Test Equipment Depot
1-800-517-8431
99 Washington Street
Melrose, MA 02176
Fax 781-665-0780
TestEquipmentDepot.com

B&K PRECISION

MODEL 575A HANDHELD DIGITAL IC TESTER

OPERATOR'S MANUAL

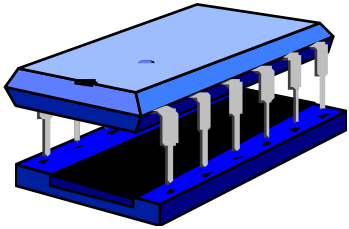
Copyright © 1992-2007 B&K Precision Corp.

CONTENTS

Copyright © 1992-2007 B&K Precision Corp.

Copyright © 1992-2007 B&K Precision Corp.

1. introduction



Thank you for purchasing the B & K Precision Model 575A Hand Held Digital IC Tester.

The basic function of the B & K Model 575A Digital IC Tester is to test a digital IC for correct logical functioning as described in the truth table and/or function table. The B & K Model 575A applies the necessary signals to the inputs of the IC, monitoring the outputs at each stage and comparing them with the expected states. Any discrepancy results in a FAIL indication and the faulty pins are shown on the integral display. Additional facilities are also provided, amongst them test loops that can be used for goods inwards inspection, detecting intermittent faults or simply providing a rapid method of exercising any IC for demonstration or educational purposes. Since the B & K Model 575A contains an extensive IC library, it is not necessary to program the unit yourself other than to key in the IC number. It is also capable of identifying an unknown IC using the SEARCH mode - this is a feature that many users will find extremely valuable.

The B & K Model 575A is provided with an RS-232 interface enabling it to be connected to a companion software package called CompactLink running on a PC. CompactLink allows test programs for ICs not included in the internal library to be developed and downloaded into the B & K Model 575A memory to enhance the library according to your wishes.

2. DC input

The B & K Model 575A is powered by four AA batteries or by the use of the battery eliminator input at the rear of the case. To insert the batteries, turn the unit upside down and remove the battery

Copyright © 1992-2007 B&K Precision Corp.

cover by removing the two cross head screws holding it in place. The batteries must be inserted in the correct orientation, as indicated by the drawing within the battery compartment. Incorrect insertion of batteries will not allow the unit to operate. Replace the battery cover and insert the screws. If the battery voltage falls too low, a low battery warning symbol will be displayed at the top left hand cell of the display in normal operating mode. A low battery warning will also be displayed during a result display. Test results may be inconsistent under these conditions.

3. battery eliminator

An external battery eliminator is available for prolonged use of the B & K Model 575A. Many bipolar LSI ICs consume a large amount of current when powered up, and battery life can be conserved by using the eliminator. There is no need to remove the batteries prior to inserting the battery eliminator. However, please note that during prolonged periods of non-use batteries are prone to leakage and should be removed. Note that to avoid damage to the unit we strongly advise that you only use the recommended battery eliminator that is available by contacting your distributor. Note that using an incorrect battery eliminator voltage may damage the unit and invalidate the warranty.

Copyright © 1992-2007 B&K Precision Corp.

Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176

FAX 781.665.0780 - TestEquipmentDepot.com

4. switching on

To switch the unit on, simply press the 'ON' key. To preserve battery life, the unit powers itself off after approximately 3 minutes of non-use or when “Sw Off” is selected from the main menu. When the unit is switched on, it first performs a self-diagnosis test. Therefore, before switching on, check that the test socket is empty to prevent interference with the diagnostics. If the unit passes the self-test, a pass result will be displayed on the screen. Press a key to enter the main operating mode - the display will be as follows:

```
NO:
MODE:Single:RDY
```

When this initial display is obtained the B & K Model 575A is ready for use. If, however, the message SELF-TEST FAIL: is displayed along with a fault message, this indicates that a self-test diagnostic fault has been detected. Any detected faults will be displayed one at a time. Pressing the TEST/EXEC key will then revert to the opening menu as above, but of course operation of the unit will then be suspect. Before contacting your distributor, check that the test socket is completely empty.

Copyright © 1992-2007 B&K Precision Corp.

