FieldTicket

Phoenix

FT80001

User's Guide
And
Installation/Setup

45 – 15833 26 Ave
South Surrey BC V3S 2X5
Canada
http://www.mpowered.biz

What's New for version 80001

* WebApp version of FieldTicket (Apple iOS)
* .NET version of the Web Services
* Fixed glitch where LNA tickets did not correctly send CRLF's from Address field to Tempest.
* Added server setting warningkeephhcmnt. If FRONT or BACK supplied, will keep the handheld comment (if any) and add the warningcomment to either the front or the back of the handheld comment.

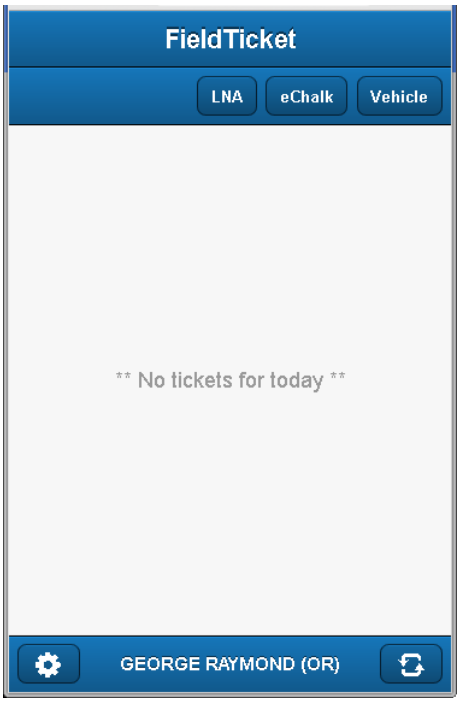
Upgrading from a previous version? See the Upgrade Notes at the end of this document for helpful advice.

1. Using FieldTicket

Note: This section assumes that you have successfully installed/upgraded and configured FieldTicket. If you have not yet done so, follow the instructions in section 2, Installation/Upgrading.

Before we begin, let's lay a foundation for what FieldTicket is designed to do, and what it is not meant to do. FieldTicket is designed to allow you to electronically create and print parking tickets in the field. FieldTicket saves you from having to use manual ticket books and having to manually transcribe ticket information from hard-copy to Tempest… and it does it wirelessly – from anywhere you have a data transmission-capable signal on your device. FieldTicket is NOT designed to be a complete replacement for Tempest MTI.

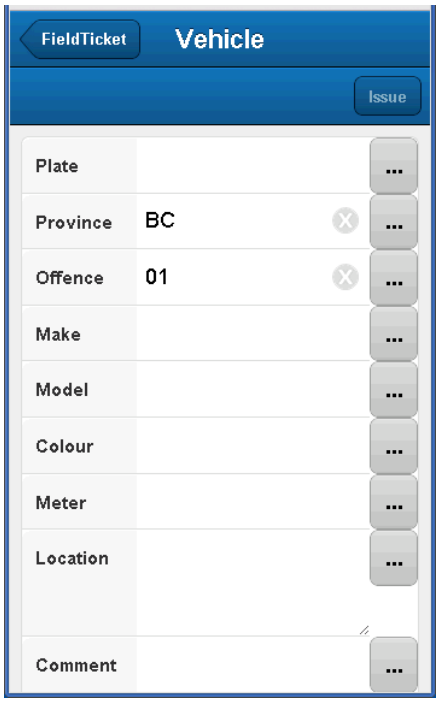
There are only a handful of screens in FieldTicket – each of them flowing naturally from the main home screen shown below. Creating a ticket, and printing it to your Bluetooth-capable printer uses a simple navigation method used by most modern handheld devices, so you should be on your way in no time.



When FieldTicket is started, this is the screen that is displayed first. At the start of each day, this screen should show you "** No tickets for today **", indicating that you have not written any tickets yet.

Creating a new Vehicle ticket

Begin by tapping the Vehicle button in the top-right. This will slide in the Vehicle entry screen:

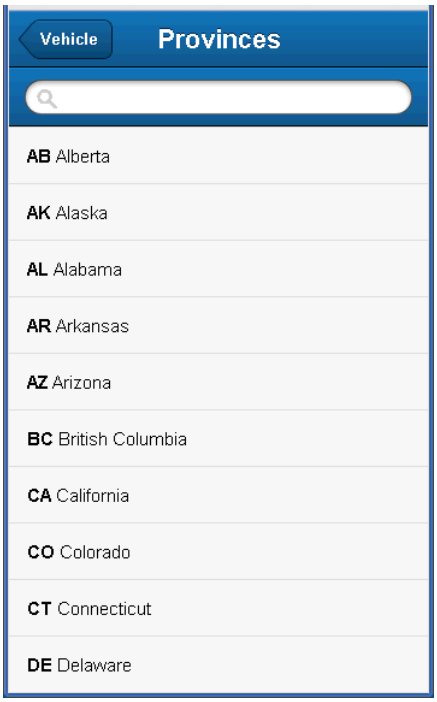


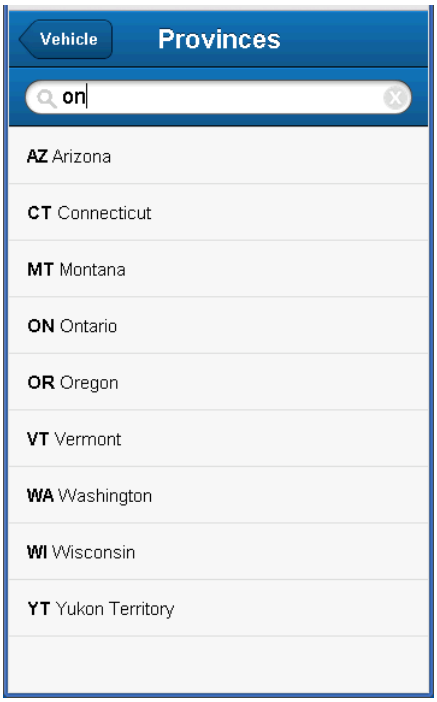
This screen is designed to require as little manual entry as possible. The default Province and Offence are pre-entered, so at a minimum you will need a Plate, and Meter or Location. (If you have set the preference to require Make/Model/Colour you will be required to enter that as well.) Plates should be entered without spaces.

Each field has an ellipsis (…) button beside it, to allow you to quickly enter values from a pick list. The data in these lists is downloaded from Tempest when you Authenticate. (Note: the Plate field has an ellipsis button to read plate data from a certified plate-recognition app. If your device does not have a certified plate-recognition app installed, this button will not do anything.)

Depending on server settings (see section 2. – Installation), and Preferences chosen… all fields on the Vehicle entry screen could have associated pick lists.

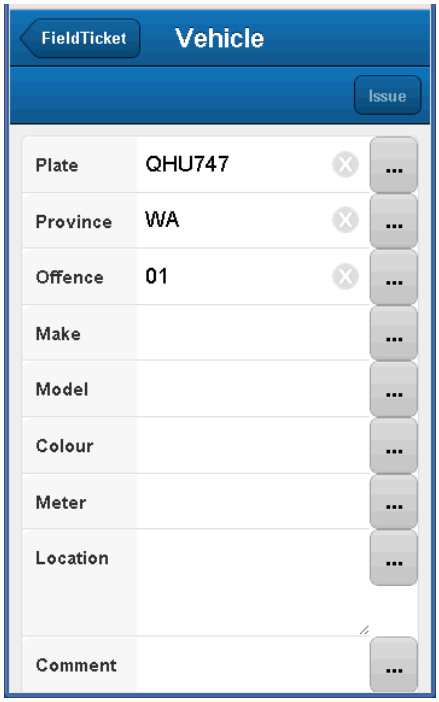
After entering a plate, for example, if you wish to change the province from the default, you would tap the ellipsis button beside the Province entry field which brings up the Provinces list:





The filter field at the top allows you to narrow the choices down using what you enter as a filter, as shown on the right.

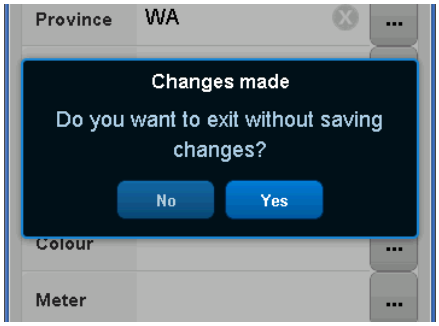
Tap a list item to enter it into the corresponding Vehicle entry field:



Navigating back

On Android, the escape button can be used to navigate back to the previous screen, or the back button in the upper-left corner of all screens other than the main screen (labelled “FieldTicket”) can be used to navigate back as well.

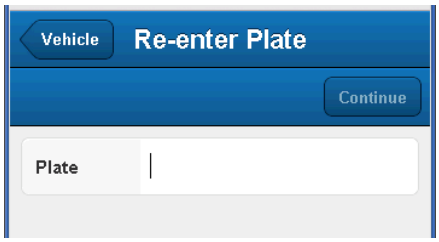
If you have made changes to data on a screen, FieldTicket will confirm whether you want navigate away from the screen before doing so:



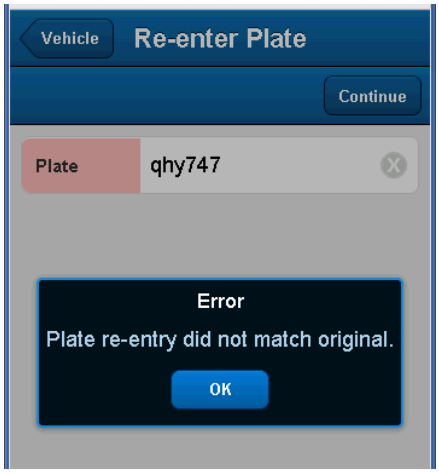
Issuing

Once you have entered all ticket fields you require to continue, tap the Issue button. (Note that the Issue button only lights up when you have entered the required minimum fields.)

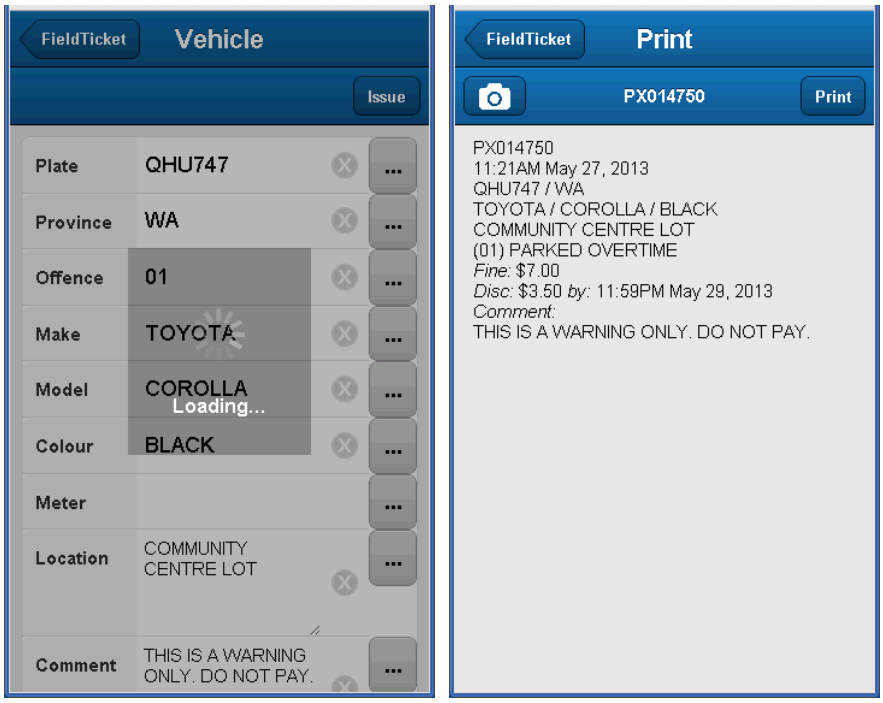
If you are requiring Plate re-entry (see the "Optionally, override control settings in Web Customer" of the "Installation/Upgrading" section of this guide), FieldTicket will display the "Re-enter Plate" screen:



If you don't enter the plate the same as on the original screen, you will get the message:



If you do not require plate re-entry (or if you do and the plate was re-entered correctly) FieldTicket will transmit the information to Tempest, and create a new ticket:



The newly created ticket information is displayed on the Print screen. To print the ticket, make sure your printer is turned on and tap the Print button.

BluePrint will see the new print and if it is connected BluePrint will print the ticket, otherwise BluePrint will notify you with your default notification sound. See the set-up section “Configuring the Bluetooth printer” and “Using BluePrint” for details on printing to a Zebra mobile printer.

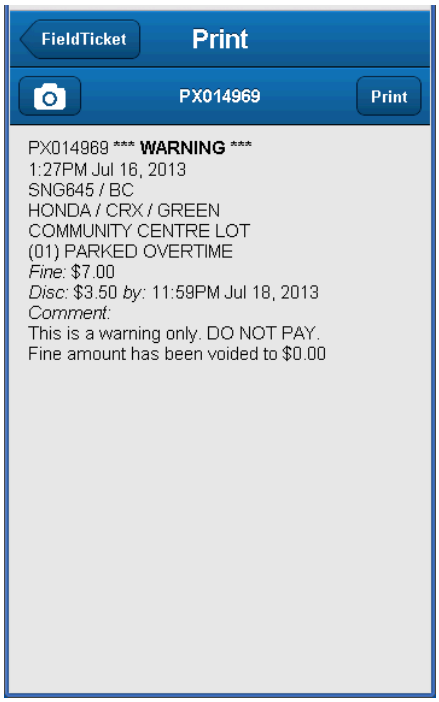
Warning Tickets

To create a Warning ticket, you tap the Warning button at the top of the Vehicle entry screen. When you create a Warning ticket, all pre-issue alert checking on the plate is bypassed.

Additionally, a workflow of WARNING is added to the ticket in Tempest. The WARNING workflow on a ticket is the only way a warning ticket is identified in Tempest/FieldTicket.

The comment is also changed from whatever was entered for the ticket (if anything) to the wording supplied for the <warningcomment> setting (see "Other control settings" in the Installation/Setup section: warningcomment).

