



# **B220**

# two-line speakerphone



# **B220 TELEPHONE DIAGRAM**



#### FIGURE 1



#### CONGRATULATIONS AND THANK YOU!

Congratulations on your purchase of this quality Teledex analog business telephone. If you have any questions concerning this telephone or its operation, please contact us via one of the methods at right. We appreciate your purchase! p/n 600-0480-53A

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# **1. FEATURES**

The Teledex B220 is a two-line telephone with a high-performance speakerphone and ten one-touch programmable feature buttons. The memory for these buttons is stored in a non-volatile EEPROM, and does not require a battery backup.

Your B220 has these useful features:

- 1.1 AUTO LINE SELECTION Automatically selects the available, idle line using either the handset or the speakerphone.
- 1.2 AUTO RINGER SELECTION Automatically selects the ringing line using either the handset or the speakerphone.
- 1.3 3-WAY CALL CONFERENCING For easy three-way conversations
- 1.4 SPEAKERPHONE For convenient hands-free conversations.
- 1.5 RINGER CADENCE ADJUSTMENT provides selection of unique ringing cadences for each line.
- 1.6 TEN (10) ONE-TOUCH MEMORY LOCATIONS For quick access to frequently-dialed numbers or PBX/Centrex services and features.
- 1.7 FLASH Sends an electronic hook-switch signal for use with special services such as call waiting, etc.
- 1.8 LAST NUMBER REDIAL Dials the last number dialed.
- 1.9 HOLD Places a call on hold.
- 1.10 MUTE Mutes the microphone of the handset or speakerphone.
- 1.11 RELEASE To re-access dial tone without depressing hook switch
- 1.12 VOLUME CONTROL Adjusts volume of handset or speakerphone.
- 1.13 DATA PORT Enables parallel connection of another telephone, fax or answering machine, or laptop computer to the phone line.
- 1.14 HEARING AID COMPATIBLE

The B220 is ETL listed to UL standards and meets all applicable FCC standards and requirements.

# 2. UNPACKING YOUR B220

Inside the box, you will find all of the items needed for installation, as shown below:



Check to be sure that your package includes all the above items. If any items are missing or damaged, please contact the distributor where you purchased the phone.

# 3. INSTALLATION

#### 3.1 DESKTOP INSTALLATION

- 1) Plug one end of the handset coiled cord into the handset. Plug the other end of the cord into the handset jack located on the left side of the phone base. (Refer to figure 3.)
- 2) Place the handset in the handset cradle.
- 3) Plug one end of the supplied line cord into the LINE jack on the bottom of your phone. Then route the line cord through the left slot of the desk/wall mount bracket.
- 4) Plug the other end of the modular cord into the wall jack.



#### 3.2 WALL MOUNTING

- 1) Plug one end of the handset coiled cord into the handset. Plug the other end of the cord into the handset jack located on the left side of the phone base (please refer to figure 3.)
- 2) Place the handset in the handset cradle.
- 3) Remove the desk/wall mount bracket from the bottom of the B220. Rotate the bracket 180° and re-install it into the four slots the bottom of the B220.
- 4) Connect the short line cord into the LINE jack on the bottom of your phone. Connect the other end of the line cord to the line jack on the wall mount plate.
- 5) Slip the phone onto the wall plate jack, lining up the wall mounting holes, and then slide the telephone down so it is firmly in place.



FIGURE 4

#### 3.3 WALL MOUNTING CLIP

- 1) Located on the front of the telephone, above the speaker grill, is the wall mounting clip. Remove this clip by firmly pushing it upward, in the direction of the hook switch.
- Rotate the clip 180° so that the side with the protruding edge is towards 2) the top. This edge will hold the handset (please refer to figure 5.)



# 4. USING THE DATA PORT

The data port is located on the right hand side of the telephone, as it is facing you. Use this jack to connect a laptop or desktop computer, answering or fax machine in parallel on the same phone line to which the telephone is connected.



## 5. ADJUSTING THE RINGER VOLUME

Your B220 has three ringer volume levels for each line: Off, Low and High. To adjust, slide the appropriate switch located along the right hand side of the telephone to the desired ringing level. (Note: Ringing volume is preset to "HIGH" setting.)



