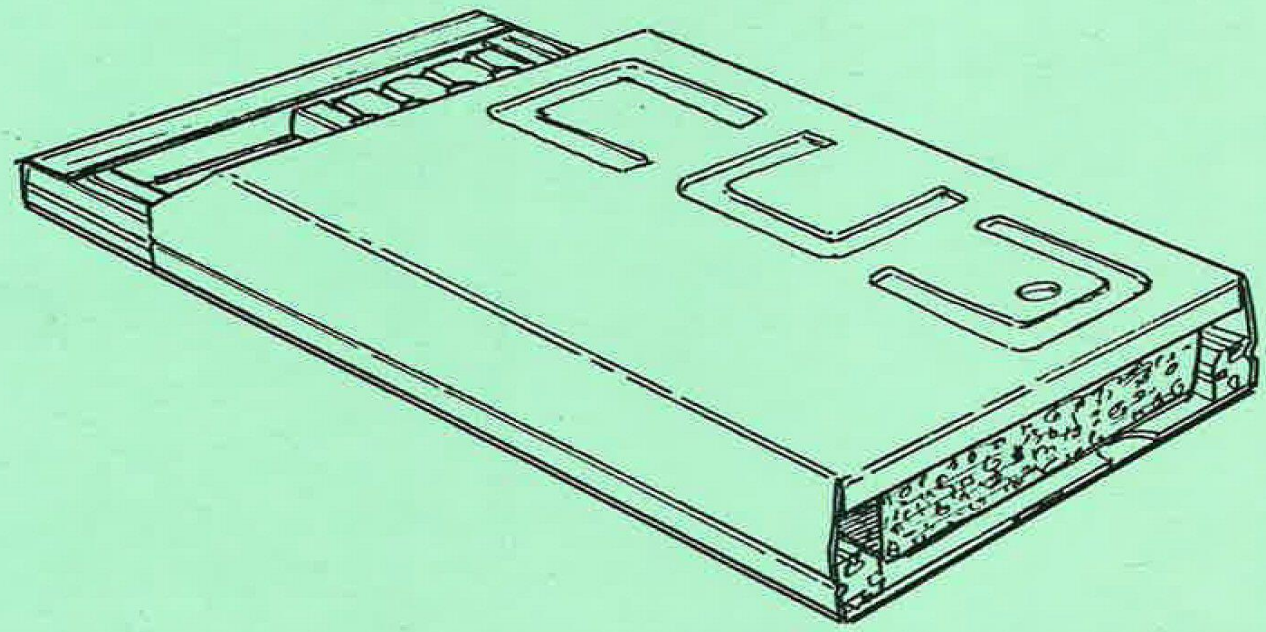
ELECTRONICS NETWORK DESIGNER



OPERATIONS MANUAL
ED 22NDC

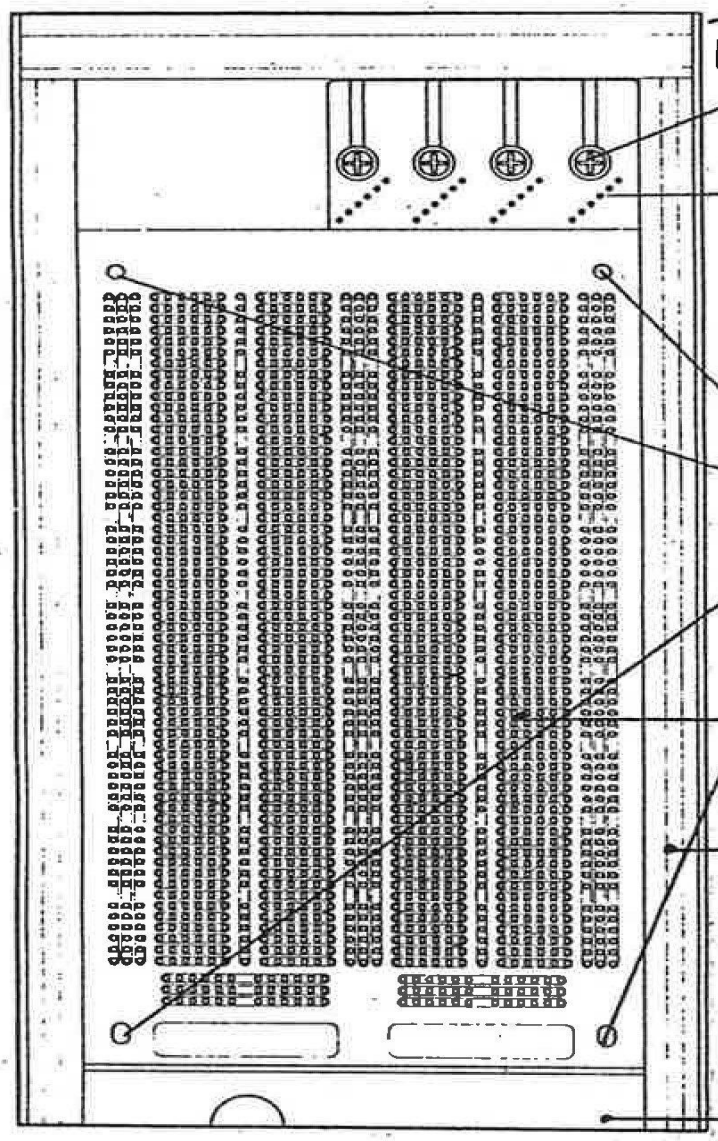
ELECTRONICS NETWORK DESIGNER

Introduction to the Electronics Network Designer

The Electronics Network Designer is system turning breadboarded prototype electronic circuits into hardwired circuits quickly. This product is unique in its design and is a valuable tool to professional engineers, students and hobbyists.

You have purchased the 2154 point END. This unit, like the larger 3400 point END, has features that are designed to make the production of soldered working circuits as simple and fast as possible. Some of the features of this model are listed below:

- High density of connections. 2154 insertion points on a 7.75" X 11" working area.
- 4 input terminals, each connected to six wire sockets to allow 24 input wires onto the board.
