OLIM | AKCEIL **Project UNA**

Interactional Architecture and Software Specification Document

OLIM, Inc. / Akceil, Inc. - UNA - Voice-Operable Digital Assistant (Design Version 4.0) August 2000 - October 2006

- Functional + Physical/Visual Interactional Flow Diagrams
- Documentation for Screen and Element Bitmap Layout and Dynamic Configuation Rules
- Suggested Vocal Command Sets (and associated contexts for active states)

Soudy Khan
OLIM, Inc. / Akceil, Inc.
phone: 650 . 494 . 9170
email: soudy@olim-watches.com
email: soudykhan@yahoo.com

Darius Mostowfi
Sigma Engineering
email: darius@dsp.com

Ted Tillingham
GoldenMean Engineering

Tony Tilghman
Attorney at Law
email: tilghmanaj@hotmail.com

John Keenan
MicroReady Engineering
phone: 408-229-0597
email: john_m_keenan@yahoo.com

Peter Mueller
Interform
3475 Edison Way
Menlo Park, CA 943
phone: 650 . 365 . 9333
fax: 650 . 365 . 9381
email: inter4m@aol.com

Michael McTeigue
JumpStart/MLM Consulting
email: mcteigue@pacbell.net

Jim Leftwich, IDSA - Principal
Orbit Interaction
Interactional Architecture
Patent Support
Product Branding/Evolution Strategy

orbit™
INTERACTION

- Interaction Design
  Information Systems, Software and Physical Devices
  - Visual and Physical Interactional Analysis, Architecture, and Design
  - Project Visualization and Management
  - Development and Implementation
  - Strategic Consulting

225 Forest Avenue
Palo Alto, California 94301
650.325.1960
650.325.2499
jleft@orbitnet.com
http://www.orbitnet.com

Date: August 28, 2000
Name: James J. Leftwich
Signed:

OLIM UNA

The OLIM UNA Story

Elegance and Innovation in a revolutionary new tiny user interface

The OLIM UNA watch was designed to completely break with the traditional digital or “computer” watch. Traditionally, computerized watches with multiple functions are laden with buttons, cluttered with busy displays, and often styled as if they belong more on the set of a sci-fi movie than on the arm of a sophisticated and design-conscious person.

Elegance in both the physical design of the UNA as a beautiful object as well as in the operation of the innovative and intuitive TUI (Tiny User Interface) two-button graphical user interface represents the ultimate in refined integration of OLIM’s design principals.

Designed by world-renowned designer, Yves Behar of the design firm, fuseproject, the UNA watch is sleek, modern, and embodies a number of technological innovations, such as flex circuitry integrated into the band.

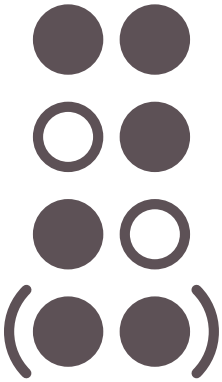
Rather than present an inelegant all-digital display, the UNA watch integrates a beautiful and quality Swiss watch works and dial. The Swiss works of the analog watch mechanism are housed in a hinged cover that when opened discreetly reveals the UNA TUI display. At just 84 x 64 pixels in size, the TUI display is amazingly small, yet comes with eleven fully operable Personal Digital Assistant (PDA) applications, with more currently under development.

Designed by James Leftwich, IDSA of the Interaction Design firm, Orbit Interaction, TUI represents the worlds smallest fully-functional user interface system. Each TUI application uses the same simple and intuitive two-button operation, which consists of just four visually-cued actions that can be learned almost instantly by anyone, and operated quickly and universally across all applications without confusion. It’s simplicity also makes it possible to use the interface in a “blind mode,” without having to look at the display, making it particularly suited to audio-cued applications as well as alternative embodiments such as in-vehicle or other types of mobile handheld devices.

The TUI™ User Manual

(Tiny User Interface)

Yes, this is all you will ever need to know!



Press Both Buttons
(Open / Perform an action / Do it)

Press Right Button
(Move Right / Next / Scroll Down)

Press Left Button
(Move Left, Previous, Scroll Up)

Hold Both Buttons
(Short Hold - After 1 second - Cancel / Go Back)
(Continued Hold - Continue to Navigate Back)
(Continued Hold from Home - After 2 seconds - Shutdown)

Sample Device Embodiments

Flip-Up Swiss Watch-Based System

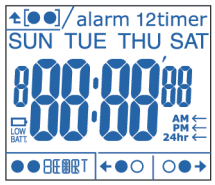
Band-based Squeeze Buttons
Screen size as small as 84 x 54
(100 x 64 shown)
Full PDA / Media / Communication Functionaltiy
16 Reference Applications
Fully and Simply Themable / Brandable

Flex Circuitry integrated
into watchband

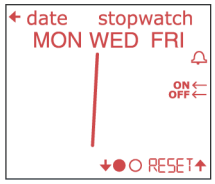
Full TUI Interface
on a wristwatch-based
device

Full TUI Interface
on an Akceil SmartStone
Keychain device
(USB Storage, Music, AutoMinder, etc.)

LCD Mask Layer 1

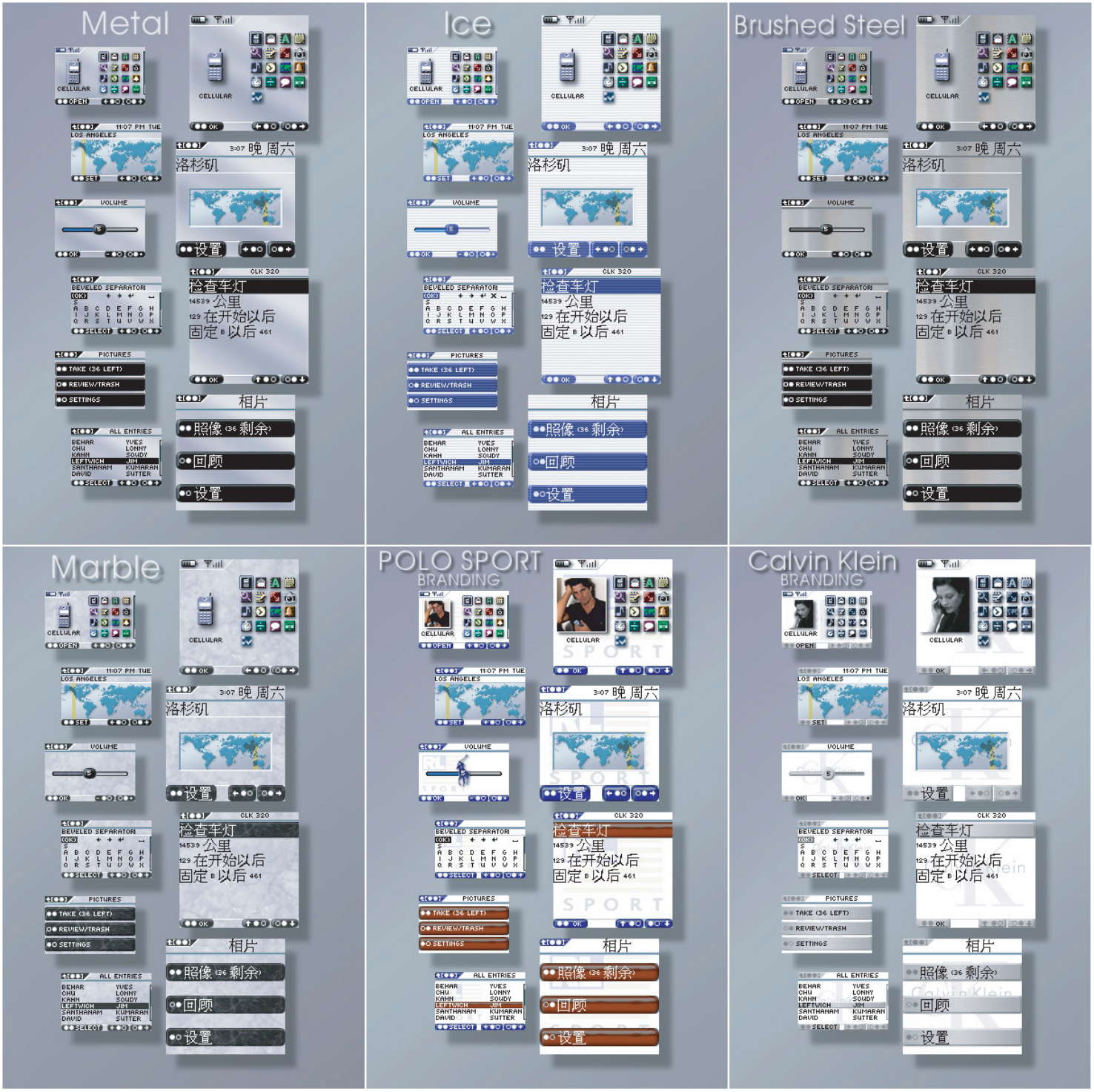


LCD Mask Layer 2



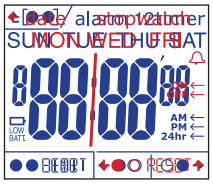
Pico TUI Interface
2-Layer, 128-segment LCD wristwatch
Ultra Low Power 4-Bit MCU based, 126-Segments
LCD Masks worked out / All usage flows completed
(Time, Date, Dual Alarm, Stopwatch, Countdown Timer)

Sample Theming and Brandability - Various Sizes and Languages Shown

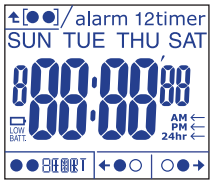


TUI™ provides for an unprecedented level of branding and customization of graphical elements. The entire system can take on unique branded looks that can be designed and implemented in a single day by a graphic artist. There is no programming or recompilation required. The new look propagates through every feature, in every application, in every screen size, automatically. TUI™ opens up tremendous cooperative and targeted marketing possibilities.

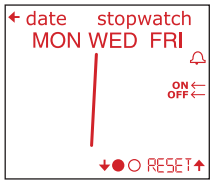
Layers 1 (Blue) and 2 (Red)



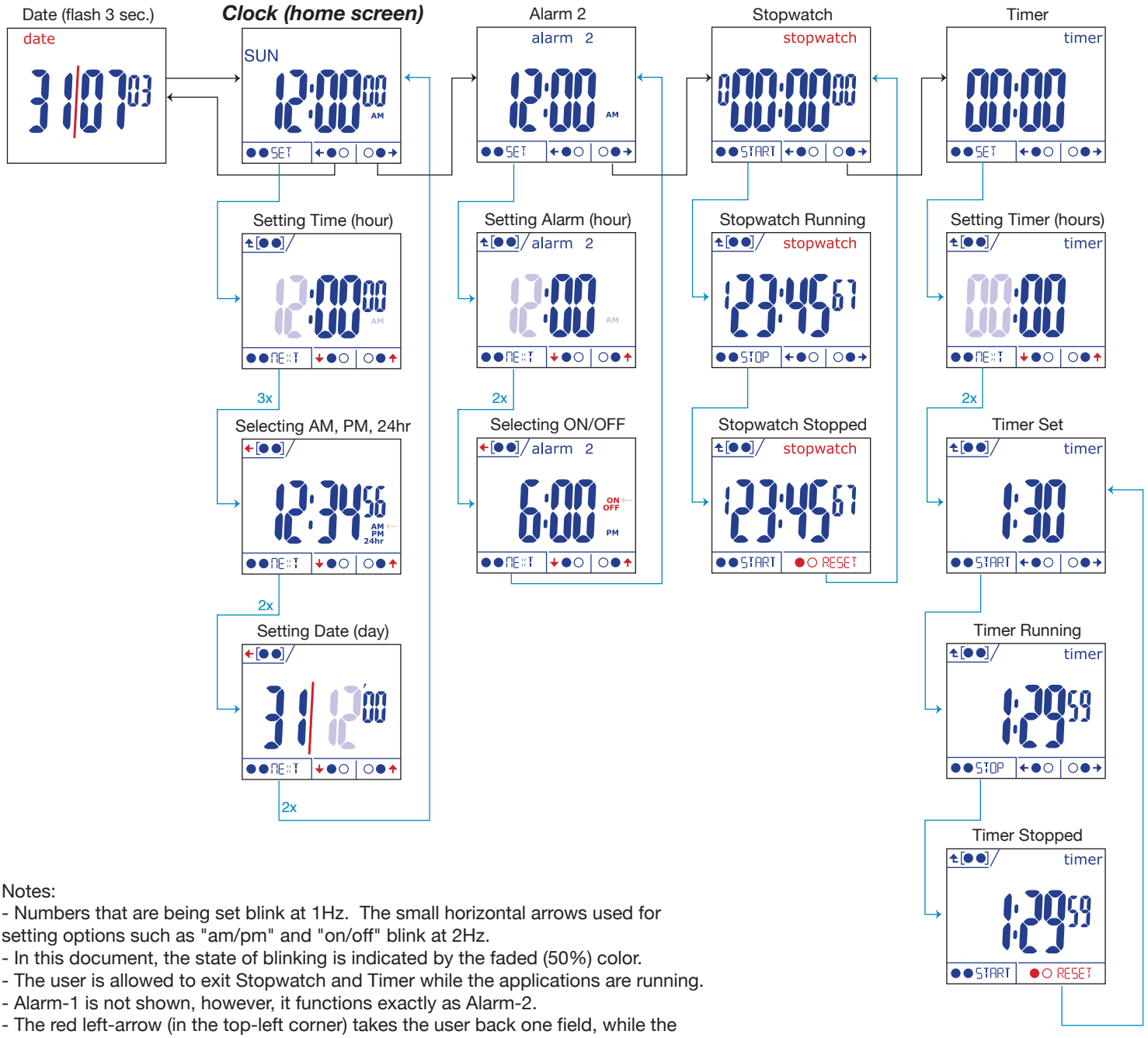
Layer 1 (Blue) Only



Layer 2 (Red) Only



Optimized Character Set for Contextual Navigation Nomenclature:



Notes:
- Numbers that are being set blink at 1Hz. The small horizontal arrows used for setting options such as "am/pm" and "on/off" blink at 2Hz.
- In this document, the state of blinking is indicated by the faded (50%) color.
- The user is allowed to exit Stopwatch and Timer while the applications are running.
- Alarm-1 is not shown, however, it functions exactly as Alarm-2.
- The red left-arrow (in the top-left corner) takes the user back one field, while the up-arrow takes the user back to the previous level, and eventually to the home-screen.

OLIM Project UNA

Interactional Architecture and Software Spec

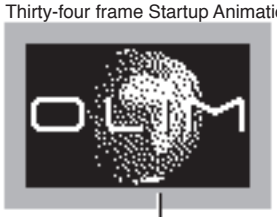
UNA - Startup Clock Function, Initial Nav Choices, Setting Time / Date

Date: August 28, 2000
Name: James J. Leftwich
Signed:

c1.1

Double-button-press to Turn Device On

Thirty-four frame Startup Animation



Button Press Indicator Glyphs

[Double-Button-Press]
(OPEN / DO IT)

[Right-Button-Press]
(RIGHT / NEXT / DOWN / SCROLL DOWN)

[Left-Button-Press]
(LEFT / PREVIOUS / UP / SCROLL UP)

[Double-Button-Hold]
Short Hold - after 1 Second CANCEL / GO BACK
Long Hold - after 2 Seconds - SHUTDOWN ANIM.

Voice Commands *(suggested commands shown in bold quotes)* *and Button Equivalents*

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

When the user [double-button-presses] to turn on the device, there will be a STARTUP SPLASH or ANIMATION (TBD).

Immediately following that the initial STARTUP Screen will appear, which will contain a clock function displaying hours, minutes, and seconds in numerals along with AM or PM indicators.