When you have created a Warning ticket, the print screen shows *** WARNING *** beside the ticket number:

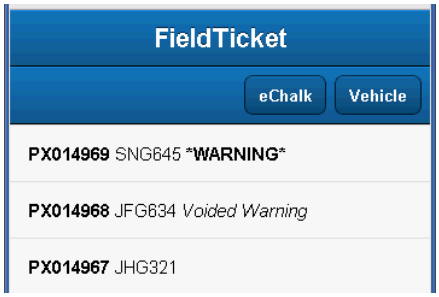


When you print a Warning ticket, the ticket FMT file can be altered to print a large-font message, such as "WARNING ONLY. DO NOT PAY". (See "Other control settings" in the Installation/Setup section: warningtext).

Warning tickets are left un-voided in case you need to re-print. After you have printed a Warning ticket, you should void it as soon as possible. FieldTicket will prompt you if there are any un-voided

Warning tickets in your list whenever you try to exit FieldTicket or create a new ticket as a safety.

The main screen clearly identifies the tickets that need to be voided, with by displaying *WARNING* (in bold) beside any tickets that need to be voided:

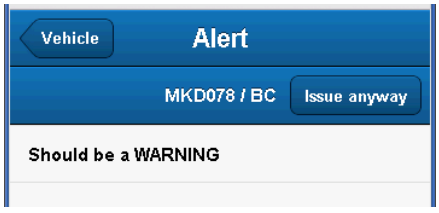


Ticket PX014969 shows a warning ticket that needs to be voided.
Ticket PX014968 shows a warning ticket that has been voided.

Identifying offences that should be given Warning tickets

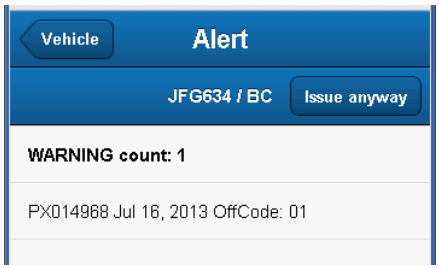
The system can be set up to pre-Issue Alert when using the Issue function when a plate/prov is being issued a ticket on a defined list of offences. If your City wishes to only issue a ticket after at least one warning has been given, this may be helpful to your Officers. (See "Other control settings" in the Installation/Setup section: warningoffences, warningexact, warningdetails).

For example, if you were to Issue a ticket that had not been given a Warning yet, the pre-Issue Alert screen would show:



If you then decided you should create a Warning ticket, you would go back to the entry screen, and tap the Warning button instead of Issue.

When a vehicle has at least one warning, the pre-Issue Alert screen would show:

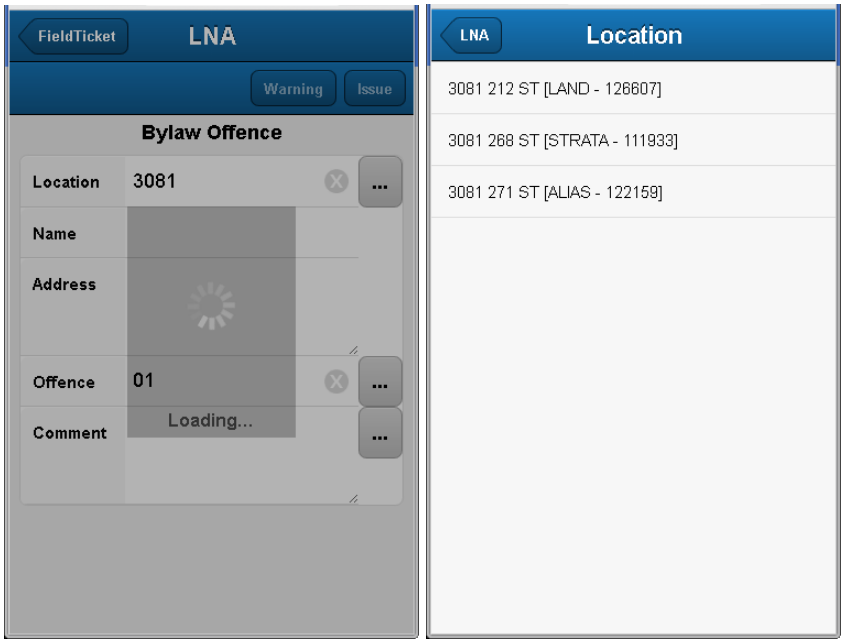


Creating a new LNA ticket

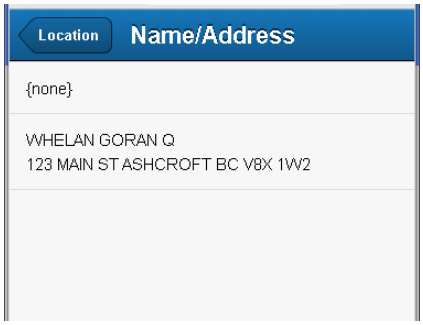
Begin by tapping the LNA button in the top-right of the main screen. (If you have 2 LNA ticket types defined in your setup, then you will get a menu allowing you to tap which type of LNA ticket you want to create next.) Now you will get the LNA ticket entry screen:

On this screen you must enter the Location, Name, Address and Offence fields. If you wish to link up to a property in the Tempest system, enter part of an address into the Location field, for example, the house number, and tap the […] button.

If we enter 3081 into the location, and tap the […] button, the system will search Tempest for any properties with the house number of 3081:

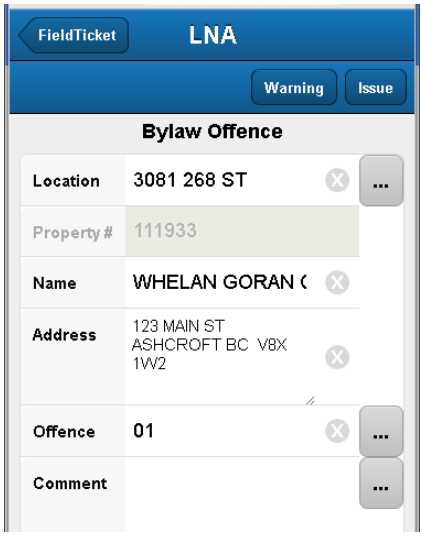


The Location screen shows the matching addresses with [property type - property number] at the end. Tapping on one of the items in the list shows us the Name/Address for the selected item:



Here we have the choice of {none} or the names and mailing addresses from the associated owner in Tempest for the Location we selected above.

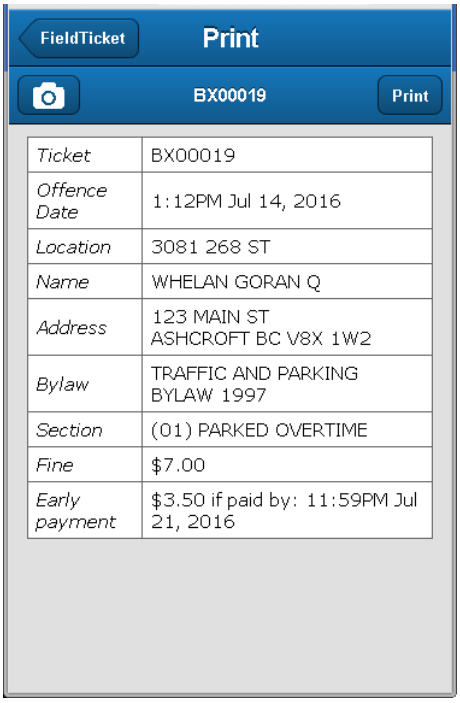
Choosing {none} will fill in the location and property number from Tempest, but leave the name and address for us to fill in manually. Choosing one of the items with a name and address will fill in the location, property number, name and address for us:



Any of the fields can be edited manually at this point, however, if we change anything in the location field – the property number will be removed. This is because the system no longer can guarantee a link to the Tempest property. (If you want the property link back, simply redo the […] search and choose the same property again.)

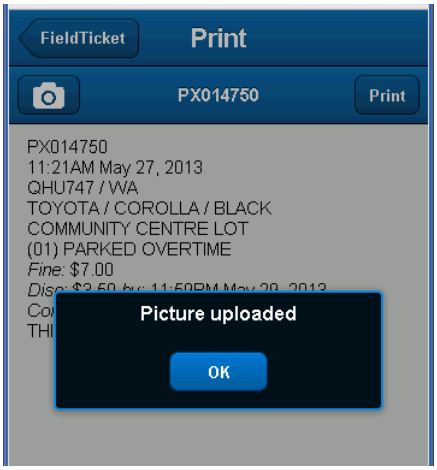
The Offence and Comment fields also have ellipsis […] buttons beside them, to allow you to quickly choose a value from a pick list. The data in these lists is downloaded from Tempest when you Authenticate.

Now you either Issue the ticket or create a Warning, which creates the ticket in Tempest, and displays the Print screen:



Attaching photos

On the Print screen, the camera button will open the device's camera allowing you to take a photo and attach it to the ticket in Tempest. FieldTicket will ask you for the picture source - either Camera or Roll. Choose Roll if you want to use a picture that you have previously taken. Once you have selected or taken the picture, you will be returned to the Upload screen where you must enter a description – which gets saved in Tempest (the description defaults to the Ticket #):



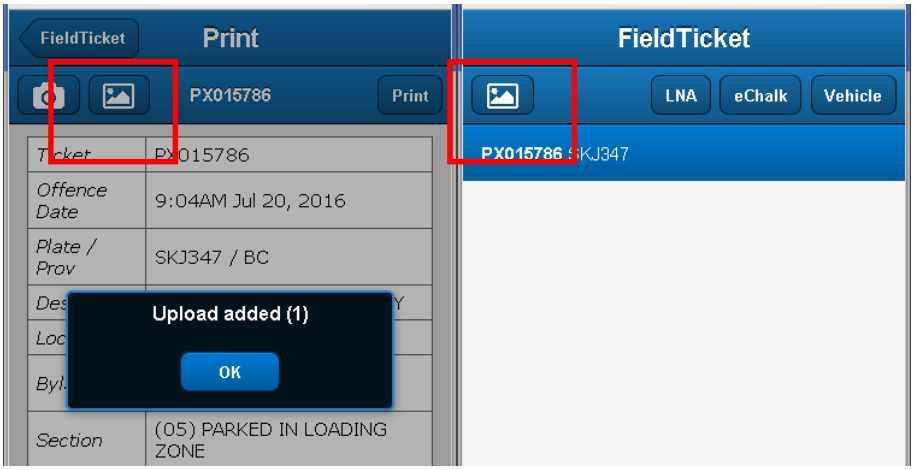
When you are done, tap the Upload button in the upper-right, and the picture will be uploaded and attached to the Tempest ticket.

Note that depending on the resolution settings for your camera, this can take a minute or so to upload. Also note that if you choose Camera as your picture source, once uploaded - photos are not stored on your device.

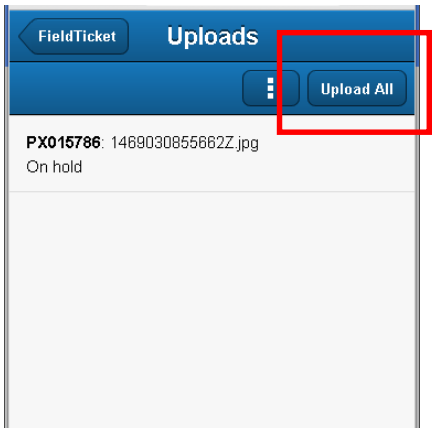
The Hold feature is not available when running FieldTicket as a Webapp.

You can also optionally tap the Hold button at the Upload screen. This places the picture onto an on-hold list, waiting for you to later upload. This can be useful when you don't want to take the time to wait for each upload to happen as you are writing tickets, or you wish to upload pictures later when in a WiFi area (which can save data charges). As you add pictures to the on-hold list, they are stored along with all the information needed to attach them to the right tickets later in Tempest.

When at least one picture is on hold, the Image button is displayed on both the Print and Main screens:



You can upload on-hold pictures at any time from either button. Once in the Uploads screen you can tap the Upload All button to attach the pictures to their respective tickets in Tempest:



On-hold pictures are stored on your device, and are available for upload even if you exit FieldTicket and later want to go back in and upload.

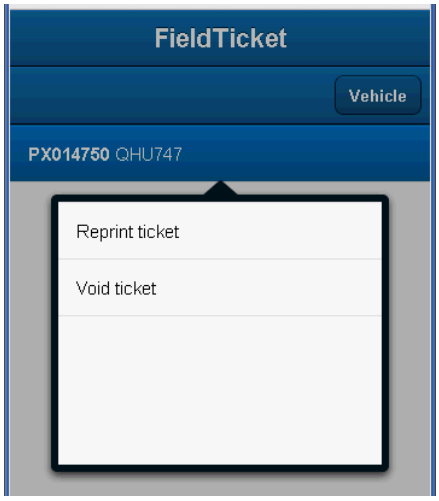
Technical notes about Uploads

The ColdFusion web server used by FieldTicket must be able to "see" the MTI attachment directory (defined in MTI config), and have network rights to save files there. If the web server is protected from the attachments directory via a firewall, you may have to open a pinhole in order to save attachments; or you can see the webproxy quick reference guide (included in the download) to see if that method will work for you.

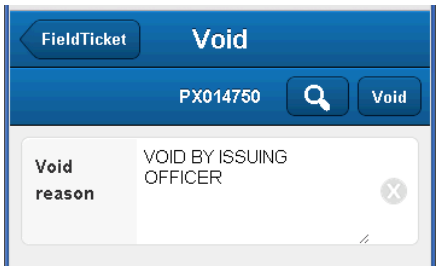
In order to create the Tempest attachment, the Mpoweredweb user must have Insert privileges on mti_attachments.

