



MEDOUZA RFID METERING SYSTEM



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Technical Data



Medoussa: System Set-up

Use the Marina Office PC and load the supplied software.

Open the software and follow the instructions:

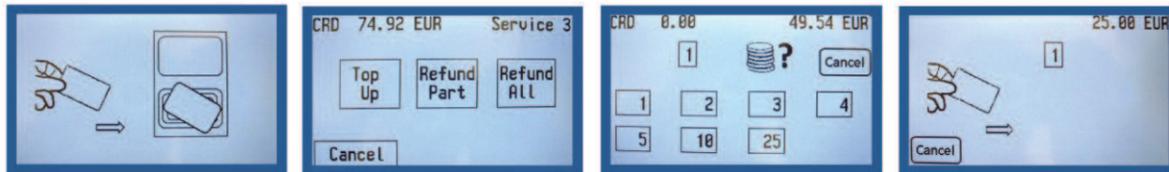
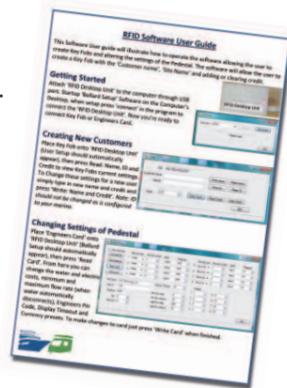
1. Create User account
2. User Details Page
3. 3 Levels of access
4. All transactions on the database need to be recorded, say in a XML log file, with login, time & date etc.
5. If Berth number is allocated, ask if Credit to be transferred to Bollard
6. If Berth number is not assigned, display custom map with available berth slots
7. User presenting Keyfob to bollard, enables services that have been assigned by management software.
8. Global kW & Ltr usage counters.
9. Full marina mapping

Title	<input type="text"/>	Berth	<input type="text"/>
First Name	<input type="text"/>	Credit in Account	<input type="text"/>
Surname	<input type="text"/>	Credit on Berth	<input type="text"/>
Address	<input type="text"/>		
Telephone	<input type="text"/>		
Email	<input type="text"/>		
		<input type="button" value="Edit / Save"/>	<input type="button" value="Add Credit"/>
		<input type="button" value="Cancel"/>	<input type="button" value="Edit Keyfobs"/>

Our Medoussa Metering System is extremely user friendly and simple to use.

Medoussa: User instructions

1. Place fob on meter area
2. Select a service
3. Top up Service
4. Refund any remaining balance.



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Designed & Produced by: www.d7a.co.uk

Medoussa

T6 ELECTRONICS



Introducing Rollins Marine

With over 50 years experience in the Marine Industry, Rollins Marine Services have built up an enviable reputation for service and quality in the U.K., across Europe and in the Middle East.

We have sales representatives all over the U.K. & Europe, so we have no limitations on location or size of project. One of our agents can visit you with no obligation, to discuss your requirements personally and in detail. Our aim is to provide a first class service whilst maintaining a competitive approach in the market place.

Every project is dealt with on a bespoke basis, ensuring that all our customers receive a personal service. Simply choose your specification, call or email your requirements and we will provide you with a bespoke, personal solution containing drawings and a detailed quotation. Our range of products are high quality, tried and tested and carry a minimum 2 year guarantee, with a lifetime anti corrosion warranty on the extrusion.

As well as supply, we have a team of dedicated professionals, offering a bespoke design and installation service. Rollins Marine Services can satisfy all marina requirements and can produce over 300 different specifications of service pedestals.

Medoussa: Product Development

RMCS recognised a growing need for an advanced and easy to use metering system for electric and water. In the past metering systems have been complicated and difficult for the operator to use, and on most systems it was impossible to refund outstanding credit on the services. Our *Medoussa* Metering System places the Marina operator and the berth holder in complete control of their expenditure.

The Manager can update service charges on the software and the pedestal user can reclaim unused credit on their personalised keyfob/card.



