Freeway Container

Scanning

Process Document

 Revision 1.0.3

Contents

Freeway Container Scanning

Overview

Freeways Container tracking capability has been principally designed around the use of Barcodes to not only identify Containers, Items, Variant Characteristics (eg: S/N or Batch) but also to control Freeways Functionality. New Freeway 'Function Mode' barcodes have been created to enable you to scan and control how Freeway will manage a transaction when Container Tracking is used. This will reduce the need for keyboard intervention, thereby allowing the user to scan a function barcode to control modes within Freeway. (NB: In the absence of the Freeway Function Barcode a user may manually type in the Function name to switch Freeway to the desired mode)

Function Modes

Function Name	Mode Indicator	Description
FUNCTION0	NCTR -> NCTR	Non-Containerised Stock To Non Containerised Stock
FUNCTION1	NCTR -> CTR	Non-Containerised Stock To Container
FUNCTION2	CTR -> NCTR	Containerised Stock To Non-Containerised Stock
FUNCTION3	CTR -> CTR	Containerised Stock To Containerised Stock
FUNCTION4	WCTR -> CTR	Whole Container to Container
FUNCTION5	WCTR -> NCTR	Whole Container to Non-Containerised Stock
FUNCTION6	VCRT <> NCTR	Non-Containerised Assembly Receipts with Virtual Container
FUNCTION7	VCRT <> CTR	Containerised Assembly Receipts with Virtual Container
FUNCTION70		Clears the "From" Container ID value from Freeway
FUNCTION71		Clears the "To" Container ID value from Freeway
FUNCTION72		Clears both "From" and "To" values from Freeway
FUNCTION73		Commit Whole Container Issue – Empty Contents
FUNCTION74		Commit Whole Container Issue – Retain Contents

These Functions can be used within Picking / Receipting and the Transfers processes.
Freeway users can easily change mode at any point to suit the goods they are processing. Once a mode has been changed, all subsequent transactions will be controlled by that mode within the Datasheet, until such time as that mode is changed again.

Function Modes are held against the datasheet within Freeway for as long as Freeway is running on the device. Therefore, for example one datasheet may be in mode FUNCTION1, whilst another InProgress datasheet may be in mode FUNCTION3.

IMPORTANT!

Each Datasheets mode settings are held in the Device memory whilst the Freeway application is running. Therefore, if you exit from Freeway all modes for all InProgress Datasheets will be lost and you will be required to re-scan the appropriate Freeway mode when re-calling an InProgress Datasheet at a later time.

The Default Function Mode can be set within Freeway on each Device to suit individual Freeway user requirements. The Default Function Mode can be selected from within the Settings screen in Freeway.

If no Default mode has been set, Freeway will always default to FUNCTION0 (NCTR -> NCTR)

The table below shows the available FUNCTION applicable to specific business processes along with the appropriate Container Style

Freeway Scanning Function Mode Matrix

Function Mode	Action	Process					
		Delivery Pick	Job Pick	Assy Pick	Assy Receipt	Purch Receipt	Stk Tsf
FUNCTION0	NCTR -> NCTR	X	X	X	X	X	X
FUNCTION1	NCTR -> CTR	X[1]	X[1]		X[3]	X[2]	X[2]
FUNCTION2	CTR -> NCTR	X[4]	X[4]	X[4]			X[4]
FUNCTION3	CTR -> CTR	X[4,1]	X[4,1]				X[4,2]
FUNCTION4 + (73 or 74 to commit)	WCTR -> CTR	X[5,1]	X[5,1]				X[4,2]
FUNCTION5 + (73 or 74 to commit)	WCTR -> NCTR	X[4]	X[4]	X[4]			X[4]
FUNCTION6	VCRT -> NCTR			X[6]			
FUNCTION7	VCRT -> CTR				X[6,2]		

These optional can be used with the appropriate function above

FUNCTION70	Clear From Container ID
FUNCTION71	Clear To Container ID
FUNCTION72	Clear Both Container IDs

Container Style Requirements relating to above Processes:

1. The '***To'*** Container must be defined with a Style of Delivery Contents (Shipping Container)
2. The '***To'*** Container must be defined with a Style of Container Contents (Stocking Container)
3. The '***To'*** Container must be defined with a Style of Assembly Order (Virtual Container)
4. The '***From'*** Container must be defined with a Style of Container Contents (Stocking Container)
5. The '***From'*** Container must be defined either with a Style on Container Contents or Delivery Contents. (depending upon whether you are simply picking existing inventory to the Delivery Container or whether you are putting a Delivery Container with already picked stock into another Delivery Container eg: Shipper box onto a pallet)
6. The '***From'*** Container must be defined with a Style of Assembly Order (Virtual Container)

Special Note On Container Styles and Picking:

Containers Styles are defined within each Container Type. The Style is automatically copied through to a new Container when that Container. These Styles allow Ostendo to control what goods can be linked to it based upon the business process.

For example, a movement of Containerised Stock will always relate to Stocking Containers , both From and To (ie: Style = Container Contents). Whereas a Job or Delivery Pick could relate to containerised stock moving from a Stocking Container into a Shipping Container (Style = Delivery Contents) or from a Shipping Container into another Shipping Container. NB: Ostendo will prevent you Job or Delivery picking 'From' a Stock Container 'To' another Stock Container.

It should also be noted that Assembly Picking can only be picked to either a Virtual Container or No Container.

Whole Container to Container Picking Transactions (WCTR - > CTR) – FUNCTION4

- Picking from a WCTR with a Style of 'Container Contents' will trigger Ostendo to issue ALL stock in that container from inventory to the Job / Delivery or Assembly.

- Picking from a Whole Container (WCTR) with a Style of 'Delivery Contents' will **NOT** trigger any inventory issue, however it will populate the 'To' Container Contents with the Contents of the 'From' container (Assuming the FUNCTION74 was selected at the time. In this case the 'From' container contents will be retained) This is to be used when you are simply putting a Delivery Container with already picked stock in/on another Delivery Container eg: Shipper box onto a shipping pallet. The result of this is that the Shipper container retains the original contents of the product and the Pallet will show the shipper contents along with any other shippers contents on the same pallet. This means at the highest level (in this case the pallet) you can determine the overall pallet contents of product being shipped.

  NB: Ostendo / Freeway currently does not allow you to put inventory from one Stocking Container into another Stocking Container. (ie: Where both Styles are 'Container Contents')

  When WCTR -> CTR (FUNCTION4) is performed along with the retaining contents (FUNCTION74) for a 'Delivery Contents' style container the Container Contents Source field of the 'To' container will be populated with the word 'Container' and its Container Contents Source Reference will be populated with the Container ID of the 'From' Container.

Process for issuing a Whole Stock Container to become a Delivery Container.

- This would be used when a full stock container is to be picked in total onto a Delivery Container :

    - Generate a new Container Label for a ‘Delivery Contents’ Style container
    - Scan FUNCTION4 (WCTR -> CTR)
    - Scan the existing Stock Container label as the ‘From’ Container
    - Scan the new Delivery Container label as the ‘To’ Container
    - Scan either FUNCTION73 to commit the transaction and empty the contents from the Stock Container
    - Physically remove or cross out the original Stock Container label from the Container
    - Ostendo will leave the empty Container in the Container List allowing this Container to be manual flagged as Scrapped later. *NB: If the Container Type Reusable Style is set to ‘Non Reusable’, Ostendo will automatically scrap this Container for you when it is emptied, otherwise you have to manually flag this Container as Scrapped from the Containers screen.*

Process For Issuing Items to a Virtual Container (Assembly Order only)

- This process is used if the Parent Item has been flagged as 'Use a Virtual Container'. A Virtual container allows you to group all Assembly Issues and the corresponding Receipt(s) together to allow full traceability. The assumption is that a Container must have already been setup (as a Container Style of 'Assembly Order') in advance of any issues or receipts for the Assembly Order. This way when an Issue or Receipt is posted, the Freeway user must scan the Virtual Container ID to link that transaction to the Virtual Container. (Same applies for the Assembly Receipt.). NB: There should be one Virtual Container ID relating to each Receipt and its associated issues.

