

P5

*Newsletter of the Severnside Television Group
Edited by Shaun O'Sullivan G8VPG*

CHAIRMAN PAUL STEVENSON G8YMM

A warm welcome is extended to all our new members we hope you will find P5 interesting, informative and useful.



MEMBERSHIP QUESTIONNAIRE

Thank you for completing the membership questionnaire, to which the results were very encouraging. Technically, it has provided the committee with a very useful data base to identify, and plan future resources. It was interesting to see the different types of equipment being used and the (P) grade of reception paths.



NEW FOR P5

In order to introduce and help beginners we have decided to reprint occasionally, a number of popular P5 articles which appeared some time ago. This does not mean boring television repeats!! No quite the opposite, we have lots of exiting news coming up and some very interesting articles.

To reach into your Diaries, we will be printing a section called "**DATES FOR YOUR DIARY**". This will help us to remind and keep you more informed. For those who receive GB3ZZ the information will be available from our text service.

Also, we hope to include from time to time a section called "**READERS LETTERS**". This will give members an opportunity to air their comments and suggestions and create some interesting feedback. Please send your letters, comments and any articles to the editor. We can accept computer DOS text on a floppy.



JAMBOREE ON THE AIR (JOTA)

On Saturday 15th October 94, members from STG will be transmitting from the Nailsea Scout Headquarters Bristol into GB3ZZ. It is hoped that those who can receive GB3ZZ will join in the fun. For those who are unable to participate, you could always have a QSO with a local or overseas JOTA station. Incidentally that's how I was introduced to Amateur Radio in 1974.



CHRISTMAS PARTY

Once again we will be holding our annual Christmas Party with all its trimmings, on the 17th December 94 starting at 7.30pm. Please feel free to invite your YLs or friends. The Venue as always:- Filton Recreation Centre, Elm Park, Filton, Bristol. If you can bring some food or drink all the merrier. We hope to have our usual Auction to raise funds, so if you have any reasonable junk, books, or bananas!! to get rid of, then bring it along.

G8YMM HOT TIPS

- ☛ Blue Tack on the end of a screw driver, holds a screw in place if you cannot hold it with your fingers.
- ☛ Lighter fuel removes sticky labels/tapes and cleans most equipment.
- ☛ Battery operated drill, one of my best buys has saved time, and good for those high places!!.
- ☛ Automatic Centre punch, no need for those hammers.
- ☛ Cone Cut, a coned shaped drill, that drills any size hole up to its largest diameter.
- ☛ Sharpen your razor blades again with fine emery paper but don't shave with them !!
- ☛ Fill gaps and cracks indoors with a water based mastic filler, wet your thumb and wipe along, don't waste time pocking around with a knife and conventional powder filler it only cracks. Up to 80% of time can be saved.
- ☛ Fine Wirewool grade (000), cleans Aluminium and other metals. Used with furniture stripper provides a good platform in which to renovate furniture.
- ☛ Don't clean your oil base paint brushes if your using them the next day, just immerse them in water or wrap them up in Cling Film.
- ☛ Qmax cutters, a must for large accurate holes i.e. PL259.
- ☛ Tights or stockings what ever you prefer!! excellent for filtering out those bits in gloss paint.
- ☛ Portable Soldering Iron for those jobs in and about.
- ☛ Store your paint upside down, prevents skin forming on top and seals the lid. Make sure the lid is on and a good fit.
- ☛ When fitting locks etc. put the fixing screws in at an angle. This makes it difficult for the screws to be forced out, as the lock is as only strong as the screws that hold it.
- ☛ When laying stone floors, tiles etc. don't try and fill the gaps with a trowel. Instead, make a liquid solution of the filler and float it all over the tiles, then place sawdust over the top. Allow a little time for it to soak in and simple brush away with a stiff brush.

