

IQANgo

Version 7.00

User manual

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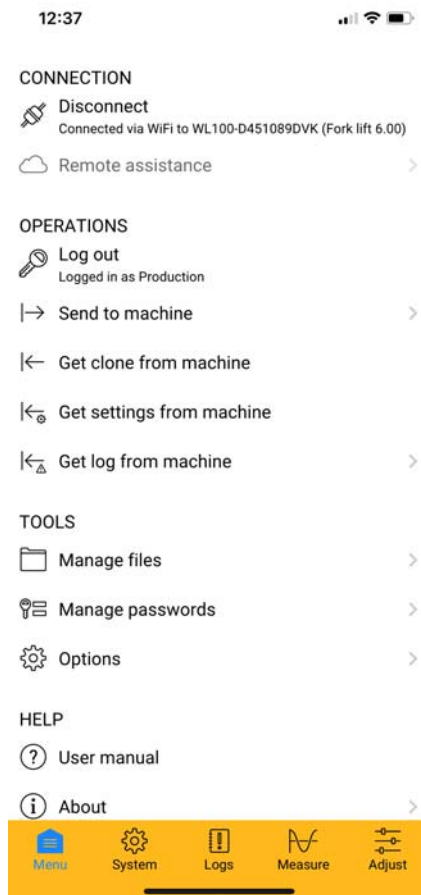
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1 User interface

IQANgo is an app for Android and iOS that is best described as a slimmed down version of IQANrun. It has key features such as system info, log management, measure, adjust and sending and receiving files.

IQANgo connects to an IQAN system using WiFi, Bluetooth or Internet.



IQANgo user interface.

When first started, IQANgo will show its main menu. At the bottom of the screen there is a tab bar that will pop up when IQANgo is connected to an IQAN system. The bottom tab bar will give access to additional views:

- System
- Logs
- Measure
- Adjust

Screen orientation

IQANgo supports both portrait and landscape mode.

Portrait mode

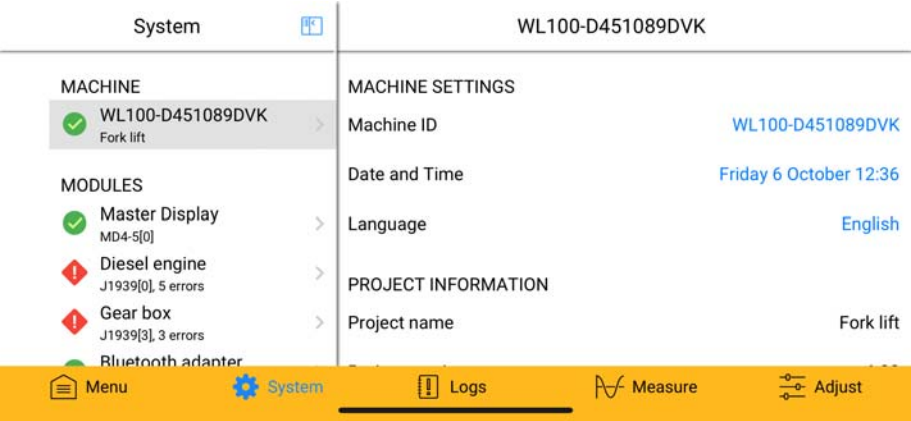
When in portrait mode, IQANgo will only display one pane at a time. When viewing a sub pane, there is a back button in the upper left corner that will navigate back to the previous pane.



Sub pane with back button.

Landscape mode

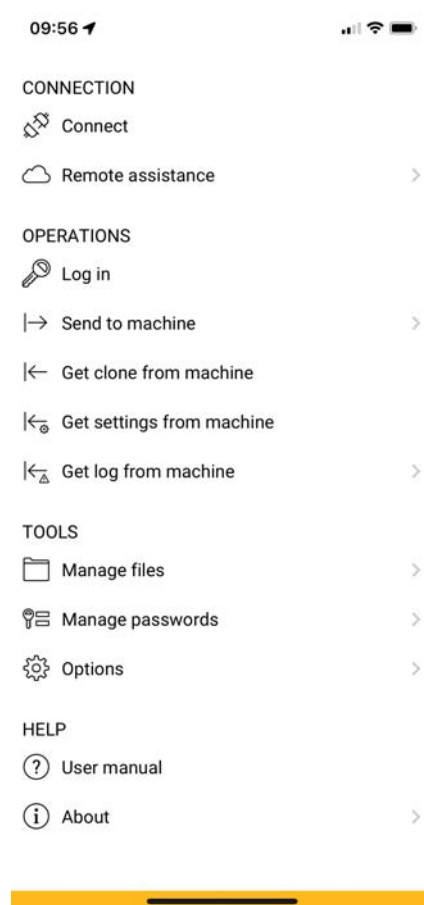
In landscape mode, the screen is divided in two, showing both the master pane and the detail pane side-by-side. The master menu can be minimized by tapping the button in the upper right corner of the master pane. Click again to restore it.



Master pane with detail pane side-by-side.

2 Menu

The *Menu* tab is visible when not connected to a system or when the *Menu* tab is selected on the bottom tool bar. The menu contains buttons to access different operations and tools.



The main menu.

Connection

Connect/Disconnect	Click to connect to or disconnect from an IQAN system. See section <i>Communication</i> on page 39.
Remote assistance	Connects an IQAN system to the IQANconnect server to allow remote connections to it. See section <i>Remote assistance</i> on page 43.

Operations

Log in	Logs in to the connected system to get access to protected components and operations. See section <i>Login</i> on page 15.
Log out	Logs out from the connected system. See section <i>Logout</i> on page 15.
Send to machine	Sends a project, clone or settings file to the connected system. See section <i>Send operations</i> on page 16.
Get clone from machine	Gets a clone from the connected system. See section <i>Get clone</i> on page 19.
Get settings from machine	Gets settings from the connected system. See section <i>Get settings</i> on page 19.
Get log from machine	Lets you select one or more logs to get from the connected system. See section <i>Get log</i> on page 20.

