



Communication Systems

JOTRON VHF/AM TRANSCEIVER TR-7550/TR-7525/TR-7510



- **Microcomputer Controlled Transmitter and Receiver**
- **Adjustable RF Output Power Multichannel or Programmable Fixed Channel Operation**
- **Adjustable RF Power Output**
- **Selectable channel spacing 25 kHz or 8.33 kHz**
- **Remote and/or Local Control of All Functions**
- **Built-in Coaxial Relay For Antenna and Control Transfer to Standby Units**
- **RS-485 Multidrop Data Bus**

FEATURES:

LED display

With 8 characters normally show the operating frequency. A push-button selects different BITE measurements available internally in the receiver and transmitter. In case of an alarm, the cause for the alarm will automatically be shown on the display to ease service.

User friendly frequency change

By 3 push-buttons. The increment/decrement is dependent of the selected channel spacing. Set-up of the transceiver is also selected with these buttons.

Programmable SingleChannel

Units can be programmed to operate on a single channel or allow change between up to 99 pre-programmed channels. Re-programming of single-channel frequency can be done by remote lines.

RS-485 Multidrop Databus

Enable remote control and monitoring of up to 128 units through a single connection. All units individually adressable.

Squelch button

On/off selection, the level is adjusted with the frontpanel pushbuttons.

Remote/Local switch

Select between local and remote operation. The output level on the audio line of the receiver part and the input sensitivity

on the audio line of the transmitter part is adjusted with frontpanel pushbuttons.

Audio volume

For adjustment of the local loudspeaker output level.

PTT

Transmit button for local operation.

LED indicators

AC/DC power availability, Alarm, High SWR, Low Power Output, Remote Control, Standby operation, Squelch, Transmit.

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TECHNICAL DATA:

GENERAL:

Frequency range:	118 - 137 MHz. Optional to 156 MHz
Channel separation:	25 kHz or 8.33 kHz (12,5 kHz optional)
RF input impedance :	50 Ω
Frequency error:	< ± 1.5 ppm (< ± 1 ppm 0 - 40°C)
Frequency selection:	25 kHz or 8.33 kHz steps
Supply voltage AC:	115/230VAC -10+15% / 50-60 Hz $\pm 2\%$
Supply voltage DC:	21.6 - 31.2 VDC negative earth
Duty cycle:	100% at ambient temperature below 40°C
Operating temperature:	-20 to +55°C, Ambient Air Humidity: 90% at +40°C (non-condensing)
Storage temperature:	-40 to +70°C
Power consumption:	Max. 300VA (TR-7550), Receiver only: Less than 10watt
Size:	Industry standard 19" Rack, 3U high
Weight:	Approx 9 kg

RECEIVER:

Sensitivity:	10 dB SINAD at 1 μ V pd, m = 0,30. Acc. to ITU-T
Squelch:	Adjustable from 1 μ V to 25 μ V pd Hysteresis: < 3 dB. Opening/closing: < 50 ms
Adjacent channel selectivity:	> 70 dB at 25KHz, > 60dB at 8.33KHz
Cross modulation:	> 85 dB >100KHz frequency offset
Spurious response immunity:	> 80 dB
Intermodulation immunity:	> 75 dB ref. 1 μ V EMF. 2 interfering signals >100 kHz offset from receiving frequency
Blocking/Desensitisation:	>100 dB @ 1MHz
Image Rejection:	>100dB
AGC:	< 3 dB from - 107 to + 5 dBm input signal Attac time: 50 ms, Recovery time: 200 ms
Spurious radiation:	< 2nW
Audio response:	25 kHz: +1 / - 3 dB rel. to 1 kHz, 300 - 3400 Hz < -30 dB at 5000 Hz 8.33 kHz: +1 / - 3 dB rel. to 1 kHz, 300 < -2500 Hz -30 dB at 3200 Hz
THD:	< 5%
AF intermodulation:	> 40 dB
S/N ratio:	> 40 dB, 100 μ V, 30% mod, 1 kHz. Weighted ITU-T
Audio output impedance :	600 Ω

TRANSMITTER:

Modulation:	AM up to 95%
Harmonic emission:	< 80 dBc
Standing wave ratio:	1: Infinity. Output is reduced automatically with severe mismatch
Output power:	Max. 50W. Adjustable. (TA-7525: Max. 25W, TA-7510: 10W.)
Adjacent channel power:	>75 dBc/25 kHz, > 55 dBc/8.33 kHz
Antenna connector:	50 Ω N - connector
T/R relay:	Built in. Key relay contacts available for external equipment
Keying time:	Less than 20 ms
Line input:	600 Ω , -20 to +10 dBm
Mic input:	Dynamic. Sensitivity 2.5mV. On front panel, or remote connector
LF compression (VOGAD):	30 dB, with less than 3dB change in modulation level
Limiter:	Limiting amplifier prevents over modulation
Audio response:	25 kHz: : +1/ - 3 dB rel. to 1 kHz, 300 Hz - 3.400 Hz <-30 dB at 5000 Hz 8.33 kHz: +1/ - 3 dB rel. to 1 kHz, 300 Hz - 2.500 Hz <-30 dB at 3200 Hz
Distortion:	Less than 5% at 90% modulation
Hum and noise level:	Better than 45 dB below at 90% modulation

JOTRON electronics a.s. reserves the right to change the design and/or the specification at any time without prior notice

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