

Quick Reference Guide for Networking Mk5 Controllers

Below are the steps needed for networking multiple Mk5 Controllers.

First you need to physically connect the controllers together. To do this you can use a 3 conductor CAN cable. We recommend: Belden 3106A. We have the components available individually or we have kits with everything needed as shown below.

CAN Cable sold per reel (250m, 750ft): 1900 0707 92 CAN Cable sold per meter (3ft): 0017 2610 13 CAN Service Connector (male and female connections): 1088 0017 27 CAN Connector (female connection only): 1088 0017 28

CAN Kit 2 Machines (150ft cable): 8092 2840 85

- 150ft of cable
- 3x CAN Connectors
- 1x CAN Service Connector
- 1x Connector Adapter
- Instruction Booklet

CAN Kit 3 Machines (225ft cable): 8092 2840 93

- 225ft of cable
- 4x CAN Connectors
- 1x CAN Service Connector
- 1x Connector Adapter
- Instruction Booklet

CAN Kit 4 Machines (300ft cable): 8092 2841 01

- 300ft of cable
- 5x CAN Connectors
- 1x CAN Service Connector
- 1x Connector Adapter
- Instruction Booklet

CAN Kit 6 Machines (450ft cable): 8092 2841 19

- 450ft of cable
- 7x CAN Connectors
- 1x CAN Service Connector
- 1x Connector Adapter
- Instruction Booklet







The 3 conductors are landed on the GND, C-, and C+ terminals in the CAN connectors. It does not make a difference which colors are connected to each terminal just be sure they are the same throughout the entire chain of cable. If there is a smaller conductor it is normally connected to the GND terminall.

After the cable is installed and terminated with the proper connectors be sure that the terminating resistor switches are in the correct position. The two end connectors (a connector with only one wire going into it) must have the switches on and the conductors must be landed on the 1C- and 1C+ terminals, the other connectors in between them (a connector with two wires going into it) must have the switches off. The image below depicts this:



CAN NETWORK - LINE TERMINATION SWITCH

The cables are now ready to be connected to the controller. You will connect all networking cables to the CAN 2 port on the back of the screen. Below is an example diagram of the controller connections:





You are now ready to set the CAN address on each controller. You need to set the CAN address on all compressors in the network. To set the CAN addresses follow the steps below:

Compressor Outlet	Menu	Settings	
100 psi 189 °F Element Outlet	n 💫 🎪 😒 🕦	😹 述 🅣 🔏 🗵	
Running Hours 5 hours	💱 📴 <u>🗡</u> 🕤 🕞	🔺 🔌 🔌 🕋 🗊	
🔿 วุ๋ 🗄 🔤	🗎 🔌 🚥	P\$	
Off	Settings	Network	
Menu			
1) Select "Menu"	2) Select "Settings"	3) Select "Network"	

Network	CAN	CAN		CAN	
CAN	CAN		CAN		
Ethernet		Off		Off	
	CAN Address		CAN Address		
		31		31	
	PC Tools Channel		PC Tools Channel		
		Mk4		Mk4	
	ECO Channel		ECO Channel		
		Mix4	L	Mk4	
		Modify		Modify	
4) Select "CAN"	5) Select "Modify"		6) Set the "CAN Ad 1-6 then turn "C	dress" from AN" On.	

You complete steps 1-6 on all compressors in the Network.

Next you need to designate one compressor as the master in the network. The Master compressor can be any compressor with an ECOi License Key installed on it. These come standard on most of our units **(Not on QGS, QOF, and QSV)** so most Quincy Compressors can be a Master on the network. However we can only have one master on the network at a time so we typically designate the #1 compressor as the master; in reality though, it can be any compressor that has the ECOi option enabled on it.

STEPS 7-18 ARE TO BE COMPLETED ONLY ON THE MASTER COMPRESSOR.



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Menu	ECOi	Master	
🔌 🎪 😒 👔		🕘 🔀 🤧 👍 🖂	
💱 🔝 述 🕤 🕞	$\bigcirc \bigcirc \bigcirc$	🖉 🕐	
🗎 🍇 💼			
ECOi	Master Status		
 Back out to the main Menu and select "ECOi" 	8) Select ECOi "Master"	9) Select "Status"	
Status			
ECO Not Activated			
Number of Compressors			
6			

10) Select "Modify"

11) Once the "Number of Compressors" in the network are set then you are ready to set the "ECO" to On. <u>THERE CAN ONLY BE ONE</u> COMPRESSOR IN THE NETWORK WITH THIS SETTING SET TO <u>"ON" ALL</u> <u>OTHERS</u> MUST BE SET TO <u>"NOT ACTIVATED."</u>

		ſ	Master	r	
This is Gr ECO Mas	reen when ther is ON	✓✓			>_
		F	Regulatio	n	

Note: When changing some network settings it may not allow you to modify them. If that is the case then you need to make sure the ECO Master is turned to "Not Activated" and the unit is not under network control. You may have to cycle power before you're able to change certain network settings.



Master	Regulation
0 🔀 ਤ 🗄 🔼	Pressure Band 1 High 115 psi
	Pressure Band 1 Low
	100 psi
	Pressure Band 2 High
	115 psi
	Pressure Band 2 Low
Regulation	100 psi
	Modify

12) Select "Regulation"

13) Select "Modify" and set the pressure band for network regulation. The pressure bands set here are different from the local control pressure bands set from the main Menu and will only pertain to network operation.



- 14) Select General Settings
- 15) Select Modify and change the 16) Select Compressors Operation Mode Local Control.



- 17) Select Counters
- 18) Set the current running hours for all the compressors





19) Select the control mode and change it from Local to LAN control.

YOU WILL DO THIS ON ALL COMPRESSORS WHEN YOU ARE READY FOR THEM TO BE CONTROLLED BY THE NETWORK.

Note: You will notice that the symbol is flashing, that means that it is in LAN control but the Master is not controlling the compressor and it is still operating on its local pressure and set points.



20) Navigate to the ECOi main display by selecting the ECOi button at the bottom or the main display selection on the right side.

Once here you should see all compressors that are connected to the Master and you need to tell the master to start controlling the network.



21) Select "ECO Commands" and select "Start ECO"

If you click on this symbol and no commands appear go back to step 15.

The network should then be operating under the Master's control (the network icon on the slave units should be solid and not flashing). If the Network Symbols are flashing this means the units are not being controlled by the network and you need to complete step 21.



A word of Caution here, if you press the "ECO Stop" it will Stop ALL compressors in the network and YOUR PLANT PRESSURE WILL DROP if there are no other compressors running outside of the ones networked. This command can be turned off in the Master Menu (Step 8) under the "Commands" Menu. In that same Menu you can turn on the Local command and it will allow you to put all compressors in network control back to local control from the "ECO Command" button (Step 21) which can be useful.

Here are a few symbols that may appear on each of the compressors on the ECOi main display:

- : No answer, not responding
 - : No valid compressor type
- : No communication (CAN)
- : Shutdown of compressor
- : Not available due to minimum stop time
- : Compressor is not in LAN Control
- : Service Warning

: Compressor is Isolated in the Slave Menu