Carrier Enterprise



Toshiba Carrier VRF Technical Training

Dyna-Doctor Diagnostic Software & Communication Adapter

Toshiba Carrier MCY/MMY VRF Dyna-Doctor Diagnostic Software & Communication Adapter

Dyna-Doctor diagnostic software can provide a user a view across the VRF entire system. The technician will be able to see valve positions, refrigerant pressures, thermistor readings, compressor speeds, operational modes and much more.

We recommend you use the software to record a base line of each VRF system you Start Up/Service. The recorded operational data can help when performing yearly routine maintenance on the same systems or when trying to diagnose operational errors.













Toshiba Carrier MCY/MMY VRF Dyna-Doctor Diagnostic Software & Communication Adapter

NOTE: The following Dyna-Doctor Guide will help you Connect, Activate and Record using Dyna-Doctor. Not all features of the Software will be shown.

- Dyna-Doctor allows the technician to see a large amount of data all in one place. No need to put gauges on the outdoor unit or take a temperature at the coil inlet/outlet and much more.
- Dyna-Doctor will not do any diagnostics for you. The technician will need to review the data and make determinations for themselves.
- The only way to be successful at using Dyna-Doctor is to use it. The more you use it on properly operating systems, the better you will catch systems not operating correctly.
- Dyna-Doctor is best used in conjunction with the Factory Service Manual for the Outdoor Unit.
- You can only connect to one VRF system at a time, even if the outdoor units are daisy chained to a central controller.
- Operation Modes can be changed, set point cannot.
- Some windows and the values shown take longer to update then others, be patient.



Toshiba Carrier MCY/MMY VRF Dyna-Doctor Diagnostic Software & Communication Adapter





Toshiba Carrier MCY/MMY VRF Dyna-Doctor Diagnostic Software

- Load Dyna-Doctor software on Windows computer/laptop to be used.
- Use the included CD or contact CE Tech Support for the latest version of software.
- The manufacture updates Dyna-Doctor software approximately once a year or as required by product enhancements.
- Once loaded, the software will only work for 30 days unactivated. We highly recommend you activate the software as soon as it's loaded. It can take up with 2 days for the activation email to be returned.





Toshiba Carrier Dyna-Doctor Activation Activating Dyna-Doctor Software

1. Start "Dyna-Doctor" and click on the message which says "The expiration date for use remains XX days. Please execute license authentication" to display the license authentication screen.





Activating Dyna-Doctor Software (cont.)

2. Select "Creation of License Information" and click the "Next" button.



3. If you agree to processing of your personal data by Toshiba Carrier Corporation in accordance with the Privacy Notice, click the "YES" button.





Activating Dyna-Doctor Software (cont.)

4. Fill in the necessary sections (*) and click the "Next" button.

😴 License Authentica	ition	×
Country(*)	United States	*
Company Name(*)	TOSHIBA CARRIER CO LTD	*
First Name(*)	Taro +Last Name(*) Toshiba	*
E-Mail address(*)	xxxxx@xxx.xx.xx	*
Division	00	
JOB Title	ХХ	
Telephone(*)	***_***_*	*
	BackNext	

5. To save the created license information, enter a file name and click the "Save" button. File location defaulted to save in Document



Activating Dyna-Doctor Software (cont.)

6. Attach the saved license information file to a new email and send. When the license is authenticated, an authentication email with an attached authenticated license information file will be sent from Tcc-dynadoctor@ml.toshiba.co.jp

Use the following format for the request email:

To: Tcc-dynadoctor@ml.toshiba.co.jp Subject: Dyna Doctor for VRF: request activation code Attachment: License information file (.xml)

Paste 🖋	Calibri (Body) II A A II A A B I II A III A III A B I II III A IIII IIII A IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Q Zoom Zoom	
To	Tcc-dynadoctor@ml.toshiba.co.jp		
Cc			
ıbject:	Dyna Doctor V for SMMS-i: request activation code		
tached:	Eicense.xml (2 KB)		
e:			
li -			
L.			

Activating Dyna-Doctor Software (cont.)

7. When email response is received. Copy the new license file to Documents of other location. Make sure you make note of where it is copied.





Activating Dyna-Doctor Software (cont.)

8. Start "Dyna-Doctor" and click on the message which says "The expiration date for use remains XX days. Please execute license authentication" to display the license authentication screen.

9. Select "Registration of License Information" and click the "Next" button.



License Authentication
C Creation of License Information
Registration of License Information
Activation E-mail Address: <u>Tcc-dynadoctor@ml.toshiba.co.jp</u>
Next



Activating Dyna-Doctor Software (end)

10. Select the authenticated license information file and click the "Regist" button.

If the license authentication is successful the following message is displayed.

The software is now activated.









Connecting Toshiba Carrier MCY/MMY VRF Dyna-Doctor Communication Adapter

Connecting Adapter/Cables:

- Select cable "B" for all 1PH Heat Pumps
- Select cable "C" for 3PH Heat Pumps & all Heat Recovery Systems
- A small flat screw driver is required to open the communication adapter
- Insert cable "B or C" through opening and connect to CN101









Connecting Toshiba Carrier MCY/MMY VRF Dyna-Doctor Communication Adapter

Connecting Adapter/Cables (cont.):

- Leave all DIP switches in the OFF position —
- Close cover



CN101 Connect Cable "B or C" here







Connecting Toshiba Carrier MCY/MMY VRF Dyna-Doctor Communication Adapter

Connecting Adapter/Cables (cont.):

- Plug Mini-USB end into Communication Adapter
- Plug USB end into computer

- Turn VRF system OFF at outdoor unit's disconnect
- Plug Cable "B or C" (depending on ODU type) into CN800 on Main Interface PCB
- Turn VRF system ON at outdoor unit's disconnect





For Serial Cable, not used

Connecting Toshiba Carrier MCY/MMY VRF Dyna-Doctor Communication Adapter (end)

Connecting Adapter/Cables (end):

• Where to find CN800 on the Main Interface PCB



1PH Heat Pump CN800

ICE



3PH Heat Pump CN800



1PH & 3PH Heat Recovery CN800

Navigating Dyna-Doctor Software

- Start Dyna-Doctor software
- Select the Outdoor Unit connected







Navigating Dyna-Doctor Software (cont.)

- After selecting the type of system, click "OK"
- Next Click on "COM Setting"





Navigating Dyna-Doctor Software (cont.)

- After "COM Setting", click the drop down for Port Setting and select the port Dyna-Doctor is connected to (USB Port).
- If you do not know the Port# (COM#), you can try each one until communication is established or see next page.

Please select the subsequent process.
 COM Setting Change connection setting and try reconnect
 Browse File Select the saved file and display the history.
Cancel Return to the Dyna Doctor window.

set up	
Port Setting	
	<u>•</u>
-Update Cycle	
1 Day.	•
Set	Cancel



When communication can not be established the following.

