# Log4OM 2 Amateur Radio Software By

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# **Quick Start Guide**

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# Introduction

This Guide is intended to provide the basic information required to get a user quickly started with Log4OM Version 2, for more comprehensive guidance the user must consult the main user guide and the YouTube Tutorials.

# **Getting Started**

It is essential for the correct operation of the software that the 'Initial start-up' section of the Program Configuration is completed.



Log4OM version 1 and version 2 can both be run at the same time because they use different installation paths and it is NOT necessary to uninstall version 1 before installing version 2

#### Installation

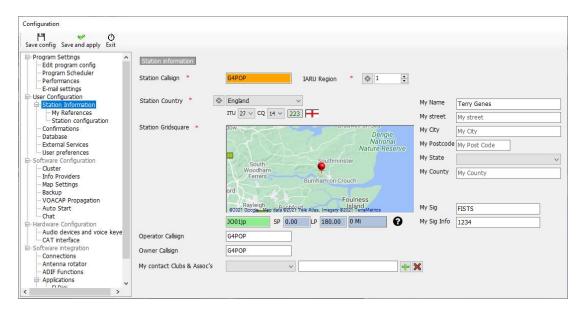
- Download the software from http://www.log4om.com
- Unzip (Unpack) the compressed download file to a convenient location
- Run the installer exe file



It is not necessary to run Version 2 as an administrator unless Omnirig or other associated programs (e.g. WSJT, JTALERT) are elevated for multithreading in which case Omnirig and all programs working with it should also be elevated (Run as an administrator).

## **Initial set-up**

Once the program is installed double click on the desk top shortcut. On initial start-up the user is presented with the window below, all information on the left hand side e.g. call signs etc, <u>MUST</u> be completed to enable Log4OM V2 to select the correct band-plans, maps, modes etc.



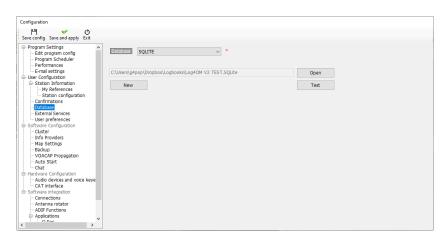
#### **Minimum information:**

- Station Call This is the current call sign being used e.g. G4POP, G4POP/P or GW4POP/M
- Station country The country where the Station call is located (In the examples above either England or Wales.) The ITU & CQ zones are automatically set upon entering the country but in the case of very large continents like Australia or the USA which cover many different zones please check that the selected zone is correct.
- Grid Locator The 6-digit Maidenhead locator applicable to the current 'Station Call'
- Operator call This may not be the station call perhaps because the station call is a special event or club call with many different operators using the equipment.
- Owners call The person who owns the station

The personal information on the right hand side of the screen is used when operating with Winkeyer or other facilities which employ macros containing the users information.

# **Creating the database**

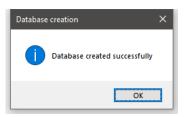
- Having completed this form click 'Save and apply'
- The program will open and present another configuration tab for creating a new database as below



- Click on the 'New' button to create a new database
- Navigate to a location for storage of the data.
- Enter a meaningful name for the database.

anise 🔻 New f	older			8== -	
	↑ Name	Date modified	Туре	Size	
NBEMS.files	Jun Log4OM V2 Test log.SQLite	10/01/2020 19:13	SQLITE File	13,478 KB	
OneDrive	I G4POP NG personal.SQLite	17/11/2019 08:42	SOLITE File	13.388 KB	
PicStream	UOG4OMNG New Test log.SQLite	08/12/2019 14:08	SQLITE File	8,502 KB	
Pictures	Test Database.SQLite	28/12/2019 22:55	SQLITE File	8,365 KB	
Saved Games	譋 WB4M.SQLite	19/11/2019 19:48	SQLITE File	8,040 KB	
Searches	🚛 WB4M2.SQLite	19/11/2019 19:50	SQLITE File	7,825 KB	
·	谢 G4POP.SQLite	23/05/2017 23:01	SQLITE File	5,164 KB	
Tracing	GB4VED.SQLite	02/06/2015 09:24	SQLITE File	136 KB	
usb_driver	💷 GB4ASC.SQLite	26/11/2012 10:39	SQLITE File	84 KB	
🚆 Videos	GB4GMF.SQLite	17/05/2013 06:42	SQLITE File	38 KB	
zygrib	谢 SOTA Chaser.SQLite	23/09/2019 10:23	SQLITE File	20 KB	
This PC					
Libraries	•				
File name: De	emo				
- C	qOM database (*.SQLite)				

• Click 'Save' followed by 'OK' then 'Save and apply'



#### Note:

- QSO's cannot be recorded until a database has been created.
- The sqlite database from version 1 of Log4OM is not compatible with version 2.
- Users of version 1 must export an ADIF file version 3>>> from version 1 and import it into version 2 once a database has been created in version 2 as described above.

# **ADIF Import**

Once a database has been created an ADIF file exported from any other logging program can be imported to Log4OM V2.

- Click menu 'File/Import ADIF'
- Click on the 'Load' button

Import ADIF file			
			Load
ADIF import 0	Award parsing	0 LOG sa	ave
1 - Apply quality check corrections $\checkmark$ Drop current database and load ADIF			Duplicates threshold $\begin{bmatrix} 0 & \frac{1}{2} \end{bmatrix}$ sec.
			^
<			>
Save log			
The import may take some time because due validating historic DXCC values against prefixe The data is simultaneously being searched fo	s, ensuring that ITU and C	2 zones are correc	
any references found are being automatically			······································

- Navigate to the location of the ADIF file to be imported
- Select the ADIF file and click 'Open'
- Check the box 'Apply country corrections on load' to correct any DXCC errors in the incoming ADIF file.
- Checking the box 'Drop current database on load ADIF' if is required to replace existing QSO's
- Click 'Import' and wait to be notified that the import is complete.



