Comtrex POS/2100

Third Party Ordering

Version 1.18   **September 26, 2016**

COMTREX
SYSTEMS CORPORATION

Comtrex POS/2100 Third Party Ordering Specification

The information supplied in this document is based on the latest information available as of the date of this document. The contents of this manual are subject to change without notice. Every effort has been made to insure the accuracy of this document, however, Comtrex can assume no responsibility whatsoever for any errors contained herein.

Guarantees

The software for the Comtrex BackOffice Suite, Point of Sale and development related to Third Party Ordering is provided on a CD-ROM or available through the Comtrex ftp site. Licensed operation of the software requires and includes a security key. Comtrex guarantees that the original media and security key are free of defects when you receive them. Defective media and keys will be replaced. In no event will Comtrex Systems, Inc. be liable for consequential or incidental damage arising from use of this program.

Disclaimer

About the Company

Comtrex Systems is a U.S. based software developer, systems integrator and manufacturer that specializes in information and control systems designed to solve the needs of the food service industry. Comtrex software development and systems engineering is accomplished at its headquarters building in Moorestown, NJ. Comtrex was founded in 1981. For more information on Comtrex, visit us at our Web site, on **http://www.comtrex.com.**

Release Information

This version of this document is 1.18 and has a release date of September 26, 2016.

Release History

Date	Document Version	POS Version PrintCheck INetOrder	Software and Document Changes/Modifications
24 Oct 2008	1.1	1.0.3.698 1.2.19 01.00.00.01	1. Initial Release.
8 Dec 2008	1.2	1.0.3.703 1.2.20 01.00.00.02 01.00.00.03	1. Added call to PrintCheck.dll to print new order as it is received. 2. Requires Printer Group vendor parameter to be a valid Printer Group Number. 3. Added revision section to document. 4. Minor editorial revisions to document.
7 Jan 2011	1.3	1.0.3.784 1.2.38 01.00.00.03 01.00.00.04 01.00.00.05	1. Totally reformat documentation to conform to new standards developed with ASK development. 2. Update document with required registry entries. 3. Update record sets to reflect database changes made in POS2100 Version 1.0.3.770 4. Update PrintCheck structure to align with POS2100 Version 1.0.3.778 5. Fix bug when order failing with "Order not found" error. 6. Update MenuSync to return zero on success and update MenuSync to return error codes as documented herein.
13 May 2011	1.4	1.0.3.790 1.2.41 01.00.00.05	1. Change document title to "Third Party Ordering" to reflect inclusion of Kiosk ordering systems. 2. Update after White Knight integration. 3. Document new TCP/IP interface.
16 May 2011	1.5	1.0.3.790	1. Minor editorial changes.
19 May 2011	1.6	1.0.3.791	1. Allow multiple online vendors 2. Swap button positions for Activate and Range. Add Paid column. Let Name auto size. Add Vendor Order Number's last 4 digits to name. 3. Implement Auxiliary Text function on Button Type-

			Future Orders. ONLY ONE BUTTON ON ANY DESKTOP.
			4. Add ability to place Button Type - Future Orders on Sales Desktop.
			5. Fixed bug so that Name of incoming order could contain an apostrophe, e.g. "Mickey's Club".
26 May 2011	1.7	1.0.3.792	1. Update Technical Note on page 3.
4 Nov 2011	1.8	1.0.3.808	1. Add text in initial section covering the fact that delivery instructions (if applicable) do not print upon order receipt and reference <Instructions>, which do print.
			2. Add entirely new section covering Delivery Orders.
7 Nov 2011	1.9		1. Add section covering "Kiosk File" programming for POS Items.
17 Nov 2011	1.10	1.0.3.809 1.0.0.9	1. Document changes to POS application to handle table number sent by InetOrder.dll (now version 1.0.0.9.
			2. Document changes to Odyssey Programming application to more easily handle table service application of "kiosk" software.
2 Dec 2011	1.11	1.0.0.10	1. Added several sections under Fixed Media to document changes to interface specification to allow third party ordering system to send Tips, Service Charges and Discounts.
3 Dec 2011	1.12	1.0.3.811	1. Document change in timing for Processing Terminal. Orders from online vendors remain at a 60 second "look/see". Orders from kiosk vendors will now get a look/see every seven (7) seconds.
8 Dec 2011	1.13	1.0.3.811	1. Changes to programming for taxable service charge.
14 Dec 2011	1.14	1.0.3.812 1.0.0.11	1. Change timing in POS2100 and add feature to dll. Dll now immediately "sends" orders to POS2100, which is not looking. POS2100 now looks at [FutureOrderVendorDefinitions].[VendorType], set to 1 if kiosk vendor. If so, ignore transmitted Trigger Date/Time and immediately process order. Fixes any problem with mismatch of time between ordering system and POS2100.
4 Oct 2012	1.15	1.0.3.822 1.5.0.3	1. Add section on Delivery XML fields to cover using all information normally printed only for Delivery Orders for all Online Orders.
			2. Modify WinRemote.exe so that if Fire Message 1 is incorrectly programmed, the requisition chits print anyway.

21 Nov 12	1.16	1.0.3.822	1. Clarify Sales Type when receiving incoming delivery instructions.
24 May 13	1.17	1.0.3.834	1. Add documentation on using ProductNumbers for integration (as a programmable option) rather the POSItemNumbers.
26 Sep 16	1.18	1.0.3.894	1. Added references to changes in Third Party Ordering which relate to the new functionality of Real Time External Ordering.

Contents

Overview – Third Party Ordering

Introduction

This document covers integration for Internet Ordering through an XML protocol. A separate document, new as of September, 2016, covers integration for Real Time External Ordering. The primary difference is that for Third Party Ordering, orders are received as essentially complete and, generally, already paid. Orders can be held for future requisition as well. The new Real Time External Ordering allows a third party, such as the NCR OrderMan, to act as a point-of-sale terminal and retrieve existing orders, add items and then service the existing order. The Real Time External Ordering also uses a JSON protocol.

This document is intended to serve as a feature/function guide to sales personnel as well as for installers and end users. The document presents an operational and environmental configuration necessary for online ordering to function in a restaurant. A separate highly technical document, intended for vendors of ordering systems wishing to integrate with the Comtrex POS2100, is available through the link below.

The Comtrex Third Party Ordering Interface is a gateway and methodology designed to facilitate injecting orders into the Comtrex POS System by remote internet ordering vendors as well as by Kiosk Vendors who interact with a central site from which the order is injected into the Comtrex system.

Vendors access the Comtrex Internet Ordering Interface through INetOrder.DLL, or through a TCP/IP connection to the Comtrex Third Party Ordering Service. The DLL method requires a body of vendor software to be resident on the Comtrex POS local network to receive remote orders, and then pass these orders on to the Comtrex INetOrder.DLL. The DLL will then inject the received orders into the local Comtrex POS database for later processing. The TCP/IP method does not require any third party software to be resident on the Comtrex Server and is the preferred method of implementation. Orders may be pickup or delivery orders. Delivery information is retained by the system and may be later used for promotions or loyalty.