If this happens, check COM Setting 1st. Next power down ODU, check CN800 connection, check USB connections, restart laptop/software



Navigating Dyna-Doctor Software (cont.)

How to find COM Port ID #

- Right click your mouse on the Windows Button
- Select "Device Manager"
- Scroll if needed and expand "Ports (COM & LPT)"
- In this case Dyna-Doctor is using COM4
- Close the Device Manager







_

X

🐣 Device Manager

Navigating Dyna-Doctor Software (cont.)

Select the COM Port that was identified and click "Set", after 15 to 30 seconds a message will appear and next a new "System Configuration Diagram" window will automatically open. Length of time depends on system size and if tech had previously connected to system.



Navigating Dyna-Doctor Software (cont.)

Once this window opens you have successfully connected to the system.

Immediately you will see the status of each fan coil as well as some outdoor unit information.

		a 🕄 S	System Configuration Di	agram										
		R	ecord No.	0 4		Þ	Time:	0.0	min Date 8	Time	9:52:38 AM			
		Sys	stem Configuration Diagrar	m (Communication) System Con	figuration Diagr	am (Refrigeratio	on Cycle) Refri	geration Cycle D	iagram (System	Data)			
Unit Address IDU Type Tonnage Status	5 4-way 1.7 Heat ON		Starting priority Outdoor type Comp condigion TOSHIBA Center Control	Header	1 - 2 Comp3 1 47.3	Follower1	3 F 2 Comp3 51.1 Comp3 ng Ope. 0	Follower2 2 12.0 Comp1 Comp2 60.9 64.5 Heating Ope.	9 Fan Ope	e. 🔽	Line add	Iress 5		
			BMS Connect	H-Duct 8.0 Thermo OFF	C-Duct 5.0 Heat ON	2-way 1.7 Heat ON	2-way 4.0 Heat ON	4-way 1.7 Heat ON	2-way 4.0 Thermo OFF	4-way 3.0 Thermo OFF	4-way 3.0 Heat ON	4-way 2.0 Heat ON	2-way 4.0 Heat ON	10
				2-way 6.0 Heat ON	2-way 1.7 Heat ON									20
														30

Navigating Dyna-Doctor Software (cont.)

On the first time you open Dyna-Doctor we recommend you select the desired units of measurements.

They do not come defaulted to the common units used in the United States and Canada.

Here we have selected PSI, Fahrenheit & kBtu/lbs.

The next time you open Dyna-Doctor these valves are saved and will not need to be set.



Navigating Dyna-Doctor Software (cont.)

Before you start reviewing data and system operation we recommend you start recording the data file. This way you can use it in the future for a comparison.

1. Click "File" then "Save"

File	Connect	Ref.Cy le	e Graph	Menu	Unit	Window	Action	Help
	Save							
	Browse Edit	n (Communica	tion) Syste	em Config	guration Diag	ram (Refrig	eration Cycle) Refrigera
	Set up		<u>e</u>					
1	Print		Header	1				
1	Exit	[6.0 -					
			Comp1 Co	mp2				

- "Browse" lets you view previously recorded Data files.
- "Edit" is used to view and add/edit comments.
- "Set up" is used to update Port Setting and Update Cycle settings.
- "Print" lets you print what is on the screen



2. Next name the file and select the location to save it to.

ộ Save As			×
\leftrightarrow \rightarrow \checkmark \uparrow	> This > Doc > ~	C P Search Documents	
Organize 🔻 New folde	r		. (2)
🔀 Pictures 📌	Name	Date modified	Туре
🚱 Music	🚞 Dyna-Doctor	2/20/2022 7:50 AM	File fold
<u>sπ</u>	🚞 sπ	2/20/2022 8:16 AM	File fold
💴 Videos			
🔉 🥧 OneDrive - Perso			
🔉 💻 This PC			
👌 📾 Local Disk (E:)			
File <u>n</u> ame: WC Tr	aining Room		~
Save as <u>t</u> ype: DynaD	octor Data Files(*.mif)		~
∧ Hide Folders		Save	ncel

Navigating Dyna-Doctor Software (cont.)

3. Select the file sampling rate, typical settings are 30 sec to 5 min.

File Name]	J.		Browse
Comment]			
Data Sampling Time]	01sec 💌		
Date]	Tuesday , June 14, 💌		
Data Count]		OK	Cancel

[File Name]	C: \Users\CENET\Documents\WC Training Room.	mif	Browse
[Comment]			
[Data Sampling Time]	10sec 💌		
[Date]	01sec 05sec		
[Data Count]	30sec	OK	Cancel
Please select the Dyna Doctor	0 1min	1	, <u> </u>

4. Finally click "Set"

[File Name]	C:\Users\CENET\Documents\WC Training F	loom.mif	Browse
[Comment]			
[Data Sampling Time]	30sec		
[Date]	Tuesday , June 14, 💌		
[Data Count]		ок	Cancel

In the bottom left corner you should see "Saving"



Navigating Dyna-Doctor Software (cont.)

The Record No. (number) is how many data sets (sampling times) have been saved. You can use the scroll buttons to look back while the data is being saved.

The total time record is shown as well as date/time each data set was taken.





Navigating Dyna-Doctor Software (cont.)

System Configuration Diagram window

ord No.	0		•	Time:	0.0	min Date 8	& Time	9:52:38 AM			
m Configuration Diagra	am (Communicatio	n) System Co	nfiguration Diagr	am (Refrigerati	on Cyde) Refri	geration Cycle D	liagram (System	Data)			
		-									
Starting priority				3		1					
	Header	-	Follower1	-	Follower2						
Guidoor type	10.0	- Comp3	Comp1 Comp	2 Comp3	12.0 Comp1 Comp2						
Comp condigion 😱	50.9 49	.1 47.3	0.0 52.9	51.1	60.9 64.5						
·						4					
TOSHIBA	Indoor unit	Conne	ct 12 Cool	ing Ope. 0	Heating Ope.	9 Fan Op	e. 0	Line ad	dress 5		
Center Control					_		_				
Connect	1 H-Duct	2 C-Duct	3 2-way	4	5	6	7	8	9 4-way	10 2-way	-
BMS Connect	8.0 Thermo OFF	5.0 Heat ON	1.7 Heat ON	4.0 Heat ON	1.7 Heat ON	4.0 Thermo OFF	3.0 Thermo OFF	3.0 Heat ON	2.0 Heat ON	4.0 Heat ON	10
	2-way	2-way									
	6.0 Heat ON	1.7 Heat ON									20
		í –	Í	í –	í –		Î	í –	Í .	<u> </u>	
											30
		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		<u> </u>	-
											40
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		<u> </u>		.L	-
Fresh											
DX COIL Unit											

The "System Configuration Diagram (Communication)" can be used to check the indoor/outdoor unit connection or operation status.



