



ALPHATRON  
Marine



Black box radar

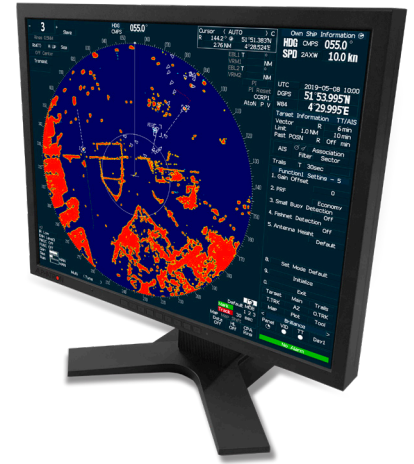
# JMA-5200Mk2 series

High performance in a simple design

[jrc.am](http://jrc.am) | [alphatronmarine.com](http://alphatronmarine.com)

# Features

JRC/Alphatron Marine proudly presents the reintroduced JMA-5200MK2 radar series. This successful radar series is now available as black box radar design. The JMA-5200Mk2 integrates the latest leading technologies with a set of advanced features to deliver continuous high performance and are designed to seamlessly run radar images faster and more efficiently than ever before. The JMA-5200Mk2 radar series are available for Non-SOLAS vessels ranging from a dome radar up to an S-band version.



- Reintroduced series
- Black box design
- High-quality AlphaScreen monitor
- Constaview digital signal processing
- TEF multi-level target enhancement
- High speed version available
- Brushless antenna motors for extended lifetime
- Variety of X-band scanners available
- Latest technologies included
- Part of the ProLine package

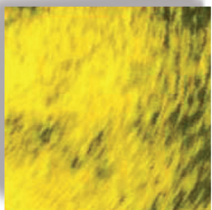
Processor unit G-000397 for JMA-5200Mk2



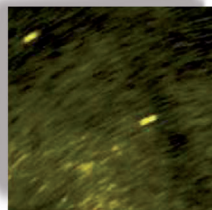
## Black box design

The radar processor is the heart of the JMA-5200Mk2 series and contains a simple configuration enhancing easy installation and operation. Optional TT (Target Tracking), AIS and plotter functionalities can be built in. Additionally, it is possible to present wind and echosounder information at a dedicated segment on the screen.

## Wide dynamic range receiver



• Saturation of noises on receiver

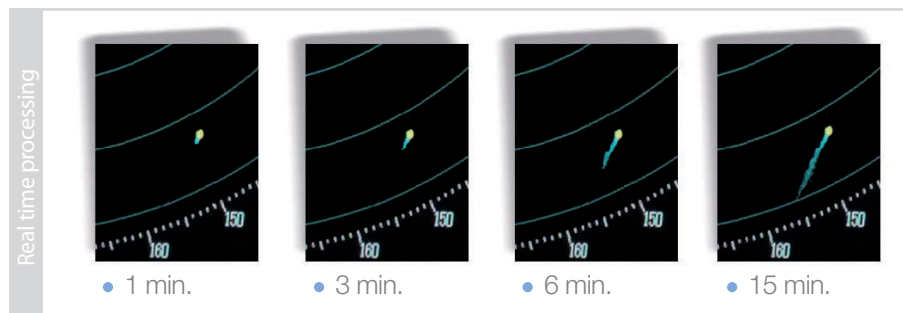


• Wide dynamic range

The JMA-5200Mk2 integrates a wide dynamic range receiver that, compared to conventional models, significantly improves the differentiation of noise and targets under sea clutter. The radar system overcomes different sources of unwanted signals, maintaining a constant level of overall visible clutter.

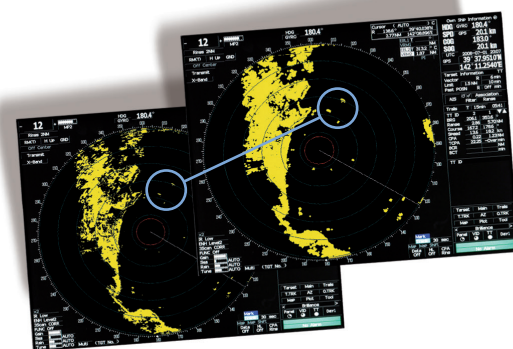
# Radar trails

Other ship's movement and speed can be monitored from length and direction of their trails, primary serving for collision avoidance. The radar integrates four different trail length modes, that will show a ship's course instantly, a unique operational feature that allows for more flexibility.



# Clearly identifies targets

With our in-house developed radar core, we can guarantee, even in bad weather, a clear radar image with clear targets. Developed exclusively by JRC, TEF, allows target enhancement relative to the target size. The smaller echoes are far more enlarged than bigger echoes, giving a better on-screen separation and identification.





