2524 Master Clock and Intercom Controller

Programming

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Table of Contents

Table of Contents (cont'd)

General Information

Description

The Rauland 2524 is a multi-function Master Clock and Communications Control Center. As a master clock, it will synchronize virtually any kind of secondary clock and control up to 350 "events" (such as sending tone signals or turning lights and equipment on and off). As an intercom controller, it adds control of room-switching functions and display functions to Director III intercom-control panels.

Manuals

This manual tells how to program the 2524 for both clock and intercom functions. The first section gives the basic programming procedures. The "Clock Modes A-F" section explains the programming for the general settings needed by the unit, whether it is used only as a master clock or also as a control unit for communications. The last two sections deal with the clock and intercom functions, respectively.

Generally, the Clock Modes A-F, *especially Clock Mode A*, should be done before the numerical modes. Refer also to KI-1628, *2524 Installation,* and KI-1630, *2524 Operation.*

Following the text are four tables that list all of the programming functions. Also attached are a work sheet for devising a special clock-correction code and charts for planning the system programming.

Power-up

When the 2524 is turned on, its displays normally appear as follows: the "Mode" window reads "0" (Run Mode), the "Time" window shows the current time, the "Sched" ("Schedule") window shows a flashing "P" (to indicate that the power was off), and the "Clock" LED lights (to show the unit is set for clock operation). Push any key to stop the flashing "P."

   ➪ *The "Sched" window will show the number of the schedule currently in use.*

Note: If the battery was "disabled" (see IL0341 in KI-1628), the "Time" display may be random. In this case, set the date and time (Clock Modes 1 and 2).

Programming Summary

This section gives the procedures for accessing, changing, and entering programming information.

After this summary, there is a section on planning. Then the three groups of programming modes are explained. The alphabetical modes (A-F) are explained first, because this group affects both clock and intercom operation; moreover, these settings are usually entered during setup and left that way, except for the annual holiday and Daylight Savings Time changes. The other clock and the intercom modes follow in that order.

Disabling Programming

Jumper *J2* on the main circuit board of the 2524 can prevent any programming changes from being effected. Although the displays would still change as a user entered different values, these changes would not be recorded in the EEPROM and so the old settings would remain in effect. The only changes that could be effected from the front panel would be the time and date, and not even these could be changed from a computer running the T2524 Diagnostic Program and connected to the 2524's serial port.

As viewed from the front of the 2524, *J2* is near the right rear corner of the circuit board, near the four-pin header of the serial port. *J2* has three pins and a sleeve jumper that slides over two pins. To disable the programming, place the sleeve jumper over the middle and rear pins (the "DIS" setting). To enable programming, place the sleeve jumper over the middle and front pins (the "EN" setting).

Caution: Accessing this jumper require removing the top cover of the 2524, which, in turn, entails removing the power connections on the rightmost rear screw terminals (as viewed from the rear). Be sure to turn off the AC power going to the unit before beginning. Follow the directions in KI-1660 when reconnecting the power.

Sequence

Important: Before entering clock events (Clock Mode 3) or editing them (Clock Mode 4), you should enter any clock-correction codes (Mode A), because each code takes up two outputs that are not, consequently, available for events. The 2524 will not allow you to enter an event for a zone that is taken up by a clock code. Should you enter events for zones that you subsequently take up with a clock code, the 2524 will not erase them. However, it will not activate events in clock-code zones, and these zones' LEDs will not light when you review the events in Clock

Mode 4. The remaining modes may be programmed in any order.

Access to Programming

To begin programming, the clock must be in the Clock Run Mode ("0").

Step 1. Enter the Security Code (*Funct 2524*–that is, press in succession the *Funct, 2, 5, 2,* and *4* keys):

> ⇨ *The "0" in the "Mode" window will flash, meaning that you can select a programming mode. If you pause more than five seconds between keystrokes or enter invalid keystrokes, the clock will display "Err0," "beep," and, after a moment, revert to the Clock Run Mode.*

Step 2. To select the Clock Modes, skip to Step 3. To select the "Comm" modes, push the white *Clock/Comm* button.

> ⇨ *The "Comm" LED will light steadily, a "1" will flash in the "Mode" window, and a "P" will appear in the "Sched" window.*

Note: Once you select intercom programming, you can only select those "Comm" modes. To select the clock modes, you have to first exit to the Clock Run Mode, then begin again with Step 1.

Step 3. To select a numbered mode (1-9), type in its number; to select a letter mode, press *Funct* while you type the corresponding number ("1" for "A," "2" for "B," etc.).

> ⇨ *The number or letter you selected will show steady in the "Mode" window. You can now either enter a different mode or commence programming.*

General Methods

Flashing, whether in a window or an entire group of LEDs, marks the spot (field) in the programming that will be affected by your entries. We refer to this flashing area as the "flashing cursor."

Step 1. When you are in the desired mode, use the cursor keys (← and →) to move to the desired window or LED group.

Step 2. Use the digit keys to enter the desired programming. Keys 1-8 toggle the individual "Zones" and "Days" LEDs on and off.

Step 3. Use the orange *Clear* key to restore a field's previous setting (except in Mode B, where it is used to

enter the entire series of numbers). When you are sure all the entries for the mode (or individual event) are correct, press the orange *Enter* key.

⇨ *The new programming will be stored in the clock's memory, and the "Time" window and any involved LEDs will light steady, to show your final entries. If you enter invalid data, such as "13" for the month, the 2524 will "beep" and flash the left-most field that had an error (for times and dates, the 2524 typically reverts to the last valid entry). Correct that field and press Enter, which will cause the 2524 to record this change and check for any other errors. If it finds one, it will flash that field.*

Note: In Modes 1 and 2, the 2524 will automatically advance to the next mode after you press *Enter.*

Exiting

To quit programming, return the cursor to the "Mode" window and type a "0" (Clock Run Mode). Alternatively, do nothing for one minute. In either case, the 2524 will return to the Clock Run Mode.

Planning

Information Needed

Because of the interrelation between the wiring and the programming, a good deal of programming-related planning was required for the installation. You need the following information from that planning:

√ What is connected to each "Zone/Output" terminal (secondary clocks, equipment, etc.).

√ What, if any, secondary clock codes are needed; if two are used, which is needed for Outputs 5 and 6, and which for Outputs 7 and 8.

√ How many relay panels are connected (0-20).

√ Whether there is an audio program source that can be used for clock events ("Music").

√ Whether there is a tone generator for clock tones. From the customer, you need to find out:

√ The desired schedules for clock events, including holidays.

√ The desired zones for clock events and intercom paging.

√ The dates of the holidays and other special days for which a special schedule is desired. (You also need to know the dates for the changes to and from Daylight Savings Time.)

√ The calling ("Architectural") number that should be programmed for each room station (typically the same as the room number).

