GUIDE TO THE
PTC-710

symbol®

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PTC-710

Contents

Unpacking the PTC-710

When you receive the PTC-710, the package should contain the following:

- PTC-710

- battery charger (if the PTC-710 was ordered with nickel-cadmium batteries)

- bar-code reader (if ordered)

Before You Use the PTC-710

Charge the Nickel-Cadmium Batteries

Follow these steps only if your PTC-710 contains nickel-cadmium batteries.

CAUTION! Do not connect a battery charger to a PTC-710 that contains alkaline batteries. Attempting to charge alkaline batteries can cause them to burst, which can result in equipment damage.

1. Connect the battery charger to the PTC-710's 25-pin connector (see Figure 1).

2. Plug the battery charger into a standard 110-volt electrical outlet. The charger's red indicator light shows that the batteries are charging.

    Note: 220-volt outlets, used outside North America, require a different battery charger than that shown in

Figure 1. Connecting the Battery Charger

Figure 1; see your Symbol sales representative for ordering information.

3. Allow the batteries to charge for 12 to 14 hours. Afterward, unplug the battery charger from the electrical outlet, then disconnect it from the PTC.

Turn on the Backup Battery

1. Remove the battery compartment cover by inserting a coin in the slot at the bottom of the battery compartment cover and applying light pressure to the coin (see Figure 2). The cover will pop up.

2. Using the tip of a pen or pencil, depress the backup battery switch (see Figure 3).

3. Replace the battery compartment cover. Line up the battery compartment cover so the recessed edge on the top of the cover is under the flange of the PTC's case. Press down lightly on the cover until it snaps into place.

Figure 2. Removing the Battery Compartment Cover

BACKUP BATTERY
SWITCH

PRESS
DOWN
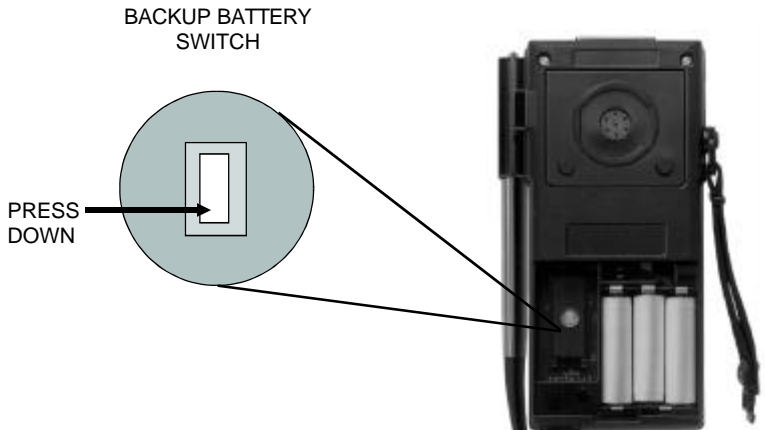
Figure 3. Turning on the Backup Battery

Overview of the PTC-710

The PTC-710 (see Figure 4) is a battery-powered, hand-held computer that you use to collect, store, and send data. PTC accessories are available for scanning bar codes, printing data, and sending data to a main computer.

The PTC runs a program specifically designed to collect data for your organization. This program leads you through the data collection procedure with a series of prompts, beeps, and messages. Prompts are words and symbols that tell you when to enter data and what type of data to enter. Messages and beeps tell you when you make errors or complete certain operations. They can also provide information on the status of the PTC and its program.

You can enter data into the PTC by typing information on the keyboard or by scanning bar-code labels.

After you enter the data, the PTC must either send the data to a main computer for processing, or send it to a printer for a printed copy, or both, to make the data useful to you and your organization.

Figure 4. The PTC-710

Parts

Figure shows the locations of the PTC-710's main parts.

Display

The PTC-710's four-line display shows prompts and messages that tell you when to enter data and what type of data to enter. Each line of the display can show up to 16 letters, numbers, or symbols.

Keyboard

The PTC-710 keyboard has data keys and function keys. The data keys consist of the letter keys (A-Z), the number keys (0-9), and the symbol keys. You use the data keys to enter information into the PTC. The function keys perform a specific procedure. For example, your program may use one function key to send the PTC's data to a main computer and another to erase the PTC's data. You activate and deactivate the function keys by pressing the PTC-710's SHIFT key.

Your PTC's program may turn off certain keys at selected points in the program to prevent you from accidentally erasing data or ending an operation too soon. When you press a key that the program has turned off, the key will have no effect.