5. operating modes

The B & K Model 575A has a number of test modes that are selected using the MODE/CLEAR key from the initial screen. The test modes are as follows:

Single	- execute a single test on the IC in the socket.
Loop	- execute test repeatedly, regardless of the result.
P Loop	- execute test repeatedly, provided the result was PASS.
F Loop	- execute test repeatedly, provided the result was FAIL.
Search	- identify the number of the IC in the socket.
Diags	- execute the diagnostic self-test.
CmLink	- enter remote mode for CompactLink software.
Sw Off	- turn off the unit.

6. entering test numbers

Press the MODE/CLEAR key until the desired test mode is displayed. Enter the number of the IC you wish to test. Pressing the MODE/CLEAR key will clear the last digit from the display if a mistake is made.

Note: The NUMERIC information only is entered, leaving out the manufacturers prefixes and suffixes and IC family information. As an example, all the following TTL ICs should be entered as 7, 4, 0, 0 on the keypad:

e.g. DM74LS00J, N74LS00N, N74S00N, N7400N, 74ALS00N, SN74HCT00

A very small number of ICs have differing pin-outs for different IC families - in these cases, the most popular pin-out only is supported. The CMOS 4000 series is also supported and the IC numbers for this family should all begin with "4", so that with for example Motorola ICs beginning MC14... the initial "1" should be omitted. The same principles apply also to memory ICs, which are mostly four digit numbers. With interface ICs of the 8T series the "T" should be omitted. A complete list of all ICs supported by the B & K Model 575A is contained in the IC SUPPORT LIST at the end of this

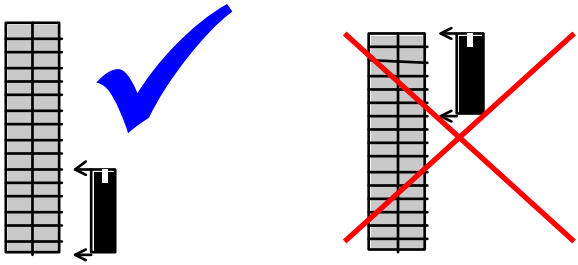
Copyright © 1992-2007 B&K Precision Corp.

manual together with notes on any special requirements for certain ICs.

Note that if you have stored a user library using CompactLink, an IC in the user library with the same number as one in the internal library will take precedence. This allows a new test to be written for an existing IC. If you wish both tests to be available, use a different number for your user test.

7. testing the IC

Insert the IC to be tested in the front of the 40 pin Zero Insertion Force socket with pin 1 towards the display as shown below:



Ensure that the operating lever on the socket is in the open (i.e. up) position before inserting the IC. Close the socket by lowering the lever, making sure that the IC is firmly seated in the socket and making good contact. Press the TEST/EXEC key to activate the test sequence for the IC. If an invalid IC type number was entered, or if the IC you have requested is not supported the message "Unknown" will be displayed. Simply entering another IC type number will automatically clear this error message. If a valid type number was entered, the IC test will begin and the message "BUSY" will be displayed while the test proceeds. Many of the tests, however, execute so quickly that this message is not noticeable.

Copyright © 1992-2007 B&K Precision Corp.

8. test results

A pre-determined sequence of signals is applied to the inputs of the IC and the IC outputs are monitored for the correct logic levels. The unit uses TTL or CMOS logic thresholds (depending on the selected IC) when evaluating the response of the IC outputs. If all the outputs respond correctly, the result PASS will be displayed at the top right of the display. A scrolling message will contain the IC function and power pin information.

If a short circuit between the power pins of the IC is detected, a warning ‘SHT!' will appear on the top right of the display and, since no valid test is then possible, the result will FAIL. If the IC under test takes an excessive amount of current when power is applied, a warning 'ICC!' will appear. Press the TEST/EXEC key to continue with the test, or MODE/CLEAR to abandon. Depending on the condition of the batteries there may also be a ‘BAT!’ warning which indicates that the batteries are incapable of supplying the current required by the IC under test. You can continue with the test by pressing the TEST/EXEC key, but the unit may malfunction because of a drop in battery voltage. To avoid this, change the batteries or use a battery eliminator. Note that a faulty IC may demand more operating current and therefore will quickly drain the batteries.