Tools

Manage files	Opens the internal file manager. See section <i>Manage files</i> on page 21.
Manage passwords	Opens the password manager, see section <i>Password manager</i> on page 44 for more information.
Options	Lets you customize the user interface and behavior of IQANgo. See 2.

Help

User manual	Shows this document.
About	Displays license and version information.

Security

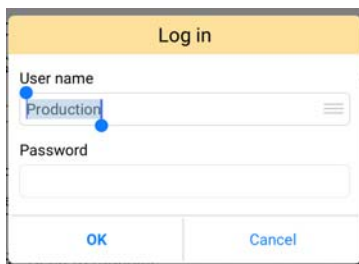
Some application components or operations may be protected by access levels. To access these you have to log in to the machine with a user that has an access level that is same or higher than the required.

Login

If you try to perform an operation that is protected by a higher access level than the one you currently have, that operation will fail due to insufficient access rights. The same applies if you haven't logged in at all of course.

Application components such as adjust groups, measure groups or logs may also be protected in your application. If you are not logged in as a user with sufficient access level, you will not even see these components in the different menus in IQANgo.

To get access to protected operations and components you need to log in to the IQAN system. Click the *Log in* item in the main menu. A dialog box is shown, asking for a user name and a password. Enter a user name that you know exists and its corresponding password.

A screenshot of a 'Log in' dialog box. The title bar is yellow and says 'Log in'. There are two input fields: 'User name' and 'Password'. The 'User name' field has a dropdown menu with 'Production' selected. There are blue dots on the 'User name' label and the 'Production' text. The 'Password' field is empty. At the bottom, there are two buttons: 'OK' and 'Cancel'.

Login dialog box.

It is also possible to store users and their passwords in your password database. Stored users can be accessed in the drop down list *Username*. When you select a stored user in the list, its password will be filled in automatically. Just click *OK* to log in. Read more about stored passwords in section *Password database* on page 45.

After a successful login, the menu item is updated with your user name. You should now be able to see the protected components and/or perform protected operations.

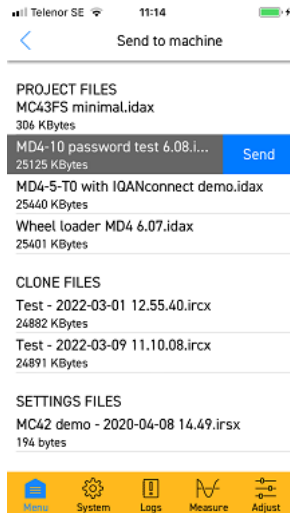
Logout

When you are done with your work, a good practice is to log out before you leave the machine to prevent other users from getting access to protected components or operations.

You will automatically be logged out if the connected master module is shut down or restarted.

Send operations

Click the *Send to machine* item to send a project, clone or setting file to a connected system. The internal file manager is shown. Select the file you want to send and tap the send button that appears on the right side.



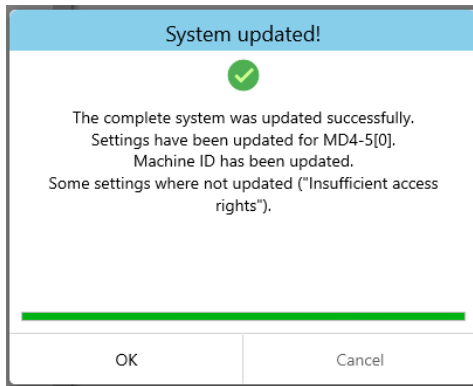
Send to machine.

A confirmation dialog box, showing you information about the file you selected, is displayed. Click *Yes* to continue. A warning message is displayed to remind you that the machine has to be stopped to proceed. Verify that the engine has been shut down and click *OK* to continue.

Before the file is sent, IQANgo checks that your access level is high enough for this operation. If you need higher access level, you will be given the option to log in as a different user. Only settings that you have access rights to change will be updated. All other settings are left unchanged. Make sure that you are logged in with sufficient access rights before you perform this operation. See section *Login* on page 15 for more information.

IQANgo will check that the required master modules can be found in the system before starting the send operation. If any master module is missing a warning will be shown with information about which master modules that will be updated. If you want to update the modules found select *Yes*.

Status is shown during the send operation with a progress bar.



Send clone file done.

After sending is complete, all master modules will automatically be restarted. Depending on which type of master module you use, this can take some time. Do not turn off power to your system during this operation.

Abort file transfer

If the file transfer has to be stopped, click *Cancel*.



ATTENTION

When sending a project to the IQAN system, first make sure the machine is not moving and the engine is shut down.

Firmware update considerations for project and clone files

When sending a project file or clone file, the IQAN master modules in the system will be updated to the firmware from the version of IQANdesign that created the project file.

Only the firmware that is different is sent. This can be an important aspect when planning for machine updates in remote locations, especially for systems with displays where the file size is usually large. If firmware versions differ, it may be wise to use the fastest possible communication interface, usually WiFi.

Send operations summary

This table summarizes what parts of the machine information is exchanged with different send operations.

Information	Send project	Send settings	Send clone
Application (including application default values, languages and users)	Yes	No	Yes
Logs	No	No	No
Adjustable values	No	Yes	Yes
Factory default values	No	Yes	Yes
Stored values	No	Yes	Yes
Machine ID	No	No	Yes

Get operations

Get clone

Use to get all data from the connected IQAN system and save them in a clone file. The clone file can later be sent to another IQAN system or viewed in IQANrun/IQANdesign.

Clone files are used to make a complete copy of the master modules in an IQAN system. They include applications, firmwares, settings, machine ID and logs.