For more information, including the most recent copy of this document, see the Comtrex site

http://howitworks.comtrex.com/OnlineOrdering/default.htm

On that site you also find the highly technical document intended for distribution to vendors of third party online ordering systems and an installation link for installing the requisite Comtrex software.

The DLL method is shown on the Comtrex site as deprecated. In the world of software development, "deprecated" refers to functions or elements that are in the process of being replaced by newer ones. The term comes from the word "deprecate," which means to disapprove of something. While deprecated items may work in the current version of a programming language, they may not function in future updates. Therefore, software developers are advised to replace deprecated items with other options.

One of our kiosk vendor partners, Usable Health, has modified their application, using the iPad as a table service, order entry device. It functions essentially identical to the kiosk application, except it is portable. There are some minor cosmetic changes to the order entry process, including the mandatory entry of a table number. In some applications, the iPad is handed to the patron for the initial order or even left at the table for additional service rounds. For this method of operation to function successfully, a few changes were necessitated and these have been incorporated into a new INetOrder.DLL, POS2100.exe and OdysseyProgramming.exe.

Integration by ProductNumber or POSItem Number

The Comtrex Third Party Ordering Interface provides several possible menu synchronizing XML files that allow the ordering system vendor to dynamically create a menu for the restaurant, or to check the current pricing for an existing menu. This synchronization can be either by ProductNumber (menu item) or POSItem.

This is a programmable option and is obviously for an entire brand or chain. The advantage of using the POSItem is that all requisitioning information is retained by POSItem. There can be multiple POSItems for any given ProductNumber. POSItems can also be classified as "menu items" (which stand alone for ordering purposes) or "condiments" (which must modify a "menu item"). If requisitioning through the Remote Requisition Network is required, then the integration must be by POSItem Number. However, if requisitioning can use a printed receipt, then integration may be by ProductNumber.

For brands or concepts with legacy installations, ones which have been installed over several years, where central control has not been exercised in the creation of local POSItem Numbers, it may be more economically feasible to use the ProductNumber integration.

NOTE: While it is possible that various online ordering vendors can maintain separate programming for each individual location it is certainly not advisable. Therefore, the ProductNumbers or the POSItem Numbers must be identical at each and every location for ease of central database maintenance and integration. While the highly recommended integration methodology is to utilize POSItem Numbers, it may be difficult to enforce this concept on brands which have legacy installations spanning several years. The process to make POSItem Numbers identical at each and every location may require an extra level of POS Desktop synchronization that is not required when making ProductNumbers identical at each and every location. It is the POSItem Number which is linked on a Sales Desktop. In either case, a central program must be re-enforced on each and every location for either Menu Item or POSItem. In the long run, a complete central database forced to each location, of both Menu Items and POSItems will allow for central database maintenance. It also provides the flexibility to use the local requisition capabilities rather than only a receipt copy.

Product Numbers can either be menu items or inventory items. For purposes of this discussion, we are only considering menu items. A menu item is something with a descriptor, possibly a recipe, which belongs to a department and a category and has six price levels. A POSItem is linked to a particular menu item. It has its own two thirty two character descriptors (which are generally identical to the menu item descriptor) and has other parameter programming which relate to the operation of the point-of-sale. For instance, it is the POSItem which has tax status, which has routing information for the requisition network and which has prompting lead through linking.

For integration via POSItem Numbers, the POS2100 has lists of items that may be selected for inclusion into the menu sync XML. When a list is programmed by the Odyssey BackOffice programming module to be a "Kiosk/Online Ordering File" type, all of the list items are included in the menu sync XML. Lists usually contain like items, such as "Appetizers", "Soups", "Sandwiches", etc.. These lists will contain menu items or ingredient (condiments) items. The ingredients will be nested to provide many layers of selection. Identical ingredient lists may be repeated in the XML for different items. A "Steak" menu item and a "Fish" menu item may both allow a "Baked Potato" as a side, and in both cases, a "Potato Toppings" ingredient item list would follow the "Baked Potato". This repetition makes dynamic menu creation easier for the ordering system vendor. This list is required in order that orders sent to the system utilize the proper numbering system.

For integration via ProductNumbers, there can be no local product requisitioning. The categorization of a particular ProductNumber as either a menu item (stand alone) or condiment (modifies a menu item) is forced by the incoming XML structure from the online ordering vendor. While this will present a correct receipt, any requisitioning is not possible.

As of the date of this document, there are seven integrated vendors of third party ordering systems:

- **Order Talk**
- **PatronPath**
- **Snapfinger**
- **White Knight Digital**
- **Usable Health**
- **Orderswift**

- **Altaine**

Only OrderTalk supports integration by ProductNumber, as a result of the roll out of a particular customer. There are a total of nine integrated vendors, with the other two using the new Real Time External Ordering integration methodology. Real Time vendors integrate only by POSItem Number, however, each vendor has a list of List Files which comprise the menu for that particular vendor.

- **Order Man**
- **Order Pad**

Process

When a new order request is received by the Comtrex interface, the new order XML is parsed and placed into temporary tables in the POS2100 database. The order may be programmed to print at this time. The order is held until either a cancel order request for this order is received, or the trigger date/time for the order is reached. If a cancel order request is received, the order is removed from the database tables.

If the order is programmed to print upon receipt, and the order is received as a delivery type order, the delivery instructions will print. Check instructions may be collected by the online ordering system. If these are contained with the incoming order, they will print when the order is received. They print at the top of the guest check. It is a function of the online ordering company what information is contained in the appropriate section of the incoming order under the XML tag <Instructions>. You must set the flag programmed under Printer Configuration – Terminal Print Options on the Check 1 tab for "Print Delivery Instructions". Note that this is a "by terminal" option.

One of the POS terminals is periodically monitoring the temporary database tables where new orders are stored, and checking the order trigger time against the actual date and time of day. Once the trigger date/time is reached, the order is removed from the temporary database tables and placed into the active POS database tables. At this time requisition printing is also initiated. Normal processing of the order will continue from this point.

There are two kinds of orders received from an ordering system, one which is fully paid and one which has no payment at all. An order which has no payment is treated just as if the order had been entered on the Comtrex system; i.e. more items can be added and the order will require payment in the normal manner.

In the Usable Health table service iPad application, all service rounds are sent as separate, unpaid, orders at the same table number. These separate orders are easily combined to a single guest check using the GUI on the Table Desktop of the POS2100.

A fully paid order is something unique to this interface. Normally, when an order is fully paid it is placed in the Closed Order file and can only be refunded/voided or have the payment method changed. A paid order may not be modified either through changes or additions. Regardless of the payment method through <PaymentType>, all payments rendered through the third party ordering system will be recorded through a single parameter-driven media on the POS. The total behind this single media can be used to balance all payments accepted through the on-line interface. If the on-line interface accepts several forms of payment, these must be reconciled outside of the scope of the in-house POS system.