  It should be remembered that a Virtual container is different to a Physical Stocking Container which has a Container Style of 'Container Contents'. Virtual Containers only exist for the purposes of enhanced traceability.

Processing an Assembly Issue into to a Virtual Container

1. Scan the appropriate Freeway Function Mode for the Component you are issuing IE:
   - FUNCTION1 (if the component is not container tracked) NCTR -> CTR
   - FUNCTION3 (if the component is container tracked) CTR -> CTR
   - FUNCTION4 (if the component is container tracked) WCTR -> CTR
2. Depending upon the Function Scanned above you may need to scan the 'From' container ID
3. Scan the Virtual Container ID as the 'To' Container ID
4. Scan the items or locations etc as usual
5. Ostendo will now issue the item from stock to the Assembly Order and also populate the Virtual Container Contents with that item and qty

Processing an Assembly Receipt into to a Virtual Container

6. Scan the appropriate Freeway Function Mode for the Component you are issuing IE:
   - FUNCTION6 (if the Parent Item is not container tracked) VCTR -> NCTR
   - FUNCTION7 (if the Parent Item is container tracked) VCTR -> CTR
7. Scan the Virtual Container ID as the 'From Container ID
8. Depending upon the Function Scanned above you may need to scan the 'To' container ID (If that Parent Item is Container Tracked)
9. Scan the item or location etc as usual
10. Ostendo will now Receipt the Parent item into stock from the Assembly Order and also populate the Virtual Container Contents with that item and qty

FUNCTION0 (NCTR -> NCTR) (Refer Fig 0)

Non-Containerised Stock To Non-Containerised Stock

Applicable Transaction Types:

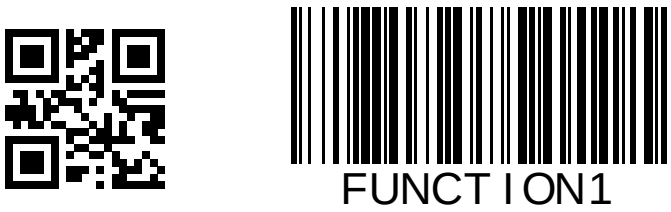
- Picking
- Receipt (Excluding Assembly Receipts using Virtual Containers)
- Transfers

This mode allows you to move Non-Containerised stock around remaining in a Non-Containerised state.

This is the default Function mode (Unless another Default mode has been set on the device in Freeway Settings) for Freeway until a different mode is scanned. In this mode, Freeway will not request Container ID's for scanning, thereby assuming that the stock you are dealing with is all Non-Containerised. (This is the standard behaviour Freeway had prior to Container Tracking)

FUNCTION1 (NCTR -> CTR) (Refer Fig 1)

Non-Containerised Stock To Containerised Stock



Applicable Transaction Types:

- Picking
- Receipt (Excluding Assembly Receipts using Virtual Containers)
- Transfers

This mode allows you to move Non-Containerised stock onto a Container.

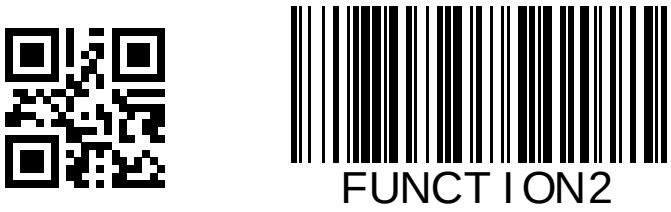
Examples:

- *Picking Non-Containerised Stock onto a Container for a Delivery or an Order*
- *Receipting product from a Supplier or Assembly Order onto a Container*
- *Transferring Non-Containerised stock onto a container*

This mode will require a "To" Container ID to be scanned prior to the normal process of recording the transaction. If items are being recorded to a different Container ID's within the process, you must scan FUNCTION71 (Clear the 'To' Container ID) before scanning a new 'To' Container ID. This means that all subsequent transactions will use that new Container ID.

FUNCTION2 (CTR -> NCTR) (Refer Fig 2)

Containerised Stock To Non-Containerised Stock



Applicable Transaction Types:

- Transfers

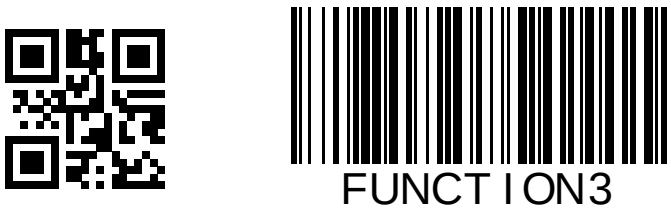
This mode will request a “From” Container ID to be scanned prior to the normal process of recording the transaction.

If items are being recorded from a different Container ID within the process you must scan FUNCTION70 (Clear the ‘From’ Container ID) before scanning a new ‘From’ Container ID. This means that all subsequent transactions will use that Container ID.

Example:
Moving specific Containerised contents back into stock in a Non-Containerised state

FUNCTION3 (CTR -> CTR) (Refer Fig 3)

Containerised Stock To Containerised Stock



Applicable Transaction Types:

- Picking
- Transfers

This mode allows you to move Containerised stock to another Container

Freeway will request a “From” Container ID along with a “To” Container ID to be scanned prior to the normal process of recording the transaction.

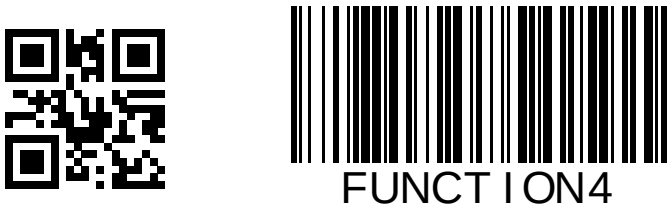
If items are being transferred from or to different Container ID’s (ie: a Container ID is different than from a previous transaction) within the process, you must clear the respective Container ID values (either FUNCTION70 or FUNCTION71) before scanning a different “From” or “To” Container ID. This means that all subsequent transactions will use that Container ID.

Examples:

- *Picking Containerised Stock onto another Container for a Delivery or Order*
- *Transferring Containerised stock from one Container to another Container*

FUNCTION4 (WCTR -> CTR) (Refer Fig 4 and 4a)

Whole Container to Containerised Stock



Applicable Transaction Types:

- Picking (Fig4)
- Transfers (Fig 4a)

This mode allows you to move the entire contents of one container to another container.

When moving a Whole Container (Bulk Transfer) to another Warehouse / Location you would scan the same From and To Container ID.

Freeway will request a “From” Container ID along with a “To” Container ID to be scanned prior to the normal process of recording the transaction. All items on the “From” Container will be moved to the “To” Container.

After both ‘From’ and ‘To’ Containers IDs have been scanned you will be required to use FUNCTION73 or FUNCTION74 (Refer these functions for more information) to commit the entire transaction. At this point, Freeway will also automatically run FUNCTION70 to clear the ‘From’ Container ID in preparation for any further transactions from a different Container.

Subsequent transactions relating to a different ‘To’ Container will require you to clear the ‘To’ Container ID (Use FUNCTION71) before scanning a new ‘To’ Container ID. This means that further transactions will use that Container ID.

Examples:

- *Picking a Whole Container of stock onto another Container for a Delivery or Order*
- *Transferring a Whole Container of stock to another Container*

FUNCTION5 (WCTR -> NCTR) (Refer Fig 5)

Whole Container To Non-Containerised Stock

Applicable Transaction Types:

- Transfers

This mode allows you to move the entire contents of one container back into stock in a Non-Containerised state.