There are mainly two scenarios where you would like to use clone files. The first one is when you for some reason need to replace a master module in the field. To guarantee that you get exactly the same function with the new master module, you must copy all information from the old one to the new.

The second scenario is when you have a problem with a machine that you need assistance to solve. Make a clone file of your machine and send that file to your support contact. Now they have an exact copy of your machine and can much easier help you with your problem.

Logs can be very large and are therefore optional. When you click *Get Clone* a confirmation dialog pops up asking whether you would like to include logs. After the data has been received, a save file dialog box is shown. The file is by default named <Machine ID> - <Date and time>.ircx to make it easier for you to know which machine it belongs to. Enter a file name for your clone file and click *Save*.

The file is saved in IQANgo's internal document storage and can be found in the file manager, see section *Manage files* on page 21.

Firmware cache

After IQANgo has successfully retrieved a clone file, the firmware for the IQAN master module is stored in a firmware cache. This way, the next time IQANgo gets a clone from a master module with the same firmware version, the get operation will be much faster.

Get settings

Use to get all settings from the connected IQAN system and save them in a settings file. The settings file can later be used to send these settings to another IQAN system.

A settings file contains adjustable, factory default and stored values.

Adjustable values	User settings for voltage inputs, current outputs, PWM outputs, servo outputs and function parameters.
Factory default values	Factory settings for same as above.

Stored values	Values for event counters, timers, SMS inputs, text parameters, state parameters, etc.
---------------	--

After the file has been received, a save file dialog box is shown. The file is by default named <Machine ID> - <Date and time>.irsx to make it easier for you to know which machine it belongs to.

The file is saved in IQANgo's internal document storage and can be found in the file manager, see section *Manage files* on page 21.

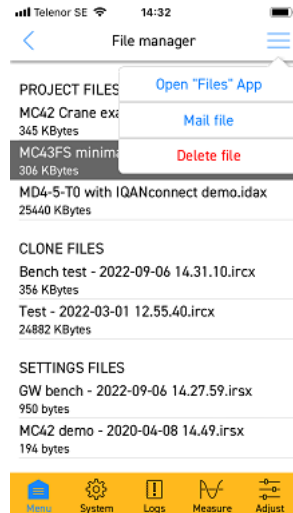
Get log

Lists all logs in the connected system and lets you select one or more of them to save. Each log that you select will be fetched in full, so this operation may be slow if a log contains a lot of records.

The file is saved in IQANgo's internal document storage and can be found in the file manager, see section *Manage files* on page 21.

Manage files

Use this menu item to view your local files. Selecting a file will allow you to mail it or delete it.



Tap the menu button and select *Mail* or *Delete*.

iOS lets you open the *Files* app from this menu.

File manager.

This menu shows files stored locally on the device in the IQANgo folder.

Managing files on iOS

On iOS devices, the folder can be accessed via the iOS Files app. The folder's location is *On My iPhone > IQANgo*. With the Files app you can move or copy files to and from the IQANgo folder. Putting a file in the IQANgo folder will make it show up in IQANgo.

Managing files on Android

On Android devices, the menu option *Import file* lets you import files from another folder or another app such as *OneDrive*.

With *Export file*, the selected file can be exported to the *Downloads* folder on the device.

Options

This section describes the options that concern the user interface of IQANgo.

Passwords

Select whether passwords should always be saved or if IQANgo shall ask for save each time a password is entered.

Disabled dialog boxes

Some message dialog boxes have a check box named *Never show this again*. By selecting that check box, you will not be shown that information or asked that question again. To enable a disabled dialog box again, click the *Show again* button next to the dialog box in the list.

3 System

Click *System* on the bottom tab bar to show an overview of all the modules in the system and their status.

System		WL100-D451089DVK	
MACHINE		MACHINE SETTINGS	
✓ WL100-D451089DVK	>	Machine ID	WL100-D451089DVK
MODULES		Date and Time	Friday 6 October 13:09
✓ Master Display	>	Language	English
✓ Diesel engine	>	PROJECT INFORMATION	
✓ Gear box	>	Project name	Fork lift
✓ Bluetooth adapter	>		
Menu		System	Logs
		Measure	Adjust

The system tab.

The topmost menu item represents system information followed by one item for each module in the system. The status and number of errors on a module is indicated on the corresponding item. The view is continuously updated so any new errors will immediately be visible.

The system tab is very useful to quickly spot any problems in a machine.

System information

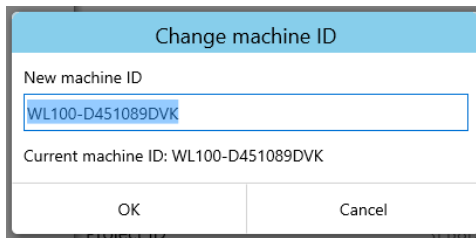
The system information includes information such as project name and version and machine ID. There may also be project specific information.

For systems with more than one master module, the system integrity is checked by making sure that the correct master modules are present and that they are using compatible applications. If more than one error is found during this check the system integrity is shown as *Error* with further details.

Machine ID

The system information contains a link to change the machine ID in the connected system. Changing the machine ID should only be done once in a machine's life time, typically in production. The machine ID is a text of up to 25 characters. It should be a unique text that identifies each machine. Typically, the machine's chassis number or serial number is used.

Logs, measures, settings and clone files are marked with the actual machine ID to make it possible for you to later identify which machine they belong to/originate from. The machine ID is also used to identify a machine when connecting to it remotely.

A screenshot of a 'Change machine ID' dialog box. The dialog has a light blue header with the title 'Change machine ID'. Below the header, there is a label 'New machine ID' followed by a text input field containing 'WL100-D451089DVK'. Below the input field, there is a label 'Current machine ID: WL100-D451089DVK'. At the bottom of the dialog, there are two buttons: 'OK' and 'Cancel'.