A received order which is fully paid can either be placed immediately (after check printing and requisitioning) in the Closed Order File or retained in the "Open" orders file. Such a check can only be "closed", i.e. moved to the Closed Order File. A reason for retaining the check on the order screen might be to assure that the correct order is being picked up and create a process by which orders are finalized when given to the customer.

Typically the customer name will be displayed on the POS2100 terminal guest check list. This will make it easy for the cashier to quickly find the correct order when the customer arrives to pick up the order. If the order is slated for delivery, the order will be transferred to a delivery driver, street maps and directions may be printed, and the order will be on its way.

Pricing is totally driven by the on-line ordering system, overriding all programming on the POS system, since payment might be accepted on-line and any difference would cause an unacceptable imbalance. On the other hand, all descriptors sent by the on-line interface are for reference only. All descriptors printed and displayed will be from the in-store database, using the <ItemNumber> field as a lookup reference.

Received orders are balanced as the sum of <AmountEach> fields, with tax calculated using the in-store database of itemizers, against the <PaymentAmount> if the order is sent as paid.

An order will be rejected if the tax as calculated by the POS/2100 is different by more than $0.05 from the tax sent by the ordering system. Any difference will move to the "rounding" media total.

On-site Requirements

Comtrex requires a Server (not a WorkStation Server) in order to implement Third Party Ordering. The Operating system should be either Windows 7 or Windows Server 2008, R2, Foundation Edition.

An InterNET connection is required. A static IP address may, or may not, be required. The ordering system vendor is responsible for managing the DNS requirements for the ordering software to interact with the TCP/IP interface in the store. For third party DNS management, a separate body of software will be installed on the server. Usually this software is a simple download installation from a web site.

The TCP/IP software which will be installed requires a port for the service to "listen on", port 6788. This port must be opened in your router and in your firewall, if the firewall is active, on the Server PC.

Installed Software

The beginning section of this document lists the minimum required version of the POS2100. There is an installation package available at the site http://howitworks.comtrex.com/OnlineOrdering/default.htm under the heading "Installation Link and Instructions". The program, INetOrderServiceSetup.msi, can either be executed from the location or copied to any location on your hard drive. It is recommended that you copy the file into the directory **C:\Program Files\Comtrex Systems\INetOrderService**. When installing the software, it is highly recommended that you take all the defaults. The installation will install a service, a dll, create several folders and make several registry changes.

> **C:\Program Files\Comtrex Systems\INetOrderService\INetOrderService.exe**
> A Windows service which will be run automatically once installed. The Online Ordering TCP/IP interface listens for incoming TCP/IP messages (on port 6788) from Online Ordering Vendors and passes these orders directly to the INetOrder.DLL for processing. Responses from INetOrder.dll are passed back to the Vendor. In essence this TCP/IP interface is an in-store bridge between the upstream Vendor and the in-store INetOrder.DLL. This TCPIP interface allows Online Ordering Vendors to send orders to the store without having to place any Vendor software on the store server. This executable will remain in this folder.

> **INetOrder.dll**
> A "go between" body of software between the POS2100.exe and the INetOrderService.exe. This file will be copied to the **C:\Windows** folder, overwriting any pre-existing copy.

> **C:\Program Files\Comtrex Systems\INetOrderService\LogFiles**
> This is the folder in which log files relating to the program INetOrderService.exe will be stored. The log files will be date encoded, e.g. "INetOrderService10.txt" will be the log file for the most recent 10th day of the month.

> **C:\Program Files\Comtrex Systems\INetOrderService\XML**
> This is a working folder for the program and acts as temporary storage for the incoming and outgoing XML files for the last five (5) days.

TECHNICAL NOTE. In order for PrintCheck.dll to function properly when invoked by the service, three registry entries are modified. Refer to the Installation Link and Instructions on the page http://howitworks.comtrex.com/OnlineOrdering/default.htm.

BackOffice Programming

Define Ordering System Parameters

Programming for Third Party Ordering begins with Programming – POS System Options – Ordering System. Note that all three of the currently supported third party ordering systems are shown below. It is possible that a store might receive orders from more than one third party ordering system, i.e. both a kiosk system and an InterNET ordering system. This screen is used to configure all ACTIVE ordering systems.

- **Ordering System Name** – This is a dropdown selection of the available third party ordering systems.

- **Default Table** – Allows incoming orders to be assigned to a particular table number. Generally, leave this at a 0. (Regardless of this setting, if the incoming XML has the <TableNumber> field, the XML table number will override.

- **Default Operator** – An incoming order must be assigned to a particular POS Operator. The requirements for the default POS Operator are included in this section.

- **Default Sales Type** – Generally this will be Take Out. With table side iPad entry, it will be Eat In or Here. An order received with Delivery Instructions is automatically assigned to Sales Type 3, the designated Sales Type for Delivery.

- **Default Terminal** –An incoming order is assigned as having been entered on this default terminal and, if the order arrives as paid, as having been closed on the default terminal. The "Default Terminal" can be different for each active ordering system. **A separate programming screen defines which terminal is evaluating the Trigger Date/Time or orders and placing them in either the Open or Closed Orders table depending on their paid status and programming. It is on a separate screen since there can only be one "Processing Terminal".**

- **Default Price Level** – When the menu sync feature is activated, only one price per POS Item is sent. The price level sent as the "Online Ordering" price is defined with this entry.

- **Printer Group** –Pertains to printing a receipt/guest check upon initial receipt of an incoming order. (Not Trigger Date/Time when items are requisitioned). Select a printer group, usually Receipt Group, to print or select "Inactive" to print no receipt/guest check upon receipt of incoming order. Orders printed upon receipt will always show a CHK# of 00, since the order has not yet been assigned a system Guest Check Number. The "Ordering System Name" will print in bold at the top of the check.

- **Print Check** – Place a check here to print a receipt/guest check at Trigger Date/Time. Receipt, and POS Items assigned to be requisitioned, are sent as programmed in normal programming. If you have a Printer Group above, the check will print twice. The second print will have the valid check number, will not have the "Order System Name" at the top and will show "Reprint # 2".

- **Automatically Close Order Received as Paid** – Put a check here if an incoming order received as paid should be immediately placed in the Closed Order File or be available on the Table Desktop. If available on the Table Desktop, the order/check can only be "closed", i.e. moved to the Closed Order File. A reason for retaining the check on the order screen might be to assure that the correct order is being picked up and create a process by which orders are finalized when given to the customer.

- **Use ProductNumber** – Defines which synchronization method is used, ProductNumber or POSItem Number. Currently this flag is only supported by OrderTalk, for one customer.

- **IP Address** – Not currently used. Leave as is.

- **IP Port** – Not currently used. Leave as it.

Processing Terminal for Ordering System(s)

Even if there are multiple active ordering systems, there can only be one Processing Terminal. The Processing Terminal for all third party ordering systems is entered under Programming – POS System Options – BackOffice Software, as shown below in the Ordering System section of the screen.