Sevenside atv contest Phil G1HIA

This is a brief summary of the STVG contest. Two weeks prior to the contest date the collation of equipment begins. Phone calls to various members who store our 4 x 48 element 24cms and 4 x 21 element 70cms antennae, and power supplies, transmitters, amplifiers and the rest of the tons of equipment. The begging 'phone calls to people without whose help we could not stage the contest. The farmers wife, to remind her that another invasion is about to descend on her, and allow her time to move the cows (but alas not the cow-pats). To Ken, the generator owner, who would rather receive a pleading 'phone call from our Viv, than a big burly me (he was persuaded to part with it). Finally to Tony at the Gordano Radio Group, who not only loan us the portable tower, but also deliver it to site (what a service).

Wednesday: Prior to contest date, sees us towing the two caravans, one an operators' van and the other the "hospitality" come sleeping caravan, both of which were donated to the contest group. Along with the generator and several cars, loaded with equipment, winding our way through the country lanes of the Mendips hills.

Friday afternoon: Assembling the aerial arrays, checking generator and other numerous tasks. Leaving two members on the Mendips overnight for security.

Saturday morning: Another steady stream of helpers arrive to secure cables to the mast and to help crank up the tower. This task was repeated three times in all, once for a broken pre-amp wire, the next for a broken video cable, and finally for trapped cables at the mast head. We all took turns at cranking the tower up and down, working up an appetite for the forthcoming barbeque. We polished off the food in record time, about eighteen members and wives tucking in, thanks again to June and Alan for the long black burnt ??? No seriously. many thanks.

We started the contest around two hours late, and had the usual line up of locals, and surprisingly, our first contact on 3cms to Nigel sporting a GW call. Sad to say, our 3cm activities were all one way, later we discovered our 3cm TX was rather sick, never mind, 70cm and 24cm contacts from his location were helpful. We ran the contest through the night, three of us called between 02.30 and 05.30, sad to say that everyone else had retired to bed, or so it seemed, as we didn't make a single contact between these times. As you can tell, we were either serious, or seriously mad ???

I would like to express my thanks to all those who loaned, helped in any way, and to all stations that were there to give us the points and even more to the stations we could not see, but the fun was in the trying, without you all there would be no contest.

Oh, the name of the contest, "Summer fun" and it certainly was that.

Oh no! Oh yes! we had to dismantle it all again, cables neatly rolled, caravans packed up and the farmers field left as we found it (minus a few cow-pats). Whatever happened to portable back-pack operating?