Change machine ID dialog.

Click on the current machine ID to show a dialog that will let you change it. Enter the machine ID you want and press *OK*. The master module may require a restart before the new machine ID is in effect.

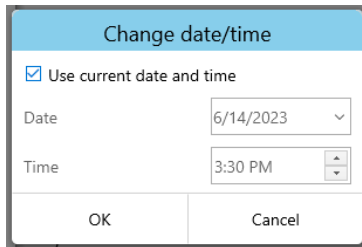


NOTE

Some systems require a higher access level to allow machine ID changing. If that is the case, an error message is displayed. Log in as a different user with sufficient access rights and try again. See section *Login* on page 15 for more information.

Date and time

Click on the current date/time to set the real time clock in the connected master module.

A screenshot of a 'Change date/time' dialog box. The title bar is blue with the text 'Change date/time'. Inside, there is a checked checkbox labeled 'Use current date and time'. Below this, there are two input fields: 'Date' with a dropdown menu showing '6/14/2023' and 'Time' with a dropdown menu showing '3:30 PM'. At the bottom, there are two buttons: 'OK' and 'Cancel'.

Change date and time dialog.

Select *Use current date and time* to use your device's clock to set the IQAN system clock. Or, set date and time to whatever you like.



NOTE

Date and time can only be set in systems where there are at least one master module with a real time clock. For systems without real time clock, the date/time item will show startup count and elapsed time since last startup instead.

Language

Click current language to select language in the connected master module. A list with all available languages is displayed. The currently active language is selected in the list.

To change the active language, select the language you want in the list.



NOTE

Not all systems have multiple languages. This depends on the actual project loaded.



NOTE

The selected language will be used both in IQANgo and in the master module. Language affects component names, such as measure groups, adjust groups, etc and the menu system in the master display.

Module info

Select a module to view further information about it. This includes for example module type and address as well as production data. Any active faults are listed together with measured value and status of the corresponding channels. If a fault disappears the channel is still measured, but the status will change to OK.



The screenshot shows the 'Master Display' interface of the IQANgo system. At the top, the time is 12:59 and there are status icons for signal, Wi-Fi, and battery. The title 'Master Display' is centered. Below it, a table lists module details: Module type (MD4-5), Address (0), Status (OK with a green checkmark icon), and LED status code (R1:4 (Exp I/O error)). A section titled 'MODULE INFO' follows, listing: Production date (6 Oct), SW Version (7.00.27.6511), Bios Version (1.00), Serial number (340010001), Temperature [°C] (49), VRefA (5.00), VBB (12.40), Capabilities (-), IP address 0 (0.0.0.0), and MAC address 0 (00-00-00-00-00-00). At the bottom is a navigation bar with five icons: Menu (house), System (gear), Logs (exclamation mark), Measure (wavy line), and Adjust (sliders).

12:59	Signal, Wi-Fi, Battery
Master Display	
Module type	MD4-5
Address	0
✓ Status	OK
LED status code	R1:4 (Exp I/O error)
MODULE INFO	
Production date	6 Oct
SW Version	7.00.27.6511
Bios Version	1.00
Serial number	340010001
Temperature [°C]	49
VRefA	5.00
VBB	12.40
Capabilities	-
IP address 0	0.0.0.0
MAC address 0	00-00-00-00-00-00
Menu System Logs Measure Adjust	

Module information.

The information is updated continuously, so you can use this view to measure module temperature and supply voltage for example.

LED status

Master modules without display have a LED that is used to indicate status. When this LED is indicating an error the error status can also be read on the master module's info page in IQANgo. For example an input error consists of one red flash followed by two yellow flashes. This is indicated as "R1:2". Status flash codes such as *application not loaded* consists of yellow flashes. This is indicated as "Y1:2". For the most common errors a clear text is also shown.

4 Logs

Click the *Logs* tab to view and manage logs in the connected IQAN system.

Logs	System log (14/14 records)
SYSTEM LOGS	2023-10-06
System log 14 records (0,56 %)	13:00:07 User logged in Production[0] /iPhone
EVENT LOGS	12:46:01 Lever Lift [%] (VIN, Pin C2:4)
Engine events 234 records (55,44 %)	Low error
STATISTICS LOGS	12:46:01 VIN-N:XC43[0] [%] (VIN, Pin C2:20)
Hydraulic oil temp 10 records	Low error
Machine statistics	12:46:01 PWMIN-A:XC43[0] [%] (PWMIN, Pin C1:11)
	Low error
	12:46:01 Hydraulic oil level [%] (VIN, Pin C1:8)
	Low error
	12:46:01 Hydraulic temperature [°C] (VIN, Pin C1:26)

The logs tab.

Some logs may be protected by a PIN code. Those logs are marked with a small lock symbol. See also section *PIN code protection* on page 34.

If you miss some log in the list that you know should be there, you may need higher access rights. Log in as a different user with sufficient access rights and try again. See section *Login* on page 15 for more information.

Each log shows a status indicating if it is full or not. If the log is full it can either stop logging (*Log full, stopped*) or start overwrite the oldest records (*Log full, recycling*).

View log

Select a log in the list to view its records. The latest log records are fetched from the connected master module and displayed. If you would like to see more records, click *Get more records* in the upper right menu. Or, click *Get all records* to get all records in the log. There is also a *Refresh* menu item that fetches newer records that may have been added to the log after you entered this view.

There is a search button in the upper right corner next to the menu which lets you filter out log records by entering a text.

Save

Select *Save* in the upper right menu to save all fetched log records to a file. A save file dialog box is shown.

There are three file formats available.

