit above with RK61, 1AG4, Gem rly



LORENZ TWO TUBE DIODE

This is a great R/C improvement. By using diodes between first and second stage of a receiver such as the Lorenz two tuber, it is possible to first stage at .1 and still keep the second stage tube cut off to 0. Diodes smooth out and amplify the voltage produced by the hiss so that much less hiss is required. Means much longer and battery life. Greater sensitivity and range. Complete kit to build the Lorenz two tube above. along with diodes, capacitors, special pot.

COMBO -- Kit, RK61, lAG4, Gem relay

\$4.95 \$14.95



LITTLE GEM DIODE

With RK61's in short supply during 1955, many requests were received for a receiver which could use an XFG1. This receiver is the result. use EITHER XFG1 or RK61 in first stage. coupled to second for the ultimate performance. First stage idles at .1 ma, which keeps second at Signal drops first and triggers second. 1AG4 or CK526 recommended for second stage. extremely small base measures $1\frac{1}{2}$ x 2 1/8" and receiver with Gem relay weighs less than 2 ounces. \$4.95 COMBO -- kit above with tubes. Gem relay \$14.95



LORENZ TWO TUBE DIODE CONVERSION

Convert your present Lorenz two tube receiver, or North American twin tuber to the diode coupling. Very simply and quickly done with either conventional or printed base receivers. Have all the advantages diode coupling offers. Tests indicate that our diode receivers follow pulse just as quickly and cleanly as two tubers without diode coupling. Complete kit of diodes, capacitors, special pot, instructions.

Uses XFG1 or RK61 first stage, with CK722 transistor in second. First idles at about .5 ma with transistor drawing slight but of current. With signal, first stage drops and transistor triggers relay. Only 50 ma filament drain. Very compact in design. Kit is complete with everything needed, except tube, transistor and relay.

COMBO -- kit, tube, transistor, Gem rly

\$3.95 \$13.50





MAC'S SINGLE

Hundreds of receivers of this type in use. One of the most dependable and unfussy of the hard receiver kits ever offered. Uses 384 hard tube for long life. Is rugged in every respect is a receiver which anyone with only a bit of R/C experience can build. Hard tubers are a bit more tricky than gas tubers, but once mastered are generally preferred in pulse applications. Completely prefabbed kit, less tube and \$4.50 relay

COMBO -- kit, 3S4 and Gem relay

\$9.95





INI MAC

Another one of Howard McEntee's designs, this one uses the same circuit as the Mac's Simple Single but with subminiature components. The quench coil and padder are much smaller than ones used above and the CK526AX used in the original draws 20 ma filament, and yet provides a current change With lAG4 this of from 1.8 ma to .4 on signal. range is improved slightly, while increasing filament to only 40 ma. Complete kit of every necessary item, less tube and relay \$4.25

COMBO--Kit, CK526AX, Gem relay COMBO -- Kit, 1AG4, Gem relay

\$10.95 \$10.65





MINI II

Uses Mini Mac in first stage, which is coupled to a DC amplifier second stage. First stage idles at .8 ma which drops to .3 on signal. This triggers second stage from 0 to 3 ma through 5K re-With hard tubes in both stages, tube life is considerably more than in gas tubers. Uses 22½ volt or 2 30 volt B. Batteries. CK526AX 1AG4 in first stage. 1AG4 second stage. not recommended unless you are experienced hard tubers. Complete kit of all components.

