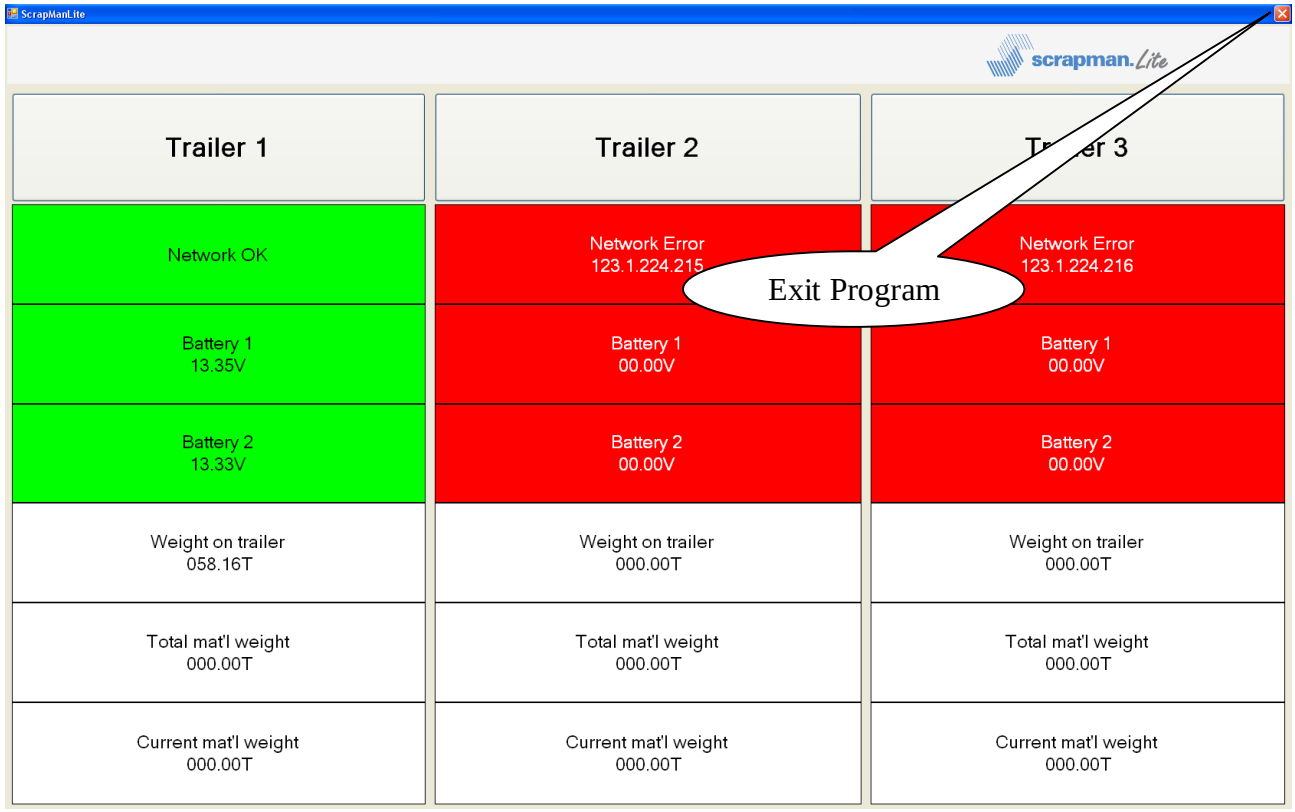
Operating Instructions

Status Screen



The ***Opening Screen*** is the normal display except when loading material to the bucket. It shows a summary of the information transmitted from the trailers on site as defined below;

Trailer No. This is the ñheadingò for the data listed; it is also the ñbuttonò to select a trailer for loading.

Network This shows the network status Green = OK, Red = Not OK and requiring attention. In this example, Trailers 2 and 3 are OFF the network and their IP (Internet Protocol) addresses are displayed.