.irlx	IQANrun Log file. Use this format to be able to open it with IQANrun and view it later.
.xlsx	Microsoft Excel format. Saves all fetched log records in an Excel workbook. Opens the file in Microsoft Excel after it has been saved.
.csv	The Comma-Separated Values file format is a file type that stores tabular data. It is a delimited UTF8-encoded text file, which uses a semicolon to separate values.

Mail

Use this to mail the current log records to another user.

Add record

Click *Add Record* in the upper right menu to add some text to a selected system log. Enter the text you want to add in the system log and click *OK*. The maximum number of characters is 250.

The text record is added with the description *External record* and the text you entered as its value. It is of course stamped with current date and time.

Clear log

To delete all records in a log select the log in the list and then *Clear Log* in the upper right menu. A confirmation dialog box is displayed. Click *Yes* to clear the log.

Some logs require a higher access level to allow this operation. If that is the case, an error message is displayed. Log in as a different user with sufficient access rights and try again. See section *Login* on page 15 for more information.

5 Measure

Select the measure tab to measure one or more channels in real-time. Measurements can be done both numerically and graphically. There is no need to open any project file to do this operation, all information needed is fetched from the connected IQAN system.

Measure		Sensors	
MEASURE GROUPS		MEASURE ITEMS	
Sensors	>	Hydraulic temperature	72,98 °C 3017 mV
Levers	>	Hydraulic oil level	72,60 % 3404 mV
Engine	>	Pressure sensor Lift	0,00 bar 0 mV
Transmission	>	Fuel level	71,47 liter
Hydraulic functions	>		

Menu

System

Logs

Measure

Adjust

The measure tab.

Measure groups

A measure group contains one or more measure items. They provide a way of organizing all measure items in a project to give you a better overview. Select a measure group to see and measure its measure items.

If you lack some measure group that you expect to be there, you may need higher access rights. Log in as a different user with sufficient access rights and try again. See section *Login* on page 15 for more information.

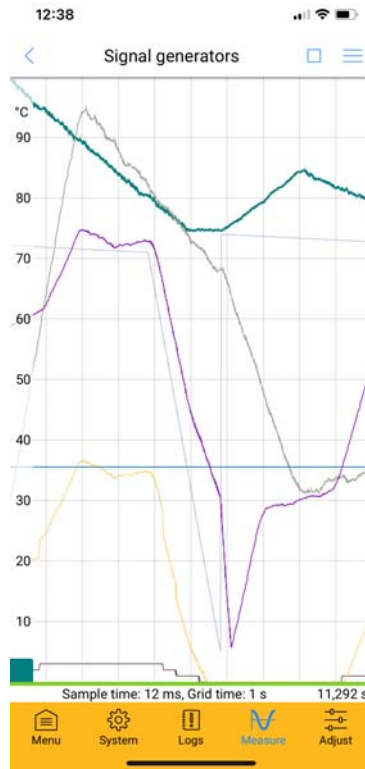
Start and stop

Use the start/stop button in the tool bar to start or stop the recording.

Graph

Click the graph button in the upper right corner to switch to graphical measuring.

In landscape mode, the measure items are shown together with the graph view. Each item is color-coded to match its curve in the graph.



Graphical measurement.

The graph also shows a colored representation of measured channel status at the bottom. This can be turned on or off using the menu in the upper right corner.

Save

After you have stopped the measurement, it is possible to save your measurement to a file. Click *Save* in the upper right menu. A save file dialog box is shown.

There are three file formats available.

.irmx

IQANrun Measure file. Use this format to be able to open it with IQANrun to view it later.

.xlsx	Microsoft Excel format. Saves all measured values in an Excel workbook. Opens the file in Microsoft Excel after it has been saved.
.csv	The Comma-Separated Values file format is a file type that stores tabular data. It is a delimited UTF8-encoded text file, which uses a semicolon to separate values.

Panning

Use one finger to pan the graph in the X and/or Y direction.

Zooming

Pinch to zoom, using two fingers and moving them away from or towards each-other.

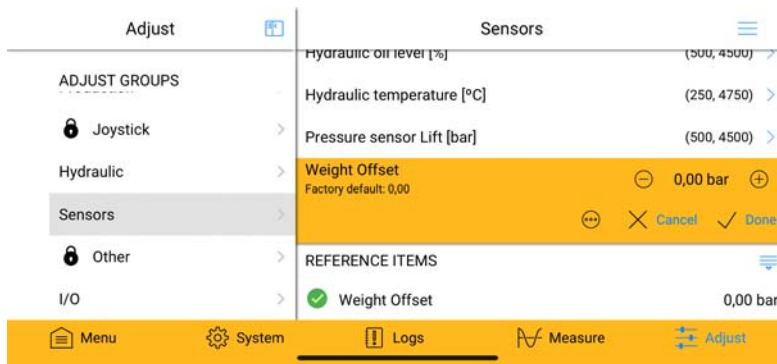
To view the complete curves again, select *Zoom to Extent* in the upper right menu.

Scaling

To manually scale a measure item, select it in the item list and then select *Item properties* in the upper right menu. Enter min and max values for the Y axis. You can also change the color of the measure item's curve if you like. Click *OK* to update the graph.

6 Adjust

Use the adjust tab to adjust things such as inputs, outputs, function parameters, etc. There is no need to open any project file to do this operation, all information needed is fetched from the connected IQAN system.



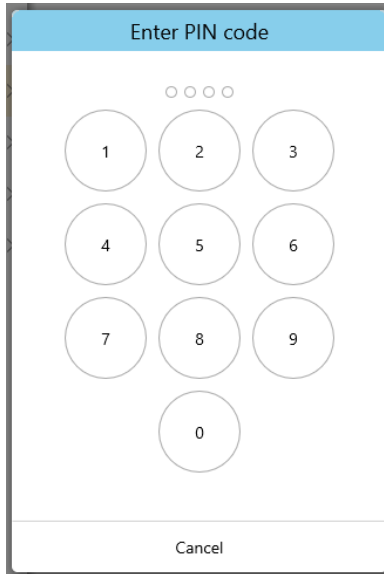
The adjust tab.

