

## Even VCO Temperature Stability Upgrade

In order to perform this upgrade, you will need to desolder many components.

This is a tricky operation that needs good DIY skills.

If this is your first time desoldering an IC or resistor, or do not feel confident, practice with a junk board several times before you attempt to do this, otherwise you will most likely damage your even VCO

**Warning!!!** Check carefully your Even VCO version. If you are not sure, please drop us a mail with pictures to help you identify it.

See suggested changes per version in following tables:

<b>Versions: 0.2.2 / 0.2.3 / 0.2.4</b>			
Name:	New value	Notes	Part Number
T_sens	100 Ohm (The blue SMT)	Located under IC3. Socket need to be desoldered	PTS080501B100RP100
IC2, IC3	LF412	Low drift OP Amp	LF412CN/NOPB
R3	820K	50 PPM 1% resistor	MBA02040C08203FRP00
R4	510 Ohm	100 PPM 1% resistor	MFR-12FTF52-510
R6	4R22	50 PPM 1% resistor	MFR50SFTE52-4R22
R8	6K2	50 PPM 1% resistor	MBA02040C6201FC100
R11	95k3	50 PPM 1% resistor	270-95.3K-RC
R53	0 Ohm	Replace with a piece of wire	Use a resistor Leg
R110	100K	1% resistor	

<b>Version V0.3</b>			
Name:	New value	Description	Part Number
T_sens	100 Ohm (The blue SMT)	Located under IC3. Socket need to be desoldered	PTS080501B100RP100
IC2, IC3	LF412	Low drift OP Amp	LF412CN/NOPB
R2	820K	50 PPM 1% resistor	MBA02040C08203FRP00
R4	510 Ohm	100 PPM 1% resistor	MFR-12FTF52-510
R5	4R22	50 PPM 1% resistor	MFR50SFTE52-4R22
R9	6K2	50 PPM 1% resistor	MBA02040C6201FC100
R11	95k3	50 PPM 1% resistor	270-95.3K-RC
R111	100K	1% resistor	
R113	0 Ohm	Replace with a piece of wire	Use a resistor Leg

Versions 0.3.2 / 0.3.3			
Name:	New value	Description	Part Number
T_sens	100 Ohm (The blue SMT)	Located under IC2. Socket need to be desoldered	PTS080501B100RP100
IC2, IC3	LF412	Low drift OP Amp	LF412CN/NOPB
R1	6K2	50 PPM 1% resistor	MBA02040C6201FC100
R2	820K	50 PPM 1% resistor	MBA02040C08203FRP00
R3	4R22	50 PPM 1% resistor	MFR50SFTE52-4R22
R4	510 Ohm	100 PPM 1% resistor	MFR-12FTF52-510
R6	95k3	50 PPM 1% resistor	270-95.3K-RC
R108	100K	1% resistor	
R115	0 Ohm	Replace with a piece of wire	Use a resistor Leg

### Recalibrate

Before calibrate, keep it connected to the power supply for at least 30 minutes  
 After this, calibrate it using the standard system.  
 A tuner with historical graph (like FMIT) is recommended.