√ Which rooms should be included in the monitoring function. (When this function is activated by the operator, it continuously cycles through the selected stations, so that the operator can listen for any unusual sound that signals a need for action.)

Most of this information can simply be entered in one or two steps and, accordingly, will be explained in the appropriate "Modes" section of this manual. The events and the paging zones require more planning.

Planning Charts

Completing the charts attached to the end of this manual is an important part of planning. This will help you organize the programming, make it easier to enter the data, give the user helpful information, and simplify later programming changes. When you are finished, provide copies to the users and keep a set for your own files.

Zones Chart

When the 2524 is wired and used like a conventional master clock, you can easily figure out how its zones can be used. Any output connected to secondary clocks or to equipment can serve only them.

However, wiring the 2524 to speakers via relay panels introduces a second type of zone, which is determined by the software in "Comm" Mode 2. Although these two types of zones work independently in some respects, they are closely interrelated:

• These software zones are used for both events and paging; thus, a page sent to Zone 4 will include the same speakers as a clock-tone event.

• The eight zones are tied in with the 2524's "Zone/Output" terminals. For example, if Outputs 7 and 8 are used for a clock-correction code, you cannot use Zones 7 and 8 for events (e.g., for sending clock tones via speakers).

• To have clock tones via speakers, the corresponding output terminals must be wired to the tone generator, in order to activate the tone signals. This eliminates the use of clock events via speakers in any zone whose corresponding output terminal is used for correcting clocks or controlling equipment.

• It is possible to have paging zones when the corresponding outputs are used for clock-correction codes. However, since the output terminals

are tied up, they cannot channel tones or music to the speaker zones.

All of these factors are summarized in the following table. Note that only one of the listed combinations can be active in a zone at a time. The first four zones have only two choices because clock-correction codes can only use Outputs 5-8.

Assigning Functions to Zones

Zone	Possible Functions
1	T&P *or* L.
2	T&P *or* L.
3	T&P *or* L.
4	T&P *or* L.
5	T&P *or* L *or* C&P.
6	T&P *or* L *or* C&P.
7	T&P *or* L *or* C&P.
8	T&P *or* L *or* C&P.

T = clock Tones via speakers.

P = Paging zones.

L = Latching zone for controlling equipment.

C = Clock-correction signal.

The "Duration" (Clock Mode 5) tells how long an event will continue: 1-59 seconds for tones, or "00" for latched events (an event with "00" duration holds the affected zone's relay closed until another event, which does not include that zone, is executed). The "Description" is for the programmer and user. For example, a zone could be described as an area ("West Wing"), a classification (laboratory classes), a time (evenings, week-ends), or a function (outside lights).

Stations Chart

This is needed only when relay panels are controlled by the 2524. Although the chart primarily deals with intercom functions, the "Paging Zones" entry directly affects clock tones sent to the speakers.

Physical Number: This refers to specific terminals on the relay switching panels. The first terminal on the first panel is "001," the first terminal on the second panel is "026," and so on. The system uses these numbers to keep track of each station (e.g., to determine which station is calling in, or to determine which relay to close to connect the operator with a station). The only way to change a station's Physical Number is to wire it to different terminals.

Architectural Number: This is the number the user will enter on the 2524's keypad in order to call the room.

The 2524 locks up the corresponding Physical Number to carry out the desired communications function.

Users typically want the room number for calling, but any three-digit number can be used. Make sure that you do not assign the same number to more than one station.

Paging Zones: Each room can be assigned no zones or from one to eight zones in any combination. Assigning a zone to a station means that the latter will receive both paging and clock events for that zone.

Monitor: Giving a station this feature means that it will be included when the 2524's monitoring function is enabled (see also "Comm" Modes 3 and 4). When activated in the "Comm" Run Mode, the monitoring function momentarily connects the control panel to each selected station in succession, so that the user can listen for disturbances or unusual sounds. The length of time that the 2524 remains connected to each station is determined by "Comm" Mode 4.

Note: This function is not available for CCOM sytems using CTL1.

Supervision: This setting determines whether or not a station will be included when the 2524's supervisory function is activated. This function scans the selected stations for wiring faults. When activated in "Comm" Mode 3, the function automatically runs every hour; it can also be manually activated at any time.

Program: Each room can be set up to automatically receive music or other audio programs whenever they are run. This setting is made in the intercom operating mode, and so is described in the 2524 operation manual, KI-1630 (see the subsection "Distribute a Program" under " 'Comm' Mode").

Note: Clock tones, pages, and calls to an individual room will override the program function to all rooms. As soon as the clock tone or intercom activity ends, the program-distribution will resume.

The Events Chart

This chart contains the most columns and will typically have the largest number of entries. In order to fill it out, you first have to fill out the charts explained above.

An "event" is simply the automatic closing of a "Zone" output terminal and the pulling in of relays on optional speaker relay panels.

The circuit closure on an output, in turn, is used to control external devices connected to the clock. The output may activate for a programmed time between one and 59 seconds (to ring bells, for instance), or it may be left on until it is turned off again by another event at a different time (to control lights or heating equipment, for instance).

The pulling in of panel relays enables clock tones or an audio program to be sent to room speakers.

Entering an event requires five pieces of information: the time and the days when the event will take place, which "Zone" outputs will be activated, which schedule is involved, and, if music or other audio programming is desired, how long it should play.

"Event No.": This column is for your reference only–to keep track of the number of events, etc.; it is not programmed into the clock.

Time: If you are using the 12-hour display format, be sure to indicate "AM" and "PM"; if you are using the 24-hour format, leave the "AM" and "PM" columns blank but use "13"—"23" for the "PM" hours and "00" for the Midnight hour. Use this chart for your own and the user's convenience: should you subsequently change modes, the clock will automatically adjust the times for the events. Thus, if you are more familiar with the 12-hour mode, you can enter everything that way and then change the clock to the 24-hour mode.

You may schedule multiple events for the same time. For example, you may want different types of events in different zones but starting at the same hour of the day, or you may want to vary the types or sequence of events on different days of the week.

Days of the Week: You may program each event to occur on one to seven days of the week, in any combination of days.

Schedule: Enter a number from "1" to "8" and add a brief description (e.g., "Regular" or "Winter"). Remember that only one schedule can be active at a time. Normally,

this is the one selected in Clock Mode 6 and displayed in the "Sched" window. However, the regular schedule will be overridden by a holiday schedule (Clock Mode C).

Zones: To decide which zones to place each room in, you must understand how zones work (see the "Zones Chart" subsection) and know the customer's needs (which rooms are to receive pages together, which will receive clock tones together, etc.).

Note that a zone must also be selected in Clock Mode 6. An event will be executed only in the zones that have been entered in the event *and* selected; however, such an event could still turn off an ongoing latched event in an active zone (see the "Important" note further on in this subsection).