Medoussa: RFID Standalone/Network Metering

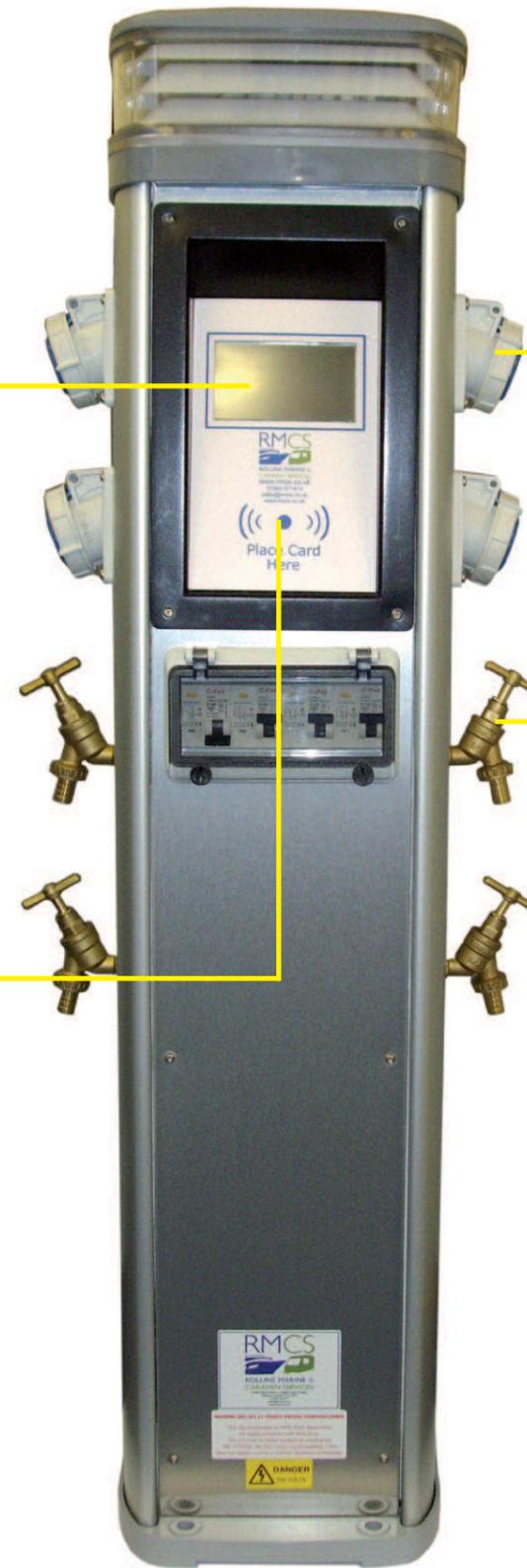
The development of *Medoussa* allows individual users to control services on pedestals with the use of a touchscreen and fob. The system is designed to work simply, efficiently and is a cost effective solution for the re-charging of electrical and water services. An office based software application has the ability to take full control of the system via a simple VB application. Staff can simply log into the system and quickly identify the users berth to operate water and electric services and add credit at users discretion at a click of a button. The system can operate in credit or pre-payment mode to allow for monthly, weekly or daily billings. Payment can be made separately for water and electrical services, for example, £10.00 could be added to a water and £50.00 to an electrical account. Any remaining credit can be refunded at the office or returned to the fob by the user. Where it is not possible to link back to the marina office the *Medoussa* System can offer the same versatility as a standalone unit.

Medoussa: Features

- 4" touch screen (optional) with easy to follow menu
- Indication of services available on pedestal
- Available in a choice of languages
- Choose monetary value of services to be loaded

- Keyfob/Card activation
- Full/part refund back to Keyfob or Card when supply is not required making outlet available to other users

- Control of 8 services in any adaption, i.e. 4 water, 4 electric, 8 electric etc.



- Auto disconnect when plug is removed to avoid missuse of available credit

- Adjustable high and low flow rates to overcome leaking hoses and wastage

Engineers Card:

- For service use
- Updating data, i.e. water and electric prices or setting water flow rates
- Clearing down outlets
- Manual override
- Maintenance

Important Notes

All monetary values are listed in Euros (EUR, €)

Current Charges stand at:

Electric: €0.25 per KWH

Water: €2.50 per 1000 Litres

Please note: When Adding Service, Topping Up or Refunding ONLY available services will be displayed.

Please note: Sockets will automatically disconnect when plug is removed. Present card to reconnect.