<u>Note all data will be lost and replaced by the incoming ADIF file!</u> leaving the 'Drop current database on load' box unchecked will merge the imported data with the existing data.

Any changes made to the incoming data will be listed and a copy of the log file containing details of any changes can be saved for future reference by clicking the <u>'Save log'</u> button at the bottom of the import window.

The 'Duplicates threshold' allows the user to set a margin for matching the QSO start times +/- nn seconds up to 60 seconds to avoid causing duplicates due to timing errors. This is a function is used when importing QSO from other sources that do not have a time resolution to seconds (e.g. QRZ.COM exports) and it is required to merge the QRZ log with the Log4OM logbook.

#### **Illegal suffixes**

Strange suffixes may cause some errors during import and cause an incorrect DXCC number and country name to be applied.

#### Examples:

- A station incorrectly using /LH as a suffix intending to signify a 'Light House' will be interpreted as a Norwegian station and recorded as such!
- A station incorrectly using /PM as a suffix intending to signify 'Pedestrian Mobile' will be interpreted as an Indonesian station and recorded as such!

/MM (Maritime Mobile) and /AM (Aeronautical Mobile) will be saved without a country name or DXCC due to the locations being outside any entity.

/P (Portable), /A (Alternative location in some countries), /QRP, /QRPP and /M (Mobile) will have no impact on the import and the country will be identified by the normal call sign prefix.

Call checking also includes checking the valid dates of special calls and DXPeditions to ensure further accuracy.

# **Radio CAT Control**

To select the CAT Interface, click on 'Settings/Program configuration then select 'CAT Interface'

Configuration						
Save config Save and apply Exit						
Program Settings     Edit program config     Program Scheduler     Performances     E-rail settings     User Configuration     Station Information     Onfiguration     Configuration     Configuration     Outser Station Configuration     Outser     Custer Preferences     Software Configuration     Outser     Custer     Configuration     Guster     Configuration     Map Settings     Backup     VOACAP Propagation     Automation     Automation     Station	CAT Management Settings Omning Hamlib CAT Engine CAT delay (ms) Invert SSB side (CW) Invert SSB side (PHONE Invert SSB side (DIGITA Send MODE before FRE Switch to DIGITAL mod Default FT8	, L) Q to radio	CAT delay betwe	CAT auto-start en commands Enable PTT key PTT KEY will trigger PTT unti CTRL + PTT KEY will trigger 2 selected in the Audio Configu We suggest use of the RED b PTT Toggle mode	440Hz tone towards th ration panel	ne radio audio interface
Chat ⊟- Hardware Configuration	CAT Control colors		0	offset		
	Main color 🚯 000	888888	8888 °	offset VFO A (single VFO) KHz	1,000,000.000	Enabled
Consection	Decimal color 谢 000			offset VFO B KHz	0.000	Enabled

- Select the required interface (Omnirig, Hamlib or TCI)
- Check the 'Auto start CAT' box
- Click on 'Save and apply'

Various other options are provided for the idiosyncrasies of various radios



If Omnirig is selected the user must download and install Omnirig from http://dxatlas.com/OmniRig/ - Then restart Log4OM V2

## **Connecting CAT**

Click on 'Connect/CAT/Show CAT interface'

Depending on the selection made in the Program configuration/CAT Interface either the Hamlib or the Omnirig interface window will appear as below

#### **TCI Interface**

Select is connecting to an Expert Electronics SDR Transceiver and ensure the Port matches that selected in the SunSDR interface.

Configuration	
I	
Program Settings     Edit program config     Program Scheduler     Performances     E-mal settings     User Configuration     Station Information     Station Information     Onfirmations     Database     User preferences     Jatabase     User preferences     Jardo Performation     Configuration     Configuration     Configuration     Configuration     Outer     Jardo Performation     Configuration     Outer     VolACAP Propagation     Auto Statt     Other     Advalue Configuration     Audo devices and voice keye     Other     CAT interface     Software Configuration     Audo devices and voice keye     Other     CAT interface     Software Integration     CAT interface	CAT Management         Settings       Omning Hamilib         TCP Connection         ADDRESS       127.0.0.1         Port       40001         (default 50001)         SPOT management         Send cluster spot to radio interface         SPOT FORECOLOR

#### Hamlib interface

Configuration	
Yave config Save and apply Exit	
Program Settings     Edit program config     Program Scheduler     Performances     E-mail settings	CAT Management Settings Omming Hamilib TCI HAMLIB PARAMETERS
User Configuration	RIG Model   TCP Connection
Station Information     My References	Serial connected radio     Hide Hamilio in the taskbar     Connect to active HAMLIB instance
Station configuration	Network connected radio     VFO MODE (supports dual VFO)     ADDRESS     127.0.0.1
Confirmations Database External Services	Serial parameters TCP Radio parameters Port 4532 🔅 (default 4532)
User preferences	Port COM18 V 🕲 Baud Rate 38400 V
Award preferences Software Configuration	Force ICOM CI-V Stop Bits 1 v Port v
Cluster Alert	Data Carrier detect NONE V CAT ODTR
- Info Providers - Configuration	Poling delay (ms) 50 📮 Debug 🗸
- Map Settings - Backup	Generated parameter Stringmodel=0rig-file=COM18serial-speed=38400port=4532set-conf=stop_bits=1
- VOACAP Propagation - Auto Start	Used parameter string -model=0 -rig-file=COM18 -serial-speed=38400 -port=4532 -set-conf=stop_bits=1
Chat Chat	and the second se
Audio devices and voice keye	* P
- CAT interface	
CW Keyer interface	CAT Status: DISCONNECTED ::
Connections	CAT Status: IDSCONTECTED

#### **OmniRig Interface**

Omni-Rig Sett RIG 1   RIG 2		×
Rig type	NONE	•
Port	COM 1	•
Baud rate	9600	-
Data bits	8	-
Parity	None	•
Stop bits	1	-
RTS	High	•
DTR	High	•
Poll int., ms	500	\$
Timeout, ms	4000	\$
<u> </u>	<u>)</u> K	Cancel

Select the appropriate radio and set the com port and baud rate to match that of the radio and any other parameters for the equipment to be used and then click Open/OK.

