

CableJoG256^(TM)

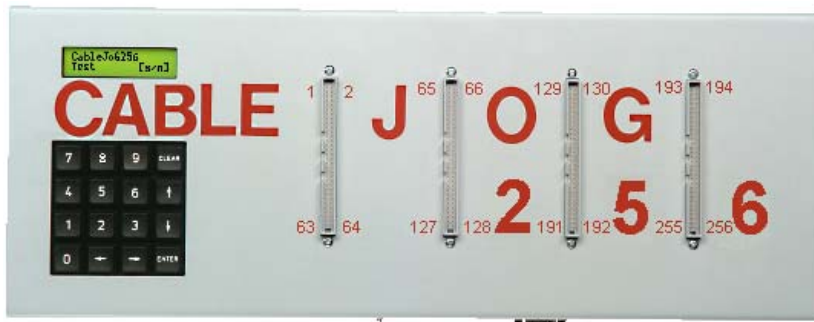


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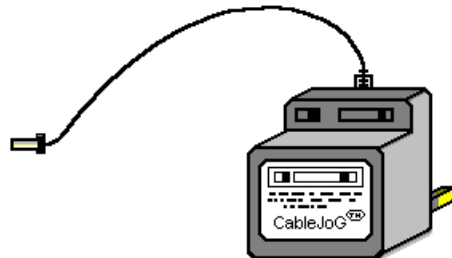
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INTRODUCTION**CE**

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.

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

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 :

<u>CableJoG128</u>		<u>PC Comms Port</u>
Pin	Signal	Pin
2.....	RXD.....	2
3.....	TXD.....	3
5.....	GND.....	5
7.....	RTS.....	7
8.....	CTS.....	8

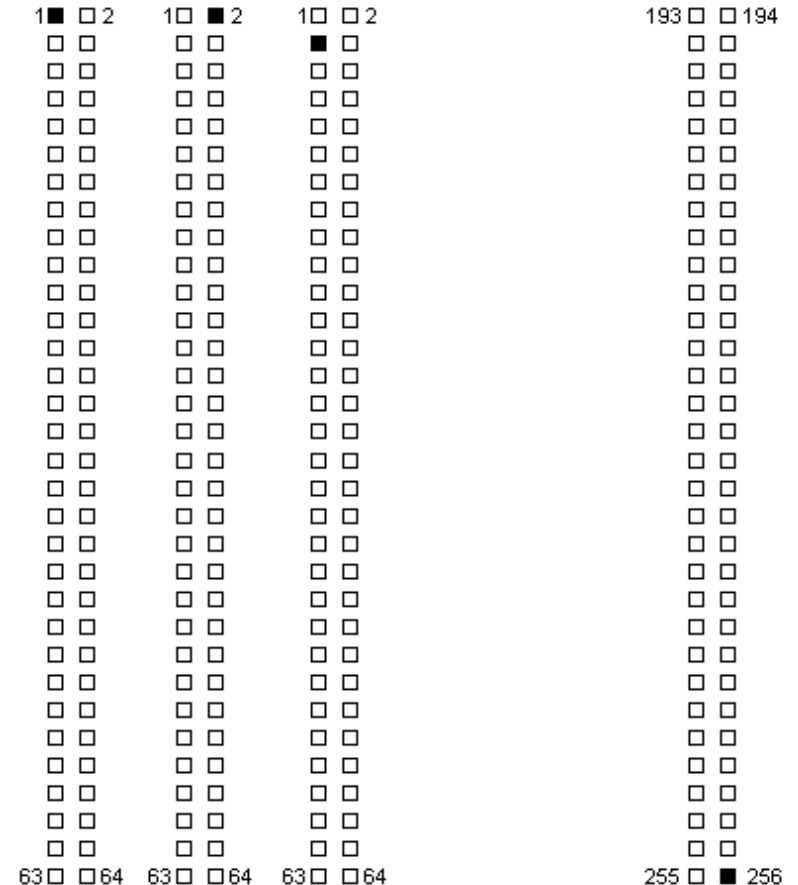
Connecting to a Serial Printer.