The screen will return to home page if screen is inactive for 30 seconds. You will have to place the Key Fob on reader to activate and start again.

Water Taps must be turned on within 30 seconds from activation otherwise they will turn off.

Water will shut off after 30 minutes of continuous flow.

If you have made an error you can return to your home page by pressing cancel.

If a cross appears on the screen after you have placed your credited Key Fob on 'Place Card Here', you should try 1 more time, if this is still showing a cross please contact the Marina Office.



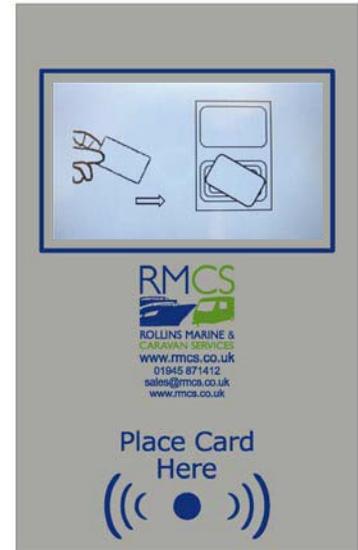
ROLLINS MARINE AND CARAVAN SERVICES

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CUSTOMER PEDESTAL USER MANUAL

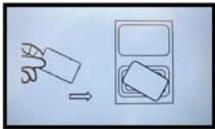
Welcome to our marina, we hope you enjoy your stay.

Before you can use the service pedestal for your berth requirements please purchase a RFID Key Fob from the Marina Office. This Fob will allow you access to water and electric services on the pedestal for your berth.

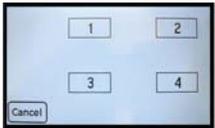
Once you have purchased this Fob please follow the instructions over leaf for access to your required services.



Selecting a Service



- 1) Place Key Fob on 'Place Card Here'



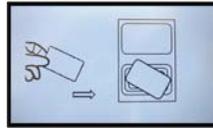
- 2) Select from '1 to 4' for your required service using the numbers on the Sockets and Water Taps

- 3) Follow 'Top-Up service' from step 3 (on next page) to activate service

Please Note: Only available services will be available to select.



Top-Up Service



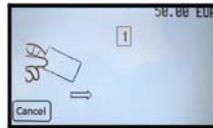
- 1) Place Key Fob on 'Place Card Here'



- 2) Select 'Top-Up'



- 3) Select amount to credit: €1, €2, €3, €4, €5, €10, €25, €50



- 4) Present Key Fob to deduct credit from Fob

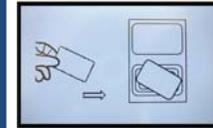
- 5) This will energise the service you require

Please note: Sockets will automatically disconnect when plug is removed. Present card to reconnect.

Please Note: Only available services will be available to Top-Up.



Refund



- 1) Place Key Fob on 'Place Card Here'

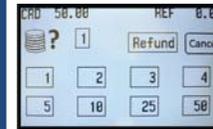


- 2) Select 'Refund Part' or 'Refund All'.

EITHER

'Refund Part'

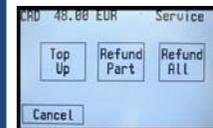
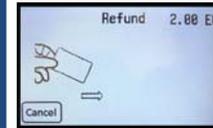
- i) Select amount to be deducted: €1, €2, €3, €4, €5, €10, €25, €50



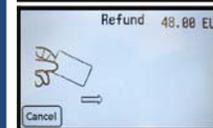
- ii) Select 'Refund'

OR

'Refund All'



- 3) Present Fob to deduct remaining credit from the pedestal back onto the Fob.



- 4) If you then wish for a cash refund return Fob to the Marina Office

Please Note: Only your services will be available to refund.



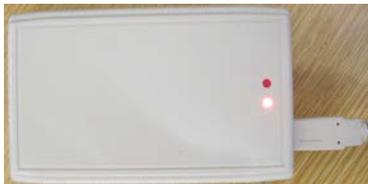
RFID Software User Guide

This Software User guide will illustrate how to operate the software allowing the user to create Key Fobs and altering the settings of the Pedestal. The software will allow the user to create a Key Fob with the 'Customer name', 'Site Name' and adding or clearing credit.