COMBO -- Kit, two tubes, Gem relay

\$5.50 \$14.50





Mini Mac coupled to transistor current amplifier for out of this world Use only one 222 volt B and yet, get full 2.5 ma current change through the relay. Circuit developed by Vern Kroamer and published in Flypaper, it has been thoroughly flight tested. Complete kit but less tube, transistor and relay \$14.25

COMBO-Kit, CK526AX, CK722 transistor, 5K gem relay

CONVERSION KIT, for your present Mini Mac, includes CK722 \$2.85

AUDIO RECEIVER KITS





Complete kit or parts to build the WAG audiotone receiver designed for heavily modulated audio signal. Will not be affected by interference from hams, or stray signals from CW transmiters in the area. Slightly more complex than the average CW receiver, but pays off in trouble free operation. No complicated sensitivity adjustment, is as easy to tune as your portable radio. Complete kit of parts as detailed by designer, with chassis of plain aluminum \$4.95

With drilled, punched chassis \$5.95 COMBO--kit, drilled chassis, set of tubes Gem or Price relay (7.5K) \$14.50



SAFFORD AUDIO



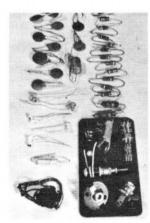
this receiver was de-At stated in the article, signed to get the most for the least. This kit will allow you to get two or three channel operation at a far less cost than reed or equipment. Uses a high and low pass filter comparable to tone control in radio sets. Uses 3Q4 and 2 3A5 tubes. For two channel operation uses 2 SPDT, for three channel 1 SPDT and 1 DPDT relay The 1956 kit contains many improvements over original many of which were worked out by Paul Johnson of Des Moines. Not recommended for beginner. With plain cnassis \$5.50 \$6.50

With drilled, punched chassis \$6.50
COMBO A--Kit, tubes, two SPDT Gem relays
COMBO B--Kit, tubes, 1 Gem SPDT, 1 Price

DPDT \$21.50



"T R" AUDIO



The hottest audio receiver to ever be offered in kit form. Howard Bonner captured 2nd at the 1954 Nationals with one, while a 50 mc version copped 4th for Colby Evett. Recommended only for the experienced R/C builder. Offers many advantages—only 180 ma.filament drain, which is very low for multi-channel receivers. Relay action is positive since current increases with signal. This amounts to savings for B batteries since idle is low without signal. For two channel operation the Babcock BCT4 transmitter may be used without alteration. Minor alterations permit simultaneous or three channel operation.

Kit contains all resistors, special RFCs, conden—

Kit contains all resistors, special RFCs, condensers, would coil, submini electro, SS03 and all other required components except tubes, diodes

TUBE and DIODE kit-2 CK536, 3 CK5672 and

6 CK705 \$13.95 COMBO--Kit, Tube & Diode Kit, 2 Gem rlys \$35.95

ACE PC 27.255 MC. RECEIVER KITS

The acceptance and approval of PC receivers since their introduction last year has been little short of phenomenal. Over 2.000 PC receiver kits Troubles which did show were minor and easy to repair .. have been sold. Many letters on file from satisfied users. Shown to be very crash resistant if mounted as suggested. For 1956, 3 new PC kits are offered. with multi-tube receivers in the audio field to come by Spring of 1956. Printed Circuitry is here to stay in R/C. The trend is indicated by the number of manufacturers who are going to printed circuitry. The best proof of their acceptance is the repeat business brought about by satisfied users. If you experience any difficulty in getting any PC kit going, return to us and we'll put it in operation for a nominal fee of \$1.50.

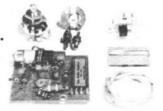


LORENZ "61"

The best single gas tube circuit available today. See conventional receiver section for full description. Even the rankest beginner will experience little difficulty in getting this circuit in operation. Complete kit as shown.

COMBO -- Kit, RK61, Sigma 26F relay

\$14.25





LORENZ TWO TUBE

This one in PC has outsold all others. Take an excellent circuit such as this, and put it on PC and you've got something. This great acceptance has made a lower price possible. This one has been completely wired in 15 minutes by beginners \$4.50 Complete kit as shown

COMBO--Kit with RK61, 1AG4, Gem relay

\$14.50



MINI MAC

The popular Mini Mac also proved a best seller. While hard tubers require a bit more knowledge, especially when it comes to tuning and install-ation, they can be mastered easily by those with Complete only a slight bit of R/C experience. \$5.50 as shown