- **Processing Terminal** – Incoming orders are received with a "Trigger Date/Time". Until that date/time is reached, the order is held in the system as a "Future Order" and is not available on the Table Desktop. The items ordered are also not included in the sales. The "Processing Terminal" evaluates the trigger date/times of the orders in the Future Orders File. Order notification is instantly transmitted to the POS2100 for POS version 812 and later. When the Trigger Date/Time is reached, an online order is "activated". A kiosk order is instantly activated. Note an "activated" order may be a paid order, in which case it might be printed (depending on the setting of the ordering system) and requisitioned and then placed in either the Open or Closed Order File, depending on programming. A non-paid order would always be placed in the Open Orders file, just like any entered order not yet paid.

NOTE: The processing functionality is built into the POS2100 software application. Unless the Server is a WorkStation Server, do not designate the Server as the "Processing Terminal" since the software must be constantly evaluating the Trigger Date/Time in order to place the order into the system at the designated Date/Time.

Default POS Operator

A POS Operator is required to be assigned to all incoming orders. This is a temporary POS Operator, since it is not an identifiable person within the restaurant.

Under Programming – Staff – POS Operator Groups, the flag "Checks Available for All" must be set. This will allow the incoming orders to be retrieved by any valid POS Operator.

It is good practice to program a separate POS Operator Group as "Online Operator". It is also good practice to program a separate POS Operator with a name of "Online Operator" and belonging to the POS Operator Group "Online Operator".

Fixed Media

Finalizing Media – Paid Online

There is a pre-programmed, fixed, finalizing media used to balance and hold payment for incoming orders which are received as paid. It is media 96, pre-programmed as "Paid Online".

Only the descriptor might need re-programming for this media. Do not place this finalizing media on any Sales Desktop of the POS. The media will collect all amounts reported by the online ordering system as paid. It will be used to balance the sales injected into the POS system by the third party ordering system and to balance the amounts paid to the merchant by the credit card provider used by the third party ordering system.

Discount/Service Charge/Tip Media – Recorded Online

Recording discounts, service charges and tips through the online ordering system will require an additional degree of coordination between the Comtrex programmer and the configuration of the third party ordering system. Like the finalizing media, it will be the general practice to use fixed media to record these types of entries. This will assure that the systems balance because fixed media have established media types. The XML structure for the third party ordering system includes a field wherein the Media Number is included. It is therefore possible for any media created by the Comtrex programmer to be transmitted by the third party ordering system. The documentation contained herein will assume that the third party ordering system is only using a single fixed media for each type of the above entry.

Tip Media

If a tip is being recorded through the third party ordering system, then it will be recorded through fixed media 4, normally programmed with the descriptor "Cash Tip". This descriptor may be changed by the Comtrex programmer to "Kiosk Tip" or "Online Tip". If a Cash Tip button is included on a Desktop of the POS2100, an additional tip media should be created and used for this purpose.

Service Charge Media

If a delivery charge, or any other amount to be collected which is not a menu item, is being entered on the online ordering system, it will be recorded through fixed media 6, normally programmed with the descriptor "Service Charge". This descriptor may be changed by the Comtrex programmer to whatever is appropriate to describe the charge. There is an additional fixed media, media 7, which can also be used by the third party ordering system, normally programmed with the descriptor "Service Items. The service charge media must remain programmed as a dollar entry media and not a percentage.

Note that a service charge within the POS2100 may be taxable or non-taxable. The Comtrex programmer must insure that the Comtrex programming matches the third party software programming. Setting both the "Use" and the "Affect" Itemizers of the service charge for the tax itemizer, and making the calculation type "Net All, Entire Amount", for the service charge itself, makes the service charge taxable. Generally service charge amounts are not taxable and therefore the "Affect Itemizer" flag will not be set for any tax itemizers.

Discount Media

Discounts recorded through the third party ordering system should be limited to dollar amount subtotal discounts. The balancing formula for third party system orders is included in the next section. If a discount is being recorded through the third party ordering system, then it will be recorded through fixed media 97, normally programmed with the descriptor "Nectar Redemption". This descriptor may be changed by the Comtrex programmer to "Kiosk Discount" or "Online Discount". The discount media must remain programmed as a dollar entry media and not a percentage.

The discount from the third party ordering system can either reduce the taxable amount or not. Items must be sent as gross amounts, with no discount amount taken. Therefore the tax will first be calculated on the sum of the items. To reduce the taxable amount, set both the "Use" and the "Affect" itemizer flags for the tax itemizers for the third party dollar amount subtotal discount. To calculate tax on the gross amount, do not set the flag for the "Affect" itemizer of the tax itemizer.

The standard implementation assumes that all items are either taxable or non-taxable. If this is not the case, then the third party ordering system must utilize two separate dollar amount subtotal discounts, one representing the discount on taxable items and the other representing the discount on non-taxable items. The corresponding discount media within the POS2100 must be programmed to match. A further discussion of this complexity is beyond the scope of this document.

Transaction Balancing Third Party Orders – Discount/Service Charge/Tip

The incoming transactions from third party ordering systems will balance as follows:

	Sum of all Items
Plus	Tips
Plus	Service Charges
Minus	Discounts
Plus	Tax
Equals	Sum of all Payments

As is evident from the above formula, items must be sent in gross amount, with no discount taken. The taxability status of service charges, and the affect of a discount on the calculated tax within the transaction of the third party ordering system must match the programming of the media of the POS2100.

Tax – Add On – Rounding

There is a pre-programmed, fixed media of type "Tax – Add On" which is normally used to collect amounts by which the transaction is rounded up or down when the flag "Round To Nearest Nickel" is set under Programming – POS System Options – Miscellaneous under the Media Options area.

When the third party online ordering system is collecting payment, it must calculate the tax to be collected. Hopefully the tax calculated by the ordering system will be identical to the tax calculated by the POS System. If the amount, including tax, as calculated by the POS system is not within +/- $0.05 of the amount sent by the online ordering system as paid, the incoming transaction is rejected. Any difference between the amount sent and the amount calculated by the POS system is placed into this "rounding" media.

The tax calculated by the online ordering system will be included in the amount collected. There is no separate tax amount sent, only the amount for each item and the amount collected. In the POS system, tax is calculated based on the programming of the POS Items received on the incoming order and placed in the appropriate totals. It is the responsibility of the installing dealer and the third party online provider to assure that the tax calculations match. If there are multiple tax rates, these can be combined into a single rate (assuming all rates apply to all taxable items) if it is easier for the online provider, since the POS2100 will handle the actual tax calculations.
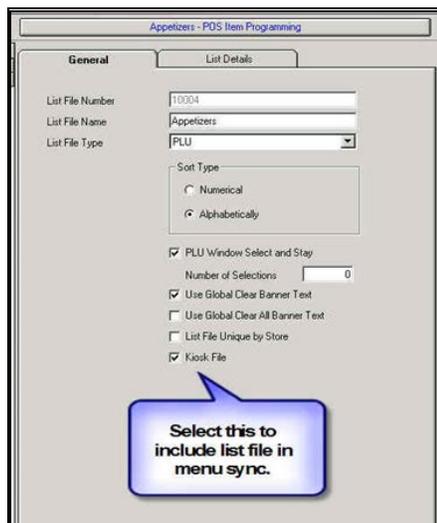

POS Item Programming

This section pertains if the flag "Use ProductNumber" under POS System Options – Ordering System is not set.