Adjust items are organized in groups. If you miss some adjust group in the list that you know should be there, you may need higher access rights. Log in as a different user with sufficient access rights and try again. See section *Login* on page 15 for more information.

Select an adjust group to view its items.

PIN code protection

If the adjust group is protected by a PIN code, a dialog box is shown to enable you to enter the correct PIN code. PIN code protected adjust groups are marked with a small lock symbol.

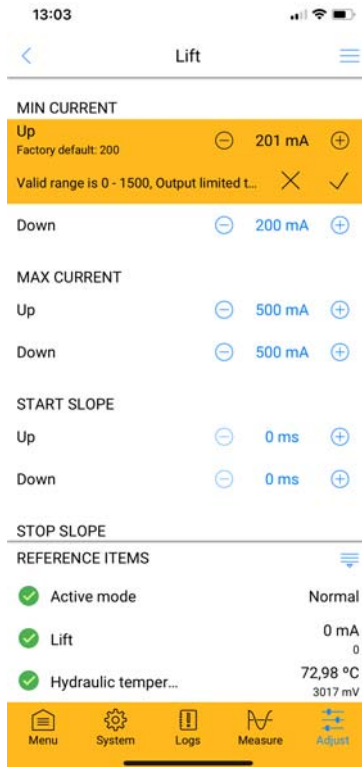
A dialog box titled "Enter PIN code" with a light blue header. Below the header, there are four small circles for visual feedback. A numeric keypad is displayed with digits 1 through 9 arranged in a 3x3 grid, and a 0 button centered below the grid. At the bottom of the dialog box is a "Cancel" button.

Enter PIN code dialog box.

Once the correct PIN code has been entered, the adjust group will be unlocked until power is turned off on the master module. Unlocked protected adjust groups are marked with an open lock symbol.

Adjust items

When you have selected an adjust group, a list with all its adjust items is displayed. Each adjust item represents a channel, such as a voltage input, current output or function parameter for example.



Adjust item for a current output.

Reference items

At the bottom of the items list there are some information values that are measured in real-time while you are adjusting.

Channel value	The actual status and value of this adjust item (channel).
Reference value	Status and value of this adjust groups reference channel. Not all adjust groups have a reference channel.
Mode	Current mode for this adjust item. Only displayed for multi-mode adjust items.

An adjust item has one or more parameters. Adjust items with a single parameter can be adjusted directly in the list. Items with multiple parameters will switch to a separate view, showing the parameters for that item.

Select parameter

Click on a parameter to make it the active parameter. You can only adjust one parameter at a time. The active parameter is highlighted.

Parameter types

The parameter value is adjusted in different ways, depending on the parameter's value type - numerical, text, state or PIN code.

Numerical

Numerical values are adjusted with increase/decrease buttons, or by clicking the value and entering a new value in the dialog box that appears. You must press *Done* to leave the parameter when you are finished adjusting, otherwise its new value will not be stored. Or press *Cancel* to abort your changes.



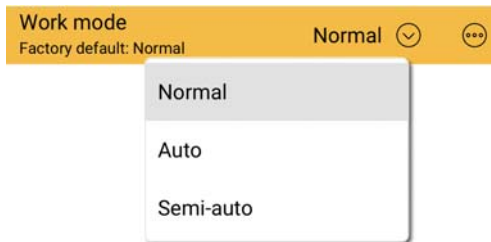
Numerical parameter.

Text

Text values are adjusted by clicking the value and entering the desired text in the dialog box that appears.

State


State values are adjusted by clicking the value and selecting desired state in the drop down list.



State parameter.

PIN code

PIN codes are adjusted by clicking the value and entering the old PIN code and the new PIN code in the dialog box that appears. The new PIN code must be entered twice to prevent input errors.

Most parameters also have a more button, , with options to reset the value to factory default or to set the factory default to the current value.

Disabled parameters

In some cases a single parameter is disabled, which means it can not be adjusted. Disabled parameters are displayed with a lock symbol.



ATTENTION

Use caution when adjusting parameters over a remote connection, since there is a longer response time on your adjustments.

All inputs and outputs are still active while you are adjusting them. This means that you will get instantaneous feedback on your adjustments if you at the same time activate the input or output.

Current outputs

When adjusting minimum current for a current output, the actual output is limited to minimum current. This will make it easier to adjust minimum current by allowing you to activate the output without having to hit the exact start position.

For example, to adjust a crane output you select the minimum current parameter by clicking it, then you activate the crane function by moving the joystick to its maximum position. The output will now be limited to minimum current. Change the parameter value until you have reached the position where the crane starts to move.



ATTENTION

After adjusting minimum current, the current output control must return to 0 before any output will be allowed. This is to avoid unintentional activation of an output when leaving the minimum current limitation.

Reset/Set group or item with multiple parameters

In the upper right corner of the parameter list, there is a menu button with options to reset or set all parameters in the current list.

Reset group

Use this button to reset all adjust items in the current group to their factory default value. If some of the items have multiple modes you will be asked whether you want to reset all modes or just the active one.

Reset item

All parameters for the current item are reset. A confirmation dialog box is displayed before the operation is executed.

Set factory default

Use this button to set the factory default value for all parameters in the current list. If some of the parameters have multiple modes you will be asked whether you want to set all modes or just the active one.

If this button is disabled, you may need higher access rights. Log in as a different user with sufficient access rights and try again. See section *Login* on page 15 for more information.



