

Overview

The 438-753E Supplemental PC Display provides a convenient touchscreen user interface that maximizes ProCare 6000® capabilities by enhancing and simplifying system operations. The PC Console Display provides easy access to primary system features, including call processing, reminders, audio paging, location data, and selected system configuration options. It also takes full advantage of the latest operating system capabilities of Microsoft Windows XP Pro.

Each PC Console Display has its own configurable room coverage, permitting the annunciation of and response to patient calls at one or more preferred locations. All display windows may be customized to meet an area's unique requirements.

The 438-753E PC Console Display application shows call events in easy-to-read alphanumeric fields that may be individually positioned and sized. This provides staff with at-a-glance system status and quickly delivers the mission-critical information they require.

The 438-753E is compatible with GE's PC Assignments and PC Messaging Client applications. Users simply need to select the desired function button on the video display to launch these software modules and access the latest in staff assignment and mobile messaging capabilities. (See Catalog Sheets on PC Assignments and PC Messaging for more detailed information on these applications.)

Standard Features

- **At-a-Glance System Status**
Displays nurse call information in easy-to-understand screens
- **Enhanced User Interface**
Simplifies operation and facilitates improved staff response
- **Networked PC Shares Centralized Databases**
Leverages a facility's existing IP network and shares nurse call information with centralized databases to minimize data entry and maximize efficiency
- **Customized Screens**
Allows users to configure screens to meet application requirements
- **Compatible with PC Assignments and PC Messaging Mobile Messaging**
Launches IP-centric applications to provide enhanced assignment and messaging capability
- **Location Data Display**
Compatible with optional IR staff/asset location system to provide real-time display of location data
- **Operates with Microsoft Windows® XP Professional**
Provides compatibility with current Windows operating system
- **Compatible with GE HL7 ADT Bridge**
Real-time display of patient data from hospital's ADT system

Supplemental PC Console Display Kit

Model 438-753E



Overview

The supplemental PC console display kit includes the Model 437-00077C Supplemental Display software and requires a GE Model HC-PC-DSK2-XP Windows® XP based personal computer. This computer connects to a GE Model 4A3610B Base Console, and requires either a GE Model HC-LCD-17 LCD flatscreen display monitor or GE Model HC-LCD-TS-17 LCD flatscreen touchscreen display.

A GE ProCare 6000® software application is installed on the computer to enhance the base master's information and user interface activities.

The supplemental display is located near the base master to visually indicate multiple incoming calls from remotely located stations/beds. The number of calls displayed is dependent on how the attendant configures the Pending Calls window (e.g., font size, selected fields). The calls appear by color-coded priority in call placement order.

When the attendant answers a call automatically or by direct selection, a separate Connect window displays. This window provides additional user-selected staff, room, or patient information to help the attendant communicate with the caller and respond appropriately to the call.

Standard Features

- Touchscreen Compatible
- Full Alphanumeric Display
- Programmable Windows Environment
- Programmable Function Buttons
- Keyboard and Mouse Compatible

Application

Although the supplemental display is specified for use with the ProCare 6000 System, it can also be used as an enhancement to a ProCare 2000 System when the ProCare 2600 Interface Kit is used to bridge the two systems. However, it is important to note that when used with a ProCare 2000 System, it will only assume the functions and features inherent with the ProCare 2000. When a call is placed on reminder, it automatically and chronologically displays in the Reminder window in a color (red, amber, green) that reflects its assigned staff level.

If the optional staff presence feature is implemented, a separate Locate window continuously lists the rooms where staff members have registered. The rooms are shown in colors that correspond to the registered staff levels. An additional auto-locate window shall be provided that is only active when the IR (Infrared) System is interfaced to the ProCare 6000 System and the Model 438-819 Infrared Locator Integration Kit is installed at the supplemental display. The active window shall display staff presence by specific name and by staff category color—red, amber, or green. If displayed in white, the badge is a non-staff badge (e.g., an asset badge). The function control buttons associated with each operational window can be configured by the user to display in any order along the left, right, or bottom of the screen.

The user can edit the button names. Each station identification line in each window can be preprogrammed by the user to display different descriptive elements within fields in two different formats. The attendant can display either one of these formats on an as-needed basis for review or selection purposes.

Additional windows are available for making or changing assignments such as base console room coverage, pocket pager or wireless telephone message distribution, and staff/patient responsibility. These functions are available using touchscreen or mouse.