The "System Configuration Diagram (Refrigeration Cycle)" tab in the system configuration diagram window to display a refrigerant cycle diagram for the whole system.

🗱 DYNA-DOCTOR for VRF

<u>F</u> ile	Connect	Ref.Cycle	Graph	Menu	Unit	Window	Action	Help					
😥 Syst	em Configu	ration Diagra	m										
Rece	ord No.	42	•)	- → ⊤	ime:	20.6 min	Date & Time		6/14/2022 8:4	3:16 AM
Systen	n Configuratio	n Diagram (Co	mmunicatio	n) Syste	em Config	guration Diag	ram (Refriç	eration C	yde) Refri	geration Cycle [)iagram (S	System Data)	
	Starting priori	tv •	2001	ב ה									





Select "Refrigerant Cycle Diagram (System Data)" to display a refrigerant cycle diagram for each air conditioner currently connected or being browsed can be displayed.

Navigating Dyna-Doctor Software (cont.)

System Configuration Diagram (Refrigeration Cycle) window

• The "Switch" button will toggle between the component's value and it's name.





• Use the scroll arrows (located bottom right) to cycle through the indoor units.





Navigating Dyna-Doctor Software (cont.)

System Configuration Diagram (Refrigeration Cycle) window

- When the system is operating, the diagram will tell you status, temperatures and pressure values.
- The indoor unit values: PMV, fan, mode, temperature values (coil split) can be seen.
- Note: When the Compressors are Blue they are OFF, when they are Red they are ON.





System Configuration Diagram (Communication) System Configura





Navigating Dyna-Doctor Software (cont.)

System Configuration Diagram (System Data) window

- The view is defaulted to "Auto" mode the indoor unit values change once a second.
- If "Fixed" is selected mode the unit being viewed can be changed using the Indoor unit scroll bar, to the right of the "Auto/Fixed" button.
- The Outdoor unit being displayed can also be changed, if systems has more then one module. Click the "Header", "Follower 1", and "Follower 2' buttons to choose an outdoor unit to be displayed.



Navigating Dyna-Doctor Software (cont.)

List of System (Error) Codes

• Go to "Menu", then click "List System Codes"

DYN	A-DOCTOR	for VRF						
File	Connect	Ref.Cycle	Graph	Menu	Unit	Window	Action	Help
-	System Cor	figuration Di	agram	Lis	t Check	Codes		
	-)			Sys	stem da	ta List		
	Record No.		43 4	Co	manare	Data		

 Check Codes are broken down by Operating Element, Determining Method and what to Check.



Check code	Detecting	Operating Element			Detailed Information	
A01	Indoor (M-HW	Flow switch operation trouble		Check Code	A01	
A02	Indoor (M-HW	Water temperature decrease		Operation	Flow switch operation trouble	
A04	Indoor (M-HW	Activation of water heat exchanger frost protection		Element		
A05	Indoor (H-HW	Activation of water High-temperature protection			When we have for which is and used	-
A06	Indoor (H-HW	Activation of low-pressure protection	_		when water now rate is reduced.	
A07	Indoor (H-HW	PMV2 trouble		Determining		
A08	Indoor (H-HW	Reversal of inlet water temperature and outlet water temperature.		Method		
A09	Indoor (H-HW	Mixed refrirerant				
A10	Indoor (H-HW	TD/TE/TS sensor trouble			Check the pump.	
A11	Indoor (H-HW	TD/TE/TS sensor connection trouble			Check the strainer.	
A12	Indoor (H-HW	Pressure sensor error (PD, PS)			(Type, direction of attachment and point of	
A13	Indoor (H-HW	EEPROM (I/F) trouble			contact)	
A14	Indoor (H-HW	Heat sink overheat trouble				
A15	Indoor (H-HW	IGBT short-circuit protection trouble				
A16	Indoor (H-HW	Current detection circuit system trouble				
A17	Indoor (H-HW	Compressor trouble (lock)				
A18	Indoor (H-HW	Compressor breakdown				
A19	Indoor (H-HW	Compressor position detection circuit system trouble		Check		
A21	Indoor (H-HW	Inverter DC voltage (Vdc) trouble (compressor)		Contents		
A22	Indoor (H-HW	Compressor case thermo operation				
A23	Indoor (H-HW	High-pressure SW system trouble				
A24	Indoor (H-HW	TH sensor trouble				
A25	Indoor (H-HW	Discharge temperature TD trouble				
A26	Indoor (H-HW	Gas leak detection (R134a)				
A27	Indoor (H-HW	High-pressure protective operation				
A28	Indoor (H-HW	H-HWM communication trouble between I/F and IPDU.				
E01	Remote contro	Indoor-remote controller communication trouble (detected at remote	1			
E02	Remote contro	Remote controller transmission trouble	-			

Navigating Dyna-Doctor Software (cont.)

Initiating Test Operation

• Select "Action" then "ON/OFF control"



Configuration D	Nagram							1			
No.	15 4	(
		Test operation	ON/OFF control	ler							
onfiguration Diagra	am (Communication) Syste	Cooling	Heatin	9 F	an M	ode store	Mode re-store	Ope	ation	Stop	Test operation
	- E	-									_
Starting priority	Header T	No. 1 Net 1	No. 2 Net 2	No. 3 Net 3	No. 4 Net 4	No. 5 Net 5	No. 6 Net 6	No. 7 Net	No. 8 Net	No. 9 Net	No. 10 Net
Juidoor type	60	Thermo OFF	Thermo OFF	Thermo OFF	Thermo OFF	Thermo OFF	Thermo OFF		l		
and the second	Comp1 Comp2	SEL AR	SEL AR	SEL AR	SEL AR	SEL AR.	SEL AR	SE. AR	SEL AR	SEL AR	SEL AR
comp condigion 😱	0.0 0.0	ON 15	0N 15	ON 15	ON 15	ON 15	ON 15	011 15	ON 15	05 15	ON 15
		OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST
TOSHIBA	Lindoor unit	No. 11 Net	No. 12 Net	No. 13 Net	No. 14 Net	No. 15 Net	No. 16 Net	No. 17 Net	No. 15 Net	No. 19 Net	No. 20 Net
Center Control		1									
	1 2	SEL AIR	SEL AR	SEL AIR	SEL AIR	SEL AR	SEL AR	SEL AR	SEL AIR	SEL AR	SEL AIR
	U-Ceiling 4-way	01 15	0N 15	ON 15	ON 15	0% 15	01 15	ON 15	01 15	05 15	01 15
	Thermo OFF Thermo	OFF TEST	077 7153	OFF TEST	077 7151	OFF TEST	OFF TEST	OF7 TEST	OFF TEST	OFF. TEST	OFF TEST
		No. 21 Net	No. 22 Net	No. 23 Net	No. 24 Net	No. 25 Net	No. 26 Net	No. 27 Net	No. 28 Net	No. 29 Net	No. 30 Net
		SEL AIR	SEL AR	SEL AIR	SEL AR	SEL AR	SEL AIR	SEL AIR	SEL AR	SEL AIR	SEL AIR
		01 15	CN 15	CN 15	01 15-	01 15	01 15	01 15	0N 15	01 15	01 15
		OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF. TEST.	OFF TEST
		No. 31 Net	No. 32 Net	No. 33 Net	No. 34 Net	No. 35 Net	No. 36 Net	No. 37 Net	No. 38 Net	No. 39 Net	No. 40 Net
		SEL AIR	SEL AIR	SEL AIR	SEL AR	SEL ADR	SEL AIR	SEL AIR	SEL AR	SEL AIR	SEL AIR
		0/1 15	01 15	01 15	04 15-	04 15	01 15	01 15	01 15	ON 15	01 15
		OFF TEST	OFF TEST	OFF TEST	OFF. TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST	OFF TEST



Navigating Dyna-Doctor Software (cont.)

