

Vse, ki Vas zanima tematika povezana z UKV dejavnostjo, vabim na

9. S5 UKV SREČANJE

Ljubljana, 19.04.2003

LAST UPDATE 31.03.2003

Sponzorji in donatorji:
Fakulteta za elektrotehniko
Ljubljana
SIPRONIKA d.o.o



Poštna 7/b
 1360 Vrhnika
 Slovenija

Branko Zemljak,
S57C

PR:
 S57CS50BOX.SVN.EU
 e-mail: [S57C@](mailto:S57C@HamRadio.si)
[HamRadio.si](http://lea.hamradio.si/~s57c)
[http://lea.hamradio.si/](http://lea.hamradio.si/~s57c)
 ~s57c
 telefon:+386 (0)1 755 11
 31
 GSM:+386 (0)41 717 714
 SMS: [041717714@](mailto:041717714@linux.mobitel.si)
linux.mobitel.si

Dnevni red srečanja:

11:00 Prihod in prijava udeležencev
 11:30 Otvoritev srečanja - [Branko Zemljak, S57C](#)

Predavanja:

1. **Matjaž Vidmar, S53MV** - Radijske komunikacije v letalstvu
2. **Marko Čebokli, S57UUU** - Nekaj malega o prilagoditvah
3. **Darko Volk, S57UUD** - Samogradnja > predstavitev SSB UKV postaj (50, 70, 144 MHz)

Meritve:

1. **Robert Vilhar, S53WW** in **Samo Vehovec, S56WSV** :
 - meritve in kontrola raznih VF elektronskih naprav
 (npr. šumnega števila predajačevalnikov in
 transverterjev do 10GHz)

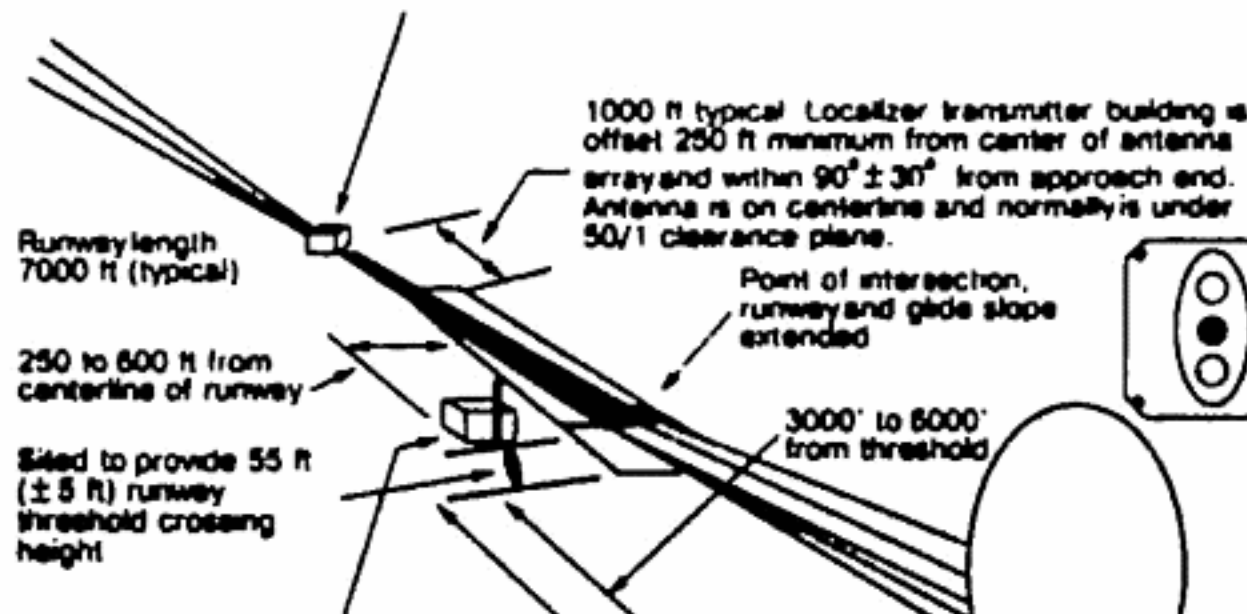
Da bi meritve potekale čimbolj tekoče, prosim da najavite, kaj nameravate prinesiti s sabo, da se bo lahko pripravila merilna tehnika. Vodite računa o kompatibilnosti priključkov in s sabo prinesite izdelke, ki se jih bo dalo priključiti na merilne in napajalne naprave! (BNC, N, bananski vtiči, itd...)