1 - Below the current time display will be three action choices. Another [double-button-press] will open the HOME Screen, defaulted to MEMOS Mode.

2 - The second action option, MOST RECENT, is a [right-button-press] to jump the user straight to the screen location / state where the device was last turned off. This may be of particular utility for situation such as stored driving directions, etc.

3 - The third action option give instant access to Synchronization Readiness between the Device and the PC Application or available Linking with other devices.

Universal shutdown [Double-Button-Hold]. At this level, the length of time necessary to trigger the SHUTDOWN ANIMATION (a three-second countdown occurring while the user holds the buttons) will be 2 seconds less than that needed at other levels in the interface (where a [double-button-press] will CANCEL or RETURN to the previous level or HOME.

Initial STARTUP Screen

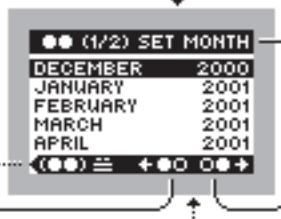
Previous Screen When Device Was Last Shutdown

Returning to Home Screen

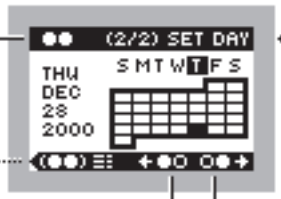
SET TIME/DATE Mode Currently Selected

Setting TIME

Selecting MONTH & YEAR



Selecting a DAY



(Will go between Months as well)

HOME Level Functional / Applications Access

Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.

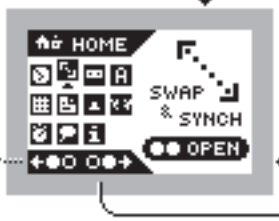
Home Level Screens (for Each of the Applications Shown) have been uploaded to a password-protected directory on the orbitnet.com site:

http://www.orbitnet.com/••••/••••/••••/

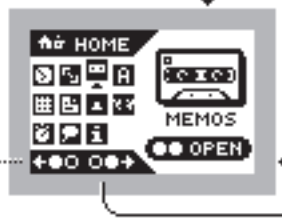
USER: ••••

PASSWORD: ••••

SYNCH & SWAP Mode

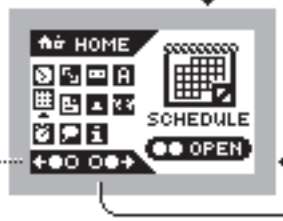


MEMOS Mode



ADDRESSES Mode

SCHEDULE Mode



NOTES Mode

ALARMS Mode

WORLDTIME Mode

STOPWATCH Mode

VOCALINKS Mode

HELP & INFO Mode

OLIM Project UNA

Interactional Architecture and Software Spec

Date: August 28, 2000	
Name: James J. Leftwich	
Signed:	

UNA - 36-Frame Startup Animation - Optimized Frame Speed: 4/100 sec

All Frame Filenames as follows: world_*n*.bmp


1


10


19


28


2


11


20


29


3


12


21


30


4


13


22


31


5


14


23


32


6


15


24


33


7


16


25


34


8


17


26


35


9


18


27


36

OLIM Project UNA

Interactional Architecture and Software Spec

UNA - Home Screen with SWAP & SYNCH Mode Selected

http://www.orbitnet.com/OLIM/OLIM_UNA.html/OLIM_UNA_Resources/SwapSynch_BMPs/

Date: August 28, 2000
Name: James J. Leftwich
Signed:

c2.1

The SWAP & SYNCH Mode provides users with a very simple and straightforward means to both swap address record information (CARD SWAP) with another compatible wireless device and synchronize records with the user's PC software.

Both functions contain similar steps and interactive elements.

CARD SWAP allows Una users to designate one particular ADDRESS record as the one that can be swapped with another OLIM or compatible wireless device. The user is given the opportunity to see the name of the record "on deck" to be swapped, and they can also choose to PICK another CARD. When the user does a [Right-Button-Push], the PICK SWAP CARD screen appears, which is equivalent in configuration and interaction to the ADDRESS Mode with all Records being displayed.

The listing is configured with the first line containing a bitmap representing "---------(none)----------". This allows the user to select no ADDRESS Record for sending, but still allows the user to receive a card in the CARD SWAP exchange process.

The currently picked SWAP CARD is always shown directly below on line two and is selected by default when the screen appears. This allows the user to immediatelydo a [Double-Button-Press] and return to the Start Swap screen.

Swapping and Synching follow the exact same interactional sequence.

From the main SWAP & SYNCH Mode screen, whether the user does a [Double-Button-Press] to begin a CARD SWAP or does a [Right-Button-Press] to initiate a PC SYNCH, the device begins to search for the appropriate signal in its local environment within wireless range.

In the case of a CARD SWAP, once the [Double-Button-Press] START SWAP command is given, the device will signal while waiting for another OLIM or compatible device to acknowledge back and initiate the Swapping process. For OLIM devices, this acknowledgement will require both users to execute the [Double-Button-Press] START SWAP command within ten seconds of each other while within signalling range. This is very straightforward and should be very efficient and usable.

In the case of Synchronization with the PC Software, this search will signal and while waiting for the PC USB dongle to acknowledge back and initiate the synchronization and exchange process.

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

VOCALINKS

User may create a VOCALINKs on the SWAP & SYNCH Mode Opened Screen, the START CARD SWAP Screen, and the PICK SWAP CARD listing. This will allow users that so desire, very quick access to these particular screen locations.

Animation Frames

An animated demonstration of the animated screens has been uploaded to a password-protected directory on the orbitnet.com site:
Animations:
http://www.orbitnet.com/••••/••••

BMP Resources:
(See Resource Directory URL at top of page)
USER: ••••
PASSWORD: ••••

CardSwap_Searching.gif
CardSwap_InProg.gif
PCSynch_Searching.gif
PCSynch_InProg.gif

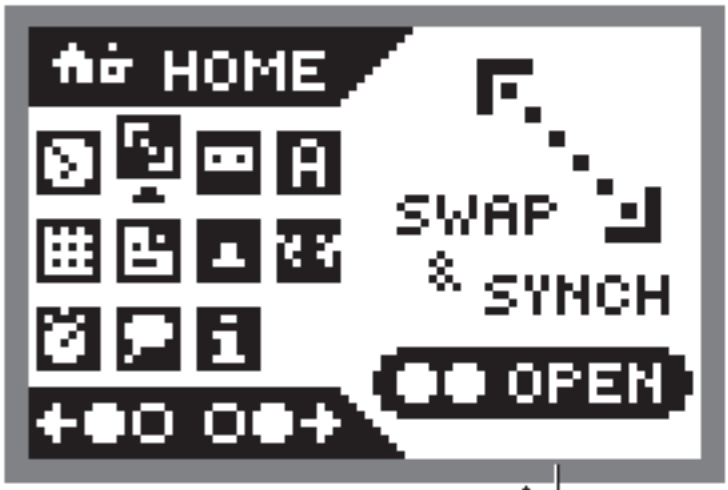
* = CardSwap or PCSynch
*_Searching_1_6.bmp
*_Searching_2_6.bmp
*_Searching_3_6.bmp
*_Searching_4_6.bmp
*_Searching_5_6.bmp
_Searching_6_6.bmp

* = CardSwap or PCSynch
*_InProg_1_6.bmp
*_InProg_2_6.bmp
*_InProg_3_6.bmp
*_InProg_4_6.bmp
*_InProg_5_6.bmp
*_InProg_6_6.bmp

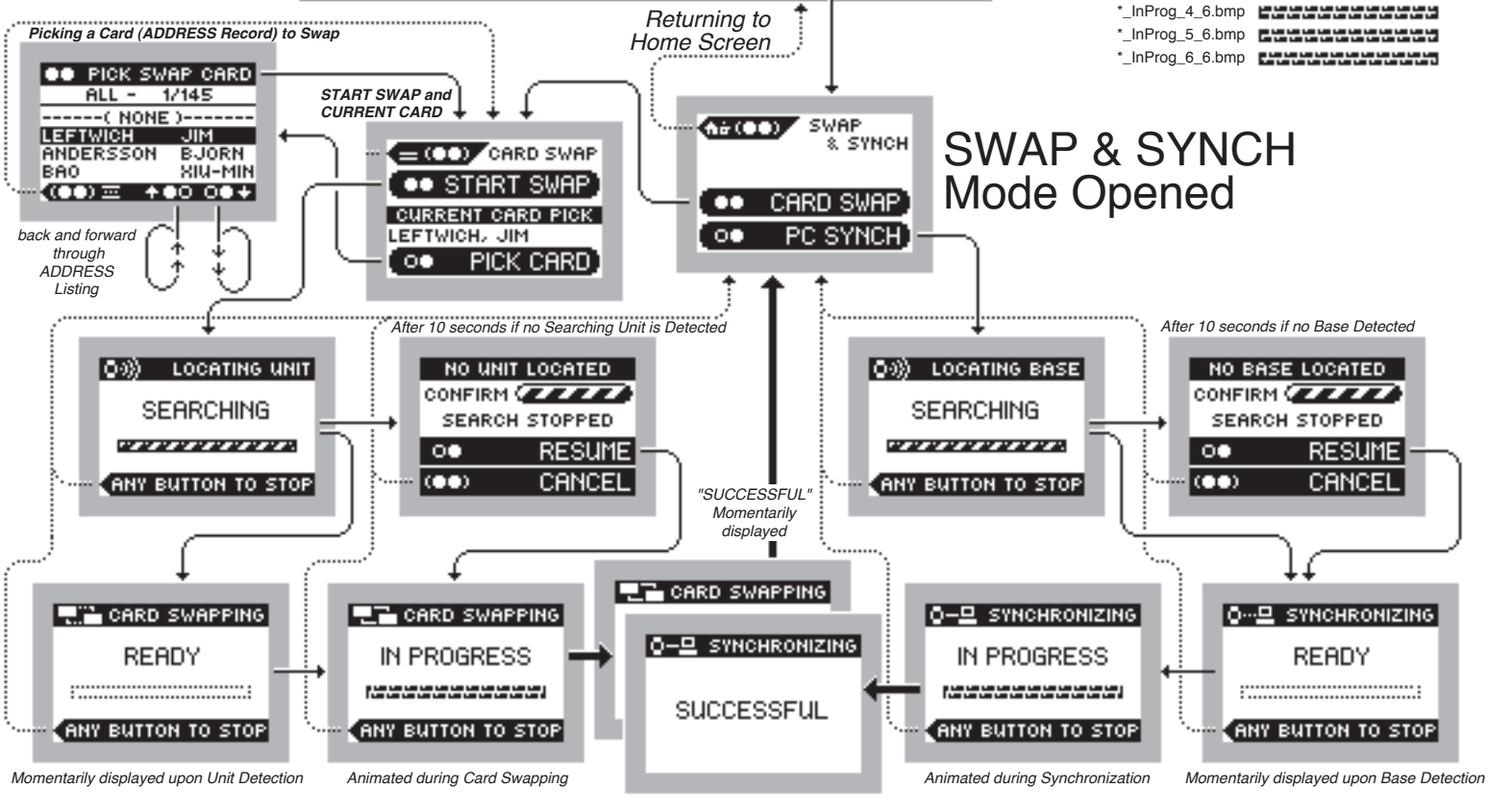
HOME Screen

SWAP & SYNCH Mode Currently Selected

Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.



SWAP & SYNCH Mode Opened



Date: August 28, 2000	
Name: James J. Leftwich	
Signed:	

The MEMOS mode is unique in that it is the only mode in which the user can both add and delete data. This data is stored as digitally-recorded sound in individual Date /Time Stamped MEMO records.

When the user double-presses to open the MEMOS mode, a CHOICE SCREEN appears with three options. The user may then either record, play, or delete a memo. Scrolling is not used on either CHOICE SCREENS or CONFIRMATION SCREENS. Instead, the user is given up to four, usually three, action choices.

Up to four Memo Timestamp-Titles will be displayed at a time on this screen. The user may scroll up the list a line at a time with a [left-button-press] and scroll down the list with a [right-button-press]. A [double-button-press] will open any selected item (indicated by inverse white text on a black bar).

The "nn/nn" string displayed centered above the list indicates the numeric order of the currently-selected Memo relative to the total number of stored Memos.

When Memos are being played back, any button press or combination press will return to the appropriate Memos list (either Play Memo or Delete Memo).

When Deleting a Memo, the user selects a Memo Timestap-Title and gives a [double-button-press], which displays a CONFIRMATION SCREEN allowing the Deletion to be completed, or the Memo can also be played (for checking purposes). The user may also Cancel back to the Delete Memo Listing.

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

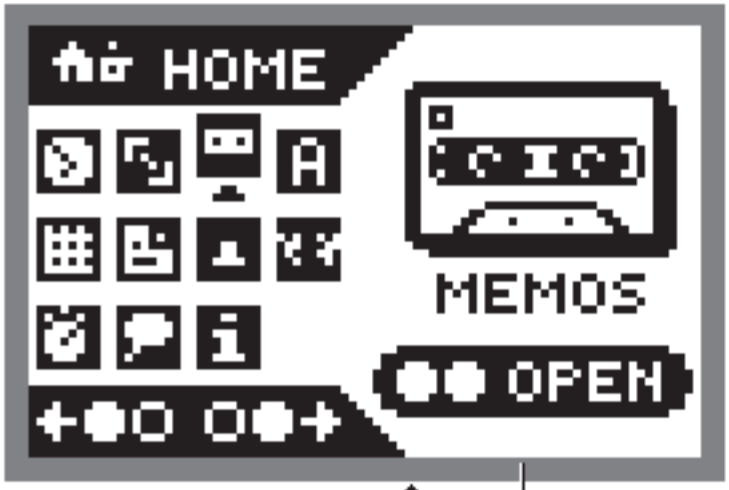
VOCALINKS

User may create a VOCALINKs on the MEMOS Mode Opened Screen, and either the PLAY MEMO listing or the the DELETE MEMO listing. It may be possible to create a VOCALINK while a Memo is being played back, thus allowing for VOCALINK access to individual Memos, but this will have to be confirmed during the implementation phase. If this direct individual Memo access is not possible or feasible, VOCALINKS will be limited to the Memo Listings.This will allow users that so desire, very quick access to these particular screen locations.

HOME Screen

MEMOS Mode Currently Selected

Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.



Returning to Home Screen

MEMOS Mode Opened

MEMOS Choice Level

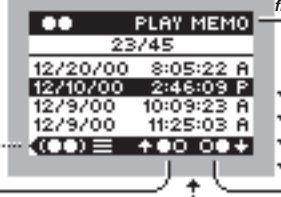
Returning to the Main Memos Mode Screen

Recording a MEMO

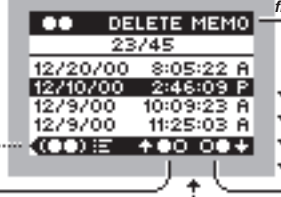
Glyph flashes on and off once per second

Gauge: memory available (68 pixels incremental)

Play a MEMO *from the MEMOS List*



Delete a MEMO *from the MEMO List*



Stop and Return

Cancel and Return

Playing a MEMO

Gauge: portion played (68 pixels incremental)

Confirm with Options

Confirm with Options

Interactional Architecture and Software Spec

UNA - Home Screen with ADDRESSES Mode Selected - (6pt Records)

Date: August 28, 2000
Name: James J. Leftwich
Signed:

When the user double-presses to open the ADDRESSES mode, a SCROLLABLE LIST SCREEN appears that contains the ADDRESS Categories (four included standard, but editable/addable from the PC app.). The displayed categories will have been transferred from the PC-based software to the device.

When the user selects an ADDRESS Category and double-presses, a SCROLLABLE LIST SCREEN appears that contains the address text field files under the chosen category, and that have been transferred from the PC-based software to the device.

