CableJoG256

Contents

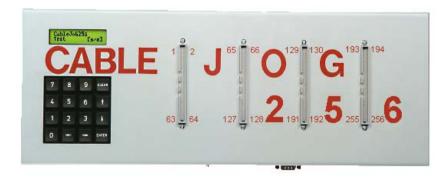
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INTRODUCTION

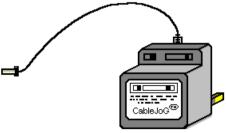
CableJoG256 takes the concept of truly portable intelligent ribbon cable & cable harness testing a step further by increasing the number of test points and incorporating a PC/Printer link. CableJoG will identify any pattern of connections between any of the 256 connector points. The display will identify each connection made in terms of the connectors true pin number. These connections can then be stored and retrieved at a later time. Using connectors crimped onto ribbon cable, CableJoG is both robust in use and simple to repair when worn out .

CableJoG256:



CABLEJOG PSU:

If the PSU supplied is of the switchable voltage and polarity type then please make sure the polarity switch is set to + and the voltage switch is set to 12V.



Manufacturers Name:	CableJoG Ltd.
Address:	18 Browmere Drive, Croft,
	WARRINGTON. WA3 7HT.

се

Declare that;

Product: CableJoG Model: JoG256

conforms to the following Product Specification:

EN55022 (1995) Class B / CISPR 22 (1993) - Conducted & Radiated Emissions IEC 1000-4-2 (1995) / EN61000-4-2 (1995) - ESD 4kV CD, 8kV AD IEC 801-3 (1984) / EN55024-3 (1992) - Radiated Immunity, 3V/m IEC 1000-4-4 (1995) / EN61000-4-4 (1995) - Fast Transient, 1kV Power Lines

Supplementary Information:

Radiated immunity test carried out on 3m ribbon all wires connected to CableJoG, long unterminated wires may cause random 'OPEN' failure in LOOP test modes.

The products herewith comply with the requirements of the EMC Directive 89/336/EC.

Dated: 1 August 2000

Eddie Zych Director.

APPENDIX - F

Fundamentals

FUNDAMENTALS

Connecting to C.C.P.

CableJoG's RS232 communication port has been designed as a DTE (Data Terminal Equipment) and so a 'one to one' cable is all that is required to Connect CableJoG128 to a PC Serial Communications Port.

A suitable cable :

CableJoC	<u>3128</u>	PC Comms Port
9 way 'd'	type female	9 way 'd' type female
Pin	Signal	Pin
2	RXD	2
3	TXD	3
5	GND	5
7	RTS	7
8	CTS	8

Connecting to a Serial Printer.

CableJoG's RS232 communication port has been designed as a DTE (Data Terminal Equipment) and so a 'cross over' cable is required to Connect CableJoG128 to a Serial Printer Port.

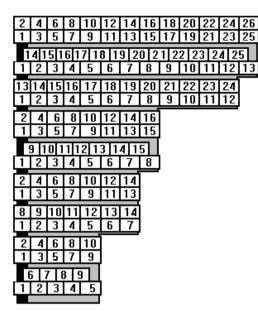
A suita	ble cable :	
<u>CableJo</u>	<u>G128</u>	Serial Printer Port
9 way 'd	' type female	25 way 'd' type male
Pin	Signal	Pin
2	RXD	3
3	TXD	2
5	GND	7
7	RTS	20
8	CTS	6

Cable testing, whether using LEARN or TEST, start with a signal being set on pin1 of the connectors. The signal is then checked for on all the other 255 pins. If a connection is found the pin number is converted into a connector label and then stored in compare memory. The signal is then moved onto pin2 and again all the other (254) pins are checked for a connection. The process is repeated until pin256 is reached.

1∎ □2 □ □	1□ ■ 2 □ □	1□ □ 2 ■ □	193 🗆 🗆 194 💷 🗆
	00 630064	00 630064	255 🗆 🗖 256
000 004	000 004	000 004	200 🖬 🖬 200

FUNDAMENTALS

Using the ribbon or IDC versions of the popular multipin connectors it is very easy to assemble a customised test box enabling a great variety of cables/harnesses to be tested. The pin numbering varies between these connector types and normally a 'look up' chart would have to be used to identify a real connection. The figure below shows some of the possibilities:-



26 way idc 25 way 'd' type 24 way Centronics 16 way idc 15 way 'd' type 14 way idc 14 way Centronics 10 way idc 9 way 'd' type

All of these connectors and more are supported by CableJoG so once the connector type has been selected the number displayed will be the actual pin number on the connector. To be of any use CableJoG has to have the relevant connections in its compare memory.

The connections can be entered into the compare memory four different ways. Firstly using EDIT the details can be entered, via the keyboard, off a wire list or circuit diagram. Secondly, using a known actual cable you can LEARN the details. Thirdly if the details have been previously stored they can be retrieved by using RECALL and finally if you have the CableJoG Command Program the connections can be transferred from a database of cables held on the PC.

AP	PENDIX - E
ERROR MESSAGES	
Pin number not recognised.	CableJoG256 Sorry Wrong No
Pin label conversion error.	LEARN Err OutOf ran9e <u>∉</u>
Only 512 pairs of connections allowed.	LEARN Err TooMany Con <u>s</u>
Trying to run TEST with having anything in compare memory to test against.	CableJoG256 No Cable in MEM <u>⊀</u>
Results in BATCH mode and this location used as a buffer.	STORE BUFFER IN USE
In EDIT 'from' address has to be less than 'to' address.	EDIT Connections Err From addr>T <u>o</u>
In EDIT 'from' and 'to' have to be different.	EDIT Connections Err From = To
In EDIT connection buffer full.	EDIT Connections Err Buffer Full
There are only 256 test pins.	LEARN Err From > 256

APPENDIX - D

ONCE

CableJoG256 1.3 CableJoG Serial Number 00601234 Operator: J Brown Date 10/04/03 Time 11:36:30 Cable 23 TEST CABLE PASSED 00000001 11:38:22 10/04/03 Cable 23 TEST CABLE PASSED 00000002 11:38:24 10/04/03 Cable 23 TEST CABLE PASSED 00000003 11:38:26 10/04/03 Cable 23 TEST CABLE PASSED 00000004 11:38:28 10/04/03 Cable 23 TEST CABLE PASSED 00000005 11:38:29 10/04/03

CONTIN.

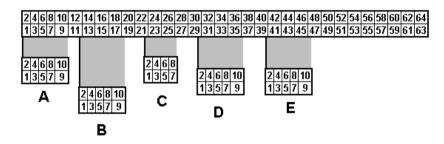
CableJoG256 1.3
CableJoG Serial Number 00001234
Operator: J Brown
Date 10/04/03
Time 11:36:30
Cable 23 TEST CABLE
PASSED 00000001 11:38:22 10/04/03
PASSED 00000002 11:38:24 10/04/03
PASSED 00000003 11:38:26 10/04/03
PASSED 00000004 11:38:28 10/04/03
PASSED 00000005 11:38:29 10/04/03

FUNDAMENTALS

Once the compare memory has the details it can use them to test an unknown cable through the TEST menu option. Testing can be configured to either a one pass/fail test, or to carry on testing if the cable passes, but to stop once a fail has been detected enabling the cable to be shaken to possibly identify intermittent connections. Or in continuous testing where the test is run continuously regardless of the presence, or not, of the cable. This enables 'hands free' use of CableJoG.

Multiple plugs or 'looms' can be easily set up on CableJoG, below is an example of a test assembly to test 5 small plugs. The plug identities A to E are allocated when the cable is learnt, but can be changed to whatever is required later using the Edit menu.