Freeway will request a “From” Container ID prior to the normal process of recording the transaction. All items on the “From” Container will be moved back into stock with the Non-Containerised ‘--’ attribute.

After the ‘From’ Container ID has been scanned you will be required to use FUNCTION73 to commit the entire transaction. At this point, Freeway will also automatically run FUNCTION70 to clear the ‘From’ Container ID in preparation for any further transactions relating to a different Container.

Example:
Moving the contents of a Whole Container back into stock in a Non-Containerised state

FUNCTION6 (VCTR <> NCTR) (Refer Fig 6)

Non-Containerised Assembly Receipts with Virtual Container In Use

Applicable Transaction Types:

- Assembly Receipts Where Virtual Containers are used

This mode allows you process Assembly Receipts from Orders where Virtual Containers are used, and the stock being receipted is in a Non-Containerised state.

This mode will require a “Virtual” Container ID to be scanned prior to the normal process of recording the transaction. The receipted item will be added to stock with the Non-Containerised ‘--' attribute.

If further items are being recorded to a different Virtual Container ID, you must scan FUNCTION70 (Clear the ‘Virtual Container ID) before scanning a new ‘Virtual’ Container ID. This means that all subsequent transactions will use that Container ID.

Examples:

- *Where Finished Product is being receipted from the production directly into stock in a Non-Containerised state*

FUNCTION7 (VCTR <> CTR) (Refer Fig 7)

Containerised Assembly Receipts with Virtual Container In Use

Applicable Transaction Types:

- Assembly Receipts Where Virtual Containers are used

This mode allows you process Assembly Receipts from Orders where Virtual Containers are used, and the stock being receipted will be a Containerised state.

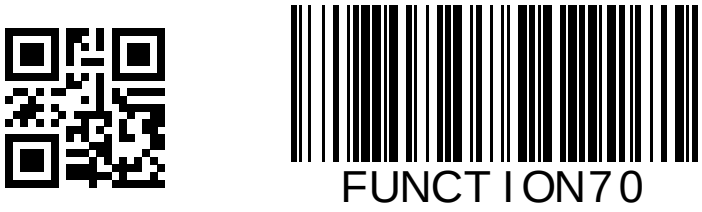
Freeway will request a “Virtual” Container ID along with a stock “To” Container ID to be scanned prior to the normal process of recording the transaction.

If further items are to be recorded with either different ‘Virtual’ or ‘To’ Container ID’s you must clear the respective Container ID values (either FUNCTION70 or FUNCTION71) before scanning a different “Virtual” or “To” Container ID. This means that all subsequent transactions will use those Container IDs.

Examples:

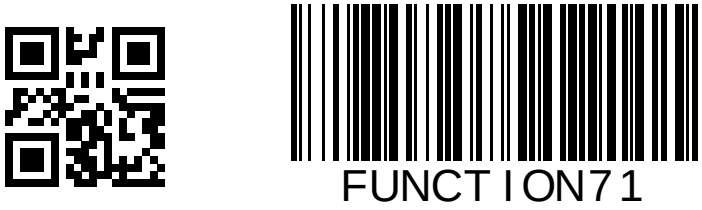
- *Where Finished Product is being receipted from the production directly onto a stock Container. Eg: pallet*

FUNCTION70 (Clear ‘From’ Container ID)



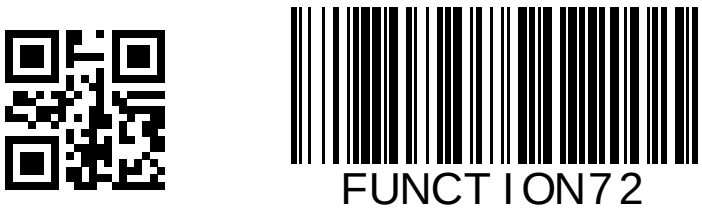
This mode clears the ‘From’ Container value from Freeway.

FUNCTION71 (Clear ‘To’ Container ID)



This mode clears the ‘To’ Container value from Freeway.

FUNCTION72 (Clear Both ‘From’ / ‘Virtual’ and To’ Container IDs)

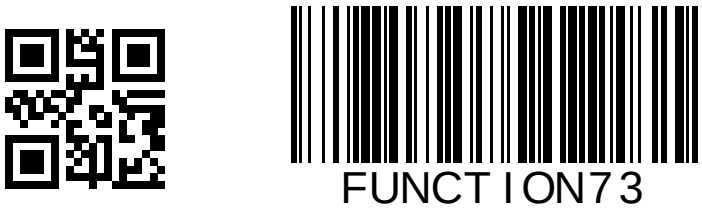


This mode clears both the ‘From’ / ‘Virtual’ and ‘To’ Container values from Freeway. This is applicable when you are in scanning modes which require **both** ‘From’ and ‘To’ container IDs. This Function can be used with any of these modes

- WCTR -> CTR
- CRT -> CTR
- VCTR <> CTR

FUNCTION73 (Commit Issue & Empty all 'From' Container Contents)

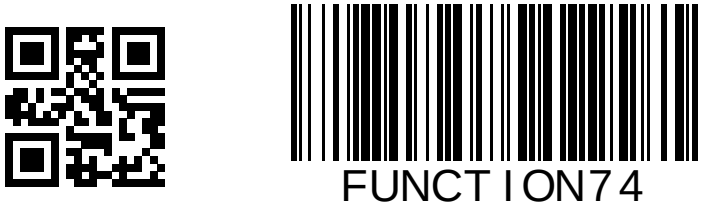
Used when you are emptying the 'From' Container Contents



This mode is only required when processing Whole Container type transactions (WCTR -> CTR or WCRT ->NCTR) in order to commit the transaction.

It is used when you are emptying the 'From' Container. Typically, this is used for all Whole Container Picking and Inventory Transfers when the 'From' Container is to be emptied and contents moved into another Container.

FUNCTION74 (Commit Issue & Retain all 'From' Container Contents)



This mode is used to commit a transaction and is taken when processing Whole Container type transactions (WCTR -> CTR) when you wish to Retain the 'From' Containers contents.

The reason why the contents are retained is that they may need to be determined at a later date.

Imagine a Shipping Container that arrives at the end destination. Within that Container, there are other Containers (eg: pallets), on these pallets are Outers, which in turn hold multiples of each item.

The rationale behind this is that the customer could scan the Shipping Container and that would show 'ALL' items from all levels (along with their respective Container ID's). Equally they could scan, a pallet, and that would show all outers on that pallet and so on..

The major difference between this function and FUNCTION73 is as follows:

FUNCTION73

- The 'From' Containers contents are copied through to the 'To' Container and the contents on the 'From' container are **removed** (This would be used for normal inventory transfers).