COMBO -- Kit, 1AG4, Gem relay

\$11.95



MINI II

This receiver features a current rise. It is unconventional in hookup, and difficulties experienced with it, were due to lack of R/C experience. With the advanced builder this circuit in PC has been a great favorite. Complete as shown

\$6.50

COMBO -- Kit, 2 lAG4 tubes, Gem relay

\$15.50







PC BASES

In response to many demands, we make available all seven of the PC bases for the receivers we kit. Drilled and eyeletted, they come with a specially numbered schematic so you can place your parts in a short time. Order by number, PCl through PC7. Any PC base



LORENZ TWO TUBE DIODE

We predict this will be one of the best PC sellers in 1956. The basic Lorenz circuit, improved by adding diodes, so that first stage may be idled at approximately .1 ma, instead of .5 and still keep second stgge cut off to 0. This allows exceptional tube life as well as greater battery economy. Thoroughly flight tested and performance proved by RC fans over the country. Complete kit, PC base, but less tubes and relay

COMBO -- PC5 Kit, with RK61 and lAG4, and Gem 7.5K relay

\$16.25



LITTLE GEM DIODE

Much smaller than the Lorenz, using Cambridge Thermionics printed circuit coil form, this receiver may use either RK61 or KFG1 in the 1st stage, so that tube shortages, won't keep you out of the air. Circuit has been thoroughly flight tested and proven superior. Uses CK526AX or 1AG4 in second stage. Complete kit, FC, but less tubes and relay \$6.25

COMBO -- PC6 kit, with XFG1 and 1AG4, and Gem 7.5K relay

\$16.25



GAZISTOR

Low filament drain with Pete Bliss' development. Uses XFG1 or RK61 first stage, coupled to CK722 which rises on current. idle of first stage is about .5 with transistor drawing about .3 ma. With signal first stage drops, triggering transistor through 5K relay with a 3 ma current rise. Very dependable, and with latest price reduction on the CK722, cheaper than 2 tube receivers. Complete kit, less tube, transsistor and relay \$4.95

COMBO -- Kit PC6, with XFG1, CK722, and Gem 5K relay

\$14.50



COPPER LAMINATED BAKELITE

Making your own PC bases is quite simple with copper laminate using either the chemical method or the stripping technique. The first involves layout of the pattern with a resist solution, and then etching the base in Ferric Chloride. The stripping technique is simpler, but takes practice. The pattern is drawn on copper and is scored into the base using a sharp model knife. Excess copper is simply stripped off. Reprint of articles covering both techniques will be included with your order Available in sheets up to 18x18". Cut to your specifications 2¢ sq in.

Also available in $4\frac{1}{2}$ x 6" sheets. While they last --- 2 for \$1.00

RELAY INFORMATION ON COMBO OFFERS

As you've read through the preceding pages, you may have wondered about the inclusion of the Gem relay in our combos. The Gem is finding increasing use, since MC, CG, Rockwood, Bramco and many other manufacturers are using them in their commercial receivers. Tests indicate the Gem is an excellent low cost light weight unit, operating in the combos where offered with excellent results. What is more, the Gem has—up to nowbeen more consistently available than other types. Should you desire a different relay, figure the cost difference. Gem lists at \$4.95; if Sigma 26F is desired—it lists at \$8.50—difference is \$3.55. Just add that amount to combo cost and specify relay desired.



50-54 mc.

RECEIVER AND TRANSMITTER KITS

The 274 mc. spot frequency is getting increasingly crowded and more and more R/C ers are turning to the 50-54 mc. band, which has recently been opened up for Technician class license holders. Equipment here is still not much more complex than 272 mc. gear, and no special material is used as it would be on higher frequencies. A license is required to use the band, but this is relatively simple to get. A code speed five words per minute is required, and any one who has been in R/C for any length of time, should not experience any difficulty in passing the theory part. The code part of the test is taken under the supervision of a local general or advanced class amateur; the theory test is Simply write the FCC for form 610 by mail, so no trips are required. and the Technician's class examination.