Battery Shows voltages on each of the batteries; RED demands URGENT attention. In this example, because Trailers 2 and 3 are off the network, the battery voltage cannot be determined and hence RED.

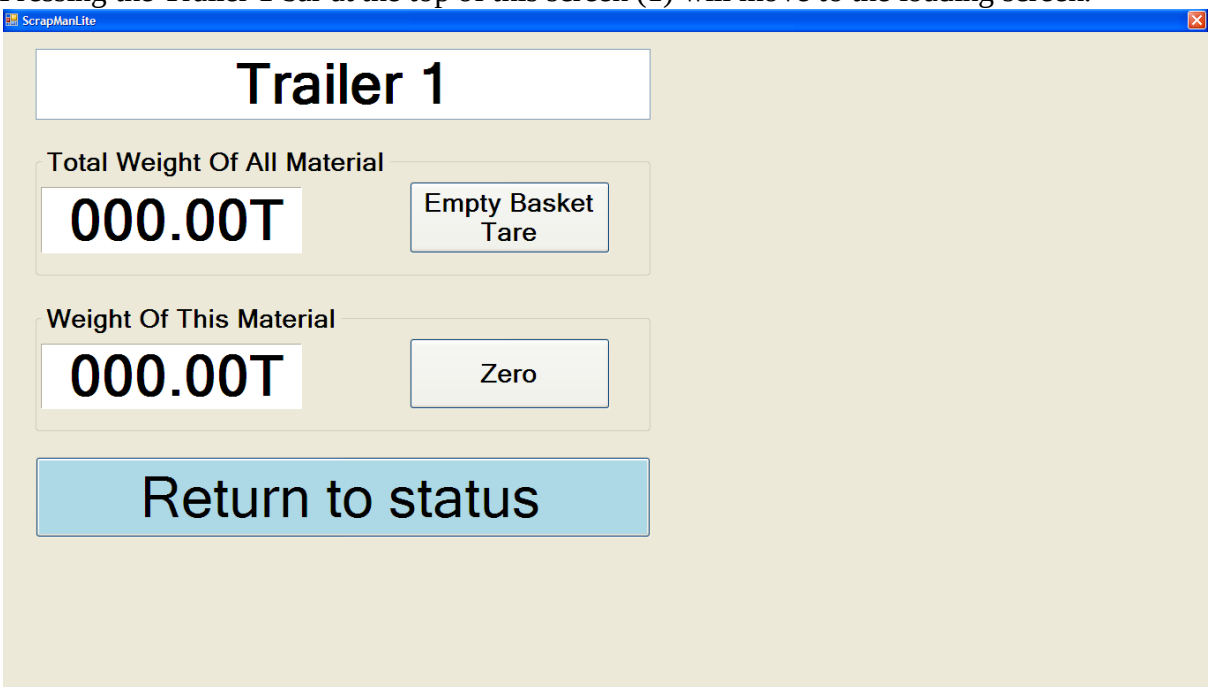
Weight on Trailer This is the **TOTAL WEIGHT** supported by the weighing system and includes the weighing platform, the bucket and any detritus on the platform. This field is NOT available for any form of editing or user adjustment. It is shown to provide backstop data in the event of someone carrying out an *Empty Bucket Tare* action by accident and ñlosingò the NET weight.

Total Mat'l weight This is the total weight of material loaded SINCE *Empty Bucket Tare* was last pressed. See *Empty Bucket Tare* on ***Weighing Screen***.

