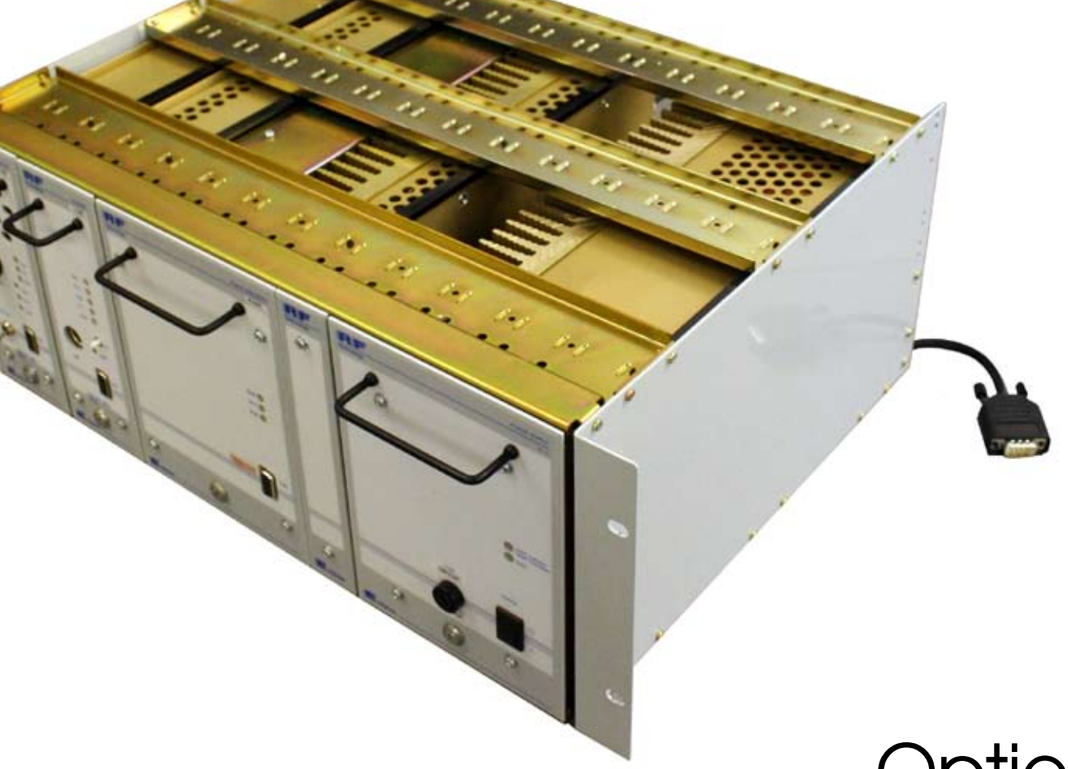


Options

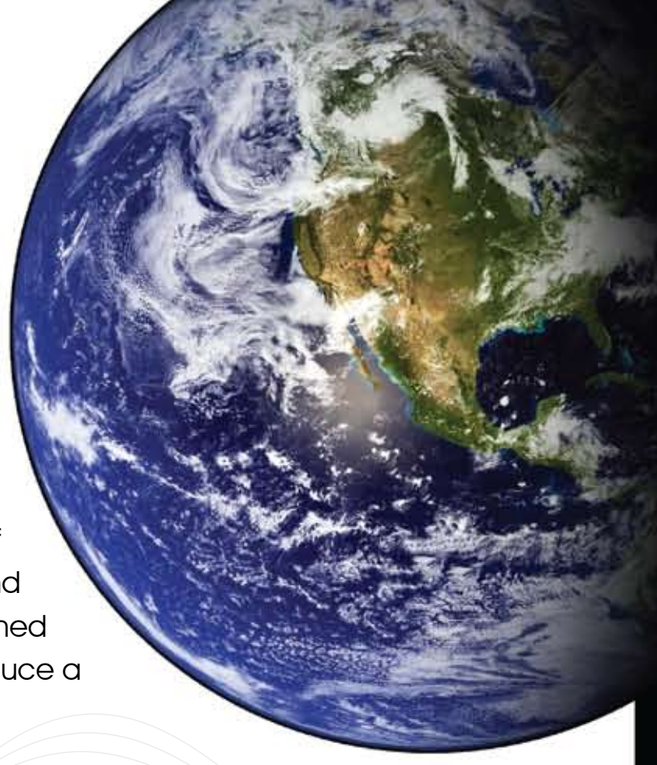
FM-1	Fan Module for full duty cycle of transmitter
BC/CH-1	Battery trickle Charger - auto changeover module AC to DC operation
THS-3	Programming software
TTC1-9	Programming lead for 9 pin computer serial connector
TTC1-25	As above but for 25 pin computer serial connector
SD-1	Channel Change Module
DUP-70	66-88MHz band duplexer set to operational frequency 50W
DUP-150	As above but for 136-174MHz band 50W
DUP-500	As above but for 400-520MHz band 50W
CR-1	Antenna changeover relay for base station operation
MEC-1	Test cable for extending modules from rack
FM-2	Spare fist microphone
RFPCB	Spare rack frame PCB kit
BP-1-2-3-4	Blanking panels 4 units wide
DTMX	Digital modulator exciter
DMRX	Digital modulator receiver
PA-50	50 watt Power Amplifier
PS12	Spare 20 Amp linear power supply
PA-150	100 watt Power Amplifier (136-174MHz band only)
70/550	Service manuals

