

# **NOVASCAN R660**

# 3D integrated Rebar Scanner for highly professional structural surveys



The Novascan R660 is a rebar detector capable of an accurately measuring of the position of the longitudinal rods and the stirrups, the thickness of the rebar cover and the diameter of the armature. Speed, accuracy and resolution make the Novascan R660 the most powerful rebab detector on the market today.

### MAIN CHARACTERISTICS

Integrated sensor that facilitates and speeds up the magnetometer survey; Localization, measure of rebar cover and the diameter of the rebars are displayed in real time and with high precision; all on the same screen; Five scan modes to suit different test needs: [JGJ Scan], [Profile Scan], [Signal Scan], [Grid Scan],

[Scan Image];

The position of the rebars is indicated by beep and LED light over the viewfinder that makes it extremely intuitive interpretation. The distance between the bars is provided automatically on the same graph; Particularly suitable for tight bars;

Increased distance supported than models R630A and R800: 65m for the [Scan Profile] and [Grid Scan], 10m to the mode [Signal Scan];

Two ways to view the data, graphically and numerically for better and quick read;

LCD transflective 3.5 "color high resolution. 6 colors selectable interface;

Software for analysis and creation of test reports;

Rechargeable lithium battery with high capacity;

Integrated, compact, portable and convenient to carry.

# SCAN MODE

[JGJ Scan]: Rapid locator with concrete cover and diameter visualization.

[Profile Scan]: It displays position, cover thickness, spacing of adjacent rebar, measuring diameter and other information of the rebar under test by section distribuition diagram.

[Signal Scan]: It is divided into two gears "general wave scan" and "dense rebar wave scan". It displays wave form, rebar position, cover thickness, center distance of adjacent rebar, diameter measurement of the rebar under test as well as manual adding and deletion of rebar test points in real time by wave form diagram. [Grid Scan]: It shows the location, cover thickness and the distance between adjacent rebar of grid tested rebar on grid graph.

[Image Scan]: It is a comprehensive analysis for multiple scans in X and Y direction at specific area, based on signal scan and grid scan, it is applicable for rebar test environment with irregular distribution.

By using of the supplied software ZRW you can achieve a 3D visualization of the bars analyzed for the [JGJ Scan], the [Image Scan] and the [Profile Scan].

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# **TECHNICAL FEATURES**

Rebar thickness range [mm]:	Ø6 - Ø50
Max range [mm]:	
- First range:	1 - 80
- Second range:	1 - 180
Maximum allowed error for protective layer [mm]	
1~59	±1
50 ~ 78	± 2
70 ~ 180	± 4
Range [mm]:	Ø6 - Ø32
Max allowed error for diameters measurement [mm]:	±2
Functions:	[JGJ Scan], [Profile Scan], [Signal Scan], [Grid Scan], [Image Scan], 3D imaging
Scan range:	Borderless
Data correction:	Automatic
Data transmission:	USB
Screen [mm]:	320 × 240
Power:	Built-in battery
Size [mm]:	240 x 93 x 110
Weight [kg]:	0,67
0.00	

### ACCESSORIES

Software ZRW for data pro	ocessing
USB Cable	
Manual	
Battery charger	
Certificate of conformity	
Rigid suitcase for transpor	t

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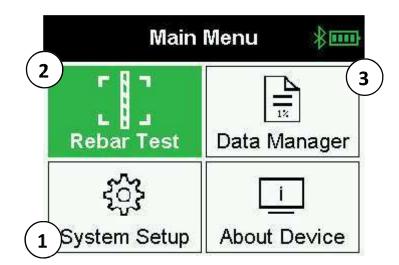


# FAST GUIDE TO R660 PACOMETER FUNCTIONALITIES

# 1. DEVICE COMPONENTS



2. MAIN MENU



The main menu screen appears on the display when the R660 pacometer starts, and allows access to the instrument functions:

- 1. Settings;
- 2. Pacometric tests;
- 3. Data management.

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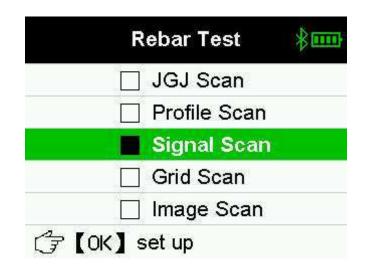


## 3. SETTINGS

System Setup 🛛 🖇 🎟	System Setup 🛛 🕴 🏧
Lightness 50	📕 Language English
🗌 Shutdown Off	☐ StirrupDist 80
🗌 Bluetooth On	🗌 Sys. Color
Buzzer Off	
☐ Date Set. 2015/04/28	
☐ Time Set. 10:25:47	

## 4. <u>TESTS</u>

The R660 pacometer allows magnetometric tests to be performed according to 5 different methods, to adapt to the different needs of the user:



Selecting the desired function, a menu opens in which it is possible to set the test parameters and name the file to be stored in the internal memory of the instrument.

