

STAR PARTS IN VK (harder to get parts listed only)

Building of a PICaSTAR. This is a list by VK3PE of the harder to get parts to build this rig. It should be noted that the hardest to get parts are: ADSP-2181, AD1885, AD603. I managed to find all of these on Ebay. Some builders have had success getting these parts as samples. Good luck trying this in Australia. The website refers you to the Australian Distributors who refuse to supply samples. In any case, some of these parts may have become obsolete. (ADSP2181 possibly.) **NO, its OK June 2007**

Don't give up though as persistence on Ebay has paid off for me. Same with the AD9951 DDS chip. Available locally also. The recommended xtal filter 10M4D is most easily found in some CB radios. See below. Occasionally, there have been group purchases on the STAR group. The 10.710MHz crystal, I bought from Hy-Q crystals. Cost is \$25.

The listed coil formers for the receiver band pass filters are virtually impossible to buy. Although not built yet, I intend to try using TOKO 10k formers from CB radios. The white ringed type should be suitable. You will need to check one for suitability. The ones I tested give uH = 16 * Turns ^2

It is VERY important to make sure you read **ONLY the build documents on the STAR website** and also the official Mods List !! **if unsure ASK the GROUP.**

However there are some official board changes made by G3ALLU. His page is on the LINKS.

He has modified a couple of the PCB's to incorporate the official mods or to simplify things etc. He also has a nice 20W and 150W power amp.

There is also an alternate PICNMIX pcb worth looking at in the LINKS section. A number of people have gone this way.

The rest of the parts are not too hard to get. Atronics stock a range of 1206 SMD parts. I am not sure if they carry all required for STAR though. You will find some 1206 kits etc on eBay. **Check carefully the postal charges for some of these.** The parts seem cheap but postage is an absolute killer!

If several people are building together, it pays to do some group purchases. The US place selling Toroids is excellent with good prices, but he does not stock ferrite beads.

If you plan to build the 150W PA, buy your SD1487s (check!) asap from Birketts in UK. Not many left I hear. Very reasonable prices for a pair. VK7MX can advise address etc. VK7MX had some spare pairs also as of 290407. Check with him.

Also, register on ebay if not already and set up for searches on the parts you want to buy so you are notified when they come up.

17-05-07 updated with some approx pricing and min order numbers for the AD parts.

15-07-07 minor update re. 24.576 Xtal source

also DAC part number corrected in DSP mother board section.

19-07-07 Rockbies have the TLC7524 DAC. See below.

20-07-07 Timer PCB FET's see below.

210707 add web address for polystyrene caps. See below.

and a source of **NEW** xtal filters. Double check p/n with them and what it is !! **Bound to be expensive!**

31-07-07 add note re formers for Rx band pass filters

04-08-07 make PDF version also for web.

IF Board:	AD603	I used SMD part-	ebay	try distributors, Avnet. (03 9760 4260)) approx \$9 min each, min order is eleven.
	10M4D filter 10.695MHz		old cb radio	US\$11 STAR group Got mine from Realistic Marine CB radio Realistic TRC-621 also UNIDEN PC-122 CB has them. others also..... Hatadi Pearce Simpson Super Tomcat MK2. filter is marked MCF 10M04DS UNI. Realistic TRC-453 (most likely but not checked internally)
	10.710mhz xtal	ordered new	Hy-Q	\$ 25.00
	Toroids	Local	see AR magazine	see later notes re Toroids
		New as spare part:	P/N EFx8106952 (from Ranger CB) From www.pacific.us.fm.pacific2005/store.html	

PICASTAR components

Magic Roundabout Board:

BN-43-2402 see later notes re USA local purchase TT Systems Tyab Vic.
 T25- 2 see later notes re USA local purchase TT Systems Tyab Vic.
 FB-43-101 30c each local purchase TT Systems Tyab Vic.
 J310 eBay! also had MP5H10's
 BC517 darlington tsr Farnell have these other similar darlington should be ok
 Epcos cores Epcos impossible to buy **Dick Smith F16 TV balun core might work?? But bigger**
 89L62 VOLTAGE REG FARNELL OR ROCKBYS

Audio amplifier STEREO AMP IC I used the TDA1519 ROCKBY Electronics used Data sheet for schematic and made own PCB
 see G6ALLU for another part about \$4

DSP board ADSP2181 eBay! \$us4 FOR "PULLS"
 I paid about \$13 for 3 parts. Be careful bidding. Sometimes they go for stupid money !!
 try VK distributors, Avnet. (Steve Handby 03 9760 4260)
 Avnet approx \$45, min order is three

Codec Board AD1885 I used a 27C256 JUNK BOX Rocky 27C512 #26592 \$2
 16.667MHz Xtal 16:384 is OK (see star posts) fairly easy to find 16:384MHz (16.667 would be custom xtal)
 AD1885 eBay rarely try distributors, Avnet. (Steve Handby 03 9760 4260))
 24.576MHz xtal easy to find eg Rocky #13687 approx \$5.50, min order is eighteen.
 some old PC boards (10Mbit LAN boards?) have them

DSP Mother board ST232 (RS232 part) MAX 232 or ST232 NEED 1uF CAPS THOUGH FOR MAX232
TLC7524CD D/A Digkey or Jaycar in Aus. see notes in STAR re. Brand to use !!
 not sure of brand. Check first on STAR and Rocky.