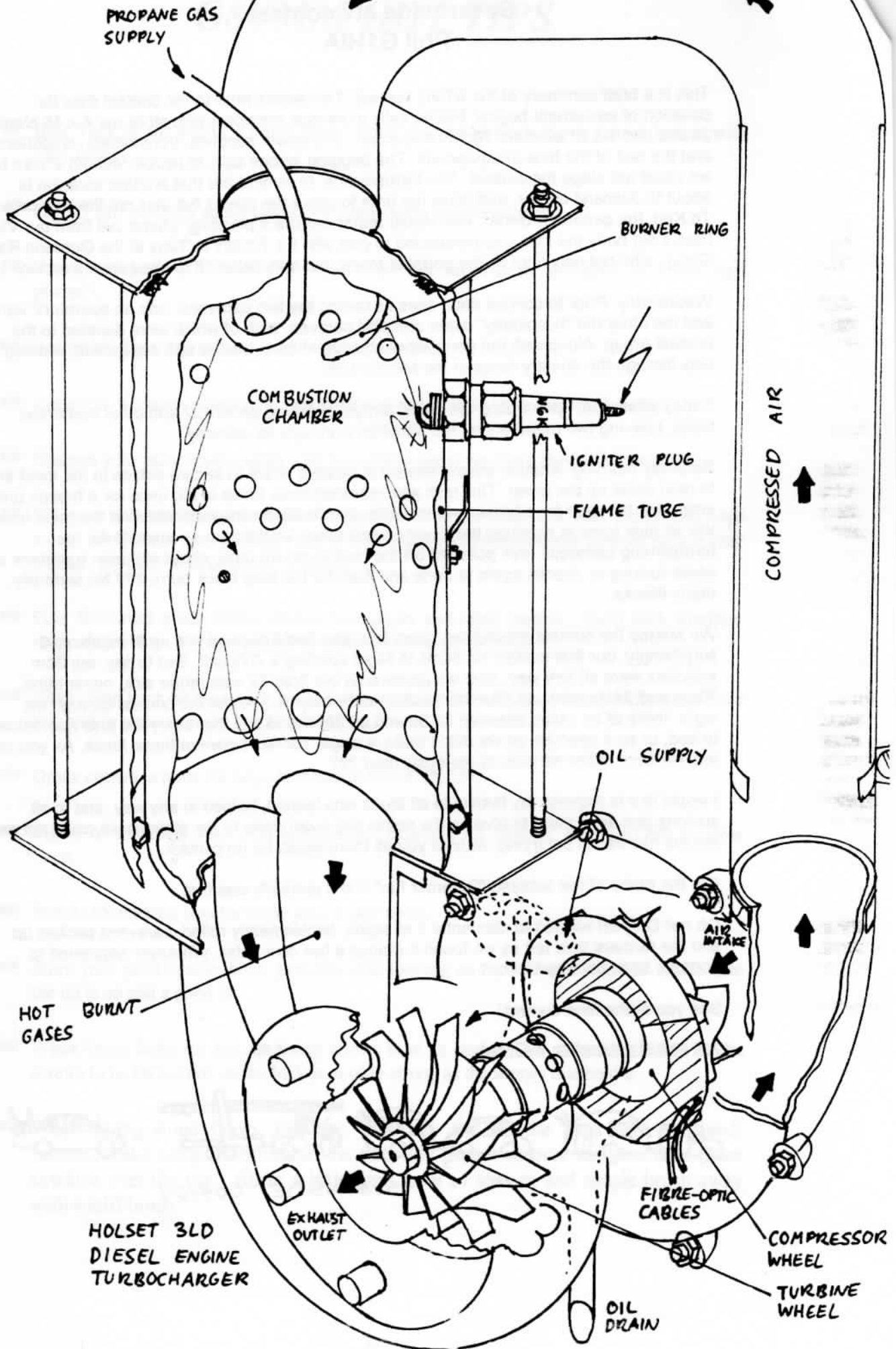
See you at the next contest!

73s Phil G1HIA STG member.



SEVERNSIDE CONVOY.

THE AWARD WINNING HOME BUILT
 GAS TURBINE ENGINE AS SEEN
 THROUGH GB322 BY G6TVJ

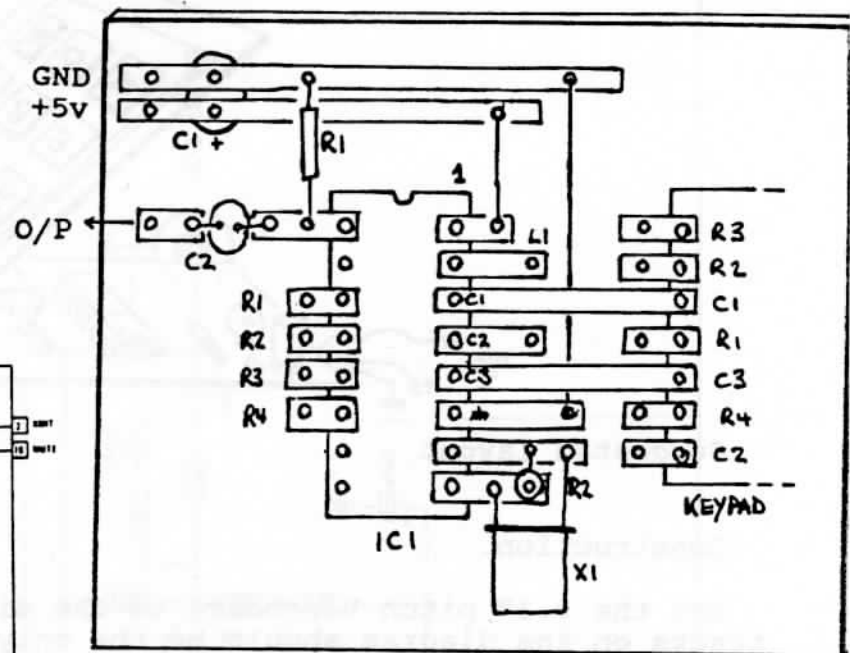
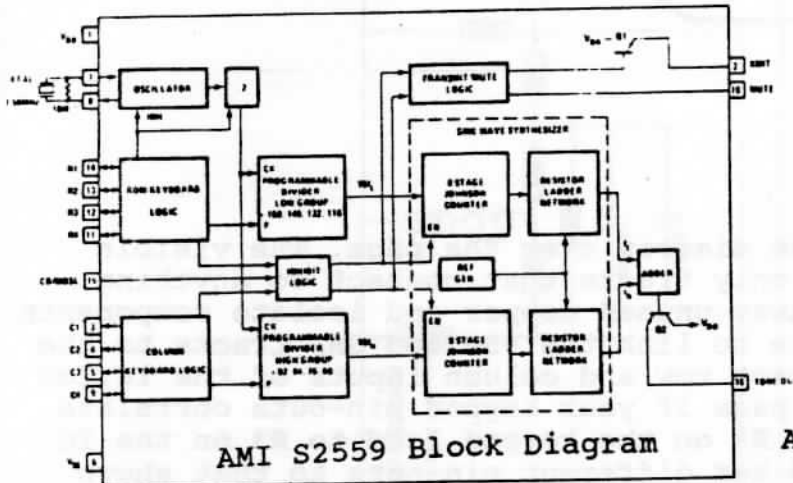