Once connected the green CAT LED at the bottom of the Log4OM V2 window should light and the frequency will be displayed at the top.



## **CAT Screen**

Selecting CAT screen from the 'Connect/CAT' menu provides a large floating CAT control window which provides the following features.

- Change frequency by scrolling the digital display numerals with the mouse scroll wheel or by clicking the left mouse button to increase the frequency or right clicking to decrease.
- Change bands and modes by using the buttons
- Change between rig 1 and 2 if using Omnirig by selection at the top right.
- Set VFO offsets by clicking the settings cog icon at the top right of the window



## SO2R and dual radios

When using Omnirig it is possible to switch between two different radios using the Rig 1 & Rig 2 selection on the toolbar as shown below. Basic SO2R operation is therefore possible using dual interfaces.



## **PTT and Tune**

In the Settings/Program Configuration/CAT Interface tab it is possible to select which keyboard keys trigger PTT and Tune.

Configuration						
Save config Save and apply Exit						
Program Settings     Edit program config     Program Scheduler     Performances     E-mail settings     User Configuration     Setation Information     My References     Station configuration     Oatabase     External Services     User preferences     Software Configuration     Custer     User Preferences     Software Configuration     Custer     Custer Alert     Information     Map Settings     Backup     VOACAP Propagation     Auto Start	CAT Management Settings) Omning Hami CAT Engine CAT delay (ms) Invert SSB side (CW) Invert SSB side (PHC Invert SSB side (PHC Send MODE before F Switch to DIGITAL m Default FTB	TCIProtocol 0  TCIProtocol RE	∼ CAT delay betw		440Hz tone towards the ation panel	radio audio interface
Chat     Chat     Hardware Configuration     Audio devices and voice keve	CAT Control colors			Offset		
- CAT interface	Main color		888	Offset VFO A (single VFO) KHz	1,000,000.000	Enabled
CW Keyer interface	Decimal color 🛃 🛛	00		Offset VFO B KHz	0.000	÷ 🗆 Enabled

- Check the 'Enable PTT Key' check box
- Select the required keyboard key
- Click the 'Save and Apply' icon

The action is a press and hold not a toggle on/off action - PTT or tune will cease when the keyboard button is released.

# Automatic Call Sign lookup

The user can select the online call lookup service to be the primary source and a choice of a failsafe or backup lookup service in the event of the primary source not being available or not providing information about the call sign being looked up.

In the settings/Program configuration menu select 'Info providers'

The user must first add the username and password for each source. Clicking the button directly to the right of each password field tests the lookup service is being correctly accessed, if it is working correctly a green check mark appears to the left of the username field.

✓ Ů fig Save and apply Exit							
ram Settings	Info providers						
rogram Scheduler Performances		Primary source	Failsafe source				Web external source  Primary source
E-mail settings r Configuration Station Information		O Disabled	$\bigcirc$ Disabled				O QRZ.COM
My References Station configuration	QRZ.COM	•		G4POP	******	•	<ul> <li>HAMQTH</li> <li>QRZCQ</li> </ul>
Confirmations Database	HAMQTH	0	0	G4POP	******	•	0 durad
External Services Jser preferences	QRZCQ	0	0	G4POP	****	(\$)	
ware Configuration	HAMCALL (online)	0	0	User	Password		
Cluster La Cluster Alert info Providers La Configuration Map Settings	Failsafe sour Set NONE d	ce will be polle uring contests	d if primary sour	ce doesn't return info. encing slow search resp	onse times		
Jackup /OACAP Propagation							
hat Chat Ware Configuration							
Audio devices and voice keye CAT interface							
CW Keyer interface							

The user can also select which source is used when the external browser is opened by using the menu choices to the right.

For an in-depth explanation for obtaining the best lookup results consult the main user guide.

# Adding QSO's

In the main UI enter the call sign of the station being worked in the Call sign field, the program will lookup the callsign using the on line lookup service selected and complete the data and frequency and mode information will be recorded from the CAT connection.



Change or add any information like RST or comments and notes

Click either the Green + (add button) or the enter/return key on the keyboard to save the QSO.

#### Incomplete lookup data

If the grid locator (Maidenhead Locator) is not displayed when entering a call sign, possibly some other information is also not displayed.

#### **Reasons:**

- 1. The user has not configured the lookup facility correctly in log4OM settings/program configuration/Info providers.
- 2. User is an unpaid 'Ham Member' at QRZ Full lookup data is only available for paid XML subscribers.
- 3. The users XML subscription to QRZ has expired.
- 4. The station being looked up has not provided information for his bio at QRZ.
- 5. Incorrect username or password entered at settings/program configuration/Info providers.

#### Choices

- 1. Renew or subscribe to QRZ as a paid xml subscriber.
- 2. Check login settings in the Log4OM config at settings/program configuration/Info providers
- 3. Use HamQTH as the primary lookup source

# **Telnet Cluster**

The Telnet cluster in Log4OM V2 will connect to many different cluster and skimmer servers simultaneously and will aggregated the results to provide a high quality list of DX spots without unnecessary duplicates.

Log4OM V2 also provides a cluster server to enable these aggregated results to be sent to other client software.

## Setting up the Telnet cluster

Access to the Telnet server is by the Connect/Telnet cluster menu.

Servers may be selected from the 'known Server' list and added to the 'Active server' list and the user can add a new cluster server to the list by completing the cluster information form followed by clicking the save icon.