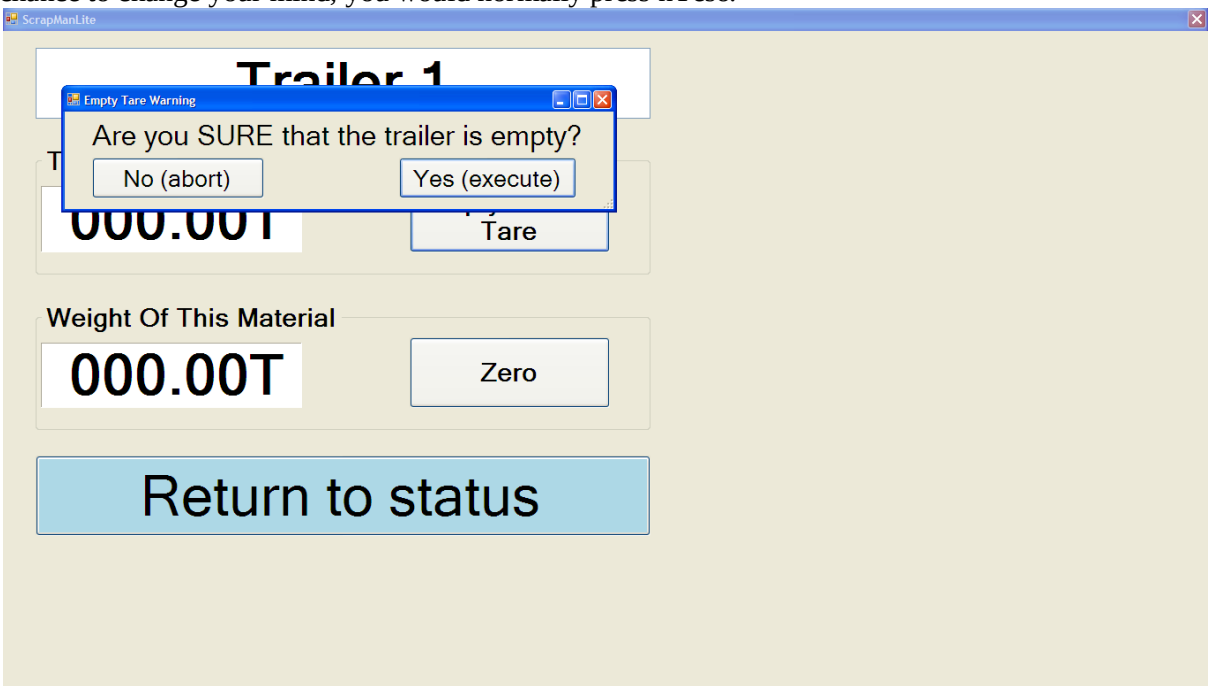
Current Mat'l weight This is the weight of material added since ***Zero*** was last pressed ON THIS TERMINAL ONLY. See *Zero* on *Weighing Screen*.