- 11 vertical tracks. Allow for greater power transmission around the board and greater density.
- Six-point connectors. The matrix uses six-point clips to increase the number of connections to IC's etc...
- Flexible connector design. Different styles of circuit boards are available with varying types of connectors including 8 position cardedge, DB-15 serial cable, 31 position cardedge connectors and screw post interconnections.
- Compact design. Tough all-metal construction and low profile design allow the END unit to be easily transported from lab to home.



BACKPLATE

INPUT CONNECTORS (4)
(Universal 6-32" screw thread)

OUTPUTS TO BOARDS (24)
(Each input terminal is served by six output terminals for distribution onto circuit board)

ALIGNMENT PINS (4)
(from matrix to circuit board)

CIRCUIT BOARD
(2154 Insertion Points)

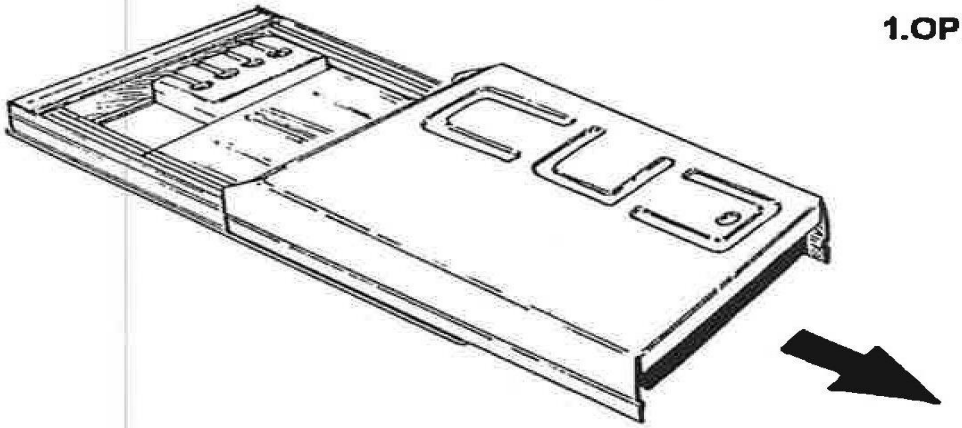
SIDE RAILS

SLIDING LOCK HOLD-DOWNS (2)
(on back surface)