The purpose of selecting five connectors and inputting the start positions of each of them enables CableJoG to use 'real' pin identification when displaying a short, open or crossed connection.



Again the example above would produce a table of Pin Address and Plug Label as follows:-

| Address : Label |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| 001 = A01 | 011 = B01 | 021 = C01 | 031 = D03 | 041 = E03 |
| 002 = A02 | 012 = B02 | 022 = C02 | 032 = D04 | 042 = E04 |
| 003 = A03 | 013 = B03 | 023 = C03 | 033 = D05 | 043 = E05 |
| 004 = A04 | 014 = B04 | 024 = C04 | 034 = D06 | 044 = E06 |
| 005 = A05 | 015 = B05 | 025 = C05 | 035 = D07 | 045 = E07 |
| 006 = A06 | 016 = B06 | 026 = C06 | 036 = D08 | 046 = E08 |
| 007 = A07 | 017 = B07 | 027 = C07 | 037 = D09 | 047 = E09 |
| 008 = A08 | 018 = B08 | 028 = C08 | 038 = D10 | 048 = E10 |
| 009 = A09 | 019 = B09 | 029 = D01 | 039 = E01 | |
| 010 = A10 | 020 = B10 | 030 = D02 | 040 = E02 | |

GETTING STARTED

Unpack the CableJoG unit and its power supply. If you have a switchable unit please make sure the polarity switch on the power supply is set to + and the voltage switch is set to 12V.

On switching the CableJoG unit ON, the display will show the current software version,

followed by the prompt:-

	_
CableJoG256	
Time 11:05:00	÷

Date 01/01/05 4

CableJoG256

CableJoG256

Version 1.6

The current date and time will be displayed. Press Enter to move from date to time and then onto the Main Menu:

You can use either of the t keys to move through the menu options, or press

the number that corresponds with the menu option you require. On first switch ON the menu prompts will follow a Learn, Store and Test sequence.

CableJoG256	
Menu LEARN	1

Should you see:-

CableJoG256 Next= 00601000 <u>4</u>

then refer to Appendix A on replacing the memory battery backup unit and reprogramming CableJoG.

Or should the following appear after the Time display:-

CableJoG256	
Operator No:	

then the operator private identity number (pin) has been set, if you have a valid number you can enter it now, otherwise contact your supervisor. If the number was correctly entered your name will be displayed briefly before moving onto the main menu's:-

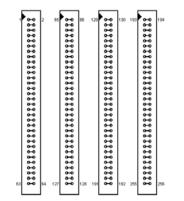
CableJoG	256
Sorry Wr	ong No

Should a wrong pin number be entered the display will show:-

Press ENTER to try again.

No:	Description:
	TO 00

13 JOG256 test A



SELF TEST CABLES

APPENDIX - B

Getting started

GETTING STARTED

Should the display show:-

CableJo0	6256	
Waiting	for	CTS_

then the printer has been selected, but is not ready. Either sort out the problem with the Printer or press CLEAR on the keyboard. The display will show:-

CableJoG256
AbortComms [9/ <u>n</u>]

Press ENTER to stop CableJoG trying to connect.

If one or more of the menus do not appear it may be that someone has set the password option on it/them you will need to know the password to gain access. If you have just received CableJoG from sales or repair then please contact CableJoG for further instructions.

The CLEAR key will always take you back to the main menu.

64way IDC 60way IDC 50way IDC 40way IDC 34way IDC 30way IDC 26way IDC 20way IDC 16way IDC 14way IDC 10way IDC 37way 'd' type 25way 'd' type 15way 'd' type 9way 'd' type 50way Centronics 36way Centronics 24way Centronics 14way Centronics

CONNECTOR TYPES

68way SCSI 80way SCSI

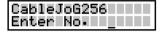
1 way

Menu LEARN

APPENDIX - A

This menu deals with the process of determining the connections. If the display shows:-

Enter the four digit password, if the password is incorrect then you will be taken back to the main menu. If the password is correct or has not been set then the display changes to:-





EARN

If you see this display and you don't want to proceed then use the key to move the cursor under the <u>**n**</u> character and then press ENTER this will return you to the main menu.

Press ENTER to continue, the display will show:-

If there are diodes in the cable then press to

move the cursorunder the $\underline{\mathbf{Y}}$ then press ENTER, otherwise just press ENTER. With or without diodes the display shows:-

LEODU
ILEHKN
C-1 C-ac- Forzal
ISel. Conns.[y/n]

Any DIODES [y/n]

As described in earlier chapters CableJoG works on a three character label for each pin, if you don't want to use this system then use the (\mathbf{D}, \mathbf{k}) key to move the cursor under the \mathbf{n} character and then press ENTER. Each pin label will now be its actual number. The cable is then learnt.

Otherwise, the next step is to choose the type of connectors used, press ENTER again, the display will show the first connector type:-



Press ENTER or this is not the correct

connector type, otherwise press \Box to move the cursor under $\underline{\mathbf{Y}}$ then press ENTER to accept that connector. The connector types currently supported can be seen in Appendix B.

Once one of the options has been accepted you have to choose the connectors position within the four 64 way IDC connectors. The connector pin addresses are numbered on the front of the unit. The display will show:-

I FORM		
Pin 1	addr	001

The display is prompting the user to input the location of pin 1 of the connector just selected. The three digit number shown is the first available location, should another location be required use to the keys to change the address to any within the 256 pins. There are two batteries in the CableJoG unit.

1. PP3 type rechargeable NiCD or NiMH type. This battery is used during normal operation of the unit. Should this need replacing, only replace with a rechargeable type as detailed earlier. **DO NOT USE** a standard 'dry' or 'alkaline' type as damage to the unit will result.

Battery Replacement

2. CMOS memory and clock battery. This can be one of three types:a) Lithium CR2430 horizontal PCB mount cell.

b) Two 'AA' type alkaline cell wired in series and protected in a sleeve.

c) Lithium CR AA PCB mount cell.

Should this need replacing you will need to use a soldering iron to remove the old battery and insert the new. **DO NOT USE** a rechargeable battery in this case.

To change the battery the plastic box needs to be 'split' open without damaging its construction. The preferred method is:-

a) Stand the box upright on the side opposite the ON/OFF switch.

- b) Press hard in the middle of the box, on the switch half. The two halves should start to separate.
- c) Whilst still pressing in the middle, unhook one end of separating halves, this should stay open.
- d) Whilst still pressing in the middle, unhook the other end. The two halves are now partly open.
- e) Turn the box over and repeat the process, but care must be taken NOT to press down on the ON/OFF switch.

If the battery hasn't actually died then it can be replaced without loss of data. This is simply achieved by having the unit powered and switch ON during the battery change over.

To re-assemble the box, align the two halves and press gently until the halves click into place.

If in doubt contact CableJoG.

SPECIAL USES / SINGLE ENDED TESTS

Using a shorting plug it is possible to test cables where access to both ends simultaneously is not possible. There are three basic types of shorting plug each has its place in the cable testers tool kit.

11111111111111

DIODE SHORTING PLUG

Using a diode to connect a pair of wires has the advantage that a short between the pair of wires will be detected and also is the wires are crossed. The cable details need only to be stored once. To enable CableJoG to recognise that a diode test is to be carried out the cable needs to be 'marked' such by including a % character in the cables title when being stored.



If the connections are known, but a diode plug is not available then a specific wired plug will identify correct connections along the cable. Two test will need to be carried out. One with the shorting

plug on and one with the shorting plug off. Unfortunately to test for crossed wires a further specific wired plug will be needed with a different wiring pattern to the first and three test to fully check the cable out. This sort of plug can be made on site requiring only a plug, wire and a soldering iron. When learning the various patterns the character **%** MUST NOT BE USED as it will probably overflow the compare memory.