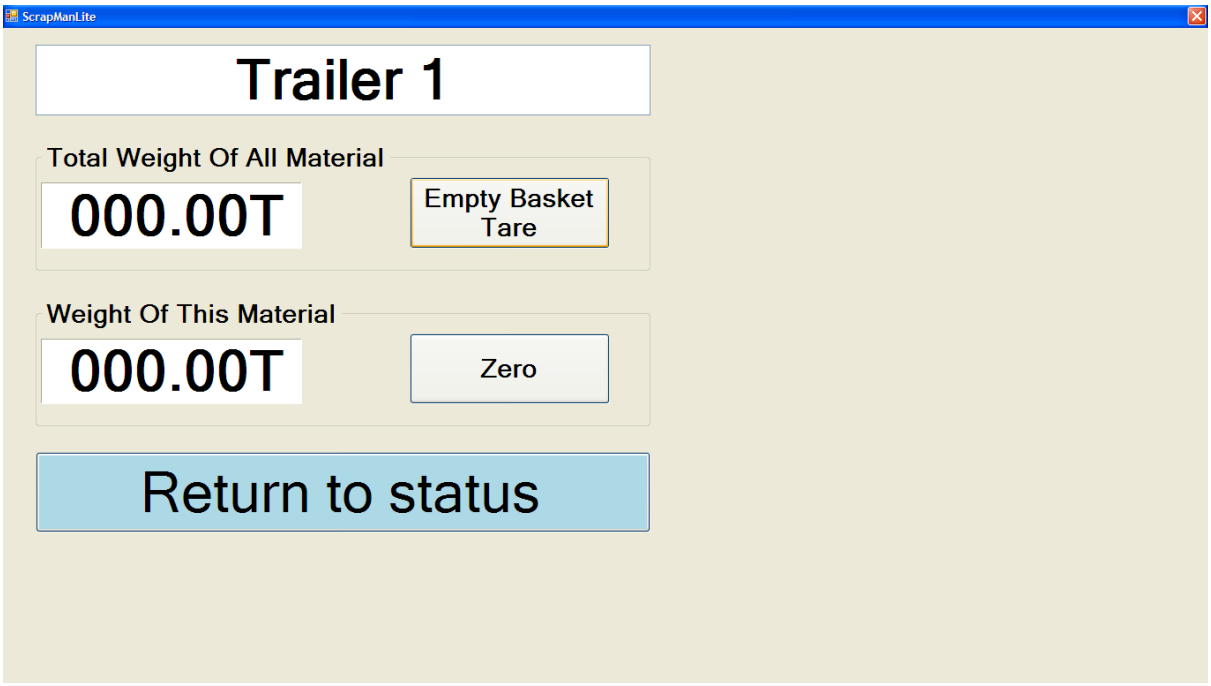
It is important to understand the significance of the word TARE: - *an allowance made for the weight of the packaging in determining the net weight of goods* (Oxford English Dictionary); in this case, discounting the weight of the empty bucket and the weighing platform.

Pressing the Trailer 1 bar at the top of this screen (1) will move to the loading screen.