PIC N MIX (DDS etc) AD9850 eBay! us\$10 try distributors, Avnet. (03 9760 4260)
AD9951 alternate is preferred eBay! US\$12 ? bought off eBay, or above.

PIC board PIC 16F870 FARNELL also Digkey but watch min order and surcharges !!!
 some old PC cards have 20MHz xtal on them.
NOTE STAR I uses 16F876 & 20MHz xtal
 ~122.3MHZ XTAL used. NEBRASKA SURPLUS SALES (USA) (min order US\$10 &post)
 MP5H10 tsr's eBay! also has the J310's
 thermistor 10k Farnell 265-690 ?? see STAR web site for Farnell equiv.
 7 segment displays 3 digit **Lused 2 x 3 digit's Green** 2 digit equiv to STAR Farnell 325-4690 (GN) or 325-4677 (Red)
 ARE OBSOLETE
 CHECK FARNELL #100314 Red

AD9951 PCB REGULATORS **NB: STAR uses 3 x 2 digits** 2 digit or 1 digit PICNMX versions are on the STAR Links page
 TIP123 for xtal heater ROCKBY #12340
 bought this part but not yet tried.

PICASTAR components

TIMER BOARD
 PIC 16F627 FARNELL Digkey also but watch min order and surcharges !!!
 ULN2803 junk box Jaycar have them I think
 VP300 ? Farnell **note different pinout**
 used ZVP2106A (diff pinout)
 20/07/2007 Post #21914 mentions some other types. In thru hole
There is a later version of this PCB in star Links, using the NDT2955 FET's. This would be the way to go. Farnell have them
 The VK3PE panel of PCBs uses the NDT2955's

STATUS BOARD
 PIC 16F627 FARNELL Digkey but watch min order and surcharges !!!
 LEDS 3mm JAYCAR etc approx 15-20c each
 KEYBOARD 3X4 JAYCAR etc **Mine was from a very old portable phone**

Following boards not yet built, but have Transistors.

20W RF POWER AMP RD06HHF1 FET RF PARTS USA US\$3.95 * 2 US\$14.50 SHIPPING !
 RD16HHF1 FET RF PARTS USA US\$4.25 * 2 WWW.RFPARTS.COM
 Ferrite cores: for the 150W PEP amp
 SD1487 (check #) pcb kit is available with Ferrites pre-wound from Communication Concepts in USA. Nice people (a lady) to deal with. (I think about \$100 with no tsdrs) bought from Birkeits in UK (about \$22 /pr) ask VK7MX

Rx BAND PASS FILTER BOARD
 Lodestone & TOKO COILS WHITE TOPPED TOKO 10K COILS ex CB radios
 original type impossible JUNK BOX (FROM CB RADIOS) uH ~ = 16 X T^2
 to get. See post #22478 for some details on toroids. added 310707
 Also check posts for filter details that cover VK ham bands etc. added 310707

FST3125 Farnell about\$6 each ! got mine From Harold on STAR chat
ALSO FROM DIGIKEY:- OR SN74CBT3125 Part # IS **296-1165-1-ND** DOUBLE CHECK IT !! quite cheap:-
 OR P13C3125WE-ND different brand. Double check the number but min order and Australian surcharge & post is high
 Polystyrene caps DSE has some but I bought mine from a place in USA quite cheap. The web address www.justradios.com
NOTE:- theres a later version of BPF pcb using SMD caps, by G6ALU **NB. NPO in hi values VERY hard to get**

FST3126 Farnell about\$6 each ! got mine From Harold on STAR chat
ALSO FROM DIGIKEY:- OR # 296-1537-5-ND from digikey for FST3126 or equivalent double check package and numbers
 OR P13C3126WE-ND different brand. Double check the number before ordering
FST3126 can be bought from Mouser in USA I think. Bill, VK7MX has the details. Quite cheap. BUT postage is HIGH. Definitely need a group buy here !!
 If you have a friend in USA who can on-post them to you, postage within USA is about US\$7 and then by USPS to VK is OK.
 Be CAREFUL Mouser 595-SN74CBTLV3126PW is wrong package for STAR !

note: ALL ANALOG DEVICES PARTS WERE OBTAINED BY UK AND USA STAR BUILDERS, BY REQUESTING SAMPLES FROM THE AD WEBSITE. IN AUSTRALIA, THESE REQUESTS ARE REFERRED TO THE LOCAL DISTRIBUTORS WHO WILL NOT GIVE FREE SAMPLES ! ONE WAY, IS TO GET A UK OR USA HAM FRIEND TO GET THEM FOR YOU AND POST THEM TO AUSTRALIA. Paul Engler was able to get samples from Austria. Check with him.

Ferrite cores: Amidon can be bought from TTS Systems in Tyabb, Victoria. Info@ttsystems.com.au, however there is a web site in USA who sells for very low cost in qty.
 His web site is: http://partsandkits.com/

PICASTAR components

ROCKBY check www.rockby.com.au