	🜌 Log4OM NG Cluster					
Н	Eile Options					
ļ	Connect Disconnect Start server Stop Server					
R	Management Internal server Cluster Connection					
	Known servers					
-	Search	Cluster Informations				
-	6LONJ (23) 7N4TWL-7 (8000)	Cluster Name				
-	9A0DYC (8000)	Host P	ort	0		÷
-	AE5E (23)	Force Callsion	SSID			-
_	AI9T (7300) AI9T-2 (7373)		2210			
	BG2RVL-9 (7300)	Password				
	BG8FFE (7373) CE4UYP-5 (9000)	Enable connection Keep Alive				
	CS5SEL-5 (41112)	Initialization commands				
1	CX2SA-6 (9000)					
0	Active servers					
	ON0AN (8000) [PRI] gb7mbc.spoo.org:8000	// : Comment				
	EI7MRE (7300)	<delay> : adds 1 sec delay</delay>				
	VE7CC (23)	<callsign> : sends your Station Callsign (or the forced one) <password> : sends the provided password (if any)</password></callsign>				
					8	9
	🕒 Cluster 🦲 Server					.:
L	• •	Kecorg snown: 1000 max: 1000 1	-			

When all the desired cluster servers have been selected clicking the 'Connect' icon on the tool bar will open the 'Management' tab and display the connections being made and the incoming spots.

#### Adding and editing Cluster servers

User defined cluster servers may be added by clicking the 'New' button and adding the server and login details in the panel on the right-hand side.

Similarly, an existing cluster server may be edited by selecting it in the top left-hand panel and clicking the 'Pen' (Edit) icon.

When the addition or editing is complete it must be saved by clicking the save icon 'Floppy disk' at the lower right

<u>Eile</u> Options			
Connect Disconnect Start server Stop Server			
nagement Internal server Cluster Connection			
Known servers			
earch	Cluster Information		
M4ONW-14 (8000)	Cluster Name SOTA		
M6YOU-2 (8000) M7GVF-6 (8000)	Host elgur.crabdance.co	om Port 7300	-
] SOTA (7300) 7YDD-12 (9000)	Force Callsign Blank for default	SSID	~
1DXZ (9000)	Password Blank for none	Enable connection Keep Alive	
4DXC (7300) 9ZAA-12 (9000)	Initialization commands		
V1IW-9 (73) V2UIH5 (7300) V2HRT-1 (7300) V2HRT-1 (7300) V3 (7300) V5 (730) V5 (7300) V5 (7300) V	// use <callsign> command to send <callsign> //<bassword> //SH/DX 30</bassword></callsign></callsign>	your callsign to the server.	^
OJ VEZCC-1 (25) PRI] [U] GB7MBC (8000)	// : Comment <delay> : adds 1 sec delay <callsign> : sends your Station Calsign ( <password> : sends the provided passw</password></callsign></delay>		3 14

#### Important note:

When editing an existing cluster that has already been selected as an active server it is necessary to remove it from the active server list, select the server in the known server list and click the ADD (+) button to replace it in the active server panel.

#### **Primary cluster server**

The Primary cluster is indicated with [PRI] in the Active servers list will receive user commands like spots and other messages and will be also the standard destination for incoming commands through internal cluster server. The Primary cluster can be selected with the "crown icon".

#### **User cluster servers**

User defined cluster servers are prefixed with a (U) and are preserved when the cluster server list is updated/

Ing Log40M NG Cluster	- 🗆 X
File Options	
Connect Disconnect Start server Stop Server	
Management Internal server Cluster Connection	
1251 gb7mbc.spoo.org:8000: To ALL de F6EXV: AMYOR ESTAIS DURMIENDO ??!! 1251 ve7cc.net:23: To ALL de F6EXV <12512> : AMYOR ESTAIS DURMIENDO ??!! 1251 44.144.11.254:8000: To ALL de F6EXV: AMYOR ESTAIS DURMIENDO ??!!	^
	Z IN80 Z IN80
1251 gb7mbc.spoo.org:8000: DX de EA4CT: 14160.0 AM705 70 ANIVERSARIO DE URE 12	51Z
	Z KM18
	>
Lock display Clear Save log	
Commands Spot simulation	
Send Send to all servers	Set personal info
Send Spot CALLSIGN 0 000 SPOT informations	Moon info
Send ANNOUNCE text Broadcast	Sun info
Cluster Server	.::

#### Sending cluster commands

Cluster commands, filters, announcements, and spots may be sent from the commands tab in the 'Management' tab.

The 'Commands' tab enables the user to send commands like Show/DX or set special cluster server filters, for details of cluster commands see the documentation for the chosen cluster servers, DX Spider, CC User etc) Spots can also be sent from this window providing the user is registered with the chosen cluster servers.

#### Sending spots to a cluster

Spots can be sent directly from the QSO input screen by clicking on the send spot icon indicated in the graphic below.

LOG40M 2 [Profile: Text NG] [Solar data info K: 1 A: 5 SH: 70 Sunspot: 0]			- 0	×
File Connect Contest View Utilities Settings Help				
🔐 I B B B B B B B B B B B B B B B B B B				
TW3HMH S 59 V R 59 V Start 22/05/2020 07:11:05 T Statistics (F1) Info (F2) Award refs (F3) My Station (F4) Extended info	5 (F5)			0
		11/7=	HN	
Daniele Pistolato	Rol	ion Amoteur A	adia Station	
		dila	-	
Mode 158 A Note C C C C C C C C C C C C C C C C C C C		-	A.S	
Country Italy	-	-		
Country 22 v cq 15 v 248 Envice TU 28 v cq 15 v 248 Envice SEND SPOT				
KH2 H2 H2 KH2 WW Locater JH6560	ata)			
Freq 3772 000 🚯 I 1 3772	and the second second			4
Main (F6) Recent QSO's (F7) Cluste Propagation (F9) W KHz Hz	+ 00		te lle	
IV/3HMH 3772 000 Nice signal on new radid Curren	tus	U de	talls	
КЛЮС	Danu P		010	4
Spot Button VI26N	160m			
Torre di M	80m C		С	
Monasteire di Piave	60m		С	
Roncade di Pinye	40m C 30m	c	C	
asale Sul Sile	20m C	c	c	
27 Eracles	17m C		c	
Select a past QSO to send spot	15m	с	с	
	12m			

#### Please Note:

#### The user must be registered with a cluster server to be able to send spots to it

# **Spot Simulation**

The 'Spot simulation' tab in the Connect/Telnet Cluster/Cluster Management screen allows the user to simulate sending a spot for test purposes without that spot being sent to the on-line cluster servers the spot is only displayed on the local computers cluster window.