SHORTING PLUG

This is the most universal shorting plug and no prior knowledge of the connections to be tested is needed. However, don't exceed the cable connection buffer limit of 512 pairs of connections. This gives a maximum number of wires as 7.

A FEW FURTHER POINTS:-

a. Unless using the diode specific plug, check each end for shorts within that end by Learning/Testing that end without the shorting plug on at the far end.

b. don't forget that the loop configuration is still valid, therefore the cable can still be checked for intermittent faults.

c. Again unless using the diode specific plug, Learn the two ends with and with out shorting plugs on a known good cable, this will make testing much easier as the r e -sults are slightly confusing because all the permutation of connections will be displayed.



Press ENTER when finished. Once the first connector has

Once the first connector has been chosen and successfully placed the display will show:-



LEARN

B: 64w IDC [9/n]

Menu LEARN

Press ENTER to add another connector. The connector identifier has now changed to B: and should the cable only have one connector then use the

 \square key to select $\underline{\mathbf{Y}}$ and press ENTER to finish.

Otherwise press ENTER and the display will return to the connector selection menu, or

using the twey and pressing ENTER to accept the second connector. The display changes to the Pin 1 address selection:-

LEARN		
Pin 1	addr	06 <u>5</u>

This time the first available location is 065. As two

64 way connectors were chosen in this example Menu Learn moves onto the next stage, should smaller connectors had been chosen the the display will go back to the No More [y/n] option and the connector identifier will increase to C: and so on until either, the No More option is accepted, or the connectors chosen have filled the available 256 addresses.

If the entries were valid then the display shows:-

LEARN Cable ready[y∕n]

Make sure the cable is now connected into CableJoG, then press ENTER. CableJoG will now scan all 256 pins.

A typical connection would be :-

LEARN From A01 To B01

You will need to press ENTER to confirm each connection, this gives you a chance to check this against a wiring list or to start a wiring list if one doesn't exist. Once all the connections have been displayed and confirmed CableJoG goes back to the Main Menu from which you can select any of the options, but the most useful is Store so that the details just entered can be filed in battery backed memory. See the Menu STORE chapter for details.

Menu LEARN

Possible PROBLEMS:-

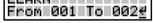
This is caused by a connection being detected on a pin address which has no corresponding connector assigned to it press ENTER and the pin address the beshown. Press CLEAR to abort the Learn, check From 001 To 002∉ assigned to it press ENTER and the pin address will

Also:-

Caused by more than 512 pairs of connections, this is a system limitation contact CableJoG if you need more connections.

Err	OutOf	ran9e <u>∉</u>
-		
	PN .	

LEARN



LEAR	8N	
Err	TooMany	Cons

Menu PROBE 0

The display is prompting the user to input the location of pin 1 of the connector just selected. The three digit number shown is the first

available location, should another location be required

PROBE	pin256
Pin 1	pin256 addr 00 <u>1</u>

use \downarrow \uparrow \downarrow \downarrow \downarrow \downarrow keys to change the address to

any within the 256 pins.

Press ENTER when finished.

Once the first connector has been chosen and successfully placed the display will show:pin256

The connector identifier has now changed to B: and **PROBE** should the cable only have one connector then use B: No More [9/n]

0	
DECE:	1-050
PRUBE	pin256
B: 64w	IDC [97n]

the key to select **Y** and press ENTER to finish.

Otherwise press ENTER and the display will return

to the connector selection menu, or using the key and pressing ENTER to accept the second

connector. The display changes to the Pin 1 address

This time the first available location is 065. As two 64 way connectors were chosen in this example Menu Learn moves onto the next stage, should smaller connectors had been chosen the the display will go back to the No More [y/n] option and the connector identifier will increase to C: and so on until either, the No More option is accepted, or the connectors chosen have filled the available 256 addresses.

The display changes to show that 'probing' is now

In this example a connection has been found to

on:-

connector A pin 31.

selection:-

PROBE	Pin256
Ready	

BBBBB	
IPROBE	P1n256
Connected	
leounecced	HOI

And in this example two pins in connector A are connected together, the display will rotate the pins every second to indicate the connection

is still valid and should there be more than two connections it will show two at a time again rotating through all the connections found.

<i>'</i>		
c-	PROBE	pin256
gh	A30	and A31

Press any key to stop probing and return to the main menu.

PROBE	pin256 addr 065
Pin 1	addr 065

Menu LEARN <u>1</u>
One PRESS

Menu PROBE

This option uses a wire or 'probe' to be used to identify connections in a cable or cable harness where one or more of the wires or connectors can not be connected directly to the CableJoG unit. If the display shows:-

Enter the four digit password, if the password is incorrect then you will be taken back to the main menu. If the password is correct or has not been set then the display changes to:-

CableJoG256

If you see this display and you don't want to proceed Probe [y/n]

then use the **b** key to move the cursor under the **n**

character and then press ENTER this will return you to the main menu.

Press ENTER to continue, the display will show:-

This is the pin to which the 'probe' or wire must be	PROBE
connected, as CableJoG will only test from this pin.	Use PIN 256[y/n]
The default pin number is 256.	

Should another location be required use the 🖬 key

to move the cursor under the \mathbf{n} character and then press ENTER use \mathbf{n} to the keys to change Enter PIN 256

the address to any within the 256 pins.

Press ENTER when finished.

The display will show:-

The next step is to choose how each pin is to be	PRUBE	P1n256
The next step is to choose how each pin is to be labelled, if you want to use the labels from the cable in	Cable	Label[y/n]
compare memory press ENTER, otherwise use the		

 \rightarrow

key to move the cursor under the <u>**n**</u> character and then press ENTER.

If you want to use standard connectors then press	PROBE 256
ENTER. Choosing n will skip the selecting connector	Sel. Conns.[y/n]
stage and each pin label will simply be it's number (1)	

to 256). However selecting the connectors will enable CableJoG to give the real pinnumber that the connection is made to. Press ENTER again the display will show the first connector type:-

PROBE	pin256
A: 64w	IDC [9∕ <u>n</u>]

Press ENTER or if this is not the correct connec-

tor type, otherwise press \Box to move the cursor under \underline{Y} then press ENTER to accept that connector. The connector types currently supported can be seen in Appendix B.

Once one of the options has been accepted you have to choose the connectors position within the four 64 way IDC connectors. The connector pin addresses are numbered on the front of the unit.

In One Press mode (see Menu Setup - Test Loop) you

only have to press the key once to cmplete the scanning process. If the display shows:-

CableJoG256	
Enter No.	

Enter the four digit password, if the password is incorrect the you will be taken back to the main menu.

If the password is correct or has not been set then the **1=Learn 2=Test** display changes to:-

and both the LED's will go out (if fitted). You are now ready to test the cable.

Diode testing is not available with One Press option. You will have to turn one press off, Learn the cable and then turn One Press back on.

Press the 1 key to learn the new cable. The display will show the number of connections found:

Check this against the master cable. If correct press the 2 key to test the next cable, if not then change the cable and press one again. If the

number of connections is still incorrect change the test loop option to no loop which will display the actual connection details found (see Setup Menu, Test Loop option).

Menu TEST 2

This menu deals with the process of scanning a cable and comparing the result with what is in the compare memory locations. If the two are the same the test can be repeated, if not then you can review the differences before repeating the test. If the display shows:-

s	CableJoG256
	Enter No

Enter the four digit password, if the password is incorrect the you will be taken back to the main menu.