FUNCTION74

- The 'From' Containers contents are copied through to the 'To' Container and the contents on the 'From' container are **retained** (This would be used only for Whole Container Transfers into a Shipping Container)

Fig 0 (FUNCTION0)

FIG 0

Freeway Container Scanning Process
Non-Containerised To Non-Containerised

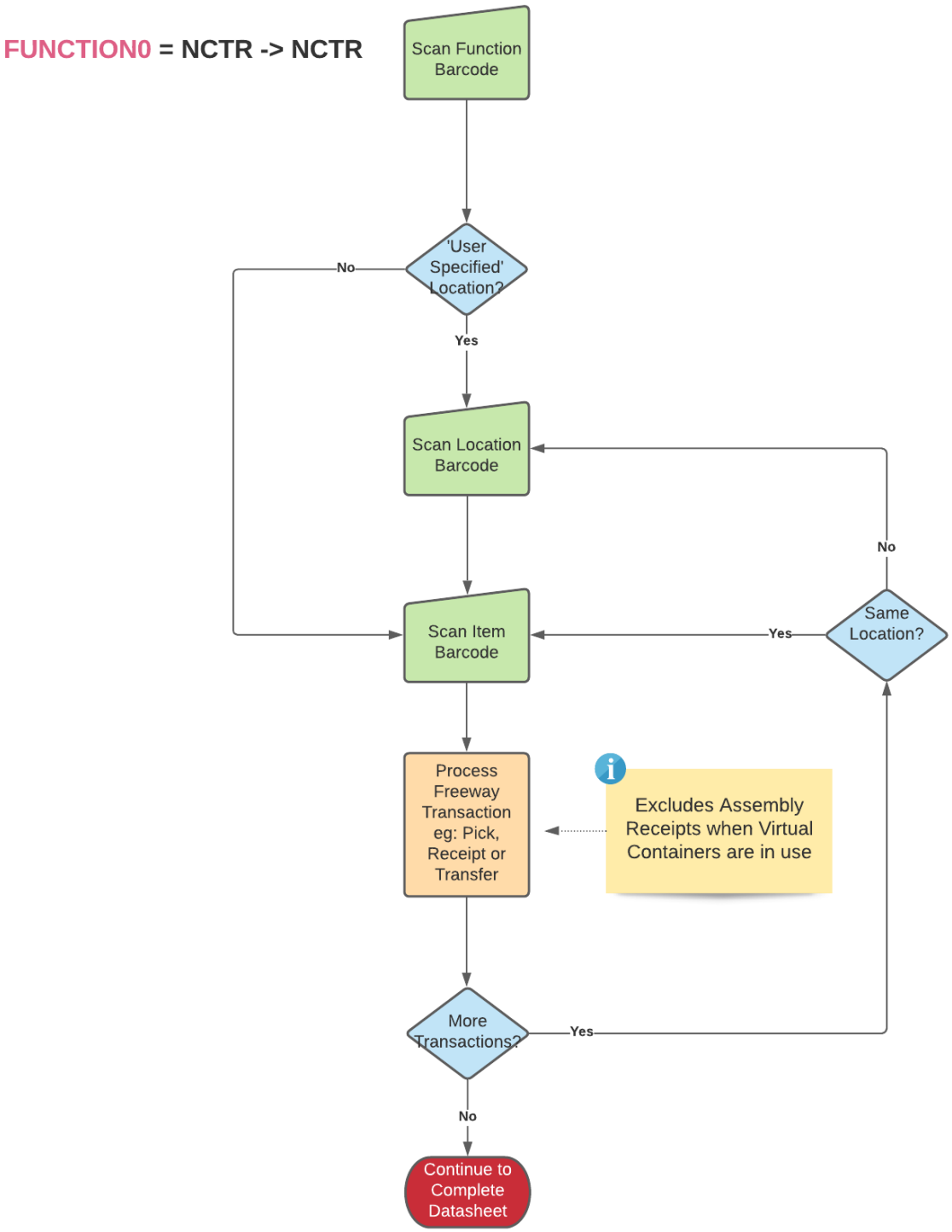


Fig 1 (FUNCTION1)

FIG 1

Freeway Container Scanning Process
Non-Containerised Stock To Container

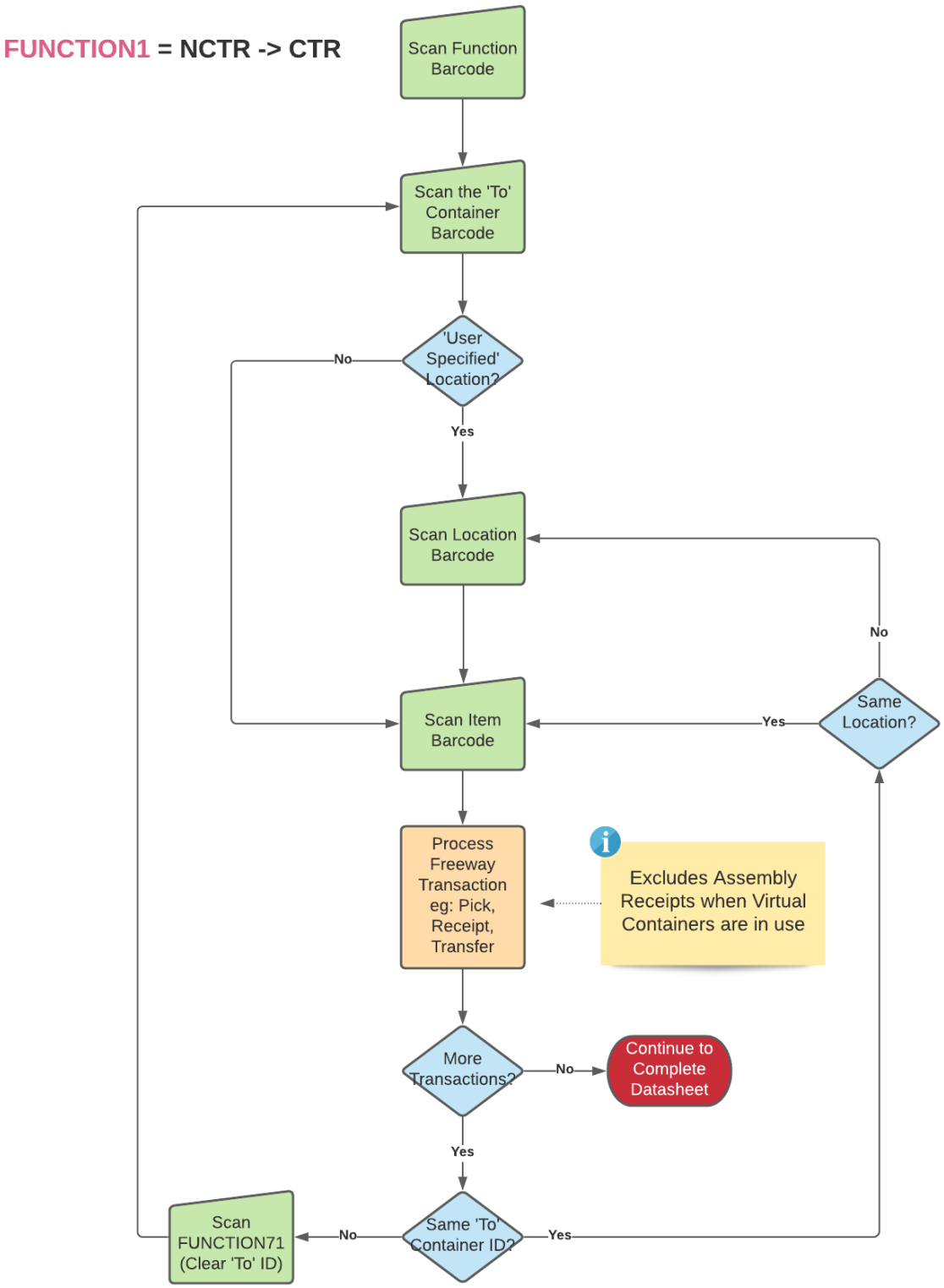


Fig 2 (FUNCTION2)