Up to four Address Name Titles will be displayed at a time on this screen in two columns - alphabetically ordered with Last Name on the left side, and First Name on the right side. The user may scroll up the list a line at a time with a [left-button-press] and scroll down the list with a [right-button-press]. A [double-button-press] will open any selected item (indicated by inverse white text on a black bar).

The "nn/nn" string displayed centered above the list indicates the numeric order of the currently-selected Address relative to the total number of stored Addresses.

At the individual Address Record screen, the various labeled Address Fields (Title, Company, Home Phone, etc.) are displayed on a single line above the scrollable record.

Multiple lines may be inverted (black/white) when fields such as address are currently selected. Scrolling will be by Field Item, and so will at times be a line at a time and at others whole page changes may occur.

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

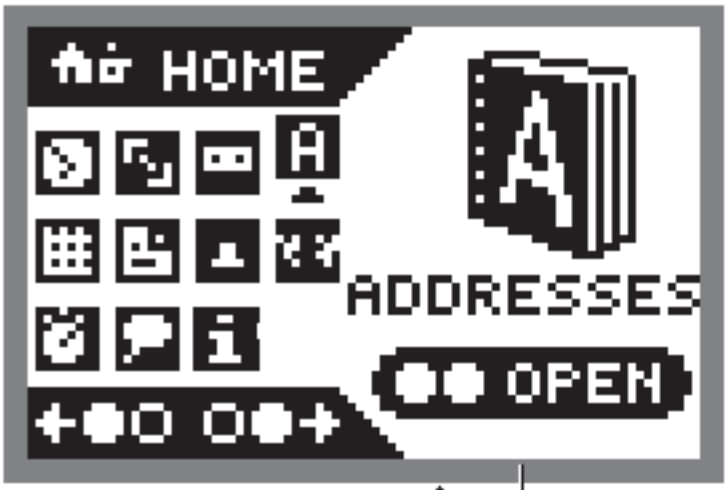
VOCALINKS

User may create a VOCALINKs on the ADDRESSES Mode Opened Screen (where categories are chosen), any Categorical Listing Screen, or at any individual Address Record. This will allow users that so desire, very quick access to these particular screen locations.

HOME Screen

ADDRESSES Mode Currently Selected

Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.



Returning to Home Screen

ADDRESSES Mode Opened

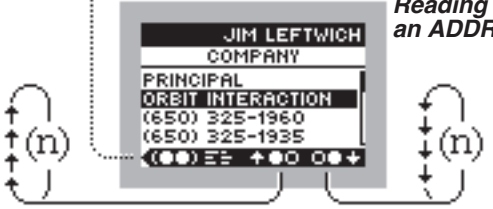
Open an ADDRESS Category
from the ADDRESS Category List

Stop and Return

Open an ADDRESS
from the Category's ADDRESS Record List

Stop and Return

Reading an ADDRESS



ADDRESS Record Fields

1. Last Name *(Full Name Displayed as Record Title)*
2. First Name
3. Title
4. Company
5. Work Phone
6. Home Phone
7. Fax
8. Other
9. Email
10. Address
11. City
12. State
13. Zip Code
14. Country
15. Web Address
16. Driving Directions
17. Note

Default ADDRESS Categories

1. ALL *(1st / Default Selected)*
2. Bus. Suppliers
3. Bus. Customers
4. Personal
5. General

Date: August 28, 2000	
Name: James J. Leftwich	
Signed:	

The SCHEDULE Mode organizes appointments scheduled with the PC Application (or imported via the PC app.) in three levels:

DAY - Opens to the current day's Schedule of Events (may be blank). Allows the user to move between individual scheduled appointments, opening them if necessary to read in full. Only scheduled appointments and associated start/stop times are listed, as the SCHEDULE function on this device is meant only as a reader, not for data input.

MONTH - Provides a monthly calendar overview showing days and day of week. Days/calendar cells that contain scheduled appointments will be marked with a bar. The user scrolls/jumps between days, including those days that contain scheduled appointments, but all MONTHS will be available, even if blank. Executing a [double-button-press] will open a particular DAY with scheduled appointments.

On the MONTH Screens, the Title prompts the user to "OPEN DAY" and scrolling moves forward and back between days on Month Map.

This Month Map is a simple grid, 7 Day Cells wide by 6 Day Cells high, with unnecessary cells hidden.

Day Cells are 8 pixels wide by 5 pixels high, with sharing one-pixel line boundaries where adjacent.

The resulting Month's Shape of Day Cells are outlined all around with a one-pixel line, giving a two-pixel look to the Calendar Boundary.

Day Cells that have an associated Scheduled Event, have a 1 pixel by 4 pixels bar in the middle of the Day Cell, for visual cuing as to where events are on the Calendar.

YEAR - Opens to current MONTH. Provides a listing of MONTHS and associated YEAR. All MONTHS will be listed (from some date. a [double-button-press] opens selected MONTH.

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

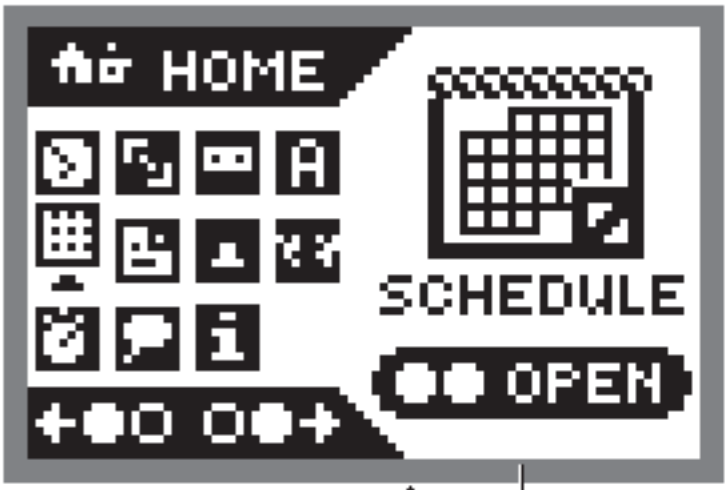
VOCALINKS

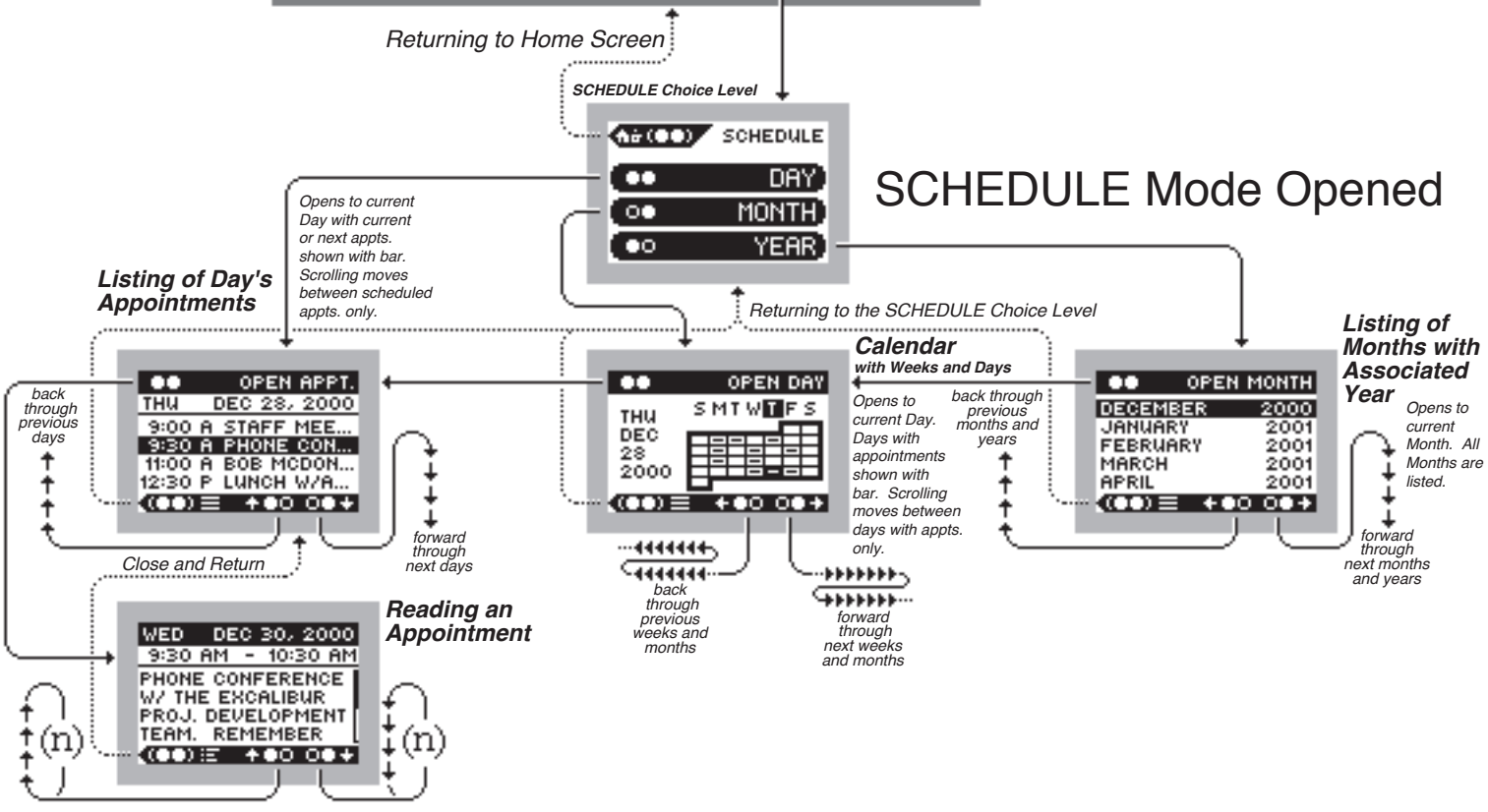
User may create a VOCALINKs on the SCHEDULE Mode Opened Screen (with DAY, MONTH, YEAR), at either of the three OPEN APPT., OPEN DAY, and OPEN MONTH Screens, and on any particular Event Note (Dated, with optional length of time and/or note. This will allow users that so desire, very quick access to these particular screen locations.

HOME Screen

SCHEDULE Mode Currently Selected

Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.





Date: August 28, 2000	
Name: James J. Leftwich	
Signed:	

When the user [double-button-presses] to open the NOTES mode, a SCROLLABLE LIST SCREEN appears that contains the note text files that have been transferred from the PC-based software to the device.

Up to four Note Titles will be displayed at a time on this screen. The user may scroll up the list a line at a time with a [left-button-press] and scroll down the list with a [right-button-press]. A [double-button-press] will open any selected item (indicated by inverse white text on a black bar).

The "nn/nn" string displayed centered above the list indicates the numeric order of the currently-selected Note relative to the total number of stored Notes.

Notes are stored in alphabetical order according to their filename / Note Title.

The user may move up the Note a page at a time with a [left-button-press] and move down the list a page at a time with a [right-button-press].

Note files are read-only, and can only be deleted by removing these files from the device file/records list in the PC application and re-synchronizing with the UNA.

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

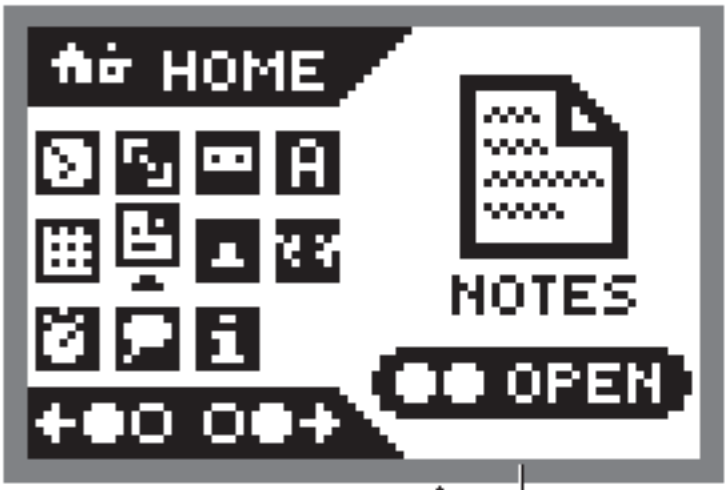
VOCALINKS

User may create a VOCALINKs on the NOTES Mode Opened Screen (Notes Listing), and at any open Note file. This will allow users that so desire, very quick access to these particular screen locations.

HOME Screen

NOTES Mode Currently Selected

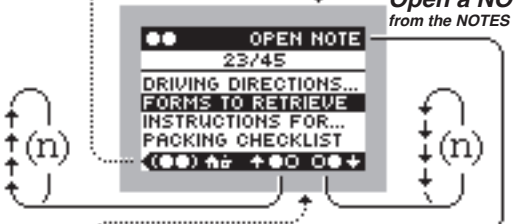
Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.



Returning to Home Screen

NOTES Mode Opened

Open a NOTE
from the NOTES List



Stop and Return

Reading an Opened NOTE

Date: August 28, 2000	
Name: James J. Leftwich	
Signed:	

The ALARMS Mode provides for three alarm times that are user settable and that can be turned on and off.

These three Alarms are separate from any that may be associated with Schedule Appointments (which are set elsewhere when the appointment records are created).

When the user opens the ALARM Mode, three button-press options are shown, each associated with one of the settable Alarms. Additionally, the set time for each alarm is displayed, along with checkboxes to indicate whether each Alarm is currently set to ON (Active) or OFF (Inactive).

Opening an Alarm brings up an Option screen with an enlarged time display along with two buttonpress options. The first is a recursive control to switch between ON and OFF. The second is for bringing up a screen where the time can be set.

The Alarm Setting Screen shows the Alarm number (1, 2, or 3) and an enlarged time display that can be set forward or backward (in one-minute increments) using [Left- and Right-Button-Presses]. Holding will scroll faster.

When the time is set as desired, a [double-button-press] will Set the Time.

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

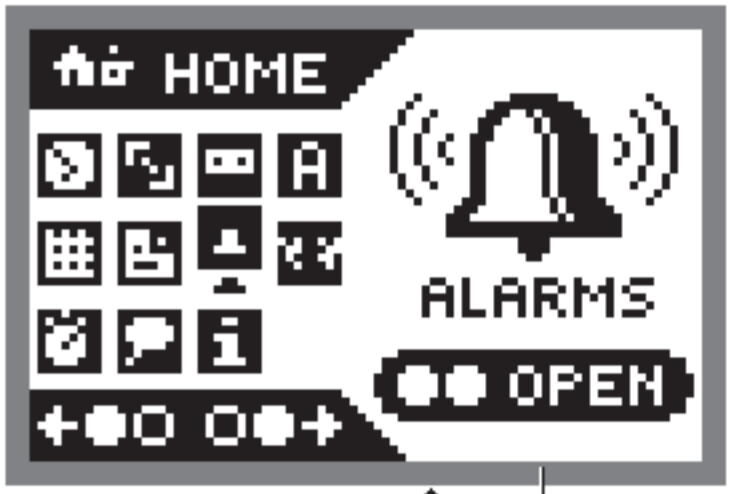
VOCALINKS

User may create a VOCALINKs on the ALARMS Mode Opened Screen (where each of the three Alarms can be accessed), the second level screens for each Alarm individually, and the Time Setting Screens for any of the three Alarms. This will allow users that so desire, very quick access to these particular screen locations.

HOME Screen

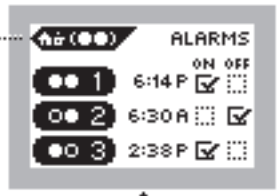
ALARMS Mode Currently Selected

Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.