If the password is correct or has not been set then the display changes to:-



If you see this display and you don't want to pro-

ceed then use the \square key to move the cursor under the **n** character and then press

ENTER, this will return you to the main menu. Press ENTER to continue, if you have not 'Learned, Recalled or Edited' a Cable then the display will show:-



Press ENTER, this will take you back to the main

menu, you can then use the most appropriate menu to put a cable's detail in the compare memory.

If there is a cable in memory then the display will show the cable name and prompt for confirmation in this case the full name was

CABLE 0123456 but the display shows only the first 11 characters :-

TEST Cable	01234[y/n]

If this is not the right cable then use the kev to

move the cursor under the **n** character and then press ENTER, this will take you to the Recall menu and enable you to choose another cable. Press ENTER to continue, the display will prompt:-

Make sure the cable is now connected into CableJoG, then press ENTER. CableJoG will now scan all 256 connector pins. Depending on which options have been selected in the Setup menus 3,4 or in Edit menu the display will show some sort of result of the comparison between the current connections and the details in compare memory.

The different configuration options are shown in the top right hand corner of the next 2 pages deal with the various display options, followed by the various test loop options.

Menu SETUP	2
SERIAL No.	8

This option enables the user to set the start number to be used for tested cable serialisation, the display will show the current value -

SETUP Next= 00010000

In this option the number shown will be the first used when this cable is tested. This enables cables of a particular type to be assigned a specific starting serial number. Use

keys to alter the number, or simply enter the number from the the **t** kevpad. Press ENTER to accept the next number.

After ENTER has been pressed the display will show the ENTER key at the right hand position. Press ENTER again to go back to the date and time option.

 $\mathbf{2}$

Menu SETUP	9
RESULTS	2

This option controls where test results go. There are three modes.

Mode1 - OFF LINE the test results are displayed on the LCD display.

Mode2 - BATCH the test results are displayed on the LCD display and stored in spare cable memory for later printing.

Mode3 - ON LINE with CableJoG permanently connected to a printer, the results are displayed on the LCD display and printed on the printer.

On entering this option the display will reflect the current setting, in this example it is OFF LINE:-



SETUP |BATCH [y∠n]

If you want to change this mode then press to

select **n** then press ENTER, this will take you onto the next mode.

If mode 1 is correct then press ENTER.

If mode 2. BATCH mode, had been selected then the buffer will be cleared and the display will return to the date and time display.

If mode2, is selected then CableJoG will scan the cable register memory looking for the last entry all of the memory after this is then allocated to the communications buffer. The dis-

play will show the amount available:-SETUP Comms Buff =18K€

Because this process re-initialises a number of variables you may need to enter the operator pin number again, if that option has been set. The date and time are re-displayed for checking.

If mode3, ON LINE, is selected then CableJoG copies all test results to the printer.

2m 1

Once the test cycle has been completed the display will show the results. The format of the display(s) is determined by the Test Display in Menu Setup.

With the PF Only setting in Test Display you will see:-

TEST	
PASSED	4

Menu TEST

TEST

if the cable connected is the same as the one in compare memory, if the two are different the display will show:-

then NO connections were detected at either end.

if the display shows:-

TEST	
FAILED	÷



PASSED 09-00-00#

PASS 0001 09-004

TEST

If Serial Nmubering has been Setup then the Passed TEST display changes to:-PASSED 00000014

If Date and Time stamping has been Setup then the Passed display changes to:-

And finally if both Serial Numbering and Date and Time stamping have been Setup then the Passed display changes to:-

With PF + Err setting in Test Display the Passed

displays don't change from the above however, the Failed display is follwed by the error report. Depending on the type of fault there are three possible displays you could see.

Missing connection on u.u.t.:no connection was found where one was expected.

TEST	
A01 B01	OPEN <u>€</u>

TEST		
- AØ2	B02	_SHORT <u>∉</u>

Extra connection on u.u.t.:-

a connection was found on the u.u.t. that was not in the compare memory.

A01B01⇒≐A01B02 4

Incorrect connection:this example shows that the original cable had a connection from Connector A pin1 to Connector B pin1, whereas the u.u.t. had Connector A pin1 connected to Connector B pin2.

9

6

Menu TEST <u>2</u>

With the PF +Cons setting in Test Display the firstly you will see all the connections found. Example of a correct 9 way 'd' type to 9 way 'd' type:-

With the PF + Er + C setting all the connections are displayed first. Then you get either Passed or Failed and finally if it was a failure then the display will show the error report.

	From	A03	То	B03∉	
		A04			
e	From	A05	То	B05≮	
d V	From				
	From	A07	То	B07∉	
				B08€	
	From	A09	То	B09∉	

TEST LOOP OPTIONS:

There are now five different ways of running the test cycle. 1. NO LOOP.

The display will show the cable name that is to be tested (In this case TESTCABLE01, the name is truncated to 10 characters):-



Plug the cable under test in and press ENTER. The display will show the result of the test, the actual display depends on the Test Display settings (see previous pages).

Press ENTER to clear the results and take you back to the first step.

2.LOOP.

The display will show the cable name that is to be tested (In this case TESTCABLE01, the name is truncated to 10 characters):-



Plug the cable under test in and press ENTER. The display will show the result of the test, if the cable has passed the testing continues until it fails or a key is pressed. This allows the user to stress the cable to check for intermittant connections.

3. CONTINIOUS

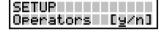
The display will show the cable name that is to be tested (In this case TESTCABLE01, the name is truncated to 10 characters):-



Press ENTER, this will start the testing process.

Plug the cable to be tested in, the display will show the results of the test shortly. Unplug the tested cable and plug in the next one....

'This option enables ten operators to be identified. Each operator has a four digit 'pin' number. Once an operator has been set up Cable-JoG will prompt for the 'pin' number on switch ON. The display will show:-



SETUP

SETUP

Operator No:

NewOperator[9/n]

Menu SETUP

OPERATORS

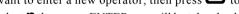
If you don't want to use this feature then press

to select $\mathbf{\underline{n}}$ then press ENTER. This will take you back to the date and time menu. Otherwise press ENTER to continue.

The display will prompt for a 'pin' number:-

Enter the four digit 'pin' number, if the password is not recognised the display will prompt:-If you just entered the number incorrectly, or don't

want to enter a new operator, then press \boxdot to



select **n** then press ENTER you will be taken back to the date and time option. The display shows:-

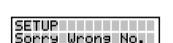
Accepting the New Operator, the display prompts for a 8 character name. Use the the keys to move up or down through the Upper case characters, numbers and lower case characters.

Press the key to move onto the next letter. Use

the key to move back to change a character and finally press ENTER when you have finished. The display will show:-

To confirm the new operator enter the same 4 digit 'pin' number, if entered correctly the display will confirm the new operator:-

If the number entered is incorrect then the new operator will not be entered.



SETUP Name:

SETUP	
Confirm	No:_





TEST

TEST

TEST

Stage PASSED 01€

PASSED 09-00-00+

No Connections +

Menu SETUP <u>9</u>
PASSWORDS 5

This menu option allows the operator to set a four digit 'password' code for each of the main menus i.e.

1 = LEARN	6 = PRINT
2 = TEST	7 = RECEIVE
3 = RECALL	8 = SEND
4 = EDIT	9 = SETUP
5 = CONFIG	0 = PROBE

Once a password has been set on a menu, that menu will not be displayed in the usual

process nor can you access it using the the keys during menu selection. The only way to access a passworded menu is to press the corresponding number key, the display will then prompt for the password to be entered before that menu will be made available.

