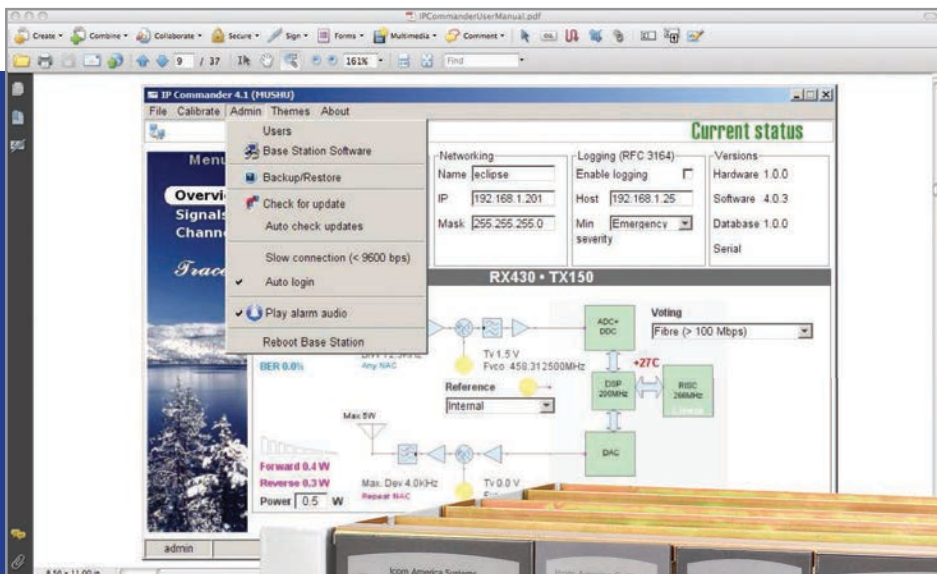


Software-defined Flexibility

You design every channel via software...

Build your radio on a screen, or Icom America Systems can do it for you!



P25 Digital + Analog Base Station/Repeater *Powerful & Proven Off the Shelf Performance*

Broadband coverage, 256 channels
Get full VHF (136 - 174 MHz) and UHF (400 - 520 MHz) coverage along with plenty of channels, each identifiable by own name, TX/RX frequency, and profile

**No in-field tuning or aligning:
IP Remote upgrade path**

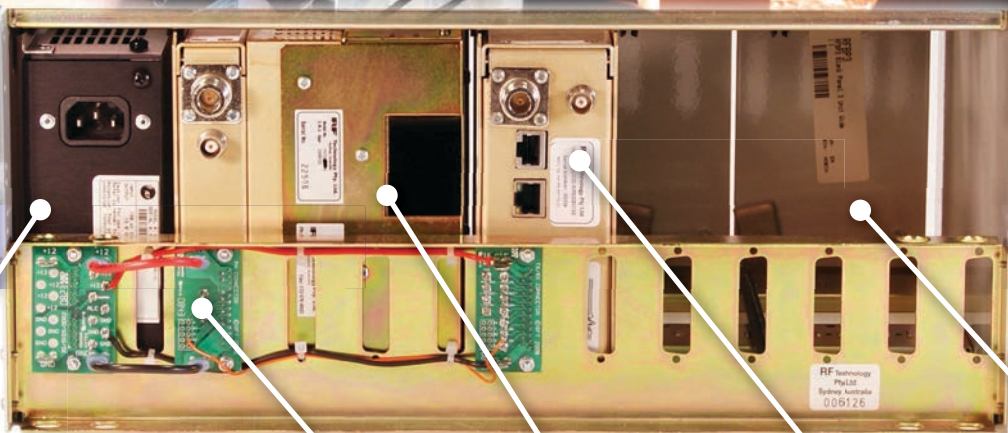
The TX and RX module is pre-tuned for the whole frequency range, and level adjustment of the signal path is done via software. Local or remote, optimize without having to physically go to the site

P25/Analog Voting over IP
An industry first! No extra controllers required makes for easy configuration

Analog/digital auto sense
Migrate into digital as your agency's capabilities and budget allows

Create your own signal maps
Get full VHF coverage (136 - 174 MHz) without tuning or aligning





Dual voltage power supply

A space-conscious 4RU tall unit for a 19" rack or desktop cabinet

Conveniently located circuit boards for easy interfacing

Smart IP PA 120W UHF 150W VHF power amplifier

Transceiver module back panel is easily accessible and clearly laid out

Expansion slots, ready for additional modules

Eclipse2: Software Defined Radio (SDR) for P25 and Analog, with an IP Remote Upgrade Path

Icom America Systems is pleased to partner with RF Technologies, a radio company with a long, reliable history in public safety radio and well-versed in everything P25. The Eclipse2 offers the latest P25 has to offer, matches it with impressive analog performance, and does it all with a broad coverage range. Eclipse2 offers an affordable, real-world solution to today's radio interoperability needs.