*Jani, S55HH, bo v odmorih med predavanji podelil nagrade za S5 UKV PRVENSTVO
 glej <http://slovhf.net>*

VHF LOCALIZER

Provides Horizontal Guidance

108.10 to 111.95 MHz. Radiates about 100 watts. Horizontal polarization. Modulation frequencies 90 to 150 Hz. Modulation depth on course 20% for each frequency. Code identification (1020 Hz, 5%) and voice communication (modulated 50%) provided on same channel



UHF GLIDE SLOPE TRANSMITTER

Provides Vertical Guidance

329.3 to 335.0 MHz. Radiates about 5 watts. Horizontal polarization, modulation on path 40% for 90 Hz and 150 Hz. The standard glide slope angle is 3.0 degrees. It may be higher depending on local terrain.

RATE OF DESCENT CHART
(feet per minute)

Speed (Knots)	Angle		
	2 1/2°	2 3/4°	3°
90	400	440	475
110	485	535	585
130	575	630	690
150	685	730	795
160	707	778	849

Compass locators, rated at 25 watts output 190 to 535 KHz, are installed at many outer and some middle markers. A 400 Hz or a 1020 Hz tone, modulating the carrier about 95%, is keyed with the first two letters of the ILS identification on

the outer locator and the last two letters on the middle locator. At some locations, simultaneous voice transmissions from the control tower are provided, with appropriate reduction in identification percentage

ILS

(FAA INSTRUMENT LANDING SYSTEM)

STANDARD CHARACTERISTICS AND TERMINOLOGY

ILS approach charts should be consulted to obtain variations of individual systems

MIDDLE MARKER

Indicates Approximate Decision Height Point. Modulation 1300 Hz 95% Keying: 95 Alternate Dot & Dash Combinations/Minute

Amber Light



Flag indicates if facility not on the air or receiver malfunctioning

OUTER MARKER

Provides Final Approach Fix for Non-Precision Approach. Modulation 400 Hz, 95% Keying: Two dashes/second

Blue light



Localizer modulation frequency
90 Hz 150 Hz

90 Hz 150 Hz
Glide slope modulation frequency



Outer marker located 4 to 7 miles from end of runway, where glide slope intersects the procedure turn (minimum holding) altitude, ± 50 ft vertically.

All marker transmitters approximately 2 watts of 75 MHz modulated about 95%.

Approximately 1 1/4" width (full scale limits)

0.7" (approx)

3° above horizontal (optimum)

Course width varies between 3° - 5° tapered to provide 700 ft at threshold (full scale limits)



* Figures marked with asterisk are typical. Actual figures vary with deviations in distances to markers, glide angles and localizer widths.

Seznam pomembnejših letalskih frekvenčnih področij

10-14kHz	OMEGA
100kHz	LORAN-C
190-1750kHz (250-450kHz)	svetilniki NDB (MCW klicni znak)
75MHz	ILS markerji MCW OM črtice 400Hz (modra lučka) MM pika-črta 1300Hz (oranžna lučka) IM/BC pikice 3000Hz (bela lučka)
108-118MHz	svetilniki VOR (kanali 50kHz) 30Hz vrtenje snopa antene (smer) 1020Hz MCW klicni znak 9960Hz FM podnosilec (koleb +/-480Hz) 30Hz ref.
108-112MHz	(lihe stotice kHz) ILS localizer 90Hz levi (rumeni) snop 150Hz desni (modri)snop 1020Hz MCW klicni znak
118-137MHz	govorna zveza v civilnem letalstvu (kanali 25kHz ali 8.33kHz)
121.5MHz	ELT (analogni civilni)
225-400MHz	govorna zveza v vojaškem letalstvu (kanali 25kHz)
243MHz	ELT (analogni vojaški)c
329-335MHz	(lihe stotice kHz) ILS glide slope 90Hz gornji snop 150Hz spodnji snop
406MHz	ELT (digitalni)
962-1213MHz	DME (in TACAN) 126 kanalov po 1MHz (1025-1150MHz) kanali X: -63MHz razmak impulzov 12us kanali Y: +63MHz razmak impulzov 36us
1030MHz 1090MHz	vprašanje radarja odzivniku (trije impulzi) odgovor odzivnika radarju (do 16 impulzov)
1227.6MHz 1575.42MHz	GPS kanal L2 (vojaški P) GPS kanal L1 (civilni C/A in vojaški P)
4.2-4.4GHz	radiovišinomer (FM radar, trikotnik 100Hz)
5.0-5.3GHz	različne izvedbe MLS
9.375GHz	vremenski radar (pulzni)
13.325GHz	JANUS Doppler-jev navigacijski radar