Once this menu has been selected the display will show the current state of the ten menus, display OFF if no password is set and ON if the password is set. If a menu password has been set you will need to know that password and have access to this menu to reset it, so don't forget those numbers! The default display will are:-

PROBE ON [y∕n]	EDIT OFF [g/n]
LEARN OFF [y/n]	PRINT OFF [y/n]
TEST OFF [y/n]	RECEV ON [y/n]
RECAL OFF [y/n]	SEND ON [y∕n]
STORE OFF [y/n]	SETUP OFF [y/n]

To set a password on a menu that is OFF or not set,

move the cursor under the $\underline{\mathbf{n}}$ character and press ENTER. The display will show:-



Enter the four digits of the password, they will not

be displayed. Once the fourth digit has been entered you will need to enter the password every time that menu is to used. The display will change to confirm the new setting.

To reset a password on a menu that is ON or set, as before, move the cursor under the **n** character and press ENTER. The display will show:-

SETUP		
Enter	No•	

Enter the four digits of the password, they will not be displayed. Once the fourth digit has been the password will be removed and the display will change to confirm the new setting.

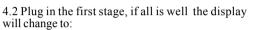
TEST LOOP OPTIONS (Continued):

4.STAGED

This is a varient of the Continious testing mode with the added feature of stringing more than one test together.

Assuming we have a two stage test procedure then the sequence of events could be:

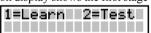
4.1 Recall the first cable and run the test. With out anything connected you will see:



4.3 Depending on how quickly you can plug the next stage in you might see a Failed message, probably an OPEN circuit.

4.4 Once the last stage has passed the display reverts to the normal PASSED one, with all it's possibilities.

4.5 Remove the Cable under test, once the No Connection display shows the first stage will be automatically recalled and run.



5. ONE PRESS

This option turns the whole testing process into just pushing one of two buttons:

5.1 Press 1 to learn a new cable, this option can be passworded .

5.2 Press two to run the test, the results options are as with the other test loop option.

Please be aware that the learnt cable details are not catalogued for future use.

6. WIRES

This option allows for a number of of different types of cable to be tested quickly, connections are assumed to be from the first two connectors to the last two connectors and pin for pin e.g. 1 wire connection would be: 001 to 129, 2 wires connection would be 001 to 129 and 002 to 130. and so on to the maximum 128 wires.

6.1 Enter the no of wires (connections) and press ENTER, if the number shown is correct (repeating the same type of cable), just press ENTER.

ss 1e	Test	<u>0</u> 01	Wires

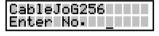
6.2 LOOP for intermittant connections, once a cable has been tested it is possible to test that cable for intermittant problems by entering 222 wires, this will loop the test until either, a fault occours or, a key is pressed.

6.3 END WIRES mode, switch the CableJoG unit off and on, press Enter when you see the date prompt, then press 9 this will take you to the Setup menu where you can change test modes.

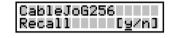
Menu RECALL 3

This menu deals with the selection of a cable from the stored list and putting the details into the compare memory ready to be used by either the Test or Edit menus.

If the display shows:-



Enter the four digit password, if the password is incorrect the you will be taken back to the main menu. If the password is correct or has not been set then the display changes to:-



If you see this display and you don't want to pro-

ceed then use the rightarrow key to move the cursor under the <u>**n**</u> character and then press ENTER, this will return you to the main menu.

Press ENTER to continue, the display will show:-



The two digit figure on the left is the cable file number. There is now a choice of methods to move through the file index.

Using the title keys you can scan through until you have recognised the cable you

require. The other method is to enter the cable number directly, using the keys to move between digits.

Press ENTER once you are on the right cable, the cable details will be transferred into the compare memory and you will go back to the main menu.

Standard cables. There are two standard cables stored in the EPROM. They start with cable number 13. It is possible to edit these details, but the changed cable will have to be stored under a new cable number below 13. For a full list of the standard cables see Appendix C.

Menu	SETUP <u>9</u>
TEST	MODE <u>4</u>

TEST = PRESS ONE

1=Learn 2=Test

SETUP

Mode 5 - PRESS ONE BUTTON

This mode set the CableJoG unit to use only one button to run the test, everytime the 1 key is pressed the test will run. This option also makes learning into a one button press. However, you can not assign any labels at the learning stage.

If there are no results to display you wil see:

All of the other menu s still work but, can't be accessed using the arrow keys.

Mode 6 - WIRES

This option allows for a number of of different types of cable to be tested quickly, connections are assumed to be from the first two connectors to the last two connectors and pin for pin e.g. 1 wire connection would be: 001 to 129, 2 wires connection would be 001 to 129 and 002 to 130. and so on to the maximum 128 wires.

6.1 Enter the no of wires (connections) and press ENTER, if the number shown is correct (repeating the same type of cable), just press ENTER.

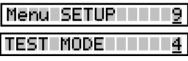
Test		
	<u>0</u> 01	Wires

6.2 LOOP for intermittant connections, once a ca-

ble has been tested it is possible to test that cable for intermittant problems by entering 222 wires, this will loop the test until either, a fault occours or, a key is pressed.

6.3 END WIRES mode, switch the CableJoG unit off and on, press Enter when you see the date prompt, then press 9 this will take you to the Setup menu where you can change test modes.

Menu STORE



This option allows the default test modes to be set, this default value is used when a new cable is learnt.

Mode 1 - NO LOOP the test is run just once and the results displayed.

SETUP TEST = <u>N</u> O LOOP

SETUP

TEST = LOOP

if this is what you require then press ENTER, othkeys to move through the erwise use the following modes.

Mode 2 - LOOP the test is run continually until either the unit under test fails or no connections are found. The display will show:-

This is the same display as would be shown if test looping was ON in the first instance, again if this is what you require then press ENTER, otherwise use the kevs to move through the following modes.

Mode 3 - Contin. the test runs continually giving the current results, pressing any key will stop the test. The display will show:-



This is the same display as would be shown if continuous testing was ON in the first instance, again if this is what you require then press ENTER, otherwise use the

keys to move through the following modes.

Mode 4 - STAGED, the test runs continually like mode3 giving the current results, once the cable under test has passed CableJoG looks through the cable store for any more cables with the same first 8 characters in the name. If one is found the stage number is check to see if it is the next one to the current, if so that cable is recalled and the test re-started automatically. After the last stage the

Passed ticket is printed (if the printer $\lfloor v/n \rfloor$ is selected) and the first stage recalled. The display will show:-

SETUP
TEST = <u>S</u> TAGED

This is the same display as would be shown if continuous testing was ON in the first instance, again if this is what you require then press ENTER, otherwise use the

keys to move through the following modes.

and time option.

This menu deals with the transfer of a cables details from compare memory into the cable database.

If the display shows:-

Enter the four digit password, if the password is incorrect the you will be taken back to the main menu. If the password is correct or has not been set then the display changes to:-

CableJoG	i256
Store	[y/n]

CableJoG256

Enter No.

If you don't need to keep a record of this cable then press 🗂 to select **n** then press ENTER. This will take you back to the main menu. Otherwise press ENTER to continue.

Press ENTER the display will prompt:-

Sel Number/Name≁

Press ENTER. The display will show the first cable e.g.:-

STORE
01:PrinterCable1

The two digit figure on the left is the cable file

number, press the 💾 key to move onto the first

entry. There is now a choice of methods to move through the file index. Using the

keys you can scan through until you either have a vacant position or are over a cable that is no longer relevant. The other method is to enter the cable number

directly, using the keys to move between digits. Press ENTER once you are on the right file, the cursor will move into the

filename first character. If this hasn't been used before you will see the letter A :-

CTODE	
STORE	
0010	
02:A	

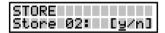
Use the **U** keys to move up or down through



the Upper case characters, numbers & lower case characters. Press the

move onto the next letter. Use the 🖾 key to move back to change a character and finally press ENTER when you have finished. To select a single ended test, enter the % character anywhere in the title, but not the first character. The % character is available

by pressing the by key when moving onto a previously blank entry. For further details see the chapter 'SPECIAL USES / SINGLE ENDED TEŜTS'.