The distinctive feature of event zones is that they use the 2524's "Zone" output terminals, whether or not relay panels are involved. To send tones to speakers, the system must include a tone generator. Because the "Zone" outputs are needed for clock corrections (except for digital clocks wired to the 2524's "DIG" output), the number of event zones available for use is reduced by two for every clock code that is programmed into Clock Mode A.

Latching events effectively monopolize a zone. You must give their zones a duration of "00" in Clock Mode 5.

Important: Latched events will end upon the execution of any subsequent event that does not include their zones. This could be a regular event or a special "no zones" one whose sole purpose is to end latched events.

Exception: When there are two or more events that will execute at the same time, only one of them needs to include the zone for the latched event.

Music: This should only be selected for speaker zones. Besides having relay switching panels, the system should also be equipped with the necessary program-distribution equipment (e.g., a Director master control panel, a tuner and cassette player, and an appropriate Rauland power amplifier).

You can select a duration of one to 15 minutes. After the bell tone sounds, the music will play for the selected length of time.

Clock Modes A-F

As was explained earlier, these general settings, especially Mode A, should be entered first. Before beginning here, you should fill out the charts, as explained in the "Planning" section.

Mode A (Preprogrammed Clock Codes)

Outputs 5-8 can be used individually to control clock events or in pairs to correct secondary clocks. Each type of secondary clock has its own sequence of correction signals (frequency, duration, etc.); see KI-1628, the 2524 installation manual, for an extensive listing of secondary clocks and the correction codes they require. Two of these codes can be used simultaneously in the 2524. Digital secondary clocks can be controlled by the 2524's *Dig* output; this arrangement does not use up either a Mode A code or any event-zone outputs.

Note: The 2524's standard codes should correct all of the widely distributed secondary clocks and most of the others. You should be able to accommodate virtually any clock by entering a custom code for it in Mode B, below.

Step 1. After entering the programming function, press *Funct* while you type *1* to select Mode A.

 ⇨ *The left half of the "Time" window will display the first correction code, and the right half will display the second correction code. If no code has been entered, the display will show "00." The "Zones" LEDs will light to show which outputs are available for events (4, 6, or 8, depending upon how many correction codes are used). The "Sched" window will show "d" if the power-up correction is disabled, or "E" if it is enabled (see Step 3).*

Step 2. Use the right cursor key (→) to select the "Time" window.

If only one correction code is needed, enter its two-digit code (e.g., "07") in the left "Time" window, and enter "00" in the right "Time" window. In this case, *Out 7* and *Out 8* will be used for correcting the clocks.

If a second correction code is needed, enter it (for *Out 5* and *Out 6*) in the right "Time" window.

If you do not want any code, press *Clear* to change both entries to "00."

You can also use *Clear* if you make a mistake and want to re-enter the codes.

 ⇨ *As soon as you enter a digit, it will replace the corresponding digit in the "Time" window, and the "Zone" LEDs will turn off.*

Step 3. Press → to move to the "Sched" window. Push *Funct* to toggle between the "E" (enabled) and "d" (disabled) setting for immediate time correction. When this function is enabled, the 2524 will send corrections to the secondary clocks immediately after the restoration of power after a power failure; when the function is disabled, the 2524 will only send corrections at the regular times (hourly and 12-hour).

Step 4. Press *Enter* to record your changes.

 ⇨ *The "Time" and "Sched" windows will show steady, and the "Zone" LEDs will light to show which outputs are now available. However, if the 2524 finds an invalid code entry, it will "beep" and keep the cursor on the "Time" window.*

Mode B (Custom Clock Code)

This mode is used to program a correction routine for a secondary clock that does not match any of the 2524's standard codes. You can enter up to two sets of seven integers. The first set consists of Integers "01" through "07," and the second set consists of Integers "08" through "14."

Creating a Custom Code

Find out the precise correction requirements of your special secondary clock. This includes such items as the on and off times for correcting the time, whether there is more than one clock motor involved, and the output or outputs on the 2524 to which the clock is wired. Use the "Custom Code Work Sheet" at the back of this manual to establish the 2524 programming for the clock. After entering this programming into the 2524, keep this work sheet with the other installation documents for future reference.

Entering the Custom Code

Step 1. After entering the clock programming modes, select Mode B by holding in *Funct* while you press *2*.

 ⇨ *A "b" will appear in the "Mode" window, and the left "Time" window will display "01," which indicates that the number in the right window is the first integer for the custom code.*

Step 2. Push → to move the flashing cursor into the right "Time" window.

 ⇨ *The two digits in that window will flash.*

Step 3. Type in the first two-digit number from your work sheet, then push *Enter*.

⇨ *The left "Time" window will increment to the next number, and the right window will flash the current entry for that integer.*

Note: For integers that need to be designated as minutes or seconds (bytes 4, 6, 11, and 13), push *Funct* to toggle between minutes and seconds (the "PM" LED lights for "minutes"). When the setting is satisfactory, press *Enter.*

Step 4. When you have finished with this mode, push *Clear* to enter your code into the EEPROM.

⇨ *All the custom-code settings will be entered, and the "Time" windows will show the first integer.*

Step 5. Go to Mode A and enter "21" as one of the correction codes. Be sure to select it as the first or second code in accordance with your work sheet.

Mode C (Holidays and Time Changes)

This mode is used to enter the dates for the holidays and Daylight Savings time changes.

Step 1. After entering the clock programming modes or finishing in another mode, select this mode by holding in *Funct* while you press *3*.

⇨ *A "C" will appear in the "Mode" window.*

Step 2. Press → to move the "flashing cursor" to the "Time" windows.

⇨ *The "Time" windows will flash.*

Step 3. To select a day for a special schedule or an automatic time-change, type two digits for the month and two more for the date (MMDD). Press → to move the cursor to the "Sched" window.

⇨ *The "Time" windows will go steady and the "Sched" window will flash.*

Step 4. Make one of the following entries:

To disable all events on that day: Type "0."

To select a special schedule for that day: Type in the schedule's number (1 through 8). Whether or not the schedule is selected in Mode 6, it will automatically run on this date.

To repeat a holiday schedule on consecutive days: After you enter a schedule number, as explained in the preceding paragraph, the Schedule window will go steady and the "Music" LED will flash. If you want the holiday schedule you just entered to run for more than one day, type "1." The left "Time" display will show "du" ("duration"). Type in an integer (from 1 to 15) to specify how many consecutive days you want this holiday schedule to run. This option is useful for vacation periods.

To advance the time one hour at 2 a.m.: Press *Funct* and *1* to enter "A" ("Advance") in the "Sched" window.

To turn back the time one hour at 2 a.m.: Press *Funct* and *6* to enter "F" ("Fall" or "fall back") in the "Sched" window.