Getting Started

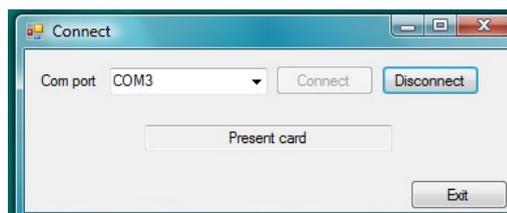
Insert USB stick into computer to download software: follow step by step below:

- 1) Select 'Utility Bollard Set Up'
- 2) Select 'Bollard Set Up' – right click and 'Copy'
- 3) Go to your Desktop – right click and 'Paste' the shortcut
- 4) Attach 'RFID Desktop Unit' to the computer through USB port



RFID Desktop Unit

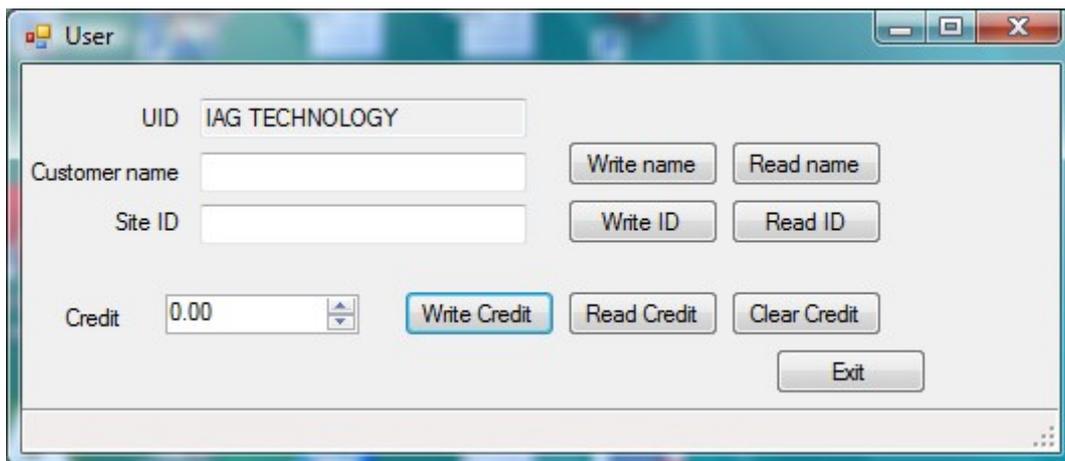
- 5) Startup 'Bollard Setup' Software on the Computer's Desktop
- 6) When setup box appears press 'connect' in the program to connect the 'RFID Desktop Unit'. Now you're ready to connect Key Fob or Engineers Card.



Creating New Customers

Place Key Fob onto 'RFID Desktop Unit' (User Setup should automatically appear)

- 1) Press Read: Name, ID and Credit to view Key Fobs current settings.
- 2) To Change these settings for a new user simply type in new name and credit and press 'Write: Name and Credit'. *Note: ID should not be changed as is configured to the marina.*



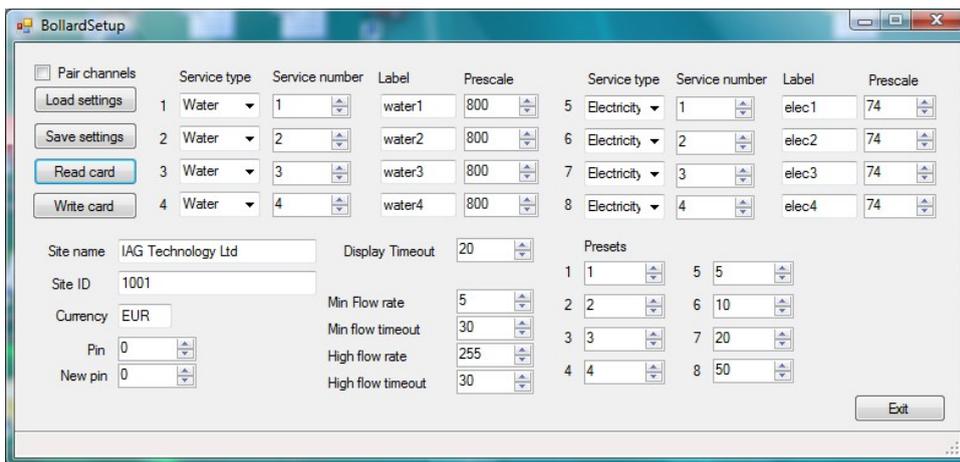
The screenshot shows a software window titled "User" with the following fields and buttons:

- UID: IAG TECHNOLOGY
- Customer name: [Empty text box]
- Site ID: [Empty text box]
- Credit: 0.00 (with a spinner control)
- Buttons: Write name, Read name, Write ID, Read ID, Write Credit, Read Credit, Clear Credit, and Exit.



Changing Settings of Pedestal

- 1) Place 'Engineers Card' onto 'RFID Desktop Unit' (Bollard Setup should automatically appear)
- 2) Then press 'Read Card'. From here you can change the water and electric costs, minimum and maximum flow rate (when water automatically disconnects), Engineers Pin Code, Display Timeout and Currency presets.
- 3) To make changes to card just press 'Write Card' when finished.



The screenshot shows the 'BollardSetup' application window. It features a 'Pair channels' checkbox and several buttons: 'Load settings', 'Save settings', 'Read card', and 'Write card'. The main area is divided into two columns of service configurations. The left column lists four 'Water' services (1-4) with labels 'water1' through 'water4' and a 'Prescale' of 800. The right column lists four 'Electricity' services (5-8) with labels 'elec1' through 'elec4' and a 'Prescale' of 74. Below these are fields for 'Site name' (IAG Technology Ltd), 'Site ID' (1001), 'Currency' (EUR), 'Display Timeout' (20), 'Min Flow rate' (5), 'Min flow timeout' (30), 'High flow rate' (255), and 'High flow timeout' (30). A 'Presets' section contains eight numbered input fields with values 1, 5, 2, 10, 3, 20, 4, and 50. An 'Exit' button is located at the bottom right.

Service type	Service number	Label	Prescale
Water	1	water1	800
Water	2	water2	800
Water	3	water3	800
Water	4	water4	800
Electricity	1	elec1	74
Electricity	2	elec2	74
Electricity	3	elec3	74
Electricity	4	elec4	74

Site name	Site ID	Currency	Display Timeout	Min Flow rate	Min flow timeout	High flow rate	High flow timeout
IAG Technology Ltd	1001	EUR	20	5	30	255	30

Presets	Value
1	1
2	2
3	3
4	4
5	5
6	10
7	20
8	50

Please note all computers are different with their own settings and you may need some assistance in setting/downloading this software, please do not hesitate to contact our technical support team +44 (0) 1945 871412.



Important Notes

All monetary values are listed in Euros (EUR, €)

Current Charges stand at:

Electric: €0.25 per KWH

Water: €2.50 per 1000 Litres

Please note: When a customer Adds a Service, Tops Up or Refunds, ONLY available services will be displayed.

Please note: Sockets will automatically disconnect when plug is removed. Present card to reconnect.

The screen will return to home page if screen is inactive for 30 seconds. You will have to place the Key Fob on reader to activate and start again.

Water Taps must be turned on within 30 seconds from activation otherwise they will turn off.

Water will shut off after 30 minutes of continuous flow.

If you have made an error you can return to your home page by pressing cancel.

If a cross appears on a pedestal screen after the customer has placed their credited Key Fob on it, you will need to use the Engineers Card to 'Upload Data'.



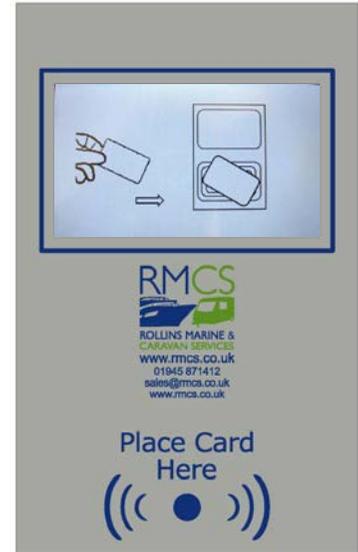
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MARINA MANAGER PEDESTAL MAINTENANCE MANUAL

This maintenance manual will assist you in updating the system and assisting customers with queries.