Initiating Test Operation

- If recording has not been started we recommend starting it before the test.
- Click "Test operation". Within 5 to 20 seconds the IDU's status will change and the test will start.
- Test Operation last about 1 hour.
- Once complete, the system will go back to what it was set at prior to the test.
- If you need to exit the test, click "Stop".

	Connect	Ref.Cycle	Graph	Menu	<u>U</u> nit	<u>M</u> indow	Action	Help																	
1	System Con	figuration Di	agram																0		23				
R	ecord No.		60 4		_		يدادا	Teres	00	C min	Data	Tere		14.4/20.22	3-30-01	044									
		,			a Tes	t operatio	n ON/OF	F control	ler														c		×
ys	stem Configu	ration Diagran	n (Communi	ication) S		Cooling		Heating		F	an	M	ode sto	re	Mode re	store		Oper	ation		Stop		Test op	eration	
	Starting	priority +	Handar		No.	Net 1	No. 2	Net 2	No. 3	Net 3	No. 4	Net 4	No. 5	Net 5	No. 6	Net 6	No. 7	Net	No. 8	Net 📃	No. 9	Net	No. 10	Net	1
	Outdoor	type .	6.0			1.5/High Cool ON	1. Cc	5/Med Iol ON	0.6	/High ol ON	0.6	ol ON	2.5 Co	/High ol ON	0.6 Cox	/High sl ON									
			Compl	Como2	SE	AIR	SEL	AIR	SEL	AIR	SEL	AIR	SEL	AIR.	SEL	AIR	SEL	AIR	SEL	AIR	SEL	AIR	SEL	AIR	
	Comp co	ndigion 🕨	0.2	0.2	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15	
	<u>الــــــــــــــــــــــــــــــــــــ</u>		1		OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	
	т	SHIBA	Indoor u	nit	No.	1 Net	No. 12	Net 🗌	No. 13	Net	No. 14	Net	No. 15	Net	No. 16	Net 🔽	No. 17	Net 📃	No. 18	Net 🔽	No. 19	Net	No. 20	Net	
	Center	Control	1		SE	AIR	SEL	AIR	SEL	AIR.	SEL	AIR	SEL	AIR	SEL	AIR	SEL.	AIR	SEL	AIR	SEL	AIR	SEL.	AIR	
			U-Ceiling	4-W	ON	15	ON	15 -	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15	
	-	• =	Cool ON	Coo	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	OFF	TEST	
			-		No	1 Net	No. 77	Net	No. 23	Net	No. 24	Net	No. 25	Net	No. 26	Net	No. 27	Net	No. 28	Net _	No. 29	Net	No. 30	Net	

Navigating Dyna-Doctor Software (cont.)

"Cooling", "Heating" and "Fan" mode can also be selected from this window.

Ç	ooling		Heating		Fa	n	M	ode stor	e	Mode re	store		Oper	ation		Stop		Test ope	ration
1	Net 1	No. 2	Net 2	No. 3	Net 3	No. 4	Net 4	No. 5	Net 5	No. 6	Net 6	No. 7	Net 📃	No. 8	Net 🗌	No. 9	Net 🗌	No. 10	Net 🗌
1.5/ Them	/Stop no OFF	1.5 Therr	/Stop no OFF	0.6/ Them	Stop no OFF	0.6/ Them	Stop no OFF	2.5/ Them	Stop no OFF	0.6 Therr	/Stop no OFF								
SEL	AIR.	SEL	AIR	SEL	AIR	SEL	AIR	SEL	AIR	SEL	AIR	SEL	AIR	SEL	AIR	SEL	AIR	SEL	AIR
ON I	15	ON	15	ON T	15	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15	ON	15
			1	An example 1	in the second se	Transa and			manage 1				1		10000	1.000	0001000		and the second

"Mode store" & "Mode re-store" can be used to first clicking "Mode store" prior to you making any changes to the operation using Dyna-Doctor. Once you are done simply click "Mode re-store" and the system should revert to the setting before you made any changes.



Navigating Dyna-Doctor Software (cont.)

List Data - System Data (2 views)

View 1 – Outdoor Units

Outdoor data is on the left, Indoor data is in the middle and System data is on the right. Scrolling may be required to see all available information.

DYNA-DOCTOR for VRF



	8 1			► → Time:	: :	8.5 min	Dat	e & Tim	e	6/13/20	22 1	:27:30 PM		
w1 View2														
Outdoor					Indoo	r						System Data		
	Header	Follower1	Follower2	<u>^</u>	Adr	No.	kBtu	Ope.	Cap.	PMV .	-	Line Address	1	1
Jutdoor Unit kBtu	0.0				Cyde	NET		Mode	Req	Open				
itarting Priority	1				1	1	18.0	Cool	100%	358		Refrigerant	R410A	ł
lomp(1) Hz	61.2				2	2	18.0	Cool	100%	150		Capacity Control	100%)
omp(2) Hz	57.6				3	3	7.5	Cool	100%	524		Oil Recovery(Cool)	•	
Outdoor Unit FanMode	37				4	4	7.5	Cool	100%	528		Oil Recovery(Heat)		
way Valve	OFF				5	5	30,0	Cool	60%	328		Cooling Start		
d:High Pressure	349.5				6	6	7.5	Cool	100%	364		Heating Start	•	
s:Low Pressure	93.0													
D 1:Discharge Temp	188.1											Defrost		
D2:Discharge Temp	186.3											Oil Equalizing Control	•	
E:Heat Exchanger emp	101.8											Demand	100%	
E2:Heat Exchanger emp2	84.2											Sound Reduction		
L:Liquid pipe Temp	95.7											Snowfall Fan Control		1
G:High Pressure Temp	105.8			•										
PMV1	620													
MV3	0													
MV4	0													
V11	OFF													
V12	OFF										-			
V14	OFF						-			_		Step Vaca Timer	0	
V15	OFF				kBtu	Iotal	88	3.5 To	tal Ope.		6	Stop Keep Timer	00.45.05	
SV2	OFF				Total C	ap.	86.4	1% To	tal Conne	ct	6	On time From start	00:45:08	1

Navigating Dyna-Doctor Software (cont.)