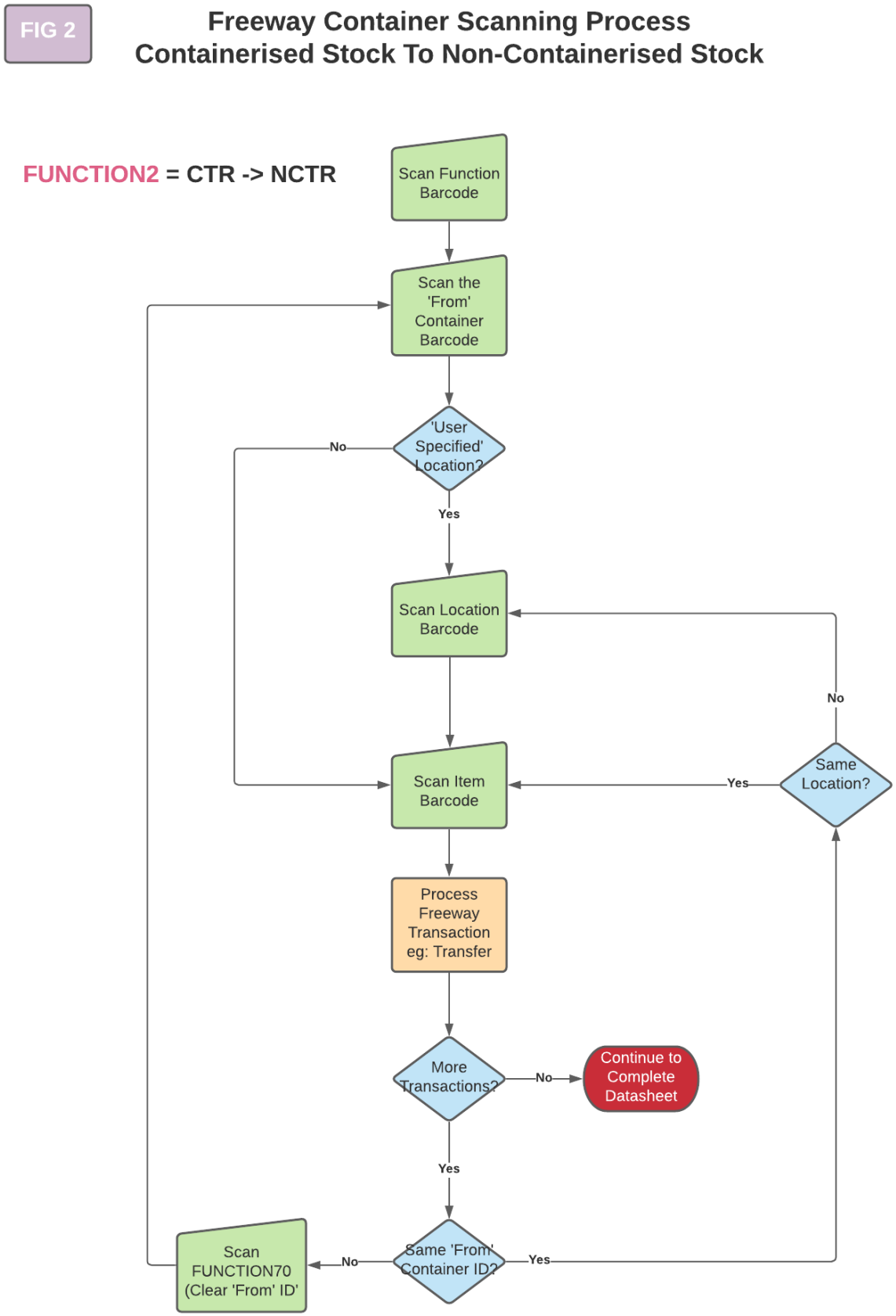


Fig 3 (FUNCTION3)

FIG 3

Freeway Container Scanning Process
Containerised Stock To Containerised Stock

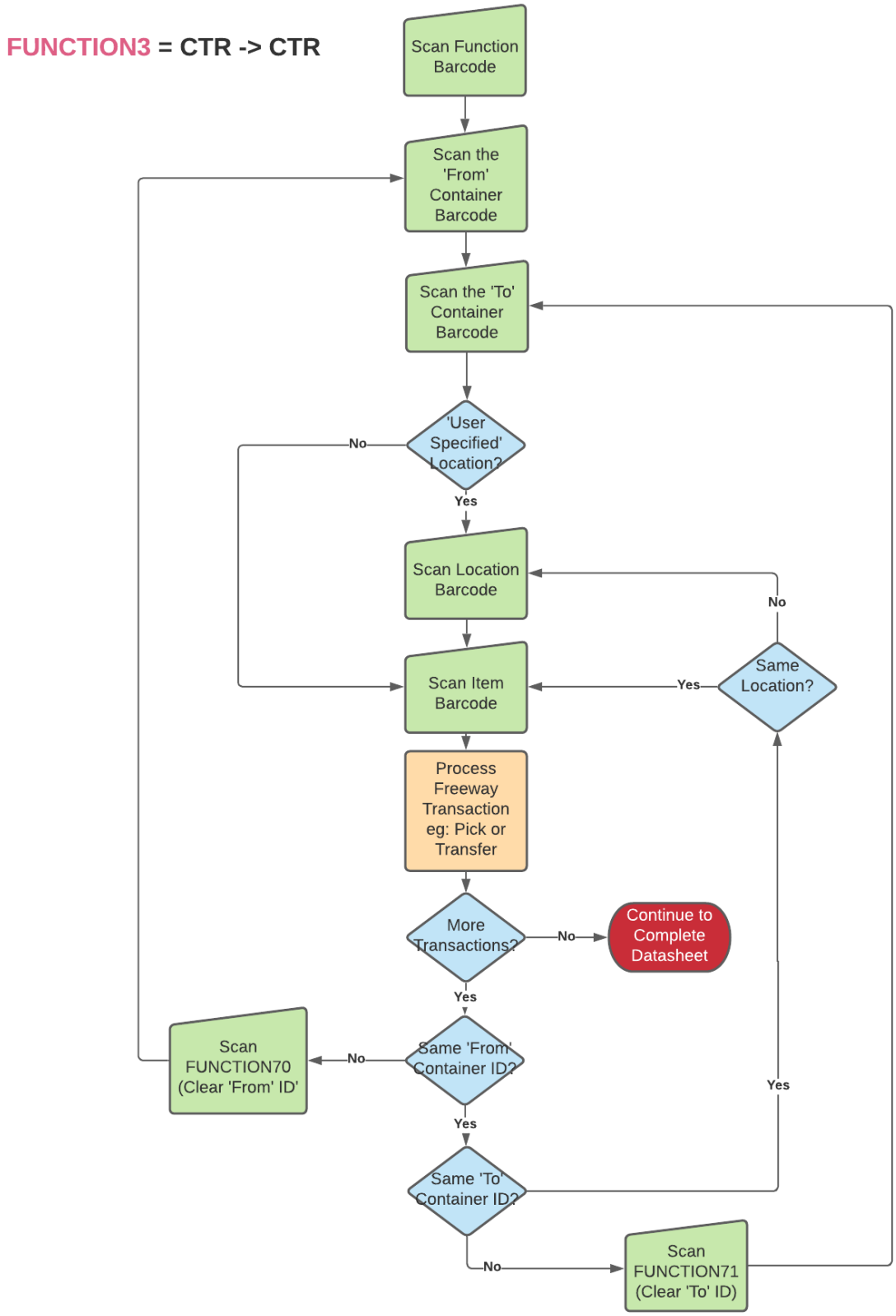


Fig 4 (FUNCTION4)