Modes of operation

Migrate from analog to digital at your own pace with this agile base station + repeater:

- Analog Base
- Analog Repeater
- Analog Voting over IP
- Analog Multi-site over IP
- P25 Repeater
- P25 Voting over IP
- P25 Multi-site over IP
- P25 Base station

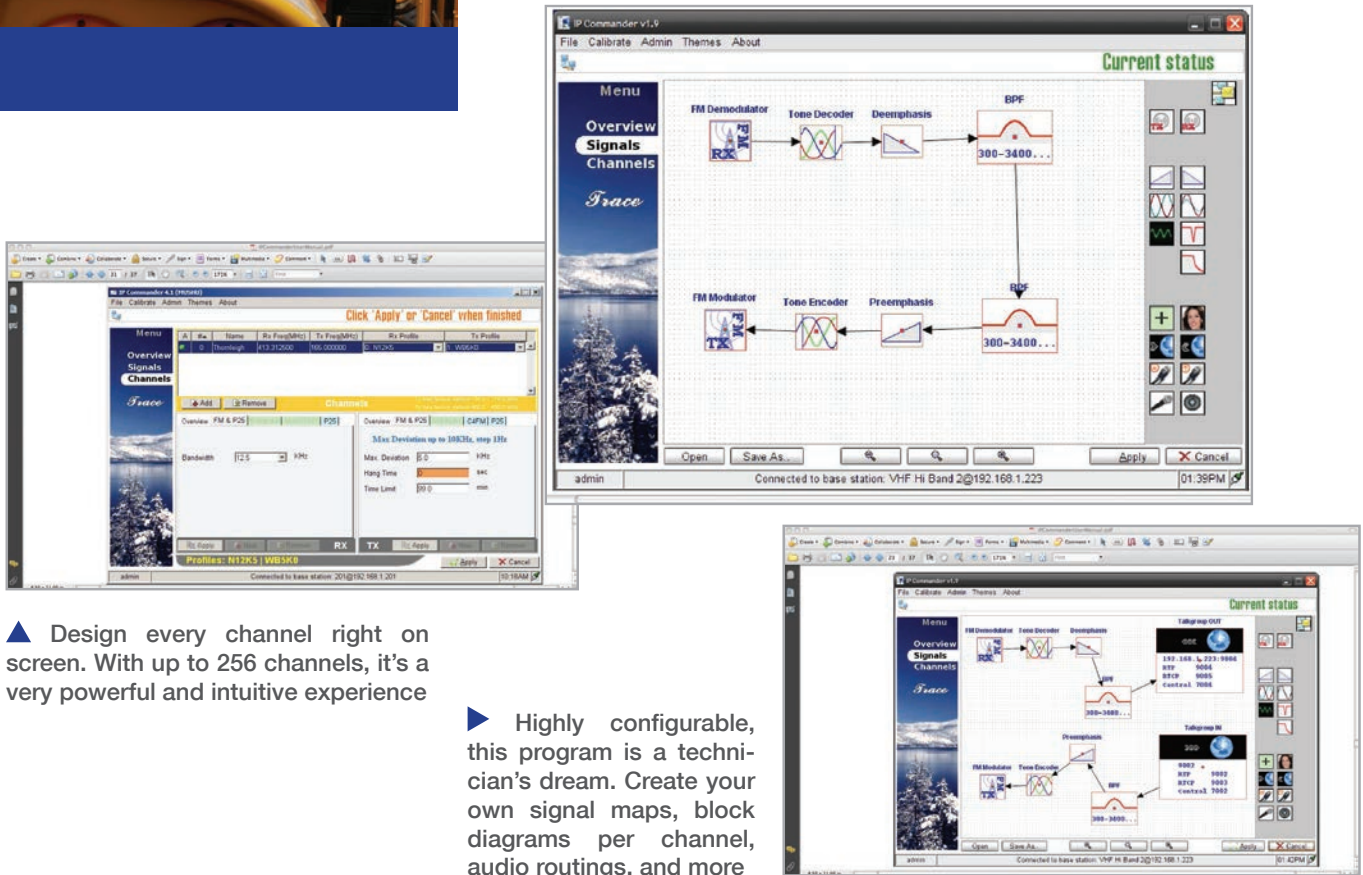




IP Commander functionality

We ship it, you build it. (Or, Icom America Systems can build it for you.)

IP Commander offers drag and drop editing, allowing for an intuitive end user experience. By clicking the apply button the features are enabled. Configurations can be saved to a file so that standard configurations can be easily programmed or sent to remote offices to ensure standardization. Flexible channel program enables multiple profiles to be stored and recalled by scrolling down the list. The trace menu allows capture of base station activity in text form which can be forward to RFT for advance diagnostics.