Internal Modem (Optional)

The PTC-710's internal modem converts data into electronic signals that can be transmitted over a telephone line.
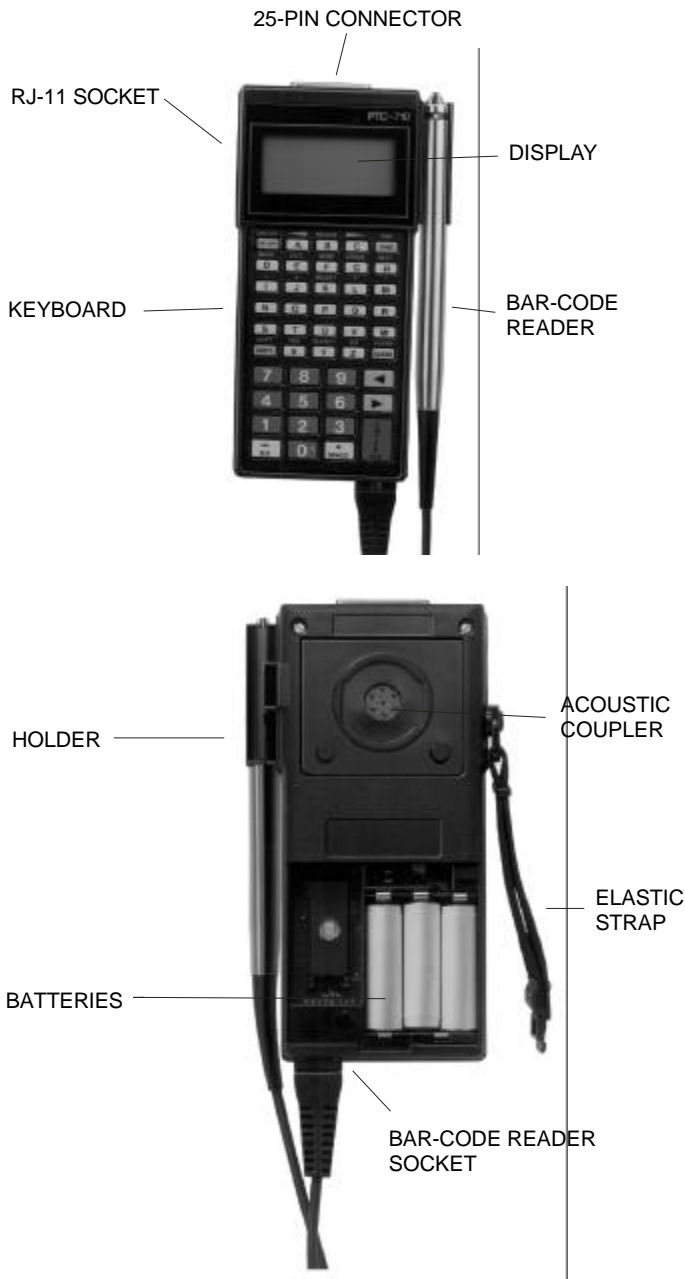
25-PIN CONNECTOR

RJ-11 SOCKET

DISPLAY

KEYBOARD

BAR-CODE
READER

ACOUSTIC
COUPLER

HOLDER

ELASTIC
STRAP

BATTERIES

BAR-CODE READER
SOCKET

Figure 5. Parts of the PTC-710

RJ-11 Socket (Optional)

The PTC-710's RJ-11 socket lets you connect the internal modem directly to a telephone wall jack with a standard telephone cable. A rubber flap protects the RJ-11 socket when the socket is not in use.

Bar-Code Reader and Holder (Optional)

Your PTC may have an optional bar-code reader that lets you enter data into the PTC by scanning bar-code labels. Your PTC program determines the type(s) of bar-code labels you can scan.

If your PTC-710 was ordered with a pencil wand bar-code reader, the PTC will come with a holder attached to its right side.

Bar-Code Reader Socket

The bar-code reader plugs into the PTC-710 through the bar-code reader socket. If your PTC-710 was ordered without a bar-code reader, there will be a plastic cover over this socket. Do not remove the plastic cover except to connect a bar-code reader to your PTC-710.

25-Pin Connector

Most of the PTC-710's accessories connect to the PTC's 25-pin connector (the bar-code reader is an exception). Some accessories connect directly to the 25-pin connector; others connect to it with a cable.

Acoustic Coupler

The PTC-710's acoustic coupler changes the PTC's data into sounds that the telephone system can transmit to a main computer. You connect the acoustic coupler to a telephone receiver. Depending on your PTC's program, the acoustic

coupler may also automatically dial the telephone number of the main computer.

Elastic Strap

The PTC's elastic strap secures the PTC to the palm of your hand for data entry. It also secures a telephone receiver to the acoustic coupler for data communication.