Step 5. When you are satisfied with your entries, press *Enter.*

⇨ The 2524 will check your entry for a valid date; if it finds an error, it will flash your entry in the "Time" windows. If you entered a "duration" value (to repeat a holiday schedule), the program will check it for validity, too. If it finds an error, it will "beep" to indicate an error, continue displaying "du" in the left "Time" window, and flash the right "Time" window. If you did not enter a duration value or if the program does not find any errors, it will store this holiday event and flash the "Time" windows again, signaling that it is ready for another entry.

Mode D (Edit Holiday events)

This mode is used to review, edit, and delete the holiday and time-change events entered in Mode C.

Step 1. After entering the clock programming modes, select Mode D by simultaneously holding in *Funct* while you press *4.*

⇨ *The "Mode" window will read "d," and the remaining windows and LEDs (except "Clock" and "Comm") will display the first holiday (in chronological order).*

Step 2. If you want to work with this event, skip to Step 3. To move to the next holiday, push the *Enter* key. To move directly to an event for a certain date, press → to move the cursor into the "Time" windows, enter the desired date in the "MMDD" format, and push *Funct.*

⇨ *The front-panel displays will show the selected holiday event. If no holiday event has been programmed on the selected date, the 2524 will display the event for the earliest following date. If there is no later holiday event, the 2524 will "beep" and display its earliest holiday event; if no holidays are programmed, the 2524 will "beep" and flash the "Mode" window.*

Step 3. *To modify an event,* use the cursor keys to select the appropriate window or LED block, then enter the desired number. *To delete an event,* move the flashing cursor into the "Time" windows, then press *Erase.* Check your entries, then press *Enter.*

⇨ *The 2524 will enter any changes into the EEPROM (or erase an event from there) and display the next event.*

Step 4. When you are finished programming in this mode, move the flashing cursor to the "Mode" window and select another programming mode or enter "0" to return the 2524 to the Clock Run Mode.

Mode E (Relay Panels, Comm Activation)

This mode has three settings. The first tells the 2524 how many "SC" relay panels (TC4110, TC4130, or TC4131) are connected to it. The second tells the 2524 whether or not it should activate its communication functions. Unless this operating mode is activated here, the 2524 will not receive call-ins, make calls, do paging, or even enter the "Comm" mode. The third setting determines whether or not the 2524 will handle call-ins.

Important: Be sure to enter the correct number of relay panels. If, for example, you specified "20" but there were only two, the 2524 would operate correctly but more slowly, because it would waste time trying to work with non-existent relay panels: checking them for call-ins, trying to pull them in for paging, etc. On the other hand, if you were to specify fewer relay panels than there actually are, the 2524 would ignore call-ins from the higher-numbered panels, and you would not be able to call rooms connected to them. If no relays are connected to the 2524, leave the intercom function disabled (the factory setting) to prevent an operator from entering the "Comm" Mode, which blanks out the clock information from the front panel.

Step 1. After entering the clock-programming function, hold in *Funct* while you press *5*.

⇨ *The "Mode" window will flash "E," the left "Time" window will display "SC," the right "Time" window will show the previously programmed number of relay panels, and the "Sched" window will show "O" ("Off") if the call-in function has been disabled or "C" if it is enabled.*

Step 2. Push → to move the flashing cursor to the "Time" windows.

⇨ *The right "Time" window will flash.*

Step 3. Enter any number between "00" and "20," then move the flashing cursor to the "Zones" LEDs.

⇨ *If the communications mode is enabled, the first LED will flash at the approximate rate of one second on and one second off; the remaining LEDs in this block will remain off. If the "Comm" mode is disabled, all eight LEDs in the block will flash at the rate of a half-second on and one-and-a-half seconds off. If the "Comm" mode has already been enabled, the first*

"Zone" LED will light steadily, and the other LEDs will be off.

Step 4. Use the *1* key to toggle between the two settings. When the setting is satisfactory, press → to move the flashing cursor to the "Sched" window.

⇨ *The "Sched" window will flash.*

Step 5. Push *Funct* to toggle between "O" ("Off") and "C" (call-ins). Make sure that all three settings are satisfactory, then push *Enter* to store the data.

Important: You must calibrate Pot *RP1* in "Comm" Mode 5 before activating the call-scanning function here.

⇨ *The stored settings will be displayed, and the "Mode" window will flash.*

Step 6. You can now specify another mode for programming or enter "0" to return the 2524 to the Clock Run Mode.

Mode F (Events: Totals and Erase All)

This mode will show how many regular events and how many holiday events have been programmed. It can be also used to erase *all* of these events.

Step 1. If necessary, enter the clock programming mode. Hold in *Funct* while you type a *6*.

⇨ *The "Mode" window will flash "F," the "Time" windows will display the number of events, and the "Sched" window will show an "E" (regular Events).*

Step 2. Use the *Enter* key to toggle between the regular events and the holiday events.

⇨ *For the holiday events, the "Time" windows will display the appropriate number, and the "Sched" window will show "H."*

Step 3. To simultaneously delete all events (both regular and holiday), move the flashing cursor to the "Time" windows, push and release the *Funct* key, type "2524," then press *Enter.*

Note: It does not matter which kind of events is currently displayed, since this procedure will erase both kinds at the same time.

⇨ *The "Mode" window will flash "F," and the "Time" windows will show "0000," indicating that no events are stored.*

Step 4. You can now proceed to another mode or exit the programming function.

Clock Modes 1-6

Before beginning here, you should fill out the programming charts, as explained in the "Planning" section of this manual. You should also have completed the programming Modes A-F, especially Mode A.

Mode 1 (Date)

Step 1. If necessary, enter the clock programming function. If you are in a different programming mode, press *1* while the "Mode" window is flashing.

⇨ *A "1" will flash in the "Mode" window, and the "Time" windows will show the current setting for the year.*

Step 2. Press → to flash the "Time" windows. To change the year, type in any number from "1989" to "2099." Check the entry, then press *Enter.*

⇨ *If you typed an invalid date, the 2524 will "beep," redisplay its current setting, and wait for you to repeat this step. Otherwise, the 2524 will store your new date and flash its current setting for the month in the left "Time" window and that for the day in the right "Time" window (e.g., "03 15").*

Step 3. To change the date, type two digits for the month and two more for the day's date (e.g., "03" for "March" and "15" for the day. Make sure that your entry is satisfactory, then store it by pressing *Enter.*

⇨ *If you typed an invalid date, the 2524 will "beep," redisplay its current date setting, and wait for you to repeat this step. If your date is valid, the 2524 will store it and flash a "2" in the "Mode" window, indicating that the unit has automatically advanced to the next mode.*

Mode 2 (Time)

Step 1. If necessary, press *2* while the "Mode" window is flashing.

⇨ *A "2" will flash in the "Mode" window, and the "Time" windows will show the current time setting.*

Step 2. Push →.