The Comtrex Third Party Ordering Interface provides a menu sync XML that allows the ordering system vendor to dynamically create a menu for the restaurant, or to check the current pricing for an existing menu. The POS2100 has lists of items that may be selected for inclusion into the menu sync XML. When a list is programmed by the Odyssey BackOffice programming module to be a "Kiosk/Online Ordering File" type, all of the list items are included in the menu sync XML.

In addition to the menu sync XML, there is are two excel spreadsheets which may be used to extract POS Item information from the Comtrex database. One extracts all POS Items and the other extracts only those items with the "Kiosk File" flag set. These spreadsheets are available on the website: http://howitworks.comtrex.com/OnlineOrdering/default.htm

The following screenshot depicts "List Files" programming. Selecting "Kiosk" for a list file insures the items in the list file are sent to the online ordering vendor. Online ordering vendors will request a menu sync from time to time which will include and "Kiosk" list files.

Product Number (Menu Item) Programming

This section pertains if the flag "Use ProductNumber" under POS System Options – Ordering System is not set. Further, it only pertains in certain unique instances. Even though the above flag is set, the integration with the ordering system is actually by POSItem Number when a ProductNumber is included in the incoming XML stream.

Every time the sales item database is initialized, the system checks the every Menu Item Number to see if there is a linked POSItem Number. If not, it searches for the first linked POSItem Number and links that POSItem Number to the Menu Item Number. If there is no POSItem Number created, then there will be no link.

The programming screen above serves two purposes. First, it allows a programmer to see which POS Item has been automatically linked. Second, in the unlikely event that another POS Item Number may be more appropriate, it allows the programmer to change the linked POS Item Number for a particular Menu Item.

Guest Check Print Considerations

The guest check can print upon receipt of the order and at the Trigger Date/Time. Upon receipt, the order has not yet been placed into the "system". It will print with CHK# 00. This print of the order will have the "Ordering System Name" in bold at the top of the guest check. To print the guest check upon receipt of the order, put a printer group in the section under Programming – POS System Options – Ordering System. If you also have Print Check set, the second print will have the valid check number, will not have the "Order System Name" at the top and will show "Reprint # 2".

It is a good idea to print the Sales Type at the top of the guest check in online ordering situations. You do this under Programming – Printer Configuration – Terminal Print Options on the Check 1 tab, "Print Sales Type on Check". You also should place a check on this same tab for "Print Delivery Info".

In the table service application of Usable Health, you would not want a guest check to ever be automatically printed by the system. The check would only be printed when the patron is ready to pay.

Fire Messages

Preparation instructions may be entered using the GUI of the third party ordering system on the web site or at the kiosk. These instructions will be converted into fire messages by the Comtrex processing software. Fire Message #1 is used, so it should be programmed to be active, a "Modify Type" and to be retained and to print on the receipt/guest check, as shown below.
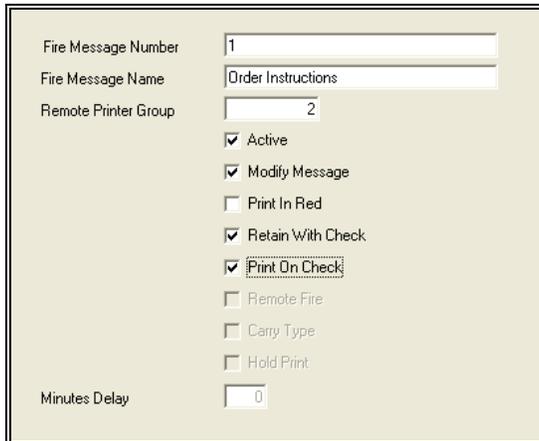
Fire Message Number	1
Fire Message Name	Order Instructions
Remote Printer Group	2
	☑ Active
	☑ Modify Message
	☐ Print In Red
	☑ Retain With Check
	☑ Print On Check
	☐ Remote Fire
	☐ Carry Type
	☐ Hold Print
Minutes Delay	0

Printer Configuration On Server

If the Server will be used as a POS terminal, it can not reference the G: drive. This is because the service (INetOrderService) is invoked before the G: drive is established. The registry setting pertaining to this is handled when the service is installed. However, programming for the server terminal needs to be modified.

In programming, under Printer Configuration – Terminal Print Options on the Output tab, change the configuration for "Print/Video Output Path" from G:\POS2100\Remote to c:\icom\POS2100\Remote.
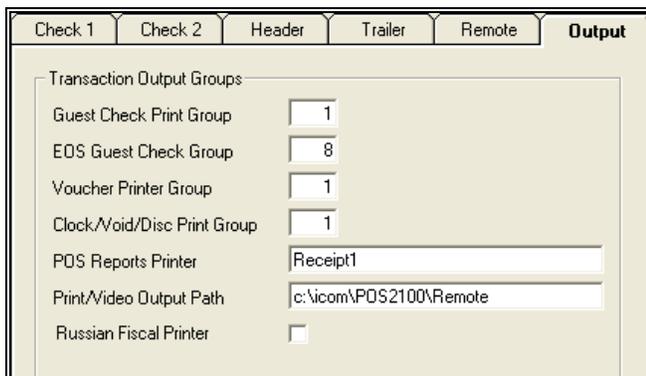
Check 1	Check 2	Header	Trailer	Remote	**Output**

Transaction Output Groups

Guest Check Print Group	1
EOS Guest Check Group	8
Voucher Printer Group	1
Clock/Void/Disc Print Group	1
POS Reports Printer	Receipt1
Print/Video Output Path	c:\icom\POS2100\Remote
Russian Fiscal Printer	☐

NOTE: Only change the Print/Video Output Path on the POS terminal which is the Server, and on which the service INetOrderService is executing. If you change this path on a Satellite, you will lose all printing. The Satellites must reference G:\POS2100\Remote in order to "reach" the Server.

POS/2100 Programming & Operations

Button Type – Future Orders

Used to access the Future Orders Desktop. This Button Type may be placed on either the Log In Desktop or the Sales Desktop. When placed on a Sales Desktop, it will no longer "function" once a transaction has begun. When placed on the Log In Desktop, it will require the entry of a valid POS Operator before functioning.

While there is only one button type, there are two modes of operation for the button. The mode of operation is defined by the entry in the field "Auxiliary Text". If the entry in Auxiliary Text is not a number between 1 and 99, then depressing the button will display all future orders, regardless of the Trigger Date/Time.

If the entry in Auxiliary Text is a number between 1 and 99, then the button becomes a combination notification and access button. Depressing the button will show all future orders with a Trigger Date/Time within the next 1 to 99 minutes, depending on the entry in Auxiliary Text. The number of orders which will be displayed will show in place of Line 3 of the button text. Therefore, always program the text on line 1 and program no text on line 2.

