General Specification

ELECTRICAL

Display:	1x16 character LCD dot matrix.
Battery Life:	
(Standby)	High Power (Carbon Zinc) - 1000 Hours. Ordinary (Alkaline) - 600 Hours.
Power Supply:	9VD 300mA AC adaptor (Polarity: center negative) or Four 1.5 "AA" batteries (optional)

PHYSICAL

Length:	6-5/16"	(160.34 mm)
Width:	4-5/16"	(109.54 mm)
Height:	2-1/8"	(53.98 mm)
Weight:	14 ounces	(435.6 mg)

ENVIRONMENT

Operating Temperature:	10ºC to 50ºC
Storage Temperature:	-20ºC to 80ºC

OTHER

Average Search Time:	0.8 second

APPENDIX: IC family and number

TTL 74 Series:

0000 0001 0002 0003 0004 0005 0006 0007 0008 0009
0010 0011 0012 0013 0014 0015 0016 0017 0018 0019
0020 0021 0022 0024 0025 0026 0027 0028
0030 0032 0033 0034 0035 0036 0037 0038 0039
0040 0041 0042 0043 0045 0046 0047 0048 0049
0050 0051 0052 0052 0053 0054 0054 0055
0060 0061 0063 0064 0065
0070 0072 0073 0074 0075 0077 0078 0078
0080 0081 0082 0083 0084 0085 0086 0087 0089
0090 0091 0092 0093 0094 0095 0096
0105 0107 0109 0110 0111 0112 0118 0114
0125 0126 0128
0132 0133 0134 0135 0136 0137 0138 0139
0140 0141 0142 0143 0144 0145 0147 0148
0150 0151 0152 0153 0154 0155 0156 0157 0158 0159
0160 0161 0162 0163 0164 0165 0166 0168 0169
0170 0173 0174 0175 0176 0177 0178 0179
0180 0821 0183 0184 0185 0189
0190 0191 0192 0193 0194 0195 0196 0197 0198 0199
0230 031
0240 0241 0242 0243 0244 0245 0246 0247 0248 0249
0251 0253 0257 0258 0259
0260 0265 0266
0273 0274 0276 0279
0280 0283 0289
0290 0293 0295 0298 0299
0322 0323
0347 0348
0350 0351 0352 0353
0363 0364 0365 0366 0367 0368
0373 0374 0375 0377 0378 0379
0382 0386
0390 0393 0395 0399
0412 0425 0426
0445 0447
0465 0466 0467 0468 0490 0518 0519
0520 0521 0522 0533 0534 0539
0540 0541 0563 0564 0573 0564 0576
0580 0620 0621 0622 0623 0638 0639
0640 0641 0642 0643 0644 0645 0646 0647
0652 0653
0668 0669 0670
0682 0683 0684 0685 0688 0689
0795 0796 0797 0798
0804 0805 0808 0810 081 0812
0827 0832 0841 0874
1000 1002 1003 1004 1005 1008 1011 1020
1034 1035 1036
1244 1245

CMOS 40 Series:

0000 0001 0002 0006 0007 0008 0009
0010 0011 0012 0013 0014 0015 0016 0017 0018 0019
0020 0021 0022 0023 0024 0025 0026 0027 0028 0029
0030 0032 0033 0035 0038
0040 0041 0042 0043 0044 0048 0049
0050 0051 0052 0053 0054 0055 0056
0060 0063 0066 0067 0068 0069
0070 0071 0073 0075 0076 0077 0078 0079
0081 0082 0085 0086
0093 0094 0095 0096 0097 0099
0100 0101 0102 0103 0104 0106 0109 0110 0147
0160 0161 0162 0163 0174 0175
0181 0182 0192 0193 0194 0257

CMOS 45 Series:

0001 0002 0003 0004 0006 0008
0010 0011 0013 0014 0015 0016 0017 0018 0019
0020 0022 0026 0027 0029 0032 0039
0043 0051 0053 0055 0056 0060 0061 0066
0072 0081 0084 0085

DRAM 41 Series:

4164
41256
411000
414000

DRAM 44 Series:

44464 (41464)
44256 (414256)
441000 (4141000)

LBT™

LBT-10

PORTABLE IC TESTER

INSTRUCTION MANUAL

LBT, INC.
3154 Main Street
Chula Vista, CA 91911
(619) 284-0210
FAX (619) 284-4567

Congratulations on your purchase of the LBT-1O. This state-of-the-art I.C. Tester will test and identify logic TTL, CMOS and Dynamic Ram. All of this is made possible by the use of a new and unique technology known as "fuzzy logic". The unit is small, portable and easy to use. LBT-1O will operate on either battery power (4 each of size AA - not included) or by the AC adaptor provided with unit.