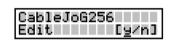
Press ENTER to store the cable details and return

to the main menu. Or use the \Box key to select **n** and press ENTER to go back to the filename selecting stage.



This menu deals with the process of changing the details of an existing cable or entering details of a new cable from a wire list. If the display shows:-

Enter the four digit password, if the password is incorrect the you will be taken back to the main menu. If the password is correct or has not been set then the display changes to:-



EDIT New Cable [9/n]

EDIT

Sel. Conns.[9/n]

If you don't want to proceed then use the kev

to move the cursor under the **n** character and then press ENTER, this will return you to the main menu

Press ENTER to continue, if there is no cable in the compare memory the display will show:-

If you intended to edit an existing cable then use the

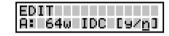
key to move the cursor under the <u>**n**</u> character and then press ENTER, this will take you to the recall menu. If you wish to enter a cable's details from a wiring list then press ENTER to continue, the display will show:-

If you just want the pin label to be it's address

(1to256) then use the $rac{1}{2}$ key to move the cursor

under the **n** character and then press ENTER, this will set the labels and move you to Edit Serial Number (p65). Otherwise to choose the

type of connectors used, press ENTER again the display will show the first connector type:-



Press ENTER or U if this is not the correct

connector type, otherwise press to move the cursor under **Y** then press ENTER to accept that connector. The connector types currently supported can be seen in Appendix B.

Once one of the options has been accepted you have to choose the connectors position within the four 64 way IDC connectors. The connector pin addresses are numbered on the front of the unit. The display will show:-

EDIT	
P1n I addr 00 <u>1</u>	

The display is prompting the user to input the location of pin 1 of the connector just selected. The three digit number shown is the first available location, should another location be required use the address to any within the 256 pins.

CableJo	bG256
Enter h	۰o، _

This menu allows you to set the amount of information to be displayed during the TEST operation, the options vary from simply shown Passed or Failed, to shown the connections found and if failed an analysis of the errors, the first display after selecting this menu will depend on what the current setting is

The possible options are:-	SETUP PF only	[<u>y</u> /n]
	SETUP PF+Err	[<u>y</u> /n]
	SETUP PF+Cons	[<u>y</u> /n]
If the option shown is what you require then press ENTER, other wise use the key to move under	SETUP PF+Er+Con	[<u>y</u> /n]

Menu SETUP

TEST DISPLAY

ENTER, other wise use the \biguplus key to move under the **n** character and press ENTER, the display will move onto the next option.

The various options are:-

the end of the Test program.

This means PASSED or FAILED messages only will be displayed at the end of the Test program. This is particularly useful if there is a large number of cables to be sorted.

This means that PASSED or FAILED messages

will be displayed along with an ERROR report at

SETUP	
PF only	[<u>y</u> /n]

[<u>9</u> /n]

This means that PASSED or FAILED messages will be displayed along with any connections found during the test program. This is particularly useful if used in conjunction with the Loop test option, as it will shown the test progressing.

This option will produce a display of all the connections found as well as a full ERROR report at the end of the test program.

Press ENTER over a **Y** to accept that option, the display will return to the date and time option.



SETUP PF+Er+Con [y∕n]

Menul	SETUP	<u>9</u>
BEEP		<u>1</u>

The beeper will normally sound after a key has been pressed, or to warn the user of a fault condition, this feature can be turned off or set for a single long beep for a PASS.

If the display shows:-



then the beeper is OFF, if this is what you require then press ENTER, otherwise use the regimential key to move the cursor under the **<u>n</u>** character and press ENTER.

The display will show:-

The beeper will only sound on a PASSED test, if this is what you require then press ENTER, otherwise use the \checkmark key to move the cursor under the **n** character and press ENTER.

The display will show:-

The beeper is OFF, if this is what you require then press ENTER, otherwise use the \bigoplus key to move the cursor under the **n** character and press ENTER.

Pressing ENTER when the cursor is under the $\underline{\mathbf{Y}}$ character will cause that option to be set and the display will return to the date and time option.







Should you see:-

then a pin number greater than 256 has been

entered. Make sure that you have selected the correct connector(s) and placed their pin 1's in the correct addresses.

Once the first connector has been chosen and successfully placed the display will show:-



Err Pin addr>256

EDIT

Edit New Cable

LEARN

Menul

The connector identifier has now changed to B: and should the cable only have one connector then use the (\square) key to select $\underline{\mathbf{Y}}$ and press ENTER to finish.



Otherwise press ENTER and the display will return to the connector selection menu, or

using the two and pressing ENTER to accept the

second connector. The display changes to the Pin 1 address selection:-

1	EDIT		
	Pin 1	addr	06 <u>5</u>

This time the first available location is 065. As two 64 way connectors were chosen in this example Menu Learn moves onto the next stage, should smaller connectors had been chosen the the display will go back to the No More [y/n] option and the connector identifier will increase to C: and so on until either, the No More option is accepted, or the connectors chosen have filled the available 256 addresses.

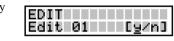
If the choice of connector causes pins to be placed past address 256 the the display will show:-

		_	
ᆝᆮᆸᇥ	2N		
Enn	Conn	Teel	$\mathbf{D} \mathbf{i} = \mathbf{I}$
	COLLE	100	ртэн
			=

In either case Edit moves onto editing the serial number option.

Menul	EDIT	5
Edit	Cable	01

If a cable is already in compare memory the display will show it and prompt the operator to edit it:-



EDIT

If this is not the right cable then use the 🕁 key to

position the cursor under the $\mathbf{\underline{n}}$ character and press ENTER, this will enable you to choose another cable using the Recall menu.

If this is the correct cable then press ENTER, the display will show:-

This option allows the user change any or all of the 256 pin labels. If there is no need to modify the pin labels then use the $\stackrel{\frown}{\longrightarrow}$ key to position the cursor under the $\underline{\mathbf{n}}$ character and press ENTER, otherwise the display will show:-

The first three characters(001) represent the pin address, see the Fundamentals chapter for details

on pin addresses and connector pins, use the

dresses until the correct one is displayed, press ENTER.



pin address 001. Using the arrow and numeric keys the label can be changed to whatever is required. This feature means that connectors using letters for pin numbers can easily be accommodated. Press ENTER when the label is correct. The display will

show the ENTER symbol, if you have made a mistake press the two go back to editing the label, otherwise press ENTER again to accept the new label.

EDIT	
001 Label	A01 <u>₹</u>

EDIT Label Chan9ed

EDIT

|Another [y/n]

The display will change from:-

To:-

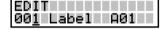
And:-

If another label is to be edited then press ENTER,

other wise press the \square key to move the cursor under the **<u>n</u>** key and press ENTER.

EDIT

Edit Pins [9/n]



EDIT 001 Label <u>A</u>01 This menu deals with the setting/changing of system parameters.

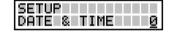
If the display shows:-

Enter the four digit password, if the password is incorrect the you will be taken back to the main menu.

If the password is correct or has not been set then the display changes to:-

If you don't want to change the system parameters

then press \Box to select <u>**n**</u> then press ENTER. This will take you back to the main menu. Otherwise press ENTER to continue. The display will show the first option:-



If you don't want to change the date and time values then either use the the keys to select another sub-menu or enter the number corresponding to the subs-menu number you require.