Voiding a Ticket

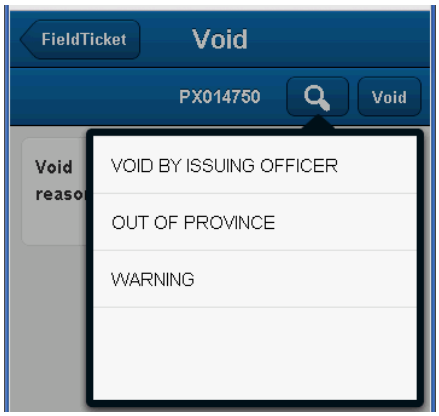
From the home screen, tapping a ticket (that is not voided) on the list will bring up the ticket menu:



Tap on Void ticket, and the Void screen is displayed, with the default reason “VOID BY ISSUING OFFICER” filled in:

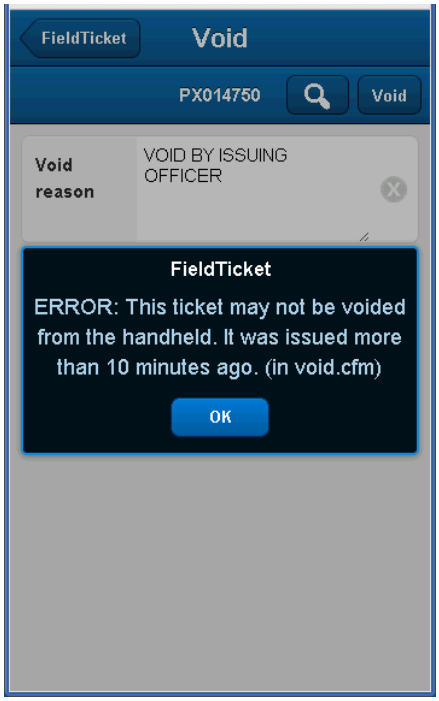


The magnifying glass button will display a list of common void reasons that you can use to save some typing:



Once you have entered the reason, tap the Void button, and FieldTicket will attempt to void the ticket.

Only tickets at a certain status can be voided, other statuses will bring up error messages, such as:



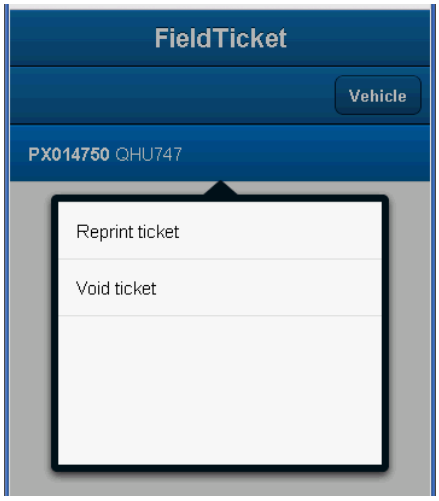
FieldTicket will only allow you to void tickets that were issued less than 10 minutes ago.

Additionally, if a ticket has any financial transactions on it in Tempest (other than the Levy transaction used to create the ticket), the ticket cannot be voided from the device.

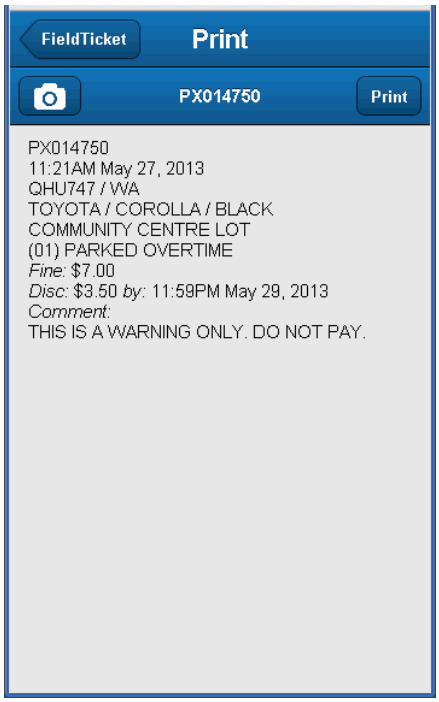
Once a ticket is voided (indicated by *Voided* in italics), tapping on that ticket on the main screen will no longer bring up the ticket menu, as you are not allowed to reprint or void a voided ticket.

Reprinting a ticket

From the home screen, tapping a ticket (that is not *Voided*) on the list will bring up the ticket menu:



Tap on Reprint ticket, and the original Print screen is displayed again, where you can attach photo(s), and reprint the ticket:



Pre-issue Alert (Vehicle tickets only)

Before creating a ticket in Tempest, FieldTicket looks for existing tickets with the same Plate and Province with outstanding amounts. It also checks to see if there are any plate comments. If either of these are found, the Alert screen is displayed:

For prior tickets, the Ticket #, Offence Date, and Outstanding Amount is shown for up to 25 prior tickets. This will allow you to make a decision as to whether to proceed with issuing this Ticket or following another course of action (such as impounding).

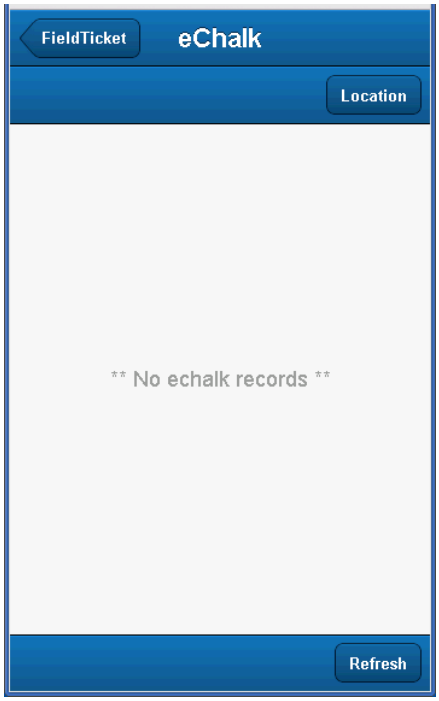
For plate comments, scroll down to the bottom by swiping. The start date, stop date (if found), category and text are displayed (up to 250 chars of the comment text only).

If you decide to proceed with issuance, tap the 'Issue anyway' button.

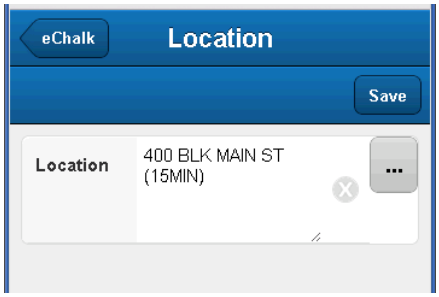
eChalking

If you use a manual method of recording parked vehicle locations, you may find the eChalk function useful. Use eChalk to record the tire, valve, plate and province in one easy-to-use screen that tracks how long each vehicle has been parked. When you are ready to ticket, plate, province, location and a pre-formatted comment are copied to the ticket entry screen!

To begin eChalking, tap the eChalk button on the main screen to bring up the eChalk list:

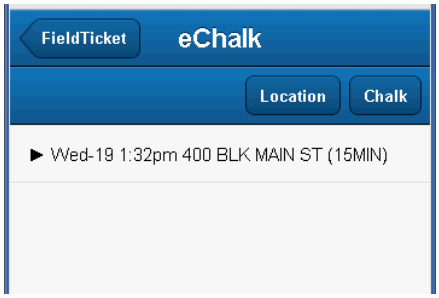


The list is empty, so the screen shows “No echalk records”. To begin, you need to tap the Location button. Type the location that you are chalking (or select from your location list with the … button):



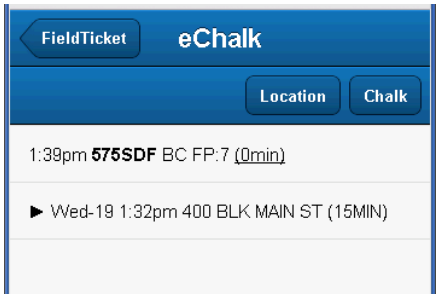
and tap the Save button.

Now, the eChalk list will show one item, and the Chalk button is displayed:



Now, we can begin chalking this location. Tap the Chalk button:

The Tire field records which tire you are chalking (FD = Front-Driver, FP = Front-Passenger, RD = Rear-Driver, RP = Rear-Passenger); and the Valve field records the 1-12 o'clock location of the valve stem on that tire. Enter a plate, and change the province from the default if necessary, and tap Save:



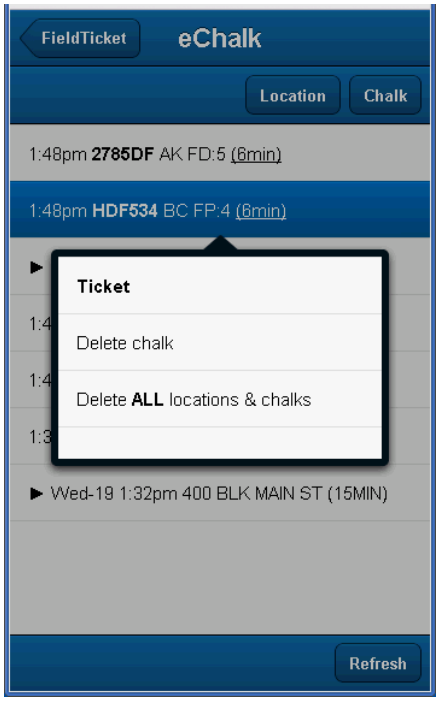
As records are added to the list, the most recent record is shown at the top. The chalking time, plate, province, tire, valve and elapsed time since chalking are displayed in a chalk record.

As we add chalks to this location, they are pushed to the top of the list:

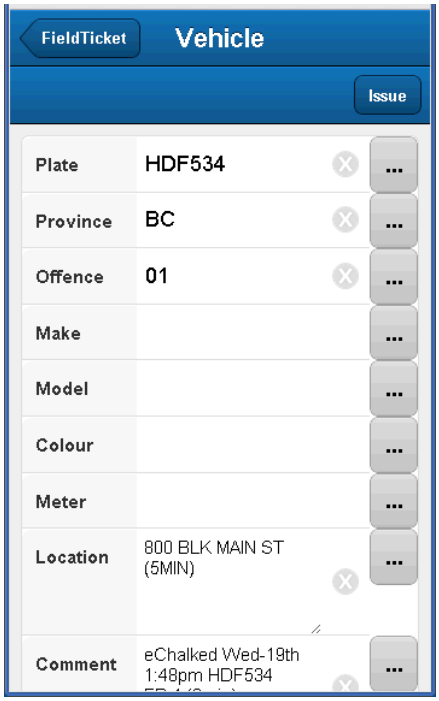
The Refresh button at the bottom of the screen will refresh the elapsed time of the chalk records, so you can always get the most recent calculation of how many minutes ago you chalked a vehicle.

Let's add one more location and a few chalks:

Now let's say that we want to ticket the HDF534 vehicle. Tap on the item in the echalk list to pop up a menu:



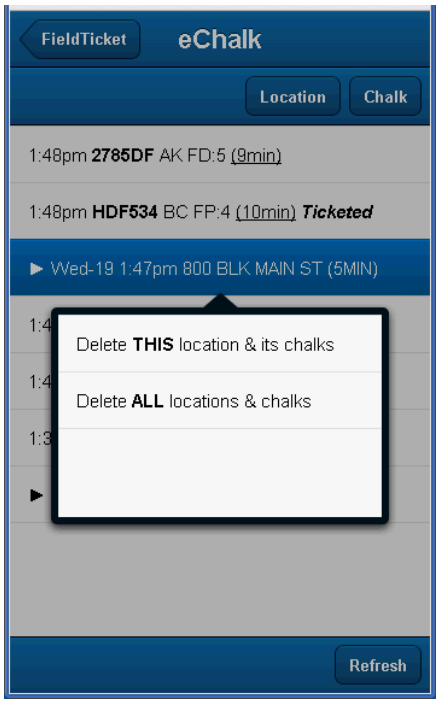
Tap the Ticket menu item:



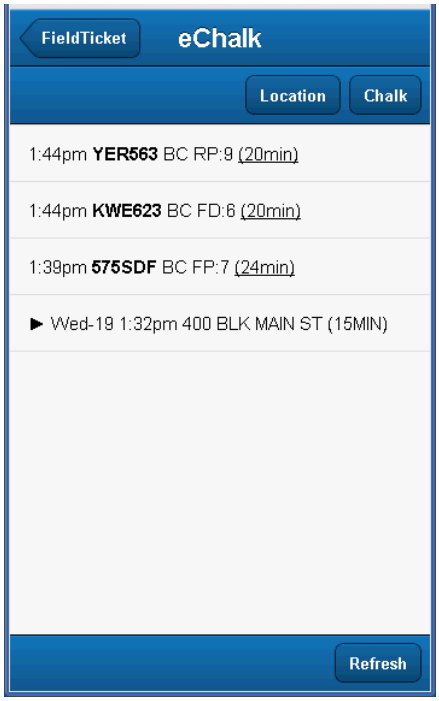
From here, you would simply need to fill in the Make, Model and Colour (if desired), and tap Issue.

Once the ticket is completed, if you go back into the eChalk screen, you will see that the HDF534 vehicle now shows that it has been ticketed:

To remove a location and all its chalk records (those above it – to the next location), tap on the location record, and choose the "Delete THIS location & its chalks" item:



After confirming that you really want to delete, the location and its chalks are removed:



To delete a single chalk record, tap on the echalk item, and choose “Delete chalk”.

To delete all locations and echalk records, tap on any item, and choose “Delete ALL locations & chalks”. This will completely wipe all echalk information.

2. Installation/Upgrading

Note: If you are upgrading from a previous version, see the notes near the end of this section regarding upgrading. Then read through the rest of this section for further information.

System Requirements

Device (phone or tablet):

- Native app: Android 4.0+. Must support Bluetooth SPP.
- Webapp: Apple iOS 6+

Bluetooth printer:

- Currently, FieldTicket supports only Zebra (www.zebra.com) ZQ510, ZQ520 and RW 420 printers. All printers must have the optional Bluetooth module installed.

Web Services:

- .NET: Requires an IIS server, running .NET Framework v4.0.
- ColdFusion: Requires an IIS server, running ColdFusion 8+, with a Data Source connection to the Tempest database. For Oracle, the version-appropriate JDBC driver is recommended, and for MS SQL Server use the built-in driver.

Tempest Licences:

- MTI
- Web Customer

Note: Some of the steps below are required once at your site, and some steps are required for each device you want to connect.

Create database user MpoweredWeb

Create a user named MpoweredWeb in each Tempest database (usually LIVE and TEST) that you wish to access with FieldTicket.