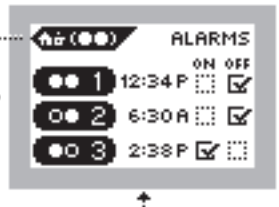
Accepting Change or Leaving As-is and Returning to Home Screen

ALARM Choice Level



New Alarm Time (Still ON)

ALARMS Mode Opened



Same Alarm Time (Now OFF)

Same Logic

Same Logic

Returning to the ALARMS Choice Level (time changed)

Returning to the ALARMS Choice Level (no change)

New Alarm Time

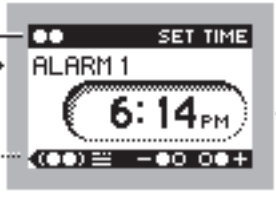
Alarm Options
Alarm Currently Set to ON

Alarm Options
Alarm Currently Set to OFF

Alarm Time Changed

Return to Alarm Options

Same as Return (no change)



Setting the Alarm Time

The WORLDTIME Mode is, in a number of ways, the simplest of all the Modes.

Upon opening with a [Double-Button-Press], the WORLDTIME Mode displays either the default Time/Place (initial device setting - Zone U - Los Angeles) or the Time/Place last scrolled to or accessed via voice by the user.

There are twenty five UTC Time Zones across the globe. These are not simple semi-spherical slices, but rather are quite irregular and sometimes discontiguous in area. To aid the user in visualizing these complex zone boundaries, care was taken in the design of this mode's graphics to accurately represent each zone at the pixel resolution shown below.

Furthermore, each of the cities in the WORLDTIME list/queue have been matched to specific Time Zones with UTC letter designations (Y, X, W, V, U, T, S, R, Q, P, O, N, Z, A (GMT), B, C, D, E, F, G, H, I, (no "J"), K, L, M). Y and M share various sections of the same section (split in two and displayed on either side of the device interface display)

Voice Commands *(suggested commands shown in bold quotes)*

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

- Cancel/return to HOME Screen: **"CANCEL THIS"**

NOTES:
1 - The cities on the initial list filled most, but not all UTC Time Zones. Cities / Places listed in parentheses indicate cities that have been added to fill unclaimed Time Zones.

2 - Tehran is associated with Zone D (for geographical correctness) but it's time is officially C+ which is GMT +3:30.

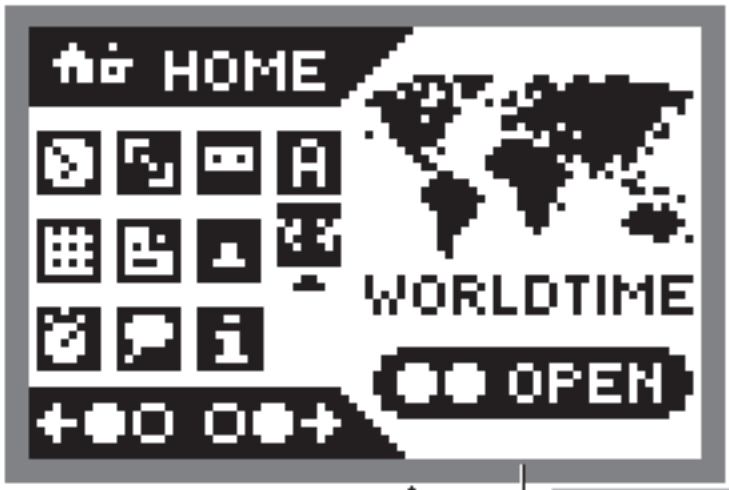
3 - Since cities / places are displayed as text strings in the display interface, it's feasible that additional cities (user-preferred) may be added at a later time, set on and transmitted via the PC synchronization application. A master list may be employed there the user will be able to choose from. It is necessary only to indicate the associated UTC Time Zone code letter in order to provide the correct display.

(at WORLDTIME Open Level)
-Display WORLDTIME for (city/place):

Y	+12:00	**("SAMOA")**
X	+13:00	**"HONOLULU"**
W	+14:00	**("TAHITI")**
V	+15:00	**"ANCHORAGE"**
U	+16:00	**"LOS ANGELES"**
T	+17:00	**"DENVER"**
S	+18:00	**"CHICAGO"**
R	+19:00	**"NEW YORK"**
R	+19:00	**"TORONTO"**
Q	+19:00	**"CARACAS"**
P	+20:00	**"RIO DE JANEIRO"**
O	+21:00	**("TRINDADE")**
N	+22:00	**("AZORES")**
Z (GMT)	+00:00	**"LONDON"**
A	+01:00	**"PARIS"**
A	+01:00	**"BERLIN"**
A	+01:00	**"ROME"**
B	+02:00	**"HELSINKI"**
B	+02:00	**"CAIRO"**
C	+03:00	**"RIYAD"**
C	+02:00	**"DUBAI"**
C	+02:00	**"MOSCOW"**
D (Time = C+)	+03:30	**("TEHRAN")**
E	+05:00	**"KARACHI"**
suggested addition:	E	+05:00	**("DELHI")**
F	+05:00	**"DHAKA"**
G	+07:00	**("YANGON")**
H	+07:00	**"HONG KONG"**
H	+07:00	**"SINGAPORE"**
i	+08:00	**"TOKYO"**
K	+09:00	**"SYDNEY"**
L	+10:00	**("SOLOMON IS.")**
M	+11:00	**"NOUEMEA"**
M	+11:00	**"WELLINGTON"**

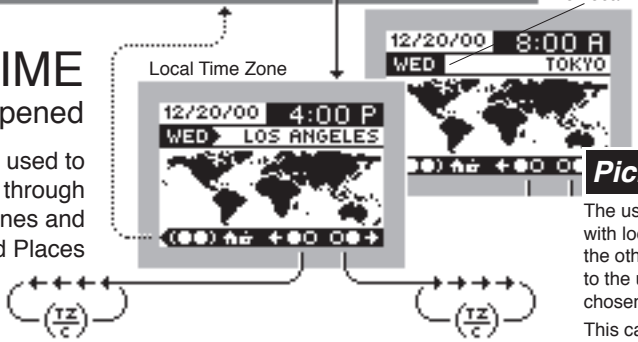
HOME Screen

WORLDTIME Mode Currently Selected



Nonlocal Time Zone

Local Time Zone



WORLDTIME Mode Opened

Left and Right Buttons used to move back and forth through world's UTC Time Zones and associated Cities and Places

Date is flush left from X:2

Weekday is flush left from X:3

Time Zone
(Pacific Standard Shown)

Zone will be indicated by alternately displaying the zone's inverse bitmap resource file (documented on c7.5)

Picking One Zone as the Local Zone

The user will choose one global time zone to correspond with local current time. The individual times for each of the other WORLDTIME Zones will be caculated according to the user's current time and the WORLDTIME Zone chosen as the Local Zone.

This can be set either from within the PC Synchronization application, or can be set by a simple [double-button-press] when the current local WORLDTIME Zone with the nearest city or place is being displayed. An arrow shape appears next to the City / Place Name of the chosen Local Time Zone.

UTC Time Zones

Placename is flush right from X:83

NOTE: Each numeral in the Worldtime is displayed individually with its own margin. This will allow an additional pixel's width of space between numerals compared to the spacing inherent in the 8pt font.

DATE

TIME

DAY

CITY

(Y) +12:00 (SAMOA)
(X) +13:00 HONOLULU
(W) +14:00 (TAHITI)
(V) +15:00 ANCHORAGE
(U) +16:00 LOS ANGELES
(T) +17:00 DENVER
(S) +18:00 CHICAGO
(R) +19:00 NEW YORK
(R) +19:00 TORONTO

(Q) +19:00 CARACAS
(P) +20:00 RIO DE JANEIRO
(O) +21:00 (TRINDADE)
(N) +22:00 (AZORES)
(Z) +00:00 LONDON
(A) +01:00 PARIS
(A) +01:00 BERLIN
(A) +01:00 ROME
(B) +02:00 HELSINKI

(B) +02:00 CAIRO
(C) +03:00 MOSCOW
(C) +02:00 RIYAD
(C) +02:00 DUBAI
(D) +03:30 (TEHRAN)
(E) +05:00 KARACHI
(E) +05:00 (DELHI)
(F) +05:00 DHAKA
(G) +07:00 (YANGON)

(H) +07:00 HONG KONG
(H) +07:00 SINGAPORE
(I) +08:00 TOKYO
(K) +09:00 SYDNEY
(L) +10:00 (SOLOMON IS.)
(M) +11:00 NOUEMEA
(M) +11:00 WELLINGTON

Worldtime Official UTC Zones and Zone Codes

Inversion Flicker Masks Shown

Zones M and Y (Pacific Ocean between Hawaii and New Zealand) overlap each other, but are split by the International Date Line (leading to the same time, but different dates).

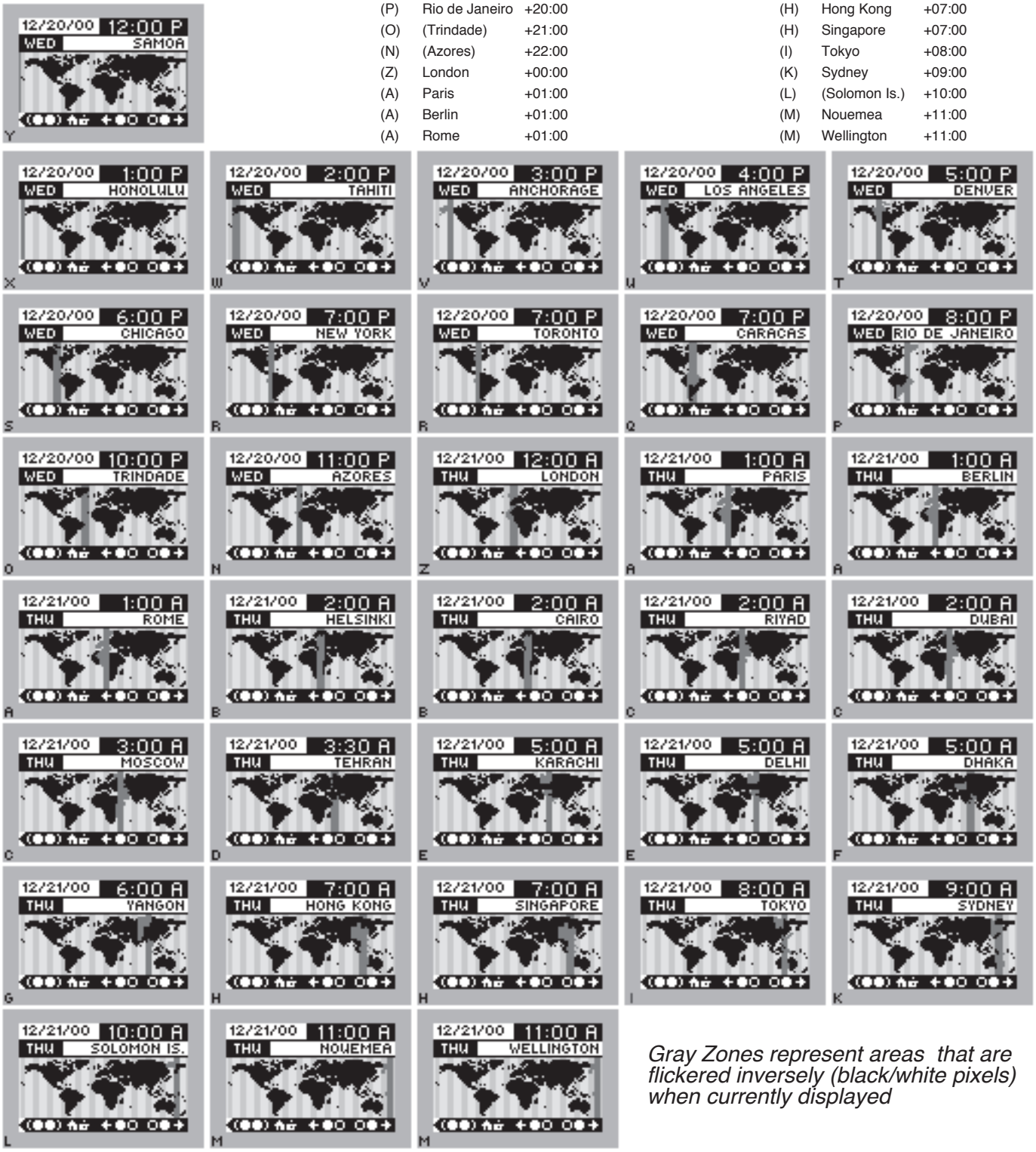
Date: August 28, 2000	
Name: James J. Leftwich	
Signed:	

An animated demonstration of these Time Zones has been uploaded to a password-protected directory on the orbitnet.com site:
http://www.orbitnet.com/••••/••••/

USER: ••••
PASSWORD: ••••

Code	City	Shift
(W)	(Samoa)	+14:00
(X)	Honolulu	+13:00
(W)	(Tahiti)	+14:00
(V)	Anchorage	+15:00
(U)	Los Angeles	+16:00
(T)	Denver	+17:00
(S)	Chicago	+18:00
(R)	New York	+19:00
(R)	Toronto	+19:00
(Q)	Caracas	+19:00
(P)	Rio de Janeiro	+20:00
(O)	(Trindade)	+21:00
(N)	(Azores)	+22:00
(Z)	London	+00:00
(A)	Paris	+01:00
(A)	Berlin	+01:00
(A)	Rome	+01:00

Code	City	Shift
(B)	Helsinki	+02:00
(B)	Cairo	+02:00
(C)	Moscow	+03:00
(C)	Riyad	+02:00
(C)	Dubai	+02:00
(D)	(Tehran)	+03:30
(E)	Karachi	+05:00
(E)	Delhi	+05:00
(F)	Dhaka	+05:00
(G)	(Yangon)	+07:00
(H)	Hong Kong	+07:00
(H)	Singapore	+07:00
(I)	Tokyo	+08:00
(K)	Sydney	+09:00
(L)	(Solomon Is.)	+10:00
(M)	Nouemea	+11:00
(M)	Wellington	+11:00



Gray Zones represent areas that are flickered inversely (black/white pixels) when currently displayed

Interactional Architecture and Software Spec

UNA - WORLDTIME Mode - (Cities - with corresponding Zone Area masks)

An animated demonstration of these Time Zones has been uploaded to a password-protected directory on the orbitnet.com site:

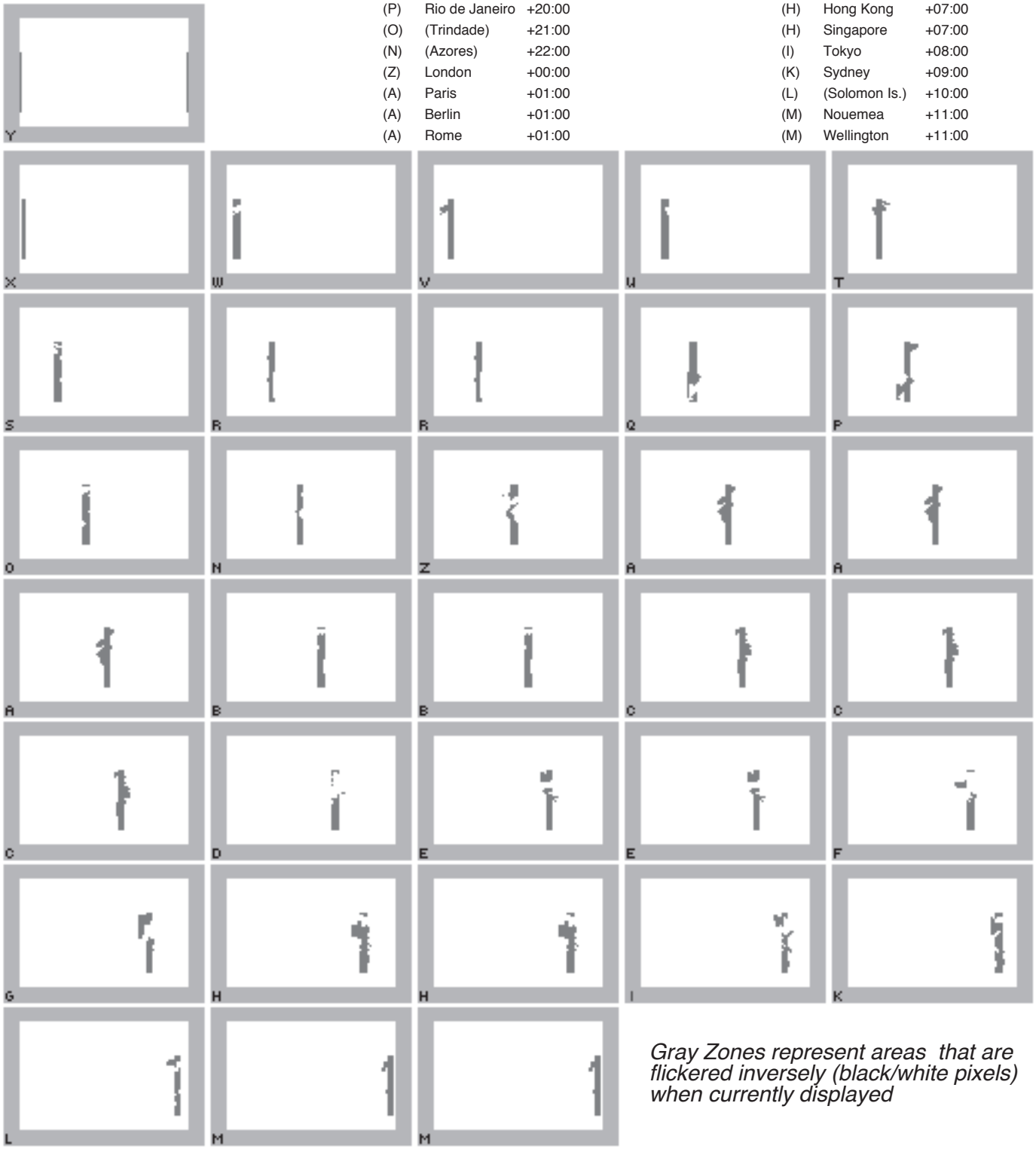
http://www.orbitnet.com/••••/••••

USER: ••••

PASSWORD: ••••

Code	City	Shift
(W)	(Samoa)	+14:00
(X)	Honolulu	+13:00
(W)	(Tahiti)	+14:00
(V)	Anchorage	+15:00
(U)	Los Angeles	+16:00
(T)	Denver	+17:00
(S)	Chicago	+18:00
(R)	New York	+19:00
(R)	Toronto	+19:00
(Q)	Caracas	+19:00
(P)	Rio de Janeiro	+20:00
(O)	(Trindade)	+21:00
(N)	(Azores)	+22:00
(Z)	London	+00:00
(A)	Paris	+01:00
(A)	Berlin	+01:00
(A)	Rome	+01:00

Code	City	Shift
(B)	Helsinki	+02:00
(B)	Cairo	+02:00
(C)	Moscow	+03:00
(C)	Riyad	+02:00
(C)	Dubai	+02:00
(D)	(Tehran)	+03:30
(E)	Karachi	+05:00
(E)	Delhi	+05:00
(F)	Dhaka	+05:00
(G)	(Yangon)	+07:00
(H)	Hong Kong	+07:00
(H)	Singapore	+07:00
(I)	Tokyo	+08:00
(K)	Sydney	+09:00
(L)	(Solomon Is.)	+10:00
(M)	Nouemea	+11:00
(M)	Wellington	+11:00



Gray Zones represent areas that are flickered inversely (black/white pixels) when currently displayed

Date: August 28, 2000
Name: James J. Leftwich
Signed:

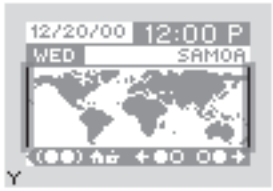
Implementable resources are rectangular image files large enough to contail all parts of one of the 25 UTC Zone sections.

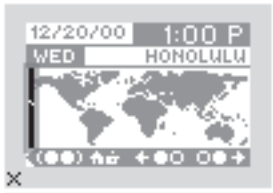
Since some zones are discontiguous, and some zones extent east and west beyond their particular vertical section, the widths of these resource files will vary accordingly.

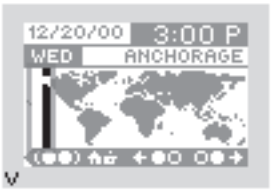
Each zone file will have the same Y-axis placement coordinate and a varying X-axis placement coordinate.

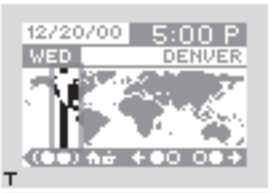
Implementable Resources: Zone Flicker Inversion Bitmaps

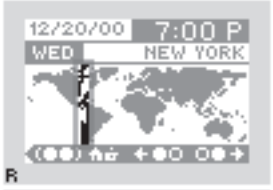
Code	City	Shift	Invert Filename	Size	Position
(Y1/Y2)	(Samoa)		y_timeinvert.bmp	V:30 / H:1	Y1:-17, X:0 / Y2:-17, X:83
(X)	Honolulu		x_timeinvert.bmp	V:30 / H:2	Y1:-17, X:1
(W)	(Tahiti)		w_timeinvert.bmp	V:30 / H:4	Y1:-17, X:3
(V)	Anchorage		v_timeinvert.bmp	V:30 / H:7	Y1:-17, X:3
(U)	Los Angeles		u_timeinvert.bmp	V:30 / H:4	Y1:-17, X:10
(T)	Denver		t_timeinvert.bmp	V:30 / H:9	Y1:-17, X:12
(S)	Chicago		s_timeinvert.bmp	V:30 / H:4	Y1:-17, X:17
(R)	New York		r_timeinvert.bmp	V:30 / H:4	Y1:-17, X:20
(R)	Toronto		r_timeinvert.bmp	V:30 / H:4	Y1:-17, X:20
(Q)	Caracas		q_timeinvert.bmp	V:30 / H:7	Y1:-17, X:23
(P)	Rio de Janeiro		p_timeinvert.bmp	V:30 / H:11	Y1:-17, X:23
(O)	(Trindade)		o_timeinvert.bmp	V:30 / H:4	Y1:-17, X:31
(N)	(Azores)		n_timeinvert.bmp	V:30 / H:4	Y1:-17, X:34
(Z)	London		z_timeinvert.bmp	V:30 / H:8	Y1:-17, X:34
(A)	Paris		a_timeinvert.bmp	V:30 / H:9	Y1:-17, X:38
(A)	Berlin		a_timeinvert.bmp	V:30 / H:9	Y1:-17, X:38
(A)	Rome		a_timeinvert.bmp	V:30 / H:9	Y1:-17, X:38
(B)	Helsinki		b_timeinvert.bmp	V:30 / H:4	Y1:-17, X:45
(B)	Cairo		b_timeinvert.bmp	V:30 / H:4	Y1:-17, X:45
(C)	Moscow		c_timeinvert.bmp	V:30 / H:8	Y1:-17, X:47
(C)	Riyad		c_timeinvert.bmp	V:30 / H:8	Y1:-17, X:47
(C)	Dubai		c_timeinvert.bmp	V:30 / H:8	Y1:-17, X:47
(D)	(Tehran)		d_timeinvert.bmp	V:30 / H:7	Y1:-17, X:52
(E)	Karachi		e_timeinvert.bmp	V:30 / H:9	Y1:-17, X:53
(E)	(Delhi)		e_timeinvert.bmp	V:30 / H:9	Y1:-17, X:53
(F)	Dhaka		f_timeinvert.bmp	V:30 / H:11	Y1:-17, X:48
(G)	(Yangon)		g_timeinvert.bmp	V:30 / H:8	Y1:-17, X:59
(H)	Hong Kong		h_timeinvert.bmp	V:30 / H:10	Y1:-17, X:62
(H)	Singapore		h_timeinvert.bmp	V:30 / H:10	Y1:-17, X:62
(I)	Tokyo		i_timeinvert.bmp	V:30 / H:10	Y1:-17, X:66
(K)	Sydney		k_timeinvert.bmp	V:30 / H:7	Y1:-17, X:67
(L)	(Solomon Is.)		l_timeinvert.bmp	V:30 / H:7	Y1:-17, X:73
(M)	Nouemea		m_timeinvert.bmp	V:30 / H:6	Y1:-17, X:78
(M)	Wellington		m_timeinvert.bmp	V:30 / H:6	Y1:-17, X:78





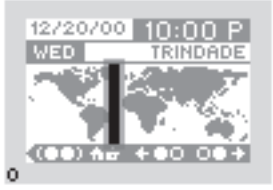






ALSO ZONE (R):

TORONTO



ALSO ZONE (A):

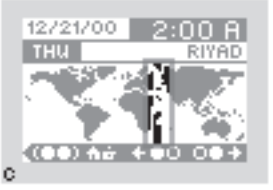
BERLIN

ALSO ZONE (A):

ROME

ALSO ZONE (B):

CAIRO

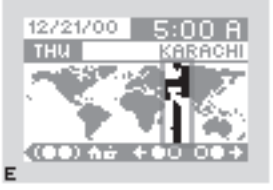


ALSO ZONE (C):

DUBAI

ALSO ZONE (C):

MOSCOW

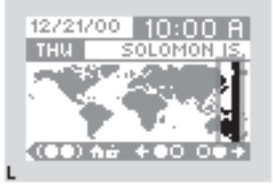


ALSO ZONE (E):

DELHI

ALSO ZONE (H):

SINGAPORE



ALSO ZONE (M):

WELLINGTON

Zone Flicker Bitmaps have been uploaded to a password-protected directory on the orbitnet.com site:

http://www.orbitnet.com/••••/••••/••••/

USER: ••••

PASSWORD: ••••

Date: August 28 2000	
Name: James J. Leftwich	
Signed:	

The **STOPWATCH Mode** features two timing functions:

1 - A Stopwatch with separate Split Time.
2 - A countdown Timer

When the STOPWATCH Mode is opened, a choice screen is displayed for:

1 - **STOPWATCH** [Double-Button-Press] Open Stopwatch Function
2 - **TIMER** [Right-Button-Press] Open Timer Function
3 - **RECENT** [Left-Button-Press] The Recent Choice will return to the last open functional screen in the Mode (could be either Stopwatch or Timer). It's important and valuable to have this functionality, as it allows the user to "save" a measured time, etc..

The **Stopwatch Function**, when in the stopped state, allows the user to Reset (to 0:00:00:00 - Hours, Minutes, Seconds, and 1/100ths of a Second), Start (or Resume, if the display count is >00:00:00:00). When in the running state, the user may capture a single Split (or Lap) Time to a display area a the lower right corner of the device interface by doing a [Right-Button-Press]. The most recent Split Time is displayed, and another Split Time can be captured any time when the Stopwatch is actively counting. When in the stopped state, the Split Time Button Indicator changes to a simple Split Time Title and the Start/Stop Button Indicator divides to become two Button Indicators:

1 - **RESUME** [Double-Button-Press] (Resume counting upward)
2 - **:00** [Left-Button-Press] (Reset Stopwatch to 00:00:00:00).

The **Timer Function** allows the user to set a countdown timer to countdown to an alarm - flashing digits: 00:00 and or audible alarm (audible setting is a Preference setting in the SETUP Mode). When the Timer Function is opened, two choices are presented:

1 - **START** [Double-Button-Press] (Count downward from Set Time)
2 - **SET** [Right-Button-Press] (Change the Timer's Set Time).

When the Timer is in the running state, only the Button Indicator for **STOP** [Double-Button-Press]is displayed/active. When the Timer Mode is in the stopped state, two Button Indicators are displayed:

1 - **RESUME** [Double-Button-Press] (Resume counting downward)
2 - **RESET** [Left-Button-Press] (Reset Stopwatch to 00:00:00:00).

Resetting returns the Timer display to the current Countdown Time Setting.

When the Timer is in the stopped or Reset state, the user may **Set the Timer's Countdown Time.** The Timer may be set to any time between 1 second and 59 seconds and between 1 minute and 99 minutes.

When the user does a **[Right-Button-Press]**, the **Set Timer Screen** appears, displaying the current **Countdown Time Setting**. The user may simply use the Right and Left Buttons to scroll this Time higher or lower. **The available Timer Settings will be arranged as a loop**, with the lower portion ranging between 01 and 59 seconds. Beginning immediately adjacent, scrolling upward, is 1 minute and continuing up through 99 minutes (which is the loop connection point - beyond 99 minutes is 1 second and vice versa). A **[Double-Button-Press]** then **SETS the currently displayed Countdown Time and returns the user to the initial Timer Open/Reset Screen**.

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

VOCALINKS

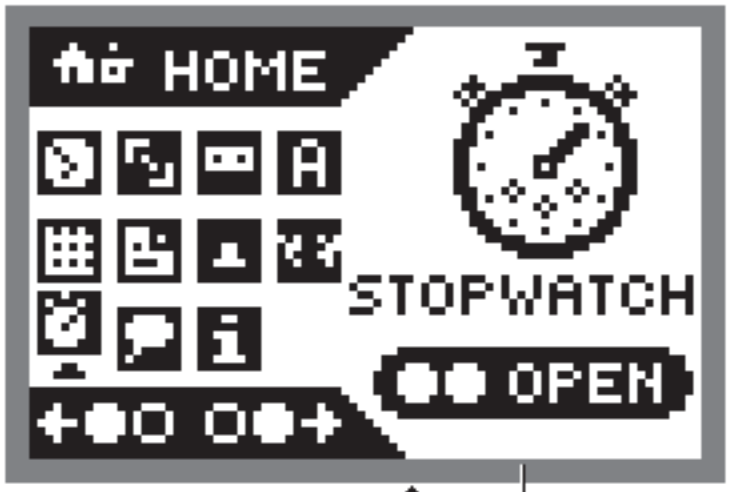
User may create a VOCALINKs on the SWAP & SYNCH Mode Opened Screen, the START CARD SWAP Screen, and the PICK SWAP CARD listing. This will allow users that so desire, very quick access to these particular screen locations.

HOME Screen

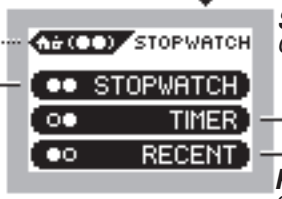
STOPWATCH Mode Currently Selected

Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.

Digits for use in the time displays.