⇨ *The "Time" windows will flash.*

Step 3. To change to the 12- or 24-hour format, hold in the *Funct* key while you press one of the following:

For the 12-hour mode, press *1.*

For the 24-hour mode, press *2.*

⇨ *The "AM" or "PM" LED will light if you selected the 12-hour mode, or turn off if you switched to the*

24-hour mode. If an afternoon-time is set in the clock, the numbers will change (e.g., between "03:27" pm and "15:27"). The "Time" windows will continue flashing.

Step 4. Enter four digits for the time (e.g., "0305" for "3:05"). Your entry must match the 12- or 24-hour time mode (e.g., a 2524 in the 12-hour mode will not accept "20:50" for "8:50 p.m.").

⇨ *If the 2524 is in the 12-hour mode, the "Time" windows will go steady and the "AM" or "PM" LED will flash. If the 2524 is in the 24-hour mode, the "Time" windows will continue to flash after you have typed in the new numbers.*

Step 5. If you are in the 24-hour mode, skip to Step 6. Press *1* to change to AM, or *2* to change to PM.

Step 6. When you are satisfied with the settings, press *Enter.*

⇨ *An invalid time will cause the 2524 to "beep," flash its current setting in the "Time" windows, and wait for you to enter a valid time. A valid entry will cause the 2524 to enter the new time and automatically switch to Mode 3.*

Step 7. Continue with Mode 3, enter the number of a different mode, or enter "0" to return the 2524 to the Run Mode.

Mode 3 (Enter Regular Events)

This mode is used to load new events (ringing bells, turning equipment on or off, etc.). You will need to write out all the events first, using copies of the attached Events Chart as guides.

Step 1. If necessary, get the "Mode" window to flash by entering the programming function or moving out of another programming mode.

Step 2. Type a "3".

⇨ *The "Mode" window will flash the "3," the "Time" windows will show the current time, all the valid "Zones" LEDs and the "Days" LEDs will light, the "Sched" window will show "1," and the "Music" LED will be off.*

Step 3. Push → to move the flashing cursor into the "Time" windows.

⇨ *The "Time" windows will flash.*

Step 4. Type in the time, using four digits.

⇨ *The new time will appear in the "Time" windows. If the 2524 is in the 24-hour mode, all the available "Zones" LEDs will flash, so you can skip to Step 6. If the 2524 is in the 12-hour mode, the "AM" or "PM" LED will flash.*

Step 5. Press *1* to select "AM" or *2* to select "PM." Alternatively, if the desired LED is flashing, you can press → to move to the next field.

⇨ *The selected LED will light steadily and all the available "Zone" LEDs will flash.*

Step 6. Select the desired zones by using the corresponding keys. For example, pressing *3* will toggle the Zone 3 LED on and off. When only the desired LEDs are lit, press → to move to the "Days" LEDs.

⇨ *The "Zone" LEDs you selected will light steadily, and all the "Days" LEDs will flash.*

Note on the Flashing of LEDs: In this mode, when the "cursor" is on the "Zones," "Days," or "Music" LEDs, the 2524 provides two types of flashing. If at least one LED in the field is selected, the 2524 will flash it at the rate of a half-second on and a half-second off. However, if no LED in that field is selected, the 2524 will flash the entire field at the rate of a half-second on and one-and-a-half seconds off. This enables you to quickly detect when the entire LED block is off or on.

Step 7. Select the desired days by using the corresponding keys. For example, pressing *4* will toggle the "Th" LED on and off. When only the desired LEDs are lit, press → to move to the "Sched" window.

⇨ *The selected "Days" LEDs will light steadily, and the "Sched" window will flash.*

Step 8. Enter one schedule number ("1" through "8").

⇨ *The number will be shown steadily in the "Sched" window, and the "Music" LED will flash.*

Step 9. If you want music to play over the speakers after they have sounded the bell tone, type in a "1." If you do not want this music, type in a "0."

⇨ *If you did not select music ("0"), the "Music" LED will flash at the rate of a half-second on and one-and-a-half seconds off. If you selected music ("1"), the "Music" LED will glow steadily, the left "Time" window will read "du" ("duration"), and the right "Time" window will flash.*

Step 10. If you did not select music, skip to Step 11. If you did select music, type in a two-digit number to indicate how long you want the music to play. You can specify from one to 15 minutes ("01" through "15").

⇨ *The right "Time" window will flash the number you entered.*

Step 11. Check all the settings for the event. When all is satisfactory, push *Enter.*

⇨ *The 2524 will check all the settings for this event. If it finds an invalid setting, it will "beep" and flash that setting; if there is more than one error, the 2524 will flash the left-most one, and work its way to the right as you correct each error. If no errors are found the 2524 will store the event and flash the "Time" window to show it is ready for you to enter another event (the time shown will be that which you entered for the last event).*

Note: To change any setting, use the cursor keys in the usual way to move back and forth through the settings. The one exception is when the cursor is "Time" windows for the "du" setting: in this case, press the *left* (←) cursor to move the flashing cursor back to the "Sched" window (or further back). To change the "du" setting when you have just entered an undesired value, push ←, to return to the "Sched" window, push → to move back to the "Music" LED, then push *1* to select music again.

Step 12. When you are finished with this mode, move the flashing cursor back to the "Mode" window and either select another programming mode or type in "0" to return the 2524 to the Clock Run Mode.

Mode 4 (Edit Regular Events)

This mode is used to Review, Edit, and Delete regular events.

Step 1. If necessary, get the "Mode" window to flash by entering the clock-programming function or moving out of another of its modes.

Step 2. Type a "4."

⇨ *The "Mode" window will flash the "4," the "Time" window will show the earliest time of day programmed for an event, and the LEDs and windows will show the programming for this event.*

Step 3. *To move to the next event,* push the *Enter* key. *To move to a specific event,* push the → key once to move the flashing cursor into the "Time" windows, enter the time of the event there, then press *Funct.*

Caution: Do *not* press *Enter,* because that would enter a new time for the displayed event.

⇨ *The next or the selected event will be displayed, and the flashing cursor will move back to the "Mode" window. If you entered a time for which there is no event, the 2524 will display the earliest event following the time you entered. If there is no event at that time*

or later, the 2524 will "beep" and display the latest event.

Step 4. *To edit (change) any part of an event,* move the flashing cursor to the appropriate window or LED block. Enter changes by typing in the desired value or using the numerical keys to toggle the LEDs on and off, as in Mode 3. To access the "duration" window, you have to enter a "1" when the "Music" window is flashing. When the 2524 shows the event as you want it, push *Enter. To erase a displayed event,* move the flashing cursor into the "Time" window and press *Erase.*

⇨ *The event will be reprogrammed or erased, and the 2524 will display the next event and move the flashing cursor back to the "Mode" window.*

Step 5. When you are finished with this mode, move the flashing cursor back to the "Mode" window, if necessary, and either select another programming mode or type in "0" to return the 2524 to the Clock Run Mode.