New transmitter designs and receiver construction articles are expected in the model magazines. We will kit them as announced, but in the meantime we make available the following extremely popular designs, all of which have been thoroughly flight tested and proven.



MAC'S "PUSH PULL" XMTR.

This 50-54 mc. transmitter, designed by Howard McEntee and described in his Radio Control Handbook, is easily and quickly built. It is offered only in basic form, since most hams will have cabinets and other equipment. It may be housed in a large variety of cabinets, depending on power to be applied. Circuit may be used with 3A5 for battery operation, with 3B7 or 6J6 for increased voltage and power. May be used with 56" whip for quarter wave antenna or with 300 ohm twin lead 8 3/4 feet long for half wave with maximum radiation.

Complete basic kit, wound coils, all resistors and capacitors, air type trimmer, both miniature and loctal type tube sockets. push button for cable or cabinet use, toggle switch, hookup wire. Less tube. \$2.25

3A5, 3B7, or 6J6 tubes, each \$1.00. 300 ohm twin lead, per foot whip antenna, collapsing type, with connector for hand held cabinet \$2.25



LORENZ TWO TUBE

This popular receiver with design changes by Ed Lorenz for 50-54 mc. The base layout is exactly the same as for the 27% receiver, but coil has been wound for 50-54 mc., with component value changes as quired. Utilizes same tube line up as 274 version. Complete basic kit of all required parts, less tubes and relay \$3.25

COMBO -- Basic, RK61, lAG4, Gem relay

\$13.50

\$10.65



MINI 50

The popular hard tube receiver by Howard McEntee with a few changes, not only in circuit, but layout, as well, for 50 - 54 mc. Housed in a plastic case, makes it almost indestructible. Uses 1AG4 tube for best operation. Complete basic kit of all wound coils, drilled base, tic case, all capacitors, resistors, hardware, quench coil, padder -everything you need, except tube and relay \$4.50 COMBO -- Basic, 1AG4, Gem relay

15

GARAGE DOOR OPENER



RECEIVER AND TRANSMITTER

Featured in the April and June 1955 issues of Science and Mechanics. Designed by N. Raskhodoff, and by special arrangment available in kit form exclusively from Ace.

A deluxe receiver and transmitter for $27\frac{1}{4}$ mc., using an audio signal to operate the receiver, instead of the simple carrier used in lower price units. This eliminates accidental operation of your door by amateurs or other R/C enthusiasts using carrier. Receiver may only be operated by an audio tone from transmitter at distances up to 300 feet.

The units are highly prefabbed with major parts completely mounted so that construction is considerably simplified. While not a beginner's project, they can be built by anyone with a little radio background.

For your convenience, the units are offered in three versions -- Basic, Deluxe and Custom Built.

BASIC Audio Receiver Kit--contains all resistors, condensers, choke, coils, transformer, hardware, plain chassis, less tubes, relay \$16.95

DELUXE Audio Receiver Kit--everything needed to duplicate the unit.

Chassis is completely punched and drilled, and major parts
are completely mounted, as illustrated. With tubes and relay
\$24.95

BASIC Audio Transmitter Kit--all condensers, resistors, choke, plain chassis, vibrator, transformer, hardware, less tubes and crystal \$18.95

DELUXE Audio Transmitter Kit--everything needed to make the unit.

Highly prefabbed chassis, with major parts mounted as illustrated, with tubes and crystal

\$26.95

COMBO--Both Deluxe Receiver and Transmitter Kits \$49.95

CUSTOM BUILT on order. Both units completely built, tested, and ready to install \$74.95