18 ELECTRICS AEROSPACE
3LD GAS TURBINE ENGINE
Nr. No. 3LD/F/03
S/N 0002 DR. NO. 001



HOLSET 3LD
 DIESEL ENGINE
 TURBOCHARGER

- C1= 4.7uF Electrolytic/Tantalum
- C2= 0.1uF Ceramic/Polyester
- R1= 4.7Kohm 10% 0.3W
- R2= 10Mohm 10% 0.3W
- IC1=S2559
- X1=3.58MHz US TV Crystal
- Keypad= 'Alps' OY Telephone style



Veroboard (Track side) layout.

All components and links fitted other side

The DTMF generator required to use the new features on GB3ZZ may easily be built by anyone in only a few hours. None of the components are critical in value and therefore any 'Junk Box' components may be used.

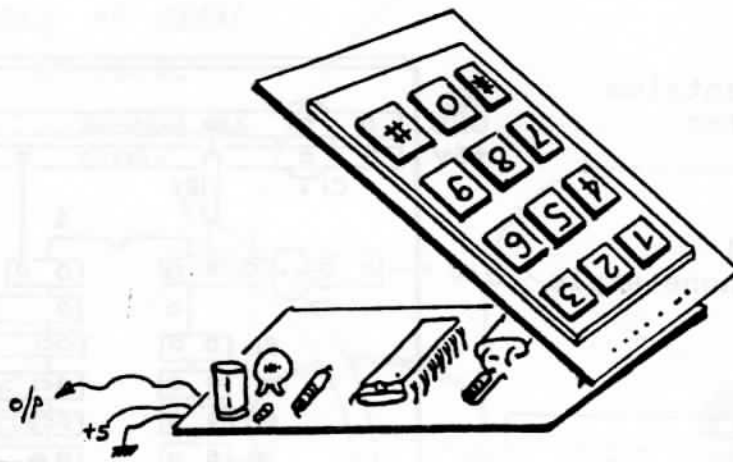
The keypads may be found at rallies or in Maplin's for a few pounds, the only thing to remember is keypad connections may vary, so refer to the block diagram for the correct connections. You should have a ROW/COLUMN matrix type of keypad to work correctly with this chip, the connections are usually marked R1-4 and C1-3 and the pad should have 12 keys (0123456789*#).

The crystal is a 3.58 MHz American 'color' TV crystal and should be across pins 7 and 8 of the chip. The 10 Mohm resistor is there only to ensure the crystal oscillator runs in its negative impedance point and again is not critical. The tone output is coupled by a 0.1uF capacitor to your microphone input of your TX and you may want to add a 10Kohm preset potentiometer here to enable you to set the tone level. Tone level is not critical as the repeater's DTMF detector is very sensitive, but too high a level may annoy other users.