List Data - System Data (2 views)

View 1 – Check (Error) Code

If Check Code is displayed, click on the code to bring up more detailed information on error.

Check code	Detecting	Operating Element	-		Detailed Information	
E02	Remote contro	Remote controller transmission trouble		Check Code	E03	
E03	Indoor	Indoor-remote controller communication trouble]	Operation	Indoor-remote controller communication trouble	
E04	Indoor	Indoor-outdoor communication circuit trouble		Element		
E06	I/F	Signal lack of indoor unit				_
E07	I/F	Indoor-outdoor communication circuit trouble	1		controller (including wireless) or network	1
E08	Indoor I/F	Duplicated indoor address		Determining	adaptor.	
E09	Remote contro	Duplicated master remote controller		Method		
E10	Indoor	Indoor inter-MCU communication trouble				4
E11	Indoor	Communication trouble between indoor P.C. board and indoor P.C. boa			Check remote controller and network adaptor	1
E12-**	I/F	Automatic address starting trouble	-		wiring.	
E13	DDC(0-10V) in	Indoor (DX) P.C. board - DDC(0-10V) interface P.C. board communicati				
E14	Indoor (DX)	Indoor (DX) P.C. board - DDC(0-10V) interface P.C. board communicati				
E15	I/F	Indoor unit not found during automatic address setting				
E16-**	I/F	Too many indoor units connected				
E17	Indoor	Indoor units(s) -FS unit(s) communication trouble				
E18	Indoor	Trouble in communication between indoor header and follower units				
E19-**	I/F	Trouble in number of outdoor header units				
E20-**	I/F	Connection to other line found during automatic address setting		Check		
E23	I/F	Outdoor-outdoor communication transmission trouble		Contents		
E25	I/F	Duplicated follower outdoor address				
E26	I/F	Signal lack of outdoor unit				
E28	I/F	Outdoor follower unit trouble				
E31-**	I/F	IPDU communication trouble				
E31-80	I/F	Communication trouble between MCU and Sub MCU				
F01	Indoor	Indoor TCJ sensor trouble				
F02	Indoor	Indoor TC2 sensor trouble				
F03	Indoor	Indoor TC1 sensor trouble	1			
F04	I/F	TD1 sensor trouble	-			4

Outdoor		
	Header	Follower
TO:Outdoor Air Temp sub	69.8	
TK1:Oil Temp1	72.6	
TK2:Oil Temp2	72.6	
TK3:Oil Temp3		
TK4:Oil Temp4	71.8	
	71.0	
Check Code	E-03	
OF ECTER CREEK	[englend	
Comp Forced	[0] [0] [-]	



Navigating Dyna-Doctor Software (cont.)

List Data - System Data (2 views)

View 2 – Indoor Units

Detailed operational data can be seen for each indoor unit. Scroll to the right for more.





w1	No . View2		29 4					• →	I Time:	14	.5 min	Date	& Time		6/13/2	2022 1:3	8:28 PM		
Indoo Adr	No.		1		1.01	Ope,	Require	ment	Fan					R	oom temp	p		Indoor unit	
Cyde	NET	Kind		ype	KBTU	Mode	Capac	ity	Mode	PMV	ICI	102		TA	TOA	TSA	IF	error code	50
1	1	Normal	U-Ce	iling	18.0	Cool		100%	High	358	47.3	51.8	37.4	76.1					OFF
2	2	Normal	4-wa	У	18.0	Cool		100%	Med	150	52.7	34.7	32.9	73.4				***	OFF
3	3	Normal	Comp	pact	7.5	Cool		100%	High	524	46.4	42.8	35.6	68.0	****	****	-		OFF
4	4	Normal	S-Du	ct	7.5	Cool		100%	High	528	48.2	55.4	39.2	77.9					OFF
5	5	Normal	H-Du	ct	30.0	Cool		70%	High	338	61.7	38.3	36.5	68.9					OFF
5	6	Normal	F-Ca	binet	7.5	Cool		100%	High	368	47.3	41.9	36.5	81.5		12222			OFF
utdo Outdo Pd:Hig	or h Press	sure	352.3	TG:High Temp	Pressur	e	105.8	TO:Out Temp	door Air		73.0		very(Cool)		0	Stop Ke	ep Tim	er 0	sec
PSILOV	FICSS	are	20.0	TU:Low Temp	Pressure	ŧ	26.6	Defrost			-	On Recon	ie yn iear			On and		dire obroo	

Navigating Dyna-Doctor Software (cont.)

List of Check

Check code

P05-00

P05-**

P07-**

P10

P12 P13

P15-01

P15-02

P17 P18

P19

P20

P22-#0

P22-#1

P22-#3

P22-#4

P22-#C

P22-#D

P22-#E

P26

P29

P31

C05

C06

P30

P30

List Data - System Data (2 views)

View 2 – Check (Error) Code

If Check Code is displayed, click on the code to bring up more detailed information on error.