*

MULTIMETER

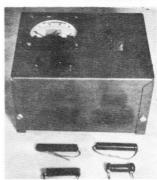
At last, a precision high quality volt-ohm-milliameter at a resonable price. Not a small face for easy undersized meter, but a full 32 reading. Sturdy metal case measures 3x4x6" the ranges fit R/C needs! MA scales -- 250 ua 2.5, 25, and 250 ma. Votage AC or DC: 10, 50, 100, 250, 500 and 1,000v. Ohms scale measures following resistance ranges: 0 - 1.5K, 0 - 15K, 0 - 150K, and 0 -15m. All scales selected by Zero adjustment. A11 means of one switch. features usually found in much higher priced units. Accurate to plus or minus 1%. With test prods and leads. \$14.95





MULTIMETER KIT

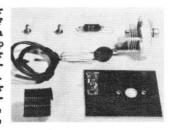
Using a moving coil precision 0-5 MA meter, Ace kits a multimeter, you can wire easily. Has 0-5, 0-50 ma, 0-5, 0-50, 0-500 volt range. Case is 3x4x5 metal box, hammertone finish. Parts are mounted as you receive the kit. It is large enough so that transistorized FSM may be included without crowding. Kit consists of meter, 6 position switch, pointer knob, 50 ma. shunt, precision resistors, prefabbed cabinet and complete instructions. \$8.25





FIELD STRENGTH METER

A bulb indicator is just fine to tune up your transmitter, but it does not tell how much RF is being radiated by your antenna. Use of a FSM when tuning up will cure that, and help prevent a flyaway. Basic kit consists of air trimmer, wound coil, capacitor, diode and subchassis, along with wire and instructions. Most users plug their FSM into their regular meter using a plug and jack or other connector. May also be plugged into VOM meter above and 250 ua. scale used for an ultra sensitive job.





TRANSISTORIZED FSM

Use one of the low priced, higher range milliameter for your FSM with this transistorized job which has an amplification factor of 10 and make an 0 -5 ma. as sensitive an an expensive 0-500 ua. With Raytheon's latest price reduction, this is far less expensive than using the sensitive meters. When used with multimeter kit above, it will give perfect satisfaction. Because of low drain, batteries will last a whole flying season. Easy and simple to wire. Kit is just as above, but transistor, switch and potentiometer have been added. \$3.50







DRY BATTERY REJUVENATOR

Rejuvenate your R/C batteries and get 2 to 4 times the life you have been getting. Sears has just marketed a hearing aid rejuvenator which sells for several times this price. The same principle is used here, although it is not as versatile as the Sears unit. It will, however, take care of R/C needs, since it will charge hearing aid A and B batteries and also batteries up to 67½ volt transmitter size. Highly prefabbed construction, makes wiring a cinch.

Wired, tested, ready to go

\$4.75



WAG PULSER

The best pulser of any kind available to date. If you've steered clear of electronic pulsers because you've heard tales about instability, your troubles are over. This WAG job by Walt Good, cures these faults, and makes a perfect unit for the dual proportional jobs. Pulse rate and width perfectly adjustable. We reccommend the use of a 3x4x5" cabinet to house pulser and its own batteries, which simply plugs into present key jack of transmitter. The Sigma 41F relay has been tested and found to work excellently in the circuit. Use of $67\frac{1}{2}$ volts of B is adequate, and an old transmitter battery may be used.

Basic kit, sockets, capacitors, resistors, hardware, less tubes, relay and cabinet \$2.75

COMBO -- basic kit, tubes, Sigma 41F, 3x4x5"
cabinet \$8.95

(NOTE: 1AG4 tubes may be used instead of 3V4s, for less A drain and 45 volts of B. Please specify 1AG4 model if desired when ordering kits. COMBO with 1AG4 tubes and submini sockets \$10.95



SERVOS & ESCAPEMENTS







		Newx 5061.5V 7.95
		NewX 5123v 7.95
Gem, 5K	. 4.95	NewX T700For Transistor . 8.95
Gem, 7.5K	. 5.45	Bonner Compound 14.95
Price, 5K	. 4.95	Babcock Compound 7.95
Price, 8.5K	. 5.50	Babcock Motor Control 12.95
Price, 8.5K, DPDT	. 8.50	Citizenship PSN 5.95
Sigma 4F, 8K		Citizenship SE 7.95
Sigma 26F, 8K	. 8.50	DMECO 2PN
Neomatic, 5K	. 5.95	DMECO 3PN
Neomatic, 7250	. 5.95	DMECO 2P2N
Kurman, BK7, 4K (6 oz.)	. 3.50	DMECO 3P
Sigma 41F		Southwestern Actuator 5.95