Function Buttons

TYPE: This button selects the IC family.
(1) 74: TTL
(2) 40: CMOS
(3) 45: CMOS
(4) 41: DRAM
(5) 44: DRAM

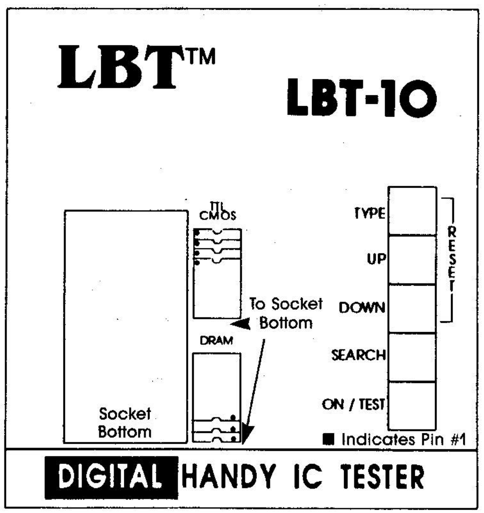
UP: This button allows the selection of the previous IC number for the type. For example: A number 7472 is found by pressing the up button; the display will read 747O.

DOWN: This button allows the selection of the next closest IC number for the type. For example: A number 7472 is found by pressing the down button; the display will read 7473.

SEARCH: This button is used for unknown logic. Works with TTL and CMOS only.

ON/TEST: Turns tester on - starts self test. Tests IC in socket.

TYPE & DOWN: By holding these two buttons down simultaneously - will turn the tester off. The tester will turn off automatically in 9O seconds if not in use to conserve power.



Preparation For Use

1. Install four 1.5 volt "AA" batteries in the compartment located to the underside of the tester. Batteries are not included.

2. The tester may also be powered by the AC adaptor (9 volt 3OOMA) provided. Plug the AC adaptor into the "DC IN" connection that is located in the rear of the tester.

3. Press the on/test button. This provides power and initiates the self test function. The tester will complete a self test within a few seconds. The LCD will display the "(version installed)" - Then a "System Check" - then a "System Ready" - provided that no error is detected.

* * * * * * **NOTE:** * * * * * *

If an error occurs during Self Test, the LCD will display "Self Test Error" and the Tester will automatically shut off within 45 seconds. Pressing the Type & Down buttons will turn the unit off immediately. Turn the Tester off.

1. Make sure there is sufficient power to the unit - check batteries -.
2. If using adaptor make sure 9 volts are available. Check the connection.
3. Remove all integrated circuits and make sure there ares no foreign objects in or on the socket. Press On/Test button. The Tester will run Self Test.
4. If the Tester still fails to operate properly - return the unit to the dealer.

! !

DO NOT ATTEMPT TO OPEN THE TESTER TO REPAIR
- - - - - - THIS WILL VOID THE WARRANTY - - - - - -
! ! ! ! ! ! ! ! ! ! ! !

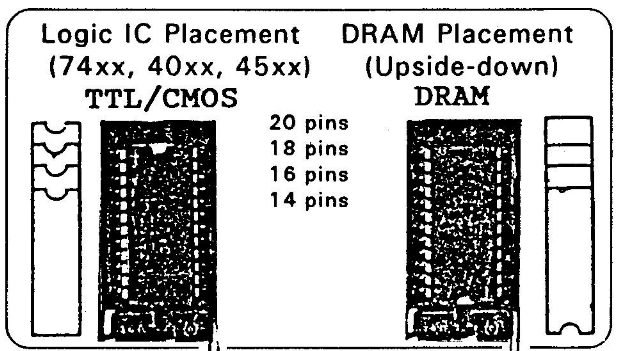


FIG. 2

Test Procedure

UNKNOWN LOGIC TTL or CMOS

* * * * * * **NOTE:** * * * * * *
This process will not work with DRAM.

1. Open the test socket by raising the lever to the vertical position. Insert the logic IC into the Tester socket with the notch or dot indicating Pin 1 to the top. The bottom pins of the logic IC Tester must be inserted into the bottom ports of the tester. Ensure to seat the IC as deeply into the socket as possible. See Figure 2. The ICs must be in the proper position prior to any testing. Care must be taken as to the placement with respect to direction, alignment, and socket depth. Close the lever.

2. Press On/Test button to turn the Tester on. After the Self Test is complete, press the Search button. The LCD will display "Logic IC Search". The first match IC number will appear as "(X) (IC Number) Find", where X is number of the IC family type, for example:
(1) 74: TTL
(2) 40: CMOS
(3) 45: CMOS

3. Press Search button again - The next match, if any, will appear. If no match is found - "Not Found" will appear.

4. Press the Test button:
- If the IC passes the LCD reads "Pass"
- If the IC fails the LCD reads "Fail"

Test Procedure

FOR KNOWN TTL, CMOS, DRAM

1. Press the Type button until the expected IC family appears on the LCD. For example:
(1) 74: TTL --- (2) 4O: CMOS --- (3) 45: CMOS
(4) 41: DRAM --- (5) 44: DRAM
This may also be accomplished with the Search button.

2. Press the Test button:
- If the IC passes the LCD reads "Pass"
- If the IC fails the LCD reads "Fail"

3. A message of "Empty" means either no IC has been installed or the locking lever has been left in the open position.

LBT-10 has been designed to conserve energy. The batteries may be expected to last 600 to 1000 hours of usage. The Tester is equipped with an auto turn off switch.