UEK-3000 SATELLITE DOWN-CONVERTER

INTERNATIONAL SATELLITE

AMSAT

The all new ***UEK-3000*** is a state of the art tool for use with amateur satellites in the 2.4 GHz range. It offers the latest technology to achieve ultimate performance and features superb RF-Parameters such as

- ✓ Low-noise PHEMT Frontend with 0.3 dB N.F. , 2nd stage GaAs-Fet Preamp
- ✓ Overall Noise figure typ. less 0.7 dB, overall gain > 30 dB!
- ✓ Interstage Hi-Q HELICAL Bandpaßfilters
- ✓ Double Balanced Schottky Microwave Mixer with high 3rd order Intercept Point
- ✓ High Output Power Silicon MMIC Post - Amplifier
- ✓ Low-noise, temperature compensated Junction Fet crystal Oscillator
- ✓ Ceramic-microfiber pcb substrate
- ✓ 13.8 V DC Operation with either direct feed or remote feed via the coaxcable
- ✓ Waterproof housing, uv-stabilized, 100% internal metal shielding
- ✓ N-connectors
- ✓ Stainless steel hardware
- ✓ Available with your choice of 2-m or 70-cm IF

SSB Electronic GmbH

Installing and operating the UEK-3000

Thank you for purchasing the all new UEK-3000 Down-Converter!
It is the ultimate tool to receive amateur satellites in the 2.4 GHz frequency range.

The built in 0.3 dB N.F. PHEMT Preamp offers superb sensitivity and the UEK-3000`s state of the art design will give you the best possible results.

Please read the following notes carefully to get the most out of your UEK-3000.

- ✓ Connect your 2.4 GHz antenna to the N-Type socket labeled "ANT"
- ✓
- ✓ Please use a quality low-loss coaxial cable. ***AIRCOM PLUS***™ or the new ***ECOFLEX***™ is an excellent choice. Please check our website www.ssd.de or www.ssbusa.com for detailed information about these cables.

- ✓ Use high quality N-connectors only. We found some really bad connectors offered to radio amateurs which have a poor impedance matching and an insertion loss of 0.5 dB or more. Use the original ***AIRCOM PLUS***™ and ***ECOFLEX***™ N-Connectors in combination with these cables only.

- ✓ Connect the Output of the UEK-3000 to your 2-m or respective 70-cm rig. A standard coax cable will work well at the IF-frequencies, because the UEK-3000 delivers a lot of conversion gain.

- ✓ You can either power your UEK-3000 directly or remotely via the coaxcable. To power the UEK-3000 directly use the SO-239 socket as the power connector.The center socket (SO-239 UHF) of the converter acts as a power connector. The center Pin is (+), the shell is (-). You can use an inexpensive RG 58 coaxcable with a PL-259 as a convinient powerfeed. We always recommend the use of shielded cable such as RG 58 when powering remote device, since it efforts a degree of protection against static voltage during thunderstorms..

- ✓ Of course you can also remotely feed the UEK-3000 through the IF cable. The center conductor is (+) and the braid is minus (-). Most of the modern 2-m transceivers have the ability to remotely power a preamplifier , this also works well with the UEK-3000

- ✓ The UEK-3000 has a shorted quarter wave input line, in order to further protect the front-end against static discharge voltages.

- ✓ Please never transmit RF-power into the IF-Port of the UEK-3000. The max. safe survival RF power level is 0.1 Watt.

We wish you best DX and hope to work you on the satellite.

