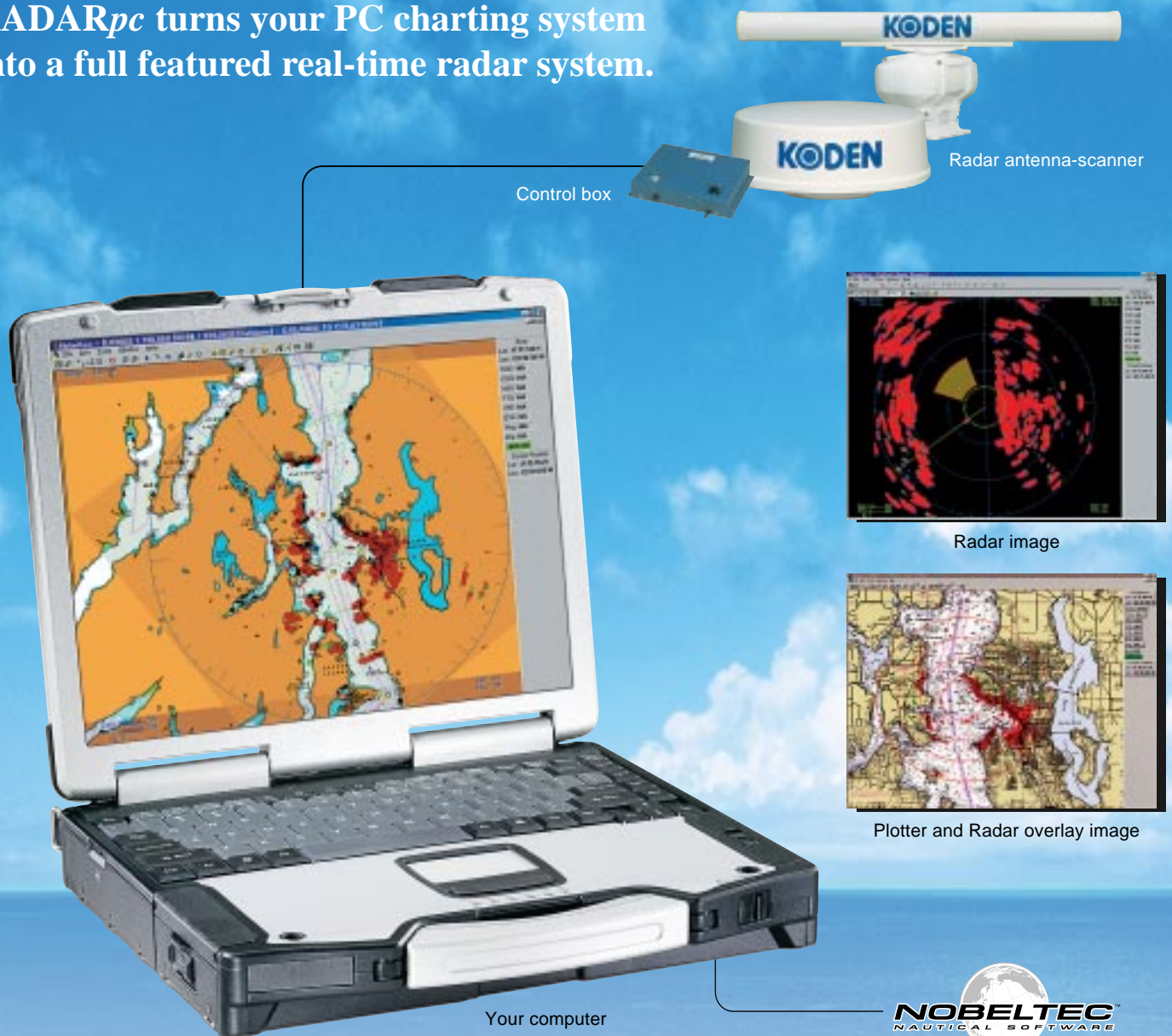


## MDS-51R/52R/61R/62R/63R

**RADAR<sub>pc</sub> turns your PC charting system into a full featured real-time radar system.**



### **FEATURES**

• **Full range of radar variation:**

A combination of the MDS-5R or MDS-6R control box and any antenna-scanner unit covers full range of KODEN radar variety selection.