STOPWATCH *Choice Screen*



Timer *Open / Reset*

Timer *Counting Down Minutes : Seconds*

Timer *Stopped*

Timer *Resumed*

Recent / Last *Stopwatch Screen Location*

Stopwatch *Open / Reset*

Stopwatch *Running (above and below)*

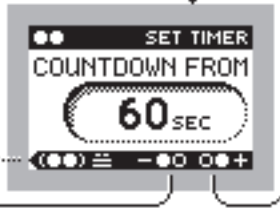
Take Split Time

Stopwatch *Stopped*

Last Split Time

Take Split Time *Last Split Time*

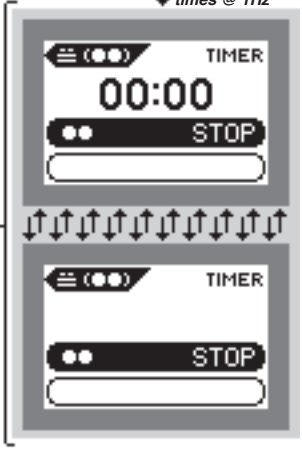
99 MIN
1 MIN
99 MIN
1 MIN



59 SEC
1 SEC
1 MIN
1 SEC

00:00 Alarm
preference: [Audible ON/Off]

00:00 flashes 10 times @ 1Hz



Date: August 28, 2000	
Name: James J. Leftwich	
Signed:	

The VOCALINKS Mode is simply a scrollable listing of the VOCALINKS the user has recorded. VOCALINKS occur any time the user presses the single VOCALINK button located near the display and while this button is held, speaks a vocal command that will be recorded and held as a recognizable link back to the spot where it was recorded

While the user [Presses-and-Holds] the VOCALINK Button near the display, the screen switches to a black display with the VOCALINK symbol and the message "SPEAK NOW" reversed out in white.

When the user lets up on the button, if the device has detected and recorded a valid signal, it will then present a Confirmation Panel where the user either Saves the VOCALINK with a [Double-Button-Press] or Deletes it (Cancels) with a [Double-Button-Hold]. Optionally, [Left-Button-Press] or [Right-Button-Press] might work as well for Deleting/Cancelling.

Accessing the VOCALINKS Mode listing is done from the Home Screen Level with VOCALINKS Icon selected and with a [Double-Button-Press].

At VOCALINKS Mode Opened Level, the user is presented with three Option Buttons. These options will determine the Action associated with the common [Double-Button-Press] command in the subsequently-opened list of recorded VOCALINKS. While this is somewhat cumbersome, it has the advantage of making it impossible to accidentally Delete a VOCALINK (or other record) when merely Reviewing it or Opening/Following it.

When the user {Double-Button-Presses] to Open VOCALINKS, they are taken to the top of the VOCALINK list (in chronological order - most recent downward to oldest). Opening one of these VOCALINKS will HyperJump the user directly to that screen, which may be appropriately updated, if necessary (Worldtime, updated Record, etc.). They will not, however, be able to navigate quickly back to the VOCALINKS Mode/List.

Reviewing will work similarly, with the user being able to interact with the target link, and, if possible, navigate below to any sub-levels (if, for example, the VOCALINK was to the ADDRESS list in CUSTOMER category). But from the level of the target
up, the user will be returned to the VOCALINKS Mode/List.

Deletion works similarly to the Deletion of Memos. The user is presented with a Confirmation and a Review opportunity.

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

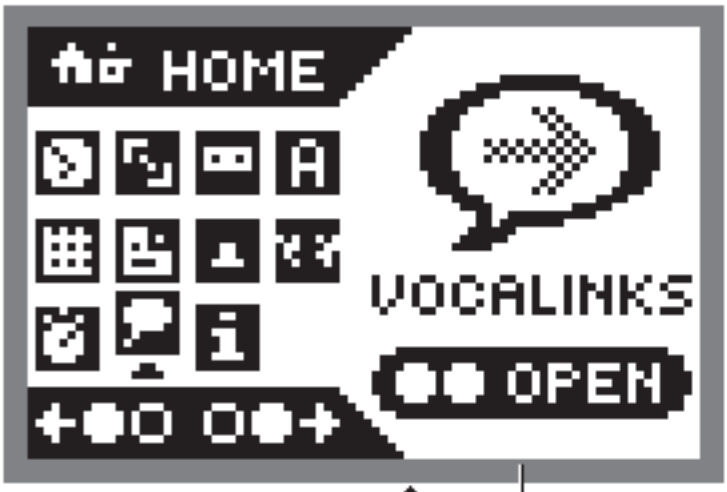
VOCALINKS

User may create a VOCALINK only to the VOCALINK Mode Opened Screen and either the OPEN VOCALINK, REVIEW VOCALINK, or DELETE VOCALINK List screen locations.

HOME Screen

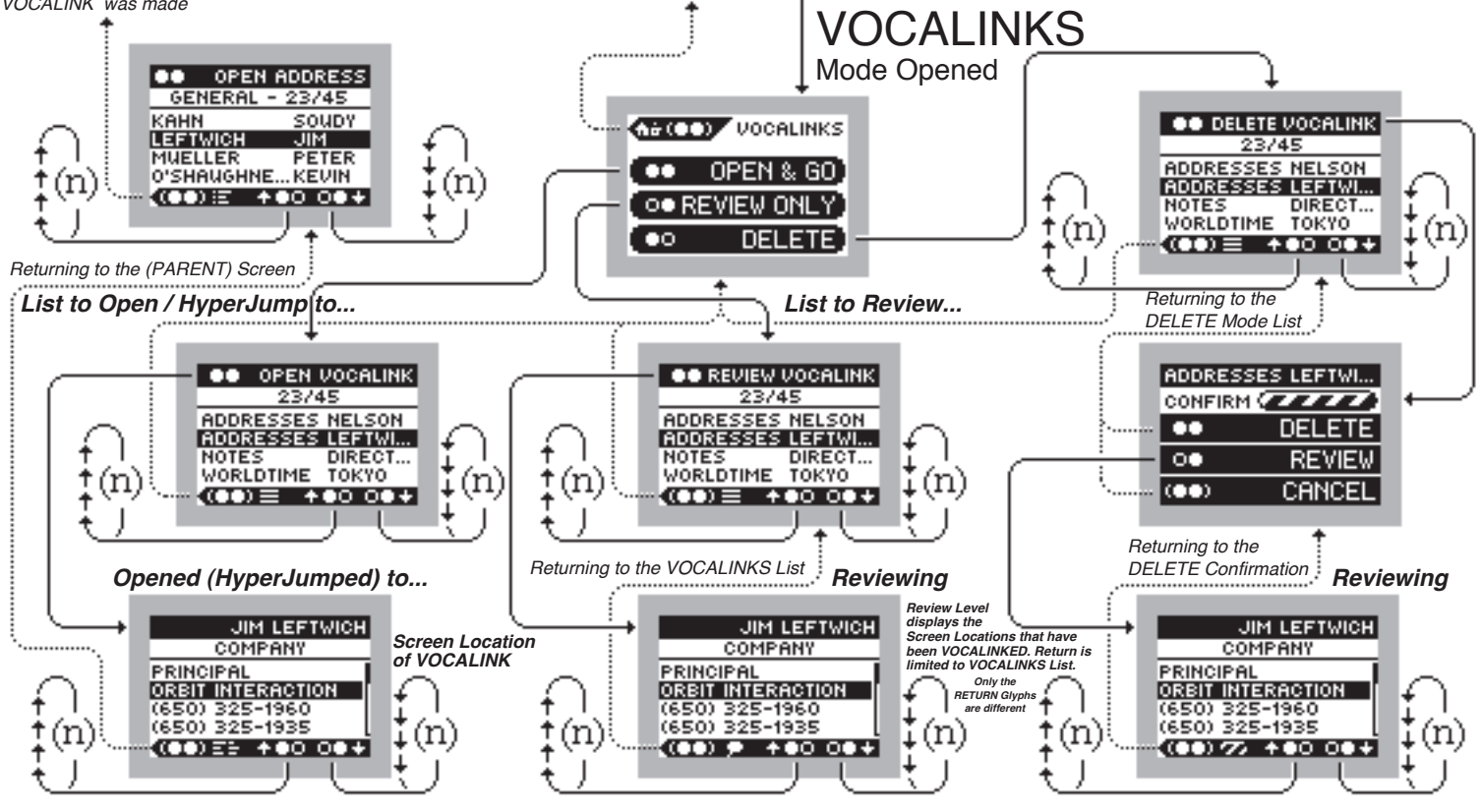
VOCALINKS Mode Currently Selected

Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.



User is now navigating within the local system hierarchy where the VOCALINK was made

VOCALINKS
Mode Opened



OLIM Project UNA

Interactional Architecture and Software Spec

UNA - Using/Following and Recording New VOCALINKS

Date: August 20, 2000	
Name: James J. Leftwich	
Signed:	

c10.2

VOCALINKS are accessed via a physical button located near the device display.

Creating (Recording) VOCALINKS and Using/Following recorded VOCALINKS are done via interaction with this physical button as follows:

Creating/Recording a VOCALINK

1 - (at any valid screen location) [VOCALINK-Button-Press]

2 - (at instruction screen) [VOCALINK-Button-Press]

(Note: at any valid screen location) Two [VOCALINK-Button-Press] commands in a row equals Steps 1 and 2.

3 - Speak word, term, or phrase during the graphically-displayed countdown.

Accessing/Following a Recorded VOCALINKS

1 - (at ANY screen location) [VOCALINK-Button-Press]

2 - (at instruction screen) [VOCALINK-Button-Hold]

(Note: at any valid screen location) A single [VOCALINK-Button-Hold] commands in a row equals Steps 1 and 2.

3 - Speak word, term, or phrase during the graphically-displayed countdown.

Watch and Screen

Location can be anywhere the user wishes to create a VOCALINK

The VOCALINK Button

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

VOCALINKS

User may create a VOCALINK only to the VOCALINK Mode Opened Screen and either the OPEN VOCALINK, REVIEW VOCALINK, or DELETE VOCALINK List screen locations.

Animation Frames

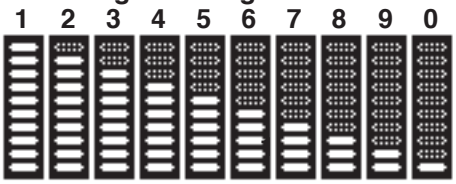
An animated demonstration of the animated screens has been uploaded to a password-protected directory on the orbitnet.com site:

http://www.orbitnet.com/••••/••••

USER: ••••
PASSWORD: ••••

Listening_Countdown.gif
Recording_Countdown.gif

Recording/Listening Countdown Frames



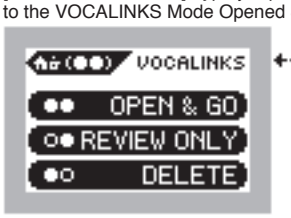
These are portions of the (10) Animation Frames for the Recording/Listening Countdown. Each bar represents 0.5 second for 5 seconds total.

Animation .bmp Resources (Screenshots) for the two VOCALINK Countdown Sequences

Recording Countdown	Recording Countdown
Lis_Cntdwn_1_10.bmp	Rec_Cntdwn_1_10.bmp
Lis_Cntdwn_2_10.bmp	Rec_Cntdwn_2_10.bmp
Lis_Cntdwn_3_10.bmp	Rec_Cntdwn_3_10.bmp
Lis_Cntdwn_4_10.bmp	Rec_Cntdwn_4_10.bmp
Lis_Cntdwn_5_10.bmp	Rec_Cntdwn_5_10.bmp
Lis_Cntdwn_6_10.bmp	Rec_Cntdwn_6_10.bmp
Lis_Cntdwn_7_10.bmp	Rec_Cntdwn_7_10.bmp
Lis_Cntdwn_8_10.bmp	Rec_Cntdwn_8_10.bmp
Lis_Cntdwn_9_10.bmp	Rec_Cntdwn_9_10.bmp
Lis_Cntdwn_10_10.bmp	Rec_Cntdwn_10_10.bmp

[Double-Button-Press] hyperjumps to the VOCALINKS Mode Opened Screen

Any button press other than a [Double-Button-Press] will cancel and return



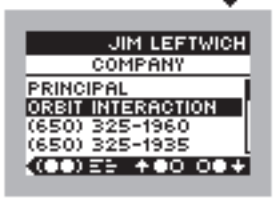
Following a stored VOCALINK

Recording a new VOCALINK

Result Below Threshhold (TBD)*

Result Below Threshhold (TBD)*

Spoken: "Jim Leftwich"



Spoken: "Saturday's Winelist"

Also adds a VOCALINK to the list

****Result Below Threshhold (TBD)***

It will be depend upon the performance characteristics of the voice-recognition firmware as to whether certain types of signals fall below an acceptable or usable level. It may be preferrable in certain circumstances to allow a RETRY instead of sending the user to a wrong location, given that HyperJumps in the UNA interface are not recursively reversable.

OLIM Project UNA

Interactional Architecture and Software Spec

UNA - Home Screen with Help & INFO Mode Selected

Date: August 28, 2000	c11.1
Name: James J. Leftwich	
Signed:	

The HELP & INFO Mode provides the user with a full set of Help Notes for each of the UNA Applications as well as a Getting Started Note that outlines the very simple button navigation and dot guides used throughout the interface. The HELP & INFO Mode Opened screen also includes a graphical representation of the UNA's battery level and provides controls to set the UNA's Beep sound level.

The HELP GUIDE functions just like the NOTES Mode. The first level screen is a listing of the included Help Notes, beginning with Getting Started. The rest of the Help Notes deal with each of the UNA Applications and run an average of five pages apiece.

These Help Note pages are being delivered as screenshots in .bmp format for the release version. Subsequent versions may implement importable NOTES-style records for updatability (when appropriate, such as with additional applications, etc.)

The Battery level graphic is a simple set of eight images, representing the amount of battery charge. Readings of the current battery charge (in volts) will trigger the display of the appropriate one of eight graphics.

The SOUND (Level Setting) functionality takes place on the first Mode-opened Level, and consists of a simple toggling of [Left-Button-Presses] and [Right-Button-Presses] for moving between the states of:

1 - Beep Off

2 - Beep Low Volume

3 - Beep High Volume.

The speaker will sound upon each move, giving the user feedback as to the results of each setting.

Voice Commands
(suggested commands shown in bold quotes)

(at Any Level)
- Home Level: **"HOME PLEASE"** or **"RETURN HOME"**

(at Home Level)
- Select Next Mode: **"NEXT"**
- Select Previous Mode: **"PREVIOUS"**
- Open Mode: **"OPEN (modename)"**

VOCALINKS

User may create a VOCALINKs on the HELP GUIDE and SOUND Mode Opened Screen, the HELP GUIDE NOTES Listing Screen, and any location within the Help Note records. This will allow users that so desire, very quick access to these particular screen locations.

Resources for Battery Level Meter and Beep Levels have been uploaded to a password-protected directory on the orbitnet.com site:

http://www.orbitnet.com/••••/••••/••••/

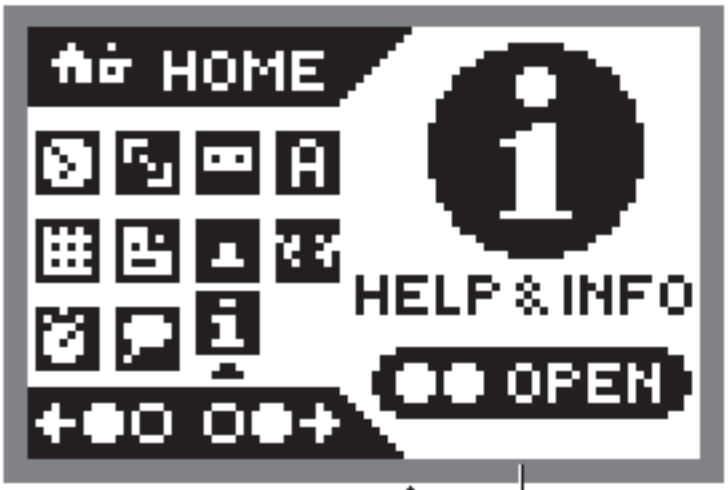
Username: ••••
Password: ••••

Listening_Countdown.gif
Recording_Countdown.gif

HOME Screen

Informational HELP & INFO Mode Currently Selected
(includes Battery Level Indicator and Beep Sound Level Setting)

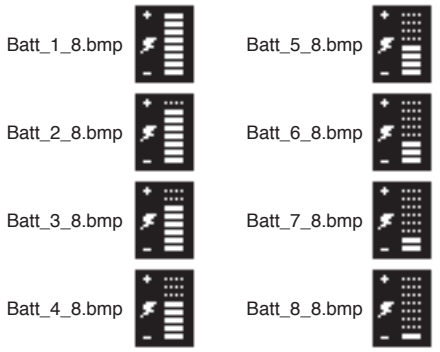
Left and Right Buttons used to scroll back and forth through application modes and their associated glyphs.