FINGER PLATE

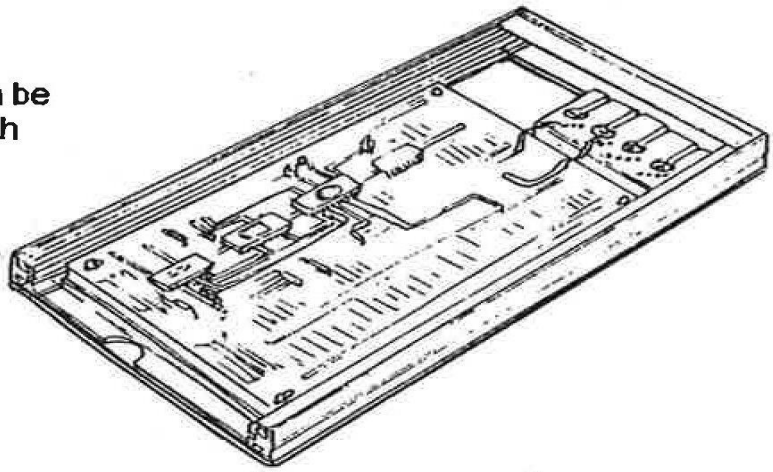
OPERATION OF THE END PRODUCT

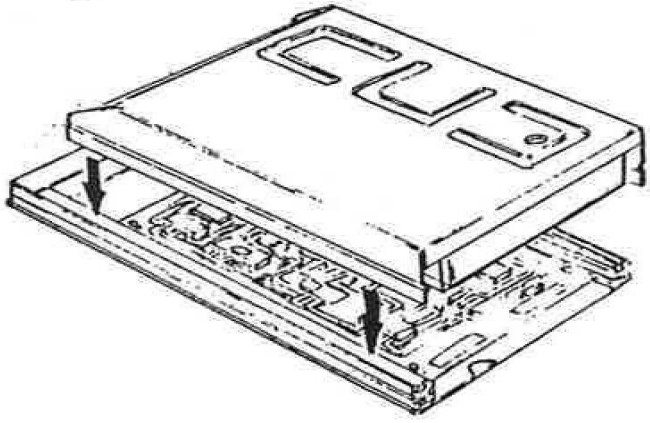
The operation of the tool is relatively simple and is explained in the following diagrams. Care in use and insertion of components will greatly reduce the chances of damage to the clip matrix and ensure a long product life.



1.OPEN THE END by removing the cover to expose the empty circuit board

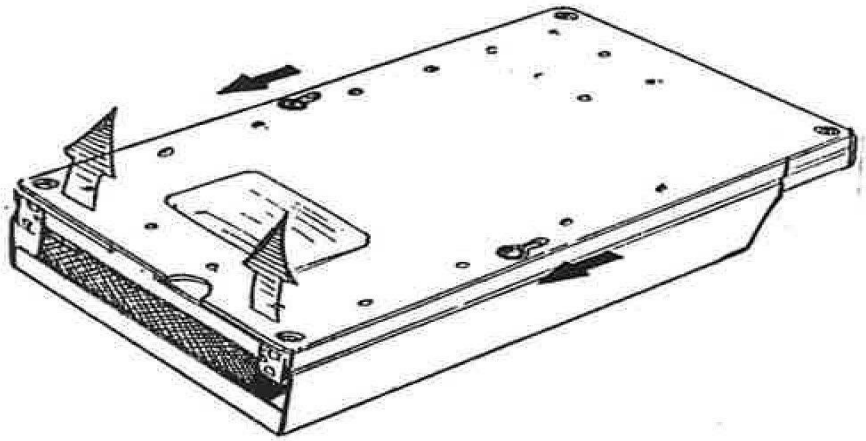
2. ASSEMBLE THE CIRCUIT
The perforated circuit board can be populated with component as with a conventional bread board. Jumper wires are used to connect components to each other to complete the circuit.