1216 www.gb7mbc.net:8000: <	DX de F8ETK:	7090.0 F5EJK	59 +20	1216Z ×
Lock display Clear Save log				
	ULSIGN 0 OTTER CALL	Hz 000 🙆 SPOT INF	0	
Cluster 🜑 Server				

# **Cluster configuration**

In the Settings/program configuration menu there are various options for the Telnet cluster e.g., Auto start of cluster and server and cluster highlighting selection.

Configuration						
Save config Save and apply Exit						
Program Settings     Edit program config     Program Scheduler	Cluster		Cluster highlight colors			
Performances E-mail settings	Server auto-start		Country not worked	COUNTRY NOT WORKED	ð	2
User Configuration	Show cluster grouped [recompleter in the second	mended]	Band/Mode not wrkd/conf	B/M NOT WORKED	ð	۵
My References	$\bigcirc$ Show User Defined clusters		Worked/Confirmed	WORKED	Ô٦	<b>a</b>
Station configuration Confirmations	<ul> <li>Show stable clusters</li> </ul>		Station not worked	STATION NOT WORKED	Ô١	۹
···· Database ···· External Services	<ul> <li>Show experimental clusters</li> </ul>		Station worked	STATION WORKED	ð	2
User preferences     Award preferences	○ Show inactive clusters		Station worked same band	WORKED SAME BAND	2	۵
Software Configuration	Cluster server port	7300 🜲	Station worked same mode	WORKED SAME MODE	Ô٦	2
Cluster Alert	Cluster max age (min)	120	Station worked band mode	WORKED SAME BAND + MODE	Ô١	۵
Info Providers     Configuration	Maximum cluster items	1000 🗧 😭	Station wkd same mode type	WORKED SAME MODE TYPE	Ô٦	2
···· Map Settings ···· Backup	Band map max age (min)	25	Station wkd band mod type	WKD SAME BAND + MODE TYPE	Ô	<b>A</b> 1
···· VOACAP Propagation ···· Auto Start	Maximum band map items	60				
- Hardware Configuration	Supercluster max age (min)	60 🗦 🚱	Award highlight	HIGHLIGHT	Ô١	۵
Audio devices and voice keye CAT interface	Cluster overload control (spot/mi	n) 30 🗧 🕜	Default	Set white background for NO COLOR		
CONSTRUCTION     Connections						

The cluster can be started directly from main USER INTERFACE. Cluster disconnection is possible only through cluster management screen.

# **Cluster displays**

The main cluster is included in the main user interface; however a floating cluster screen can be deployed by clicking the cluster icon on the top tool bar.

🚾 LOG4OM NG [Profile: New config] [Solar data in	nfo K: 1 A: 4 SFI: 66 Sunspot: 0]
File Connect Contest View Utilities	Settings Help
🚆 8 8 8 8 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Azimuth 2 Elevation 143° 323° 2 €0
IQ1LY 59	∨         R         59         ✓         Start         26/08/2019 12:07:50         ≤         E         Statistics (F1)         F2)         Award ref         B)         My Station (F4)         Q           End         26/08/2019 12:07:50         €         E         NEW ONE         NEW BAND         W MODE
Cisar Sezione Di Genova Grid	JN44cc [LOTW USER] NEW GRID GRID BANK D MODE
Band 40m 🗸 🔒 Commer	* Open floating cluster
Mode SSB 🗸 🕒 Note	
Country Italy 🗸 📂	4 V U
ΠU 28 🗸 CQ 15 🗸 248	Add Super Cluster results to cluster
Freq 7074 000 🙆 RX Freq	KHz Hz 7074 000 🙆 RX Band 40m 🗸 🖨 DIG COCOOOCOCCOCCO

Both cluster displays provide displays of country worked/confirmed status and choices of band, mode and display views as below.

## **Super Cluster**

The Super Cluster gathers data from HRDLog of QSO's recently logged by HRDLog users and amalgamates that information with the main cluster results providing an extremely accurate indication of spot quality.

#### Example:

If G4POP logs a QSO with VK7AMA in the last few minutes and spots are also received from the telnet clusters for the same band and mode then there is a high probability that VK7 is workable from the UK.

luster Map												Statistic		View	
Time	Callsign	Flag	Frequency	Country	Note	Band	Emission Type	Spot Mode	Reporter	Data Quality	Ri ^	248 - It	aly		
1219Z	OZ1ADL		14080	Denmark		20m	DIGITAL	FT4		Spot	31	Band	PH	CW	DIG
1219Z	F90AGNK		14026.9	France		20m	CW		JH1GNU	Soot	33	160m	PR	CVV	010
1219Z	HL3EHK		14074	Republic of Korea (S. Ko		20m	DIGITAL	FT8		High	26	80m	C		c
1219Z	M3JIE	Æ	14074	England		20m	DIGITAL	FT8		Poor	33	60m	6	-	
1218Z	RZ5D/6/M	=	14180.0	European Russia	rda RO-23/41 rafa HHZ2	20m	PHONE		RV9USA	spor	33	40m	0	c.	0
1218Z	Z35M/P	<b>**</b>	14060.0	Macedonia	QRP on a beach Z3FF-0001	20m	CW		Z37FCA	Spot	27	30m		C	0
1218Z	UA3KA/M	-	14016.0	European Russia		20m	CW		RQ3M	Spot	33	20m	6	C	6
1218Z	BG5UER	-	14074	China		20m	DIGITAL	FT8		Spot	27	17m	c	C	C
1217Z	VK2BY	-	14250.0	Australia	keep caling dx	20m	PHONE		2E0FSD	Spot	29	15m	0	c	0
1217Z	F4FZR		14080	France		20m	DIGITAL	FT4		Spot	33	12m		U	
1216Z	GD1JNB	2	14247.0	Isle of Man	Islo of Man BOOMING	20m	PHONE		PB5X	Spot	25	1.2m	0	-	
1216Z	RZ5D/M	-	14180.0	European Russia	rda RO-23/41 rafa HHZ2	20m	PHONE		RV9USA	Spot	33	ruen	(W)	-	and the second

In the image above the 'Data quality' column displays spots of HIGH quality which have been received by Telnet and from the HRDLog data, whereas POOR quality indicates the data was only received via HRDLog and SPOT are spots received only via Telnet.

