

DXW800P SERIES

The DXW800P is a high-performance transportable repeater based on the state of the art DX Radio Systems DXW800 series base/repeater. The unit is constructed to withstand the rugged emergency service environment. The radio transceiver and built in accessories are mounted in a floating sub-chassis that is suspended in a rubber gasket. Additionally, the batteries are mounted dedicated pockets and are also independently isolated from the chassis ("suspended") by means of rubber gaskets.

The DXW800P features an interface that is accessible through an internally locked sealed stainless steel access panel. Depending on options purchased, the featured connectors are:

- Receive antenna (also operates as TX/RX antenna in the simplex mode)
- Transmit antenna (TX/RX antenna fitted with Duplexer Option)
- AC power (requires option PSP11012BU)
- Bayonet Lock Mil-C-26482 Series 1 Type Multi-purpose interface socket supporting the following optional functions and accessories:
 - External microphone
 - External headset
 - External speaker microphone
 - External Speaker
 - Amplified External Speaker
 - 12V (13.8V) DC Power In
 - Programming interface
 - 4-wire E & M interface (TX pair, RX pair, COR, PTT and GND)
 - Interface to Tone remote (requires tone remote option)
 - Interface to PC based monitoring of system
 - Cross band/full duplex repeater/linked repeater/base interface utilizing a second DXWP repeater/base
 - Battery/power supply status LCD (requires PSP11012BU option)
 - Full set of status indicator LEDs
 - 99 Channel LED display
 - DC in/out Switch (allows for powering external options)
 - Radio Power Switch (disconnects radio from batteries)
 - Digital Volume control (push up/push down)
 - Simplex Duplex switch (Duplexer bypass switch if duplexer option is supplied)
 - Programming, Speaker mute, Ext. Speaker/Headset switch
 - Display/LED power saver (disable switch)
 - 99 Channel selector switch via dual rotary controls (tens & units).



OPTIONS

Following is a list of standard options available for the DXWP Transportable Repeater-Base stations:

Option PSP11012BU (included in standard package "A")

AC Power option with built-in DC power supply/battery charger 110V input, 12 V output with Low voltage battery disconnect, microprocessor controlled

Option OPA-12-12 and OPA-12-24 (OPA-12-24 included in standard package "A")

Built-in 12 or 24 Ah battery capacity; capable of running the transceiver for up to 3 hours at full rated power for a 100% transmit duty cycle; up to 24 hours on a 20% transmit duty cycle.

Option PDS11012 (included in standard package "A")

External DC Power input with auto-switchover relay (automatically disconnects batteries and provides trickle charge to batteries during external DC operation)

Option RPB200SW (included in standard package "A")

Repeater/Base configuration features two antenna-ports for duplex operation and a selectable Transmit/Receive relay, which may be activated for simplex operation. The simplex mode is selected by switching the simplex option switch to the simplex.

Option MXOT14 (included in standard package "A")

99 programmable channels with channel selector switch and 99 Channel LED display

Option SPKRVC350 (included in standard package "A")

Built in speaker with volume control and disable switch

Option SPKEXT100 (included in standard package "A")

External speaker, Speaker-Microphone, handset/headset output with selector switch

Option SPKEXT200

Heavy duty External speaker

Option HSB101

Heavy-duty handset (speaker-mic.)

Option ANTXXX (shown for reference; XXXX represents band and model)

Antennas for all bands available – please contact your DX representative.

Option ANTPORT2500

Portable antenna towers.

Option LMR400U (req. 50 FT per antenna; LMRU400U-50)

Flexible Low-loss Antenna Cable for use with Portable antenna towers.

Option IPPORT250

Built-in 30 dB Intermodulation and Power Amplifier protector highly recommended for operating on portable antennas.

Minimum performance to exceed the following for 30MHz to 960MHz*:

AS4295-1995, ETS 300 086 Jan 1991, ETS 300 113, ETS 300 279,

CEPT T/R 24-01 E Sept 1988,

RFS25, RFS26, RFS32,

TIA/EIA-603,

BAPT 225 ZV 1/2098 (German soft keying),

FCC Part 22, 74, 90, 90.210, 80.475,

MIL-STD-810E (Parts thereof),

EC Marking, EC EMC Directive 89/336/EEC.

*Conforms but not all approved.

Note: some features listed are available as options

GENERAL

FREQUENCY RANGE	FREQUENCY RANGE	COVERAGE 30-960 MHz	COVERAGE 30-960 MHz
Band A2 30-39 MHz	Band F 195-225 MHz	Band N2 ^o 400-435 MHz	Band R 805-825 MHz
Band A3 39-50 MHz	Band G 220-250 MHz	Band O 425-460 MHz	Band S 824-849 MHz
Band A 66-80 MHz	Band H 245-275 MHz	Band P 455-490 MHz	Band T 850-870 MHz
Band B ^o 70-88 MHz	Band I 270-300 MHz	Band P2 ^o 450-485 MHz	Band U 870-904 MHz
Band C 135-160 MHz	Band J 295-325 MHz	Band P3 475-495 MHz	Band V 890-915 MHz
Band D 155-180 MHz	Band K 320-350 MHz	Band O ^o 485-520 MHz	Band V2 900-925 MHz
Band D3 ^o 148-174 MHz	Band L 345-375 MHz	Band Q2 500-532 MHz	Band W 917-950 MHz
Band E 177-207 MHz	Band M 370-400 MHz	Band Q3 485-505 MHz	Band X 925-960 MHz
Band E2 177-185 MHz	Band N 395-430 MHz		