Grant database user MpoweredWeb database access permissions

Grant the following table permissions to MpoweredWeb:

```
GRANT SELECT ON LAND_EQUITY TO MPOWEREDWEB;
GRANT SELECT ON LAND_LEGAL TO MPOWEREDWEB;
GRANT INSERT ON LAND_NOTES TO MPOWEREDWEB;
GRANT SELECT ON LAND_NOTES TO MPOWEREDWEB;
GRANT SELECT ON LAND_NOTE_GROUPS TO MPOWEREDWEB;
GRANT SELECT ON LAND_OWNER TO MPOWEREDWEB;
GRANT INSERT ON LAND_RELATION TO MPOWEREDWEB;
GRANT SELECT ON LAND_RELATION TO MPOWEREDWEB;
GRANT DELETE ON MTIW_TICKET_IMPORT TO MPOWEREDWEB;
GRANT INSERT ON MTIW_TICKET_IMPORT TO MPOWEREDWEB;
GRANT SELECT ON MTIW_TICKET_IMPORT TO MPOWEREDWEB;
GRANT UPDATE ON MTIW_TICKET_IMPORT TO MPOWEREDWEB;
GRANT INSERT ON MTI_ATTACHMENTS TO MPOWEREDWEB;
GRANT INSERT ON MTI_BATCHES TO MPOWEREDWEB;
GRANT SELECT ON MTI_BATCHES TO MPOWEREDWEB;
GRANT UPDATE ON MTI_BATCHES TO MPOWEREDWEB;
GRANT INSERT ON MTI_BATCH_TICKETS TO MPOWEREDWEB;
GRANT SELECT ON MTI_BATCH_TICKETS TO MPOWEREDWEB;
GRANT SELECT ON MTI_BYLAWS TO MPOWEREDWEB;
GRANT SELECT ON MTI_LICENCE_PLATES TO MPOWEREDWEB;
GRANT SELECT ON MTI_OFFICERS TO MPOWEREDWEB;
GRANT SELECT ON MTI_PARAMETERS TO MPOWEREDWEB;
GRANT SELECT ON MTI_PARKING_METERS TO MPOWEREDWEB;
GRANT SELECT ON MTI_PROVINCES TO MPOWEREDWEB;
GRANT SELECT ON MTI_SECTIONS TO MPOWEREDWEB;
GRANT INSERT ON MTI_TICKETS TO MPOWEREDWEB;
GRANT SELECT ON MTI_TICKETS TO MPOWEREDWEB;
GRANT UPDATE ON MTI_TICKETS TO MPOWEREDWEB;
GRANT SELECT ON MTI_TICKET_TYPES TO MPOWEREDWEB;
GRANT INSERT ON MTI_TRANSACT TO MPOWEREDWEB;
GRANT SELECT ON MTI_TRANSACT TO MPOWEREDWEB;
GRANT UPDATE ON MTI_TRANSACT TO MPOWEREDWEB;
GRANT SELECT ON TEMPESTV_SECURITY TO MPOWEREDWEB;
GRANT SELECT ON TEMPESTV_SECURITY_ALL TO MPOWEREDWEB;
GRANT SELECT ON TEMPEST_CLIENT TO MPOWEREDWEB;
GRANT INSERT ON TEMPEST_MODULE_ATTACHMENTS TO MPOWEREDWEB;
GRANT SELECT ON TEMPEST_RELEASE_HEADER TO MPOWEREDWEB;
GRANT SELECT ON TEMPEST_RESOURCES TO MPOWEREDWEB;
GRANT SELECT ON TEMPEST_WORKGROUPS TO MPOWEREDWEB;
GRANT SELECT ON WC_CUSTOMERS TO MPOWEREDWEB;
GRANT SELECT ON WC_CUSTOMER_NOTES TO MPOWEREDWEB;
GRANT SELECT ON WC_CUSTOMER_USERS TO MPOWEREDWEB;
GRANT SELECT ON WC_SESSION_HEADER TO MPOWEREDWEB;
```

Download the Install package

Go to www.mpowered.biz and click on Downloads. Here you will find links to various packages that match recent versions of Tempest. For example, if your Tempest version is 80000, we would download the highest install package starting with 800, in this case 80001. This will download the ZIP package, for example FieldTicket-80001.zip, which you can then extract into a working directory on your web server.

Contents of the ZIP package

Once the ZIP package is extracted, you will find this structure:

\ColdFusion
\Docs
\Dotnet
\Printer
\Webapp
\WebProxy

Decide on which type of web services you wish to use – ColdFusion or .NET

The package contains two complete, identical in functionality and mutually exclusive versions of web services – one for Adobe ColdFusion and one for Microsoft .NET

Installing the ColdFusion web services (if not installing .NET)

If you wish to install the .NET web services, see "Install the .NET web services" just a bit further down in this document.

The ColdFusion installation requires two Data Sources (DSNs in ColdFusion Admin): one to the LIVE and TEST Tempest databases logging in as the database user MpoweredWeb. Appropriate names for these Data Sources would be "MpoweredLive" and "MpoweredTest". (Note: be sure to use **JDBC** drivers in ColdFusion for Oracle by using the "other" Driver type. The Adobe ColdFusion web site has information on setting up JDBC data sources if this is your first time. SQL Server users should use the built-in Microsoft SQL Server driver.)

On your Web Server, go into the ColdFusion Administrator, and ensure that valid (i.e. verified) Data Sources to the Tempest Live (MpoweredLive) and Test (MpoweredTest) databases exist. The UserName (under Advanced Settings for the Data Source) should be **MpoweredWeb** – do not use TempestWeb.

Additionally in the ColdFusion Administrator:
Under Settings, ensure that the **Enable In-Memory File System** checkmark is turned on; and
In your MpoweredLive (and Test) Data Sources, Show Advanced Settings, ensure that the **BLOB** checkmark is turned on.

On your external (outside the firewall) web server, create a home directory for the Mpowered ColdFusion web services if you don't already have one… something like:

```
C:\inetpub\wwwroot\Mpowered\FieldTicket-80001
```

Copy all the files from the \ColdFusion directory from the download here. Now on your external web server, you should have this structure:

```
…\Mpowered\FieldTicket-80001\
      getauth.cfm
      {etc…}
```

Test to make sure external browsers can access the web services. For example, if your web server is named esrv.ecity.ca, you should be able to browse to:
http://esrv.ecity.ca/mpowered/FieldTicket-80001/getauth.cfm and see a page that looks similar to: ERROR: URL variable v00 not defined … (in getauth)
This error message is normal. If you cannot browse to this page from an external browser, you have a connectivity issue (firewall, etc) that needs to be resolved by your IT team.

That's all you need to do to install the ColdFusion web services. If you are not installing the .NET web services you can now skip to the "Create the FIELDWORKSUSERS customer in Web Customer" section.

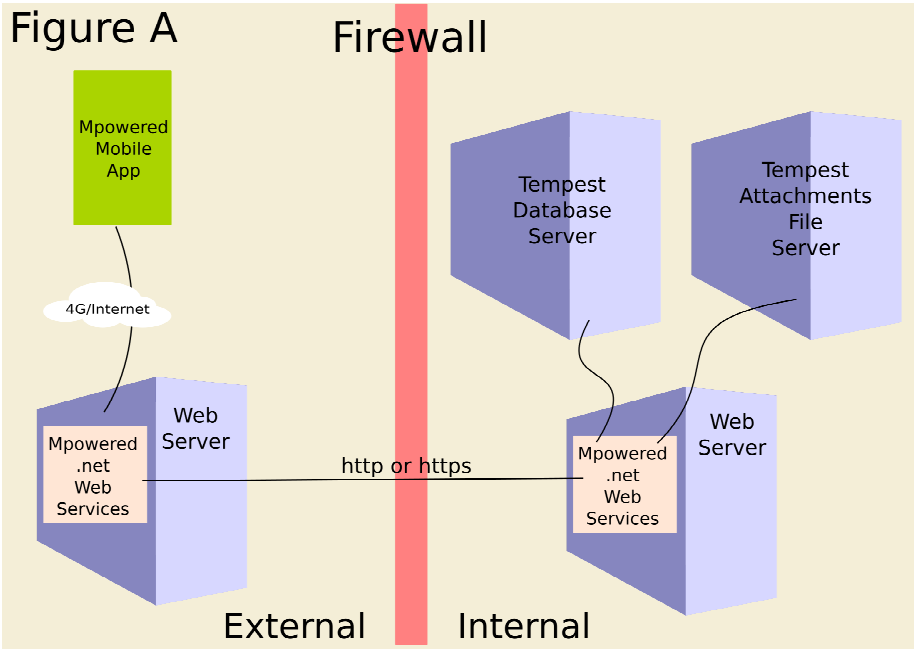
If you wish to install the ColdFusion web services, see "Install the ColdFusion web services" just a bit further up in this document.

Installing the .NET web services (if not installing ColdFusion)

The \Dotnet directory contains the .NET web services required for FieldTicket. In this document the "external forwarding/internal direct" method of setting up the .NET web services will be shown. This is because this method is proven to be the most secure – it protects sensitive data from being stored in a config file that is exposed to the Internet.

Installing .NET web services as "external forwarding/internal direct"

Refer to Figure A below:



The Mpowered mobile app is connected to a web server outside the main firewall, making its requests for anything to do with the Tempest database or Tempest attachments. (This is the Base URL you will enter into Preferences on the mobile device later.) These requests are then forwarded to an internal web server, which does all the heavy lifting and then simply hands the result back to the external web server, which then hands the result back to the mobile app.

The one slightly down side to using this method is that you must have an internal web server, and keep it up-to-date with the same version of Mpowered .NET web services as the external web server.

The huge benefits to this architecture are **security, security, security**! The external web server knows absolutely nothing about your internal network structure and configuration. No configuration files

on the external web server contain any sensitive information, thereby alleviating any potential for malicious hacking from the outside. It is the internal web server (protected by your firewall and internal network security policies) that knows where your Tempest database and attachments servers are, and has the sensitive information about how to connect to your database servers.

Internal Web Server

On your internal (behind the firewall) web server, create a home directory for the Mpowered .NET web services if you don't already have one… something like:

```
C:\inetpub\wwwroot\Mpowered\FieldTicket-80001
```

♣ Option 1: If your back-end database is **SQL Server**: copy the entire \Dotnet**Redmond*** directory contents from the download here. Now on your internal web server, you should have this structure:

```
…\wwwroot\Mpowered\FieldTicket-80001\
      bin\
            FT80001.dll
      FieldTicket.asmx
      Web.config.internal.txt
      Web.config.external.txt    * delete this file
```

Delete the Web.config.**external**.txt file

♣ Option 2: If your back-end database is **Oracle**: copy the entire \Dotnet**Oracle*** directory contents from the download here. Now on your internal web server, you should have this structure:

```
…\wwwroot\Mpowered\FieldTicket-80001\
      bin\
            FT80001.dll
            Oracle.ManagedDataAccess.dll
            Oracle.ManagedDataAccessDTC.dll
      FieldTicket.asmx
      Web.config.internal.txt
```

Now edit the Web.config.internal.txt file and look for a section with the tag <connectionStrings> near the bottom. Here you will see a sample connection string for SQL Server named "MpoweredSQL", and one for Oracle named "MpoweredORA". You can completely remove the line that doesn't apply to your site. DON'T change the first part of the connection string name, i.e. "MpoweredSQL" or "MpoweredORA".

With the connection string you will use, edit it so that YOURHOST becomes the server name where the Tempest database lives, and

♣ Only use one of these options! The Redmond dll will not work with Oracle, and similarly, the Oracle dll will not work with SQL Server.

INSTANCE becomes the name of the database instance. Also, change the Password= to the MpoweredWeb password you created earlier. (NOTE: the password is entered in clear text here – this file should be secured so that only people with proper permissions can view this file.) If you don't know the server name or password values, you may have to talk with your Database Administrator.

Note: you can have multiple connection strings in this file, for example you could have an MpoweredSQLProd and an MpoweredSQLTest connection string each pointing to the Production and Test Tempest databases. When you enter the Authentication settings on the mobile device, you choose which DSN (connection string) to use.

♣ Very important!

Save and exit. Rename ♣ the Web.config.internal.txt file to **Web.config**

Now we need to fire up IIS Manager on the internal web server. Browse into Application Pools, and right-click and choose Add Application Pool. Create a new pool named "MpoweredApps" using .NET CLR Version v4.0.30319 (if you do not have this version, you will need to install MS .NET Framework 4.5 on this machine), Integrated, Start application pool immediately ON. Click on the newly created pool, and browse to Advanced Settings on the right side menu. Make sure that Enable 32-Bit Applications is set to True, and click OK.

Now on the left tree, browse down to Sites > Default Web Site > Mpowered > Dotnet and right-click on FieldTicket-80001. Choose Convert to Application. Keep the Alias as FieldTicket-80001, but select Application pool MpoweredApps, and click OK. This should change the icon in the tree to:  .

Now right-click on FieldTicket-80001 again, and choose Manage Application > Browse. The default browser should appear with the FieldTicket .NET services listing, containing links for AA_ServiceInfo, AB_ServiceTest, AC_DatabaseTest, etc. Click on AC_DatabaseTest. If you are a SQL Server site, you can just hit Invoke; otherwise you will need to enter something like `<root><dsn>MpoweredORA</dsn></root>` into the postedGET field and hit Invoke. You should get an XML page that says "SUCCESS: Found nnnn rows in the mti_tickets table". This means that the DSN was set up correctly, and we are getting a connection to the Tempest database.

For SQL Server, if you get the message "Timeout expired. The timeout period elapsed prior to completion of the operation or the server is

not responding." you may be able to solve the issue by running "exec sp_updatestats" on the database.

That completes the set-up of the internal web server.

Note that if you are using a web application firewall (for example, Barracuda's Web Application Firewall - WAF), you probably will not need to set up the external web server as described in the remaining part of this section below - the WAF will manage the external/internal forwarding.

External Web Server

The set up of the external web server is almost identical to the internal web server set up. On your external (outside the firewall) web server, create a home directory for the Mpowered .NET web services… something like:

```
C:\inetpub\wwwroot\Mpowered\FieldTicket-80001
```

Copy the entire \Dotnet\Redmond directory ♣ from the download here. Now on your internal web server, you should have this structure:

♣ The Redmond directory is used on the external server for both SQL Server and Oracle.

```
…\wwwroot\Mpowered\FieldTicket-80001\
      bin\
            FT80001.dll
      FieldTicket.asmx
      Web.config.internal.txt     * delete this file
      Web.config.external.txt
```

Delete the Web.config.**internal**.txt file

Now edit the Web.config.external.txt file and look for a section with the tag <appSettings> near the bottom. Here you will see a "requestForwardTo" key. It is the value that you must edit to point to the web services location on the internal web server (through the firewall). You may need to get your firewall expert to help you figure this one out. In most cases you will simply need to change {ip} to the ip address of the internal web server (as seen from outside the firewall).