The screenshot below shows a Future Orders button programmed with Auxiliary Text of 99 minutes. At 4:30 pm on May 18th, there was only one order to be activated in the next 99 minutes, referring to the screenshot on the next page.

When the button above is touched, only a single order will show on the Future Orders screen. Referring to the next section, this display can be overridden using the Range Button to show more orders.

NOTE: Only place a single Future Orders button on any single Sales Desktop or on the Log In Desktop. You want the button on the Log In Desktop to show all orders.

Future Orders Desktop – Screen View

The following screenshot illustrates the functionality of the Future Orders Desktop. The date of this screen shot is May 18th.

Guest Check Screen Area

➢ The time will be the time the order was received as an incoming order.

➢ The POS Operator identification will be the default POS Operator as programmed under POS System Options – Ordering System.

➢ The guest check number will be a sequential number for all future orders. **This is not the "system" Guest Check Number. It is only a way of identifying a future order.** When the order is activated, it will be assigned a sequential guest check number for the Sales Day in which it is activated.

➢ As on all check display desktops, the entered name is shown at the bottom

Future Orders List Area

Touching the header row for any column will sort the displayed list by that column.

➢ The "Trigger" column shows the Date/Time when the order will be activated. If there is no date, it is the current date. The current date for this screenshot was 5/18. Note the highlighted order was received seven days prior, on 5/11, to be activated on 5/19.

➢ The "Name" column shows the entered name. If an order number was provided by the third party ordering system, the last four digits of the order number will be shown at the end of the name as an additional reference when the customer arrives to collect the order.

➢ The "Total" column shows the total amount of the order, including tax as calculated by the POS terminal.

➢ The "Paid" column will have a check mark if the order was paid online. No check mark indicates the order will be paid upon pickup or delivery.

➢ The "Delivery" columns will have a check mark if the order is to be delivered. The order will be processed as Sales Type 3 once activated. An order with no check mark is most likely pickup but will be processed as the default Sales Type as programmed under POS System Options – Ordering System.

➢ The "Originated" column shows the Date/Time when the order was placed. The time will be the same as the time displayed in the Guest Check Area of the screen. This is useful for orders whose Trigger Date/Time was received days in advance. If there is no date, it is the current date. Note the highlighted order was received seven days prior, on 5/11, to be activated on 5/19.

Future Orders Desktop – Button Types

There are no programmable buttons on the Future Orders Desktop.

There are six "fixed" function buttons which are displayed on the bottom of the Future Orders Desktop. The function of these buttons is documented herein purely for operational reference.

Button Type – Exit

Use this button to return to either the Log In Desktop or the Sales Desktop from which the Future Orders button was depressed.

Button Type – Range

Use this button to parse the displayed list of Future Orders by Trigger Date. The screen below shows the selection methodology. Touch a start date as "From" and an ending date as "To" and touch "OK". The selected range is "forgotten" as soon as the Future Orders Button is depressed. This button type is very useful when using either the Summary or the Activate button when finding orders.


NOTE: If you used a Future Orders button with Auxiliary Text to only show orders within the next programmable number of minutes, the Range Button can be used to override this and show more orders.

Button Type – Summary

This button is for use as a planning tool in ordering. The button will display a consolidation of all menu items yet to be requisitioned (contained in Future Orders) for the displayed range of dates. Management can quickly scan this list to see if additional inventory might need to be ordered, or batch preparations made, in order to fill the orders. A sample is shown below.
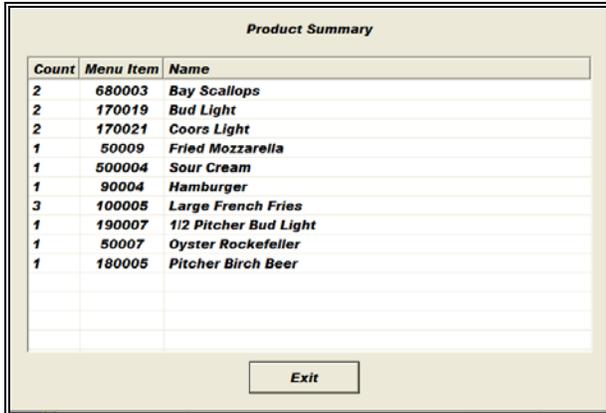
Product Summary

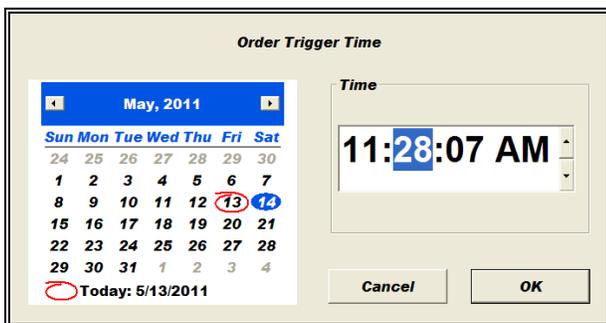| Count	Menu Item	Name
2	680003	Bay Scallops
2	170019	Bud Light
2	170021	Coors Light
1	50009	Fried Mozzarella
1	500004	Sour Cream
1	90004	Hamburger
3	100005	Large French Fries
1	190007	1/2 Pitcher Bud Light
1	50007	Oyster Rockefeller
1	180005	Pitcher Birch Beer

Exit

Button Type – Activate

This button will be grayed out if there not an order selected. When there is an order selected, and highlighted, this button is used to override the customer's Trigger Date/Time and immediately bring the Future Order into the system, causing requisition print.

In order to prevent the inadvertent activation of an order, this button has an "Are You Sure?" prompt which alerts the POS Operator that the order is about to be activated and therefore requisitioned.

Button Type – Trigger

This button will be grayed out if there not an order selected. When there is an order selected, and highlighted, this button is used to override the customer's Trigger Date/Time and change it to a Date/Time selected by the POS Operator as shown below. The current Trigger Date/Time shown is May 14, 2011 at 11:28 AM.

Order Trigger Time

May, 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
24	25	26	27	28	29	30
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

Today: 5/13/2011

Time

11:28:07 AM

Cancel   OK

> ➢ To change the date, merely click another date
> ➢ To change the time, click on the hour, minute or AM/PM and use the up and down arrows on the right.
> ➢ If you have made a mistake and want to start over, touch Cancel
> ➢ To confirm the entry and change the Trigger Date/Time, touch OK