Copyright © 1992-2007 B&K Precision Corp.

In the case of a FAIL result, the error conditions at all the non-functional pins of the IC will be scrolled on the display, and the IC function will be shown. The various failure conditions that can be displayed are as follows:

LOW	- the output was LOW when HIGH was expected.
MID LOW	- the output was LOW, but not a valid logic level.
HIGH	- the output was HIGH when LOW was expected.
MID HIGH	- the output was HIGH, but not a valid logic level.
LOAD 0V	- the input cannot be driven HIGH.
LOAD 5V	- the input cannot be driven LOW.

In some cases, the scrolling test results may include one or more WARNING indications. These warnings indicate conditions that may result in an incorrect test result, and are as follows:

D/F	- result may be invalid because last self-test failed.
BAT	- battery voltage too low during test.
ICC	- large current taken by IC under test.

Before discarding a failed IC check that the correct IC type number was entered and also check that the IC pins are clean and making good contact with the test socket. Note that there is no way of stopping a test once it has commenced, but see the description of loop functions later in this manual.

9. testing further ICs

After a test is completed, the test result will be displayed. To test another IC of the same type, simply insert the next IC and press the TEST/EXEC key again. To test a different IC, enter the new IC type number in the usual way, noticing that pressing the first digit of the new number automatically clears the previous number from the display. Remember that the MODE/CLEAR key can be used if an error is made during the entry of the IC type number.

Copyright © 1992-2007 B&K Precision Corp.

Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176

FAX 781.665.0780 - TestEquipmentDepot.com

10. continuous testing

It is possible to test the same IC repeatedly to detect intermittent or temperature-related faults, or to rapidly test a batch of identical ICs. There are three types of test loop modes:

Loop - execute a test repeatedly, regardless of the result.
P Loop - execute a test repeatedly, provided the result is PASS.
F Loop - execute a test repeatedly, provided the result was FAIL.

The B & K Model 575A is configured into one of the loop modes using the MODE/CLEAR key as described earlier. Insert the IC and press TEST/EXEC in the usual way to start the continuous test process. The result of each test is displayed as PASS or FAIL on the top right of the display. In LOOP mode, this allows a large batch of identical ICs to be tested, without any action on the part of the operator other than inserting the IC. When the IC is inserted, sufficient time must be allowed for the test to take place before the result status is updated, so if in doubt the IC should be tested in single mode so that the approximate test time can be determined. It will be found that high throughput can be obtained using this mode.

To stop any of the test loops, press MODE/CLEAR, but note that the test in progress is completed before the command is obeyed. The effect of this is usually unnoticeable, but where the test takes a reasonable time to execute there will be a delay before the instrument responds to the MODE/CLEAR key.

Note: Testing high current ICs in loop mode will drain the batteries quickly, and it is recommended that a battery eliminator is used if you wish to perform loop tests.

11. search mode

This feature allows the type number of an unknown IC to be determined, provided the IC is actually contained in the B & K

Copyright © 1992-2007 B&K Precision Corp.

Model 575A library, and it is a correctly functioning IC. This facility is useful when the IC type number is illegible or has been removed.

Use the MODE/CLEAR key to choose SEARCH mode, insert the unknown IC into the socket and press the TEST/EXEC key. You will be prompted to choose the number of pins of the IC you wish to identify - use the MODE/CLEAR key to select from 8 to 40 pins or 'QUIT' to abandon this mode. Press the TEST/EXEC key again to start the SEARCH or to quit as required.

During the identification process the display will indicate the number of ICs identified (IDENT:) and will show graphically how far through the library the SEARCH has progressed. At the end of the SEARCH, a list of all the similar ICs will be scrolled onto the display. The list may be scrolled again by pressing the TEST/EXEC key.

If the IC cannot be identified the message "Not in Library" will be displayed. This means either that the IC is not in the library or it is non-functional. Note that if the B & K Model 575A detects excessive supply current (ICC! or BAT! warnings), the IC will not be identified during the SEARCH, but can still be tested in SINGLE mode.