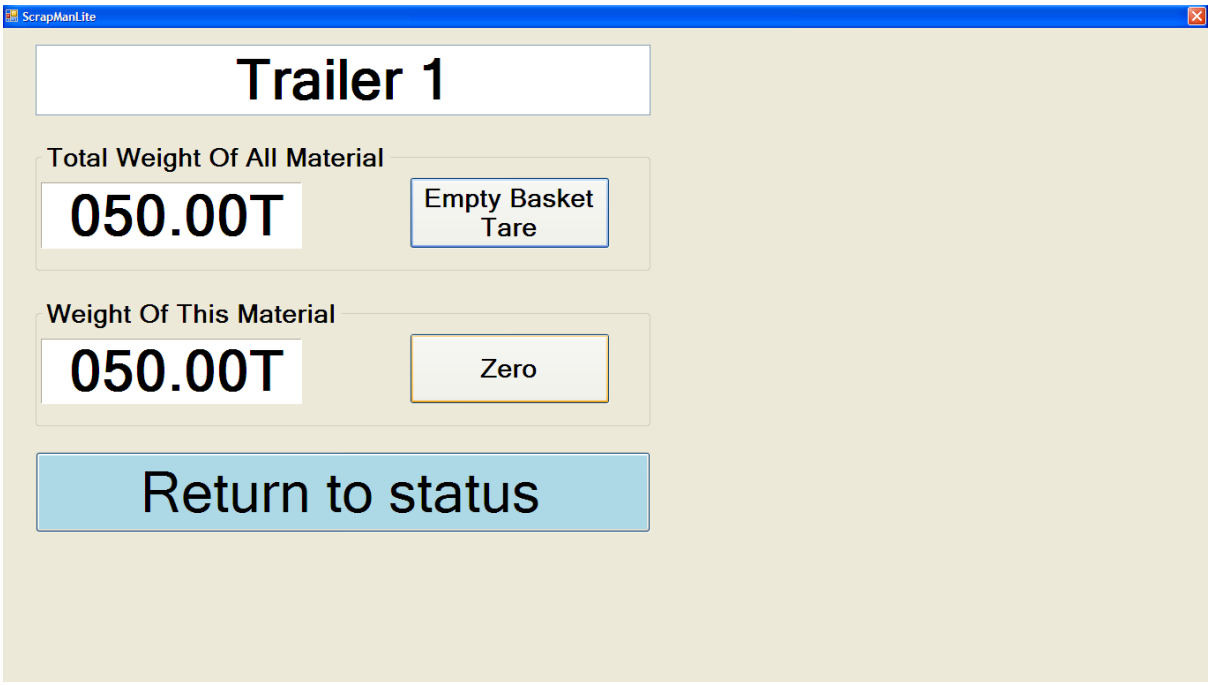


When a new, empty basket is put on the Car Frame it is important to do an ñEmpty Basket Tareò. This will clear the ñtotal weight of all materialò down to zero and be ready for loading. There is a warning to give you chance to change your mind; you would normally press ñYesò.