# 6. RING CADENCES

Your phone has three ring cadences, or patterns, for each line. The ring cadence switches are located on the bottom of the telephone, hidden by the wall mounting bracket (please refer to Figure 8.) To change the cadence of either line, remove the wall mounting bracket, and select the desired ring cadence. Once you have selected a satisfactory cadence, replace the wall mount bracket to the bottom of the telephone.



# **OPERATION**

#### 7.1 PLACING AND ANSWERING CALLS USING THE HANDSET

To make a call, pick up the handset. The B220 will select the appropriate, idle line. When you hear the dial tone, dial the desired number. To answer an incoming call, pick up the handset. To end a call, place the handset back on the cradle.

#### 7.2 PLACING AND ANSWERING CALLS USING THE SPEAKERPHONE

To place a call using the speakerphone, press either the LINE 1 or LINE 2 key, or the SPEAKER key. The SPEAKER indicator will light and the phone will go off hook.

To answer a call using the speakerphone, press the SPEAKER key. The SPEAKER indicator will light and the B220 will select the ringing line automatically, activating the speakerphone. You may also answer an incoming call by pressing the LINE key associated with the ringing line.

To end a speakerphone call, press the SPEAKER key again. The SPEAKER indicator light turns off.

#### 7.3 CONFERENCE CALLS

The CONF key allows you to initiate conference calls, or to include an additional party in an existing conversation.

To initiate a conference call by calling both other parties:

- 1) Place call to first party.
- Place the first party on HOLD by pressing the HOLD key. 2)
- 3)
- Place call to second party. Press the CONF key. All three parties will now be conferenced together. 4)

**FIGURE 7** 

To create a conference call by calling one party, while on an existing conversation:

- 1) Receive call from first party.
- 2) Place the first party on HOLD by pressing the HOLD key.
- 3) Place call to second party using available, second line.
- 4) Press the CONF key. All three parties will now be conferenced together.

To create a conference call when receiving both calls:

- 1) Receive call from first party.
- 2) Place the first party on HOLD by pressing the HOLD key.
- 3) Receive call from second party.
- 4) Press the CONF key. All three parties will now be conferenced together.

#### 7.4 HANDSET VOLUME CONTROL

There are three (3) volume levels for the handset. To increase or decrease the handset volume level, press the VOLUME UP or DOWN keys.

#### 7.5 SWITCHING BETWEEN HANDSET AND SPEAKERPHONE

To switch from the handset to the speakerphone during a call, press the SPEAKER key, and place the handset on the base.

To switch from the speakerphone to the handset, lift the handset. The speakerphone will automatically turn off.

#### 7.6 ADJUSTING THE SPEAKERPHONE VOLUME

There are seven (7) volume levels for the speakerphone. To increase or decrease the speakerphone volume level, press the VOLUME UP or DOWN keys.

#### 7.7 USING A HEADSET

Plug a standard 2.5 mm headset plug into the headset jack on the right hand side of the telephone. You may place and receive calls by pressing the "SPEAKER" key.

#### 7.8 USING REDIAL

The redial function allows you to redial the number that was last dialed. Pick up the handset, or press the SPEAKERPHONE button, and press the REDIAL key. The number will be dialed automatically.

#### 7.9 USING FLASH

The FLASH key supports various custom calling services. For example, if you have subscribed to call waiting, press FLASH to answer an incoming call without disconnecting the current call. Press FLASH again to return to the first call.

#### 7.10 USING HOLD

To place a call on hold, press the HOLD key. The HOLD indicator flashes, indicating the call is on hold. You can now hang up the handset without disconnecting the call.

To resume the call, press the LINE key of the call that is on hold. This will remove the call from hold and make the call active once again. The LINE indicator LED will return to a steady, in-use condition.

#### 7.11 USING MUTE

To temporarily switch off the microphone of either the speakerphone or handset, press MUTE. The MUTE indicator lights and the microphone turns off, but you can still hear the person on the other end of your conversation. Press MUTE again to resume your conversation.

#### 7.12 STORING A NUMBER IN MEMORY

Follow these steps to program up to ten memory locations, for one-touch access to frequently-dialed numbers or special PBX/Centrex services or features. Each memory location can store up to 16 digits.

- 1) Lift the handset, then press STORE.
- 2) Enter the telephone number or string of digits you wish to store. Once you have entered the entire number or string, press the memory button corresponding to the location where you would like the number stored.