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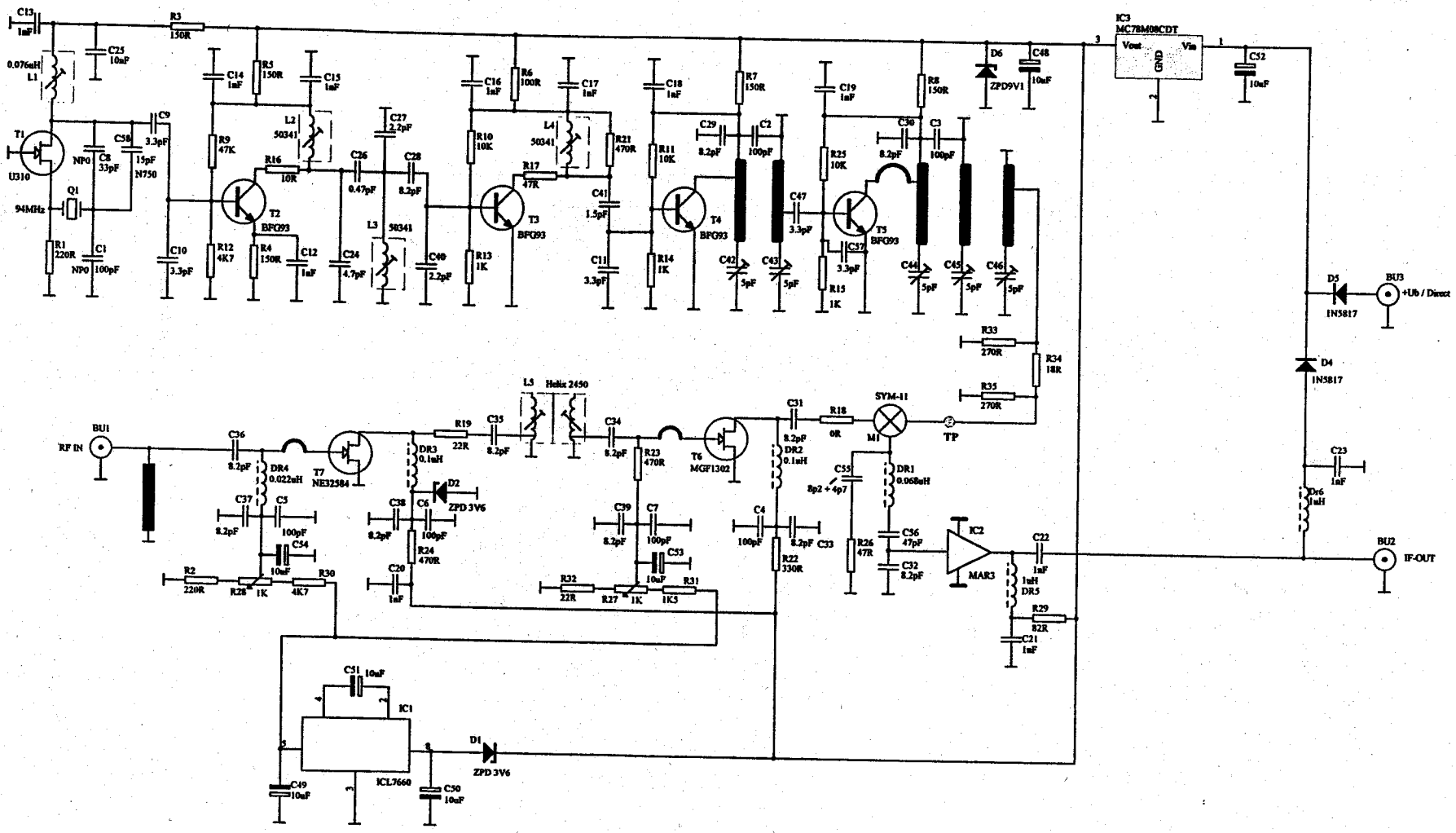

