

This is a collection of accumulated wisdom for running the DiFX software correlator on observations including LBA data specifically.

For more information see [notes from the correlator at Curtin](#).

This fix on inverted bands is very out of date. If the vex file correctly describes the setup (as it should) then the vex2difx/mpifxcorr will do all the necessary inversions, and this is much preferable to hacking the input file.

Notes below are quite old. (Fix below can also be made in the vex file rather than the v2d.) It is also possible/better to invert the data prior to correlation. ===== 64 MHz Modes =====
The DAS band inversion module is bypassed when running at max data rate (512 Mbps per DAS dual pol 64 MHz). This means that if the band for a given antenna is inverted, you have to manually tell the correlator to invert it—the DAS won't fix it for you. At present, this means manually looking up whether a band is inverted for each station, and if necessary adding extra entries in the frequency table of a .input file and changing the datastream entries for that telescope to point to the inverted bands. To enter an inverted band in the frequency table, first increment the number of entries in the table (top line) and then copy/paste the frequency that you want inverted to the bottom of the table. Edit the index numbers of this new entry appropriately. Then add 64 to the frequency, and change the "SIDEBAND" line from U to L (ie upper to lower). As an example, if i wanted to have an inverted band of frequency 0 in the following table (sorry about the dodgy spacing in the tables): [=#]= FREQ TABLE #####!

```
FREQ ENTRIES: 2
FREQ (MHZ) 0: 8257.0
BW (MHZ) 0: 64.0
SIDEBAND 0: U
FREQ (MHZ) 1: 8307.0
BW (MHZ) 1: 64.0
SIDEBAND 1: U \\ I would end up with: [=#]= FREQ TABLE #####!
FREQ ENTRIES: 3
FREQ (MHZ) 0: 8257.0
BW (MHZ) 0: 64.0
SIDEBAND 0: U
FREQ (MHZ) 1: 8307.0
BW (MHZ) 1: 64.0
SIDEBAND 1: U
FREQ (MHZ) 2: 8321.0
BW (MHZ) 2: 64.0
SIDEBAND 2: L
```

And for reference: vsop.pro for ATCA and Mopra is a **FLIPPED** profile! vsop_n.pro is the unflipped profile for these stations.

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