Operatin retection of open phase/phase se nverter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	Reco View1 Indo Adr Cycle 1 2 3 3	rd No. View2 or No. NET 1 2 3 ment e	Kind Normal Normal	29 Type U-Ceiling 4-way Compact	kBtu 18.0 7.5	Ope. Mode Cool	Requirement Capacity 1009	→I Time: Fan Mode 6 High	PMV	.5 min TC1	Date I	& Time TCJ	Roc	6/13/2 om temp TOA	022 1:38: TSA	28 PM	oor unit or code	1
Operatin etection of open phase/phase se nverter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	View1 Indo Adr Cycle 1 2 3 g Elem quenc (comp	View2	Kind Normal Normal	Type U-Ceiling 4-way Compact	kBtu 18.0 18.0 7.5	Ope. Mode Cool Cool	Requirement Capacity 1009	Fan Mode 6 High	PMV	TC1	TC2	TCJ -	Roc	om temp TOA	TSA	TF Ind	oor unit or code	2
Operatin etection of open phase/phase se overter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	g Elem quence (comp	No. NET	Kind Normal Normal Normal	Type U-Ceiling 4-way Compact	kBtu 18.0 18.0 7.5	Ope. Mode Cool Cool	Requirement Capacity 1009	Fan Mode 6 High	PMV	TC1	TC2	тсл	Roo	om temp TOA	TSA	TF Inc	loor unit or code	
Operatin etection of open phase/phase se overter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	g Elem quenc (comp	e NET	Normal Normal Normal	U-Ceiling 4-way Compact	18.0 18.0 7.5	Cool Cool	Capacity 100%	Mode 6 High	358	477.0			TA	TOA	TSA	en	or code	s
Operatin etection of open phase/phase se nverter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	g Elem quenci (comp	2 1 3 1 hent	Normal Normal Normal	4-way Compact	18.0	Cool	1005	6 Figh			E1 0	37 4	76 4				-	-
Operatin etection of open phase/phase se nverter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	g Elem quenco (comp	a lient	Normal	Compact	7.5	COOI	1009	6 Med	150	52.7	34.7	37.4	73.4			P-10	. 0	OF
Operatin etection of open phase/phase se nverter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	g Elem quenc (comp	ient	A factor al	C Dust		Cool	1009	6 High	524	46.4	42.8	35.6	68.0				0	OF
Operatin etection of open phase/phase se overter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	g Elem quenc (comp	ient e				Carl	1000	LE-L	600	40.0	FF 4	20.0	77.0		F		C	OFF
Operatin etection of open phase/phase se nverter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	g Elem quenc (comp	ent e									F	0		x			0	DFF
etection of open phase/phase se nverter DC voltage (Vdc) trouble leat sink overheating trouble ndoor overflow trouble (Safety co	quenc (comp	e						Deta	iled Inf	ormati	on						0	DFF
nverter DC voltage (Vdc) trouble leat sink overheating trouble indoor overflow trouble (Safety co	(comp	7 .				Chr	eck Code	P10										
leat sink overheating trouble ndoor overflow trouble (Safety co	Heat sink overheating trouble							Indoor over	flow tro	ouble (S	Safety	contact	t)*				-	•
ndoor overflow trouble (Safety co						E	lement			1.			2					
	ntact)	*				-		Flood and the							top Kee	p Timer	Oser	ec
ndoor fan motor trouble								Float switch	circuit	is open	-circuit	ed or			in time f	From start	00:56:08	8
Outdoor liquid backflow detection trouble							termining	disconnecte	d at co	nnecto	r.							
Gas leak detection (TS1 condition)						N	rethod	(Outside tro	uble in	put ten	minal sig	gnal wa	as input	1				
as leak detection (TD condition)					10 (CN34).)	Sec.						-			_			
Discharge temperature TD2 trouble Discharge temperature TD3 trouble 4-way valve reversing trouble								Check float	switch	connec	tor.							
								Check oper	ation of	drain	oump.			1000				
								Check drain Check drain	pump o	arcuit.	ina.							
ctivation of high-pressure protect	ion							Check for t	ouble in	n indoo	P.C. b	oard.						
outdoor fan IPDU trouble								(Check outs	ide dev	ice tro	uble.)*		14					
outdoor fan IPDU trouble								(Check con	nector ([US] 8 [N34]*	r [Co] a	re dos	ed.)-					
outdoor fan IPDU trouble								(Check for trouble in indoor P.C. board.)*										
outdoor fan IPDU trouble								* :For DX COIL unit.										
outdoor fan IPDU trouble																		
outdoor fan IPDU trouble						3	Check											
outdoor fan IPDU trouble						C	ontents											
GBT/IPM shortcircuit protection tr	ouble																	
ompressor position detection circu	uit trou	ble																
ther indoor trouble (group follow	er unit	troubl	e)															
CC-LINK central control device tra	nsmiss	ion tro	uble			1												
CC-LINK central control device red	ception	troub	le															
atch alarm for general-purpose de	vice c	ontrol in	nterface		_													
uplicated central control address																		
roup control follower unit trouble																		
alsisisisisisisisisisisisisisisisisisisi	charge temperature TD2 trouble charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble tivation of high-pressure protect tdoor fan IPDU trouble tdoor fan IPDU trouble 3T/IPM shortcircuit protection tr mpressor position detection circu her indoor trouble (group follow C-LINK central control device tra C-LINK central control device re- tch alarm for general-purpose de plicated central control address oup control follower unit trouble	charge temperature TD2 trouble charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble tivation of high-pressure protection tdoor fan IPDU trouble tdoor fan IPDU trouble 3T/IPM shortcircuit protection trouble mpressor position detection circuit trou her indoor trouble (group follower unit C-LINK central control device transmiss C-LINK central control device reception tch alarm for general-purpose device co plicated central control address oup control follower unit trouble	charge temperature TD2 trouble charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble tivation of high-pressure protection tdoor fan IPDU trouble tdoor fan IPDU trouble 3T/IPM shortcircuit protection trouble mpressor position detection circuit trouble her indoor trouble (group follower unit troubl C-LINK central control device reception troub tch alarm for general-purpose device control is plicated central control address oup control follower unit trouble	charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble tivation of high-pressure protection tdoor fan IPDU trouble tdoor fan IPDU trouble trouble trouble (group follower unit trouble) C-LINK central control device reception trouble tch alarm for general-purpose device control interface plicated central control address oup control follower unit trouble	charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble tivation of high-pressure protection tdoor fan IPDU trouble tdoor fan IPDU trouble C-LINK central control device transmission trouble C-LINK central control device reception trouble tch alarm for general-purpose device control interface plicated central control address oup control follower unit trouble	charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble tivation of high-pressure protection tdoor fan IPDU trouble tdoor fan IPDU trouble to fan IPDU trouble tch alarm for general-purpose device control interface plicated central control address oup control follower unit trouble	charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble tivation of high-pressure protection tdoor fan IPDU trouble tdoor fan IPDU trouble to fan IPDU trouble to fan IPDU trouble tch alarm for general-purpose device control interface plicated central control address oup control follower unit trouble	charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble tivation of high-pressure protection tdoor fan IPDU trouble tdoor fan IPDU trouble Check Contents ST/IPM shortcircuit protection trouble mpressor position detection circuit trouble) CC-LINK central control device transmission trouble tch alarm for general-purpose device control interface plicated central control address oup control follower unit trouble	charge temperature TD2 trouble Check float charge temperature TD3 trouble Check drain vay valve reversing trouble Check drain tivation of high-pressure protection Check drain tivation of high-pressure protection Check drain tdoor fan IPDU trouble Check for tr tdoor fan IPDU trouble Contents 3T/IPM shortcircuit protection trouble Contents Pir/IPM shortcircuit protection circuit trouble) Check control follower unit trouble) C-LINK central control device reception trouble Check control follower unit trouble tch alarm for general-purpose device control interface plicated central control address oup control follower unit trouble Control follower unit trouble	charge temperature TD2 trouble Check float switch. charge temperature TD3 trouble Check float switch. vay valve reversing trouble Check float switch. tivation of high-pressure protection Check drain pump of Check for trouble in (Check controlie in (Check conscion of Check for trouble in (Check conscion of Check drain pump of Check for trouble in (Check conscion of Check for trouble in the indoor fan IPDU trouble tdoor fan IPDU trouble Check Contents 3T/IPM shortcircuit protection trouble Check in trouble *:For DX COIL unit cLINK central control device reception trouble Check in trouble Keek in the information of the informatin trouble Keek information of the infore	charae temperature TD2 trouble Check float switch connect charae temperature TD3 trouble Check float switch connect vay valve reversing trouble Check drain pump circuit. vay valve reversing trouble Check drain pump circuit. tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor tdoor fan IPDU trouble Check for trouble in indoor mpressor position detection circuit trouble Contents CLINK central control device transmission trouble Check Control fo	sheak detection (TD condition) charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble tivation of high-pressure protection tivation of high-pressure protection tidoor fan IPDU trouble tidoor fan IPDU trouble Check contextor (X34)* (Check for trouble in indoor P.C. I (Check for trouble in indoor P.C. I (Check for trouble in indoor P.C. I (Check contextor CM34)* (Check for trouble in indoor P.C. I (Check contextor CM34)* (Check for trouble in indoor P.C. I * :For DX COIL unit. Check Contents	Sheak detection (TD conductor) charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble vay valve reversing trouble tivation of high-pressure protection tdoor fan IPDU trouble Check for trouble in indoor P.C. board. (Check for troub	sheak detection (TD contained) charge temperature TD2 trouble charge temperature TD3 trouble vay valve reversing trouble vay valve reversing trouble tivation of high-pressure protection tdoor fan IPDU trouble T/IPM shortcircuit protection trouble check for trouble in indoor P.C. board. <	A lead detection (10 Containon) Charge temperature TD2 trouble charge temperature TD3 trouble charge temperature to trouble charge temp	Sheak detection (TD Condition) Charge temperature TD2 trouble Charge temperature TD3 trouble Check float switch connector. Check drain pump. Check for trouble in indoor P.C. board. (Check to terminal [C5] & [C6] are dosed.)* (Check to trouble.)* (Check for trouble in indoor P.C. board.)* *:For DX COIL unit. Contents Check Contents Contents Contents CLINK central control device transmission trouble CLINK central control device reception trouble CLINK central control device reception trouble CLINK central control device reception trouble Check central control device reception trouble CLINK central control device reception trouble plcated central control interface plcated central control interface plcated central control interface plcated central control interface	Sheak detection (To Conductor) Charge temperature TD2 trouble charge temperature TD3 trouble way valve reversing trouble tivation of high-pressure protection tivation of high-pressure protection tidoor fan IPDU trouble tidoor f	charge temperature TD2 trouble charge temperature TD2 trouble charge temperature TD3 troubl

