

Microwave Engineering Project Transverter Research Document

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W5NYV, KC8SVT

| Transverter | Output/IF | Bandwidth | Source | Price |
|---|-----------------------------|--------------------------------------|--|----------------|
| 3456-144 | 3456MHz/144MHz | DEMI Estimates 20MHz | Down East Microwave 3456 MHz transverter assembled, 1W, <2dBNF, 144 MHz IF, Separate TX/RX ports | \$450 |
| 3456-144LP | 3456MHz/144MHz | DEMI Estimates 20MHz | Down East Microwave 3456MHz transverter assembled, 20mW, <2dBNF, 144MHz IF, Separate TX/RX ports | \$375 |
| 5760-144 | 5760MHz/144MHz | DEMI Estimates 20MHz | Down East Microwave 5760 transverter, 2W, <1.3dBNF, 144MHz IF, Separate TX/RX ports, SMA conn, assem | \$675 |
| 5760-144LP | 5760MHz/144MHz | DEMI Estimates 20MHz | Down East Microwave 760 transverter, >10mW, <3.5dBNF, 144MHz IF, Separate TX/RX ports, SMA conn, assem | \$385 |
| DB6NT 3.4GHz transverter module MKU34G2 | 3456-3458MHz/ 144-146MHz | 1dB BW/ 10MHz 3dB BW/ 20MHz | http://www.kuhne- electronic.de | About \$400 |
| DB6NT 5.7GHz transverter module MKU57G2 | 3456-3458MHz/ 144-146MHz | 1dB BW/ 10MHz 3dB BW/ 20MHz | http://www.kuhne- electronic.de | About \$400 |
| San Bernardino Microwave Society 3.4/5.6GHz transverter kit | TBD | TBD | TBD | TBD |

The Transverter: An Introduction to a Useful Device

<http://www.arrl.org/tis/info/pdf/O306040.pdf>

transverters-101 writings - link at the bottom of the page -

<http://www.ntms.org/present.php>

This is a home brew implementation of a transverter -

http://mysite.verizon.net/michael_d_lewis/10GHz_Project.htm

The San Diego Microwave Group 1296 MHz Transverter K. Banke N6IZW

12/20/00 - <http://www.ham-radio.com/sbms/sd/1296xvdoc.htm>

A Simplified Path to a High-Performance 10-GHz Transverter -

<http://www.cq-vhf.com/Sum07ASimplifiedPath.html>

Surplus microwave test equipment at [FairRadio.com](http://www.fairradio.com) which is a little drive north of Dayton Ohio ...

<http://www.fairradio.com/catalog.php?mode=view&categoryid=179>

K7MDL Amateur Radio Pages 5.7 GHz Transverter Project -

http://mysite.verizon.net/michael_d_lewis/5.7GHz_Project.htm

lots of transverter projects -

<http://members.fortunecity.com/xelbef/transverters.htm>

good photo of a transverter mounted to a dish -

<http://www.n4mw.com/24ghz.htm>

A transverter sequencer project - easy to read descriptions with some cautions, photos, schematics -

http://www.w1ghz.org/small_proj/sequencer_V2.pdf

list of transverter manufacturers and vendors -

<http://www.dxzone.com/catalog/Manufacturers/Transverters/>

note : where i left off on my search

<http://search.yahoo.com/search?p=surplus+transverter&ei=UTF-8&fr=moz2&xargs=0&pstart=1&b=51>

DB6NT 3.4GHz transverter kitset paired with 9cm PA from Mark, GM4ISM provides 15W. DB6NT also has a 5.7GHz transverter kit.

3.4GHz system writeup

<http://www.g3pho.free-online.co.uk/microwaves/9cm.html>

Microwave Rover Station observed with

- 1) Down East Microwave transverter
- 2) Directive Systems 3.4GHz Looper
- 3) Directive Systems 976LY 76 Element Looper

San Bernardino 3.4/5.6GHz transverter kit is in progress.

Bandwidth Inquiries

Kuhne Electronics

Here is a (translated) message from Kuhne Electronics, the source for the DB6NT transverter kits, answering an inquiry about their supported bandwidth for their microwave transverter kits by DB6NT.

“Hello Michelle, thank you for the interest in our products. Our microwave Transverter MKU 34 G2 and MKU 57 G2 is available as kit (Transverter kit). The RF-range is as follows: 1 dB-bandwidth approx. 10 MHz 3dB-bandwidth approx. 20 MHz.

“These data are valid for the normal alignment (narrow-band), which is descriptive in the guidance. If RF-measuring instruments are available, also the alignment is possible on a somewhat larger range.

“In addition one should have, however, experience with microwave engineering! Further information on the Transverters is on our web page:

http://www.kuhne-electronic.de/en/shop/147_Transverters

“Since the beginning of 2008 we sell our products world-wide only directly (no more over SSBUSA.com). Thus we guarantee best service and support. Our web page is attainable over www.db6nt.de. We are pleased to be able to offer you the following prices:

1 x KIT 3,4 GHz 34G2 the USA 263.87 € (Frequency 3456 MHz, all construction units and description)

1 x KIT 5,7 GHz 57G2 263.87 € (all construction units and description)

“Forwarding expenses to the USA 30.13 €

All prices understand themselves without value added tax.

Terms of payment: cash before delivery on our bank account, by master Card or visa Card

“We will gladly answer any questions you might have. We would be pleased to receive your order.

Many greetings, Stefanie Bahr, DL8NSB”

Down East Microwave

“Our transverters are designed to be used with an IF of 130 to 150MHz. So the bandwidth of 12MHz is not (a problem). The switching speed may be since the units are not full duplex and have mechanical relays for transmit and receive switching functions.

“The flatness response is dependent on the TX and RX gain stages within the transverter and since we only use the transverter in a narrow bandwidth (300KHz) it has never been an issue for our type of use so we do not know. As for the phase stability our assumption is if it does not change in temperature the phase will not change at that particular frequency but again what it does in a 12 MHz bandwidth has not been tested.”