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 suitable cable :

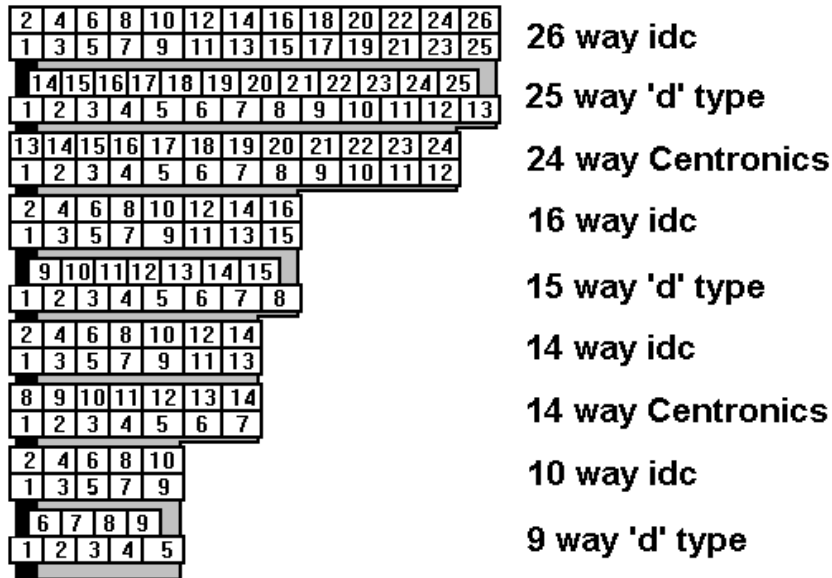
<u>CableJoG128</u>		<u>Serial Printer Port</u>
Pin	Signal	Pin
2.....	RXD.....	3
3.....	TXD.....	2
5.....	GND.....	7
7.....	RTS.....	20
8.....	CTS.....	6

Cable testing, whether using LEARN or TEST, start with a signal being set on pin 1 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 pin 2 and again all the other (254) pins are checked for a connection. The process is repeated until pin 256 is reached.



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:-



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.

APPENDIX - E

ERROR MESSAGES

Pin number not recognised.



Pin label conversion error.



Only 512 pairs of connections allowed.



Trying to run TEST with having anything in compare memory to test against.



Results in BATCH mode and this location used as a buffer.



In EDIT 'from' address has to be less than 'to' address.



In EDIT 'from' and 'to' have to be different.



In EDIT connection buffer full.



There are only 256 test pins.



APPENDIX - D

FUNDAMENTALS

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.

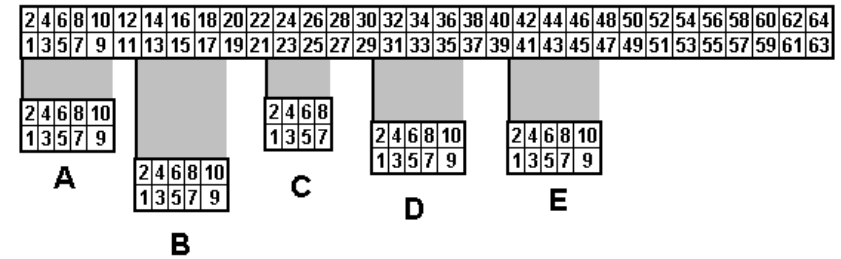
```

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
    
```

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	Address : Label	Address : Label	Address : Label	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	

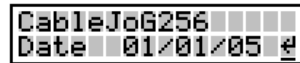
GETTING STARTED

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:-



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 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.



Should you see:-



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

Or should the following appear after the Time display:-



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:-



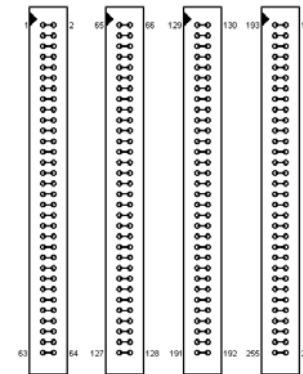
Should a wrong pin number be entered the display will show:-

Press ENTER to try again.

APPENDIX - C

SELF TEST CABLES

No: Description:
13 JOG256 test A



APPENDIX - B**CONNECTOR TYPES**

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

68way SCSI
 80way SCSI

1 way

GETTING STARTED

Should the display show:-

```
CableJoG256
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 [y/n]
```

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.

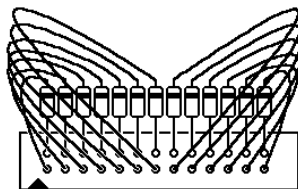
The CLEAR key will always take you back to the main menu.

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.

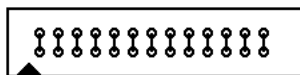
DIODE SHORTING PLUG

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 if 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.



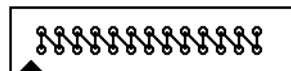
SPECIFIC WIRED PLUG

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 tests 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 tests 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:-

- 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.
- don't forget that the loop configuration is still valid, therefore the cable can still be checked for intermittent faults.
- Again unless using the diode specific plug, Learn the two ends with and without shorting plugs on a known good cable, this will make testing much easier as the results are slightly confusing because all the permutation of connections will be displayed.

Menu LEARN 1

Press ENTER when finished.

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

LEARN
B: No More [y/n]

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 key to select Y and press ENTER to finish.