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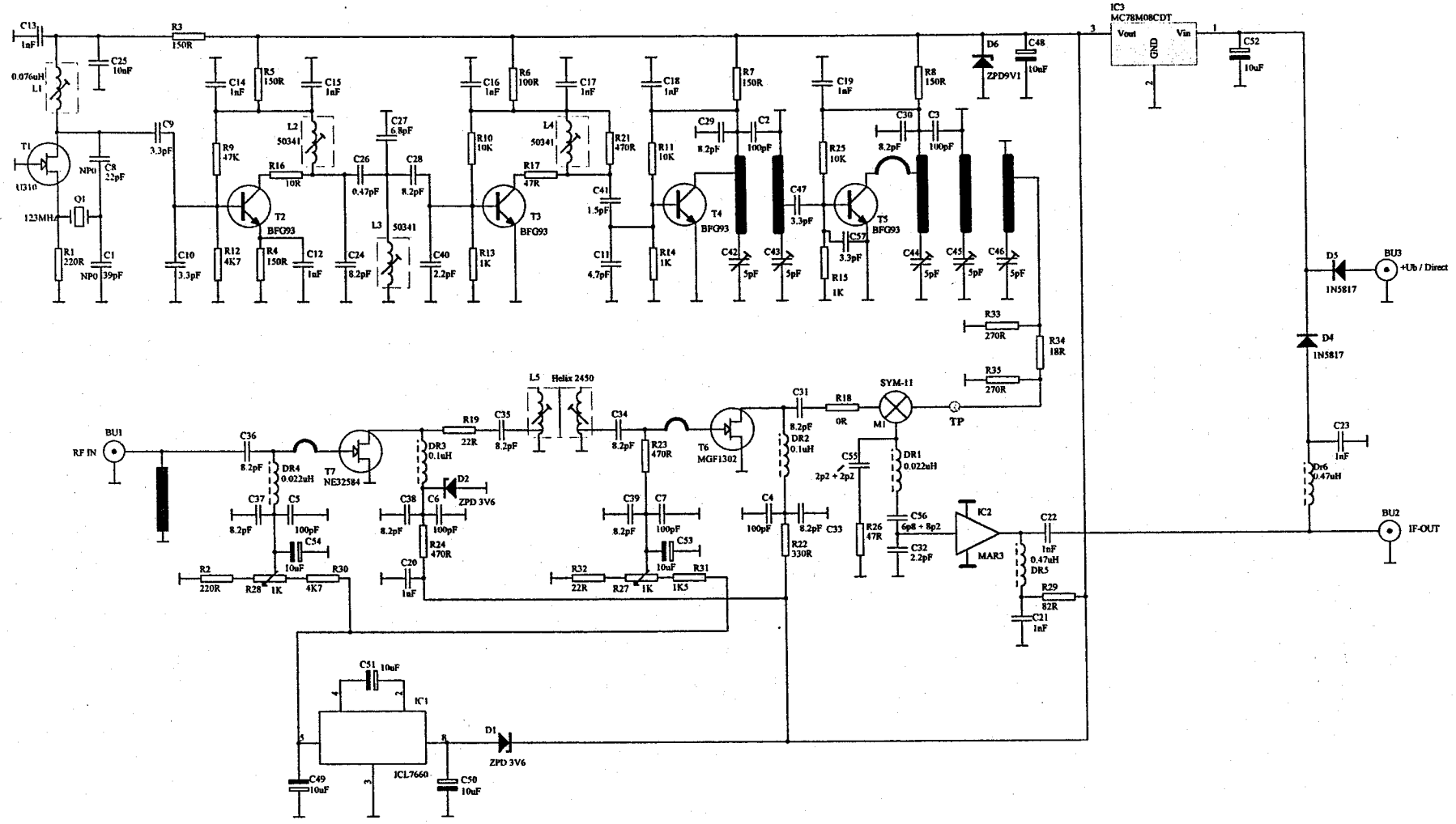
Änderung: 1.0