	****										3000		
🗌 Obj. No.	Obj. No. JGJ00001				Obj. No.				_IGJ00001				
Dia.	ø16		🗌 Dia.			Ø16							
Cover	<u>37</u> mm		Cover				37 mm						
🗌 Туре	Girder	0	1	2	3	4	5		7	8	9		
□ Retest	1	A K	B L	C M	D N	Е 0	F P	G Q	H R	I S	T T		
		U	V	W	X	Y	Ζ	+		#	1		

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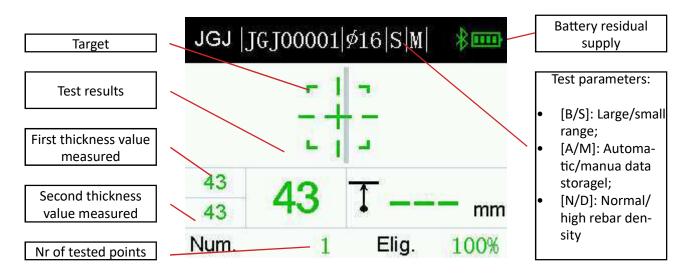






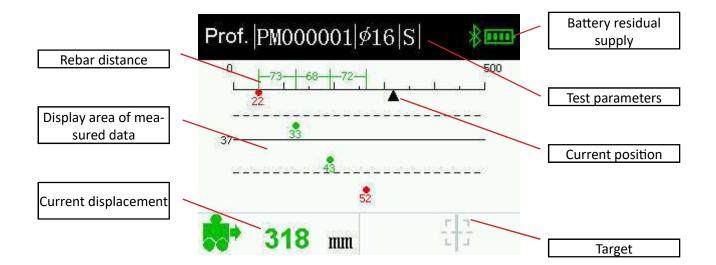
# a) JGJ SCAN

The "JGJ SCAN" mode allows you to identify the position of a reinforcing bar and estimate its thickness. You can estimate the thickness using a single measurement or as an average value between two measurements (depending on the initial setting set by the user).



### b) **PROFILE SCAN**

The "PROFILE SCAN" mode makes it possible to identify the thickness of the concrete cover, diameter, position and spacing of the bars and other information on the reinforcement examined through the cross section graph.



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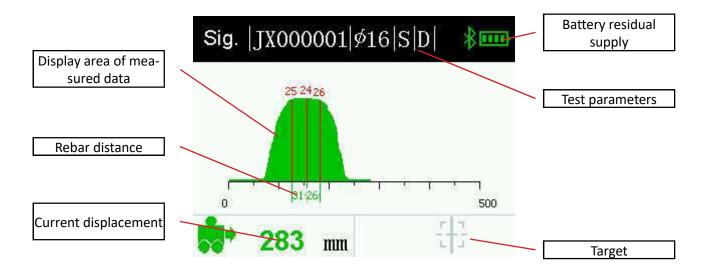
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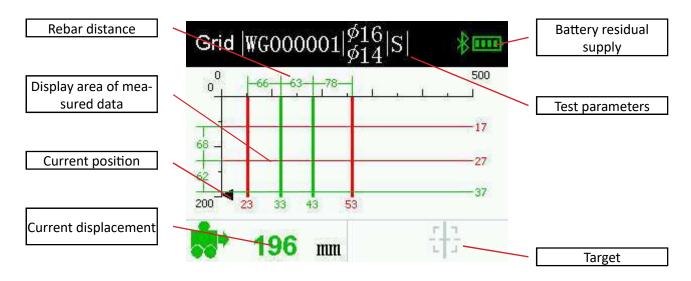
# c) SIGNAL SCAN

The "SIGNAL SCAN" mode is divided into two steps: "general wave scan" and "dense rebar wave scan". Displays the waveform, the position of the reinforcement, the thickness of the cover, the central distance of the adjacent reinforcing bar, the measurement of the diameter of the reinforcing bar being tested and the manual addition and cancellation of the points of real-time armature test using a waveform diagram.