LEARN
B: 64w IDC [y/n]

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 selection:-

LEARN
Pin 1 addr 065

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.

LEARN
From A01 To B01

A typical connection would be :-

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 1

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 will be shown. Press CLEAR to abort the Learn, check your cable and start the Learn menu again.

LEARN
Err OutOf range

LEARN
From 001 To 002





Also:-

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

LEARN
Err TooMany Cong

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

use     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:-

The connector identifier has now changed to B: and should the cable only have one connector then use


the  key to select Y and press ENTER to finish.

PROBE Pin256
Pin 1 addr 001

PROBE Pin256
B: No More [y/n]

PROBE Pin256
B: 64w IDC [y/n]

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 selection:-

PROBE Pin256
Pin 1 addr 065

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 on:-

In this example a connection has been found to connector A pin 31.

PROBE Pin256
Ready

PROBE Pin256
Connected A31

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.

PROBE Pin256
A30 and A31

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



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.

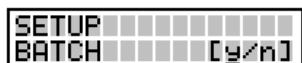
Mode3 - ON LINE with CableJoG permanently connected to a printer, the results are displayed on the LCD display and printed on the printer.

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



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 display will show the amount available:-



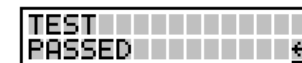
Because this process re-initialises a number of variables you may need to enter the operator pin number again, if that option has been set. The date and time are re-displayed for checking.

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

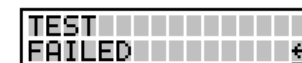


Once the test cycle has been completed the display will show the results. The format of the display(s) is determined by the Test Display in Menu Setup.

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



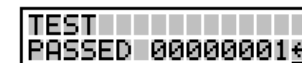
if the cable connected is the same as the one in compare memory, if the two are different the display will show:-



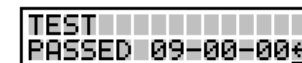
if the display shows:-
then NO connections were detected at either end.



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



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

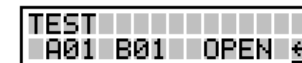


And finally if both Serial Numbering and Date and Time stamping have been Setup then the Passed display changes to:-



With PF + Err setting in Test Display the Passed displays don't change from the above however, the Failed display is followed 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.



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

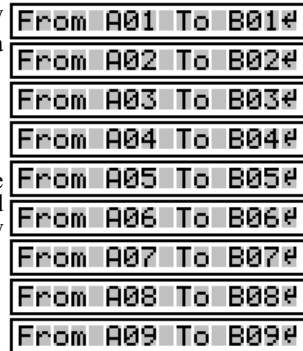


Incorrect connection:-
this example shows that the original cable had a connection from Connector A pin1 to Connector B pin1, whereas the u.u.t. had Connector A pin1 connected to Connector B pin2.





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.

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. CONTINUOUS

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:-



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



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 proceed then use the 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:-



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 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.

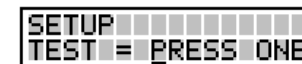
Press ENTER once you are on the right cable, the cable details will be transferred into the compare memory and you will go back to the main menu.

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.



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 will 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.



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 occurs 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 SETUP 0000 2
```

```
TEST MODE 0000 4
```

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 00000000
TEST = NO LOOP
```

if this is what you require then press ENTER, otherwise use the   keys to move through 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:-

```
SETUP 00000000
TEST = LOOP
```

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   keys 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:-

```
SETUP 00000000
TEST = CONTIN.
```

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 checked 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 [y/n] is selected) and the first stage recalled. The display will show:-

```
SETUP 00000000
TEST = STAGED
```

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.

```
Menu STORE 0000 4
```


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

If the display shows:-

```
CableJoG256
Enter No. 0000
```

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
Store 0000 [y/n]
```






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:-






```
STORE 00000000
Sel Number/Name#
```

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


```
STORE 00000000
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 :-

```
STORE 00000000
02:A
```

Use the   keys to move up or down through the Upper case characters, numbers & 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. 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  key when moving onto a previously blank entry. For further details see the chapter 'SPECIAL USES / SINGLE ENDED TESTS'.

```
STORE 00000000
Store 02: [y/n]
```

Press ENTER to store the cable details and return to the main menu. Or use the  key to select n and press ENTER to go back to the filename selecting stage.

```
Menu EDIT      5
```


```
Edit New Cable
```

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:-

```
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:-

```
CableJoG256
Edit        [y/n]
```


If you don't want to proceed then use the  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 there is no cable in the compare memory the display will show:-

```
EDIT
New Cable [y/n]
```



If you intended to edit an existing cable then use the  key to move the cursor under the n 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:-

```
EDIT
Sel. Conns. [y/n]
```

If you just want the pin label to be it's address (1to256) then use the  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:-

```
EDIT
A: 64w IDC [y/n]
```

Press ENTER or  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
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     keys to change the address to any within the 256 pins.