Blatt: 1 / 1

Titel: UEK3000 /2



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Blatt: 1 / 1

Titel: UEK3000 /70

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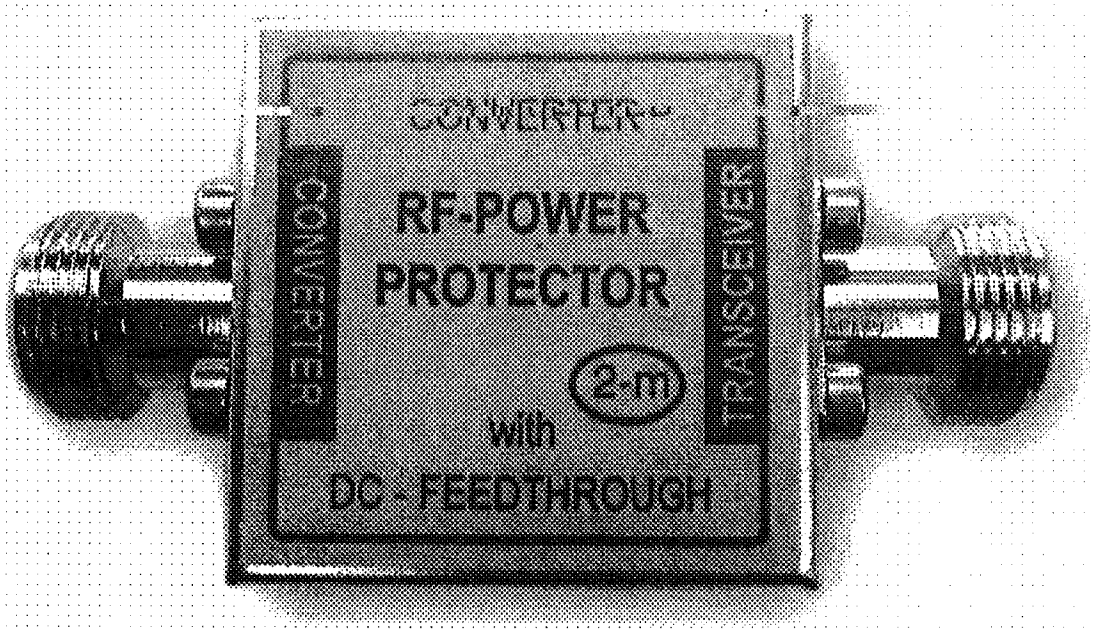

Schützen Sie Ihren UEK-3000 gegen unbeabsichtigtes Senden !

RF-POWER-PROTECTOR

Der UEK-3000 wird oft in Verbindung mit einem 2-Meter-Transceiver betrieben. Die Erfahrung zeigt, dass schnell einmal unbeabsichtigt gesendet wird. Die Sendeleistung des Transceivers gelangt so ungehindert in den ZF-Port des UEK-3000. Die Folgen: ZF-Verstärker, Mixer und GaAs-Fet werden zerstört.

Der RF-POWER-PROTECTOR setzt dem Frust ein Ende. Zwischen 2-Meter-Transceiver und UEK-3000 eingeschliffen, verhindert der Protector dass Sendeleistung an den UEK-3000 durchgereicht wird. Dabei liegt die Durchgangsdämpfung beim Empfang lediglich bei 0,1dB. Durch einen eingebauten DC-Bypass kann der UEK-3000 auch weiterhin über das Koaxkabel ferngespeist werden. Der RF-POWER-PROTECTOR selbst arbeitet passiv: Eine weitere Verkabelung oder Stromversorgung ist nicht erforderlich .
Der Protector absorbiert zuverlässig bis zu 30 Watt FM-Sendeleistung oder bis zu 50 Watt SSB-Sendeleistung. Am ZF-Ausgang des UEK-3000 liegt nur noch eine harmlose HF-Spannung an. Zudem sorgt der RF-POWER-PROTECTOR für ein schlechtes SWR am Antennenausgang des Transceivers. Auf diese Weise wird die Endstufenschutzschaltung des Transceivers schnell zur Abschaltung gebracht.

Art.-Nr.: 3020

SSB Electronic GmbH

RF-POWER PROTECTOR

Protect your Down-Converter against reverse transmit power!

Very often a 2-m transceiver is used in combination with a receive Down-Converter. This is a dangerous setup because the transceivers RF-power can easily destroy the IF-output circuit of the converter or in an extreme case, burn all semiconductors and even the mixer.
This often happens in a very short moment: a few milliseconds are long enough to damage the converter seriously.

Now the good news:
With the all new RF-Power Protector you instantly get rid of these problems!
This little unit measures only 40 x 40 mms. It is equipped with 2 N-connectors and requires no power supply. It must be installed in the coaxial cable between your Down-converter and your Transceiver.

The Power-Protector absorbs up to 30 watts FM and up to 50 watts SSB, only a small harmless amount of power reaches the IF-output of the downconverter.

The insertion loss in receive mode is close to nothing, typically 0.1 dB.

Even high power transceivers (100 watt) can`t destroy your converter, if you place the unit directly after the TRX in the coaxial cable. In transmit mode, the RF-Power Protector offers the TRX a very high SWR which forces the VSWR Protection of the TRX to switch off the power immediately!

In addition, the RF-Power-Protector features a DC-Bypass in order to feed the down-converter remote from the TRX.

At a price of DEM 99.-- plus shipping the RF-Power Protector is strongly recommended for every AO-40 user.