

**MULTI EXTENDER  
CB-401  
User's Manual  
CA947-4**

**MULTI EXTENDER USER'S MANUAL**

**Table of Contents**

1. Functional Description.....	1
2. Specification.....	3
3. DIP SW Adjustment.....	4
4. Installation and Cabling.....	5
5. Operation .....	6
6. Troubleshooting.....	8
7. Appendix A .....	9
8. Appendix B .....	11

FUNCTIONAL DESCRIPTION

- 4) **High Compatibility:**  
Can be utilized along with all the on-the-shelf packages and programs.
- 5) **Compact size and Light Weight:**  
Measured in 13.7 x 10.3 x 3.4 (cm), sizes about 2 cigarette packs and weights around 270 gm.
- 6) **Auto Form Feed Selection:**  
Auto Form Feed is an option by selecting internal DIP Switches, allowing the users to select or deselect auto Form Feed after terminating files printing.
- 7) **Time Out Selection:**  
Adjust internal DIP Switches to choose different Time out periods ranging from 8 to 24 seconds.

1-2 Description:

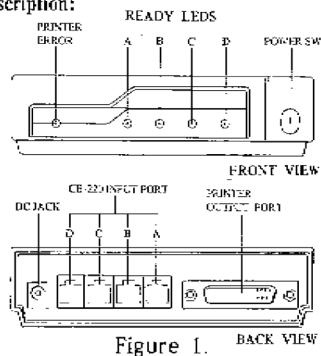


Figure 1. BACK VIEW

SPECIFICATION

2. SPECIFICATION

- 1) **Power Supply** - DC 9V/12V 500mA.
- 2) **Time Out** - User adjustable from 8 sec. to 24 sec..
- 3) **Form Feed** - User selectable form feed enable or disable.
- 4) **Output Interface** - Centronics Compatible.
- 5) **Input Interface** - CB-220 serial interface Max Speed 27.5Kbyte, Max length 4000 feet.
- 6) **Mode of Operation** - Automatic Switching.
- 7) **DIP SW** - 4 position, facilitates Time out and form feed.
- 8) **Connectors** - Input : 4 RJ-116 connectors, Output: DB 25S Female connector.
- 9) **Computer Input port** - 4 port
- 10) **Printer Output port** - 1 port
- 11) **Leds** - 4 Ready Leds, 1 Printer error Led
- 12) **Temperature** - 0°C~80°C (Non-condensing)
- 13) **Humidity** - 0 ~ 80 %
- 14) **Size** - 13.7x10.3x3.4 cm
- 15) **Weight** - 270g

### 3. DIP SW ADJUSTMENT

3-1. Shown in fig.2, gently pull out the 2 small plates pointed to by the arrows and slide the case outwards to take the front panel off.

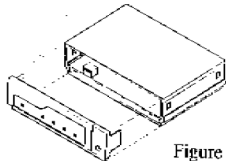


Figure 2.

3-2. As the front panel is taken off, the 4 pin DIP Switches can be found, as indicated in fig. 2. Adjusting them to select different time out periods from 8 to 24 seconds and to select Form Feed option, table 1 shows different DIP Switches setups:

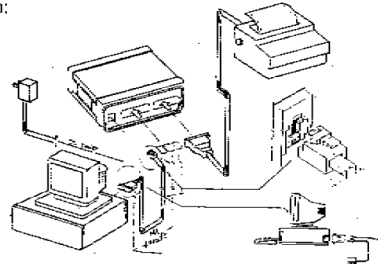
Functions	DIP SWITCH POSITION			
	S1	S2	S3	S4
Time out 8 Sec		ON	ON	X
Time out 10 Sec		ON	OFF	X
Time out 16 Sec		OFF	ON	X
Time out 24 Sec		OFF	OFF	X
Form Feed disable	OFF			X
Form Feed enable	ON			X

X: Don't care                      Table 1

3-3. After adjusting the DIP Switches, please put the front panel back on by pushing it back wards.

### 4. INSTALLATION AND CABLING

Please follow the below sequences for proper installation:



- 4-1. Hook 1 to 4 PCs' and/or terminals' printer cable(s) to CB-220.
- 4-2. Connect one end of the RJ-116 Cable(s) to the Phone Jack of CB-220, then another end to the Phone Jack of CB-401.
- 4-3. Take one cable with male DB25 connector at one end and C36 Centronics printer cable at the other, connect DB25 connector to CB-401's 25 pin female connector and hook the C36 Centronics printer connector to a printer.
- 4-4. Connect DC Adaptor to the DC 9V Jack at the back of CB-401.
- 4-5. If the distance between CB-220 and CB-401 exceeds 50 meters, another external DC 9V power supply is needed for CB-220; otherwise, the CB-220 can be powered by the CB-401.
- 4-6. Turn on the PC(s) or terminal(s).
- 4-7. Turn on the CB-401.
- 4-8. Turn on the printer.

## 5. OPERATION

Please complete the above sequences for installing CB-220, CB-401, PCs or terminals and printer before getting to the next steps.

