

MATH'S NOTES

BY IRWIN MATH,* WA2NDM

I WOULD like to start this month's column with an item I hope is still in stock by the time you read this. Herbach & Rademan, 401 East Erie Avenue, Philadelphia, Pa. 19134, a surplus house dealing primarily with industrial concerns, is offering a Teletron type 7735 one inch vidicon camera tube for the amazing price of \$12 each. These tubes are brand new, fully tested, and guaranteed to meet all 7735 specifications except for "occasional slight blemishes and shading and should be perfect for all but the most demanding applications." Since one has to look far and wide and hard to find any kind of usable vidicons, not to mention new ones, for anywhere near this price, this is indeed a bargain for those who need such a tube. You might also request a copy of their Spring 1973 catalog.

In the June installment of MATH'S NOTES, we mentioned the ZN414, a complete, self-contained radio receiver integrated circuit, manufactured by Ferranti Ltd. of England, and promised some follow up information when it became available. We have just received some additional circuit details and would like to pass them on to you now.

Figure 1 is a schematic of a complete receiver, suitable for use from 150 kHz to 3 MHz, using one Ferranti ZN414 integrated circuit. The values of L and C should be selected for the frequency range of interest and the "Q" of the combination should be as high as possible. Signals of down to 30uv or so at the input of the chip will be receivable with this circuit.

In figure 2, one stage of amplification with a volume control has been added for greater convenience. Also, a crystal earphone is used instead of the magnetic one.

Other circuits and applications as well as performance data for this unique integrated circuit are given in a brochure published by Ferranti and are available domestically from

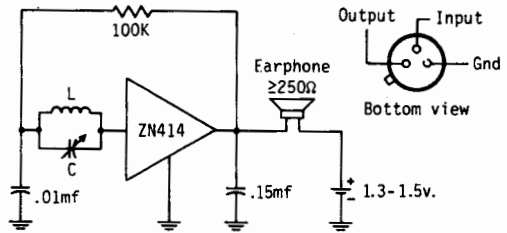


Fig. 1—Complete receiver, usable from 150 kHz to 3 MHz.

Ferranti Electric Inc., East Bethpage Road, Plainview, N.Y. 11803.

Also available from the same source are the ZN414's. Cost is only \$4 in quantities of 5-49, \$3.40 for 50-99 and \$2.95 for 100 or more. Single units are \$5 plus 50¢ handling.

We have received three new surplus manufacturer's brochures this month and would like to briefly describe the contents of each.

Andy Electronics, 6431 Springer Street, Houston, Texas 77017 has brought out a new catalog listing lots of government surplus test equipment and components. Some items that "caught our eye" were AN/UXH-2 FAX machines, in good condition for \$50, Kleinschmidt Corp. (SCM) Teletype units, type TT-100 for \$89.95, all kinds of miscellaneous RTTY parts and accessories and replacement CRT's for almost all Tektronix oscilloscopes.

Colonel Wayne D. Russell, 9410 Walthampton, Louisville, Kentucky 40222, a newcomer to us, has sent us a brochure with several interesting items.

One of these is a Hallicrafters T-14/TRC-1 f.m. transmitter, 70-99.9 MHz, 40 watts, that should be easily convertible to 6 meters. These units are complete with all tubes, and a wooden field case. The price is \$29.95, F.O.B. Louisville.

Another item is a collection of AN/GRC series, equipment consisting of two f.m. transceivers, the RT-68 (\$35.00) and the

[Continued on page 82]

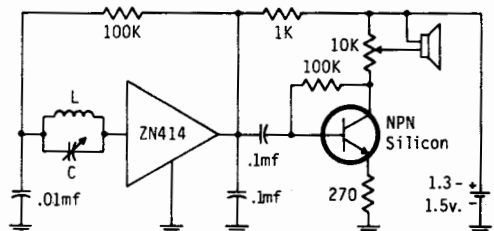


Fig. 2—Amplified version of fig. 1.

*5 Melville Lane, Great Neck, N.Y. 11023.

Math's Notes [*from page 45*]

RT-70 (\$15), (both tune the 6 meter band with no modifications), an R110 receiver (also 6 meters) and several control boxes, power supply, and accessories.

East Coast Electronics, 50 Scott Street, Hamburg, N.Y. 14075, has sent us their latest flyer which contains a wealth of components that should interest the experimenter.

New Rotron fans are \$6.50 each, Nixies are 3 for \$6, a Guardian solid state time delay (adjustable from .5 to 100 seconds) is \$4.50 and, for those just getting started, several brand new, excellent quality hand tools such as diagonal cutters, long nose pliers, etc., for only \$3 each.

Also included are capacitors, semiconductors and the like, just about all of which are *brand new!* If you are interested, write for the list.