▲ Design every channel right on screen. With up to 256 channels, it's a very powerful and intuitive experience

► Highly configurable, this program is a technician's dream. Create your own signal maps, block diagrams per channel, audio routings, and more

More features

- Remote diagnostics over Ethernet
- Radio over IP (VoIP)
- InBase voting over IP
- (No Central Comparator required)
- TIA APCO P25 AFSI/DFSI compliant
- Snmp and syslog functionality
- P25 advanced conventional
- Software upgradeable
- Analog and P25 auto detect
- Field proven robust hardware
- Full duplex base station or repeater
- Software upgradeable to P25
- dPMR/DMR software ready
- Local voice reporting
- Individual channel profiles
- In base voting over IP network
- Smart signal & noise detection
- Self calibration in real time
- External reference input for simulcast/paging
- Remotely configurable via IP
- Front panel mounted USB programming socket
- Flash firmware upgrade capable
- Remote IP firmware rollback safeguard facility
- Remote alarm logging using RFC 3164 protocol
- Broadband high efficiency LDMOS PA module
- RX & TX switching BW covers full sub band
- Cross band capabilities
- Low RFI and EMI emission design
- Low current consumption with full operating system
- Latest technology, full SMD
- Advanced and optimized RF design
- Fast & simple disassembly for service
- Minimal technician adjustments for future maintenance
- Built on proven technology
- Virtual elimination of internal wiring
- 100% Duty cycle

P25 REPEATERS

RFT ECLIPSE 2

General	Receiver & Exciter	PWR Amp	IP PA
Weight	1.45 Kg	3.55 Kg	4.65 Kg
Dimension (Width) 2UW = 62mm (2 ⁷ / ₁₆ in)	2UW	3UW	5UW
Mounting Rack	4U high 19 inch 4.55 Kg		
Blank Front Panel	Available in 1UW, 2UW, 3UW, 4UW width		
Power	+13.8 Vdc or 120/240 volt, 50/60 Hz ac		
Channel Capacity	256 channels		
Tone Squelch	Fully programmable, CTCSS, DCS, NAC		
Programming	Windows® or Linux®, through serial port, USB or Ethernet		
Software	IP Commander		
Test & Diagnostics	Front panel test connector USB, via Ethernet and ALM, SQ, TX and PWR LEDs		
Audio Response	Selectable flat or 750uSec pre/de - emphasis		
Audio Interface	Standard 600 Ohm OdBm balanced and Hi - Z unbalanced		

Receivers	Series 150	Series 500
Frequency stability	.5 ppm standard (TCXO) Temp -30 to +60C	
Frequency spread for 1 dB degradation	Full Band	40 MHz
Sensitivity	0.25 uV (119 dBm) for 12 dB Sinad	
Spurious & Image	Rejection 9 0 dB	
Selectivity	80 dB at 25 KHz, 75 dB at 12.5 KHz	
Intermodulation	85 dB	
Modulation acceptance	Software adjustable from 0 to 26db Sinad, Carrier Squelch adjustable from -120 dB to -60 dB	
Squelch	Software adjustable from 0 to 26 dB Sinad Carrier squelch, adjustable from Carrier squelch adjustable from -120 dB to -60 dB	
Audio response	+1 to -3 dB 300 to 3000hz	
Audio level	600 Ohm line adjustable from -20 to +10 dBm Monitor output, 3W @ 8 Ohms	
Audio distortion	Less than 3% at 1 KHz, 60% system deviation with 750 uSec de-emphasis	
COS output	Opto-coupled + 12V, GND and free switch connections	
Diagnostics	VCO Unlock, tuning voltage, signal strength, external mute, alarms and supply voltage via password protected via IP Commander software	

Power Amplifier	IP PA150BH	IP PA500BH
Output Power (adjustable)	2-150W	2 to 120W
Input power (typical)	2W	2W
Duty cycle	100%	100%
Protection	Automatic power reduction with high VSWR and temperature	
Spurious and harmonics	Less than -90 dBc	

Exciters/Transmitters	Series 150	Series 500
Frequency spread	Full band	40 MHz
Frequency stability	+/- .5 ppm	
RF Power output adjustable	0.5 to 5W	
Power regulation	+/- 10% from 12 - 16Vdc, 0 to 50°C, all channels	
Duty cycle	100% -30 to +60°C	
Carrier & Modulation Attack Time	20 mSec	
Spurious & harmonics	Less than -36 dBm	
Audio response	+1 to -3 dB 300 to 300 Hz	
Audio distortion	Less than 3% +1 to -3 dB 300 to 3000hz	

Residual hum & noise relative to 60% system deviation	Less than -50 dB
Audio input level	600 Ohm line, -20 to +10 dBm Hi -Z input, 25 mV to 1 Vrms Subtone input compatible with receivers Test microphone, 6 mVrms at 200 Ohms
Remote keying	DC opto-isolated E&M input, IP Network
External ref. option	Allows the transmitter to be phase locked to an external reference 5 Mhz, 10 Mhz, 12.8 Mhz
Diagnostics	VCO Unlock, tuning voltage, signal strength, external mute, alarms and supply voltage via password protected via IP Commander software

DC Power Consumption (DC Amps)			
TRX Model	Standby (RX active)	Full power RX/TX active	100% vol
TRX150	0.5	2	24 Amps 150 Watts
R500	0.53	2	19 Amps 120 Watts

T150	24 Amps 150 Watts
T500	19 Amps 120 Watts
	Note: For a repeater or base station Add TRX and PA currents for a total figure

Icom America Systems

Systems for People Who Make Smart Choices

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