#### 7.13 DIALING A STORED NUMBER

Lift the handset or press the SPEAKER key, then press the desired memory key. The telephone will automatically dial the stored number.

# 8. MESSAGE WAITING

There is an oval-shaped LED at the top of the telephone that provides you with a visual indication that you have a message. Consult your service provider or system administrator for instructions on how to access these messages.

# 9. CARING FOR YOUR B220

Your B220 telephone is an example of superior design and craftsmanship. These suggestions will help you care for your phone so you can enjoy trouble-free service for many years.

- 1) Keep the phone dry. If it gets wet, wipe it dry immediately. Liquids can contain minerals that may corrode the electronic circuits.
- 2) Use and store the phone only in normal temperature environments. Extreme temperatures can shorten the life of electronic devices and distort or melt plastic parts.
- 3) Keep the phone away from dust and dirt, which can cause premature wear of parts.
- 4) Handle the phone gently and carefully. Dropping it can damage internal circuit boards or external parts, and can cause the phone to work improperly.

Modifying or tampering with the phone's internal components can cause a malfunction. If your phone is not performing as it should, see your distributor for assistance. If the trouble is affecting the telephone lines, the phone company or service provider may ask you to disconnect the phone until the problem is resolved.

# **REOUIREMENTS OF PART 68- FCC RULES**

This device has been granted a registration number by the Federal Communications Commission, under Part 68 rules and regulations for direct connection to the telephone lines. In order to comply with these FCC rules, the following instructions must be carefully read and applicable portions followed completely:

1. Direct connection to the telephone lines may be made only through the standard modular cord furnished, to the utility installed jack. No connection may be made to party or coin phone lines. On the bottom of the phone is a label that contains among other information, the FCC Registration Number and the Ringer Equivalence number (REN) for this equipment. If requested this information must be provided to the telephone company. The USOC lack for this equipment is RJIIC.

2. The telephone company, under certain circumstances, may temporarily discontinue and make changes in Facilities and services, which may affect the operation of the users' equipment. However, the user shall be given adequate notice in writing to allow the user to maintain uninterrupted service.

3. In certain circumstances, it may be necessary for the Telephone Company to request information from you concerning the equipment which you have connected to your telephone line. Upon request of the telephone company, provide the FCC registration number and the ringer equivalence number of the equipment which is connected to your line; this information will be found on the device.

4. If any of your telephone equipment is not operating properly, you should immediately remove it from the telephone line. It may cause harm to the telephone network.

5. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of a disconnection. If advance notice is not feasible, the telephone company must: promptly notify you of such temporary discontinuance; afford the opportunity to correct the condition; inform you of your rights to bring a complaint to the FCC under their rules.

6. Repairs to the device may be made only by the manufacturer or an authorized service agency. This applies at any time during and after warranty. If unauthorized repair is performed, registration, connection to the telephone lines and remainder of warranty period all becomes null and void.

7. This equipment is hearing aid compatible.

8. This telephone must be connected behind a PBX.

# **REQUIREMENTS OF PART 15 - FCC RULES**

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is not a guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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) Move the telephone away from the receiver, 2) Consult the dealer or an experienced radio/TV technician for help. Any changes made by the user not approved by the manufacturer can void the user's authority to operate the telephone.

# **INDUSTRY OF CANADA REQUIREMENTS**

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements documents. The department does not guarantee the equipment will operate to the user satisfaction. Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local Telecommunications Company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure for their own protection that the electrical ground connections of the power utility, Telephone lines, and internal metallic water pipe systems, if present, are connected together. This precaution may be particularly important in rural areas. Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority or electrician, as appropriate. The Ringer Equivalence Number (REN) of this device is Z.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5. This telephone connects to the telephone network under the connecting arrangement code CA11A.

# **IMPORTANT SAFETY INSTRUCTIONS**

WHEN USING YOUR TELEPHONE EQUIPMENT, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK AND INJURY TO PERSONS. INCLUDING THE FOLLOWING:

1. READ AND UNDERSTAND ALL INSTRUCTIONS.

2. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE PRODUCT.

3. UNPLUG THE PRODUCT FROM THE WALL OUTLET BEFORE CLEANING. DO NOT USE LIQ-UID CLEANER OR AEROSOL CLEANERS. USE A DAMP CLOTH FOR CLEANING.