Power Supply Battery charger:

Microprocessor controlled

External DC Power:

Reliable heavy duty Multi-purpose DC connector

Functions	Power supply	20' long heavy duty DC power cord with battery clips
	Charge and	20' DC cord with cigarette lighter connector
	Trickle	Auto switchover to external DC source
Input Voltage	90-130 VAC	Input voltage 11-15 Volts DC at 10 Amps max.
	4-Amp AC Fuse	15A DC fuse

Batteries

Residual capacity due to self-discharge at storage @ 25°C

3 months	91%
6 months	82%
12 months	64%

Battery replacement

Expected life 3-5 years
 Recommended replacement cycle 24 months
 Easy access after removal of top cover

Rev 1.5 Updated, June 2003

Synthesis Method:	Non-mixing PLL. Fractional N synthesizer.
Modulation:	Direct FM two-point method.
Channel Spacing:	50kHz, 30kHz, 25kHz, 20kHz or 12.5 kHz.
Synthesizer Step Size:	25kHz, 12.5kHz, 10kHz, 7.5kHz, 6.25kHz or 5kHz.
Channels:	255 Software or switch selectable, 1-99 BCD or 255 Binary parallel selection.
Supply Voltage:	13.8 +/- 20%.
Power Consumption:	<600 mA receive, typically 460mA. <11A for 50W TX RF.
Operating Temperature:	-10 to +60C. -30 to +60C option.
MX800P Size:	230 mm (9") high x 380 mm (15") deep x 550 mm (21.5") wide, High-impact Case
Approximate weight fully loaded	25 kg, 55 LBs
Optional LED indicators**:	Power, RX, TX, CTCSS, Aux/Lock, Alarm.

TRANSMITTER

MEASURED IN ACCORDANCE WITH TIA/EIA-603 STANDARDS

RF Power Output:	5W to 50W (30-520MHz). 5W to 35W (800-960MHz).
Frequency Stability:	20PPM, 2.5PPM, 1.5PPM or 1.0PPM.
Audio Response:	Flat within +1,-3dB across BW.
Audio Bandwidth:	DC to 3400Hz (DC FM input). 300Hz to 3400Hz (VF input).
Modulation Distortion:	Less than 2% @ 60% deviation.

**Specify if desired

TRANSMITTER

S/N Ratio:	Better than 50dB, (WB). Better than 44dB, (NB).
Spurious:	Better than -90dBc.
RF Switching Bandwidth Exciter:	Same as band allocation.
RF Switching Bandwidth PA:	> 10MHz nominal, wider on special request.
Duty Cycle:	100% for 35W or 50W RF output with Thermal controlled fan and open lid or vent option.
RF Rise Time:	4mS with continuous VCO selected (Controlled RF envelope).
Typical Supply current (470MHz):	50W:8.6A, 25W:6.2A, 15W:5A, 10W:4.3A, 5W:3.3A, 1W:2.1A.
VCO Conducted Emissions:	Less than -70dBm.
VCO Radiated Emissions:	Less than 1uV @ 1M.

RECEIVER

MEASURED IN ACCORDANCE WITH TIA/EIA-603 STANDARDS

Sensitivity:	Better than -117dBm for 12dB SINAD
Selectivity 805-960MHz:	More than 70dB for 25kHz adj channel, more than 65dB for 12.5kHz adj channel
Audio Bandwidth VF output:	300Hz to 3000Hz (+1,-3dB).
Discriminator Output Bandwidth:	DC to 3400Hz (-3dB).
Spurious Response Immunity:	Better than 90dB. 100dB option available.
Intermodulation Immunity:	Better than 80dB (100kHz / 200kHz offset)
Blocking:	Better than 100dB at +/- 1MHz point.
Distortion:	Less than 2% @ 60% deviation.
S/N Ratio:	Better than 50dB (WB). Better than 44dB (NB).
Co-Channel Rejection:	Better than 5dB.
RF Switching Bandwidth:	Equal to band allocation.
Receiver Front End BW:	Equal to band allocation, no retuning.
VCO Conducted Emissions:	Less than -70dBm.
VCO Radiated Emissions:	Less than 1uV @ 1M.

ANCILLARIES

Tx Timer:	Programmable, on/off selectable.
VF Level to Line:	+6 to -15dBm, 600 ohms unbalanced or differential.
VF Level from Line:	+6 to -15dBm, 600 ohms unbalanced.
Pre-Emphasis Accuracy:	Within +/-1dB of 6dB per octave curve.
De-Emphasis Accuracy:	Within +/-1dB of 6dB per octave curve.
VF Compressor Range:	>30dB for line input.
Control Outputs:	1K ohm 5V source/sink available.
Alarm Output:	Open collector.
PTT Input:	Logic CMOS/TTL compatible.
Channel Select:	8 way Dip switch or RS232 or BCD/ Binary.
Repeater Tail Timer:	Programmable 0, 1 or 2 seconds.

Due to ongoing development we reserve the right to alter specifications without notice.

NB: Rev 6 specification to be supplied as standard after stock depletion of previous model.