SMC

South Midlands Communications

The ECLIPSE range is a totally new state of the art Base Station, Repeater system.

Following an extensive survey of user requirements, high reliability and superb performance were combined with many unique features to produce a superior, user friendly product.



ECLIPSE Base Station - Repeater

» Modular Construction - 100% Duty Cycle

» Duplex, Simplex, Trunked Applications

» 100 Channel Capacity, P.C. Programmable

Tel: +44 (0)23 8024 6200
Fax: +44 (0)23 8024 6206
Email: sales@smc-comms.com
Website: http://www.smc-comms.com

SM House, School Close
Chandlers Ford Ind. Estate
Eastleigh, Hampshire
SO53 4BY, UK

The Future Never Sounded So Good

Features and Advantages

Exceptional systems performance.

Modular construction with independent Receivers and Transmitters. This allows split RX and TX racking for convenient connection to multicouplers etc.

Easy configured for Duplex, Simplex, Trunked or link applications.

Exciters can be used alone for 1-25 watt applications.

Separate High power Amplifiers can be added for 25-150 watt output.

Transmitter power adjustable over a wide range to meet local licensing requirements.

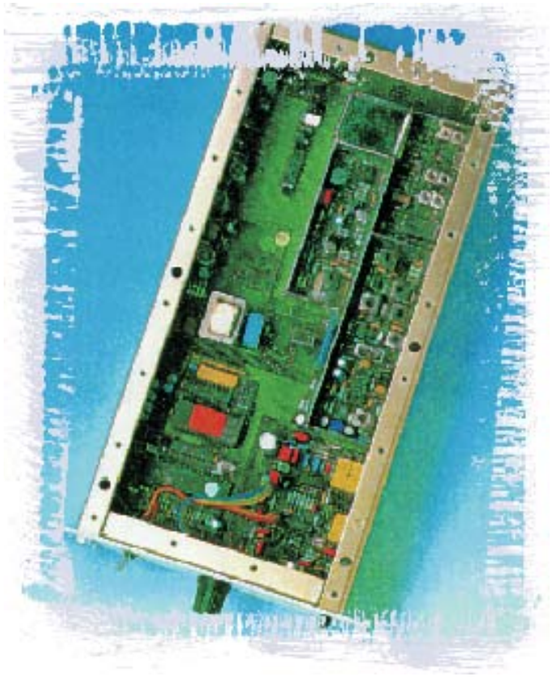
Synthesized design with programming by IBM compatible PC through front panel RS232 port on each Receiver and Transmitter.

100 channel capacity

Individually programmable CTCSS with squelch tail elimination for each channel.

Programmable processor controlled repeater hang time.

Internal links for flat or emphasised audio response.



Wide Receiver and Transmitter frequency spreads

The 19" rack module positions can be simply coded to automatically select channel and CTCSS tones.

All modules mate with readily available D range connectors.

DCS compatible without modification.