4. DO NOT USE THIS PRODUCT NEAR WATER, FOR EXAMPLE: NEAR A BATHTUB, WASH BOWL. KITCHEN SINK OR LAUNDRY TUB, IN A WET BASEMENT, OR NEAR A SWIMMING POOL.

5. DO NOT PLACE THIS PRODUCT ON AN UNSTABLE CART. STAND OR TABLE. THE PRODUCT MAY FALL, CAUSING SERIOUS DAMAGE TO THE PRODUCT.

6. SLOTS AND OPENINGS IN THE CABINET AND THE BACK OF BOTTOM ARE PROVIDED FOR VENTILATION. THESE OPENINGS MUST NOT BE BLOCKED OR COVERED. THE OPENINGS SHOULD NEVER BE BLOCKED BY PLACING THE PRODUCT ON A BED, SOFA, RUG OR ANY OTHER SIMILAR SURFACE. THIS PRODUCT SHOULD NEVER BE PLACED NEAR OR OVER A RADIATOR OR HEAT REGISTER. THIS PRODUCT SHOULD NOT BE PLACED IN A BUILT-IN INSTALLATION UNLESS PROPER VENTILATION IS PROVIDED.

7. NEVER PUSH OBJECTS OF ANY KIND INTO THIS PRODUCT THROUGH CABINET SLOTS AS THEY MAY TOUCH DANGEROUS VOLTAGE POINTS OR CAUSE A SHORT CIRCUIT THAT COULD RESULT IN A FIRE OR ELECTRIC SHOCK. NEVER SPILL LIQUID OF ANY KIND ON THE PRODUCT.

8. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT DISASSEMBLE THIS PRODUCT. IF SER-VICE IS NECESSARY, SEND OR TAKE THE TELEPHONE TO A QUALIFIED SERVICE FACILITY. OPENING OR REMOVING COVERS MAY EXPOSE YOU TO DANGEROUS VOLTAGES OR OTHER RISKS. INCORRECT REASSEMBLY CAN CAUSE ELECTRIC SHOCK WHEN THE APPLIANCE IS SUBSEQUENTLY USED.

9. UNPLUG THIS PRODUCT FROM THE WALL OUTLET AND REFER SERVICING TO QUALIFIED SERVICE PERSONNEL UNDER THE FOLLOWING CONDITIONS:

- IF THE POWER SUPPLY CORD OR PLUG IS DAMAGED OR FRAYED IF LIQUID HAS BEEN SPILLED INTO THE PRODUCT IF THE PRODUCT HAS BEEN EXPOSED TO RAIN OR WATER IF THE PRODUCT DOES NOT OPERATE NORMALLY BY FOLLOWING THE OPERATING INSTRUCTIONS. ADJUST ONLY THOSE CONTROLS THAT ARE COVERED BY THE OPERAT ING INSTRUCTIONS, AS IMPROPER ADJUSTMENT OF OTHER CONTROLS MAY RESULT IN DAMAGE AND WILL OFTEN REQUIRE EXTENSIVE WORK BY A QUALIFED TECHNICIAN TO RESTORE THE PRODUCT TO NORMAL OPERATION. IE THE PRODUCT HAS BEEN DROBED OF THE CAPITOL HAS BEEN DAMAGED
- IF THE PRODUCT HAS BEEN DROPPED OR THE CABINET HAS BEEN DAMAGED. IF THE PRODUCT EXHIBITS A DISTINCT CHANGE IN PERFORMANCE.

10. AVOID USING THE TELEPHONE DURING AN ELECTRICAL STORM. THERE MAY BE A REMOTE RISK OF ELECTRIC SHOCK FROM LIGHTNING.

11. DO NOT USE THE TELEPHONE TO REPORT A GAS LEAK IN THE VICINITY OF THE LEAK.

### EUROPEAN STANDARDS

Teledex phone model B220 has been successfully tested to the applicable European standards below:

#### TELECOMMUNICATIONS (R&TTE DIRECTIVE 99/5/EC)

TBR 21 (EN 301 437)- Access to Public Switch Telecommunications Network TBR 38- Acoustics (Analog voice device with handset)

#### SAFETY

89/336/EEC - EMC directive (EN 61000-4-2:4-3:4-4:4-5:4-6:4-8), EN 55022:1998, EN 550024, EN 61000-3-3 73/23/EEC - Low Voltage Directive (CB scheme covering 33 countries) EN 60950