	ANTENNAS	CONDENSERS
	1 section, 4 foot aluminum, with a kwikmount connector, for hand held cabinets \$1.00 56 " telescoping antenna, with top of the cabinet mount. For hand held cabinets \$2.25 3 section, $9\frac{1}{2}$ foot, take apart type	Ceramic disc and tubular, in most standard values .10 Paper, .01, 002, .001 .10 Paper, .05 .20 Air Type Trimmers .15, 25 and 35 mmf45
)	for ground based cabinets with top of cabinet mount, or two stand off insulators for side mount. Specify.	125 and 140 mmf95 Ceramic trimmers 3-12 and 3-25 mmf45 Compression trimmers
	\$2.95 112" telescoping antenna. A really deluxe quality antenna. With stand offs for side mount ground based cabinets \$4.95	5-25 mmf10 10-60 mmf10 Arco 469, 780 mmf40 Arco 308, 1380 mmf60 Arco 310, 1900 mmf80
	CABINETS	Erie, tubular 1-8 mmf35
	#1 1 5/8 x 2 1/8 x 3¼, grey #1.00 #2 3x4x5, grey hammertone #1.60 #3 3x6x8, blue hammertone #4 5x6x9, black crackle #5 7x8x10, black crackle #6 8x10x10, black crackle 3.75	Electrolytic 10 mfd-80 volt 1/2 x 1 1 mfd-50 volt Barco 3 mfd-70 volt Barco 1.00 PLUGS AND JACKS
	COILS and FORMS	Jack, RCA type, with two plugs .15
	1/4" or 3/8", with vibration proof mounting, either .50 CTC, ISM 1/4" red dot core .60 CTC, IS6 1/4" ceramic, red dot .70 CTC, IS3 3/8" red dot core .60 CTC SPC2 1/4" for printed circuits-	Jack, open circuit, standard .25 Jack, closed circuit, standard .35 Phone plug, standard .40 Tini Jax, CC, 1/3 size of std30 Tini Plug, 1/3 size of std50 2, 4 and 5 prong plugs and sockets either, per pair .25
	although it can easily be used in conventional receivers .35	7 prong miniature plug and socket per pair .45
	Wound coils for Lorenz 61, Lorenz 2 tuber, Min, Mac Single, .85 Wound coils for WAG, Gazistor, TR, Little Gem \$1.00	Snap on connectors for 67½ batt. per pair A battery plug for 1½ batt. .15
	CHOKES	QUENCH COILS
	P-33 tune double ni wound	OSR, for Miller, Simple Single 1.85 Mini, for Mini Mac, etc. 1.20 Sub Mini, for Mini about 2/3 of size of Mini 1.70 Citizenship, replacement 2.25
	AUDIO Sub ouncer. Small size 1.00	CRYSTALS AND SOCKETS
	BASE MATERIAL	Petersen Z9A, 27.255 mc. \$3.95 Petersen Z9A, 27.120 mc., for amateurs, or continental countries.
	1/16" linen base cut to your speci- fications, per sq. inch .02	\$3.95 Hundley, 6813.7 mc. for Branco and similar transmitters \$2.00
	Receiver bases, blanks cut to size for all popular receivers .10	Socket for Z9A .20 Socket for Hundley .25
	POTENT IOMETERS	METERS
	Submini - dime size	Precision, moving coil, 0-5 ma 3.95 0-5 meter, with 50 ma shunt 4.25 0-50 ma iron vane meter 3.00