```
Menu SETUP    9
```

```
TEST DISPLAY  3
```


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    [y/n]
```

```
SETUP
PF+Err    [y/n]
```

```
SETUP
PF+Cons   [y/n]
```

If the option shown is what you require then press ENTER, other wise use the  key to move under the n character and press ENTER, the display will move onto the next option.

```
SETUP
PF+Er+Con [y/n]
```

The various options are:-

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.

```
SETUP
PF only    [y/n]
```

This means that PASSED or FAILED messages will be displayed along with an ERROR report at the end of the Test program.

```
SETUP
PF+Err    [y/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.

```
SETUP
PF+Cons   [y/n]
```

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.

```
SETUP
PF+Er+Con [y/n]
```

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


```
Menu SETUP 0000 2
```

```
BEEP 00000000 1
```


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:-

```
SETUP 00000000
BEEP OFF [y/n]
```


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

```
SETUP 00000000
BEEP PASS [y/n]
```

The display will show:-

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

```
SETUP 00000000
BEEP ON [y/n]
```

Pressing ENTER when the cursor is under the **Y** character will cause that option to be set and the display will return to the date and time option.

```
Menu EDIT 0000 5
```

```
Edit New Cable
```


Should you see:-

```
LEARN 00000000
Err Pin addr>256
```


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:-

```
EDIT 00000000
B: No More [y/n]
```

The connector identifier has now changed to B: and should the cable only have one connector then use the  key to select **Y** and press ENTER to finish.

```
EDIT 00000000
B: 64w IDC [y/n]
```

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 selection:-

```
EDIT 00000000
Pin 1 addr 065
```

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:-

```
LEARN 00000000
Err Conn Too Big
```


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

```
Menu 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
Edit 01      [y/n]
```





If this is not the right cable then use the  key to position the cursor under the **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:-


```
EDIT
Edit Pins   [y/n]
```

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  key to position the cursor under the **n** character and press ENTER, otherwise the display will show:-

```
EDIT
001 Label A01
```

The first three characters(001) represent the pin address, see the Fundamentals chapter for details on pin addresses and connector pins, use the     keys to move around the addresses until the correct one is displayed, press ENTER.

```
EDIT
001 Label 001
```

The cursor is now under the label that will represent 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  key to go back to editing the label, otherwise press ENTER again to accept the new label.

```
EDIT
001 Label A01 e
```


The display will change from:-

```
EDIT
Label Changed e
```

To:-

And:-

```
EDIT
Another     [y/n]
```

If another label is to be edited then press ENTER, other wise press the  key to move the cursor under the **n** key and press ENTER.

```
Menu SETUP    9
```

```
DATE & TIME  0
```

This menu deals with the setting/changing of system parameters.


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 display changes to:-

```
CableJoG256
Setup       [y/n]
```



If you don't want to change the system parameters then press  to select **n** then press ENTER. This will take you back to the main menu. Otherwise press ENTER to continue. The display will show the first option:-

```
SETUP
DATE & TIME  0
```

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

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

```
SETUP
13:05 01/08/00
```

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:-


```
SETUP
DATE 01/08/00 e
```

and new time:-

```
SETUP
Time 13:05:01 e
```

Press ENTER:-

```
SETUP
      OK? [y/n]
```

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.



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

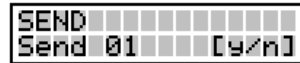
If the display shows:-

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 key to move the cursor under the **n** character and then press ENTER, this will take you to the Remote Link option (see page72) 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 cable you want to send the details of then use the 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 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:-



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



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

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

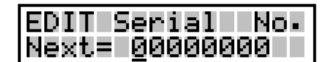


With the option set to continue each tested cable will be numbered and the number will be a continuation of the fundamental serial number (see SETUP for details on the fundamental serial number). Use the key to move onto the next option, or press ENTER to accept the continue option.



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.



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 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.


```
Menu RECEIVE 007
```

If you entered **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 **←** 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:-

```
CableJoG256
Remote Link ON
```

```
Menu EDIT 005
```

```
Edit Test Mode
```

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:-

```
EDIT
Edit Test [y/n]
```

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

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

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

```
EDIT Test Type
TEST = NO LOOP
```

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 Type
TEST = LOOP
```

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.
```

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

Mode 4 - Staged testing, actual test mode is as for continuous, but once passed the NEXT stage is automatically loaded. The display will show:-

```
EDIT Test Type
TEST = STAGED
```

If this is what you require then press ENTER, otherwise use the **↑** 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.

```
EDIT Test Stage
Stage Number 01
```

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.