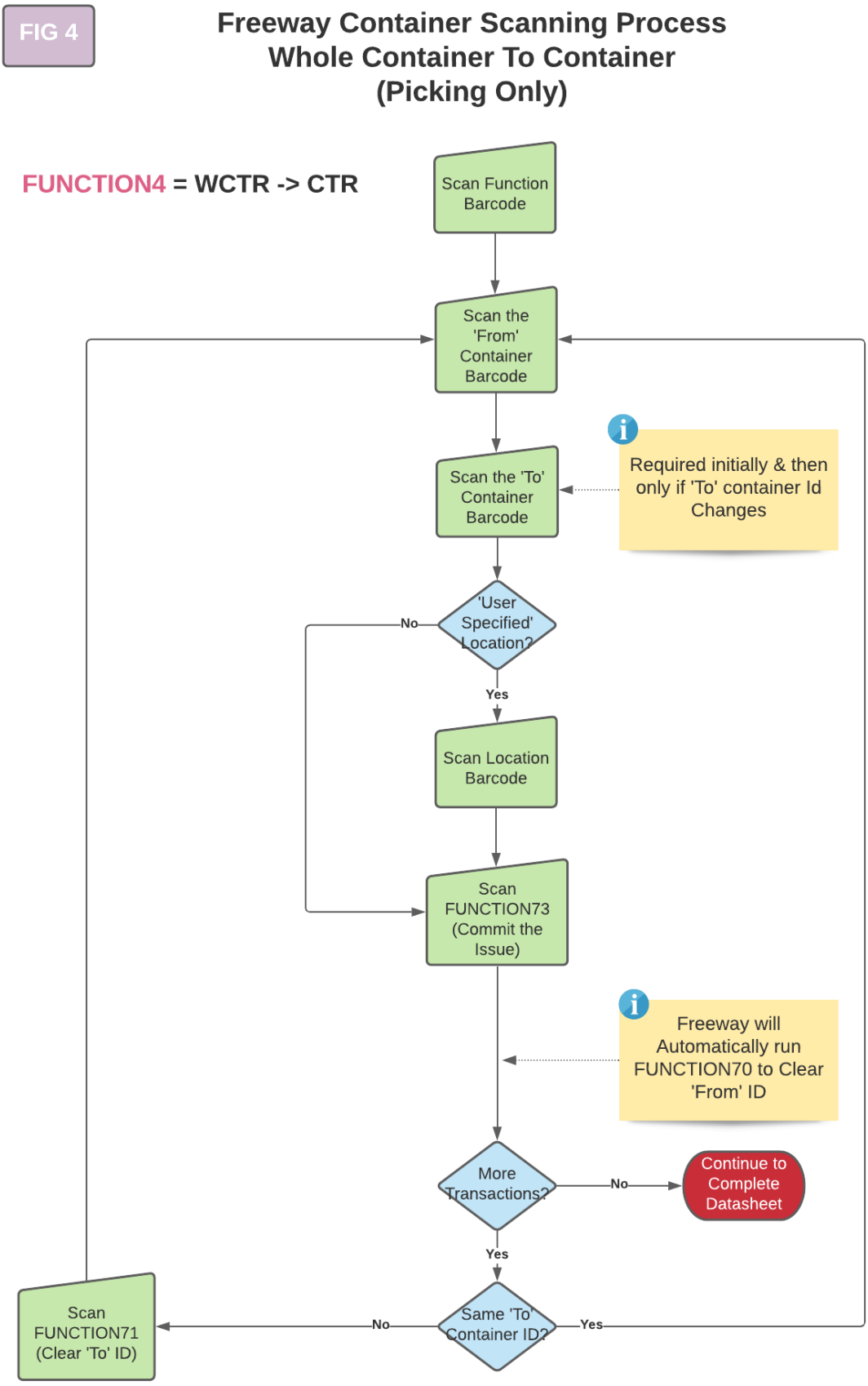


Fig 4a (FUNCTION4)

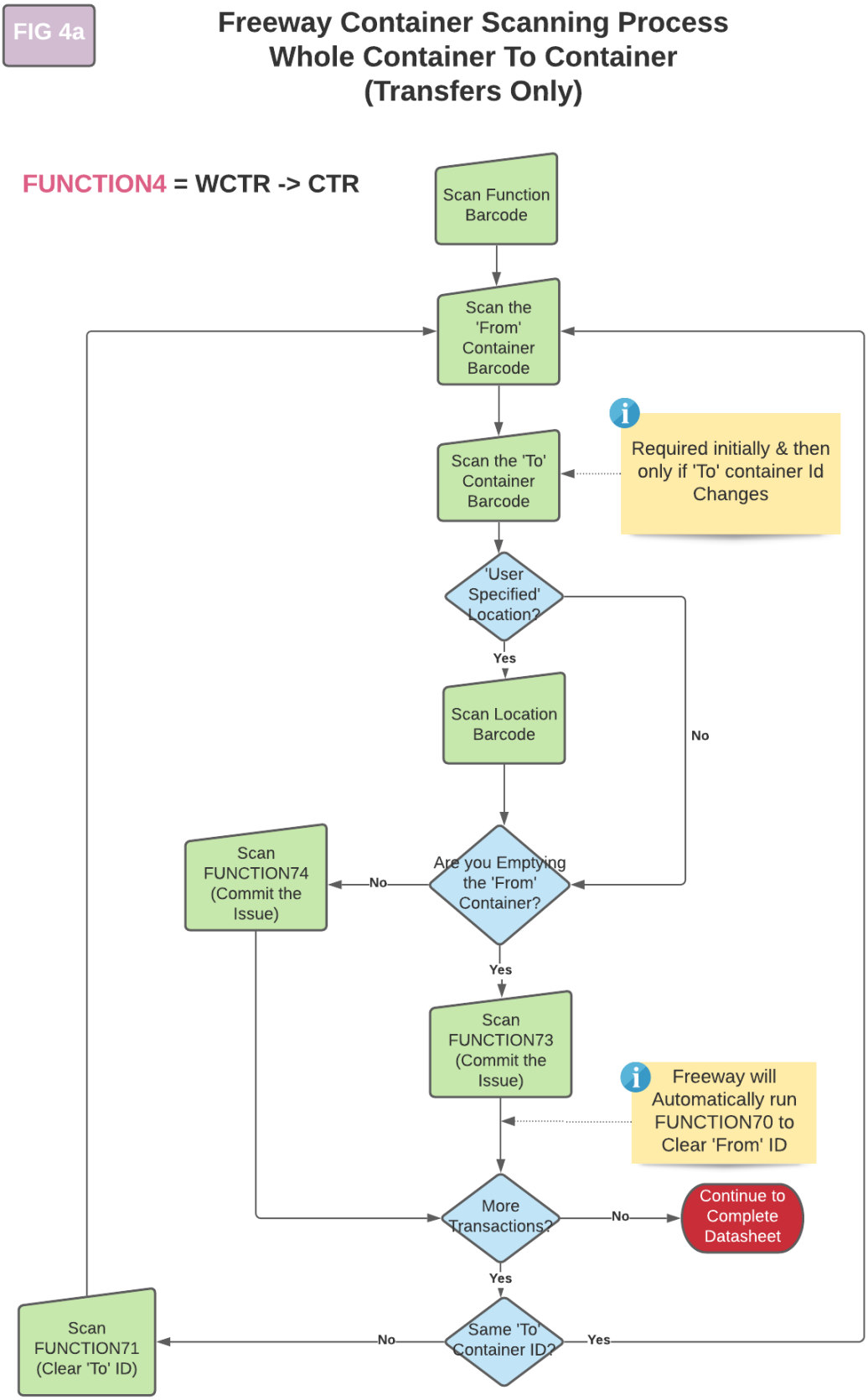


Fig 5 (FUNCTION5)