HARDWARE AND MISCELLANEOUS	RESISTORS
	1/2 watt, most standard values .10
Machine Screws	
2/56 x 3/16 pkg of 10 .10	
2/56 x 1/4 pkg of 10 .10	GOOVERS
2/56 x 3/8 pkg of 10 .10	SOCKETS
2/49 = 1 nkg of 8 .10	7 nin ministure, wafer .05
4/40 x 1/2 pkg of 10 .10	pin minimum, mare-
4/40 x 1 pkg of 8 .10	7 pin miniature, moulded .15
1/ 10 x = F-0	Shield for either socket .20
	Loctal, 8 pin for 3D6, 3B7 .05
2/56 nuts, pkg of 10 .10 3/48 nuts, pkg of 10 .10	Submini, hearing aid type .20
3/48 nuts, pkg of 10 .10	Submini, 5WC type .35
4/40 nuts, pkg of 10 .10	Flea clips 4/10¢ 12/ .25
6/32 nuts, pkg of 10 .10	
Wing Nuts, 6/32, pkg of 2 .15	
Eyelets, 3/32" od, 30 .10	SWITCHES
Eyelets, 3/32 od, 30 .10	
Everers, 1/0 om,	Slide type, knife contact
2,01000, 20000	SPST, DPST, SPDT, either .20
Eyelet lugs 10 .10 solder lugs 10 .10	2201, 2221, 2221,
solder lugs 10 .10	1088-01
Fibre washers, asst. 10 .10	108820, 252
Fahnestock clips small 3 .10	Push button, cable use .45 Push button, cabinet use .30
Fibre washers, asst. 10 .10 Fahnestock clips small 3 .10 Fahnestock clips large 3 .10	
DUIANTALHUM UNDE TAY VA	Push button, micro, normally on .90
Spaghetti, 3 feet .10	
Lord Shock Mount .20	
10	TRANSFORMER
Mini-gator insulator .12	
Mini-gator clips Mini-gator insulator Alligator clips, standard size .15	Power pack transformers, see page 3
Alligator Clips, beamders	
- 00	Modulation transformer, made for us
Solder, Ersin multicore, 1 oz20	by Triad for audio transmitters
Double off the contract of the	2.95
Tuning screwdrivers	SSO3, subouncer output 4.95
Small, 3 inches .20	Output similar to 9002 electrical=
Large, 12 inches .40	1. but alightly larger 150
WIRE	ly, but slightly larger 1.50
Magnet, enamel insulation. All even	WIDER TO NETOTORE DIODES
sizes from #14 through #40	Tobbo, Third Diolo, Diobbo
#14 through #20 per foot .01	RK61 3.50 304 1.00
#22 through #40 two feet .01	MAGI 0.00 CQ1
	AFG1 3.50 354 1.00
#18 solid, plastic ins. foot .03	CK526 2.25 3V4 1.20
#20 solid, plastic ins. foot .02	
#26 solid, plastic ins. foot .01	CK5672 1.95 6AK6 1.50
	CK722 1.50 6AQ5 .95
#22 stranded, plastic insulation.	CK705 (1N66) .85 6C4 .95
Flexible. 20 feet of 5 colors	184 1.10 6J6 1.00
.25	185 .95 68L7 .95
#24 stranded, plastic insulation.	
Flexible. 20 feet of 5 colors	1115 1 30 1N51 .65
.35	1AG4 1.95 1N64 .30
Cableplastic jacket covering 3, 4	1AG4 1.95 1N64 .30 1AG5 2.50 1N66 .85
and 5 #22 stranded wires	
3 wire cable foot .05	
4 wire cable foot .06	3A5 1.00 NE51 Neon .20 3B7 1.00 #47 pilot .10
5 wire cable foot .07	
O WITE CEDIC 1000	3D6 .95 #48 pilot .10

TERMS---We will pay postage on all orders over \$3.00 if you remit with your order. Orders under \$3.00, please add 50¢ for handling and postage. COD orders postage collect.

Ace Radio Control Box 301
In the Heart of America Higginsville, Mo.