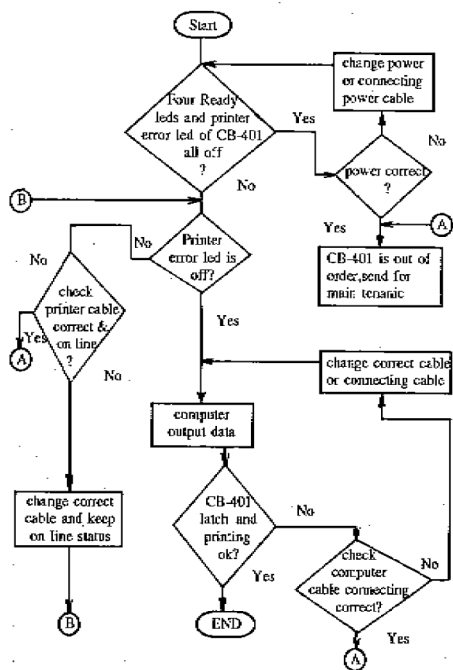
- 5-1. Power on PCs, then turn on the power switch on the front panel of CB-401; in the mean time, the Printer Error LED of the CB-401 is flashing and the 4 Ready LEDs are off.
- 5-2. Turn on the printer:
  - a. While the printer is Off Line, the Printer Error LED on CB-401 should be flashing and the four Ready LEDs should be off.
  - b. While the printer is On Line, the Printer Error LED should be off and the four Ready LEDs should be on.
  - c. If all the Ready LEDs on the front panel of CB-401 are on, it indicates the printer is available to all the PCs or terminals. If only one LED is on, it means only the specified PC is allowed to send files to the printer.
  - d. The printer is available to all the PCs when four Ready LEDs are on; however, while there is one PC requesting file printing, CB-401 will dedicate itself to that PC by shutting all three other Ready LEDs off and disable all three other PCs from sending files at the same time.

- e. After PC or terminal finishes printing a file, CB-401 will wait for a pre-select Timeout period; and if that PC or terminal does not continue sending file(s) within the Timeout period, CB-401 sets all the Ready LEDs on automatically which enables all PCs to share the printer.
- f. Form Feed Enable function activated by adjusting DIP Switch #1 forces the printer to perform form feed after printing a file.
- g. Timeout period can be set by adjusting DIP Switch #2 and #3.

**Note:**

If the four Ready LEDs are not on immediately after CB-401 is turned on with the printer On Line status, this means CB-401 is processing internally. The four Ready LEDs will be on soon after the Timeout period is reached; meanwhile, the printer will print one blank page if the Form Feed Enable function is selected.

### 6. TROUBLESHOOTING



### 7. APPENDIX A

7-1. Pin assignments:

a. Pin assignment of 25-Pin connector of CB-220.

Pin NO.	Signal name	Pin NO.	Signal name
1	STROBE	14	N.C.
2	DATA 1	15	TIED TO +5V 2.2KΩ
3	DATA 2	16	N.C.
4	DATA 3	17	N.C.
5	DATA 4	18	GND
6	DATA 5	19	GND
7	DATA 6	20	GND
8	DATA 7	21	GND
9	DATA 8	22	GND
10	ACK	23	GND
11	BUSY	24	GND
12	GND	25	GND
13	TIED TO +5V 2.2KΩ		

b. Pin assignment of 25-Pin connector of CB-401.

Pin NO.	Signal name	Pin NO.	Signal name
1	STROBE	14	TIED TO +5V 2.2KΩ
2	DATA 1	15	FAULT
3	DATA 2	16	TIED TO +5V 2.2KΩ
4	DATA 3	17	GND
5	DATA 4	18	GND
6	DATA 5	19	GND
7	DATA 6	20	GND
8	DATA 7	21	GND
9	DATA 8	22	GND
10	N.C.	23	GND
11	BUSY	24	GND
12	N.C.	25	GND
13	N.C.		

c. Pin assignment of 6-Pin Phone-jack of CB-220.

Pin NO.	Line Color	Signal name
1	BLUE	GND
2	YELLOW	RI-
3	GREEN	RI+
4	RED	DO-
5	BLACK	DO+
6	WHITE	+9V

d. Pin assignment of 6-Pin Phone-jack of CB-401.

Pin NO.	Signal name
1	GND
2	DO-
3	DO+
4	RI-
5	RI+
6	+9V

7-2. Centronics interface timing diagram  
CENTRONICS INTERFACE TIMING DIAGRAM  
Centronics Interface Timing Chart



Figure 3

## 8. APPENDIX B

### Preventing Radio & TV Interference

**Warning:** This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio and television reception. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient the receiving antenna.
2. Relocate the computer with respect to the receiver.
3. Move the computer away from the receiver.
4. Plug the computer into a different outlet so that computer and receiver are on different branch circuits.
5. Ensure that the mounting screws, attachment connector screws and ground wires are tightly secured.
6. Ensure that good quality, shielded and grounded cables are used for data communications.

If necessary, the user should consult the dealer or an experienced

radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

**"How to Identify and Resolve Radio-TV Interference Problems."**

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-0345-4.