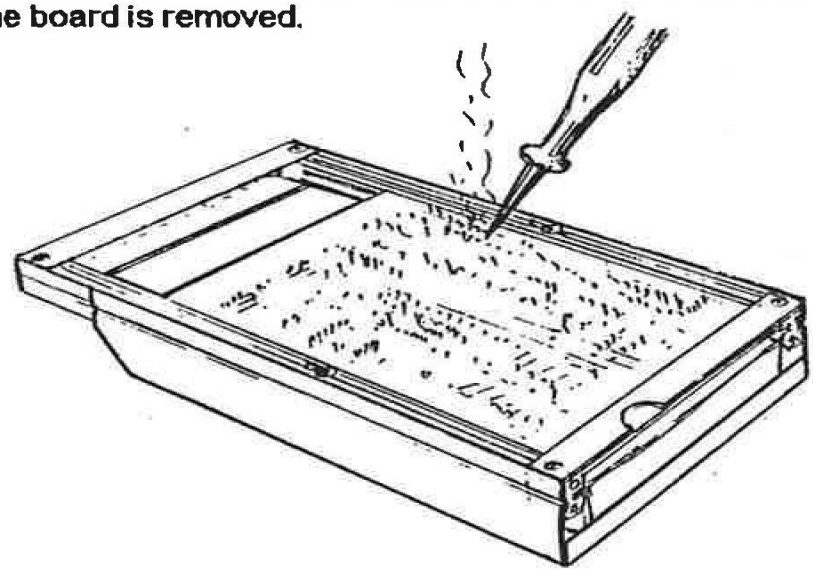


3. CLOSE THE END
When the circuit is completed the cover is snapped into position over the working area. This compresses the foam against the components and holds them in place. Small components that are close to larger ones may need to be taped in position to prevent them from falling out.

4- Turn the closed **END** unit over.
Ensure that it is on a protective surface to prevent scratching, and carefully lift the backplate up to separate the component leads from the clip matrix.
It may be useful to carefully press the edges up with a screw driver or any other flat object.

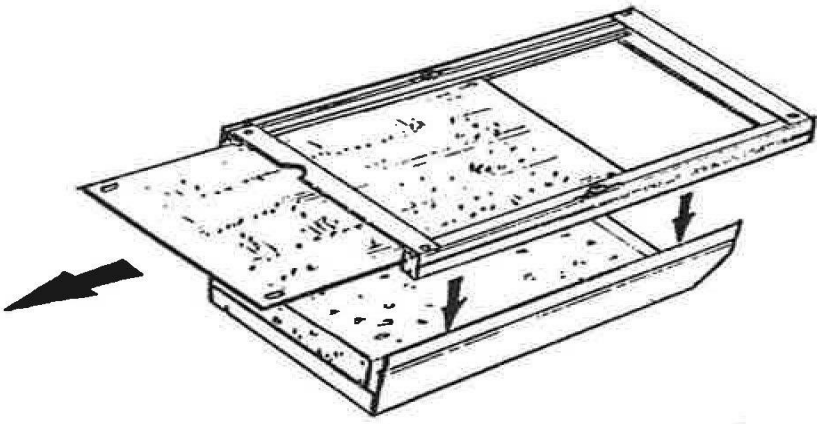


This should be done with extreme care to ensure that all component leads are visible on the back-side of the circuit board. Leads that fall down can be soldered later after the board is removed.