FIG 5

Freeway Container Scanning Process
Whole Container to Non-Containerised Stock

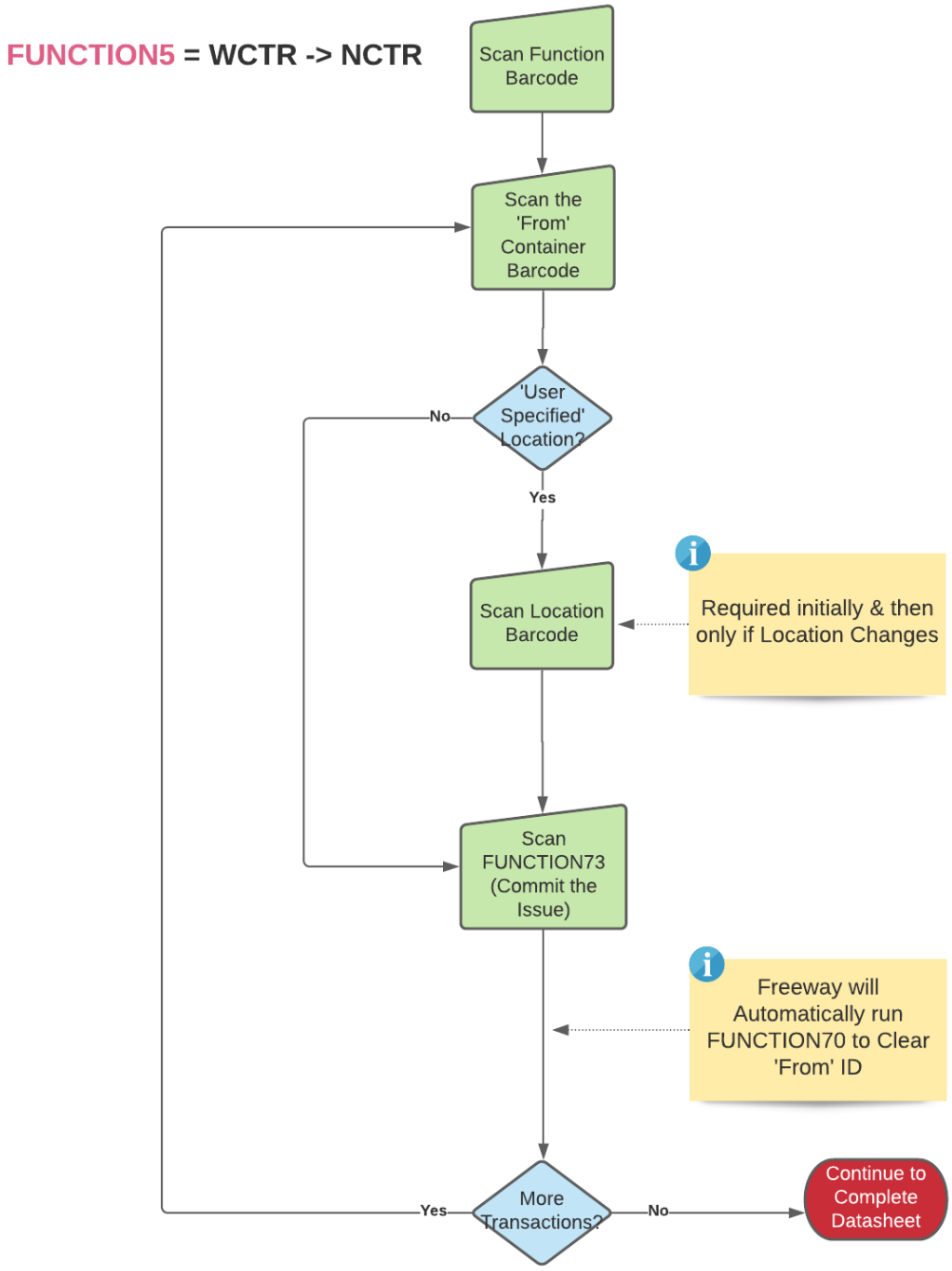


Fig 6 (FUNCTION6)

FIG 6

Freeway Container Scanning Process Non-Containerised Assembly Receipts With Virtual Container

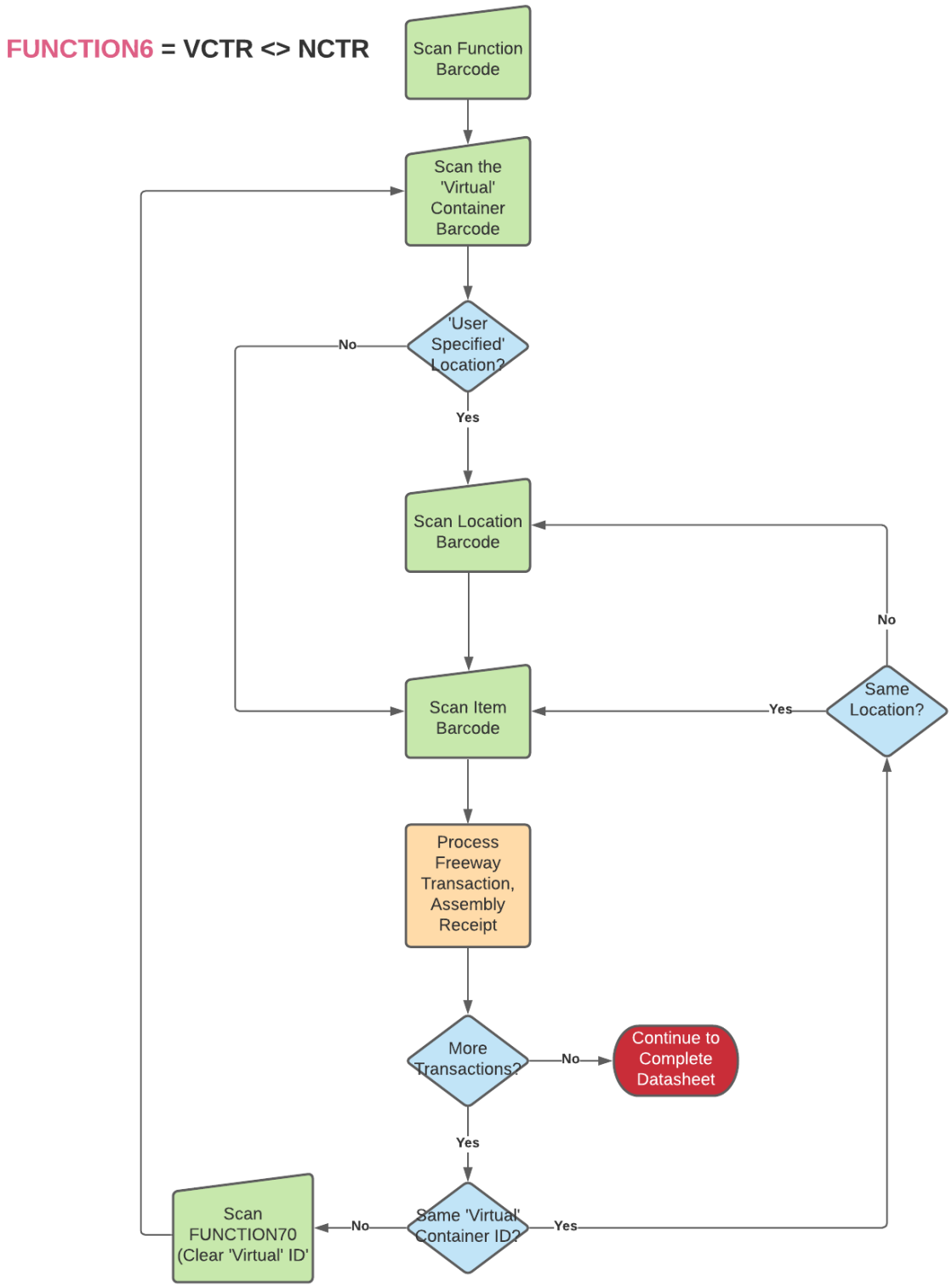
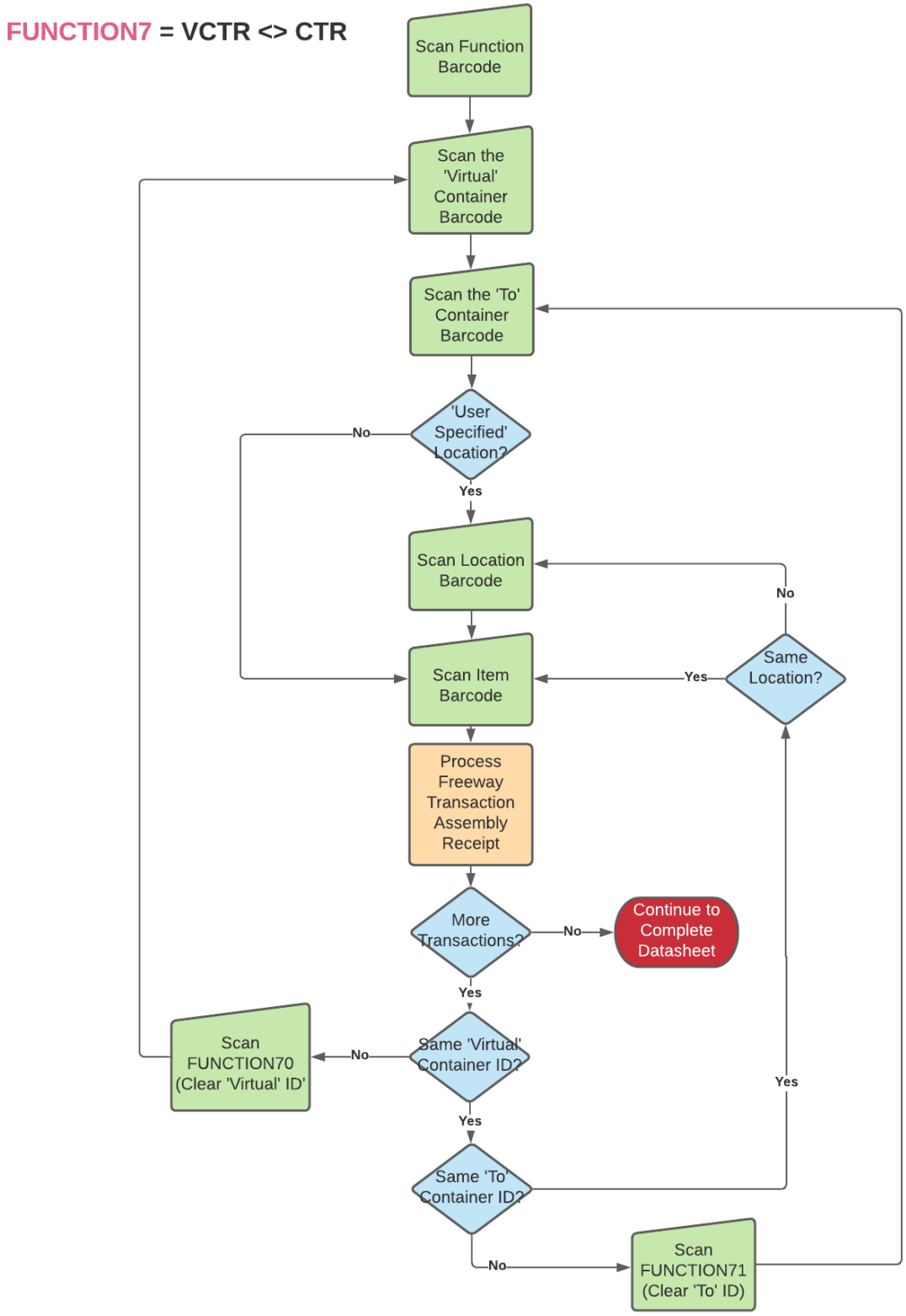