If you follow the Veroboard layout you should have few problems as this circuit is so simple, the chip is only damaged when the +5volts is connected the wrong way round or if the voltage exceeds 10volts. If 5volts is difficult to arrange in your 24cm TX use a 5.6volt zener diode fitted across C1 (striped end to +ve) and feed the zener from 12volts via a 1kohm resistor.

The terminal marked L1 on the track layout (IC1 pin 2) can feed an LED via a 270 ohm resistor to light up when a button is pressed, if you think you have a need for this ! If you do this however you will need to reduce the value of the resistor feeding off the 12volt line to the zener to provide the extra current that the LED will take.

If after construction, the keys you press do strange things to the repeater, check you have the Row and Column connections correct. You can't damage the repeater, and if you key an invalid sequence GB3ZZ will just beep at you. A good test is keying *10# for the text index page, and if you can monitor your own signal you should see your through video replaced by an index page.



Suggested layout

Construction.

Cut the 0.1" pitch Veroboard to the diagram over the page. The visible tracks on the diagram should be the only tracks that connect to anything else. Use a 3-4mm drill bit to cut away unused copper and isolate components from each other. Use thin jumper wire to link the +5v and GND tracks to the chip and link the keypad to the correct row and column inputs of the IC. You may use the layout diagram over the page if your keypad pin-outs correlate with that shown, you must still link R3 on the keypad land to R3 on the IC land and R2 to R2 etc. If your keypad has different pin-outs to that shown you will need to link the row and column pins as appropriate to the keypad.

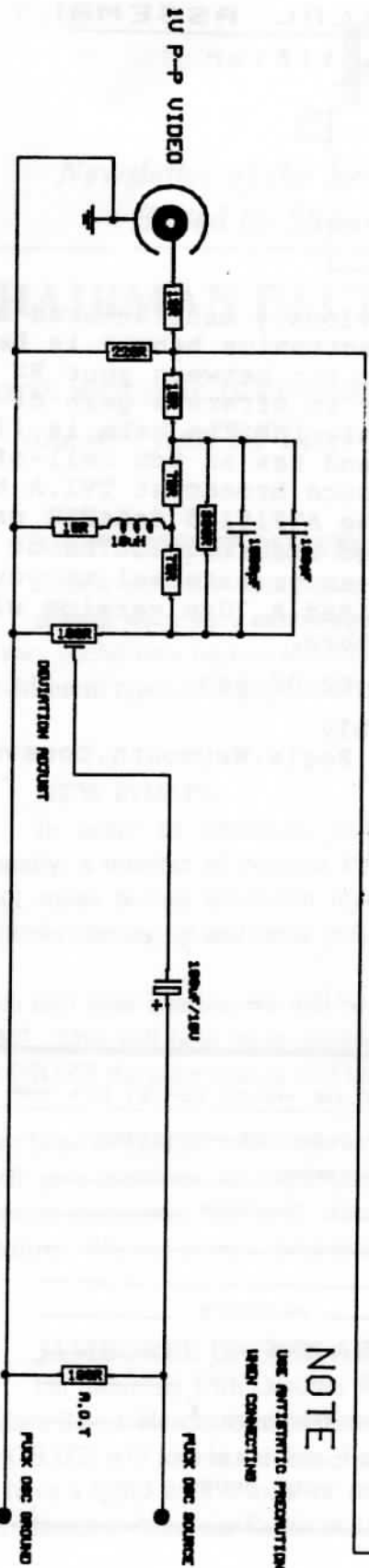
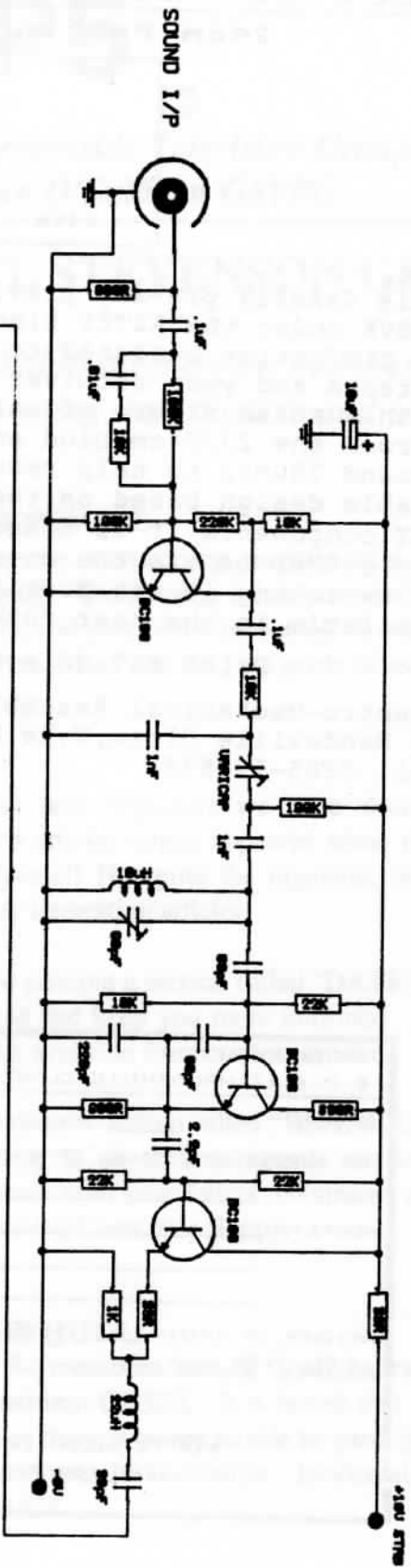
Next fit the passive components (all 5 of them!), and finally fit the IC to the board. You may if you wish use a socket, but either way ensure that the end with the indent is furthest away from the crystal, thus ensuring that PIN1 connects to Vdd or +5volts. Note that the diagram over the page shows the track side view and the chip is viewed as if the Veroboard is transparent so you are looking at the underside of the chip. The layout drawing above this text will show you what the final assembly will look like.