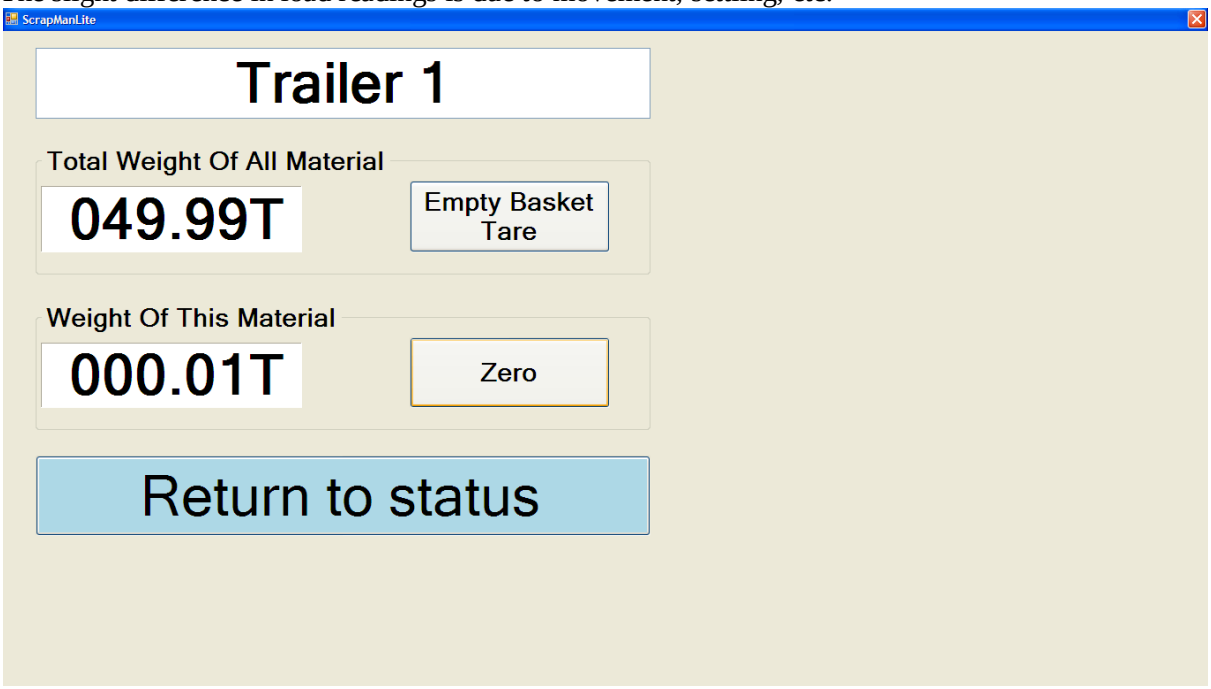


Screen BEFORE any material loaded

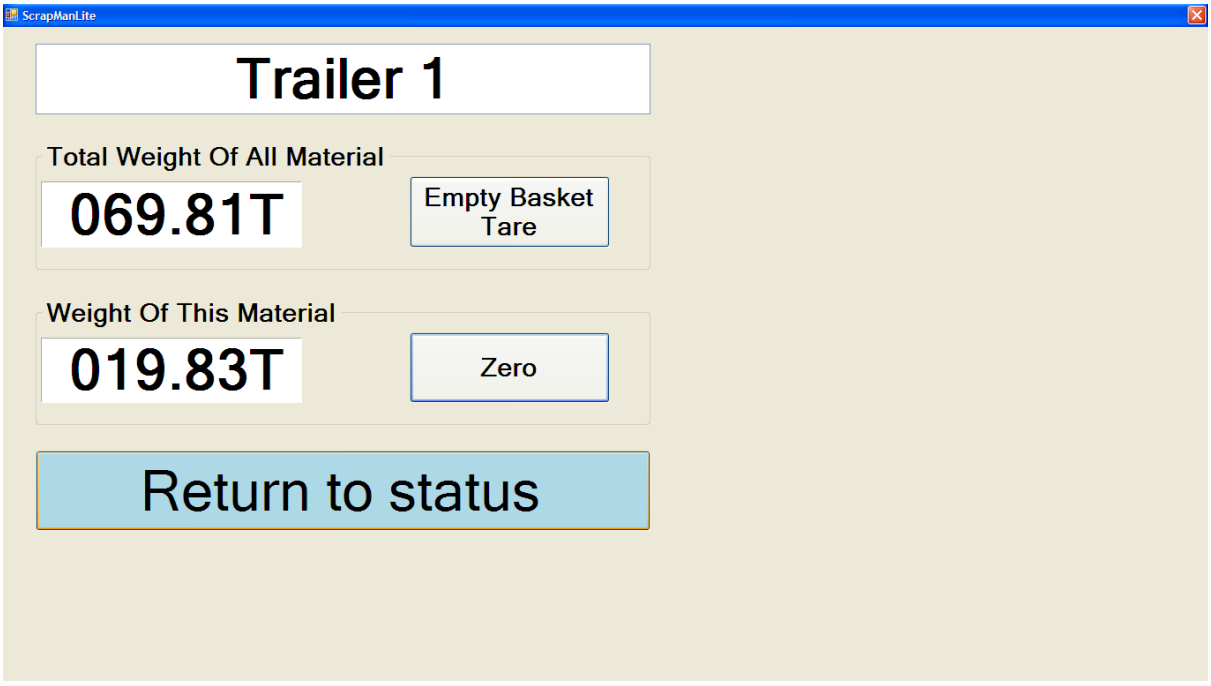


Screen having loaded 50.0T of material; in practise, it is most unlikely that anyone will be able to load EXACTLY 50.00 T of material; however, if 50T was the total requirement for that material, the zero button would be pressed now to showé é é

The slight difference in load readings is due to movement, settling, etc.



This is now ready to load some more material and when the requirement has been satisfied, the zero button is pressed again for more, new material etc. etc.



In this case, a further 20T has been loaded to the basket making the Total Weight 70T

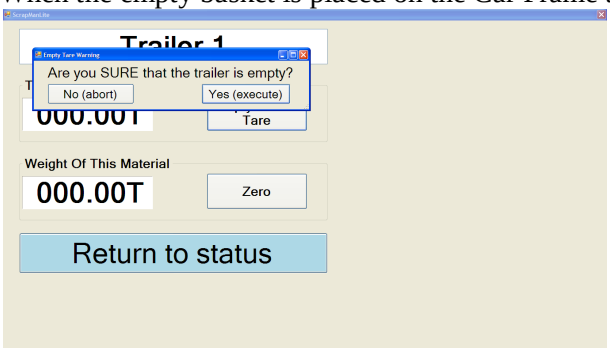
Normally loading would be done against a recipe list of material and required tonnage, it would be sensible to record the ACTUAL tonnage loaded next to the REQUIRED tonnage thus giving an accurate list of materials used.