• **High speed data communication:**

Ethernet data communication gives interfaceability with almost every PC. Multi PC network system can be constructed.

• **Full performance on the recommended software:**

Recommended NOBELTEC charting software IR2 Visual Navigation Suite or Admiral gives you stand alone, side by side or overlay radar image with full radar control in addition to NOBELTEC advanced charting capability.

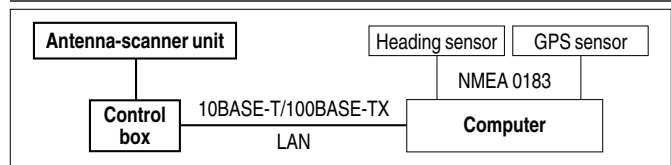
# SPECIFICATIONS

Model	MDS-51R RB715A	MDS-52R RB716A	MDS-61R RB717A	MDS-62R RB718A	MDS-63R RB719A					
Antenna unit	R 2.0 feet (Radome)		3.0 feet	4.0 feet	4.0 feet	6.0 feet	6.0 feet	6.0 feet	9.0 feet	
Peak power output	4 kW		6 kW		12 kW		25 kW			
Transmitting frequency	3.9°		2.5°	1.8°	9410 ± 30 MHz		1.8°	1.2°	1.2°	0.8°
Beam width	Horizontal	25°		22°	22°	22°	22°	22°	22°	25°
Rotation	Vertical	25°		22°	22°	22°	22°	22°	22°	25°
Pulse length / PRF	S	0.083 μsec / 2000 Hz		0.083 μsec / 2000 Hz		0.083 μsec / 2000 Hz		0.083 μsec / 2000 Hz		
	M	0.25 μsec / 1000 Hz		-		-		-		
	M1	-		0.3 μsec / 1500 Hz		-		0.3 μsec / 1300 Hz		
	M2	-		0.8 μsec / 1000 Hz		-		0.6 μsec / 800 Hz		
	L	0.8 μsec / 500 Hz		1.0 μsec / 500 Hz		-		-		
	L1	-		-		-		1.2 μsec / 500 Hz		
	L2	-		-		-		1.2 μsec / 400 Hz		
IF center frequency	S	20 MHz		60 MHz (Logarithmic amplifier)		20 MHz		20 MHz		
IF bandwidth	M	20 MHz		-		-		-		
	M1	-		20 MHz		-		20 MHz		
	M2	-		3 MHz		-		3 MHz		
	L	3 MHz		3 MHz		-		-		
	L1	-		-		-		3 MHz		
	L2	-		-		-		3 MHz		
Noise figure	-		6.5 dB or less		-		-		-	
Operating temperature	-		-25°C to +55°C		-		-		-	
Operation in wind (relative)	-		100 knots		-		-		-	
Water resistance	-		IPX6 (IEC945)		-		-		-	
Control box	MDS-5R		MDS-6R		-		-		-	
Range scales	1/8 to 36 nm		1/8 to 48 nm		1/8 to 64 nm		1/8 to 72 nm		1/8 to 96 nm	
Presentation modes	-		Head up, North up, Course up		-		-		-	
Echo trail interval	-		OFF, 15, 30 sec, 1, 3, 6 min, Continue		-		-		-	
Minimum range	-		Better than 25 m on 1/8 nm range		-		-		-	
Range accuracy	-		Better than 8 m or 0.9 % (at the maximum range of the scale in use)		-		-		-	
Bearing accuracy	-		Better than ±1°		-		-		-	
Range discrimination	-		Better than 25 m		-		-		-	
Functions of radar image	-		Auto/Manual Gain, Auto/Manual/Harbor STC, Auto/Manual FTC, Auto/Manual Tune, Interference rejection, Expansion, Trigger delay adjustment, Heading line adjustment, Full image transfer mode / Quadrant image transfer mode / Real time image transfer, Transfer radar image size (240 x 240 / 480 x 480), Off center		-		-		-	
Transfer data size	Real time transfer	256 / 512 / 680 dots / sweep (1024 / 2048 / 4096 sweeps per antenna rotation)		Level: 3 bits		-		-		
	Full image transfer	240 x 240 / 480 x 480 dots		Level: 2 bits		-		-		
	Quadrant image transfer	120 x 120 / 240 x 240 dots		Level: 2 bits		-		-		
Other function	Serial number output	Yes		-		-		-		
	Preheat times output (by 5 sec step)	115 sec to 5 sec		-		-		175 sec to 5 sec		
	Program version up	by Ethernet		-		-		-		
	Error output	SHF, System, AZI, RAM, ROM, DHCP server		-		-		-		
Operating temperature	-		-15°C to +55°C		-		-		-	
Water resistance	-		None (IPX0)		-		-		-	
Interface	-		Ethernet		-		-		-	
Serial / Ethernet	-		10BASE-T / 100BASE-TX		-		-		-	
Mode of communication	-		Communication command and radar image transfer		-		-		-	
TCP / IP layer	Application layer	ARP (Address Resolution Protocol), ICMP (Internet Control Message Protocol)		-		-		-		
	Internet layer	UDP (User Datagram Protocol)		-		-		-		
	Transport layer	Shielded UTP (Unshielded Twisted Pair Cable) with cross style, 2 m (standard)		-		-		-		
Network Interface	-		10 Mbps / 100 Mbps		-		-		-	
Transmission speed	-		Radar image video by proprietary protocol		-		-		-	
Output data	-		Radar control by proprietary protocol		-		-		-	
Input data	-		-		-		-		-	
Antenna cable length	10 m (standard)		15 m (standard)		-		-		-	
Power	-		10.2 to 41.6 VDC		-		-		-	
Power supply	55 W or less		70 W or less		80 W or less		90 W or less		130 W or less	
Power consumption	-		120 sec		-		-		180 sec	
Preheat time	-		-		-		-		-	