Button Type – Name

This button will be grayed out if there not an order selected. When there is an order selected, and highlighted, this button is used to change the Name associated with the highlighted Future Order.
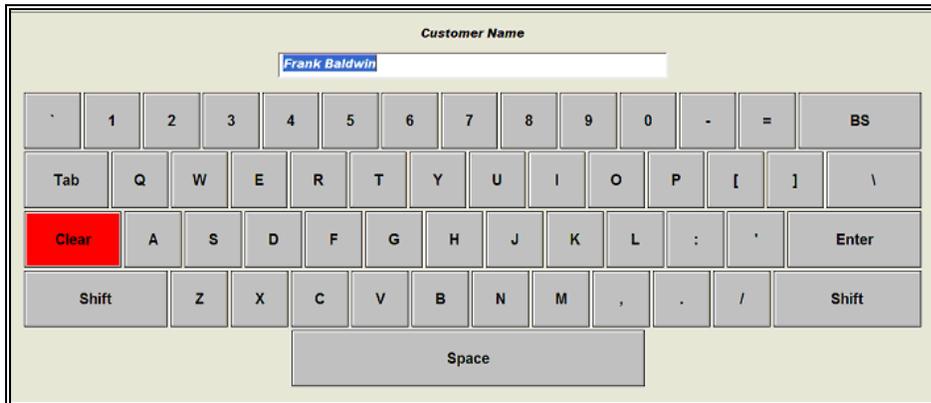
> ➢ Enter a new name and touch "Enter"

> ➢ If you want to start over, regardless of what is displayed, touch "Clear" Twice

Closing Out A Paid Order

Orders received as paid can either immediately be moved to the Closed Check file or retained and displayed on the normal Open Check list on the Table Desktop. Such orders can only be viewed or closed.

In order to close the order, you need to enter an amount ("0") then touch a finalize button like Cash.

For training and simplicity, it is recommended that you create a Cash Finalize button, put "Close Order" as the text of the button and put "0" in the Auxiliary Text field. This is a much more intuitive operation for the POS Operator.

Delivery Orders

Introduction

Typically, the default sales order type for online ordering will be for takeout or online, since not all incoming orders will be for delivery. If the incoming order contains delivery instructions, it is assumed that the order is for delivery. When an incoming order contains delivery instructions, the sales type of the incoming order will automatically be set to SalesType = 3.

If the order is programmed to print upon receipt, and the order is received as a delivery type order, the delivery instructions will print. Check instructions may be collected by the online ordering system. If these are contained with the incoming order, they will print when the order is received. They print at the top of the guest check. It is a function of the online ordering company what information is contained in the appropriate section of the incoming order under the XML tag <Instructions>.

NOTE: You must set the flag programmed under Printer Configuration – Terminal Print Options on the Check 1 tab for "Print Delivery Instructions". Note that this is a "by terminal" option.

Online Delivery vs. POS2100 Delivery

Incoming orders which contain delivery instructions will be tagged as Sales Type 3. The complete customer name, address, phone number and any additional delivery instructions (as gathered by and sent from the online ordering system) will print in the same area as they would for delivery customers in the AccountCharge file of the POS2100 terminal. However, the incoming customer information is not in any way related to any information in the AccountCharge database of the POS2100. This allows for a less strict process of information gathering by the online ordering system than is required with the POS2100.

The mapping features of the POS2100, for delivery customers, does not function for incoming online orders flagged as delivery orders. This is because the delivery information sent to the Microsoft mapping software is normally resident in the internal AccountCharge database of the POS2100.

It is probable that the online ordering system will have duplicate functionality, as it relates to prior orders and ordering patterns, for online customers. This functionality will cover orders across an entire brand using the online ordering system. This functionality would supersede the single location AccountCharge functionality of the basic POS2100 software.

Delivery XML Fields

It is possible to print the information collected by the online ordering system for all orders, takeout or delivery. The information which can be printed is as follows.

```
<Delivery>
        <CustomerInfo>
                <LastName>Wilson</LastName>
                <FirstName>Robert</FirstName>
                <MiddleInitial>K</MiddleInitial>
                <AddressLine1>1855 West Bourbon Street</AddressLine1>
                <AddressLine2 />
                <City>Freemont</City>
                <State>AZ</State>
                <Zip>45128</Zip>
                <HomePhone>(749) 555-9823</HomePhone>
                <WorkPhone>(749) 558-1223</WorkPhone>
                <CellPhone />
                <DeliveryInstructions>Recessed house at end of Street</DeliveryInstructions>
                <HomeAddress>Yes</HomeAddress>
        </CustomerInfo>
</Delivery>
```

In order to print the above, the system changes the sales type to a 3. If the online system always sends customer information, the POS Operator may always change this sales type back to the sales type default or to any other sales type.

You can change the Language Database to eliminate confusion on incoming online orders where the "Delivery Instructions" are being used for customer information. Consider editing the language database for the POS Application.

617   Default is "Delivery Instructions". This is a printed message. Edit to the more generic "Instructions"

1079   Default is "Delivery". This is a column header on a display. Edit to the more correct "Online".

Table Service Orders

Introduction

One of our kiosk vendor partners, Usable Health, has modified their application, using the iPad as a table service, order entry device. It functions essentially identical to the kiosk application, except it is portable. There are some minor cosmetic changes to the order entry process, including the mandatory entry of a table number. In some applications, the iPad is handed to the patron for the initial order or even left at the table for additional service rounds. For this method of operation to function successfully, a few changes were necessitated and these have been incorporated into a new INetOrder.DLL, POS2100.exe and OdysseyProgramming.exe.

BackOffice Programming

If the "kiosk" system is being used for table service ordering, then the programming under Programming – POS System Options – Ordering System should look like the screen shot below.

Note that the table number will be sent by the ordering system. There is no Printer Group selected and there is not a check mark next to Print Check.

A programming option has been added to Programming – POS Terminal Options – Desktop Options to provide a smoother integration with using the "kiosk" vendor's software for table side order entry.

If there are multiple service rounds entered at the same table, each service round will be sent by the Online Ordering System as a separate open and unpaid order, at the same table. Setting the new option "Default to Combine Mode" allows the POS Operator to use the Table Desktop icon presentation to simply touch the displayed table icon two times and combine all entered orders at the table to a single guest check, either to add new items using the POS terminal or to print the entire guest check for presentation to the patron.

Note above that the "Two screen Table Desktop" presentation is not enabled. This mode of operation is not recommended when using table side, "kiosk" entry terminals.

Default POS Operator

A POS Operator is required to be assigned to all incoming orders, therefore there must be a default POS Operator for the Online Ordering System. This is a temporary POS Operator, since it is actually not an identifiable person within the restaurant.

Under Programming – Staff – POS Operator Groups, the flag "Checks Available for All" must be set on this default POS Operator. This will allow the incoming orders to be retrieved by any valid POS Operator.

## POS Recommended Mode of Operation

It is recommended that the Table Desktop presentation be limited to the single screen version, as shown in multiple screen shots in this section.