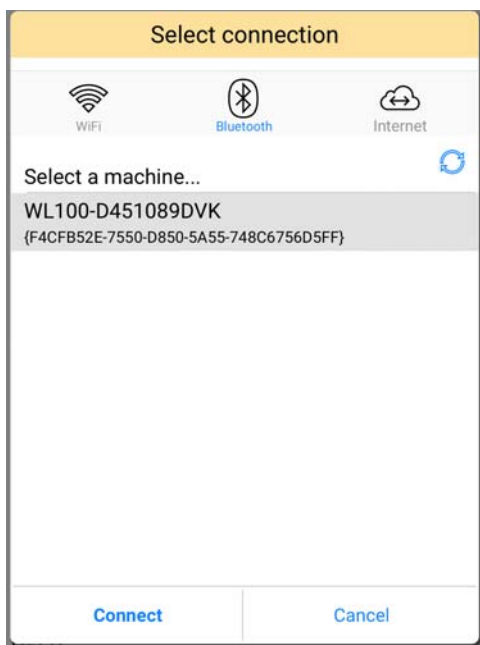
NOTE

Not all parameters have a factory default value that can be set. The *Set Default* button will then be disabled.

7 Communication

This chapter describes different ways of communicating with an IQAN system. There are three communication types available; WiFi, Bluetooth and Internet.

Click *Connect* on the *Menu* tab to initiate a connection. A connection dialog is displayed. You can also initiate a connection by clicking an operation that requires a connection.



Connection dialog.

Select the connection type tab appropriate for your system. The different types are explained in detail in the following sections.



WiFi/Ethernet

WiFi or Ethernet can be used to connect to your IQAN system if it contains a master module with an Ethernet port. Your device and the master module must be on the same network and their IP addresses set up correctly. Read more about these setups in the IQANdesign user manual.

The WiFi tab has two modes, *Discover* and *Static IP*. In discover mode all available modules on the local network are listed automatically. Select a module in the list and click *Connect* to start to communicate with that module. If you are not sure which module you should connect to, you can select a module in the list and click *Identify*. This will cause the screen of the selected module to flash.

If the module you want to connect to is located on another network than the one your computer is connected to, it may not turn up in discover mode. In this case you can try to add the IP address manually instead by switching to static IP mode and adding the IP address of your master to the list. You will find the IP address of a display master in the menu system of the master. Note that no public IP addresses will be accepted here.

IQANgo will remember which system you where connected to last time and try that system first next time.

Bluetooth

If the IQAN system is equipped with an IQAN Bluetooth gateway it can be used to connect to the system from IQANgo. The Bluetooth tab will automatically scan and list all compatible Bluetooth gateway modules that are found nearby.

The first time IQANgo connects to an IQAN-G12 Bluetooth gateway, pairing is required. The IQAN-G11 does not require pairing.

Pairing with G12

The first step is to make sure pairing is enabled in the Bluetooth gateway module. The method for enabling pairing is application specific and configured in IQANdesign.

In systems with an IQAN display, pairing can usually be enabled in the display menu system, where the pairing passkey is also found.

In systems without a display, pairing might be permanently enabled or enabled via machine logic. Consult the machine operating manual for how to find the pairing passkey.



Connect via Bluetooth, pairing required.

G12 Pairing passkey fall-back

If the IQAN master is not running an application, it is always possible to perform temporary pairing. In this case the pairing passkey will be all zeros.

This makes it possible to connect via G12 before an application has been sent to the IQAN master, if the IQAN master has older firmware, and also if the application has been bypassed (see instruction for each master module).

Note however that this pairing is not stored and a new pairing is required on each connection.

Internet

If your machine is equipped with a modem or otherwise connected to Internet, it is possible to connect to it remotely via Internet. It allows you to send and get projects, measure and do all the things you can do with a local system.



ATTENTION

Take extra care when using a remote connection to a machine.

The persons at the machine could be exposed to an increased risk.

Always inform the persons at the machine before sending updates to the machine and before performing any adjust operations.

Check with the persons on site that:

- the machine is positioned safely
- the engine is off
- the machine cannot start to move
- the emergency stop works, and can be reached quickly

In essence, these are the same precautions you take when working on site.

The only difference when working over a remote connection is that cooperation with another person who is at the machine is always necessary.

To connect via Internet you need an IQANconnect key for the machine you want to connect to. The key is presented in the menu system of the master module.

Select a machine in the list or add the key for a new machine. When the key has been added the machine ID and connection status is retrieved from the server and shown in the list. Select a machine in the list and click *Connect* to start the communication. All remote diagnostics communication is routed through Parker's IQANconnect servers.

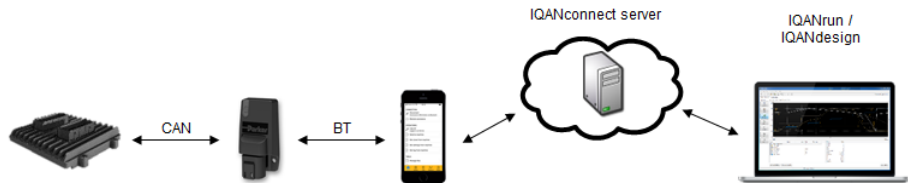


NOTE

IQANconnect uses HTTPS on port 443 to communicate with the server. Firewalls normally allow communication on this port so no additional setup should be required.

Remote assistance

The IQANgo app, together with the IQAN-G11/G12, can connect the machine to Internet, making the IQAN system available to remote support via the IQANconnect service.

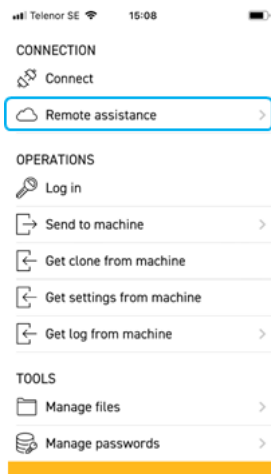


Remote assistance mode.