♣ Very important!

Save and exit. Rename ♣ the Web.config.internal.txt file to **Web.config**

Now we need to fire up IIS Manager on the external web server. Browse into Application Pools, and right-click and choose Add Application Pool. Create a new pool named "MpoweredApps" using .NET CLR Version v4.0.30319 (if you do not have this version, you will need to install MS .NET Framework 4.5 on this machine), Integrated, Start application pool immediately ON. Click on the newly created pool, and browse to Advanced Settings on the right side menu. Make sure that Enable 32-Bit Applications is set to True, and click OK.

Now on the left tree, browse down to Sites > Default Web Site > Mpowered > Dotnet and right-click on FieldTicket-80001. Choose Convert to Application. Keep the Alias as FieldTicket-80001, but select Application pool MpoweredApps, and click OK. This should change the icon in the tree to:  .

Now right-click on FieldTicket-80001 again, and choose Manage Application > Browse. The default browser should appear with the FieldTicket .NET services listing, containing links for AA_ServiceInfo, AB_ServiceTest, AC_DatabaseTest, etc.

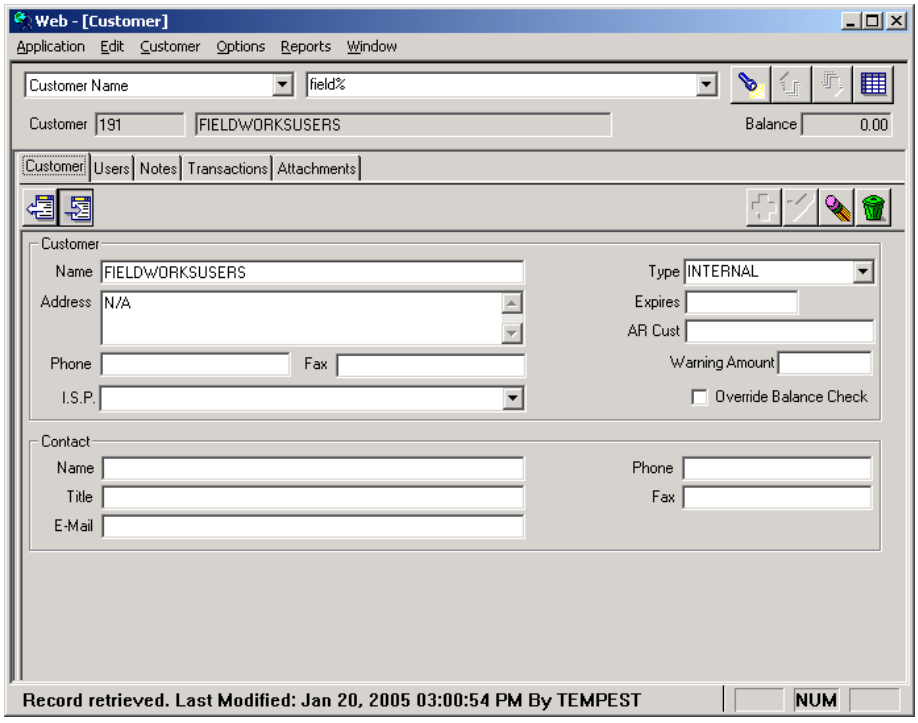
Click on AB_ServiceTest and hit Invoke. You should get an XML page that says “SUCCESS”. This means that the “requestForwardTo” key was set up correctly, and we are getting a connection to the internal web service.

Close the browser, and right-click on FieldTicket-80001 (in IIS Manager) again, and choose Manage Application > Browse. This time click on AC_DatabaseTest. If you are a SQL Server site, you can just hit Invoke; otherwise you will need to enter something like <root><dsn>MpoweredORA</dsn></root> into the postedGET field and hit Invoke. You should get an XML page that says “SUCCESS: Found nnnn rows in the mti_tickets table”. This means that the external/internal connection is working, and the internal web services are proxying correctly to the Tempest database.

That completes set up of the web services in “external forwarding/internal direct” mode.

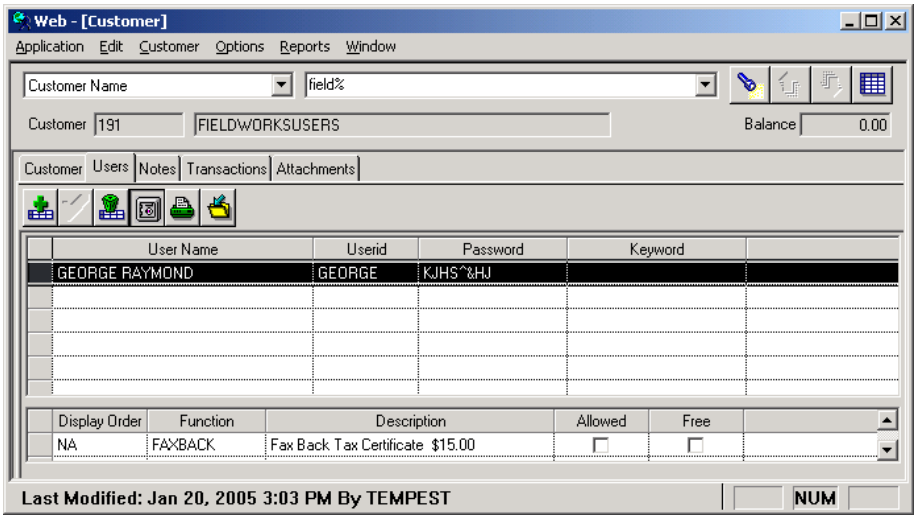
Create the FIELDWORKSUSERS customer in Web Customer

In Tempest create a FIELDWORKSUSERS customer. Make the user an INTERNAL type:



Create the FIELDWORKSUSERS users in Web Customer

Create the MTI user in the FIELDWORKSUSERS users whose UserId corresponds to the user's actual database UserID:



In this example, we have created user GEORGE RAYMOND. George is an MTI user, and logs into Tempest with the UserID GEORGE. You also need to set a password for GEORGE. This will be the password GEORGE will need to enter on the device in the next steps. In our example, GEORGE's password is KJHS^&HJ

The users created in the FIELDWORKSUSERS customer should not have any functions turned on.

You will need to create a user in the FIELDWORKSUSERS customer for each user of FieldTicket.

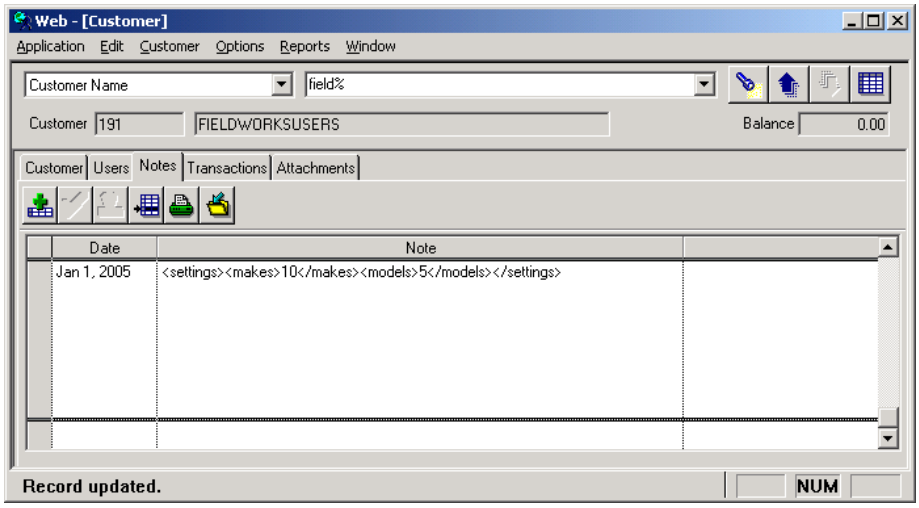
Security notes:
Always use unique passwords of at least 5 characters for your users.

Passwords are never transmitted over the Internet. On the device, before sending a transaction request, FieldTicket generates an MD5 "fingerprint" made up of various pieces of information (including the password), which is then transmitted to the ColdFusion web services. On the web server, the ColdFusion web service generates its own version of the fingerprint based on information stored on the server. If the fingerprints are identical, the transaction is allowed to proceed. This is the same security method used in validating ecommerce transactions by trusted ecommerce payment service providers.

If, for any reason, one of your devices is lost or misplaced, you can remove the password for the user from the FIELDWORKSUSERS customer and be assured that no transactions will be allowed from that device.

Control Settings

FieldTicket control settings are stored as an XML string in the Notes tab of Web Customer for the FIELDWORKSUSERS, in a note dated Jan 1, 2005:



The XML string entered into the note must be formatted correctly for FieldTicket to interpret the settings correctly (see XML notes). The basic format is:

```
<settings>
        <makes>10</makes>
        <models>5</models>
</settings>
```

With this XML string we are overriding FieldTicket's default load of 15 makes with 10, and 10 models/make with 5. Note that the XML can be "crunched" to remove whitespace, if desired:

```
<settings><makes>10</makes><models>5</models></settings>
```

All overrides are entered between the <settings> and </settings> tags. The following XML string shows an additional override of the default number of colours loaded:

```
<settings>
        <makes>10</makes>
        <models>5</models>
        <colours>20</colours>
</settings>
```

For most settings, if a setting is not provided in the XML string, a default value is used by FieldTicket.

Settings used when authenticating in Preferences:

Setting	Default (if no setting given)	Allowed Range	Description
makes	15	10 – 100	Number of makes loaded (based on your data's top used makes). Authentication will take longer the higher this number is. If the MMC flag is N (server or handheld), makes are not loaded.
models	10	0 – 50	Number of models loaded per make. Authentication will take longer the higher this number is. If the MMC flag is N (server or handheld), models are not loaded.
colours	15	5 – 50	Number of colours loaded (based on your data's top used colours). Authentication will take longer the higher this number is. If the MMC flag is N (server or handheld), colours are not loaded.
prefix		1 – 3 chars, all chars must be alpha (A – Z)	Used when you want to force all handhelds to use the same prefix. Individual handheld setting is used if no server override is given.
series		3 – 9 chars, all chars must be 0's	Used when you want to force all handhelds to use the same series. Individual handheld setting is used if no server override is given.
usemmc		Y or N	Used when you want to force all handhelds to collect Make, Model and Colour. Individual handheld setting is used if no server override is given.
platedblchk	N	Y or N	Used when you want to force all handhelds to require re-entry of plates before issuing.

Setting	Default (if no setting given)	Allowed Range	Description
lna1type		Any string, for example 'Bylaw'	Used when you want to force all handhelds to use the same name for the 1st LNA ticket type. Individual handheld setting is used if no server override is given.
lna1prefix		1 – 3 chars, all chars must be alpha (A – Z)	Used when you want to force all handhelds to use the same prefix for the 1st LNA ticket type. Individual handheld setting is used if no server override is given.
1na1series		3 – 9 chars, all chars must be 0's	Used when you want to force all handhelds to use the same series for the 1st LNA ticket type. Individual handheld setting is used if no server override is given.
lna2type		Any string, for example 'False Alarm'. Cannot be set if lna1type is not set.	Used when you want to force all handhelds to use the same name for the 2nd LNA ticket type. Individual handheld setting is used if no server override is given.
lna2prefix		1 – 3 chars, all chars must be alpha (A – Z)	Used when you want to force all handhelds to use the same prefix for the 2nd LNA ticket type. Individual handheld setting is used if no server override is given.
lna2series		3 – 9 chars, all chars must be 0's	Used when you want to force all handhelds to use the same series for the 2nd LNA ticket type. Individual handheld setting is used if no server override is given.
pbpurl		Any string	Make sure you have entered a valid PayByPhone url. You will receive the url either directly from PayByPhone or from Mpowered.

Settings used when printing tickets:

Setting	Default (if no setting given)	Allowed Range	Description
ticknumout	1	1	What part of the ticket number to print onto the ticket: 1 = prefix & series (e.g. PX12345) **Note that value 2 has been removed.**
pagewidth	40	30 - 60	In printing the ticket, used to control where long line splitting occurs for bylaw and section descriptions. The number given is the maximum number of characters in a print line.
bylawsectionoutput	1	1 - 5	What parts of the bylaw and section to print onto the ticket: 1 = Bylw #, Bylw Desc, Sect #, Sect Desc 2 = {blank}, Bylw Desc, {blank}, Sect Desc 3 = {blank}, {blank}, Sect #, Sect Desc 4 = {blank}, {blank}, {blank}, Sect Desc 5 = Bylw #, {blank}, Sect #, Sect Desc
discmsg1	If paid before		Printed along with the discount amount and date/time, if the fine has a “Disc. Fine” amount. E.g. If paid before 11:59pm Jul 17, 2005 the fine is reduced to: $25.00
discmsg2	fine is reduced to:		See above.

Setting	Default (if no setting given)	Allowed Range	Description
extamt1	1	0 – 3	Extended amount 1 to print out if the fine has a Reminder or Warning amount: 0 = {blank} 1 = fine + reminder amt 2 = fine + warning amt 3 = fine + rem + warn amt Note that if the Reminder or Warning amount to be used for calculating the extended amount is null, {blank} is printed.
extamt1msg1	If not paid within 28 days from		If the Reminder or Warning amount to be used for calculating the extended amount is null, OR extamt1 = 0; {blank} is printed.
extamt1msg2	Issued Date, the fine is increased to:		If the Reminder or Warning amount to be used for calculating the extended amount is null, OR extamt1 = 0; {blank} is printed.
extamt2	0	0 – 3	Extended amount 2 to print out if the fine has a Reminder or Warning amount: 0 = {blank} 1 = fine + reminder amt 2 = fine + warning amt 3 = fine + rem + warn amt Note that if the Reminder or Warning amount to be used for calculating the extended amount is null, {blank} is printed.
extamt2msg1	If not paid within 65 days from		If the Reminder or Warning amount to be used for calculating the extended amount is null, OR extamt2 = 0; {blank} is printed.