NOTICE
This aircraft is not to be used for commercial purposes.
The operator is responsible for the safe operation of the aircraft.
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235.0

N 33
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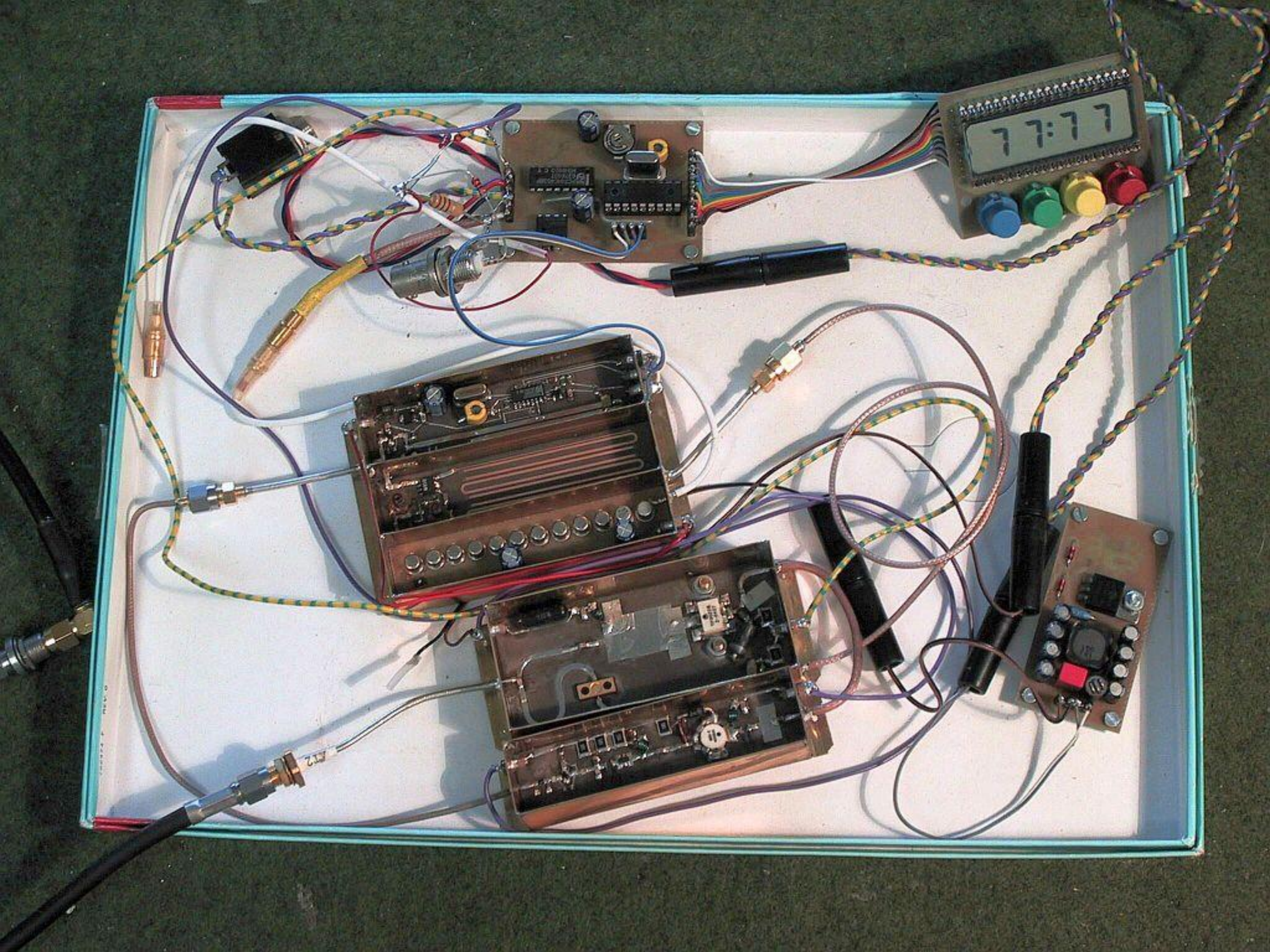
2000