- Standby
- Rotates EBL azimuth
- Acknowledge alarm
- Allocate function
- North-up, head-up and course-up
- Shrink/expand observation range
- Change VRM distance
- Trackball

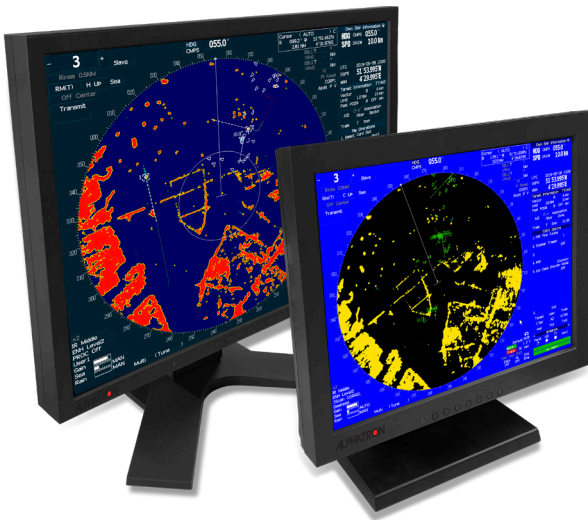
# Keyboard

The keyboard allows you to carry out all radar operations simply by using the keyboard or on-screen by use of the trackball. The responsive feel keys allow logical and precise operation and integrates function keys for one-touch access to EBL, VRM, GAIN, SEA and RAIN. This makes it easy to navigate through all common used tasks.

# Choose your scanner

A wide range of X-band scanners are available depending on installation space and required performance, all with exceptionally reliable target detection capabilities. The latest leading technologies with a set of advanced features are integrated, allowing the radar to run images faster and more efficient than ever before. Also, the brushless antenna motors in the scanner guarantee for extended lifetime.

		Width	TX power	HS	
Choose your scanner	NKE-2043		2 ft	4 kW	-
	NKE-2063A		3.9 ft	6 kW	-
	NKE-2103		4 ft	10 kW	-
			4 ft	10 kW	v
	NKE-2103		6 ft	10 kW	-
			6 ft	10 kW	v
NKE-2254		7 ft	25 kW	-	
		9 ft	25 kW	-	



# Choose your display

Optionally the radar can be connected to high-quality AlphaScreen monitors which feature high brightness, fully dimmable and up to an astonishing 420 candelas, providing excellent visibility. The JMA-5200Mk2 series is compatible to be connected to either a 15-inch display or a 21-inch display. The 21-inch display is available as flush mount or with an adjustable stand.

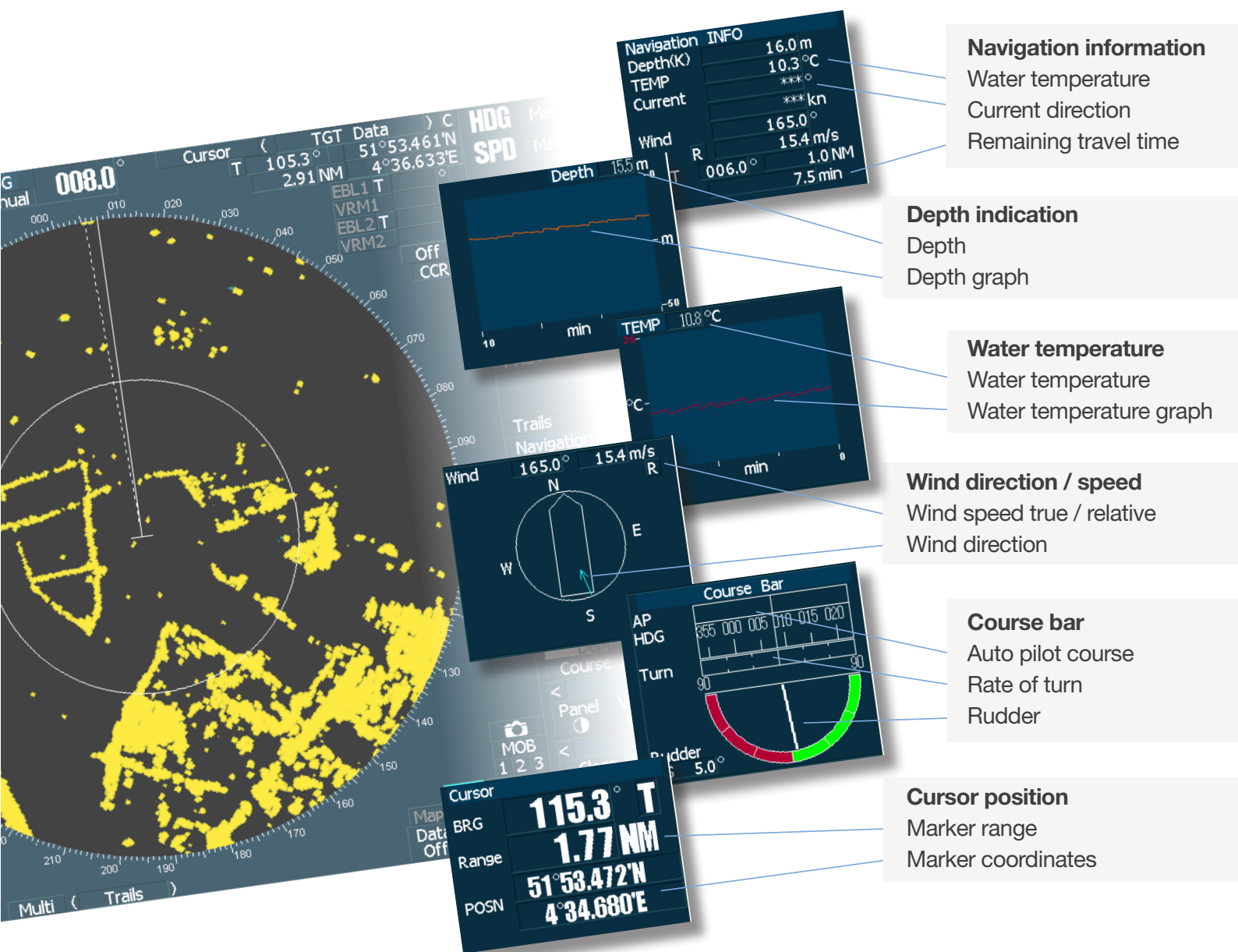
Size	Description	Pixels	Resolution	Aspect ratio	Vessel size	Adjustable stand
15-inch	AlphaScreen 15"	1024 by 768	XGA	4:3	Up to 299 GT	✓
21-inch	BasicScreen 21"	1600 by 1200	UXGA	4:3	Up to 299 GT	✓
21-inch	AlphaScreen 21"	1600 by 1200	UXGA	4:3	Up to 299 GT	