The age and maximum number of spots displayed in the Cluster, Band map and from HRDLog for the Super Cluster display can be selected by the user in the settings/program configuration/cluster tab as shown below.

Configuration					
Save config Save and apply Exit					
Program Settings     Edit program config     Program Scheduler	Cluster Cluster auto-start		Cluster highlight colors		
Performances E-mail settings	Server auto-start		Country not worked	COUNTRY NOT WORKED	
- User Configuration  - Station Information	Show cluster grouped [recor	mmended]	Band/Mode not wrkd/conf	B/M NOT WORKED	
My References	○ Show User Defined clusters		Worked/Confirmed	WORKED	A
Station configuration Confirmations	<ul> <li>Show stable clusters</li> </ul>		Station not worked	STATION NOT WORKED	1 🏹
- Database External Services	<ul> <li>Show experimental clusters</li> </ul>		Station worked	STATION WORKED	
- User preferences - Award preferences	<ul> <li>Show inactive clusters</li> </ul>		Station worked same band	WORKED SAME BAND	
Software Configuration	Cluster server port	7300 🗘	Station worked same mode	WORKED SAME MODE	
Cluster Cluster Alert	Cluster max age (min)	120 🔹	Station worked band mode	WORKED SAME BAND + MODE	
Info Providers     Configuration	Maximum cluster items	1000 🗘 😭	Station wkd same mode type	WORKED SAME MODE TYPE	A
	Band map max age (min)	25	Station wkd band mod type	WKD SAME BAND + MODE TYPE	۹
VOACAP Propagation Auto Start	Maximum band map items	60 🔹			
	Supercluster max age (min)	60 🗦 🚱	Award highlight	HIGHLIGHT	<b>A</b>
- Audio devices and voice keye CAT interface	Cluster overload control (spot/m	in) 30 🗘 😭	Default	Set white background for NO COLOR	

The 'Statistics' pane displays the worked/confirmed status and by what method of confirmation, of the country depending on that selected in the Program configuration/Confirmations menu shown on the right below.

## **Cluster time coloured red**

When the time for a spot is in a red font it indicates that the spotted station is a known LOTW user

Cluster	Мар									
Time	Callsign	Band	Frequency	Mode	Flag	Country	Note	Reporter	Reliability	Cluster Name
1241Z	T6AA	20m	14025.0	CW		Afghanistan		DK1CO	79	www.gb7mbc.spoo.org:8000
1240Z	RU3II	20m	14015.0	CW		European Russia		DK9VS	98	www.gb7mbc.spoo.org:8000
1240Z	RK3YWS	40m	7100.0	PHONE		European Russia	5 OKEAH	RZ3QWE	88	www.gb7mbc.spoo.org:8000
1238Z	Z33YL	40m	7120.0	PHONE	*	North Macedonia	CQ ARCK	Z33YL	40	ve7cc.net:23
1238Z	RZ4AZ	20m	14033.9	CW		European Russia		HA7VK	98	ve7cc.net:23
1237Z	HB9BQU/P	40m	7197.0	PHONE		Switzerland	HB/LU-023	HB9BQU	98	elgur.crabdance.com:7300
1237Z	VU2XO	20m	14177.0	PHONE		India	cq dx	RC7C	34	ve7cc.net:23
1236Z	IQ5QO/P	40m	7173.0	PHONE		Italy	IFF-0067 DCI-GR99	OK1VEI	98	ve7cc.net:23
1236Z	YO8CNA	20m	14240.0	PHONE		Romania		ON6ZK	98	ve7cc.net:23
1233Z	HB9AFI/P	20m	14061.0	CW	-	Switzerland	HB/VD-049	HB9AFI	64	elgur.crabdance.com:7300
1232Z	HB9EAJ/P	40m	7192.0	PHONE	+	Switzerland	HB/SO-008	HB9EAJ	98	elgur.crabdance.com:7300



Save config Save and apply Exit	
Program Settings     User Configuration     Settion Information     Settion Information     My References     Settings     Onfirmations     Ontrabase     Determal Services     User preferences     Software Configuration     CAT Interface     Outer     Info Providers     Map Settings     Backup	Confirmations Set the default confirmations for each award accordin Type Sent Rcvd QSL default message Main UI Statistic view Confirmations Main UI Statistic view Confirmations Main UI Statistic view Confirmations Confirmations Rcvd Confirmations Rcvd Confirmations Rcvd Confirmations Rcvd Confirmations Rcvd Confirmations Rcvd Confirmations Confirmations Rcvd Confirmations Confi

Double clicking a cell in the statistics pane marked with a W or C will open a worked before list of all the contacts with that country on the band/mode of the cell selected.