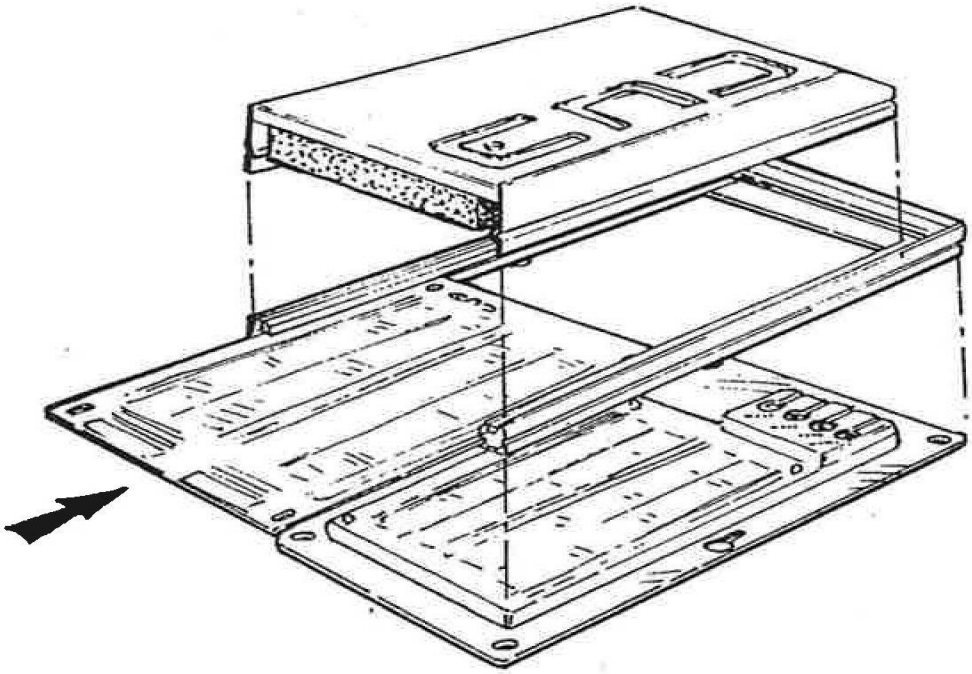


5. SOLDERING
Each wire that protrudes from the circuit board should be carefully soldered.

6. REMOVING THE COMPLETED CIRCUIT BOARD
When all of the component leads have been soldered to the circuit board they can be trimmed to a height of no more that 0.1" from the surface of the board.
The completed board can now be removed from the END.
The END is ready for another project.



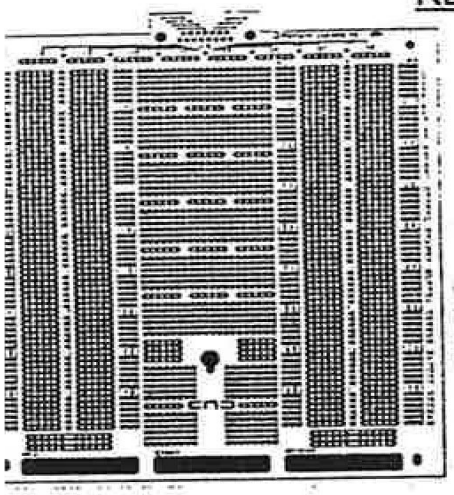
7. INSERTION OF NEW BOARD



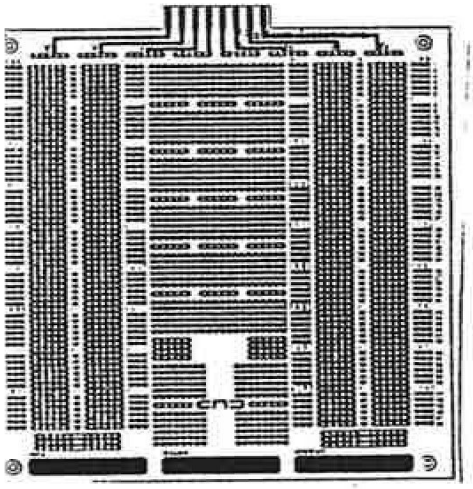
To commence a new project you must insert a new circuit board into the END. Slide the board into the frame side rails and position the frame over the backplate and clip matrix. Ensure that the holes in the circuit board align with the locator pins on the plastic matrix. When the board is positioned, the sliding locks are closed to hold the frame and the backplate together. The END is ready to begin the next project.

More Products From

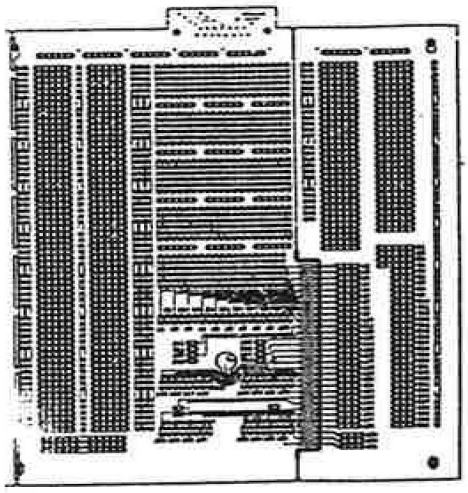
REPLACEMENT CIRCUIT BOARDS



High Quality Gold PCB (CB 01AYF)
Compatible w/: ED 01NAA
Connectors: DB-15
Dimensions: 8.875" x 8.00" x 0.031"
Description: Dbl sided, gold plated, through hole, FR-4, 1 oz. copper