Setting the date and time, the display will show the current date and time:-

Using the numeric keys and the keys adjust the date and time to the correct value, when finished press ENTER. The display verifies the new date:-



Time 13:05:01

SETUP

0K? [9/n]

13:05 01/08/00

SETUP

SETUP

and new time:-

Press ENTER:-

If everything is correct press ENTER, If there is an

error then press to select **n** then press ENTER. This will take you back to changing the date and time.

Menu setup

Menul	SETUP	<u>9</u>
DATE	& TIME	0

CableJoG256

Enter No.

CableJoG256

Setup [9/n]

Menu SEND	<u>8</u>
SEND	CABLE

This menu allows the transfer of cable details from CableJoG to CableJoG Command Program (C.C.P).

If the display shows:-

Enter the four digit password, if the password is incorrect the you will be taken back to the main menu. If the password is correct or has not been set then the display changes to:-

If you see this display and you don't want to

proceed then use the rightarrow key to move the cursor

under the **n** character and then press ENTER, this will take you to the Remote Link option (see page 72) SEND otherwise press ENTER, the display will change to:-

CableJoG tries to send the details for the cable in compare memory. In this example it is number 01:-

If this is not the <u>cab</u>le you want to send the details

of then use the \square key to move the cursor under the **n** character and then press ENTER, this will take you into the cable register and allow selection of the cable to send.

The two digit figure on the left is the cable file number. There is now a choice of methods to move through the file index. Using the the keys you can scan through until you have recognised the cable you require. The other method is to enter the cable number directly, using the keys to move between digits.

Press ENTER, if you see:-

then the link is either not ready or not connected, correct this fault or press any key to break out of printing. The display will change to:-

SEND Waiting for CTS	š_
SEND AbortComms[y/n]	

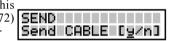
If sending has taken place the display will change to:-

CENIN		
SENU		
lCahle	SENT	- 41



CableJoG256 Enter No







One of the test options that can be set for each cable type individually is the serialisation of each cable tested -

If you do not want to edit this option then use the

kev to position the cursor under the **n** character and press ENTER, this will take you to the next option.

If you you do want to edit the serial number option. then press ENTER, there are three option for the serial number. Continue (default):-



With the option set to continue each tested cable will be numbered and the number will be a continuation of the fundamental serial number (see SETUP for details on the

fundamental serial number). Use the 🗖 key to move onto the next option, or press ENTER to accept the continue option.

The second option is :-

In this option the tested cables will NOT be

numbered. Use the key to move onto the next option, or press ENTER to accept the off option.

	STT O		1	
		Seria		
ING	ext=l	- <u>0</u> 000	0000	

EDIT Serial No. Next= OFF

The third option is:-

In this option the number shown will be the first used when this cable is tested. This enables cables of a particular type to be assigned a specific starting serial number. Use the the keys to alter the number, or simply enter the number from the

keypad. To change the option to OFF or CONTINUE press the 🗂 key until the display changes. Press ENTER to accept the next number.

After ENTER has been pressed the display will show the ENTER key at the right hand position. Press ENTER again to move onto the next cable option.

Menul	EDIT	<u>5</u>
EDIT	Serial	No.

EDIT

Edit SerNo [9/n]

Menu EDIT

Menu SEND	<u>8</u>
SEND	BATCH

This menu deals with the transfer of Batch test results from CableJoG to CableJoG Command Program (C.C.P). When enabled, CableJoG uses any spare cable memory area past the last cable as a print buffer. During testing the results are stored away and held even if the unit is switched off. Then when a PC running C.C.P. is available the results can be transferred. For details on how to set this see chapter menu SETUP RESULTS.

If the display shows:-

Enter the four digit password, if the password is incorrect the you will be taken back to the main menu. If the password is correct or has not been set then the display changes to:-



CableJoG256	Π
Send [9/n]	I

If you see this display and you don't want to pro-



under the **n** character and then press ENTER, this will return you to the main menu.

Press ENTER to continue, if there are any results to print from the batch buffer then the display will show:-

SEND Send BATCH [y∕n]

If you don't want to send the results use the rightarrow

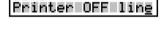
key to move the cursor under the **n** character and then press ENTER the display will show (For details on this option see page 74.).

If you do want to send the batch results then make sure you have CableJoG connected and ready. Press ENTER, if you see:-

then the link is either not ready or not connected, correct this fault or press any key to break out of printing.

The display will change to:-

If sending has taken place the display will change to:-



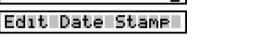
SEND

5END
AbortComms[y/n <u>]</u>

SEND		
SEND Results	SENT	÷

press ENTER, CableJoG then re-initialises itself

going through the power on sequence of date, time, operator and password (if used).



5

Another of the test options that can be set for each cable type individually is the Date and Time stamping of each cable tested:-



If you do not want to edit this option then use the

key to position the cursor under the $\underline{\mathbf{n}}$ character and press ENTER, this will take you to the next option.

If you you do want to edit the Date and Time stamp, then press ENTER, the display will show:-

EDIT Enter DateStamp<u>4</u>

Press ENTER, if this has not been set before then the display will show (default):-



Using the two keys you scroll through the date and time options.

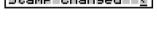
- Y = Year
- M = MonthD = Dav
- = Day
- h = hours
- m = minutes
- s = seconds

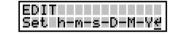
Once a value has been set, that value will be attached to each cable tested, there are 6 positions giving a maximum of hmsDMY. Press ENTER when the correct date and time format has been entered. The display will show the ENTER key at the right hand position.

Press ENTER the display will confirm the changes:-

Press ENTER again to move onto the next cable

EDIT Stamp Chan9ed <u>¥</u>





Example of just the time stamp:-

Example of full time and date stamp:-



option.

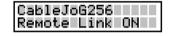
Menu RECEIVE

If you entered $\underline{\mathbf{n}}$ to the receive prompt the display shows:-

CableJoG256 Remote Link[y/n]

This allows CableJoG to be controlled from CableJoG Command Program (C.C.P). If you don't want to proceed then use the $\underbrace{\square}$ key to move the cursor under the \underline{n} character and then press ENTER, this will return you to the main menu.

Press ENTER to continue the display will show:-



Another of the options that can be set for each cable type individually is the test routine itself. The test routine operates in one of three modes. The display will show:-



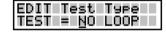
Menu EDIT

EDIT Edit Test [y/n]

If you do not want to edit this option then use the

key to position the cursor under the $\underline{\mathbf{n}}$ character and press ENTER, this will take you to the next option.

Press ENTER, the first and default mode will be displayed:-



Mode 1 - NO LOOP the test is run just once and the

results displayed. If this is what you require then press ENTER, otherwise use the key to move onto the next mode.

Mode 2 - LOOP the test is run continually until either the unit under test fails or no connections are found.

The display will show:-

EDIT	Test	Туре
TEST	I= <u>L</u> OC)P

If this is what you require then press ENTER, otherwise use the key to move onto the next mode.

Mode 3 - Cont. the test runs continually giving the current results, pressing any key will stop the test. The display will show:-

EDIT Test Type TEST = CONTIN.
$1 \Box D I = \overline{O} O U I I U = \overline{O} O U I I U = \overline{O} O U I I U = \overline{O} O U = O$

If this is what you require then press ENTER, otherwise use the key to move onto the next

erwise use the \bigcirc key to move onto the next mode.