Callsign	QsoDate	TimeOn	Mode	Band	Freq	Name	Comment	Country	RstRcvd	RstSent	(
GB0IWM/P	20190512	120828	SSB	80m	3720	Brian	Ifield Water Mill Station c/o G4PFW	England	58	58	N
G2LO	20190427	091839	SSB	80m	3750	Harry	Ariel Radio Group - Ariel Radio Group - a re	gistered International	Marconi Day station	59+15	N
GOJMZ	20190418	073321	SSB	80m	3742	Peter Farrar		England	59+15	59+10	N
G3PQD	20190323	084741	SSB	80m	3755	Derek	FT990 + W3DZZ(G3DYN)	England	59	59	N
GBOHNY	20190101	093427	SSB	80m	3760	Brian Stocks		England	59	57	N
G4AXP	20180925	185155	SSB	80m	3727	Gerald		England	59+10	59+10	N
GB4CW	20180909	115943	SSB	80m	3718	Brickfields A		England	59+10	57	N
<i>c</i>											>

## **Cluster filters**

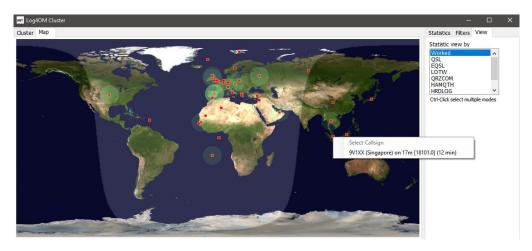
The cluster filters provide a method of tailoring the spots to be displayed by band, mode, worked and QSL confirmation status - Use Ctrl/Click to select or deselect bands or statistics confirmation types.

The Beam filters enable selection of spots from a specific compass direction via short path or short and long path. This will enable filtering based on current beam direction in order to optimize efficiency.

Statistics Filters Beam View   Mode Lock Band lock   Origital Participation   Exclude FT(x) Band filter   Hide worked Bom   Keep bands 000   Spot origin 000   Tom 000   Reliability threshold C	Statistics       Filters       Beam       View         North       North       North       Include         West       All       East       Current beam         South       South       South       No         West       South       South       No	Statistics       Filters       Beam       View         Statistic view by       Vorked       EQSL       Image: Construction of the const
Hide info >>	Hide info >>	Hide >> _;;

#### **Cluster spots map**

Clicking the 'Map' tab in either cluster will display a map of the current cluster spots, clicking a spot reveals the details of the spot a further click on the revealed call sign will perform the same actions as detailed in the 'cluster actions' section.



#### **Intelligent cluster**

When a spot is clicked on in the cluster if there is an award reference e.g. IOTA, SOTA or Log4OM V2 designer awards the text in the cluster comments/notes field is parsed, matched and added to the awards panel.

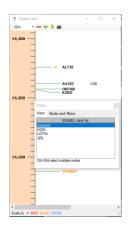
LOG4OM NG [Profile: New config] [Solar data info K: 2 A: 3 SFI: 75 Sunspot: 24] File Connect Contest View Utilities Settings Help 1 🗧 🗘 0000566 3575500 () = ¥ Info (F1) Award refs (F2) My Station (F3) QSL's (F4) TM5FI Start 9:16:21 59 59 + 09/05/2019 Award ΙΟΤΑ 9:16:21 -09/05/2019 ~ EU-070 EU-074 EU-081 EU-094 Ratonneau Island Grid Group 80m Sub Provence-Cote d'Azur (Bouches du Rhone) Mode SSB Note EU-105 EU-107 EU-148 France References IOTA@EU-095 ITU 27 V CQ 14 V 227 000 🙆 3720 000 3720 80 req Main (F6) Recent QSO's (F7) Cluster (F8) Cluster Map Time Callsion Country Band Frequency Mode Note Reporter Ranking Flag 0915Z RP74AB European Rus 20m 14023.0 CW CQ RADT 337 UF8T Asiatic Russia 20m 14080.0 DIGITAL IKOGD 324 0915Z RP74MY European Russia 20m 14014.0 CW RV7C 337 0914Z LZ4970M Bulgaria 20m 14123.0 PHONE LZ1ASP 319

Below is an example of an IOTA reference being 'Read' from the notes field automatically.

## **Cluster Band map**

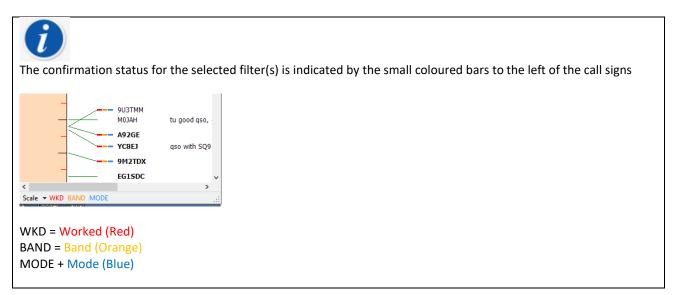
Cluster band map can be accessed by the Connect/Cluster Band View menu and multiple Band map can be opened for individual bands.

The band map is automatically reopened when restarting Log4OM V2 in the same size and position as last opened.



## **Band map filters**

Clicking the small folder icon at the top of the band map provides options to change the statistics view from 'Worked' to confirmation types (EQSL< LOTW or QSL) and multiple confirmation types can be selected by holding the Ctrl key depressed and left clicking the menu selections.



The 'Mode' tab in this window provides a choice of Phone, Digital or CW spots to be displayed.



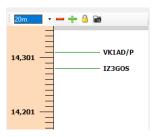
#### **Band map Bands**

The drop-down menu at the top left provides choice of bands to be displayed

🙀 Cluster view		×
i 20m 🔹 🕶 🕂 🔒 📾		
14,300 — — — —		ſ

#### **Band Map Scale menu**

The zoom level or scale of the band map can be changed using the 'Scale' drop down menu at the lower left of the Band Map from 0.5x to 15.0x or the +/- buttons at the top of the band map window.



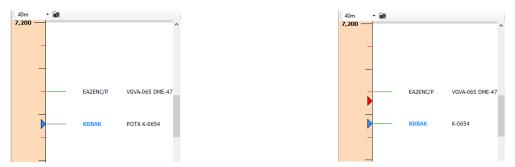
#### Band map Lock.