# On-screen info

Menu selections, via the keyboard or trackball are clearly shown on the display - allowing "at a glance" interpretation of the radar image.

You can also select day and night background modes and adjust the brilliance at your own convenience.





# Specifications JMA-5200Mk2 series

JMA-5204

JMA-5209

JMA-5212-4

JMA-5212-6

JMA-5222-7

JMA-5222-9

JMA-5212-4HS

JMA-5212-6HS

Model	
IMO compliant	Non-SOLAS
Display	colour raster scan PPI
Range scale	0.125/0.25/0.5/0.75/1.5/3/6/12/24/48/96 NM
Scanner	
Model	NKE-2043    NKE-2063A    NKE-2103-4    NKE-2103-6    NKE-2254-7    NKE-2254-9    NKE-2103-4HS    NKE-2103-6HS
Antenna length	2 ft.    3.9 ft.    4 ft.    6 ft.    7 ft.    9 ft.    4 ft.    6 ft.
Transmitting power	4 kW    6 kW    10 kW    25 kW    10 kW
Transmitting frequency	9410 MHz ± 30 MHz
Beam width 3 dB	Hor. 4°, Ver. 25°    Hor. 2°, Ver. 30°    Hor. 1,8°, Ver. 20°    Hor. 1,2°, Ver. 20°    Hor. 1°, Ver. 20°    Hor. 0,8°, Ver. 20°    Hor. 1,8°, Ver. 20°    Hor. 1,2°, Ver. 20°
Rotation speed	16-48 rpm    16-27 rpm    27 rpm    24 rpm    48 rpm
Pulse width (receive freq.)	0.08 µs/4000 µs 0.08 µs/2250 µs 0.13 µs/1700 µs 0.25 µs/1700 µs 0.5 µs/1200 µs 0.8 µs/750 µs 1.0 µs/650 µs
Duplexer	circular + diode limiter
Tuning	automatic / manual
Ambient condition	temperature -25 to 55°C, relative humidity 0 to 93% non-condensing
Processor	
Model	NDC-1460
Bearing indication	north-up / course-up / head-up
Presentation mode	RM display with true trail, RM display with relative trail, TM display
EBL	2 (EBL1/EBL2) (center/independent) 000.0° - 359.9°, digital display
VRM	2 (VRM1/VRM2), 0.000 - 97.7 NM, digital display
Trail indication	4 stages: short, middle, long, super long (e.g. short: off/0.25/0.5/1/3/6/10/15-min and continuous)
Keyboard	
Model	NCE-7699A
Connection cable	5 m (processor-keyboard)
Installation cable	CFQ-6912-20 standard L= 20 m (optional up to 65 m)
Power supply (voltage)	24 VDC (21.6 to 31.2 VDC) / 100 to 120/220 to 240 VAC (50/60 Hz, 1φ) <sup>1</sup>
Power consumption (at max wind load)	60 W    180 W    600 W    680 W    600 W
Ambient condition	temperature -15 to +55 °C, relative humidity 0 to 93 % non-condensing (processor, display, keyboard)

1. AC power requires rectifier NBA-5111

All specifications are subject to change without notification.