Direct FSK data transmission options are available for paging and data link applications.

Balanced 4 wire 600 Ohm and Unbalanced audio I/O.

Separate sub-audible ports allow tones and data to be repeated without regeneration, or for easy connection to tone panels.

Isolated DC loop for PTT and COR functions.

Built in diagnostics of low supply voltage, power out, reverse power, receive signal strength, VCO voltage, channel information, squelch open/close, CTCSS, noise and carrier squelch.

Remote monitoring, channel change and programming through RS232 port.

Front panel display of alarm functions.

System monitoring and service made easy with "TecHelp" software.

20 mSec TX/RX switching time for efficient data transmission.

Carrier adjustable squelch from -140 to -70dBM

Low signal alarm adjustable -140 to -70dBm for point to point links etc.

Signal strength adaptive noise squelch virtually eliminates squelch tail on signals over 2uV.

Operational over temperature range -30 C to +60 C

Automatic protection with power reduction at high VSWR and temperature.

All external preset controls are multi-turn potentiometers.

Simulcast and Voting compatible.

Monitor speaker included in Receiver.

All modules operate from 13.8Vdc (nominal 12v) supply.

Fully rated linear Power Supply available.

Specifications

Frequency Range	66-88MHz	136-156MHz 148-174MHz	400-430MHz 450-490MHz 485-520MHz	800-830MHz 850-870MHz 896-930MHz 928-943MHz

Channel Spacing	12.5, 20, 25 or 30KHz in 5 or 12.5 KHZ steps
Channel Capacity	100 channels, BCD coded 00-99
Tone Squelch	Fully programmable. EIA Tone per channel
Programming	Via serial port with an IBM compatible PC
Frequency Stability	+/- 5ppm standard
Audio Response	Selectable flat or 750 uSec pre/de-emphasis
Audio Interface	Standard 600 Ohm 0dBm balanced and Hi-Z unbalanced
Test and Diagnostics	Front panel test connectors
Power	+13.8 Vdc or 120/240 volt, 50/60 Hz ac with optional PS12 power supply
Mounting	Standard 4U high 19" rack

Receiver

Sensitivity	0.2uV for 12dB SINAD 0.28uV for 20dB quieting
Spurious and Image Rejection	90dB
Selectivity	80dB at 25KHz spacing per RS-204-C 70dB at 12.5KHz spacing
Frequency Spread	10MHz for 1dB degradation
Intermodulation	80dB per RS-204-C
Modulation Acceptance	7.5 and 3.75 KHz
Squelch	Noise squelch, adjustable from 6 to 26dB SINAD Carrier squelch, adjustable from 1 to 200 uV
Audio Response	+1/-3dB
Audio Level	600Ohm line, adjustable -10 to +10dBm Monitor output, 3watts @ 4Ohms Discriminator and subtone output 1V peak at 100% system deviation
Audio Distortion	3% at 1KHz, 60% system deviation with 750 uSec de-emphasis
COR Output	Opto-coupled +12V, grid and tree switch connections
Alarms	see feature and benefits

Exciter/Transmitter

Frequency Spread	12MHz
Power Output	Adjustable 1 to 25 watts (dependant upon frequency and band)
Power Regulation	+/- 10% from 12-16Vdc, 0-50 C, all channels
Duty Cycle	100% to 50 C
Carrier and Modulation Attack time	20mSec
Spurious and Harmonics	Less than 0.25uW
Audio Response	+ 1/-3dB per 6dB octave
Audio Distortion	Less than 3% at 60% system deviation at 1Khz
Residual Hum and Noise	Less than -45dB relative to 60% system deviation
Audio Input Level	600 Ohm line, -30 to .1 0dBm Hi-Z input. 25 mV to 1 V rms Subtone input, compatible with R500 Test microphone, 6 mV rms @ 200 Ohms
Remote Keying	dc Opto-coupled input
External Ref. Option	Allows the transmitter to be phase locked to an external 1 MHZ reference

Power Amplifiers

Output Power	25 to 120 watts adjustable (dependant upon frequency and band)
Duty Cycle	100 watts, 100% with optional fan unit
Protection	Automatic Power reduction with high VSWR and temperature
Harmonics and Spurious	Less than 0.25 uW