Mode 5 (Zone Duration)

This mode is used to program the length of time (duration) that each zone's relay will close when it is activated by an event. Two kinds of events are set up here: regular, short-duration events like sounding a bell tone, and latched events, which turn on a relay and leave it on until another event turns it off. Latched events are used for controlling such things as lights and equipment for heating and cooling. Note that the duration for music or other program material is set as part of the event itself in Mode 3.

Step 1. If necessary, get the "Mode" window to flash by entering the programming function or moving out of another programming mode.

Step 2. Type a "5."

⇨ *The "Mode" window will flash the "5," the "Zone 1" LED will light, the left "Time" window will show "du" ("duration"), and the right "Time" window will flash with the programmed duration of Zone 1.*

Step 3. To cycle through the zones, press *Enter* while the right "Time" window is flashing.

⇨ *Whenever you press Enter, the 2524 will advance in numerical order to the next zone; after Zone 8, it will wrap around to Zone 1. If a zone is used for a clock-correction code and is therefore not available for events, the "Time" windows will show "Corr."*

Step 4. For a regular duration, type in from "01" second to "59" seconds; for a latched event, type in "00." When the zone is the way you want it, press *Enter.*

⇨ *The 2524 will store the new duration, turn off the LED for that zone, and display the duration for the next zone.*

Step 5. When you are finished with this mode, move the flashing cursor back to the "Mode" window and either select another clock-programming mode or type in "0" to return the 2524 to the Clock Run Mode.

Mode 6 (Activate Zones and Schedules)

This mode determines which zones and schedules are active. Unless a zone is "turned on" in this mode, it will not run even though it is included in a regular event that the 2524 executes. For example, if a regular event included Zones 1-4 but only Zone 3 was activated in Mode 6, the 2524 would only carry out this event in Zone 3.

Only one schedule can be active at a time, and only those regular events that have the currently selected schedule will be executed.

Note: A holiday entry will execute the events in its selected schedule even if they have not been selected in Mode 6.

Step 1. If necessary, get the "Mode" window to flash by entering the clock-programming function or moving out of another of its modes.

Step 2. Type a 6.

⇨ *The "Mode" window will flash the "6," the "Time" window will be blank, the LED of each active zone will be lit, and the "Sched" window will show the currently selected schedule.*

Step 3. *To select a different schedule,* skip to Step 5. *To select different zones,* move the flashing cursor to the "Zones" block.

⇨ *The currently selected "Zones" LEDs will flash; if none is selected, the entire block will light for a half-second every two seconds.*

Step 4. Use the corresponding numeric keys to toggle the "Zones" LEDs on and off.

⇨ *Each available zone's LED will toggle on and off as you press its corresponding numeric key. If you press the numeric key for a zone being used for clock corrections, nothing will happen.*

Step 5. To select a different schedule, press → to move the flashing cursor to the "Sched" window. Type in a number from "1" to "8." Double-check both this value and the "Zone" LEDs, then push *Enter.*

⇨ *The "Zone" LEDs and the "Sched" window will light steadily with your new entries, and the "Mode" window will flash.*

Step 6. Select another clock-programming mode or type in "0" to return the 2524 to the Clock Run Mode.

Mode 0 (Run)

The Clock Run Mode is the normal operating state of the 2524. To enter this mode from any programming mode, type a "0" while the "Mode" window is flashing. Note that the 2524 will automatically revert to the Clock Run Mode from any programming mode after one minute of inactivity (no button is pushed).

Communication Modes

Before beginning here, you should have filled out the programming charts, as explained in the "Planning" section of this manual. You should also have performed the clock programming modes, especially Mode A.

Entering the "Comm" Modes

Step 1. Enter the programming function in the usual way, by typing in the security code (*Funct 2524*).

⇨ *A "0" will flash in the "Mode" window.*

Step 2. Press the *Clock/Comm* (upper right) key once.

⇨ *The "Comm" LED will light and the "Clock" LED will go out, indicating that the 2524 is in the intercom function. The "Mode" window will flash "1."*

Step 3. Enter the number of the desired "Comm" programming mode (other than "1").

Note: Once you have entered the "Comm" function, you can access only the "Comm" programming functions. To program clock functions, you must first return to the "Run" Mode, which will automatically return the 2524 to the Clock Run Mode.

Mode 1 (Room Numbers)

This mode is used for entering the "Architectural Number" for each room that can be called. This is the number that the user "dials" on the 2524's keypad when calling the room, and it is the number that appears in the "Time" windows when the room calls in. We designate this number "Architectural" because many users find it convenient to assign the room number for this purpose.

The 2524 uses a set of "Physical Numbers" that correspond to the room wiring. In this programming, you assign an Architectural Number to each Physical Number that has an intercom speaker. The 2524 then refers to an internal table of Architectural and Physical Numbers so that it knows which relay to activate and which number to display.

Step 1. Enter the "Comm" programming function, as described above; if you are already in this programming

function, move the flashing cursor to the "Mode" window and type in "1."

⇨ *The "Mode" window will flash "1," the "Station" ("Time") window will read "001," and the "Sched" window will read "P" ("Physical"). This means that you are ready to program the lowest Physical Number.*

Step 2. Press the right cursor key (→) once to move the flashing cursor into the "Station" window. If you want to check or change the Architectural Number for this station, skip to Step 4.

Step 3. To select a different Physical Number, type it in. A fully expanded system would have Physical Numbers from "001" through "500"; "000" is reserved for Physical Numbers without corresponding room stations.

⇨ *The new number will flash in the "Station" window.*

Step 4. When the desired Physical Number is displayed, press *Funct.*

⇨ *The Architectural Numbers will flash in the "Station" window, and an "A" will appear in the "Sched" window.*

Step 5. To change the Architectural number, type in the new one (any number from "001" to "899 for an active station, "000" for any unused Physical Number). Push *Enter* to store the new Architectural Number.

⇨ *The "Sched" window will change to "P," and the "Station" window will show the next-highest Physical Number.*

Step 6. Repeat Steps 3 through 5 for each number you want to check or change. When you are finished, use the left cursor (←) to move back to the "Mode" window. Enter a different number to program in another "Comm" mode, or enter "0" to return the 2524 to the Clock Run Mode.

Mode 2 (Zones and Scanning)

This mode sets the zones for each station and determines which stations can be monitored and regularly

checked for electrical faults (supervised). You can also use this mode to find a station's Physical Number.

Step 1. If necessary, enter the "Comm" programming function. When the "Mode" window flashes, type in "2."

⇨ *The "Mode" window will flash "2," the "Sched" window will read "A," and the "Station" ("Time") windows will show the Architectural Number assigned to the lowest Physical Number in use (usually Physical Number "001"). Note that the 2524 will skip past unused Physical Numbers-those assigned "000" in place of an Architectural Number. The "Zones" LEDs will show which zones have been assigned to the station, and the first two "Days" LEDs will light if the station has been given the monitoring and supervising functions, respectively.*

Step 2. Press the right cursor (→) to make the "Station" windows flash. To select a different Architectural Number, either push *Enter* to display the next one in numerical order, or type in the desired number.