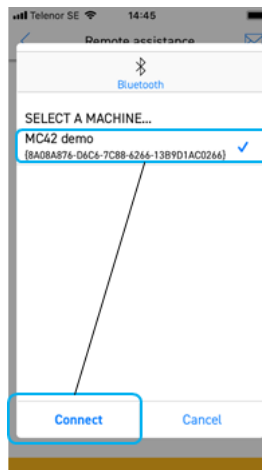
IQANgo user at the machine

Make sure Bluetooth is enabled on your device. Start IQANgo and follow these steps:

1. Select *Remote assistance*.



2. When the machine shows up, select it and tap *Connect*.



3. The *IQANconnect* key is shown.



4. The *IQANconnect* key can be sent to the person who will connect.

Initiate remote assistance.

The IQANconnect key that is shown in the *Remote assistance* menu is unique to your phone. If you connect a different machine to Internet using the same phone, the same IQANconnect key will be used.

Remote user

The remote user connects with IQANrun, IQANgo or IQANdesign to the machine by selecting Internet as the connection interface and adding the IQANconnect key from the IQANgo user.

8 Password manager

Files, components and operations are often protected by a password to prevent unauthorized personnel from accessing sensitive application or machine data. When you open a protected file, IQANgo will ask for its password. If you try to perform a protected operation, you will be asked to log in with a user name and password first.

There is a safe and easy function to handle passwords in IQANgo. By adding a password to IQANgo's password database you don't need to enter it each time you open a protected file or perform a protected operation. In fact, you don't even need to know what the password is.

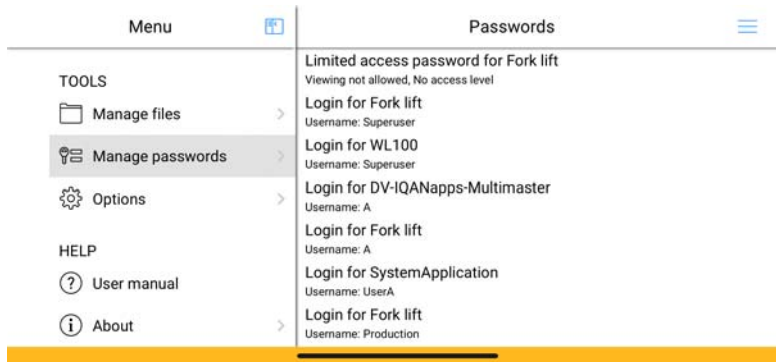
IQANgo uses something called *safe passwords* to achieve this. Safe passwords are encrypted which means they can be sent safely via for example email. The encryption also ensures that the end user can not read the actual password.

Safe password encryption is done with the help of a *safe password request*. The safe password request ties the safe password to a specific user and computer, which means no one else than the password requester can use the safe password.

Password database

The password database stores one or many passwords on your device. Passwords stored in the database can not be copied or moved to another user or device.

There is a password manager that lets you manage your passwords. Start the password manager by selecting *Tools > Manage passwords* on the *Menu* tab.



Password manager.

In the password manager you can see a list of all your passwords, and some details about each one.

Password types

There are four password types available; Full access password, Limited access password, Component password and Login.

Full access password

Full access passwords are actually meant to be used when opening a protected file for editing in for example IQANdesign or IQANscript. It can however be used in IQANgo to open a protected file.

A full access password works in the same way as a limited access password. See next section for more details.

Limited access password

Limited access passwords are used when opening a protected file with the same ID as the limited access password. There can only be one limited access password per ID in the database. If you add the same password again, the old one will be replaced.

Comment shows details for the password, such as viewing access and access level ID connected to this password. Viewing is not available in IQANgo, only in IQANrun.

Component password

Not used by IQANgo, only for IQANrun.

Login

Used to add a user name and password to the login dialog box. Logins are also connected to a project ID. Before you log in, IQANgo checks the project ID in the connected system and lets you choose between the users in the password database that have the same ID. See section *Login* on page 15 for a detailed description.

Date restrictions

Passwords can be date restricted, which means they will only be valid until a certain date. The date is displayed in the comment for date restricted passwords. When the valid date has been passed, the password will no longer work.

Add/delete passwords

Whenever you enter a password for a protected file or component or when you log in to a master module, you will be asked whether you want to add the password to your database. Click *Yes* to store the password.

The password is stored and can be used automatically when IQANgo detects the need for it next time.

If you click *No*, the password is added to the database anyway but only temporary. Temporary passwords remain in the database as long as IQANgo is running. This means that if you open a file with the same ID and password during the same IQANgo session, you don't have to enter the password again. When you exit IQANgo, all temporary passwords are removed. The text (*Temporary*) is added to the comment for temporary passwords in the password manager.

If you don't see the dialog *Add password*, it may be turned off in options. To get it back, go to *Tools > Options* on the *Menu* tab and enable it again.

Safe passwords

To add a safe password to the database, you must first receive it from your password administrator. You do that by sending the administrator a message, for instance by email, with a safe password request and an inquiry for the password you need.

The safe password request is initiated from the password manager. Select *Request password* in the upper right menu. You can choose to open your email program with the safe password request file attached, or simply save it to your disk so you can send it manually.

When your request has been granted, you will receive a safe password in return. The safe password is stored in a file or as a long string of characters. To add it to your password database, open the file from the mail client. If you got the safe password in a string of characters instead of a file, select *Add password* and paste the string in the dialog box that is displayed.

The safe password is added to your password database and appears in the password list. Check the password list to verify that you received the correct password with the access you need.

Delete password

Select a password in the password list and click *Delete password* in the upper right menu to delete it from the database. You can also swipe left on a password to reveal a delete button. A confirmation dialog box is shown asking you to confirm the deletion. Click *Yes* to delete the password.

Select *Delete all passwords* to empty your password database.