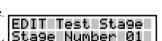
Mode 4 - Staged testing, actual test mode is as for conitinuous, but once passed the NEXT stage is automaticaly loaded. The display will show:-If this is what <u>you</u> require then press ENTER, oth-

erwise use the to key to move back to the first mode.

After confirming the option the display will show:-Select the stage number for this cable, 1 is the first stage option.

NOTE:

1. The first 8 characters of the cable name need to be the same for each cable stage. 2. The passed display and printout will happen on completion of the last stage.



EDIT Test Type

TEST = STAGED

Menu edit

5

Menu EDIT

Edit Test Mode

Mode 5 - PRESS ONE BUTTON

Menu RECEIVE

This menu allows the transfer of cable details from CableJoG and CableJoG Command Program (C.C.P) into the cable register, if the display shows:-

CableJoG256 Enter No.

Enter the four digit password, if the password is incorrect then you will be taken back to the main menu. If the password is correct or has not been set then the display changes to:-

CERTER	DE 2
CableJoG2	236
Receive	LAND

If you see this display and you don't want to proceed then use the 🖾 key to move the

cursor under the **n** character and then press ENTER, this will give you the option of running the CableJoG unit from a PC using C.C.P.

(see below), otherwise, press ENTER to continue, the display will show:-

RECEIVE	
Receivin9	

Following the instructions for C.C.P. a Cable Profile is chosen and sent to CableJoG. During receiving the display reflects the number of cables currently received .:-

Received Cab 01_

Finishing off with:-

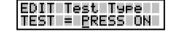
RECEIVE	
••End of	File(s)

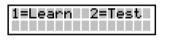
This mode set the CableJoG unit to use only one button to run the test, everytime the 1 key is pressed the test will run. This option also makes learning into a one button press. However, you can not assign any labels at the learning stage.

5

If there are no results to display you wil see:

All of the other menu s still work but, can't be accessed using the arrow keys.





Menu PRINT	<u>6</u>
Print	CABLE
Print	LIST

This option enables the details of a particular cable to be printed.

If you see this display and you don't want to pro-

ceed then use the \Box key to move the cursor

under the **n** character and then press ENTER the display will show:-

This option prints out the cable store catalogue with any staged details. Press ENTER to print or use the

 $\stackrel{\frown}{\longrightarrow}$ key to move the cursor under the <u>**n**</u> character and then press ENTER the display will show:-

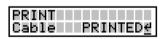
Press ENTER to print a cable, CableJoG tries to print the details for the cable in compare memory. În this example it is number 01:-

If this is not the <u>cable</u> you want to print the details

of then use the \square key to move the cursor under the **n** character and then press ENTER, this will take you into the cable register and allow selection of the cable to print.

The two digit figure on the left is the cable file number. There is now a choice of methods to move through the file index. Using the the keys you can scan through until you have recognised the cable you require. The other method is to enter the cable number directly, using the the keys to move between digits.

Press ENTER once you are on the right cable, the cable details will be transferred to the printer, when finished the display will show:-

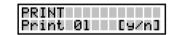


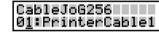
For examples of print out's see Appendix D.

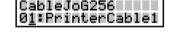
Page 28

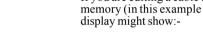
PRINT PrintCABLE [y∕n]











STORE.

display will show:-



This of course isn't an actual connection, but identifies a vacant entry.

If you are editing a cable that is already in compare memory (in this example it is cable number 01) the

EDIT	Connections
00 <u>1</u> .	A01 to B01

The three digit figure on the left is the cable connection number, press the move onto the first entry.

character and press ENTER, this will take out of the edit cable menu. Remember that

the editing is carried out on the details in compare memory and although you will be able to test cables against these settings you have not saved them, to do so use menu

keys to select the correct line entry, if you are just starting to Use the enter a wire list then only line 001 is valid. Press ENTER to move into the details area. The cursor will move underneath the first 'A' character. To change this to 'B' press the

key, continue to use the the keys to move along the line and change any or all the details.

The only rule to remember is that the left hand detail must be less than the right hand detail.

For example:-

EDIT	Conr	nect	lions
EDIT 001.	AØ1	to	A02≁

Is valid, but:-

EDIT	Conr	nect	lions
001.	BØ1	to	A02 <u>∉</u>

EDIT Connections

Err From addr>To

is not because B01 has an address of 65 and A02 is 2 and will produce an error message:-





EDIT Edit Conns [y/n]

This option allows the actual connections of this cable to be edited.

If you do not want to edit the connections then use

the \bowtie key to position the cursor under the **<u>n</u>**

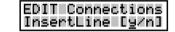
Press ENTER, if you are editing a new cable then

there won't actually be any connections and the

Menu EDIT <u>5</u>

Edit Connections

Once you are satisfied with the details press ENTER. The display will show:-



If you don't want to proceed then use the key

to move the cursor under the $\underline{\mathbf{n}}$ character and then press ENTER, this will restore the line to what it was and return you to the line number part. Pressing ENTER will insert this line in the correct place in the compare table. You may find that it is not where you expected it to be, this will be because you have chosen a connector with a different pin numbering scheme to a standard 64way IDC header. The pin number you see will always correspond to the actual number by that pin in the real connector.

By pressing the ENTER key the display will show the entry in its correct location.

If you wish to Delete then once the cursor is in the details area Press ENTER without changing any of the details, the display will show:-

If you want to delete the line then press the 📛

key to position the cursor under the $\underline{\mathbf{Y}}$ character and press ENTER. The display will remove those details and display next connection in the current position. e.g. if the cable was:-

then after deleting the second entry, the table would look like:-

To complete editing is similar to Deleting a line, that is you have to be on a valid unchanged line then press ENTER.

The display will show:-

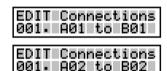
This time press ENTER and the display will change to:-

If you've made a mistake then use the 🖬 key to

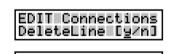
move the cursor over the **n** character and then press ENTER, this will return you to the line you

were editing, otherwise press ENTER and the display will return to the main menu. Remember that the editing is carried out on the details in compare memory and although you will be able to test cables against these settings you have not saved them, to do so use menu STORE.





EDIT Connections 00 <u>1</u> . A01 to B01
--





This menu deals with the printer batch output. When enabled, CableJoG uses any spare cable memory area past the last cable as a print buffer. During testing the results are stored away and held even if the unit is switched off. Then when a printer is available the results can be printed using this option. For details on how to set this see chapter menu SETUP PRINTER.

If the display shows:-

the display changes to:-

Enter the four digit password, if the password is incorrect the you will be taken back to the main menu. If the password is correct or has not been set then

CableJoG256 Print [9/n]

CableJoG256

Enter No.

If you see this display and you don't want to pro-

ceed then use the \square key to move the cursor under the <u>**n**</u> character and then press ENTER, this will return you to the main menu.

Press ENTER to continue, if there are any results to print from the batch buffer then the display will show:-



If you don't want to print the results use the 🗖

key to move the cursor under the $\underline{\mathbf{n}}$ character and then press ENTER the display will show (For details on this option see page 71.):-

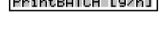
If you do want to print the batch results then make sure you have the printer connected and ready. Press ENTER, if you see:-

then the printer is either not ready or not connected, correct this fault or press any key to break out of printing. The display will change to:-

If printing has taken place the display will change to:-

press ENTER, this batch buffer will be cleared and its value shown briefly:-

For examples of print out's see Appendix D.



PRINT	
PrintCABLE	[9/n]

PRINT		
Printer	OFF	line

CableJo6256
CableJoG256 AbortComms[y/n <u>]</u>

PRINT	
Results	PRINTED <u>#</u>

PRINT		
Comms	Buff	=18K <u>∉</u>