All orders placed on the table side entry device will "belong" to a default POS Operator. The previous section defines the required programming for this Operator. Because of this programming, any POS Operator (Server) may retrieve all of the open orders at the table. Since these checks do not "belong" to the Server, they are not shown in the check list area. Also the table icons are gray. The screen shot below illustrates this situation.
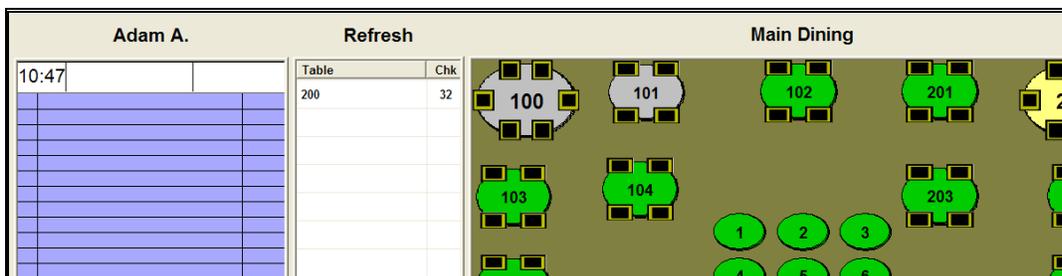

The Server shown above is Adam. Adam has an open check at Table 200. It is shown in the list box in the middle and the table icon is yellow in the table icon display area. To eliminate confusing screens, when the Table Desktop Screen is presented, only those guest checks which belong to the entered POS Operator are shown. All that can be ascertained from the above display is that there are checks at tables 100 and 101 and they currently do not belong to Adam.

Touching the "Refresh" button in the middle of the screen, above the check list, will additionally show guest checks that are "available to all". The screen shot below illustrates this situation.
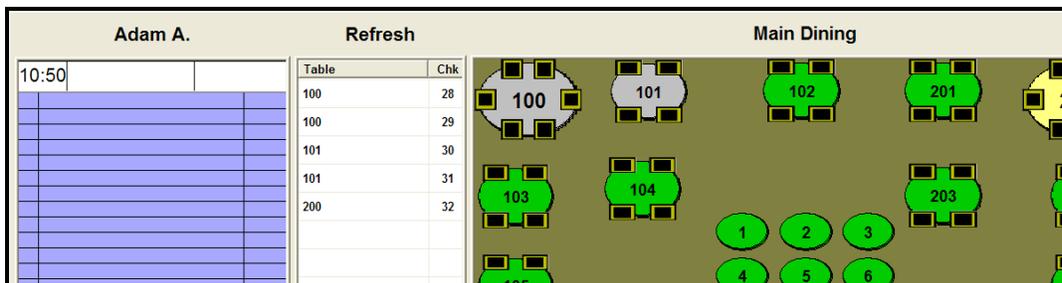
As shown above, in this situation, both tables 100 and 101 have multiple guest checks which are "available to all". With Combine mode enabled, touching the table icon will highlight the checks which belong to this table in the check list area and will also move all items for display onto the guest check area on the left. The screen shot below illustrates this situation.
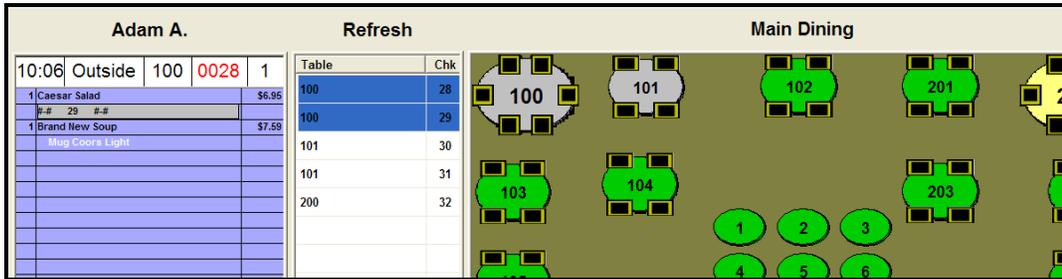

To retrieve these two checks, and have them now "belong" to Adam, Adam needs to merely touch the "Select" button. Once retrieved, the single check can be printed for presentation or items may be added. After being retrieved, when Adam next sees the Table desktop the table and any open checks will "belong" to him. The screen shot below illustrated the Table desktop after Adam has retrieved the checks and combined them.
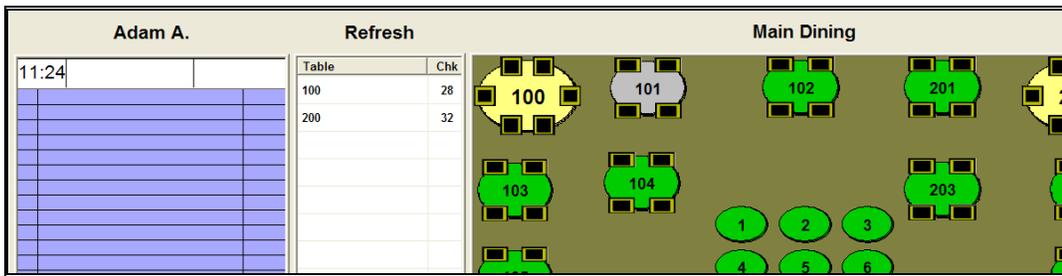
Note that table 100 is no longer gray. It belongs to Adam. The single check open at table 100 uses the guest check number from the first "service round" entered at the table.

It is recommended, when using table side iPad entry, that the guest checks not be combined until the iPad is retrieved from the Patron and is no longer in use.

If the iPad is left at the table after the open checks have been combined and a new order is added, the table will not only no longer "belong" to Adam but there will once again be multiple checks open at the table. The combined check will belong to Adam, but the other(s) will belong to the default POS Operator. The other(s) will not show on Adam's screen. However, Adam will know something is "amiss" because the table which he thought was his will now be gray, as illustrated below.
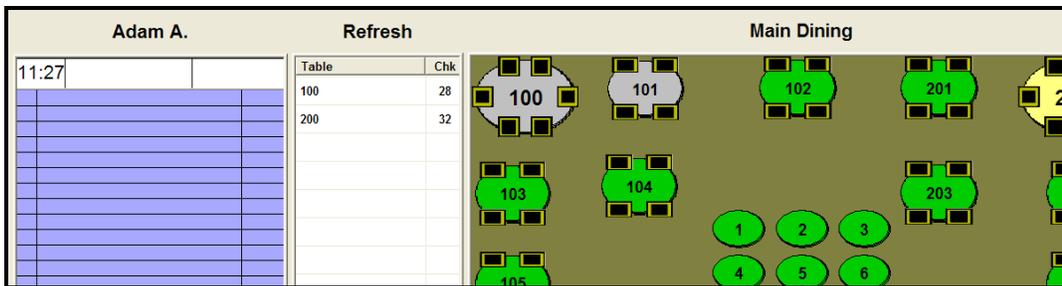
As shown above, check 28 at table 100 belongs to Adam. However, since the table is gray, the entire table itself no longer "belongs" to Adam. With Combine enabled, Adam must again touch the "Refresh" button in the middle of the screen. Doing so will once again show the checks "available to all" and Adam can follow the same procedure as outlined above to retrieve all the checks and combine them.

Since the middle area of the single screen, the check list area, provides significant feedback to the POS Operator when retrieving checks which "belong" to another POS Operator it is recommended that terminals used by POS Operators retrieving checks opened using the table side iPad terminals not use the two screen Table Desktop presentation.

It is recommended that the Table Desktop presentation be limited to the single screen version, as shown in multiple screen shots in this section.