The keyboard can be used to enter a patient's name and special comments or instructions to be associated with a room/bed number. Staff members' names can also be associated with an ID number for patient assignments and for automatic remote communication through a telephone system.

Engineering Specification

A GE Supplemental PC Console Display, consisting of a Model HC-PC-DSK2-XP Windows XP-based personal computer, a Model HC-LCD-17 LCD Flatscreen Touchscreen Display, and a Model 438-753E Supplemental PC Console Display Kit, which includes the Model 437-00077C Supplemental Display software, shall be located near and connected to a Model 4A3610B Base Console as shown on the floor plans. Each complete unit shall operate independently of every other unit and provide the following operational capabilities:

1. Provisions shall be made for one or more supplemental displays to respond to and control the same or selected groups of remote stations. Provisions shall also be made for selected supplemental displays to delay showing calls of a certain priority unless they are not answered within a user-programmable time limit.
2. The supplemental display shall have the ability to capture individual rooms as needed, or groups of stations normally under the control of other supplemental displays and base consoles in the same local area group.
3. The supplemental display shall simultaneously and visually indicate up to 25 incoming calls from remotely located stations and beds under the control of its base console. The number of calls displayed shall depend on the Pending Calls window configured by the attendant. The calls shall be listed by color-coded priority in call placement order. The attendant shall be able to display calls in two different user-programmable formats for quantity display or easy direct selection.

Each format shall contain any one or more of the following descriptive elements chosen by the user:

Room/Bed Number	Patient Name
Call Priority	Area Name
Original Event Time	Transaction Time
Event	Staff Level
Primary Staff ID	Alternate Staff ID

4. The attendant shall be able to answer calls and establish two-way voice communications through the associated base console in any one of the following manners:
 - a. Automatic—The highest priority call, or the first call placed, shall be automatically connected by selecting the AutoAnswer button. Each additional selection of the button shall automatically disconnect the current call and connect to the next call in order of priority and/or call placement.
 - b. Line Selection—The attendant shall be able to answer calls in any order by highlighting any call displayed in the Pending Calls window.
 - c. Direct Selection (touchscreen only)—The attendant shall be able to answer calls in any order by increasing the size (zoom) of the Pending Calls window format then directly touching the line displaying the call.
5. The attendant shall be able to originate calls for two-way voice communications to any individual patient station on a bed basis, or to any staff/duty station, by one of the following methods:
 - a. Direct Dial—The base console shall be able to connect to any station, whether or not it is under the base console's control, by displaying the Dial Pad window on the supplemental display screen and dialing the assigned room/bed numbers using the touchscreen or the mouse. (Numerals 0–9 and eight

user-assigned alpha keys are available for room/bed number assignments.)

- b. Room List Selection—It shall be possible to display a list of the rooms and bed numbers, along with associated patient names and staff/duty stations (on an area coverage basis), in the Room List window. Highlighting the desired patient name, then selecting the Connect button, or selecting the highlighted line directly shall connect the base console to that room.
6. A Connect window shall appear when a call is answered or originated. It shall display the information elements specifically chosen to help the attendant communicate with the patient and to direct the proper staff assistance to the patient.
7. The attendant shall be able to access additional patient information by selecting the Data button while the Connect window is displayed. The current staff notes and patient data shall display in two different formats. The attendant shall be able to add, change, or delete additional patient information in freeform text using the keyboard.
8. Patient calls that require follow-up by staff members shall be placed on reminder, either selectively or automatically by priority, as required by the user. Three reminder levels shall be provided for selection by the attendant, depending on the staff level required to respond to that patient. Any one of the three reminder levels can be user-assigned to each priority level except Patient or Staff Normal and automatically selected upon answering the call. Patient and Staff Normal calls shall only be placed on reminder manually. The color of the reminder level displayed in the Reminder window shall correspond to the color of the slow flashing corridor light outside the patient's room.
9. A list of all rooms/beds currently on reminder shall be displayed in a Reminder window. The attendant shall be able to scroll through this window if the entire list does not fit within the current viewing area. This window can be continuously displayed on the screen, or it can be opened or closed by the attendant. In addition to the room number, the attendant shall be able to display any or all the information fields in two different formats based on individual needs or preferences.
10. Any call placed on reminder and not answered within a user-determined time limit shall appear again in the Pending Calls window as a recall and be placed ahead of any other unanswered calls of equal or lower priority. Selecting the recall in the Pending Calls window or in the Reminder window shall automatically connect the station for communications. The reminder recall timer shall be reset every time the recall is answered until the reminder is canceled at the station that originated the call.
11. A list of all rooms/beds that have any of up to three color-designated staff levels registered in the room shall be displayed in a separate Locate window. The attendant shall be able to scroll through this window if the entire list does not fit within the current viewing area. When the supplemental display is interfaced to the automatic staff IR location option using a Model 438-819 IR Locator Integration Kit, the name of the staff present in the room shall be displayed regardless of whether the staff is assigned to the room. If designated as non-staff, the name shall appear in white. Either window can be continuously displayed on the screen, or opened or closed by the attendant. When the attendant selects a room in the Locate window, direct communication shall automatically be established between the attendant and the staff member in that room.