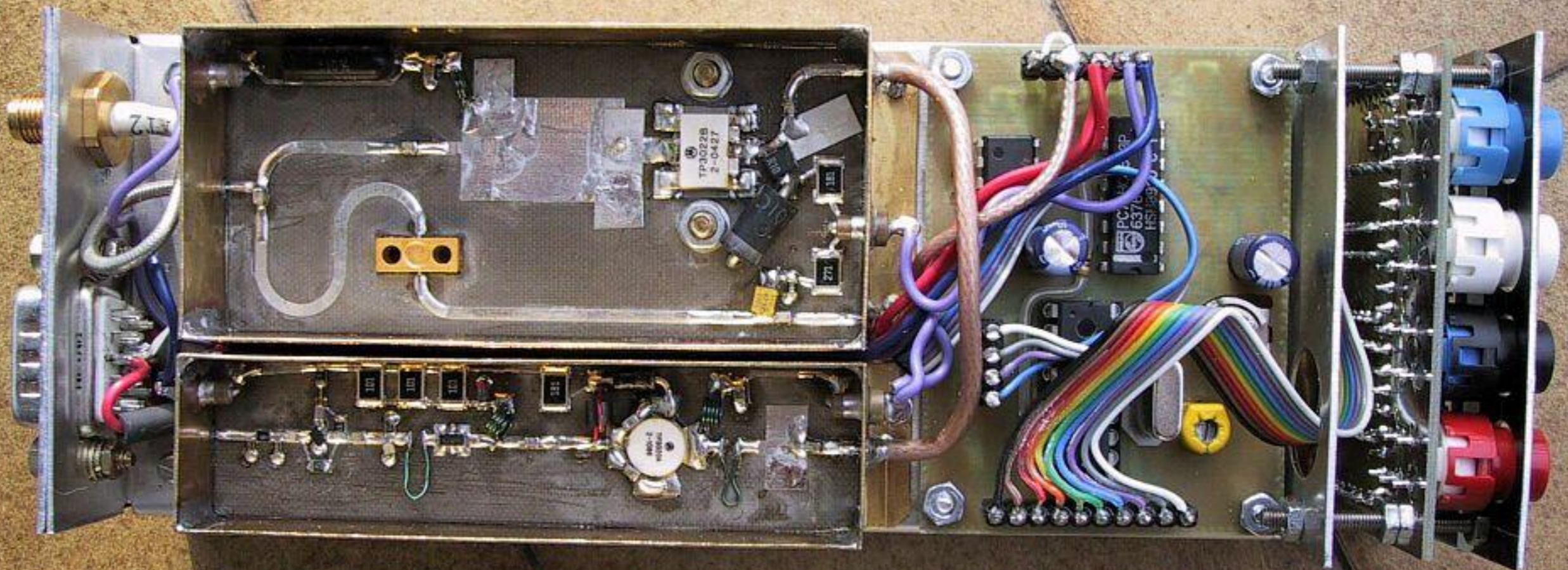
BRUNIGER
HEADSPEED

S5-PCV

ALPHAMED

ATTENTION: BARS AND VIBR. GUARD
MUST BE OPENED BEFORE STARTING





2.1

TP3022B
2-0427

PC 6376
HSI 1000

480-2
1000000

100

100

100

100

270

100

100

