COMMUNICATIONS WAVEFORMS — The following table details the available waveforms.

Each radio is capable of storing and saving up to 20 waveforms.

PAE M7 Series – Available Waveforms

Communications Waveform	Waveform Reference Specification	Modulation	Frequency Range	Channel Spacing	Applicable Models	RF Power
AM Voice	ICAO Annex 10 EN 300 676 STANAG 4205	AM	100.000 – 399.975 MHz 100.000 – 399.975 MHz 100.000 – 399.975 MHz	25 kHz 8.33 kHz 12.5 kHz	All radios All radios All radios	50 W 50 W 50 W
FM Voice	ICAO Annex 10 EN 300 086 STANAG 4205	FM	100.000 – 399.975 MHz	25 kHz	All radios	100 W
AM Wideband	STANAG 4204 STANAG 4205	AM	100.000 – 399.975 MHz	25 KHz	All radios	50 W
FM Wideband	STANAG 4204 STANAG 4205	FM	100.000 – 399.975 MHz	25 KHz	All radios	100 W
Maritime	EN 300 162 TS 101 089	PM	156.000 – 163.975 MHz	25 kHz	All radios	100 W
HaveQuick EPM*	STANAG 4246	Refer to STANAG			M7XS	50 W
Saturn EPM*	STANAG 4372	Refer to STANAG			M7XS	100 W
Talon EPM*	Rockwell Collins Standard	Proprietary ECCM			M7XS	100 W
Link 11	STANAG 5511 MIL-STD-188	Refer to STANAG			All radios	100 W
Link 22	STANAG 5522	Refer to STANAG			M7XS	100 W
Link 4a	STANAG 5504	Refer to STANAG				
VDL Mode 2	ICAO Annex 10 DO-224A EN 301 841-1	D8PSK	118.000 – 136.975 MHz	25 kHz	All radios	40 W
VDL Mode 3	ICAO Annex 10 DO-224A	D8PSK	118.000 – 136.975 MHz	25 kHz	All radios	40 W

* Provided by Rockwell Collins

PAE M7 Series – General Specifications

GENERAL			
Frequency range		100 – 399.975 MHz	
Frequency stability		0.15 ppm (non EPM waveforms)	
Dimensions			
	Height	178 mm (4u)	
	Width	483 mm (19” rack mount)	
Temperature range			
	Operating	-20°C to +55°C	
	Storage	-40°C to +70°C	
POWER SUPPLY			
ac		99 – 264V, 48 – 62 Hz	
Consumption	M7X models	Transmit 450VA Receive 150VA	
	M7XS models	Transmit 500VA Receive 200VA	
	M7R models	100VA	
	M7C models	30VA	
dc		21.6 – 32V (negative earth)	
Consumption	M7X models	Transmit 12A Receive 2A	
	M7XS models	Transmit 13A Receive 3A	
	M7R models	1.5A	
	M7C models	0.5A	
TRANSMIT			
Carrier power output		±0.5 dB over operating band, ±1 dB over (see Waveforms chart) temperature adjustable from max down to 5W in 1W steps	
Offset carrier		2, 3, 4 and 5	
VSWR		>2:1 at full power	
Harmonic outputs		Less than -36dBm	
Spurious outputs		Less than -46dBm >500 kHz from carrier	
RECEIVE			
Sensitivity	Noise Figure	14dB main receiver, 8dB guard receiver	
	am voice	-101dBm for ≥ 10dB (S+N)/N main receiver, 30% at 1kHz modulation -107dBm for ≥ 10dB (S+N)/N guard receiver, 30% at 1kHz modulation	
	am wideband	-101dBm for ≥ 10dB (S+N)/N, 30% at 1kHz modulation	
	fm voice & maritime	-104dBm for ≥ 10dB (S+N)/N, ±3.5 kHz deviation at 1kHz modulation	
	fm wideband	-95dBm for ≥ 10dB (S+N)/N, ±6.25 kHz deviation at 1kHz modulation	
	HaveQuick EPM	-95dBm for ≥ 10dB and -60dBm for ≥ 45dB (S+N)/N main receiver, 30% at 1kHz modulation	
	Link 4a, Saturn EPM, TALON EPM & Link 22	-95dBm for ≥ 10dB and -60dBm for ≥ 45dB (S+N)/N main receiver, ±6.25 kHz deviation at 1kHz modulation	
	Link 11	-95dBm for ≥ 10dB and -60dBm for ≥ 45dB (S+N)/N main receiver, ±20 kHz deviation at 1kHz modulation	
	VDL Mode 2 & 3	-98dBm for ≤ 1x10_3 Bit Error Rate (BER)	
Selectivity			
	am voice 8.33 / 12.5kHz	<6dB at ±3.5 kHz / >70dB at ±17 kHz	
	am voice 25 kHz	<6dB at ±12 kHz / >80dB at ±25 kHz	
	Maritime, VDL Mode 2 & 3	<6dB at ±12 kHz / >80dB at ±25 kHz	
	am wideband, fm wideband, Link 11, Link 4a, Saturn EPM, TALON EPM and Link 22	<6dB at ±25 kHz / >70dB at ±75 kHz	
	HaveQuick EPM	<6dB at ±35 kHz / >70dB at ±75 kHz	
Squelch		-110 to -60dBm	
OPTIONS			
V/UHF Guard receiver		Internal module operating on 121.50 MHz & 243.00 MHz	
GPS receiver		Internal module providing real time output for EPM waveforms	
Control head removed		Replaced with blank panel when front panel monitoring & control needs restricting or no local operation required	
Customised interface module		Can be fitted to provide customer-specified interface requirements	

Park Air Systems reserves the right to amend specifications in the light of continuing development – 081-1