If you have a user library present the search will extend to user ICs in that library also. However, CompactLink contains a facility for excluding ICs from the search if required.

12. self test mode

This feature allows you to check the integrity of the unit, including the pin drivers and receivers, power supplies and other internal hardware. The test executes automatically at switch on, but you can if you wish perform a self-test at any time by selecting Self-Test (DIAGS) mode using the MODE/CLEAR key and pressing TEST/EXEC.

If a fault is discovered a brief description will be displayed which will help our engineers to locate and rectify the fault. This message

Copyright © 1992-2007 B&K Precision Corp.

should be noted and quoted in any correspondence relating to a unit fault. Contact your distributor in the event of a self-test fail, but first of all ensure that the socket was empty when the diagnostics were run.

13. CompactLink mode

The B & K Model 575A is provided with an RS-232 interface to connect to a PC with a serial COM port or using a USB to RS-232 converter. A companion software package CompactLink is available which provides library management, test development and debugging and user library update facilities. You can also use CompactLink to update the software of your B & K Model 575A without replacing the internal memory or opening the case.

To enter CompactLink mode, user the MODE/CLEAR key to enter CMLINK mode, then press TEST/EXEC. Press TEST/EXEC again to confirm that you wish to enter CompactLink mode, and the display will show “Not Connected”. Run the CompactLink software on your PC, connect the serial cable and follow the CompactLink manual instructions to connect to the B & K Model 575A.

For comprehensive instructions on using CompactLink please refer to the manual and built-in help supplied with the software.

Note that in CompactLink mode, including waiting for a connection, the normal power down timeout is disabled and the unit will remain on for ever. We recommend using a battery eliminator when using CompactLink mode to develop test programs.

Copyright © 1992-2007 B&K Precision Corp.

14. specifications

SPECIFICATIONS		
Batteries	4 X AA size	
DC input	6V, 850mA max, center positive, regulated	
Power consumption	Power off	10µA max
	Standby	30mA
	Testing	IC dependent
Test thresholds (internal library)	TTL low	0.5V max
	TTL switching	1.2V
	TTL high	2.4V min
	CMOS low	0.5V max
	CMOS switching	2.4V
	CMOS high	3.8V min
Test thresholds (user library)	Programmable 0V to 5V (using CompactLink)	
RS-232 settings	38400 baud, 8 data bits, 1 stop bit, no parity	
Dimensions	200mm X 100mm X 55mm approx.	
Library ICs	TTL, CMOS, VLSI, Interface, Memory, User	

Copyright © 1992-2007 B&K Precision Corp.

Software Version No.
BK575A 2.02

15. IC support list

15.1. introduction

This section is a complete list of the ICs supported by the B & K Model 575A. If there are any special requirements necessary for a particular IC, there will be a number in brackets referring to the notes at the end of this manual. Always consult this list before testing an IC you have not tested before, particularly when there is a note to refer to.

15.2. series 54/74 TTL ICs

7400	7431	7476	74120
7401	7432	7477	74122 (3)
7402	7433	7478	74123 (3)
7403	7437	7480	74125
7404	7438	7482	74126
7405	7439	7483	74128
7406	7440	7485	74132
7407	7442	7486 (2)	74133
7408	7443	7489	74134
7409	7444	7490	74135
7410	7445	7491	74136
7411	7446	7492	74137
7412	7447	7493	74138
7413	7448	7494	74139
7414	7449	7495	74140
7415	7450 (1)	7496	74143
7416	7451 (2)	7497	74144
7417	7453 (1)	74100	74145
7418	7454 (2)	74104	74147
7419	7455	74105	74148
7420	7456	74107	74150
7421	7457	74109	74151
7422	7460	74110	74152
7423	7464	74111	74153
7424	7465	74112	74154
7425	7470	74113	74155
7426	7472	74114	74156
7427	7473	74116	74157
7428	7474	74118	74158
7430	7475	74119	74159

Copyright © 1992-2007 B&K Precision Corp.

Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176
FAX 781.665.0780 - TestEquipmentDepot.com

74160	**74241**	**74355**	**74465**
74161	**74242**	**74356**	**74466**
74162	**74243**	**74357**	**74467**
74163	**74244**	**74363**	**74468**
74164	**74245**	**74364**	**74470 (6)**
74165	**74246**	**74365**	**74471 (6)**
74166	**74247**	**74366**	**74472 (6)**
74167	**74248**	**74367**	**74473 (6)**
74168	**74249**	**74368**	**74474**
74169	**74251**	**74373**	**74475**
74170	**74253**	**74374**	**74490**
74171	**74257**	**74375**	**74518**
74173	**74258**	**74376**	**74519**
74174	**74259**	**74377**	**74520**
74175	**74260**	**74378**	**74521**
74176	**74261**	**74379**	**74522**
74177	**74265**	**74381**	**74533**
74178	**74266**	**74382**	**74534**
74179	**74273**	**74384**	**74540**
74180	**74276**	**74385**	**74541**
74181	**74278**	**74386**	**74543**
74182	**74279**	**74387 (6)**	**74560**
74183	**74280**	**74390**	**74561**
74184	**74281**	**74393**	**74563**
74185	**74283**	**74395**	**74564**
74188 (6)	**74284**	**74398**	**74568**
74189	**74285**	**74399**	**74569**
74190	**74287 (6)**	**74408**	**74573**
74191	**74288 (6)**	**74412**	**74574**
74192	**74289**	**74415**	**74576**
74193	**74290**	**74422 (3)**	**74580**
74194	**74293**	**74423 (3)**	**74590**
74195	**74295**	**74425**	**74591**
74196	**74298**	**74426**	**74592**
74197	**74299**	**74436**	**74593**
74198	**74300**	**74437**	**74595**
74199	**74301**	**74440**	**74596**
74200	**74322**	**74441**	**74597**
74201	**74323**	**74442**	**74604**
74224	**74347**	**74443**	**74605**
74225	**74348**	**74444**	**74606**
74230	**74350**	**74445**	**74607**
74231	**74351**	**74446**	**74620**
74237	**74352**	**74447**	**74621**
74238	**74353**	**74448**	**74622**
74240	**74354**	**74449**	**74623**

Copyright © 1992-2007 B&K Precision Corp.

74638	74670	74832	741032
74639	74671	74867	741035
74640	74672	75869	741240
74641	74682	74873	741241
74642	74683	74874	741242
74643	74684	74876	741243
74644	74685	74878	741244
74645	74688	74879	741245
74646	74689	74880	741620
74647	74690	74906	741621
74648	74691	74907	741622
74649	74692	74929	741623
74651	74693	741000	741638
74652	74696	741002	741639
74653	74697	741003	741640
74654	74698	741004	741641
74657	74699	741005	741642
74666	74760	741008	741643
74667	74804	741010	741644
74668	74805	741011	741645
74669	74808	741020	

15.3. CMOS ICs

Note: 74C/HC/HCT ICs are listed in the TTL section

4000	4024	4056	4094
4001	4025	4060	4098 (3)
4002	4026	4063	4099
4006	4027	4066	4104
4007	4028	4067	4106
4008	4029	4068	4160
4009	4030	4069	4161
4010	4031	4070	4162
4011	4032	4071	4163
4012	4035	4072	4174
4013	4038	4073	4175
4014	4040	4075	4192
4015	4041	4076	4193
4016	4042	4077	4194
4017	4043	4078	4195
4018	4044	4081	4240
4019	4049	4082	4244
4020	4050	4085	4245
4021	4051	4086	4373
4022	4052	4089	4374
4023	4053	4093	4501

Copyright © 1992-2007 B&K Precision Corp.