# d) GRID SCAN

"GRID SCAN" is the mode that shows the position and diameter of the bar, the thickness of the cover, the interaxis between the adjacent reinforcements. It is possible to scan in the two directions X and Y and get the graph with the reinforcement grid.



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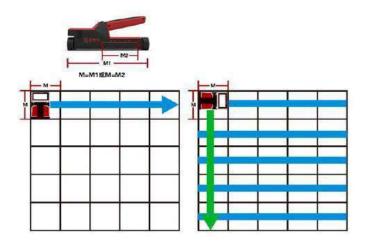
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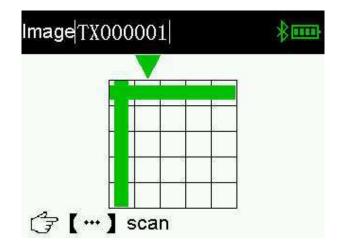




# e) IMAGE SCAN

The "IMAGE SCAN" function allows you to scan an element in the two directions X and Y, after having divided the area to be tested into a grid with a maximum number of areas equal to 5 x 5. Performing the scan 2 to 5 times for each mesh grid, you can view an image of the arrangement of the bars in the element.





### **5. DATA STORAGE**

By accessing the device archive it is possible to view the saved results or eliminate unwanted measurements.

Data Manager 🛛 🖇 🎟	Data View 🖇					
📕 Data Display	Obj. 🔻	Data				
Data Deleting	WG000005	2015/04/27 16:23:55				
	WG000004	Type JGJ Scan Dia. 16mm				
	WG000003	Cover 37mm				
	WG000002	Points 16				
	<b>t</b> WG000001	Elig. 81%				
	WG000000					

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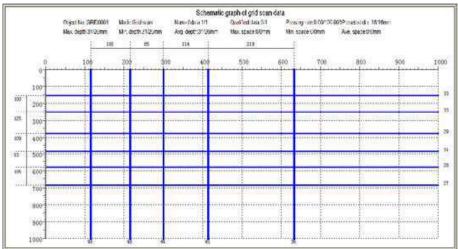
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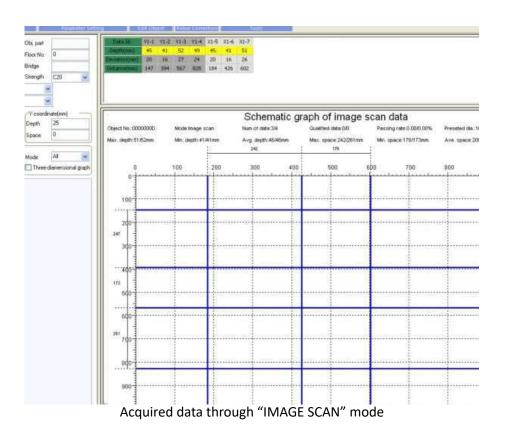




# 6. DATA ELABORATION SOFTWARE



Acquired data through "GRID SCAN" mode



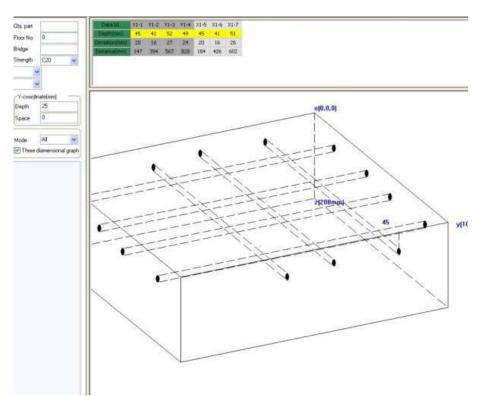
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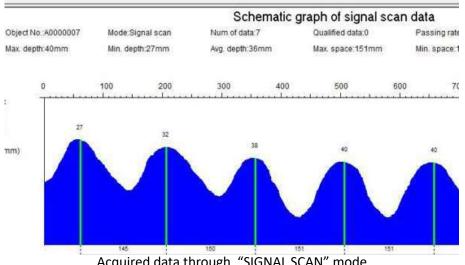




### "IMAGE SCANE" Mode - 3D data elaboration

rection Object Object Rebar Rebar Transfer Report Firmware

Edi	t Obje	α	Reba	Rebar Correction				1001	
Data id.	X-1	X-2	X-3	X-4	X-5	X-6	X-7		
Depth(mm)	27	32	38	40	40	34	39		
Deviation(mm)	12	17	23	25	25	19	24		
Distance(mm)	61	206	356	507	658	792	934		



Acquired data through "SIGNAL SCAN" mode

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