Navigating Dyna-Doctor Software (cont.)

List Data - System Data (2 views)

View 2 – Flow Selector Box Values

If Heat Recovery system, operational data can be seen for the Flow Selector Units.

Scroll window to the right for this information.

				e l	11				1 -				- E						
ecord	INO.		29	•	1			1-21] Time	e: 1	.4.5 min	Date &	Time	6/1	3/2022 1	:38:28 F	PM		
	liam?																		
ew1	VIEW2																		
Indoo	r																		
Adr	TC2	TCI	Ro	oom tem	p	TE	Indoor unit	SVD	SVS	SVDD	22/22	W Pump	Heater	Value	Comp	pd	De	TD	
Cyde	102	103	TA	TOA	TSA		error code	340	3+3	3400	3433	w_rump	ricater	Valve	Comp	Fu	ra	10	
1	51.8	37.4	76.1					OFF	ON	OFF	ON								
2	34.7	32.9	73.4					OFF	ON	OFF	ON								
3	42.8	35.6	68.0					OFF	ON	OFF	ON								
4	55.4	39.2	77.9					OFF	ON	OFF	ON								
5	38.3	36.5	68.9					OFF	ON	OFF	ON								
6	41.9	36.5	81.5					OFF	ON	OFF	ON								
																		1.	
•									_										1
Outdo	or																		
Pd:Hig	h Pressu	re	352.3	TG:H	igh Press	ure	105.9	TO:Outo	loor Air		72.0	Oil Recovery	(Cool)		0 Stop	Keep Ti	mer	0sec	T
Psilow	Pressur	-	93.0	Temp)		105.8	Temp			75.0	Oil Recovery	(Heat)		0 00.1	ime Fron	n start	00:56:08	
13.201	TICSSO	-		TU:L	ow Press	ure	26.6	Defrost			•	OINCEDVE	YU ICULY		U UIII	and i ron	ir otor t		



Navigating Dyna-Doctor Software (cont.)

List Data - System Data (2 views)

View 2 - Flow Selector Box Values

Record	INo.		29	•]			• →	Time	8: 1	.4.5 min	Date &	Time	6/1	3/2022 1	:38:28	PM	
ew1 \ Indoor	View2																	
Adr	TCO	TCI	Ro	oom tem	p	TE	Indoor unit	SVD	CUC	CUDD	EVEC	W. Dump	Hantar	Value	Comp	D.d	De	TD
Cyde	102	ics	TA	TOA	TSA	IF.	error code	500	542	5000	2422	w_Pump	neater	vaive	Comp	PO	PS	10
1	51.8	37.4	76.1					OFF	ON	OFF	ON							
2	34.7	32.9	73.4					OFF	ON	OFF	ON							
3	42.8	35.6	68.0					OFF	ON	OFF	ON							
4	55.4	39.2	77.9					OFF	ON	OFF	ON				****			
5	38.3	36.5	68.9					OFF	ON	OFF	ON							
	41.0	36 E	91 5		10000	1.000	0.00	OFF	ON	OFF	ON	100	10000					

Use the diagram and table from the Factory Service Manual to help trace ands understand refrigerant flow.



Functional par	ts name	Function outline						
Solenoid valve	SVD	(Discharge gas block valve) 1) High-pressure gas circuit at heating operation						
	SVS	(Suction gas block valve) 1) Low-pressure gas circuit at cooling operation						
	SVDD	(Pressure valve)1) To increase pressure when No. of indoor heating units are increased						
	SVSS	(Regulator valve)1) To recover refrigerant in the stopped cooling thermostat-OFF indoor unit2) To decrease pressure when No. of indoor heating units are decreased						
Pulse motor valve	PMV	1) Controls flow volume of the double-pipes bypass circuit						
Temp. sensor	TCS	 (Only Multi port FS unit) 1) Detects refrigerant temp. at outlet of the double-pipes bypass circuit to check an abnormality of PMV 						

Dyna-Doctor does not show these two values

Multi port FS unit

Navigating Dyna-Doctor Software (cont.)

Graphing Data

Using a graph to see the data trends can be very useful to spot irregularities in the equipment operation.