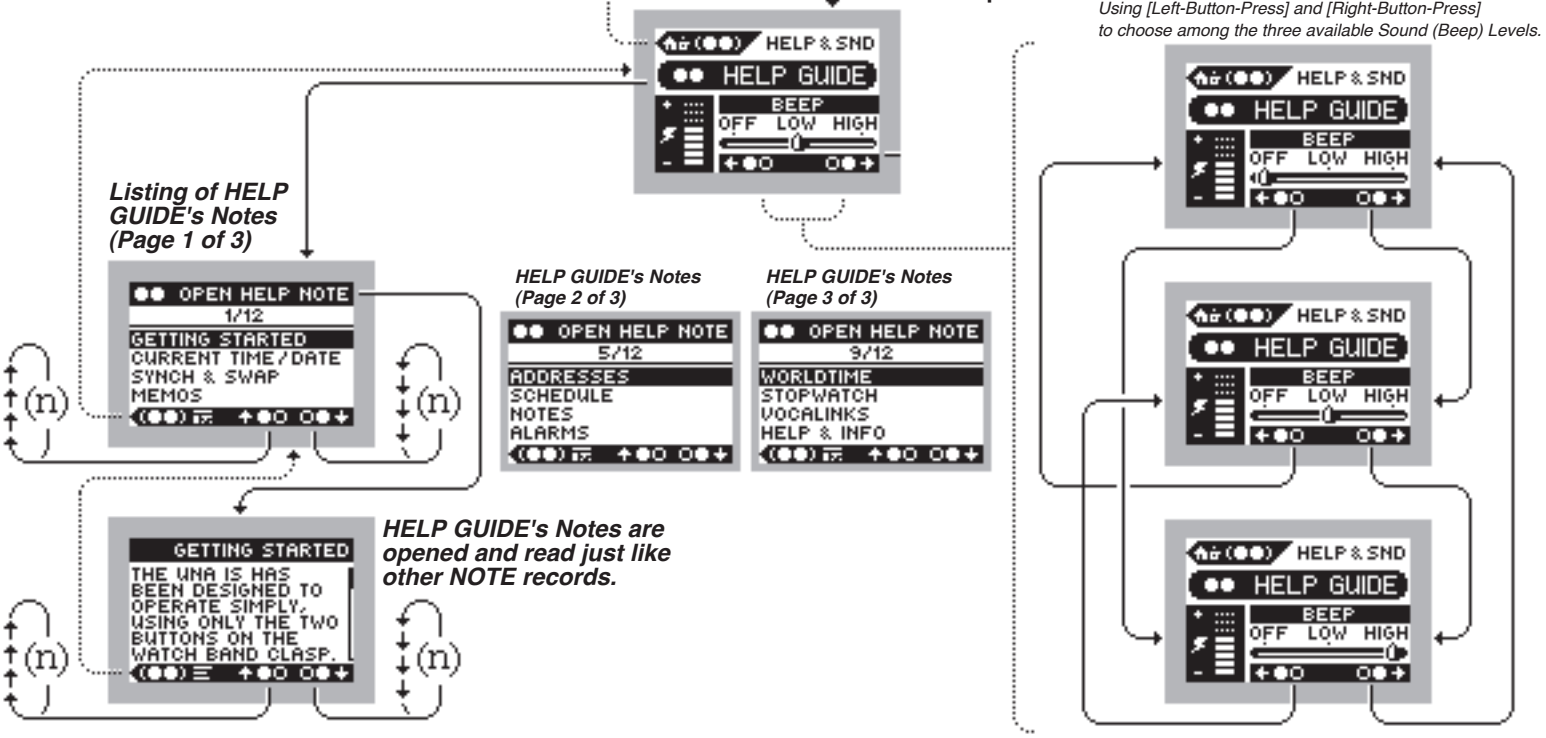


Returning to Home Screen

HELP & Info Mode Opened

Eight-State Battery Level indicator





Date: August 28, 2000
Name: James J. Leftwich
Signed:

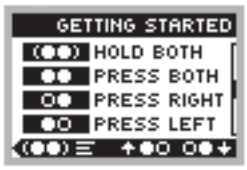
c11.2

Help_GStart_1.bmp
Help_GStart_2.bmp
Help_GStart_3.bmp
Help_GStart_4.bmp
Help_GStart_5.bmp

Page 1

Page 2

Page 3

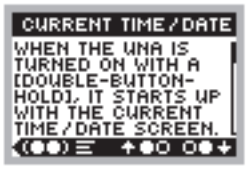


Page 4

Page 5

Help_CTime_1.bmp
Help_CTime_2.bmp
Help_CTime_3.bmp
Help_CTime_4.bmp
Help_CTime_5.bmp

Page 1

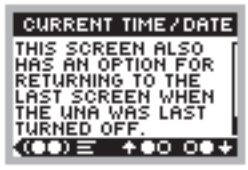


Page 2

Page 3

Page 4

Page 5



Help_SwSyn_1.bmp
Help_SwSyn_2.bmp
Help_SwSyn_3.bmp
Help_SwSyn_4.bmp
Help_SwSyn_5.bmp

Page 1

Page 2

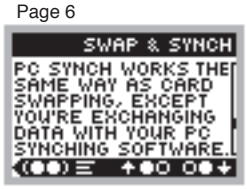
Page 3

Page 4

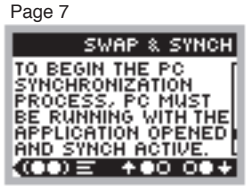
Page 5

Help_SwSyn_6.bmp
Help_SwSyn_7.bmp
Help_SwSyn_8.bmp

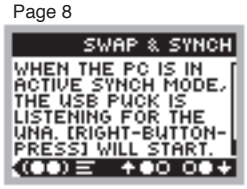
Page 6



Page 7



Page 8



Help_Memos_1.bmp
Help_Memos_2.bmp
Help_Memos_3.bmp
Help_Memos_4.bmp
Help_Memos_5.bmp

Page 1

Page 2

Page 3

Page 4

Page 5

Help_Address_1.bmp
Help_Address_2.bmp
Help_Address_3.bmp

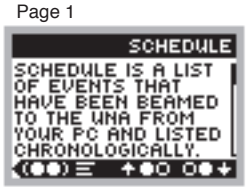
Page 1

Page 2

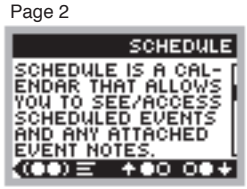
Page 3

Help_Sched_1.bmp
Help_Sched_2.bmp
Help_Sched_3.bmp
Help_Sched_4.bmp
Help_Sched_5.bmp

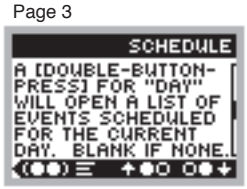
Page 1



Page 2

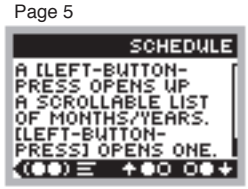


Page 3



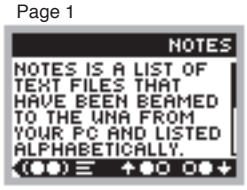
Page 4

Page 5

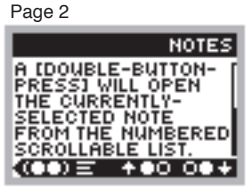


Help_Notes_1.bmp
Help_Notes_2.bmp

Page 1



Page 2



Resources for the Help Guide Note pages on c11.2 and c11.3 have been uploaded to a password-protected directory on the orbitnet.com site:

http://www.orbitnet.com/••••/••••/••••/

Username: ••••
Password: ••••

Date: August 28, 2000
Name: James J. Leftwich
Signed:

c11.3

Help_Alarms_1.bmp
Help_Alarms_2.bmp
Help_Alarms_3.bmp
Help_Alarms_4.bmp
Help_Alarms_5.bmp

Page 1

Page 2

Page 3

Page 4

Help_WTime_1.bmp
Help_WTime_2.bmp
Help_WTime_3.bmp
Help_WTime_4.bmp
Help_WTime_5.bmp

Page 1

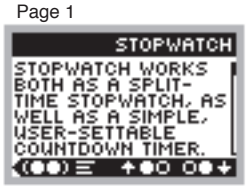
Page 2

Page 3

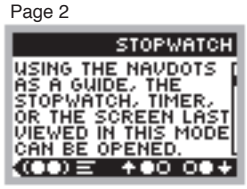
Page 4

Help_StpWtch_1.bmp
Help_StpWtch_2.bmp
Help_StpWtch_3.bmp
Help_StpWtch_4.bmp
Help_StpWtch_5.bmp

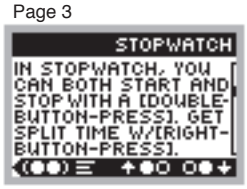
Page 1



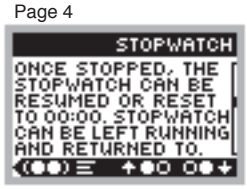
Page 2



Page 3



Page 4



Page 5

Page 6

Page 7

Page 8

Help_StpWtch_6.bmp
Help_StpWtch_7.bmp
Help_StpWtch_8.bmp

Help_VLinks_1.bmp
Help_VLinks_2.bmp
Help_VLinks_3.bmp
Help_VLinks_4.bmp
Help_VLinks_5.bmp

Page 1

Page 2

Page 3

Page 4

Page 5

Help_VLinks_6.bmp
Help_VLinks_7.bmp
Help_VLinks_8.bmp
Help_VLinks_9.bmp
Help_VLinks_10.bmp

Page 6

Page 7

Page 8

Page 9

Page 10

Help_VLinks_11.bmp
Help_VLinks_12.bmp
Help_VLinks_13.bmp

Page 11

Page 12

Page 13

Help_HelpInfo_1.bmp
Help_HelpInfo_2.bmp

Page 1

Page 2

Resources for the Help Guide Note pages on c11.2 and c11.3 have been uploaded to a password-protected directory on the orbitnet.com site:

http://www.orbitnet.com/••••/••••/••••/

Username: ••••
Password: ••••

Date: August 28, 2000
Name: James J. Leftwich
Signed:


```
~!@#$%^&*()_+
`1234567890-=
ABCDEFGHIJKLM
NOPQRSTUVWXYZ
[]\;',./{}|:"<>?
...
```

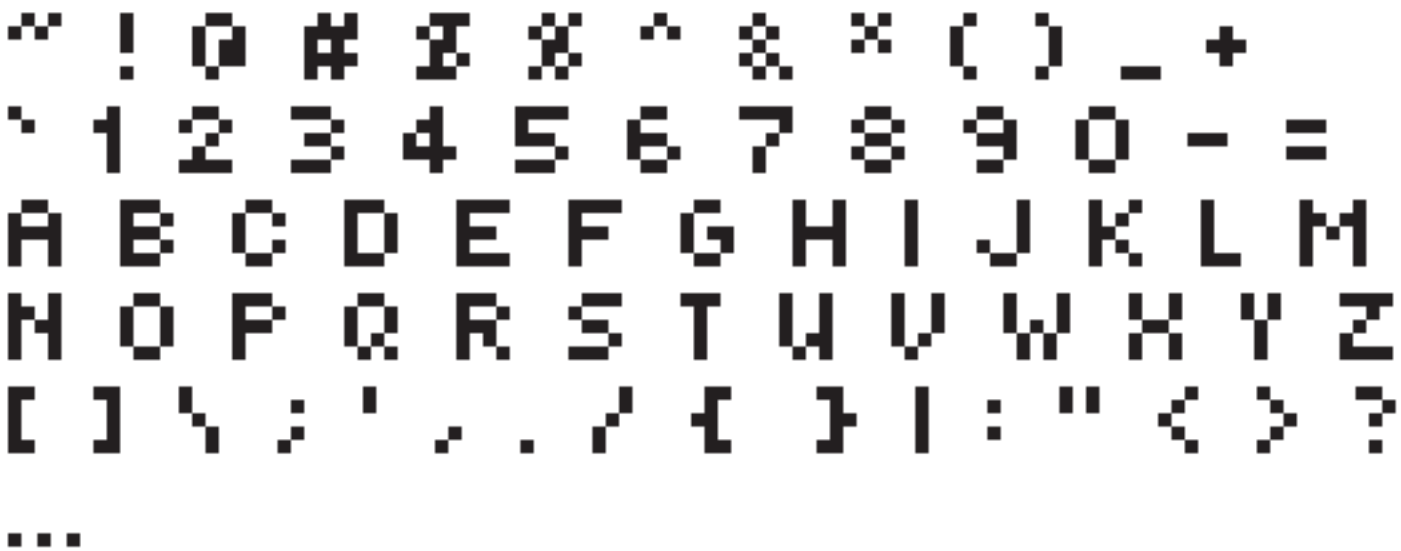
UNA 8pt. (All Uppercase Characters)

Resources for the UNA Bitmap Fonts have been uploaded to a password-protected directory on the orbitnet.com site:

http://www.orbitnet.com/••••/••••/••••
Username: ••••
Password: ••••

```
~!@#$%^&*()_+
`1234567890-=
ABCDEFGHIJKLM
NOPQRSTUVWXYZ
[]\;',./{}|:"<>?
...
```

UNA 6pt. (All Uppercase Characters)



Date: August 28, 2000
Name: James J. Leftwich
Signed:

UNA 8pt. (Character Set)

C-@	C-a	C-b	C-c	C-d	C-e	C-f	C-g	C-h	C-i	C-j	C-k	C-l	C-m	C-n	C-o	C-p	C-q
C-r	C-s	C-t	C-u	C-v	C-w	C-x	C-y	C-z	C-[	C-\	C-]	C-^	C-_		!	"	#
															!	"	#
$	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3	4	5
$	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3	4	5
6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G
6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Z	[	\	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
Z	[	\	]	^	_	`	A	B	C	D	E	F	G	H	I	J	K
l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	{	|	}
L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	(	\	)
~	*	OuA	S0a	S0c	OeE	OnN	Ou0	OuU	Oea	O`a	Oia	Oua	Ona	Oa	Oc	Oee	O`e
~	*																
Oie	Oue	Oei	O`i	Oii	Oui	Onn	Oeo	O`o	Oio	Ouo	Ono	Oeu	O`u	Oiu	Ouu	Ot	S08
04	03	06	08	07	Os	Or	Og	02	OeOe	OuOu	O=	S0'	S0o	05	S0=	O,	O.
Oy	Om	Od	Ow	S0p	Op	Ob	09	00	Oz	O'	Oo	S0/	01	Ol	Ov	Of	Ox
Oj	O\	S0\	O;	Oblk	O`A	OnA	On0	S0q	Oq	O-	S0-	O[	S0[	O]	S0]	O/	S0v
			…														
Ouy	S0`	S01	S02	S03	S04	S05	S06	S07	S09	S00	S0w	S0e	S0r	S0t	S0y	S0u	S0i
S0s	S0d	S0f	S0g	S0h	S0j	S0k	S0l	S0;	S0z	S0x	S0b	S0n	S0m	S0,	S0.	Oh	Ok
*	*	*	*														

Date: August 28, 2000
Name: James J. Leftwich
Signed:

UNA 8pt. (Character Widths w/space)