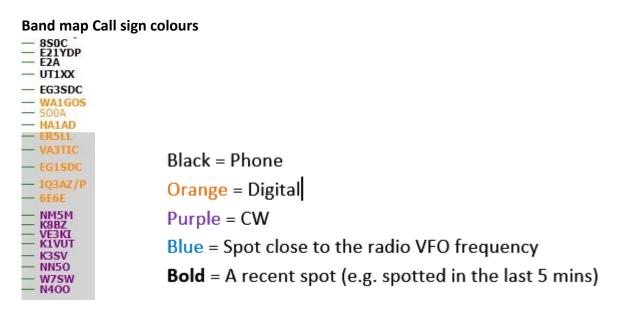
Clicking the yellow padlock locks the band map frequency display to the band selected on the radio if there is a CAT connection.

#### Band map CAT frequency display

The current radio RX/TX frequency is displayed on the band map frequency scale by a blue arrowhead marker, as the image on the left below.

When in split mode (assuming the radio is supported by Omnirig) the blue arrowhead marker indicates the RX frequency and the red arrowhead marker the TX frequency, as shown in the image on the right below.





**Please note**: Clicking on a spot in the band map will activate a lookup in the main UI F6 view including country worked statistics, it will not activate the country statistics in the main cluster because the main cluster is able to function independently.



#### **Band Map Mouse Actions**

Identical to Cluster actions below with the addition of the ability to 'SCROLL' the band up and down with the mouse scroll wheel.



## **Cluster actions**

#### Single click on cluster spot

- 1. Adds call to call sign input field
- 2. Looks call sign up in Clublog, QRZ, Recent calls and completed data fields
- 3. Checks for SOTA or IOTA or other award reference in comments and notes fields and completes the appropriate awards program fields.
- 4. Fills country worked by mode and band graph
- 5. Draws great circle path on world map
- 6. Opens the large-scale station location map and biography photo if available from lookup site
- 7. Fills SP/LP headings, antenna elevation and distances in the Contact(F3) tab
- 8. Adds data to the Info (F1) tab for the station
- 9. Displays 'Worked' banner in the lookup data box If 'Worked before' is clicked the worked before window opens displaying all previous contacts with that station.
- 10. If a call sign is found for call during lookup, clicking the lookup providers name (QRZ, HamQTH) opens the web browser at the page of the call sign
- 11. Fills mode, frequency and band in the input window if CAT is enabled.

#### Double click on cluster spot

All as 1 above plus changes radio mode and frequency on the radio.

#### **Cluster grid columns**

Right clicking on the cluster column title bar provides access to a menu, selecting 'Edit table layout' provides the user with a selection of which columns to be displayed and also font size and colour selections.

req 1 Main (F6)			RX Freq 1			Hz 000 🙆 RX Band 20m orked before (F10)	~ <mark>(</mark>	Grid configuration Columns Appearance B B B Band LP	∑ Mode ∑ Flag	Reporter Locator
Tim	Colleion Bond Frequency			Mode	Fla	g Country	Note		Callsign     Itu Zones     Spot Country       Callsign Locator     Lotw User     Spot Mode       Cluster Name     Modulation Type     Spot Source       Country     Note     State	Signal To Noise Ratio
150:	Edit table layout		PHON	E 📕	Indonesia	thx qso daud				
150	Cancel sort     Clear selection     Clear selection     Export visible rows to EXCEL     Export visible rows to CSV     Export visible rows to HTMI			PHON	E 두	European Russia		Cluster Name		
150				PHON	E	Saudi Arabia	QRZ	Country		
150				DIGIT	AL 📕	Indonesia	RTTY	Cq Zones		🗹 Time
150				CW		United States	tnx fb qso, 73			
150:				PHON	E 🏼 🎽	Z Jersey	wkd 9m6tmt			
150:				PHON	E 🗖	East Malaysia	Calling CQ - Re			
1500Z	PU1JSV	15m	21076.0	DIGIT	AL 🔽	Brazil	Tnx a lot, gl,			

Columns can be re-ordered by left clicking the title bar of the column to be moved and dragging to its new location.

# Backups

It is highly recommended that the user enables the automatic backup facilities included in the software, details of which are fully covered in the main user guide.

Configuration	
[비 ♥ () Save config Save and apply Exit	
Program Settings     Edit program config     Program Scheduler     Performances     E-mail settings     User Configuration     Station Information     Market Configuration     Configuration     Configuration     Database     Estain Services     User preferences     Loster Preferences     Custer Alert     Info Providers     Loster     Loster     Mag Settings     Backup     VoACAP Propagation     Auto Statt     CAT interface     CAT interface     CAT interface     CW keyer interface     Software integration     CAT interface     CW keyer interface     Software integration     CAT interface     CW keyer interface     Software integration     Software integration	Backup            Obtabase backup [NOT ADJF] (SQLte database only)          Backup folder       C:\Users\g4pop\AppData\Roaming\Log4OMZ\backup\         If backup folder is not set, Log4OM will create backup in the default folder            Backup rotation       13         If backup folder is not set, Log4OM will create backup in the default folder           Backup rotation       13         If program will keep a number of historical backup copies up to the indicated value (indicates the number of different days. Multiple backup in the same day are considered a single one)         Image: Enable additional backups         Database backup [NOT ADJF] (SQute database only) [NOT RECOMMENDED]         Backup rotation       13         Image: C:\Users\g4pop\OneDrive\Documents\Log4OM Test backups\         Image: C:\Users\g4pop\OneDrive\Documents\Log4OM Test backups\

# **Duplicating Log4OM setup on another PC**

e.g., The user has a station in the house and one in the garage using the same type of equipment and wishes to duplicate the various screen layouts and configuration from the house PC to the one in the garage.

#### Action

Copy the contents of the 'USER' folder here C:\Users\YOUR USER NAME\AppData\Roaming\Log4OM2\user to the same folder on the other machine.

The authors of Log4OM and its associated documentation and visual aids take no responsibility for any defects or malfunctions cause by its use or interpretation. E&OE