⇨ *The "Station" windows will show the new number.*

Step 3. You can use the *Funct* key here to toggle between the Physical and Architectural Numbers for this station.

⇨ *The number will change, and the "Sched" window will read "A" or "P" to show which number is displayed. When the Physical Number is displayed, the "P" will flash, indicating that you must toggle back to the Architectural Number before you can continue programming.*

Step 4. To program this station, push → to flash the "Zones" LEDs. Use keys 1-8 to toggle the respective zones on and off.

⇨ *Selected LEDs will alternately light for a half-second and darken for a half-second. Those not selected will remain off unless none is selected; in the latter case, the entire block will alternately light for a half-second and darken for one-and-a-half seconds.*

Step 5. Press → to flash the "Days" LEDs. Use numerical keys *1* and *2* to toggle the first two LEDs on and off. Turn LED 1 on to select the supervising function for this station, and LED 2 to select the monitoring function.

⇨ *When selected, these LEDs will alternately turn on and off at half-second intervals. If neither is selected, all seven "Days" LEDs will alternately turn on for a half-second and turn off for one-and-a-half seconds.*

Step 6. Check all of the programming for this station. When all is satisfactory, push *Enter.*

⇨ *The 2524 will store the information and display the next "non-zero" Architectural Number. The flashing cursor will be in the "Station" windows.*

Step 7. Repeat Steps 2-6 for any other station you wish to review or program. To exit this programming mode, either *(a)* use the left cursor (←) to flash the "Mode" window, then enter another number to select a different "Comm" programming mode, or *(b)* enter "0" to return to the Clock Run Mode.

Mode 3 (System Options)

This mode is used to activate optional features of the unit. Monitoring and supervising have already been explained, in "Comm" Mode 2.

TC4200 Display

This optional Vacuum Fluorescent Display will normally show the time and date. In this mode, you can program the 2524 to display either normal or priority call-ins, both types, or neither. When there are no call-ins, the display will resume showing the time and date. Note that this programming option does not affect the 2524's front-panel display.

Automatically Connect Priority Call-ins

This function causes the 2524 to automatically connect a priority call-in to an optional intercom control panel. If this function is not selected, a priority call-in will be signaled at the 2524 and the control panel, but the user will have to press a button to establish communications with the caller; the user will also have the option of making a call or performing another function before answering a priority call-in.

Remote Phone

A "Remote Phone" can be installed in a different location from the 2524 to answer call-ins, and make All Pages.

Step 1. If necessary, enter the "Comm" programming function. When the "Mode" window flashes, type in "3."

⇨ *The "Mode" window will flash "3," the "Station" ("Time") window will read "SELE" ("Select"), and the "Zones" LEDs will light to show which optional functions have been selected. If none has been selected, all the LEDs will remain off.*

Step 2. Press the right cursor (→) to flash the "Zones" LEDs.

⇨ *Selected LEDs will turn on and off at one-second intervals. Those not selected will remain off unless none is selected; in the latter case, the entire block of*

LEDs will alternately flash on for a half-second and turn off for a second-and-a-half.

Step 3. Use keys 1-6 to toggle the respective LEDs on and off. The following table shows the function associated with each LED:

"Zones" LED No.	Function when Selected
1	Enable Monitor function. N/A on CCOM systems.
2	Enable Supervision function.
3	Display normal call-ins on TC4200.
4	Display priority call-ins on TC4200.
5	Automatically connect priority call-ins to the intercom control panel.
6	Enable Remote Phone. N/A on CCOM systems.
7	Enable Dial Tone on CCOM phone.
8	Enable Single-Button Answer on CCOM systems.

Mode 4 (Monitoring Duration)

The monitoring function has already been explained under in the "Planning" section of this manual. This setting determines how long the 2524 will remain connected to each station as it cycles through the stations selected in "Comm" Mode 2. *Note:* This function is not available on CCOM systems using CTL1.

Step 1. If necessary, enter the "Comm" programming function. When the "Mode" window flashes, type in "4."

⇨ *The "Mode" window will flash "4," the left "Station" window will read "du" ("Duration"), and the right "Station" window will show the current setting.*

Step 2. Press the right cursor (→) to flash the right "Station" window. You may type in any number of seconds, from "01" to "15." When the desired value appears, push *Enter.*

⇨ *The "Mode" window will flash, and the "Station" window will light steadily with "du" and the value you entered.*

Step 3. Enter a different number to select another "Comm" programming mode, or enter "0" to return to the Clock Run Mode.

Mode 5 (Call-in Sensitivity)

This mode is used to adjust Pot *RP1* on the 2524 for call-in sensitivity; you must do this before activating the call-scanning function in Mode E.

Step 1. Select a station to use for this adjustment. Temporarily install a 1500 Ω resistor across its call-in wires (its "T" and "G" terminals on the rear of its relay panel).

Step 2. If necessary, enter the "Comm" programming mode. When the "Mode" window is flashing, enter a "5."

⇨ *The "Mode" window will flash a "5," and the "Station" windows will display "000."*

Step 3. Press →.

⇨ *The "Station" windows will flash.*

Step 4. Enter the three-digit Architectural Number of the selected station. If you enter a wrong number, push *Clear* and return to Step 2. When the desired Architectural Number flashes in the "Station" windows, press *Funct.*

⇨ *The display will "freeze" with Mode 5 and the Architectural Number. This signifies that the unit is continuously scanning the station.*

Step 5. Face the back of the 2524 and locate *RP1*: its dark blue thumbwheel can be accessed near the left end of the terminal slot, just to the right of the four-pin wire-wrap terminal.

Step 6. Use a small, flat-blade screwdriver to turn this pot completely counterclockwise. Then slowly turn it back clockwise until the 2524 starts to "beep." Mark this position on the pot.

Step 7. Resume moving the pot clockwise until the beeping stops. Mark this position on the pot, too.

Step 8. Move the pot back to the middle of your two markings. Remove the resistor from the call-in wires.

Step 9. Push *Clear.*

⇨ *The "Mode" window will flash "5," and the "Station" windows will show "000" steadily.*

Step 10. Enter a "0" to return to the Clock Run Mode.

Step 11. Have someone send normal and priority call-ins from a nearby and a distant station. If necessary, try a different setting between your two markings on *RP1*.

Mode 0 (Run)

When the 2524 is in the Run Mode ("0"), the *Clock/Comm* button will toggle the unit between the clock and communications modes. Normally, there is no reason to select the communications mode. Whenever a call-in comes in or the user dials a number, the 2524 will automatically switch to the communications mode, and then switch back when all communications have ended. Putting the 2524 in the "Comm" mode when there are no calls in progress will blank the front-panel displays (except for the "Mode" window).