0	*	*	*	*	*	*	*	*	0	*	*	*	0	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	3	2	4	6
															!	"	#
6	6	6	2	4	4	6	6	4	6	2	6	6	3	6	6	6	6
$	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3	4	5
6	6	6	6	2	3	5	6	5	6	6	6	6	6	6	6	6	6
6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G
6	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
6	3	6	3	6	5	3	6	6	6	6	6	6	6	6	2	6	6
Z	[	\	]	^	_	`	A	B	C	D	E	F	G	H	I	J	K
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	4	6	4
L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	(	\	)
6	6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
~	*																
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	5	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			...														
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*														

Date: August 28, 2000
Name: James J. Leftwich
Signed:

UNA 8pt. (Hexadecimal Codes)

x00	x01	x02	x03	x04	x05	x06	x07	x08	x09	x0A	x0B	x0C	x0D	x0E	x0F	x10	x11
x12	x13	x14	x15	x16	x17	x18	x19	x1A	x1B	x1C	x1D	x1E	x1F	x20	x21	x22	x23
															!	"	#
x24	x25	x26	x27	x28	x29	x2A	x2B	x2C	x2D	x2E	x2F	x30	x31	x32	x33	x34	x35
$	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3	4	5
x36	x37	x38	x39	x3A	x3B	x3C	x3D	x3E	x3F	x40	x41	x42	x43	x44	x45	x46	x47
6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G
x48	x49	x4A	x4B	x4C	x4D	x4E	x4F	x50	x51	x52	x53	x54	x55	x56	x57	x58	x59
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
x5A	x5B	x5C	x5D	x5E	x5F	x60	x61	x62	x63	x64	x65	x66	x67	x68	x69	x6A	x6B
Z	[	\	]	^	_	`	A	B	C	D	E	F	G	H	I	J	K
x6C	x6D	x6E	x6F	x70	x71	x72	x73	x74	x75	x76	x77	x78	x79	x7A	x7B	x7C	x7D
L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	{	\	}
x7E	x7F	x80	x81	x82	x83	x84	x85	x86	x87	x88	x89	x8A	x8B	x8C	x8D	x8E	x8F
~	*																
x90	x91	x92	x93	x94	x95	x96	x97	x98	x99	x9A	x9B	x9C	x9D	x9E	x9F	xA0	xA1
xA2	xA3	xA4	xA5	xA6	xA7	xA8	xA9	xAA	xAB	xAC	xAD	xAE	xAF	xB0	xB1	xB2	xB3
xB4	xB5	xB6	xB7	xB8	xB9	xBA	xBB	xBC	xBD	xBE	xBF	xC0	xC1	xC2	xC3	xC4	xC5
xC6	xC7	xC8	xC9	xCA	xCB	xCC	xCD	xCE	xCF	xD0	xD1	xD2	xD3	xD4	xD5	xD6	xD7
			…														
xD8	xD9	xDA	xDB	xDC	xDD	xDE	xDF	xE0	xE1	xE2	xE3	xE4	xE5	xE6	xE7	xE8	xE9
xEA	xEB	xEC	xED	xEE	xEF	xF0	xF1	xF2	xF3	xF4	xF5	xF6	xF7	xF8	xF9	xFA	xFB
xFC	xFD	xFE	xFF														

Date: August 28, 2000
Name: James J. Leftwich
Signed:

UNA 6pt. (Character Set)

C-@	C-a	C-b	C-c	C-d	C-e	C-f	C-g	C-h	C-i	C-j	C-k	C-l	C-m	C-n	C-o	C-p	C-q
C-r	C-s	C-t	C-u	C-v	C-w	C-x	C-y	C-z	C-[	C-\	C-]	C-^	C-_		!	"	#
															!	"	#
$	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3	4	5
$	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3	4	5
6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G
6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Z	[	\	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
Z	[	\	]	^	_	`	A	B	C	D	E	F	G	H	I	J	K
l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	{	|	}
L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	{	|	}
~	*	0uA	S0a	S0c	0eE	0nN	0u0	0uU	0ea	0`a	0ia	0ua	0na	0a	0c	0ee	0`e
~	x																
0ie	0ue	0ei	0`i	0ii	0ui	0nn	0eo	0`o	0io	0uo	0no	0eu	0`u	0iu	0uu	0t	S08
04	03	06	08	07	0s	0r	0g	02	0e0e	0u0u	0=	S0'	S0o	05	S0=	0,	0.
0y	0m	0d	0w	S0p	0p	0b	09	00	0z	0'	0o	S0/	01	0l	0v	0f	0x
0j	0\	S0\	0;	0blk	0`A	0nA	0n0	S0q	0q	0-	S0-	0[	S0[	0]	S0]	0/	S0v
			…														
0uy	S0`	S01	S02	S03	S04	S05	S06	S07	S09	S00	S0w	S0e	S0r	S0t	S0y	S0u	S0i
S0s	S0d	S0f	S0g	S0h	S0j	S0k	S0l	S0;	S0z	S0x	S0b	S0n	S0m	S0,	S0.	0h	0k
*	*	*	*														

Date: August 28, 2000
Name: James J. Leftwich
Signed:

UNA 6pt. (Character Widths w/space)

0	*	*	*	*	*	*	*	*	0	*	*	*	0	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	3	2	4	5
															!	"	#
5	5	5	2	3	3	4	4	3	4	2	4	5	3	5	5	5	5
$	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3	4	5
5	5	5	5	2	3	4	4	4	4	5	5	5	5	5	5	5	5
6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G
5	2	5	5	4	6	5	5	5	5	5	5	4	5	5	6	5	4
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
5	3	4	3	4	3	3	5	5	5	5	5	5	5	5	2	5	5
Z	[	\	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
4	6	5	5	5	5	5	5	4	5	5	6	5	4	5	5	2	5
l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	{	|	}
5	4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
~	¤																
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	5	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			…														
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*														

Date: August 28, 2000
Name: James J. Leftwich
Signed:

UNA 6pt. (Hexadecimal Codes)

x00	x01	x02	x03	x04	x05	x06	x07	x08	x09	x0A	x0B	x0C	x0D	x0E	x0F	x10	x11
x12	x13	x14	x15	x16	x17	x18	x19	x1A	x1B	x1C	x1D	x1E	x1F	x20	x21	x22	x23
															!	"	#
x24	x25	x26	x27	x28	x29	x2A	x2B	x2C	x2D	x2E	x2F	x30	x31	x32	x33	x34	x35
$	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3	4	5
x36	x37	x38	x39	x3A	x3B	x3C	x3D	x3E	x3F	x40	x41	x42	x43	x44	x45	x46	x47
6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G
x48	x49	x4A	x4B	x4C	x4D	x4E	x4F	x50	x51	x52	x53	x54	x55	x56	x57	x58	x59
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
x5A	x5B	x5C	x5D	x5E	x5F	x60	x61	x62	x63	x64	x65	x66	x67	x68	x69	x6A	x6B
Z	[	\	]	^	_	`	A	B	C	D	E	F	G	H	I	J	K
x6C	x6D	x6E	x6F	x70	x71	x72	x73	x74	x75	x76	x77	x78	x79	x7A	x7B	x7C	x7D
L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	{	|	}
x7E	x7F	x80	x81	x82	x83	x84	x85	x86	x87	x88	x89	x8A	x8B	x8C	x8D	x8E	x8F
~	x																
x90	x91	x92	x93	x94	x95	x96	x97	x98	x99	x9A	x9B	x9C	x9D	x9E	x9F	xA0	xA1
xA2	xA3	xA4	xA5	xA6	xA7	xA8	xA9	xAA	xAB	xAC	xAD	xAE	xAF	xB0	xB1	xB2	xB3
xB4	xB5	xB6	xB7	xB8	xB9	xBA	xBB	xBC	xBD	xBE	xBF	xC0	xC1	xC2	xC3	xC4	xC5
xC6	xC7	xC8	xC9	xCA	xCB	xCC	xCD	xCE	xCF	xD0	xD1	xD2	xD3	xD4	xD5	xD6	xD7
			…														
xD8	xD9	xDA	xDB	xDC	xDD	xDE	xDF	xE0	xE1	xE2	xE3	xE4	xE5	xE6	xE7	xE8	xE9
xEA	xEB	xEC	xED	xEE	xEF	xF0	xF1	xF2	xF3	xF4	xF5	xF6	xF7	xF8	xF9	xFA	xFB
xFC	xFD	xFE	xFF														

OLIM Project UNA

Interactional Architecture and Software Spec

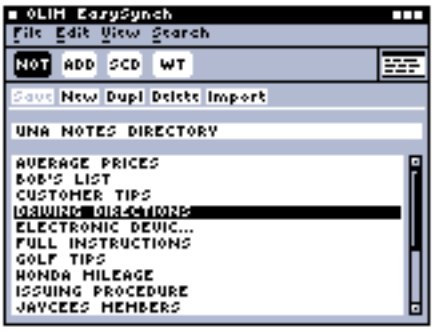
UNA - PC Companion/Synchronization Application - General Direction

Date: August 14, 2000	
Name: James J. Leftwich	
Signed:	

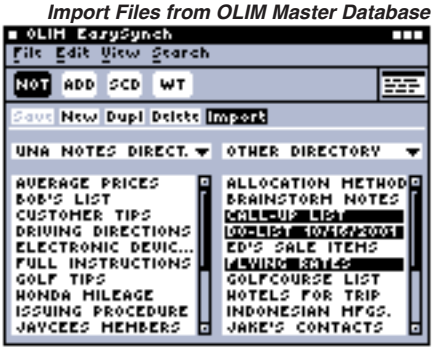
http://www.orbitnet.com/••••/••••/••••/
Username: ••••
Password: ••••

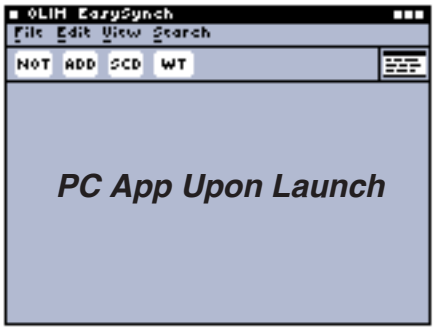
NOTES Mode

NOTE Titles/Filenames



Import Files from OLIM Master Database



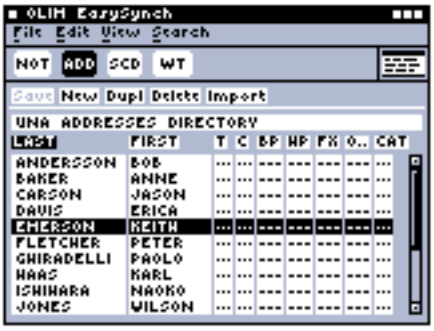


NOTES are simply text files with alphabetically-ordered titles.filenames. The EDITOR/PREVIEWER Window (not shown) will alternate between displays of a basic text-editing scrollable pane below a Title/Filename field (editable).

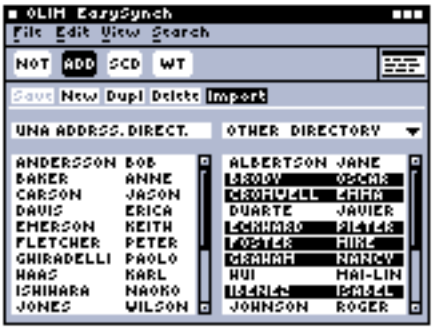
Importation of NOTES text files will occur as shown above. (See explanation of OLIM Master Database below)

ADDRESSES Mode

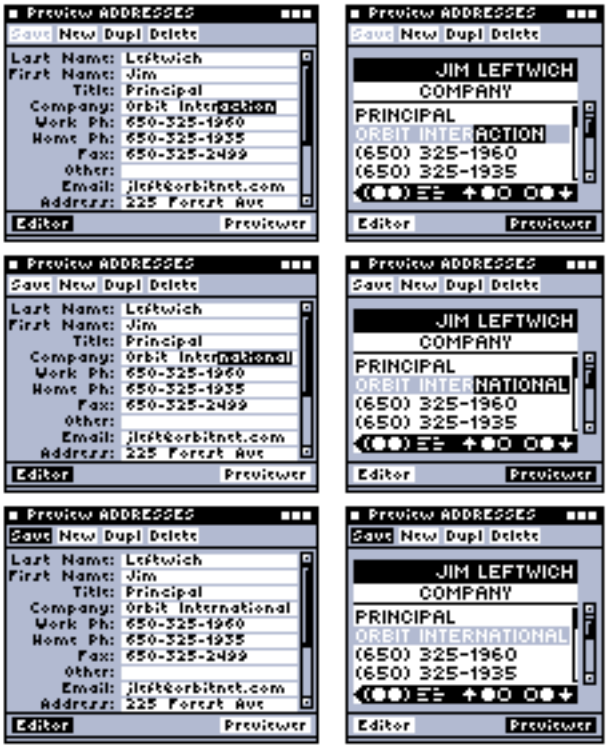
Records/Columns



Import Records from OLIM Master Database



EDITOR/PREVIEWER (EDITOR Mode) *(PREVIEWER Mode)*



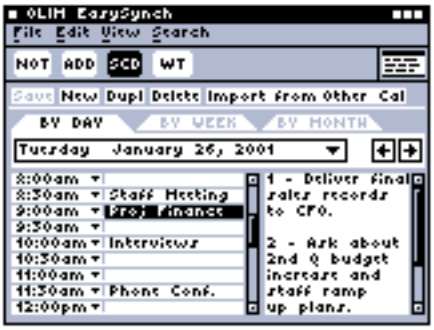
In ADDRESSES Mode, the main window will appear as a listing of records. The sorting of this list will be as simple as clicking on respective header buttons/labels over columns corresponding to the fields of information common to PDA-style address records.

The "OTHER DIRECTORY" shown above is the User's OLIM Master Database. The OLIM Master Database is the aggregate database of all records, including some not on the device . This database synchs with other Apps. in an automated procedure.

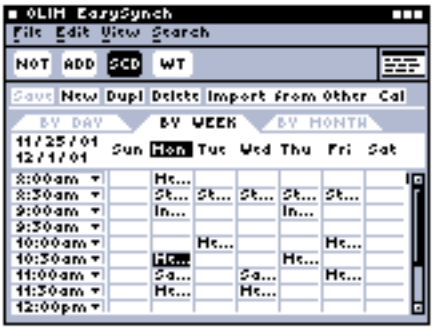
Since there is a significant difference in scale between the amount and formatting of information on other, larger PDA-style devices and the OLIM UNA, synchronization should probably occur in an automated fashion with an OLIM Master database that contains record information from Text Notes, Address Records, and Schedule/Calendar Events/Durations. This OLIM Master Database might be extremely large, after importing information from other applications, and so it is from this "pre-digested" Master Database that the user will then pick and transfer desired records over to the watch, while previewing how it will look.

SCHEDULE Mode

By Day



By Week

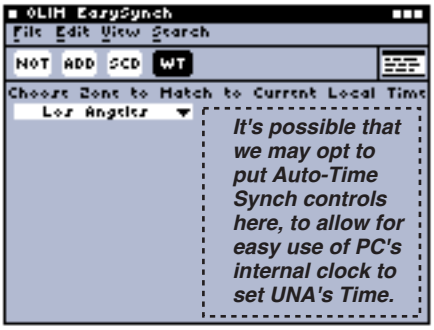


By Month

All three SCHEDULE View-By modes are simply ways to navigate to see, create, and access scheduled events and the note-like records that can be attached to them. Events can be re-occurring, and can also be of certain time lengths. (9:30am to 11:00am for example)

Double clicking on any event will bring up a n EDITOR/PREVIEWER Screen as shown above in the ADDRESSES Mode.

WORLDTIME Set Local Mode



Click and scroll down menu

Let up on "Paris"

"Paris" is now set as "Local Time"