12. A minimum number of control buttons (listed below) shall be made available for the user's choice and associated with each activity window as required by the user.

More	Displays next group of control buttons
Up	Moves highlight bar up
Down	Moves highlight bar down
AutoAnswer	Automatically answers next call on a priority basis
Zoom	Changes a window display format
Tone	Silences pending call tones
Reminder	Displays or removes the Reminder window
Reminder Set	Activates Reminder feature and displays rooms/beds placed on Reminder
Locate	Displays or removes the Locate window
Data	Displays patient profile window
Data Entry	Allows patient profile changes
Dial Pad	Displays the key pad to dial rooms
Room List	Displays rooms/bed numbers with patient names for audio connection, patient data review, or data entry (change)
Audio Page	Displays page choice (type and area) for audio paging into rooms or hallway pages
Pocket Page	Displays staff ID, room number, and message choice
Configure	Displays configuration options (password protected)
Connect	Connects audio to highlighted room
Disconnect	Disconnects audio from highlighted room
Duty	Toggles supplemental display on duty-off duty
Next Window	Changes focus from one window to next
Assignments	Displays assignment list and tables for staff, coverage, priority swing bed, and duty areas

13. Any combination of control buttons shall be chosen for each window depending on the features selected by the user and the operations to be performed by the attendant. The user shall be able to re-order the control buttons, position them on the left, right, or bottom of the screen, and edit the button text to accommodate specific user preferences. The button shall be active (i.e., black text) when that function is usable for the current operational sequence, and inactive (i.e., grayed out) when that function is not accessible.

14. Separate windows shall be available to make or change the following assignments, using minimum touchscreen or mouse action.

- a. Activate names and ID numbers from a list of available staff for assignment as a primary or alternate member, or deactivate names and ID numbers, placing them on the available list for later assignment.
- b. Assign individual patient beds to an active staff name and ID and an optional pocket pager or wireless telephone ID number, depending on the primary or alternate staff responsibility level and work shift.
- c. Review individually selected room stations, select or change at least three patient call priorities (normal, priority, emergency), and assign up to two in-room auxiliary hardware.

Note: Auxiliary hardware must be listed to appropriate safety standards and have an FDA approved or cleared nurse call connection. Auxiliary hardware must have a latching, normally open, dry contact relay, and must also provide a cable that has a standard 1/4-inch (0.64 cm) plug.

Auxiliary hardware is not part of the nurse call system. Before connecting auxiliary hardware to an auxiliary input, staff must be trained and certified in using the auxiliary hardware properly.

- d. Review individually selected room stations designated as swing rooms, and the consoles to which they are temporarily assigned, with provisions for each console to take control of any room for reporting purposes.
- e. Review or reassign beds and/or rooms to selected predetermined areas for area audio paging and/or system monitoring of calls. Up to 10 stations for restrictive area audio paging, or more than 10 stations for unrestricted area audio paging, can be assigned to one or more of up to 127 duty areas designated to report to that individual console.

15. A separate Data Entry window shall be available to enter or change the following information on an individual bed (patient) basis:

- a. Patient name assignment to a room/bed number, with provisions to transfer the patient to another bed or discharge (delete) the patient from the system.
- b. Choice of a primary and alternate staff name from a list of staff members preassigned to the console and on duty for the current shift.
- c. Priority of the call placed by the patient, or assignment of the proper auxiliary hardware connected to the auxiliary input receptacles.
- d. Information relating to the patient in three different free-text note fields, each protected by an optional password and/or configured to appear within other function windows, to be displayed on an as-needed basis by the attendant or during communications between the attendant and the patient.