Setting	Default (if no setting given)	Allowed Range	Description
extamt2msg2	Issued Date, the fine is increased to:		If the Reminder or Warning amount to be used for calculating the extended amount is null, OR extamt2 = 0; {blank} is printed.
comments	N	Y or N	When set to Y, comments can be optionally printed onto the ticket. The ticket layout (FTICK.FMT) must be "enabled" for comments for this to occur.

Other control settings:

Setting	Default (if no setting given)	Allowed Range	Description
cpicsearch1		Any text.	If enabled, this feature will automatically perform a Licence Plates search on the CPIC web site (http://www.cpic-cipc.ca/English/index.cfm) upon issuing or reprinting a ticket. This web page searches the entire national database of over 185,000 stolen vehicles. The vehicle records in CPIC's database are updated every day. Even if you get a positive response to your search, it does not mean the item is stolen. The item's status should be confirmed with your local police. NOTE: If this feature is enabled, it will add an additional 2-3 seconds to each ticket issued due to the additional search done on the CPIC web site. To enable the CPIC search, set to the positive response "Possible stolen vehicle. Please contact your local police service for confirmation." E.g.: <cpicsearch1>Possible stolen vehicle. Please contact your local police service for confirmation.</cpicsearch1>

Setting	Default (if no setting given)	Allowed Range	Description
cpicsearch2		Any text.	If you wish to enable a further CPIC search for the negative response "No records were found." you must use this entry AND cpicsearch1, e.g.: <cpicsearch1>Possible stolen vehicle. Please contact your local police service for confirmation.</cpicsearch1><cpicsearch2>No records were found.</cpicsearch2>
piawodate			Pre-Issue Alert Write Off date. See below for notes.
warningoffences		A comma-separated list of offence codes in quotes, for example '01','02','03'	Controls checking for Warning tickets. If blank or not supplied, no checking is done. If supplied, and a ticket is Issued with an offence matching one in the list, a check is done for prior Warning tickets for the entered plate/prov.
warningexact	Y	Y or N	If Y, the Warning check is done on only the offence entered on the current ticket, otherwise the Warning check is done on all offences in the warningoffences list.
warningdetails	Y	Y or N	If Y, the details of prior Warning tickets are displayed in addition to the count of Warnings.
warningcomment	This is a warning only. DO NOT PAY	Any text	For Warning tickets, this comment is used regardless of what was entered.
warningtext		Any text, for example "WARNING ONLY. DO NOT PAY"	If supplied, will print the supplied text for Warning tickets. If supplied, you must alter the LBL file on your printers to add one additional line, similar to: T90 4 1 600 1000 \\

Setting	Default (if no setting given)	Allowed Range	Description
warningkeephhcmnt		FRONT or BACK	If FRONT or BACK supplied, will keep the Officer's comment (if any) and add the warningcomment (see above) to either the front or the back of the Officer's comment.
warningtext		Any text, for example "WARNING ONLY. DO NOT PAY"	If supplied, will print the supplied text for Warning tickets. If supplied, you must alter the LBL file on your printers to add one additional line, similar to: T90 4 1 600 1000 \\
priorsreqbal	Y (legacy – FT has operated as if this flag is Y in the past)	Y or N	When checking for prior offences, if there were 20 offences found, but none had an os balance, Y would not show the priors, while N would show the priors.
voidtimeout	10	0-120	For non-Warning tickets only: 0 means that voiding is not permitted, 1-120 is the number of minutes from issuance that a ticket may be voided within. Note that Warning tickets can be voided at any time.

Notes for <piawodate>:
The value must be a date of the form "YYYYMMDD", for example **20100401**. A valid date will indicate that this alternate method of processing pre-issue alerts will take effect. Any other value (including non-date values) will have no effect – i.e. pre-issue alert processing will be handled as it always has. (Allowing existing customers to not have to make any changes.)

If the control setting described above is valid; when processing the ticket entry form data and existing tickets with the same plate/province are found; and if those tickets have:

1) An o/s balance, **OR**
2) A zero balance **AND** the ticket has REFERRED TO COLLECTION wf **AND** is not followed by PAID AT COLLECTIONS wf **AND** the ticket was issued on or after the <piawodate>

then a flag will be set, which will cause the system to display the pre-issue Alert screen (as described below).

The pre-issue Alert screen will display information similar to the following:

3 Comments (see below) {these are plate comments}
67 priors (max 25 shown)
PX013701 Mar 10, 2011 $110.00 [Sec. 22] {after <piawodate>}
PX013154 Oct 20, 2010 $0.00 [Sec. 14] {after <piawodate>}
PX013001 Sep 14, 2010 $0.00 PAC [Sec .13] {after <piawodate>}
PX012452 Apr 1, 2010 $0.00 RTC [Sec. 44] {after <piawodate>}

PX012002 Feb 17, 2010 $0.00 [Sec. 44] {bfore <piawodate>}
…

XML notes

XML has a special set of characters that cannot be used in normal XML strings. These characters are:

& - &
< - <
> - >
" - "
' - '

For example, the following XML string is invalid:

<Organization>IBM & Microsoft</Organization>

Whereas the following is valid XML:

<Organization>IBM & Microsoft</Organization>

Note that we have replaced '&' with '&' in the second XML string which makes it valid. In the following XML overrides, you will get a message stating, “XML override is not well-formed” when you try to authenticate - if you do not handle the special character(s) properly.

If you wish to get more assistance in building your XML strings, there are several very good (and free!) XML editors out there on the net. A particularly good one is at:

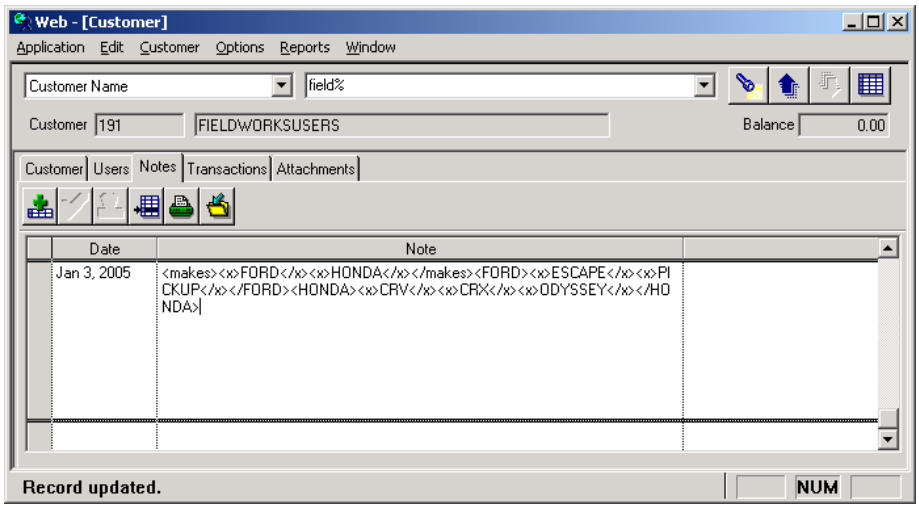
http://architag.com/xray/

Optionally, override "Makes/Models" in Web Customer

Instead of loading the top makes and models from the existing ticket data in Tempest, you can override the pick list of makes/models by 1) by using a note in WebCust, or 2) using a text file on the web server. Option 2, if used, will trump option 1. (Note: you should only use Option 2 if you find that the makes/models list needs to be larger than what can be stored in the WebCust note (2000 bytes)). Please contact Mpowered if you wish to override makes/models. A cfm that can get you a good starting point from your data can be run.

Option 1

You can supply a pick list of makes/models with an XML string in the Notes tab of Web Customer for the FIELDWORKSUSERS, in a note dated Jan 3, 2005:



Option 2

You can supply a pick list of makes/models with an XML string in a text file stored in the same web directory as the FieldTicket ColdFusion files. The name of this file must be 'makesmodels.txt'. **Remember that you must back up this file as it is not part of the Tempest database.**

The XML string entered into the note must be formatted correctly for FieldTicket to interpret the makes and models correctly (see XML notes). The basic format is:

```
<makes>
        <x>FORD</x>
        <x>HONDA</x>
</makes>
<FORD>
        <x>ESCAPE</x>
        <x>PICKUP</x>
</FORD>
```

```
<HONDA>
        <x>CRV</x>
        <x>CRX</x>
        <x>ODYSSEY</x>
</HONDA>
```

Note how the makes listed each have a subsequent list of models in the XML string.

The <makes></makes> tags **MUST** be in lowercase. Also note that any sub-tags in the <makes> branch cannot have spaces in it. For example, the following will cause errors:

```
<makes>
        <x>FORD OF CANADA</x>
        …
```

If you have makes with spaces in them, use dashes, for example:

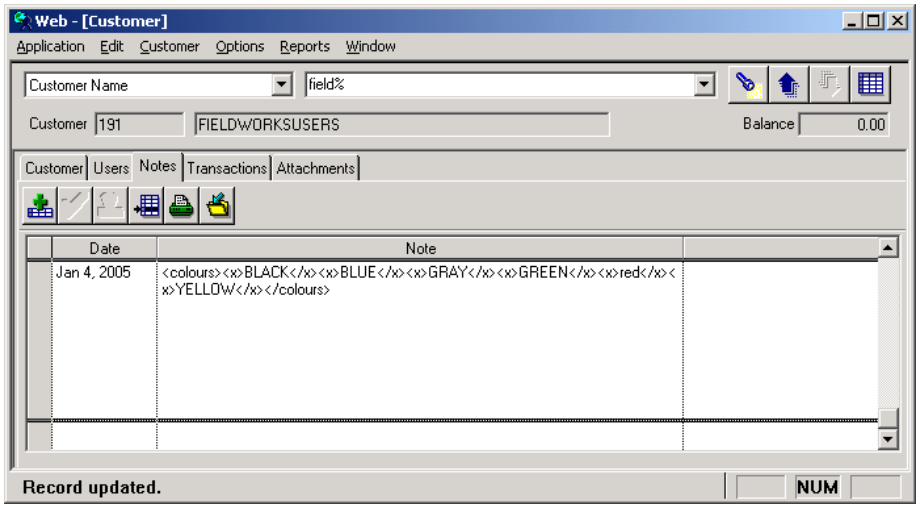
```
<makes>
        <x>FORD-OF-CANADA</x>
        …
```

The case of the makes must match in both lists, i.e. use either upper case or lower case. This example uses all lowercase:

```
<makes>
        <x>ford</x>
</makes>
<ford>
        <x>aerostar</x>
        <x>escape</x>
        <x>pickup</x>
        <x>probe</x>
</ford>
```

Optionally, override “Colours” in Web Customer

Instead of loading the top colours from the existing ticket data in Tempest, you can override the pick list of colours by supplying an XML string in the Notes tab of Web Customer for the FIELDWORKSUSERS, in a note dated Jan 4, 2005:



The XML string entered into the note must be formatted correctly for FieldTicket to interpret the colours correctly (see XML notes). The basic format is:

```
<colours>
        <x>BLACK</x>
        <x>BLUE</x>
        <x>GRAY</x>
        <x>GREEN</x>
        <x>red</x>
        <x>YELLOW</x>
</colours>
```

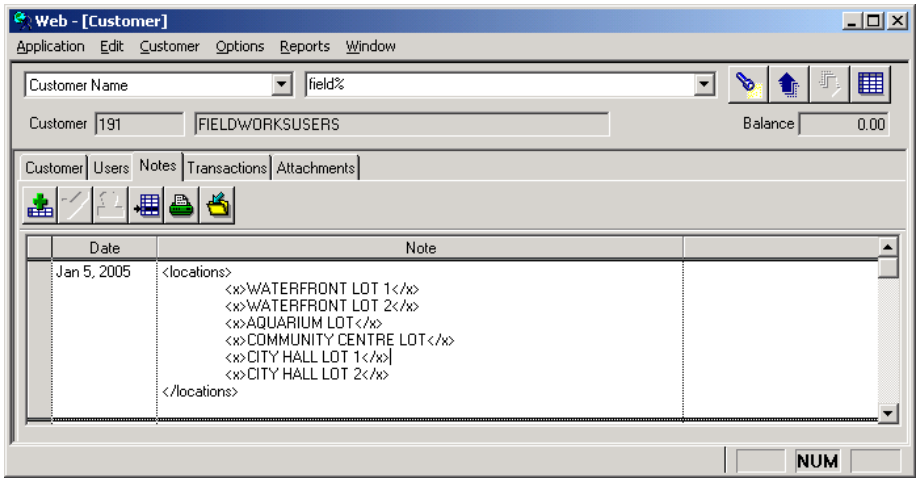
As with all pick list overrides, FieldTicket will uppercase the fields fields before sending to Tempest. In the above example, “red” woud appear in lowercase in the Colours pick list, but FieldTicket would uppercase it to RED before sending to Tempest.

Optionally add a "Locations" pick list

Optionally, a Locations pick list can be added by 1) by using a note in WebCust, or 2) using a text file on the web server. Option 2, if used, will trump option 1. (Note: you should only use Option 2 if you find that the locations list needs to be larger than what can be stored in the WebCust note (2000 bytes)).