Batteries

The PTC-710 uses three AA-size rechargeable nickel-cadmium batteries as the standard source of power (PTCs ordered with these batteries also include a battery charger). As an option, the PTC-710 can also use three AA-size alkaline batteries.

The PTC tells you when the batteries are going dead by beeping five times and showing a "LOW BATTERY" message
on the display. When this happens, either charge the batteries (if your PTC contains nickel-cadmium batteries) or replace the batteries (if your PTC contains alkaline batteries).

Note: When batteries are extremely weak, the PTC-710 does not operate, beep, or show the "LOW BATTERY" message. In this event, charge or replace the batteries immediately.

CAUTION! If your PTC-710 contains nickel-cadmium batteries, do not store it for more than one month without charging the batteries. If your PTC-710 contains alkaline batteries, do not store it for more than two months without replacing the batteries. Otherwise, your data or program may be lost.

Application ROM Cartridge (ARC)

The application ROM cartridge (ARC) contains the PTC's program. The ARC determines the PTC's key functions, the prompts and messages on the display, and the procedures for sending, receiving, and printing data.

ARCs are removable and interchangeable, although during normal use there is no need to remove or change an ARC.

Features

Power Backup System

The power backup system in the PTC-710 protects data, the clock, and programs for 800 hours after you remove the batteries.

Clock and Calendar

A clock and calendar are built into the PTC-710. Depending on your program, the PTC may use the clock and calendar to show the time and date on the display or to record the time and date of data entries.

Automatic Off

To conserve battery power, the PTC-710 automatically switches off after about one minute of inactivity. The exact length of time depends on your PTC's program.

Automatic Return At On

When you turn the PTC-710 off, or when it turns itself off, it "remembers" where it was in the program. When you turn the PTC-710 back on, it returns to that same point in the program. You do not need to review what you have done so far to find your place.

Handling and Maintaining
the PTC-710

Follow these suggestions to keep your PTC in top working condition.

Use and Storage

- Protect the PTC and its accessories from harsh, dirty environments and from excessive heat, cold, and moisture.

- Do not use the PTC for more than 10 minutes in temperatures below 32°F (0°C) or above 120°F (49°C).

- Do not store the PTC in temperatures below -20°F (-29°C) or above 160°F (71°C).

- If your PTC-710 contains nickel-cadmium batteries and you store it in below-freezing temperatures for more than one hour, do not charge the batteries until the PTC reaches normal room temperature. Do not store the PTC for more than one month without charging the batteries.

- If your PTC contains alkaline batteries, do not store the PTC for more than two months without replacing the batteries.

Cables and Accessories

- Do not insert any foreign object into the 25-pin connector or the bar-code reader socket.

- Ensure that all accessories are connected correctly and those with locks are locked into place.

- Do not attempt to connect any device that is not part of your PTC-710 system to the PTC-710.

Cleaning

- Clean the PTC by slightly moistening a clean, soft, lint-free cloth with a mild, non-abrasive plastic cleaner and wiping the outside surfaces. Do not soak the cloth, and do not spray or pour cleaning liquids directly on the PTC.

Service

- Do not attempt to service the PTC. Only a trained technician may service the PTC.

Replacing Alkaline Batteries

To Remove the Batteries:

1. Be sure the PTC is off.

2. Insert a coin in the slot at the bottom of the battery compartment cover (see Figure 6).

3. Apply light pressure to the coin and the cover will pop up. Remove the cover from the case.

4. Remove the batteries with your fingers. Be careful not to damage the battery contacts.

**Figure 6. Removing the Battery
Compartment Cover**

To Replace the Batteries:

1. Insert the new batteries according to the diagram inside the battery case (see Figure 7).

2. Line up the battery compartment cover so that the recessed edge on the top of the cover is under the flange of the PTC's case.

3. Press down lightly on the cover to snap it into place.

Figure 7. Replacing Alkaline Batteries

Charging Nickel-Cadmium Batteries

**CAUTION! Do not connect a battery charger to a PTC-710
that contains alkaline batteries. Attempting to charge alkaline
batteries can cause them to burst, which can result in equip-
ment damage.**

1. Connect the battery charger to the PTC-710's 25-pin
    connector (see Figure 8).

2. Plug the battery charger into a standard 110-volt electri-
    cal outlet. The charger's red indicator light shows that
    the batteries are charging.

    Note: 220-volt outlets, used outside North America, require a
    different battery charger than that shown in Figure 8; contact
    your Symbol sales representative for ordering information.