4502	**4528 (3)**	**4572**	**40161**
4506	**4530**	**4583**	**40162**
4507	**4531**	**4584**	**40163**
4508	**4532**	**4585 (4)**	**40174**
4510	**4538 (3)**	**4599**	**40175**
4511	**4539**	**4724**	**40181**
4512	**4541**	**4731**	**40192**
4514	**4543**	**40085**	**40193**
4515	**4544**	**40097**	**40194**
4516	**4547**	**40098**	**40195**
4517	**4555**	**40102**	**40240**
4518	**4556**	**40103**	**40244**
4519	**4557**	**40104**	**40245**
4520	**4558**	**40106**	**40373**
4522	**4559**	**40107**	**40374**
4526	**4560**	**40109**	**5029**
4527	**4561**	**40160**	**22100**

15.4. memory ICs

1220	**2k * 8**	**5256**	**256k * 4**
1403	**16k * 1**	**5516**	**2k * 8**
2015	**2k * 8**	**5517**	**2k * 8**
2016	**2k * 8**	**5518**	**2k * 8**
2102	**1k * 1**	**6104**	**4K * 1**
2111	**256 * 4**	**6116**	**2k * 8**
2112	**256 * 4**	**6167**	**16k * 1**
2114	**1k * 4**	**62256**	**32k * 8**
2141	**4k * 1**	**6264**	**8k * 8**
2142	**1k * 4**	**6810**	**128 * 8**
2147	**4k * 1**	**7164**	**16k * 4**
2148	**1k * 4**	**7185**	**8k * 8**
2149	**1k * 4**	**7186**	**8k * 8**
2600	**64K * 1**	**7489**	**16 * 4**
2700	**256 * 1**	**74189**	**16 * 4**
2703	**16 * 4**	**74200**	**256 * 1**
3101	**16 * 4**	**74201**	**256 * 1**
4164	**64k * 1**	**74289**	**16 * 4**
41256	**256k * 1**	**74300**	**256 * 1**
41257	**256k * 1**	**74301**	**256 * 1**
41464	**64k * 4**	**74929**	**1k * 1**
4256	**256k * 1**	**8225**	**16 * 4**
4416	**16k * 4**	**2716**	**2k * 8 EPROM (6)**
4464	**8k * 8**	**2732**	**4K * 8 EPROM (6)**
4532	**32K * 1 (5)**	**2764**	**8K * 8 EPROM (6)**
4816	**16k * 1**	**27128**	**16K * 8 EPROM (6)**
5110	**1024k * 1**	**27256**	**32K * 8 EPROM (6)**

Copyright © 1992-2007 B&K Precision Corp.

27512	64K * 8 EPROM (6)
27101	128K * 8 EPROM (6)
271001	128K * 8 EPROM (6)
1410	256 * 4 PROM (6)
1822	256 * 8 PROM (6)
1830	32 * 8 PROM (6)
1842	512 * 8 PROM (6)
1846	512 * 8 PROM (6)
74188	32 * 8 PROM (6)
74287	256 * 4 PROM (6)
74288	32 * 8 PROM (6)
74387	256 * 4 PROM (6)
74470	256 * 8 PROM (6)
74471	256 * 8 PROM (6)
74472	512 * 8 PROM (6)
74473	512 * 8 PROM (6)
74474	512 * 8 PROM (6)
74475	512 * 8 PROM (6)

15.5. interface, peripheral, microprocessor and LSI ICs

75... SERIES

75113
75114
75121
75122
75123
75124
75125
75127
75128
75129
75136
75138
75146
75151
75153
75158
75159
75160
75161
75163
75172
75173
75174
75175
75183
75189
75192
75194
75195
75401
75402
75403
75404
75416
75417
75418
75419
75451
75452
75453
75454
75465
75466
75468
75469
75476
75477
75478
75479
75491
75492

ULN2... SERIES

2001
2003
2004
2005
2064
2065
2066
2067
2068
2069
2070

DS88.. SERIES

8815
8830
8831
8837
8838
8881
8885

8T SERIES

8T13 use 813
8T14 use 814
8T23 etc
8T24
8T26
8T28
8T38
8T97
8T98
8T127
8T128
8T129

82... SERIES

8234
8251
8266
8273

25/26/29... SERIES

2510
2514
2515
2518
2522
2595

Copyright © 1992-2007 B&K Precision Corp.