It will detail how to up load new data using the Engineers Card and overriding outlets to add or remove credit. Please follow the instructions over leaf for information.



Uploading New Data

- 1) Place 'Engineer Card' on 'Place Card Here'
- 2) Enter Password (Currently defaulted to '0000', go onto software on computer to change)
- 3) Press 'Enter'
- 4) Press 'Upload Data'
- 5) Place 'Engineer Card' on 'Place Card Here' (Wait till tick shows before removing)
- 6) Data is now Updated
- 7) To return to home page press cancel

Please note: when you make changes to the settings in the software, for example flow rate minimum and maximum, you will need to update all pedestals to match the software.

Changing Password: Go into the software, place 'Engineers Card' on the RFID Desktop Unit, 'Bollard Setup' should automatically start, press 'Read Card', then type your new pin in 'New Pin', press 'Write Card' and your password will now be changed.



Crediting Service

- 1) Place 'Engineer Card' on 'Place Card Here'
- 2) Enter Password (Currently defaulted to '0000', go onto software on computer to change)
- 3) Press 'Enter'
- 4) Press 'Reset Outlet'
- 5) Select service outlet 1 to 4 using the arrows.
- 6) Press 'Credit'
- 7) Type amount to credit service outlet.
- 8) Press 'Enter'
- 9) Credit has now been added
- 10) To return to home page press cancel.

Crediting Key Fob: Go into the software, place a Key Fob on to the RFID Desktop Unit, 'User' should automatically start, press 'Read Credit' (to see what credit is on the Fob), then type amount to credit (e.g. €10.00), press 'Write Credit' and credit will now be applied.



Clearing Credit Remaining

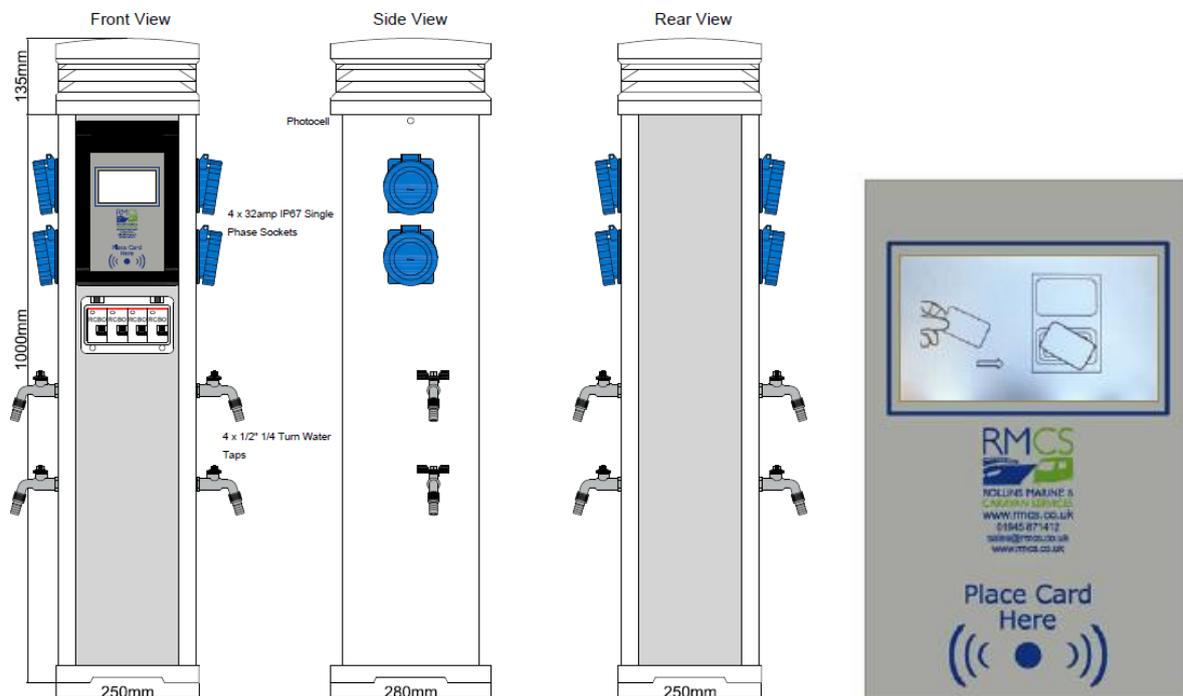
- 1) Place 'Engineer Card' on 'Place Card Here'
- 2) Enter Password (Currently defaulted to '0000', go onto software on computer to change)
- 3) Press 'Enter'
- 4) Press 'Reset Outlet'
- 5) Select service outlet 1 to 4 using the arrows.
- 6) Press 'Clear' to remove any remaining credit on that service outlet.
- 7) Remaining credit has now been cleared.
- 8) To return to home page press cancel twice.