Option 1

You can supply a pick list of locations with an XML string in the Notes tab of Web Customer for the FIELDWORKSUSERS, in a note dated Jan 5, 2005:



Option 2

You can supply a pick list of locations with an XML string in a text file stored in the same web directory as the FieldTicket ColdFusion files. The name of this file must be 'locations.txt'. **Remember that you must back up this file as it is not part of the Tempest database.**

The XML string entered into the note (or file) must be formatted correctly for FieldTicket to interpret the locations correctly (see XML notes). The basic format is:

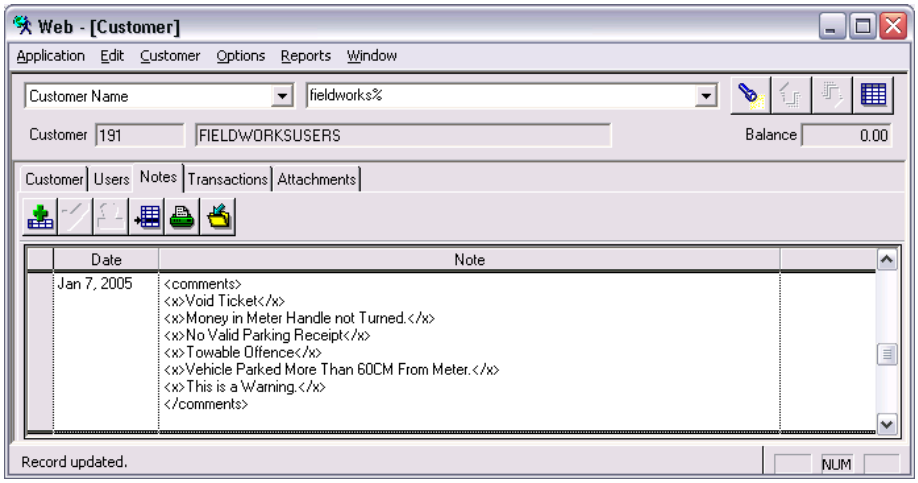
```
<locations>
        <x>WATERFRONT LOT 1</x>
        <x>WATERFRONT LOT 2</x>
        <x>AQUARIUM LOT</x>
        <x>COMMUNITY CENTRE LOT</x>
        <x>CITY HALL LOT 1</x>
        <x>CITY HALL LOT 2</x>
</locations>
```

Optionally add a "Comments" pick list

Optionally, a Comments pick list can be added by 1) by using a note in WebCust, or 2) using a text file on the web server. Option 2, if used, will trump option 1. (Note: you should only use Option 2 if you find that the comments list needs to be larger than what can be stored in the WebCust note (2000 bytes)).

Option 1

You can supply a pick list of comments with an XML string in the Notes tab of Web Customer for the FIELDWORKSUSERS, in a note dated Jan 7, 2005:



Option 2

You can supply a pick list of comments with an XML string in a text file stored in the same web directory as the FieldTicket ColdFusion files. The name of this file must be 'comments.txt'. **Remember that you must back up this file as it is not part of the Tempest database.**

The XML string entered into the note (or file) must be formatted correctly for FieldTicket to interpret the locations correctly (see XML notes).

Android: Load the FieldTicket and BluePrint apps to the device

When running on Android, both the FieldTicket and BluePrint apps are required on each device.

FieldTicket

Using the device's web browser, browse to the mpowered.biz > Downloads page, determine the version of Mpowered web services you are using (*), and tap on the appropriate Get it on Google Play link. You will be directed to the device's PlayStore app with the FieldTicket app showing. Tap the Install button.

* The app name reflects the Tempest database/Mpowered webservices release number. For example, with an app name of FT80001, FT = FieldTicket; 800 = Tempest database release 8.0.x; and finally 01 = Mpowered web services release 01. You cannot use any other version of the app other than both the exact Tempest database and Mpowered web services release it was intended for.

BluePrint

BluePrint takes care of Bluetooth connections to the Bluetooth printer as well as sending tickets to the printer. Using the device's web browser, browse to the mpowered.biz > Downloads page and tap on the Get it on Google Play link for BluePrint. You will be directed to the device's PlayStore app with the BluePrint app showing. Tap the Install button.

Using BluePrint is described in more detail later in the section "Configuring the Bluetooth printer".

Recommended: If you wish to have updates automatically applied (to all apps), tap the menu button in the PlayStore app > Settings > Auto-update apps > Auto-update apps over Wi-Fi only.

iOS: Load the FieldTicket web app and MobiPrint app to the device

When running on iOS, FieldTicket runs as a web app, and the MobiPrint app from the App Store is required to support printing.

FieldTicket

The \WebApp directory (in the download package) contains the web app version of FieldTicket. Currently, the web app is only supported under iOS. If you wish to use FieldTicket on Android, see above "Android: Load the FieldTicket and BluePrint apps to the device".

On your external (outside the firewall) web server, create a home directory for the web app… something like:

For FieldTicket, it is recommended to use the Safari browser. With Safari, use the "Add to Home Screen" feature which creates an icon on your home screen and turns FieldTicket into a single-tapable icon.

```
C:\inetpub\wwwroot\Mpowered\FieldTicket-80001WA
```

Copy the entire \WebApp directory from the download here. Now on your internal web server, you should have this structure:

```
…\Mpowered\FieldTicket-80001WA\
      FieldWorksX\
      lib\
      resources\
      app.js
      favicon.ico
      index.html
```

Now on your device, browse to this location as located on your external web server, for example, http://yourserver/mpowered/fieldticket-80001WA/index.html, and you should see the FieldTicket application appear.

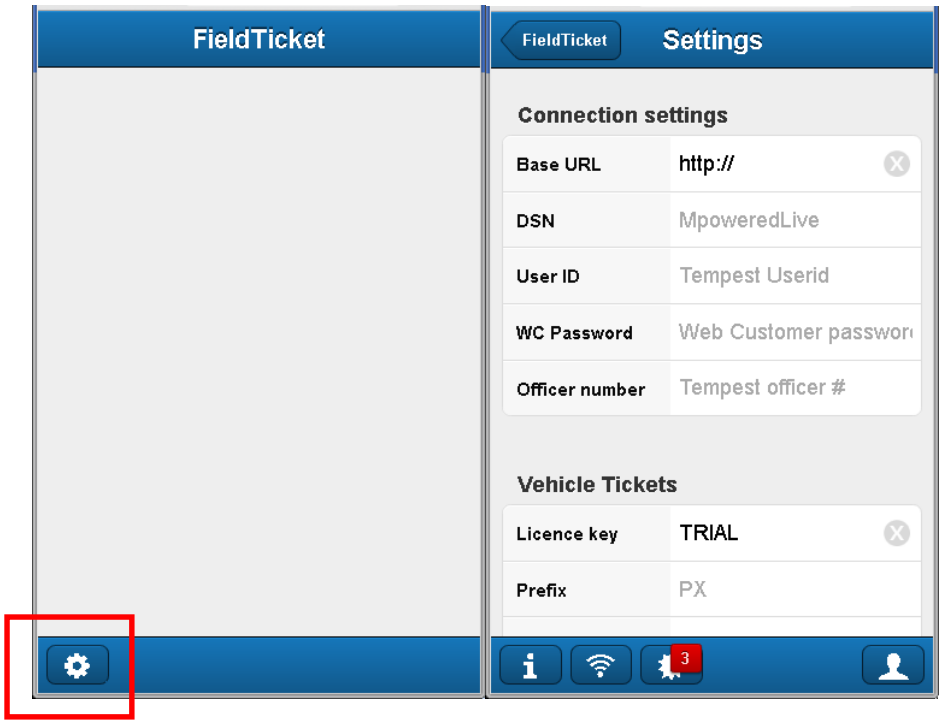
MobiPrint

Find the Mobi Print Pro app on the Apple App Store, and download it. You will get a certain number of free prints in Mobi, but after that you will need to purchase a licence.

These settings will work well for Mobi:
Print > Print: Auto ON
Print > Auto return to source app: ON
Print > Format selected: Encoded CPCL file
Settings > APP SETTINGS > Return to app: Safari

FieldTicket setup

Tap the FieldTicket app icon to run it. Tap the Settings button in the lower left corner:



Connection settings

Connection settings are required as this establishes the location (on the Internet) of the web services allowing FieldTicket to communicate with Tempest data, as well as establishing your credentials.

Change the defaults to your site's specific values, for example:

Base URL: the location of your web services root, e.g.
ColdFusion:
http://esrv.ecity.ca/mpowered/FieldTicket-80001/
.NET:
http://esrv.ecity.ca/mpowered/FieldTicket-80001/FieldTicket.asmx/

After entering your Base URL, you can test whether FieldTicket can reach it by tapping the connection tester button. The messages shown will indicate if your Base URL is reachable.

DSN: the ColdFusion Data Source name (e.g. MpoweredLive).

User ID: the Web Customer ID as created above in the step “Create the FIELDWORKSUSERS users in Web Customer”.

WC Password: the Password as created above in the step “Create the FIELDWORKSUSERS users in Web Customer”.

Officer Number: the Officer number from MTI who will be writing Tickets on this device.

Vehicle Tickets

Licence key: the 5 character licence key supplied to you by Mpowered. If you wish to use FieldTicket on a trial basis, leave the Licence key set to TRIAL. You will have 10 days of full functionality trial usage from the time you first ran FieldTicket on your device. Licence keys can be purchased from Mpowered.

Prefix: the Ticket alpha prefix you want to use, e.g. “P” or “PA”. May be from 1 to 3 characters. (*)

Series: indicates how long you want the ticket numbers to be. For example, if you want to have ticket numbers up to 99999, you would enter 00000. Must be at least 000. (*)

(*) The Prefix and the Series make up the “mask” from which Ticket numbers are derived. The mask must be from 5 to 10 characters long. Masks may be shared between Officers (i.e. two or more devices could have a mask of “PA00000”). The system is designed to allow this, and as Tickets are created, each user’s Tickets will be interleaved with each other’s. Unique Ticket prefixes can also be assigned to individual officers.

Use M/M/C: Choose Yes if you want to require entering Make/Model/Colour as vehicle tickets are entered.

LNA Tickets (optional)

Licence key: the 5 character licence key supplied to you by Mpowered. There is a separate licence key required to create LNA tickets. Licence keys can be purchased from Mpowered.

Type 1 Name: the name used in FieldTicket (not printed) for the 1st LNA ticket type. This can be any string, for example ‘Bylaw’.

Type 1 Prefix: the alpha prefix you want to use for LNA type 1 tickets, e.g. “P” or “PA”. May be from 1 to 3 characters. (* see above).

Type 1 Series: indicates how long you want the ticket numbers to be for LNA type 1 tickets. For example, if you want to have ticket

numbers up to 99999, you would enter 00000. Must be at least 000. (* see above)

Type 2 Name: the name used in FieldTicket (not printed) for the 2nd LNA ticket type. This can be any string, for example 'False Alarm'. LNA type 1 fields must be entered if you want to use LNA type 2 fields.

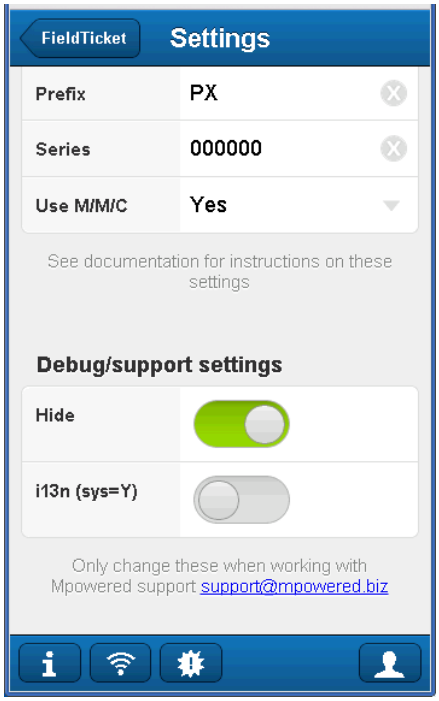
Type 2 Prefix: the alpha prefix you want to use for LNA type 2 tickets, e.g. "P" or "PA". May be from 1 to 3 characters. (* see above).

Type 2 Series: indicates how long you want the ticket numbers to be for LNA type 2 tickets. For example, if you want to have ticket numbers up to 99999, you would enter 00000. Must be at least 000. (* see above)

Once you have entered the connection settings, tap the Authenticate button. This will validate the information you entered, and return you to the main screen if all is well. Your officer name from Tempest will be displayed in the bottom toolbar on the main screen.

Debug/support settings

These settings should be left alone unless directed otherwise by Mpowered support. These settings can be changed without Authenticating.



App information (1st button bottom left)

This screen shows contact and technical information, and may be used by Mpowered support during the course of a support call.

Event log (3rd button bottom left)

This screen shows information logged by the system, and may be used by Mpowered support during the course of a support call.

Configuring the Bluetooth printer

Setting up the Bluetooth printer:
The document “Configuring Zebra printers using Zebra Setup Utilities.pdf” – included in the download package - describes how to configure your Zebra printer model for use with FieldTicket.

LBL files:
The printer must contain layout file(s) named FTICK.FMT (for vehicle tickets) and optionally FTICK2.FMT (for LNA tickets). The layout files are created using LBL files – of which there are samples included in the download. These LBL files are sent to the printer to create the FMT files, and the procedure to upload these files to the printer is described in the set-up document above. If you require assistance in creating a suitable layout file, please contact Mpowered.

Pairing the device to the Bluetooth printer:
The Bluetooth printer must be “paired” with your device before you can print. Use the device’s built-in settings app to pair with your Zebra printer. You may need to consult the manufacturer’s documentation on this topic.

Using BluePrint (Android native app only)

BluePrint is an Mpowered app designed to manage the connection to the Zebra printer, and to send print files to connected printers or notify you if the printer is not/cannot be connected.

Assuming you have followed the steps in “Load the FieldTicket and BluePrint apps to the device” above, tap the BluePrint icon to open it.

The upper right corner of the screen will show that it is "Not connected", and the body area displays the print codes that will be sent to the printer.

Tap the "Connect" button. You should see the printer you paired with on the list, tap it. BluePrint will attempt to connect to the device - you will have to enter the PIN you set up on the printer to allow the connection.

Once you have connected, tap "Print", and the print codes displayed in the body will be sent to the printer.

IMPORTANT! To use BluePrint most effectively with FieldTicket, BluePrint must be running in the background. To leave BluePrint running, use the Home button or the Recent Apps button (see your

device manual for instructions). This leaves BluePrint running and waiting for a print command from FieldTicket.

With BluePrint running in the background, when you print a ticket from FieldTicket, BluePrint will “see” it, and will immediately send it to the printer.