252517
252521
252536
252568
252569
2610
2611
2631
2632
2633
2901
2902
2907
2908
2911
2918
2922
2924
29821
29822
29823
29824
29825
29826
29841
29842
29843
29844
29845
29846

MC68... SERIES
6800
6802
6805 (12)
6818
6820
6821
6845
6850
6880
6887
6888
6889
68681

MC34... SERIES
3438
3446
3486
3487

Z80... SERIES
780 Z80 CPU
8400 Z80 CPU
8420 Z80 PIO
8430 Z80 CTC
8440 Z80 SIO
8442 Z80 SIO-2
8470 Z80 DART

MC65... SERIES
6502
6510
6520
6522
6545
6551

INTEL SERIES
8031
8032
8039 (9)
8040 (9)
8042 (8)
8085
8088 (7)
8155
8156
8212
8216
8226
8228
8237
8243
8250
8253
8254
8255
8259
8279
8282
8283
8286
8287
8288
8289
8755 (6)

MISCELLANEOUS
1005
1006
1489
384
491
492
5452
54563
54564
58167
6595
7641
8131
8136
8160
8230
8252
8262
8277
8641
9014
9301
9309
9312
9314
9324
9328
9338
9347
9348
9614
9640
9641
9901
9902 (10)
9995 (11)

Copyright © 1992-2007 B&K Precision Corp.

Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176
FAX 781.665.0780 - TestEquipmentDepot.com

15.6. notes on TTL ICs

Note 1: The 7450 and 7453 ICs have non-TTL compatible expander inputs that are often not used in designs. These inputs are not tested.

Note 2: The 74LS51 and 74LS54 have differing pin connections and functions from the standard 7451 and 7454 ICs. The test assumes that the 'LS version is being tested - to test the standard version use the numbers 7450 and 7453 respectively. In addition, the 74L86 IC has a different pin out to the standard 7486 ICs, but it can be tested using the 74386 test.

Note 3: When testing these ICs the warning "EXT" will appear on the LCD display. This means that external timing components are required to test the IC. The timing components should be inserted into the socket as given in following table:

IC	COMPONENTS
74122/74422	2.2µF between pins 24 and 26 of the ZIF socket, +ve to pin 26
74123/74423	2.2µF between pins 18 and 19 of the ZIF socket, +ve to pin 19
	2.2µF between pins 27 and 26 of the ZIF socket, +ve to pin 27
4528/4538/4098	0.22µF between pins 13 and 14 of the ZIF socket.
	0.22µF between pins 27 and 26 of the ZIF socket.

15.7. notes on CMOS ICs

Note 4: Certain differences exist between manufacturers parts with this IC which may cause a FAIL result with ICs other than (Motorola) MC14585 ICs. Consult the data sheets for full details.

15.8. notes on memory ICs

Note 5: The 4532 32k DRAM is in fact a partially non-functional 64k DRAM. Four types exist, manufactured by OKI and TI who each supply two types. The type numbers 45321 and 45322 are used for OKI types, and 45323 and 45324 are used for TI types. The first number in each case is for the low array version, and the second number for the high array version. See the IC data sheets for further details.

Copyright © 1992-2007 B&K Precision Corp.

Note 6: The ROM/EPROM tests perform a blank check and checksum on the IC, and display the contents of the first 16 locations. These tests cannot confirm the integrity of an IC, or identify it in SEARCH mode, since they have no knowledge of the intended contents of the EPROM. Please be patient when testing EPROMs in this way - some of the larger ICs take a long time to read.

15.9. notes on interface ICs

Note 7: The MOS version of this IC is internally dynamic, and the test may FAIL after a prolonged in-circuit LOOP test. The CMOS version, however, is completely static.

Note 8: The 8742 EPROM version of this IC must have the erase window covered otherwise the test may FAIL.

Note 9: The 8039 and 8040 ICs should be tested in FAIL LOOP mode due to the power down mode of the ICs affecting tester synchronization.

Note 10: This IC should only be tested in SINGLE MODE with a 1uF decoupling CAPACITOR connected across the supply and ground pins 29 and 20 of the ZIF socket (IC pins 18 and 9) due to its high supply current requirement.

Note 11: This IC requires a 1uF decoupling CAPACITOR to be connected across the supply and ground pins 10 and 31 of the ZIF socket due to its high supply current requirement.

Note 12: This IC may need to be tested in FAIL LOOP MODE.

Copyright © 1992-2007 B&K Precision Corp.

Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176

FAX 781.665.0780 - TestEquipmentDepot.com