3. Allow the batteries to charge for 12 to 14 hours. After-
    ward, unplug the battery charger from the electrical out-
    let, then disconnect it from the PTC.

Figure 8. Connecting the Battery Charger

Connecting and Removing Accessories

PTC-710 accessories include printers, battery chargers, and cables.

To Connect an Accessory:

1. Turn the PTC-710 off.

2. Line up the pins on the end of the accessory cable (or the 25-pin connector on the accessory) with the holes in the PTC-710's 25-pin connector. If the accessory has a locking latch, be sure the latch is in the unlocked (far left) position (see Figure 9).

3. Press the cable's connector or the accessory firmly onto the PTC-710's 25-pin connector. Do not use a rocking or twisting action. If you are connecting an accessory directly, slide the accessory's locking latch to the locked (far right) position.

Figure 9. Accessory Locking Latch

4. If you are connecting a cable, follow the procedure in Step 2 to connect the other end of the cable to the accessory.

To Remove an Accessory:

1. Turn the PTC-710 off.

2. If you are removing an accessory that connects directly to the PTC-710, slide the accessory's locking latch to the unlocked (far left) position (see Figure 9).

    CAUTION! When removing a cable from the PTC-710, grasp the cable connector head to remove the cable. Pulling on the cable can break the wiring near the cable connector head.

3. Pull the cable connector or the accessory straight away from the PTC's 25-pin connector.

Scanning Bar-Code Labels

Follow this procedure if you are scanning labels with a pencil wand bar-code reader. If you are using another type of reader, see the instructions shipped with the reader.

1. Place the tip of the bar-code reader at the beginning of the bar-code label. Make sure the reader touches the label and is within 30 degrees of vertical in any direction (see Figure 10).

2. Draw the reader across the label with a smooth, quick motion. The PTC beeps when the reader successfully reads the label.

    Note: Do not draw the reader across the label too slowly. More failures occur from scanning too slowly than from scanning too quickly.

If the bar-code reader fails to read the label, the label may be worn or dirty. Wipe off the label and try again.

If the bar-code reader still fails to read the label, try scanning from the top or bottom of the bars in the bar code. If necessary, wipe off the tip of the bar-code reader.

Figure 10. Scanning Bar-Code Labels

Attaching the Acoustic Coupler
to a Telephone Receiver

1. Disconnect one end of the elastic strap from the PTC.

2. Place the acoustic coupler over the mouthpiece of the telephone receiver (see Figure 11). Make sure the receiver is centered over the acoustic coupler.

3. Stretch the elastic strap across the receiver and snap it onto the PTC to hold the receiver in place.

For information on sending and receiving data, see the instructions provided by your organization for your PTC system.

Figure 11. Attaching the Acoustic Coupler to a Receiver

Connecting the Internal Modem to a Telephone Line

1. Lift the rubber flap from the PTC's RJ-11 socket.

2. Plug a standard telephone cord into the RJ-11 socket (see Figure 12).

3. Plug the other end of the cord into an RJ-11 telephone wall jack.

For more instructions on sending and receiving data, see the instructions provided by your organization for your PTC system.

Figure 12. Connecting the Internal Modem to a Phone Line

Troubleshooting

If the PTC Does Not Start:

- Charge the batteries if they are nickel-cadmium; replace them if they are alkaline.

- Replace the nickel-cadmium batteries.

- Check any accessory connections.

If the PTC Shows the Message "BACKUP BATTERY FAULT":

- Make sure the backup battery is switched to the ON position. If the PTC still will not turn on, contact your Symbol service representative.

If the Bar-Code Reader Does Not Read a Label:

- Try scanning across the top or bottom of the bars in the label.

- Make sure the bar-code reader is connected securely to the PTC-710.

- Wipe off the bar-code label.

- Wipe off the tip of the pencil wand.

Regulations

FCC (United States)

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with this operator's guide, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operating 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.

According to 47 C.F.R. Part 68, Section 68.106 (1983) of FCC regulations, the customer must notify the telephone company before connecting the modem to the telephone line for the first time, and also when permanently removing the modem from service. Such notice must include the FCC Registration Number of the modem. For the PTC-710's internal modem, the Registration Number is BC5USA60772DTE.

Department of Communications (Canada)

NOTICE: The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The Department does not guarantee the equipment will operate to the user's 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. In some

cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). 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 made by Symbol. 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 system, 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 Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100. An alphabetic suffix is also specified in the Load Number for the appropriate ringing type (A or B), if applicable. For example, LN = 20 A designates a Load Number of 20 and an "A" type ringer.

For the PTC-710, the Load Number is 4, with no alphabetic suffix.

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