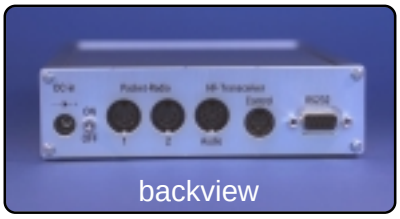
SCS PTC-II Radio Modem

HF / VHF / UHF

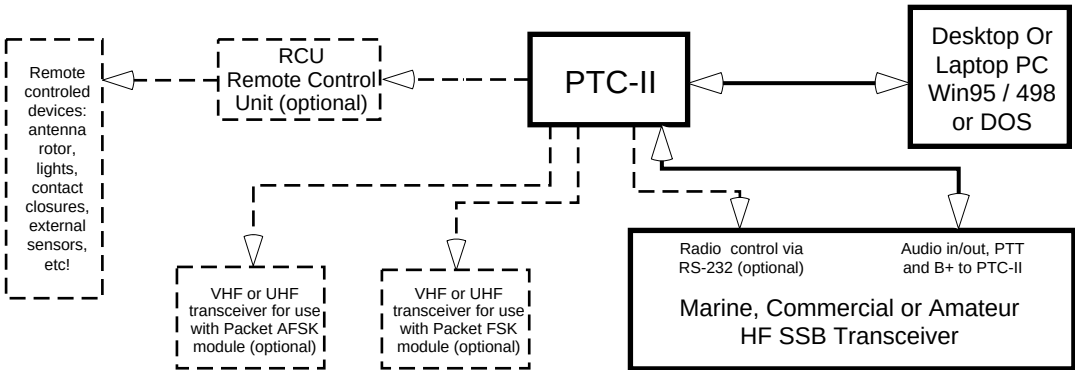
Up to 30 times faster than AMTOR, up to 6 times faster than PACTOR I

Send email, transfer files, real-time data links. The PTC-II modem from Special Communications Systems is the data interface between your PC and radio equipment. From the German developers of the PACTOR I protocol comes PACTOR II, the most robust digital mode available. The PTC-II will maintain links in conditions with signal to noise ratios of minus 18 dB. That means data transfer with absolutely inaudible signals. Test proven with a 16 milliwatt link between Europe and Australia! The PTC-II is fully backwards compatible with all known PACTOR I implementations.


backview

Powered by a powerful Motorola CPU and DSP (digital signal processing), the PTC-II stands out as superior technology for HF radio data transfers. With optional Packet radio options for VHF/UHF 9600+ baud rates can be employed.

Simple installation with compatible radios from Icom, Kenwood, Yaesu, SGC, SEA, Furuno, R&S and others. Use the PTC-II with commercial stations WLO, SailMail and others, as well as the international network of amateur radio opetators that support Pactor II. PC software for Windows or DOS.



Amateur • Commercial • Industrial • Marine

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TECHNICAL

Standard Features of the PTC-II Hardware

Three simultaneously available communication ports: HF and up to two VHF/UHF Packet ports.

Separate transceiver control port for remote operation of Icom, Kenwood, Yaesu, R&S and SGC equipment.

32 bit system with Motorola RISC 68360 processor at 25 MHz. 16 bit Motorola DSP 56156 at 60 MHz (30 MIPS).

Expandable to 2 MB of static, 32 MB of dynamic RAM. Firmware stored in flash memory. Easy update via serial RS-232 link to a PC. Modem tones (mark-space) and shift programmable in 1 Hz steps within all modes.

Equipped for FAX (AM, FM, Meteosat), SSTV, CW operation with reception and transmission and full compatibility to nearly all modern PC programs.

Built in mailbox with comprehensive features. Common and simultaneous access from all modes (PACTOR-I & II, AMTOR, PACKET).

Battery backup for the clock and CMOS RAM. No mail loss when switched off.

Mail display at the front panel shows the operator there is new mail.

Excellent tuning display with 15 bi-color LEDs with center function.

All significant link and controller status are displayed on both the front panel bi-color LEDs and on the 10 character display.

10 character dot matrix display for mode and other parameters such as the call sign of a connecting station and much more.

Channel-busy detection displayed on the PTC 10 character display as well as on the terminal screen.

The PTC-II is fully usable as a DSP filter for all modes (SSB, CW and others) as a “denoiser” with freely programmable sets of parameters. Features: Auto peak, auto notch, passband filter, inversion, delay line, function generator and more.

Comprehensive filtering of all inputs and outputs for excellent electromagnetic compatibility.

HF <--> VHF/UHF gateway and cross band digipeating with comprehensive and automated link establishment features from remote. PACTOR goes PACKET.

Hostmode, extended hostmode, CRC-hostmode. Full compatible to nearly all modern PC programs. Fully integrate with FBB/Winlink networking and mailing systems.

Features of the PACTOR II Mode

Automatic frequency tracking allows the same frequency tolerance as with PACTOR-I (+/- 80 Hz). The days of dithering fingers on the dial are over.

Newly developed on-line data compression system (PMC) reduces the data transfer by nearly 1/2.

Fully backwards compatible with all known PACTOR-I implementations, including automatic mode recognition and selection. The unit always answers in the mode it has been contacted in (PACTOR-I, PACTOR-II, AMTOR).

Utilizing the latest coding technology. Constraint length 9 convolutional coding is used with full frame interleaving and Viterbi decoder combined with very efficient Memory ARQ algorithms.

Automatic transceiver output power adaptation to the quality of the HF link and the required data throughput.

CW operation (RX and TX) with automatic speed adaptation using high sophisticated DSP algorithms. Users say: "the best cw receiving computer we have ever seen"

Available Options

- RCU Remote control / Amplifier Unit
  8 analog and digital I/O ports, 8 watt audio amp
- 2 MB Memory Expansion
  Mail box memory buffer expansion
- Packet Radio, AFSK Module
  VHF / UHF, 1200 / 2400 baud
- Packet Radio, FSK Module
  G3RUH compatible
- Radio Remote Control Level Converter
  Required for the PTC-II to control via RS-232 some types of radios

Specifications

Dimensions	1.61 H x 5.91 W x 7.48 D inches 41 H x 150 W x 190 D mm
Weight	23.6 ounces (670g)
Voltage	12 VDC nominal, 15 VDC max
Power	3 to 4 watts depending on options
PC interface	DB9 serial port, AT type
Audio out	20 to 1000 Mv, 330 ohm impedance
Audio in	10 to 1000 Mv p-p. 47k ohms impedance
Memory	512k CMOS w/ battery backup expandable to 2mb
Operating temp	-4 to 122 degrees F -20 to 50 degrees C

Transceiver minimum switching time is 20ms. Check you transceiver for compatibility.

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