Clearing Key Fob: Go into the software, place a Key Fob on to the RFID Desktop Unit, 'User' should automatically start, press 'Read Credit' (to see what credit is on the Fob), press 'Clear' and credit will now be removed.



Services Bollard Front End Software

RMCS has designed a Water & Electric control system. The system consists of a 4" Touch Screen, RFID Reader/Write Module and an I/O interface card. The boat or caravan owner currently pays to have credit put onto an RFID Keyfob. The Keyfob is presented to the service bollard where they can select the services they want and the credit is transferred from the Keyfob onto the Bollard. The water & electric usage is then deducted from the users' credit. The user has the option to add additional credit or refund back to the RFID Keyfob.



There is a requirement on the larger sites to centrally manage the services. The I/O board in our system has a dedicated RS485 port for this management. The credit is no longer stored on the RFID Card, but the card is used to authenticate the user at the bollard. Credit transactions are through the management software/database. Each Bollard will have a 2 byte network address on the RS485 network, and can supports 4 outlets.

Function of the central management software:

1. Create User account (up to 1000)
 - a. Personal details
 - b. Upto 5 keyfob UID (MiFare RIFID Card Unique Identifier). (USB Card Reader)
 - c. Credit value
 - d. Berth location number (Map reference*)

The form contains the following fields and buttons:

- Title:
- First Name:
- Surname:
- Address:
- Telephone:
- Email:
- Berth:
- Credit in Account:
- Credit on Berth:
- Buttons: Edit / Save, Add Credit, Cancel, Edit Keyfobs

2. User Details Page
 - a. Present Users RFID card to USB reader, SW displays information:
 - i. Available Credit
 1. In Database
 2. On Bollard
 - ii. Berth Number & Location (click to show location on Map*)
 - b. Add Credit to account
 - i. Cash or Credit Card (just value boxes to keep track of how the money was transacted)
 - c. Refund – remove credit from Bollard and add to Database
 - d. Credit Bollard – add credit to Bollard and deduct from Database
 - e. Book Out – refund and clear Berth Number
3. 3 Levels of access
 - a. Operator
 - i. Add users, take money, refund etc
 - b. Supervisor
 - i. Change Pre-scale value (number of pulses per 1/100th credit (pence, cent etc)
 - c. Admin (requires two user logins – two directors)
 - i. Turn on outlets (Free Vend override)

4. All transactions on the database need to be recorded, say in a XML log file, with login, time & date etc.
5. If Berth number is allocated, ask if Credit to be transferred to Bollard
6. If Berth number is not assigned, display custom map with available berth slots (colour coded Red / Green icons).
7. User presenting Keyfob to bollard, enables services that have been assigned by management software.
 - a. Credit operation transfers credit from Database to Bollard
 - b. Refund (all or Part) operation stores credit back to Central Database
 - c. Auto Disconnect features works as normal
 - i. Electric Disconnect – present card to re-enable
 - ii. Water Time Out – present card to re-enable
8. Global kW & Ltr usage counters.
 - a. I/O card to store usage per channel.
 - b. Central SW has capability to reset this counter.
9. * Map
 - a. Import of images to create a virtual Map of the Site
 - b. Top level picture of site allows clicking through to zoom in on a Pontoon or section of the Site
 - c. Coloured Icons to indicate if berth in use.
 - i. Red = In use, with Username
 - ii. Green = Available
 - iii. Amber = Out of Service



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