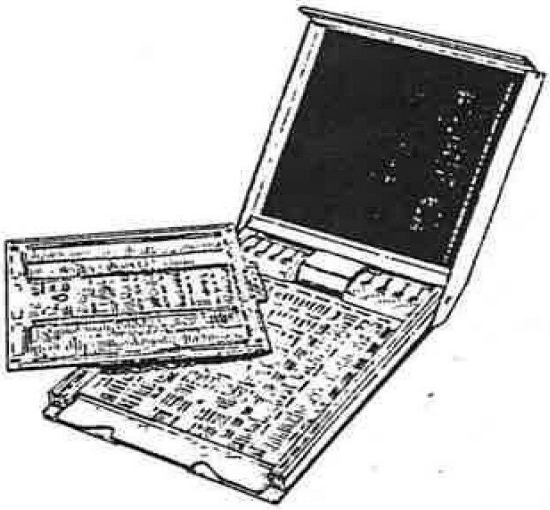


Value Priced PCB (CB 02BYE)
Compatible w/: ED 01NAA
Connectors: 8 pin standard or card edge
Dimensions: 8.875" x 8.00" x 0.031"
Description: Single sided, solder plated FR-4, 1 oz. copper



PC Cardedge PCB (CB 01AYG)
Compatible w/: ED 01NAA
Connectors: 31 position cardedge
Dimensions: 8.875" x 8.00" x 0.031"
Description: Dbl sided, gold plated, through hole, FR-4, 1oz. copper

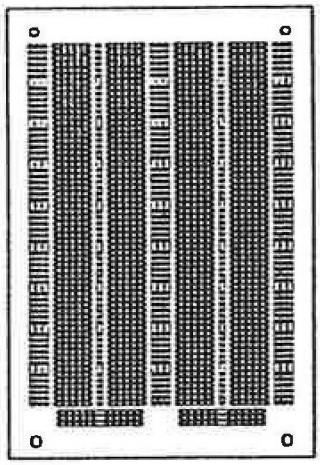
PLATFORM SYSTEMS



OTHER PROTOBOARDS

Full Sized END (ED 01NAA)

- Three working areas (2 vertical, 1 horizontal)
- Connection strips in rows of 6
- 3,400 connection points
- 14 vertical buses
- 8 binding posts
- Removable cover

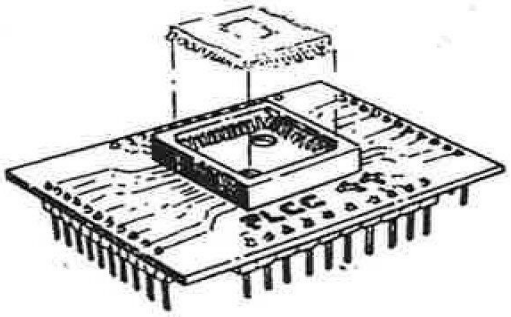


REPLACEMENT CIRCUIT BOARD

Value Priced PCB (CB 22BYH)

Compatible w/: ED 22NDC
Dimensions: 4.06" x 6.840" x 0.031"
Description: Single sided, solder plated, FR-4, 1 oz. copper

PLCC SOCKET ADAPTERS



Prototype with Surface Mount

(SM 44A02 - 44 pin)
(SM 52A02 - 52 pin)
(SM 68A02 - 68 pin)

Compatible w/: ED 01NAA
Description: Variable pin sized PLCC socket mounted on a mini FR-4 PCB, connected to connector stip compatible with ED 01NAA.

HELPFUL HINTS

* Watch out for small wires and leads that may fall out when the unit is turned over. We suggest taping them in place before you turn the unit. Also use the schematic diagram to keep track of your circuit design. This way you can replace stray leads.

* The circuit boards are FR4 and only 0.03 thickness. They can be cut easily with a sturdy pair of scissors. The remaining parts of the circuit board can be used as a general purpose universal printed circuit board.

* Banana plugs can be substituted for the screw input connectors by removing screw and inserting plugs into threaded metal inserts.