Fig 7 (FUNCTION7)

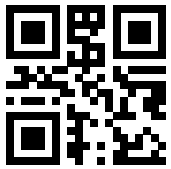
FIG 7

Freeway Container Scanning Process
Containerised Assembly Receipts with Virtual Container

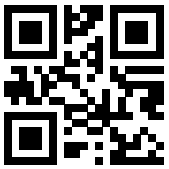


Function Mode Barcodes

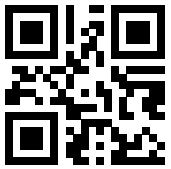
FUNCTION0
(NCTR -> NCTR)



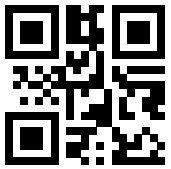
FUNCTION1
(NCTR -> CTR)



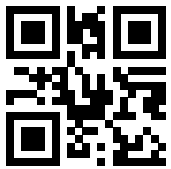
FUNCTION2
(CTR -> NCTR)



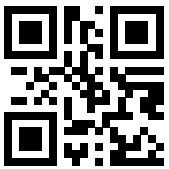
FUNCTION3
(CTR -> CTR)



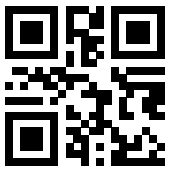
FUNCTION4
(WCTR -> CTR)



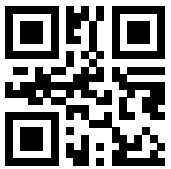
FUNCTION5
(WCTR -> NCTR)



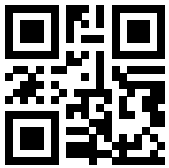
FUNCTION6
(VCTR -> NCTR)



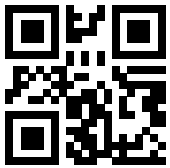
FUNCTION7
(VCTR -> CTR)



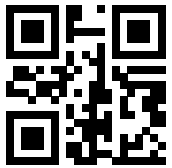
FUNCTION70
(Clear 'From' ID)



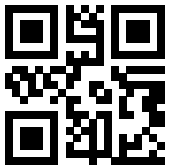
FUNCTION71
(Clear 'To' ID)



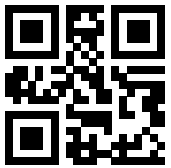
FUNCTION72
(Clear Both IDs)



FUNCTION73
(Commit Issue Empty)

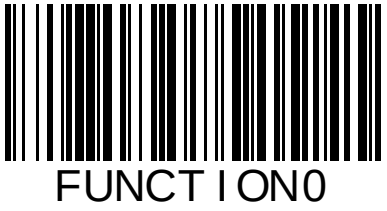


FUNCTION74
(Commit Issue Retain)



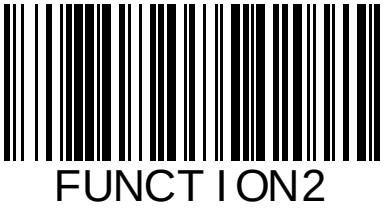
Function Mode Barcodes

FUNCTION0
(NCTR -> NCTR)

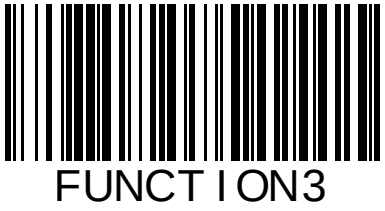


FUNCTION1
(NCTR -> CTR)

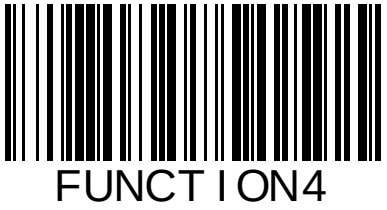
FUNCTION2
(CTR -> NCTR)



FUNCTION3
(CTR -> CTR)



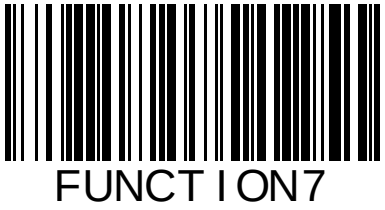
FUNCTION4
(WCTR -> CTR)



FUNCTION5
(WCTR -> NCTR)

FUNCTION6
(VCTR -> NCTR)

FUNCTION7
(VCTR -> CTR)



FUNCTION70
(Clear 'From' ID)

FUNCTION71
(Clear 'To' ID)

FUNCTION72
(Clear Both IDs)

FUNCTION73
(Commit Issue Empty)

 Revision 1.0.3

Function Mode Barcodes

FUNCTION74

(Commit Issue Retain)