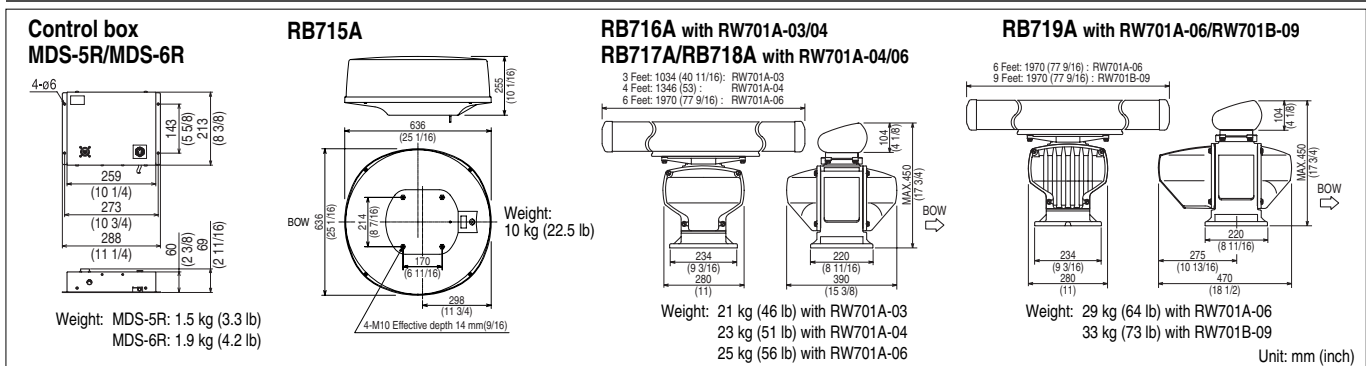
## EQUIPMENT LIST

Standard equipment	Control box	1
	Antenna-scanner unit	1
	Connecting cable	1
	Power switch	1
	DC power cable	1
	LAN data cable	1
	Spare parts kit	1
	Installation materials	1
	Installation manual	1

## CONNECTIONS



## DIMENSIONS AND WEIGHT



\* Specifications subject to change without notice.

# KODEN

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Certified to ISO 9001 ( TUV PRODUCT SERVICE )



To ensure proper and safe use of the equipment, please carefully read and follow the instructions in the OPERATION MANUAL.

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