16. The optional Pocket Page control window shall be available to select staff members who are currently active and assigned a pocket pager or wireless telephone, and to send a page consisting of a room/bed number and an optional 20-character message from a list of up to 83 predetermined messages. The message shall be transmitted to the pocket pager or wireless phone

through an event server connected to a GE supported data-type pocket pager system with display pagers. The room number and alpha or numeric message shall appear on the pocket pager or telephone handset display, dependent on the pocket page and wireless telephone systems selected.

17. While a patient station has an active voice connection to the base console, the Pocket Page control window, when selected, shall automatically highlight (select) the room/bed number and its assigned primary staff name. The attendant can then page the primary staff member, sending the room number with or without a text message. The alternate staff member can automatically be selected for paging purposes in place of the primary staff member, or any other staff member currently on duty can be selected by name to be paged in place of the primary staff member.
18. Automatic pocket paging of the primary staff member when a call is placed from a patient station/bed shall be configurable on a priority basis. This function and the priority level(s) shall be predetermined by the user depending on whether the console is on duty or off duty.
19. It shall be possible for a high priority call to initiate a page to a group of staff for signaling purposes. Each priority (code blue, staff emergency, lavatory emergency, and auxiliary) shall have up to four groups assigned to it. Each station may be assigned to one group from each priority. The number of pagers or wireless phones that can be assigned to a group shall depend on the capabilities of the pocket pager or wireless phone system.
20. The optional Audio Page control window shall be available for the attendant to select the following types of paging to transmit staff or public announcements.
 - a. Staff paging shall be available by selecting one or more staff names from a list of names assigned to a station/bed for the current shift. The staff page shall sound only at the remote stations at which the staff name is assigned as a primary or alternate care giver, or optionally only at that station where staff presence of the level selected (red, amber, green) is registered.
 - b. Area paging shall be available by selecting one to eight areas per audio channel in any one or more zones. The area page shall sound at all remote stations assigned to the area and currently under the control of the paging console, or optionally only at those stations where the selected staff level presence (red, amber, green) is registered.
 - c. Console paging shall be available by selecting one or more console ID numbers. The console page shall sound at all remote stations currently under the control of the selected consoles, or optionally only at those stations where the selected staff level presence (red, amber, green) is registered.
 - d. All page shall be available. The all page shall sound at all remote stations currently under the control of all consoles configured as members of the Local Area Group, or optionally only at those remote stations where the selected staff level presence (red, amber, green) is registered.
 - e. Hallway (corridor) paging shall be available individually or in conjunction with area paging. Optionally, the speakers, if normally connected to the general paging system, shall be

installed with an override capability. The hallway page shall sound at all speakers connected to all paging adapters currently assigned to the console.

21. The desktop computer and display for the Supplemental PC Console Display shall be provided by GE, the systems integrator, or the customer and shall comply with the following:
 - a. See the latest revision of document number 85100-0055, the GE Model HC-PC-DSK2-XP XP-based General Purpose PC, for detailed computer specifications.
 - b. The supplemental display shall be located within 10 feet (3 m) of a Model 4A3610B Base Console containing the display interface device, and shall be connected to the base console by a 9-pin serial data cable assembly. The supplemental display shall be capable of continuous 24-hour operation.
 - c. Microsoft Windows XP Workstation and GE Model 437-00077C software shall be factory installed and tested for use with the ProCare 6000 System when the combination is provided by GE. Additional site-specific configuration shall be required, assisted by the use of the optional Model 438-804A ProCare 6000 Configuration Tool.
22. A Model 438-753E Supplemental PC Console Installation Kit shall be required for each supplemental display, regardless of the supplier of the computer display unit. It shall contain the necessary installation and operation information, base console interface device and connecting cable, software application CD, and software protection device.

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Ordering Information

Part Number	Description
438-753E	Supplemental PC Console Display Kit
Associated Equipment	
4A3610B	Base Console (required)
HC-LCD-17	LCD Flatscreen Display
HC-PC-DSK2-XP	General Purpose PC
HC-LCD-TS-17	LCD Flatscreen Touchscreen Display
438-819	IR Locator Integration Kit (optional)
438-804A/B	ProCare 6000 Configuration Tool (recommended option)