Steve Walsh GBKUU 8/89

10 GHz ATV MODULATION SYSTEM

by John Hudson G3RFL

The Circuit opposite is designed to allow sound and video modulation to be applied to the DRO/puck oscillator in a 10 GHz transmitter. This could be a purpose built oscillator or a converted satellite LLB.

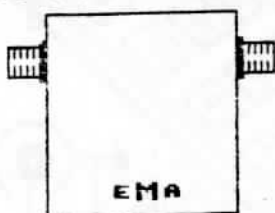


NOTE
 USE ANTISTATIC PRECAUTIONS
 WHEN CONNECTING

TITLE PUCK TV MODULATION		
SIZE	DOCUMENT No 017	REV
DATE 22-09-94	SHEET 1 OF 1	

ELECTRO-MECHANICAL ASSEMBLY

24cm Pre-amplifier



This GaAsFET pre-amp previously manufactured by G4BVK under the AZTEX Electronics banner is back in production. Designed to fit between your RX antenna and your receiver it offers a gain of 17db with a noise figure of only 1db. The gain is flat across the 23/24cm band and has an 8db roll-off at around 700MHz to help reduce broadcast TVI. A highly stable design based on the ATF10135 GaAsFET using SMT components it is boxed and aligned. The dc supply can either be via the co-ax or external, to your requirement. RF switching is not provided. A 70cm version will be available in the near future.

Price £67.00 + £2.00 p&p

Electro-Mechanical Assembly
18 Mandeville Close, Wyke Regis, Weymouth, Dorset DT4 9HP
Tel. 0305-778575

ORDER FORM TO:	
E. M. A., 18 MANDEVILLE CLOSE, WEYMOUTH, DORSET DT4 9HP.	
PLEASE SUPPLY _____ QTY: 23/24CM PRE-AMPLIFIER	
DC SUPPLY VIA CO-AX OR EXTERNAL _____	
NAME _____	CALLSIGN _____
ADDRESS _____	

_____	POSTCODE _____
NUMBER OF UNITS _____	TOTAL VALUE _____
POSTAGE £2.00 PER UNIT	_____
TOTAL ENCLOSED £ _____	
PLEASE ALLOW 28 DAYS DELIVERY	
THANK YOU FOR YOUR ORDER	

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