

M42-1-1
 Radio Receiver--Chance or Choice can be obtained from Gilfer Shortwave, P.O. Box 239, Park Ridge NJ 07656, for \$18.50 plus \$1 shipping. I feel that it was a very worthwhile addition to my library.

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Schottky Diode Detectors

NHP

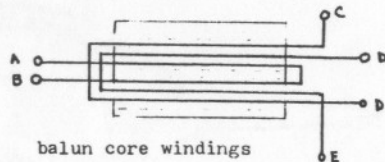
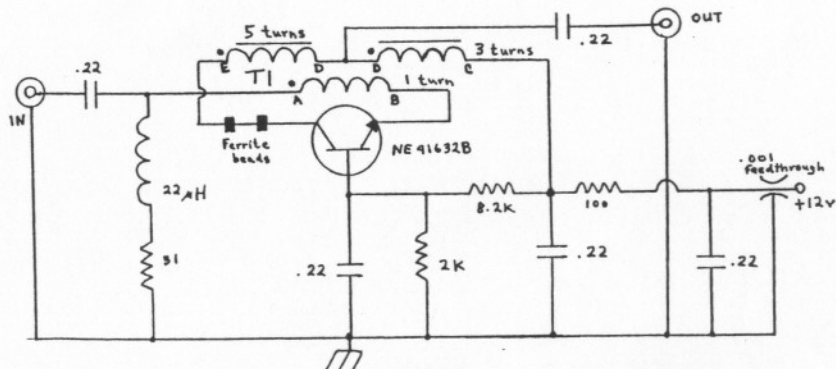
You've probably heard by now that Radio West, 3417 Purer Rd., Escondido, CA 92025 is offering a "Schottky diode receiver mod" for \$35 AM/SSB in communications receivers and \$25 for the AM only detector in portables. According to the October '85 Garage Sale list from Radio West, the mod involves replacement of the stock detector diodes (point contact germanium) directly with Schottky barrier diodes. These diodes are more expensive, but according to Radio West, they are less noisy, allowing weaker signals to be detected. That isn't quite all there is to it according to Rev. Doug Millar K6JEY, writing in the November '84 QST, p. 55. He used these devices to replace the stock product detector diodes in his TS-830S transceiver and noticed a definite improvement in audio quality. This was not just due to less noise using the Schottky diodes. His point is that "in the audio frequency range, a point contact diode contributes to the distortion of a received signal". Below a critical frequency (i.e. in the audio frequencies which we want to recover) noise and distortion increase dramatically. This critical frequency is lower for various Schottky diodes. So, less audio distortion is contributed to the detected signal by a Schottky diode--rather important when trying to ID a weak signal.

Rev. Millar first used Radio Shack 276-1124 diodes, then went on to using HP 5082-2900 from Hewlett-Packard. (Write Hewlett-Packard Components, 350 W. Trimble Rd., San Jose, CA 95131 for distributors) The RS diodes are not listed in my most recent Canadian catalog; are they still available in the U.S.? I'm not sure if one type of Schottky diode is better to use in detector circuits than another, but so-called "hot-carrier diodes" also use a Schottky barrier construction. I used such a diode to replace the AM detector in my SPR-4, and it does seem that its audio has become crisper. Unfortunately, I don't have a stock SPR-4 to compare it with, so I won't state that the new diode has been a definite improvement. Schottky and "hot-carrier" diodes are available from Mouser Electronics, 11433 Woodside Ave., Santee, CA 92071 and a hot carrier diode is available from Circuit Specialists, P.O. Box 3047, Scottsdale, AZ 85257.

(Thanks to Bruce Portzer for drawing my attention to Rev. Millar's observations in QST.

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Gerry Thomas' Phase One delay line phasing unit described in the Nov 16, 1985 DX Monitor should certainly be of interest to the antenna experimenter. The main limitation in its use for the urban DXer might be found in the broadband amplifiers used, which may overload under the brunt of numerous local 50 kw stations. A somewhat more "crunchproof" broadband amplifier designed for 50 MHz is described in the November '84 Ham Radio. According to Jim Hill, the designer says it will work down as low as 455 kHz using .22 uF bypass capacitors, so I'll run a reproduction of the circuit using the larger capacitors:



Transformer wound on Fair-rite type 284 3002 402 balun core

Input/output impedance of the amplifier is 50 ohms, and parts for it are available from Proto-Parts, 74 Wedgemere Drive, Lowell, MA 01852; send SASE for a price list. I can't guarantee that this circuit would be an improvement over the amplifiers that Gerry built from the October 1982 QST! A similar broadband RF amplifier appeared in the July 1984 CIDX Messenger, p. 31.

Another source for a delay line might be Fair Radio Sales, PO Box 1105, Lima, OH 45802, which offers a three delay line assembly on p.26 of their WS-85 catalog. These lines, stock #5915-650-38-5, each have .5 usec (500 nsec) delay and are continuously variable, with a 750 ohm impedance. At \$12.95, they might be worth investigation. Again, I haven't tried them, so no guarantees...

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Circuit Specialists (address on previous page) offers the MC 13020P Motorola stereo decoder IC for \$3. Who's going to be the first to put one of these in a DX radio and log Australia in AM stereo? I've heard CHAM-820 in stereo here using two receivers and a stereo amp, but Australia in stereo would be even more amusing.

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 Finally, Century 21 Communications Inc., 4610 Dufferin St., Unit 20-B, Downsview, Ontario M3H 5S4 may be of interest to Canadians, as they carry Kenwood, Icom and Yaesu receivers and claim to have the lowest Canadian prices on these units.

EASTERN DX FORUM

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There have been several items in DXM that I'd like to comment upon; I'm just sorry that I have been too busy before now to send in a forum. My logs have always been kept in GMT, yet I feel that ELT is more logical for DXM! GMT/UTC can only lead to total confusion, especially when listing ET's, when a majority of the states switch to Daylight time/Standard Time each year! ELT is logical because domestic stations are the majority of what we list in DXM, and the first to sign/off and on begin with the eastern time zone. GMT is perfect for the DXW column. It has been said that others use GMT/UTC, so should we. Doing something just because others do it has always been the worst reason and a poor excuse. We should use the time that is most logical for our needs, not others. If we change, we should only do so if it will aid us; I have yet to see an explanation as to how GMT/UTC can benefit us. While the only computer I use, other than the one at work, is the one located between my ears, I believe that DXM should have some articles on how to use personal computers in DX'ing. This would help keep the club current, and as the technical articles benefit the technically oriented so would these articles help those with an interest in computers. As for promoting one partial AM stereo system over others, as hobbyists, should we? What would be gained by doing so? If the industry and the FCC can't decide upon a standard why should we? In regard to technical articles being sent to the technical column only, why? Also, why restrict the size of