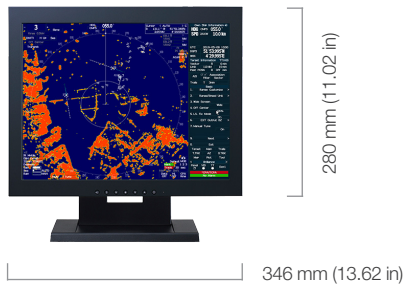
Optional items

- G-006464 AlphaScreen 21" dimm. LED monitor flush mount 230 VAC
- G-006463 BasicScreen 21" dimm. LED incl. height adjustable stand 230 VAC
- NL-1005654 PSU 24 VDC - 230 VAC for 21" monitor (optional)
- G-005593 AlphaScreen 15" incl. mounting stand, dimm. 24 VDC
- G-000107 CFQ-6912-10 Scanner cable 10 m
- G-000108 CFQ-6912-20 Scanner cable 20 m
- G-000109 CFQ-6912-30 Scanner cable 30 m
- G-000110 CFQ-6912-40 Scanner cable 40 m
- G-000112 CFQ-6912-50 Scanner cable 50 m
- G-000113 CFQ-6912-65 Scanner cable 65 m

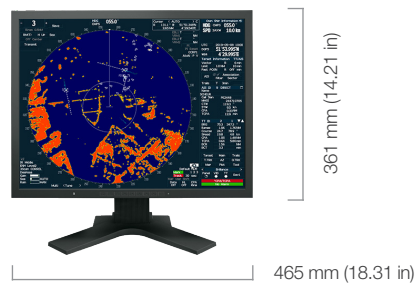
- G-001192 CFQ-5350 Video buffer cable
- G-000374 NCA-877A ATA board 30 targets
- G-000468 NQA-2155 AIS interface unit
- G-000403 NCT-4106A NSK unit
- G-000363 NBA-5111 Power supply AC/DC in and 24 VDC out, 20 A
- G-000959 CAD-249 Video buffer unit
- G-000127 CFQ-8914 External VGA cable
- G-000167 CQD-1891 VDR-connection kit
- G-000351 Heavy duty bulkhead mounting bracket

# Tech Specs JMA-5200Mk2 series

15-inch display incl mounting stand  
G-005593 Weight 3.4 kg (7.50 lbs)



21-inch display | flush mount / adjustable stand  
G-006464 / G-006463 Weight 5.6 kg (12.35 lbs)



Processor **RoHS**  
NDC-1460 Weight 4 kg (8.82 lbs)



Keyboard **RoHS**  
NCE-7699A Weight 1.3 kg (2.87 lbs)



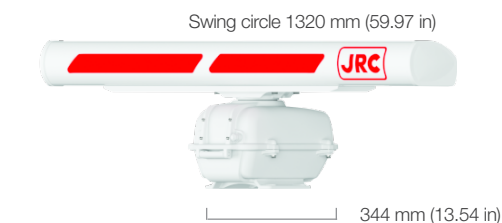
2 ft | 16-48 rpm  
NKE-2043 Weight 10 kg (22.05 lbs)



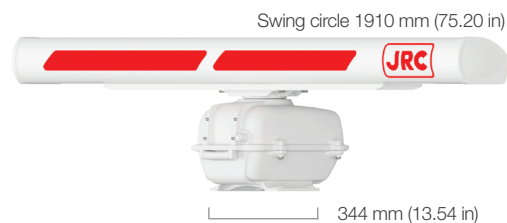
3.9 ft | 16-27 rpm  
NKE-2063 Weight 24 kg (52.91 lbs)  
Swing circle 1220 mm (48.03 in)



4 ft | 27 rpm | 48 rpm HS  
NKE-2103-4/4HS Weight 31 kg (68.34 lbs)



6 ft | 27 rpm | 48 rpm HS  
NKE-2103-6/6HS Weight 37 kg (81.57 lbs)



7 ft | 24 rpm  
NKE-2254-7 Weight 58 kg (127.87 lbs)  
Swing circle 2270 mm (89.37 in)



9 ft | 24 rpm  
NKE-2254-9 Weight 60 kg (132.28 lbs)  
Swing circle 2240 mm (88.19 in)



\*All scanners have a brushless motor and with 40 dB/dec surprisious particulars



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