 Select "Graph" then "Outdoor Unit – System data"



DYI	A-DOCTOR f	for VRF	Graph Me	eou Unit	Window A	tion Help									_	o x
Tue.	System Conf	figuration Di		r Unit - Syster	n Data							1	_ 0			
[5	ystem Configur	ration Diagran	Indoor	Unit	mgarauomoiag	ram (Refrigeration	on Cyde) Refri	igeration Cycle D	iagram (System	Data)						
[
	Starting p	riority 🕨	Header													23
	Outdoor t	ype 🕨	6.0 E06	-											Test operation	
	Comp cor	ndigion N	Comp1 Com	p2										Net	No. 10 Net	
	1 от	SHIBA	Indoor unit	Conn	ect 6 0	oling Ope	Heating One	0 F#	an Ope	Line ad	dress 1			AIR	SEL AIR	
	Center	Control	T indeer unit			oung ope. 1 o	including ope			Line du				TEST		
		_	1 U-Ceiling	2 4-way	3 Compact	4 S-Duct	5 H-Duct	6 F-Cabinet	7	8	9	10		9 Net	No. 20 Net	
	P	•	1.5 Cool ON	1.5 Cool ON	0.6 Cool ON	0.6 Cool ON	2.5 Cool ON	0.6 Thermo OFF					10			
			1	1	1		1							AIR	SEL AIR	
													20	TEST	OFF TEST	
			ſ	<u> </u>		1					<u> </u>	[]		9 Net	No. 30 Net	
													30			
														AIR	SEL AIR	
													40	15 TEST	OFF TEST	
				1										9 Net	No. 40 Net	
														AIR	SEL AIR	
Ŀ					UPE T TEST T	09-1 051	1 000 1 105			151 1 04	1 1151 1 09	F I JEST I	000-1-1051-1		OFF TEST	

Saving: Suspended by an error

Navigating Dyna-Doctor Software (cont.)

Graphing Data

 Now select the data points you wish to see. Data points can be selected for each outdoor unit in the system up to a four module system.



	📆 Ou	tdoor System data graph	: item sele	ction				- 0 ×			
Starting priority	Ched	Header unit	Check	Follower 1 unit	Check	Follower 2 unit	Check	Follower 3 unit			Test operation
Outdoor type	9	Comp Hz		Comp Hz	Г	Comp Hz	Г	Comp Hz			
Comp condigior	4	Pressure sensor		Pressure sensor		Pressure sensor		Pressure sensor			Net No. 10 Net
-	5	TE1/TE2/TL/TO sensor		TE1/TE2/TL/TO sensor	L'	TE1/TE2/TL/TO sensor	E	TE1/TE2/TL/TO sensor			
	5	Ts sensor	Г	Ts sensor	Г	Ts sensor	Г	Ts sensor			AIR SEL AIR
TOSHIB	-	PMV1/2 open ratio	Г	PMV1/2 open ratio		PMV 1/2 open ratio	Г	PMV1/2 open ratio			15 ON 15
Center Contro		PMV4 open ratio	Г	PMV4 open ratio	Г	PMV4 open ratio	Г	PMV4 open ratio	1 120		TEST OFF TEST
		4W-Valve/SV2/SV5/SV6	E	4W-Valve/SV2/SV5/SV6		4W-Valve/SV2/SV5/SV6	E	4W-Valve/SV2/SV5/SV6	10	-	9 Net No. 20 Net
1	-	TK1,2,3,4,5 Outdoor Ean mode		TK1,Z,3,4,5 Outdoor Eso mode		TK1,2,3,4,5 Outdoor Eao mode		TK1,2,3,4,5 Outdoor Ean mode		10	
	F	Indoor signal	1	Cotooor Partitione	- F	Cottoor Parmode		Colocor Parmode	-		
										10550	
										20	1 15 01 15 1
										30	3 Nec 1 No. 30 Nec 1
											AIR SEL AIR
										40	15 ON 15
			- 0.0		2			K Cancel			TEST OFF TEST
	Select	max 6 items.					¥	Zaurei		1	9 Net No. 40 Net

Saving: Suspended by an error

Navigating Dyna-Doctor Software (cont.)

Graphing Data

- When viewing a system live, the data points update based on what you selected.
- When viewing a recording of a system, data only updates when manually scrolling through data sets.





Navigating Dyna-Doctor Software (cont.)

Graphing Data

The same can be done for the Indoor Units.

 Select "Graph" then "Indoor Unit"





Navigating Dyna-Doctor Software (cont.)

Graphing Data

- Now select the Indoor Unit and the data points you wish to see.
- Not all Graph Contents can be seen at one time.
- Cycle Data and Control Data can be selected.



Check No Indoor HP Type	Check Graph Contents	geration Cycle Diagram (System Data)		
□ 2 1.5 Normal □ 3 0.6 Normal □ 4 0.6 Normal □ 5 2.5 Normal □ 6 0.6 Normal	 (1) PMV Opening (2) TA / TF / TC1 / TC2 / TCJ Temperature (3) Outdoor unit pressure saturation temperature Control Data (1) Capacity Requirement (2) Operation Mode (3) Indexe Can 			Test operation Net No. 10 Net
Select All Reset All	□ Indoor Comparison Data (1) <pmv opening,="" status=""> □ Indoor Comparison Data (2) <suction ability="" relative="" temperature,=""> </suction></pmv>	O Fan Ope. O Line address 1 6 7 8 9 10 F-Cabinet 0.6 1 1 0.6 Thermo OFF 1 1	10	15 OK 15 TEST CFF TEST 9 Net No. 20 Net AIR SEL AIR 15 ON 15 TEST OFF TEST 9 Net No. 30 Net
			40	AIR SEL AIR 15 ON 15 TEST CFF TEST No. 40 Net
				AIR SEL AIR

Navigating Dyna-Doctor Software (cont.)

Indoor Unit - Cycle Data and Control Data



Navigating Dyna-Doctor Software (cont.)

Indoor Unit Comparison Data 1

PMV Opening Status

 If you want to compare two or more Indoor Unit's PMVs, select the ones you want to compare and then select "Indoor Comparison Data 1".

Navigating Dyna-Doctor Software (cont.)

Indoor Unit Comparison Data 1

PMV Opening Status

Navigating Dyna-Doctor Software (cont.)

Indoor Unit Comparison Data 2 Suction Temp, Relative Ability

• If you want to compare two or more Indoor Unit's Suction Temp, Relative Ability (capacity), select the ones you want to compare and then select "Indoor Comparison Data 2".

Navigating Dyna-Doctor Software (cont.)

Indoor Unit Comparison Data 2

Suction Temp, Relative Ability

Toshiba Carrier MCY/MMY VRF Dyna-Doctor Diagnostic Software & Communication Adapter

Important items to remember about Dyna-Doctor

- Dyna-Doctor will not diagnose the system for you. The Technician needs to review the data and make determinations based on findings.
- Dyna-Doctor is best used in conjunction with the Factory Service Manual for the Outdoor Unit.
- You can only connect to one VRF system at a time.
- Operation Modes can be changed, set point cannot.
- Some windows and the values shown take longer to update then others, be patient.
- The more you use Dyna-Doctor the better you will be at seeing irregularities in the operational data.

This guide was made by Carrier Northeast Technical Services Department.

Information within is subject to change