Work Sheet for Custom Secondary-Clock Code

Bit	Value	Bit	Value	Description
01		08		Starting hour: any number between "01" and "12." Enter "80" to select every hour.
02		09		Starting minute: any number between "00" and "59." Enter "80" to select every minute.
03		10		Starting second: any number between "00" and "59." Enter "80" to select every second.
04		11		How long the relay should remain "on": indicate whether your units are seconds ("S") or minutes ("M").*
05		12		Number of cycles.
06		13		How long the relay should remain "on": indicate whether your units are seconds ("S") or minutes ("M").*
07		14		Select the output relay that this seven-byte block will control: enter "1" for Out 5 or Out 7; enter "2" for Out 6 or Out 8.**

* The way you enter this number during programming will determine whether the 2524 interprets it as minutes or seconds: after typing the number, press *Enter* for seconds or *Funct* for minutes.

** You must coordinate three factors to direct a seven-number block to a particular clock or motor in the clock:

√ You must wire the clock to a particular relay (*Out 5, Out 6, Out 7,* or *Out 8*).
√ In Mode A, you must enter the Custom Code as either the first correction code (the only choice when only one code is used) or the second code. The first correction code controls *Out 7* and *Out 8*, and the second code controls *Out 5* and *Out 6*.
√ Use the seventh number of the block to designate the odd or even relay.

Note: Although Mode A and the seventh number in the block each designate two possible relays, in combination they designate only one relay. For example, choosing the second code in Mode A limits the relay choice to 7 or 8; entering a "2" in the seven-number block designates Relay 6 or 8. Only *Out 8* matches both these designations.

Example

The following table shows how the correction code for Rauland analog clocks (regular Correction Code 1) would be set up as a special code. This is done for illustration only; you would not usually need to enter a regular code as a special code (the only exception would be entering

Block 1		Block 2	
Entry	Value	Entry	Value
01	80	08	06
02	00	09	00
03	00	10	25
04	25	11	24*
05	00	12	00
06	00	13	00
07	01	14	01

a simple standard code for each seven-number block, in order to get two corrections in a single code and thereby free up two output terminals).

Commentary:

Entry 1: "80" = hourly correction.

Entry 2: "00" = start the correction pulse during the "zero" minute.

Entry 3: "00" = start the correction pulse on the "zero" second.

Entry 4: "25" = close the relay for 25 seconds per pulse.

Entry 5: "00" = only one correction pulse.

Entry 6: "00" matches Entry 5: no time between pulses, since there is only one pulse.

Entry 7: "01" = send this correction out the odd-numbered relay.

Entry 8: "06" = start the 12-hour correction during the sixth hour.

Entry 9: "00" = start the 12-hour correction during the "zero" minute.

Entry 10: "25" = start the correction 25 seconds after the minute. Note that the standard code would start this at "00" seconds. The difference here is that we are using the same output terminal for both the hourly and the 12-hour correction (see Entries 7 and 14). Therefore, we have to wait 25 seconds for the hourly pulse to end (Entry 4) before beginning this pulse.

Entry 11: "24" = close the relay for 24 minutes.

Entry 12: (Like Entry 5.)

Entry 13: (Like Entry 6.).

Entry 14: (Like Entry 7.)

Schedule Chart

Schedule	Description
1	
2	
3	
4	
5	
6	
7	
8	

Zone Chart (Clock Mode 5)

Zone	Duration	Description
1		
2		
3		
4		
5		
6		
7		
8		

"00" duration indicates latched mode.

Holidays Chart

Number	Date MMDD	Schedule*	Repeat (no. of days)

* Enter "F" for "Fall" and "A" for "Advance" (for Spring) in the Schedule block for time-change correction.

Table 1. Clock Modes A-F

Mode	Function
A	Secondary Clock Codes; each code takes up two clock zones.
b	Custom Clock-Correction Code.
C	Holiday and time-change dates.
d	Review, edit, and delete holidays.
E	How many SC25s; enable or disable call-in scanning and "Comm."
F	Display the number of events and holiday entries; erase them all.

Table 2. Clock Modes 1-6

Mode	Function
1	Date.
2	Time.
3	Enter Events.
4	Review, edit, or delete events.
5	Duration for each zone.
6	Select active zones and schedules.
7	[Future.]
8	[Future.]
9	[Future.]

Table 3. Intercom Modes

Mode	Function
1	Architectural Number for each speaker.
2	Enter and review intercom zones; monitor and supervision bits for each speaker.
3	Enable or disable the system's monitor and supervision functions.
4	Duration for monitoring.
5	Adjust call-in sensitivity.
6	[Future.]
7	[Future.]
8	[Future.]
9	[Future.]

Table 4. Cross-Reference to the Major Functions

Mode	Function
Call-in configuration	Mode E. Intercom Mode 3
Call-in sensitivity	Intercom Mode 5
Clock codes	Modes A and B
Clock-event entry	Clock Mode 3
Clock-event detailed review and edit	Mode 4
Clock-event overview and erase all	Mode F
Holiday-event entry	Mode C
Holiday-event detailed review and edit	Mode D
Holiday-event overview and erase all	Mode F
Monitoring	Intercom Mode 2-4. Activated in Intercom Run Mode
Music	Clock Modes 3 and 4
Numbers: room (Architectural) and line (Physical)	Intercom Modes 1 and 2
Schedules	Clock Modes 3, 4, and 6
Supervision	Intercom Modes 2 and 3
Time and date	Clock Mode 1
Time-change (Daylight Savings)	Modes C and D
Time-correction	Mode A
Zones	Clock Modes 3, 4, 5, and 6
Zones for clock events	Reduced by codes in Mode A. Clock Modes 3-6; Modes C and D.

Table 5. Factory Settings

Mode	Setting
A	Correction Code "01"
E	No. of SC's = 0; Comm. Scanning disabled
Clock 5	"03" sec., all zones
Clock 6	Zones 1-6 selected; Sched. 1
Comm. 3	Mon., Sup., Auto Answ., & Rem. Ph. disabled; normal and priority call-in enabled.
Comm. 4	Monitor dur.: "03" seconds

Notes for Table 5: 1. The time and date are not set, and no event or station programming is entered. 2. In "Comm" Mode 3, only the two call-in types are enabled. These will not run unless Mode E is changed. However, should the "Comm" function be activated, these two call-in types will usually be wated.

Intercom Station Chart

Phys. No.	Arch. No.	Paging Zones	Mon.	Sup.	Prog.	Station Description

Clock Events Chart

Event No.	Time				Zones								Days							Sched-ule	Music Duration (in minutes)
	Hr	Min	AM	PM	1	2	3	4	5	6	7	8	Mo	Tu	We	Th	Fr	Sa	Su		