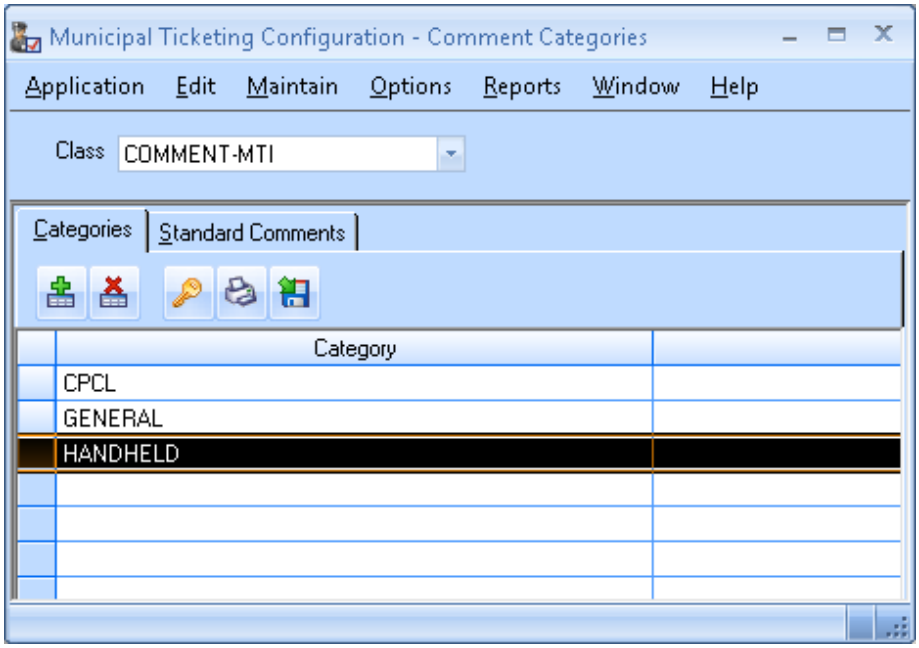
If you have connected at least once, and the connection is lost, BluePrint will try to re-connect to the last-connected device automatically in the background when it sees a new print file. This should mean that you normally would only have to go into BluePrint to connect once per day or so (or if you have not printed within about 2 hours - Android os seems to kill apps that are idle for longer than a couple of hours). If you have connected, and then the connection is lost, tapping Print from FieldTicket will trigger BluePrint to try to re-connect.

If BluePrint cannot connect to a printer, it will notify you that a new BluePrint file is available with your default notification sound/vibration and an icon in the notification area. Access the notification (see your device manual for instructions), and tap the BluePrint notification. This activates the BluePrint app, and depending on its status, you can either connect or print.

If BluePrint is not running, you will not receive a notification, and you will notice that nothing prints. When you notice this, simply tap the BluePrint app, and connect and print (the last print from FieldTicket is in the buffer ready to print). Leave BluePrint running in the background (using the Home button), and go back into FieldTicket to continue processing tickets.

Options for ticket comments

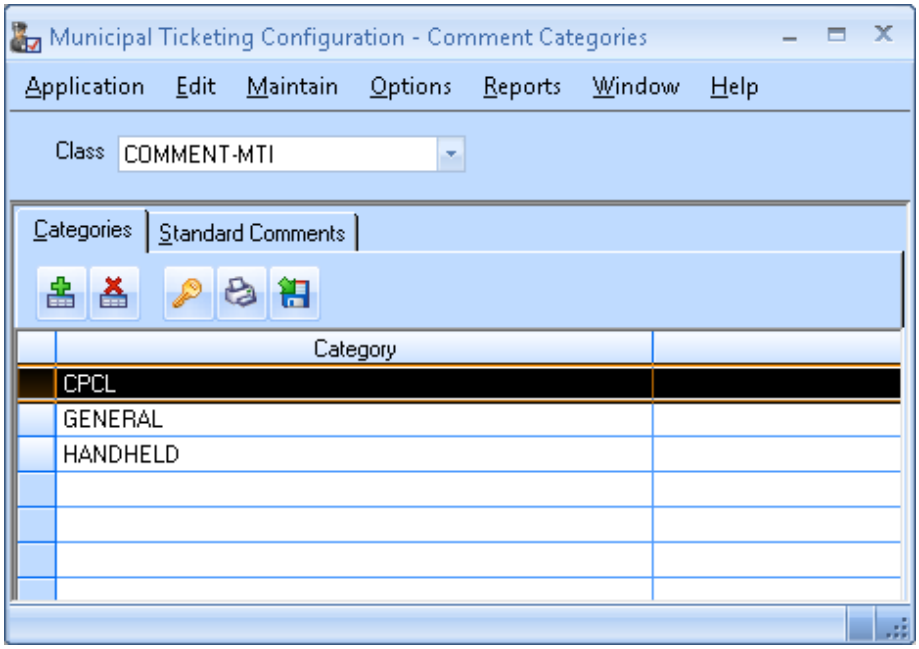
FieldTicket will optionally insert ticket comments into MTI Ticket Comments. This is the recommended method of storing comments as a COMMENT indicator appears on the main ticket window in Tempest when comment(s) exist. To enable this, you must create a comment category called HANDHELD:



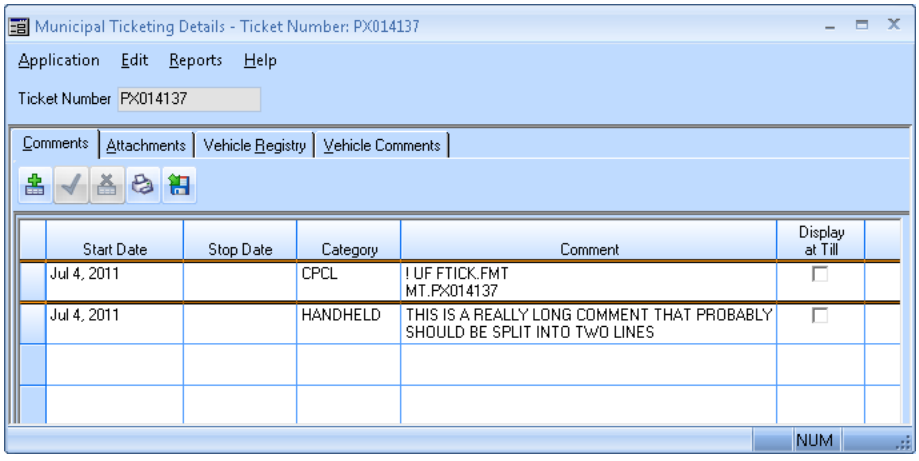
You must also ensure that the TempestWeb user has INSERT privileges on land_relation and land_notes.

Inserting ticket printer code as a comment

FieldTicket will optionally insert the ticket printer code into MTI Ticket Comments. This will enable you to re-print a ticket if needed at any time. To enable this option, you must create a comment category called CPCL:



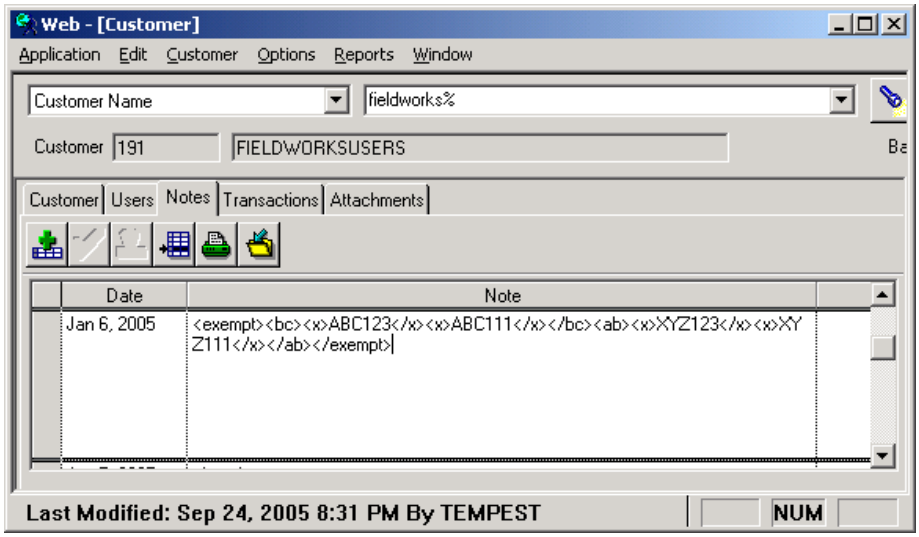
With the CPCL category created, and with appropriate permissions, CPCL comments are visible (they start with **! UF FTICK.FMT**):



The comment can be copied to a notepad .txt file, and sent to the ticket printer using Label Vista. **Note** that handheld comments (if the "comments" setting is Y (see above) AND any comments were added by the Officer) are always present in the CPCL comment and may need to be redacted if necessary. If you are editing the comments out, make sure that the carriage returns still exist – i.e. only remove the comment text; otherwise the ticket will not print properly.

Exempt plates

FieldTicket will check an exempt list to allow you to bar issuing tickets to specific plate/province combinations. You can supply a pick list of locations by supplying an XML string in the Notes tab of Web Customer for the FIELDWORKSUSERS, in a note dated Jan 6, 2005:



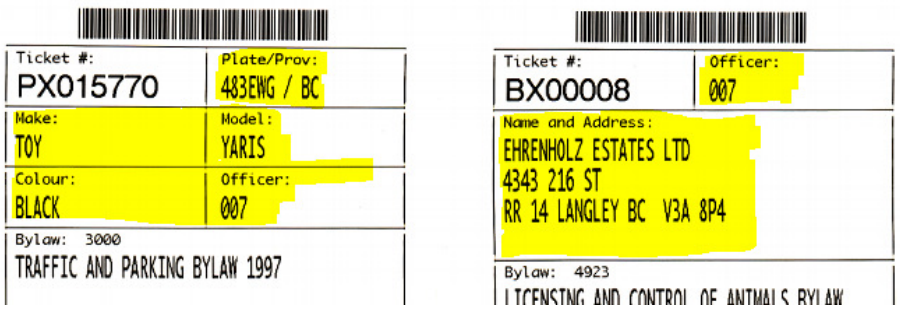
In the above example, we have two exempt plates for BC: ABC123 and ABC111, and two exempt plates for Alberta: XYZ123 and XYZ111.

Considerations for customers who are newly adding LNA ticketing to their existing Vehicle ticketing set-up

1. You will need a separate licence key to add LNA functionality. This can be obtained from Mpowered. See **www.mpowered.biz** for costs. If you have Officers who will be issuing both Vehicle and LNA tickets, the LNA license one-time cost is 25% of the full price, and annual maintenance fees are 20% of that.

2. You will need a new layout file on the printer you will be printing LNA tickets on. The layout file must be named FTICK2.FMT, and is usually created by sending your custom version of FTICK2.LBL to the printer. A sample FTICK2.LBL file is included in the download package, which designed for a 3" printer where you are printing ticket comments. Mpowered is here to help: if you wish to have Mpowered build you an LNA LBL file, please contact **support@mpowered.biz**. If you wish to create your own LNA LBL file (based on your existing Vehicle LBL file), please note the following:

The main change in the layout is that placeholders 3, 4, 5, 6, and 7 have changed. (Placeholders in the LBL file are indicated with the string '\\'.) Placeholder 3 was Plate/Prov and is now Officer; 4 was Make and is now Name; 5 was Model and is now Address Line 1; 6 was Colour and is now Address Line 2; 7 was Officer # and is now Address Line 3. You will also need to rearrange line work and get rid of some lines that form boxes. This sample, shows the differences between the two:



You should leave room for 3 address lines, as the system allows for up to 3 lines of address.

3. If you want all officers to use the same LNA type(s), prefix(es) and series, then do the following: On the FIELDWORKSUSERS note dated Jan 1, 2005, add the type, prefix and series for up to 2 LNA ticket types. If you don't add these overrides, then each Officer can make up their own on the device - which you may not want. You may only

have one LNA type you want to issue, but the second one is there if you need it. If you don't need it, omit the tags beginning with <lna2... Here is an example with 2 LNA types:
<lna1type>Bylaw</lna1type>
<lna1prefix>BX</lna1prefix>
<lna1series>00000</lna1series>
<lna2type>False Alarm</lna2type>
<lna2prefix>FX</lna2prefix>
<lna2series>00000</lna2series>
Remember, these need to go between the root tags in that note!!

4. Add the Offence Codes for the LNA tickets into Tempest > Ticketing > Configuration > Bylaws. There is currently no way to limit the offence codes by ticket type, so it would be a matter of organizing the LNA offence codes with say numbers 100-199 or something like that.

5. **Test the configuration on your Test system FIRST!** Install the web services into a test area on your web server using the “Testing releases/upgrades” procedure below. Install the Android .apk onto a testing device. Authenticate with all the LNA settings. Make sure the printer is printing LNA tickets correctly.

Upgrading from a previous version

1. If you wish to test this new release, please review the "Testing releases/upgrades" section below. Otherwise, continue with these steps.
2. For Android native, install the new app version from the PlayStore corresponding to the web services you will install. Because the app is version specific, you can have multiple versions of the app on one device, however, it is recommended to remove old versions from production devices after upgrading so as to avoid confusion. For the webapp, point the device browser at the location you installed the FieldTicket webapp in the Setup section.
3. Copy/Install the 80001 web services to your web server as per the instructions in the Setup section.
4. Run all the grants in the Setup section.

General upgrade notes

All web services releases and patches are cumulative and include fixes from previous updates. FieldTicket is integrated with Tempest, and may or may not require maintenance as described below.

Major releases

A major release of FieldTicket (FT) will coincide with a major Tempest release, that is, when any of the first 3 digits of a release change, e.g. 72000 to 80000. You *must* (and can only) upgrade FT when you have upgraded the underlying database in order to continue using FT. All major releases are full (i.e. cumulative), i.e. all apps and web services are released as a full package, and will usually require upgrading all devices and the web server with the new versions. After every major release, run all the grants in the Setup section.

Patch releases

When any of the last 2 digits of a FieldTicket release change, e.g. 80000 to 80001, this is an Mpowered patch release. Mpowered *does not* synchronize these patches with Tempest. Therefore, when Tempest releases a patch, there will not necessarily be a corresponding patch release by Mpowered. Mpowered releases patches in order to fix bugs and/or introduce new features. All patch releases are full (i.e. cumulative), i.e. all apps and web services are released as a full package, and will usually require upgrading all devices and the web server with the new versions. After every patch release, run all the grants in the Setup section.

Testing releases/upgrades

To test releases before going into production, install the new web services as explained in the Setup section (ensuring that you are using a different directory for the web services than production). On a test device, run FieldTicket (either native or as a web app) and point its Base URL to the **new web services directory**, and DSN to the **Test** database DSN. Once testing is complete, all production devices can download the new app and Authenticate to the new web services. After successfully re-Authenticating the production devices, remove any old version(s) of app from the devices. For more information contact Mpowered.