The system DOES NOT record any weights
IT IS UP TO THE DRIVER OR CRANE OPERATOR TO RECORD WEIGHTS

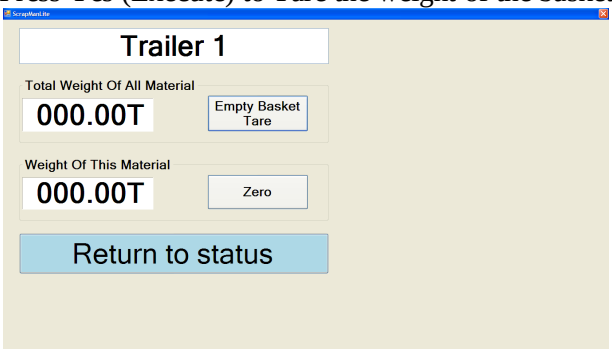
An example based around a recipe with 5 items; the lit would probably be printed from a spreadsheet or similar and the crane driver would be expected to fill in the ACTUAL loads as each is completedé é .

Item	Material Description	Required Tonnage	Actual Tonnage
1	Turnings	5.00	
2	Scrap 18/80 Stainless	20.00	
3	Scrap Mild Steel	60.00	
4	Nickel	1.00	
5	Lime	2.00	
6			
7			
8			
9			
10			
	Totals	88.00	

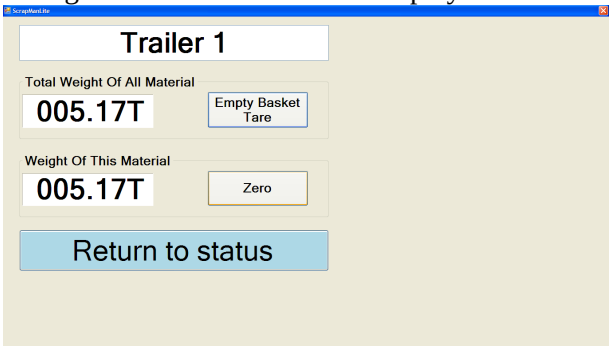
When the empty basket is placed on the Car Frame the ***Empty Basket Tare*** is pressed showingé .



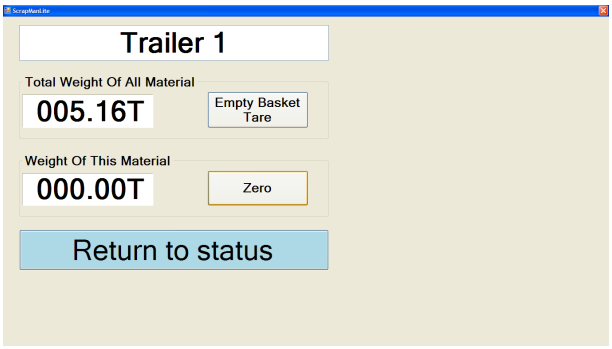
Press Yes (Execute) to Tare the weight of the basket



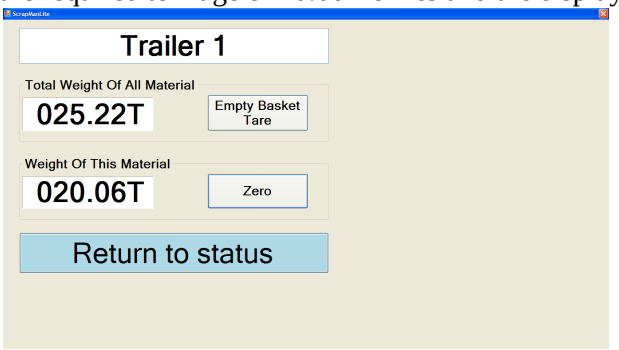
The first material ***Turnings*** is loaded until the ***Weight Of This Material*** is approx equal to the required tonnage of 5.00 Tonnes and the display will showé .



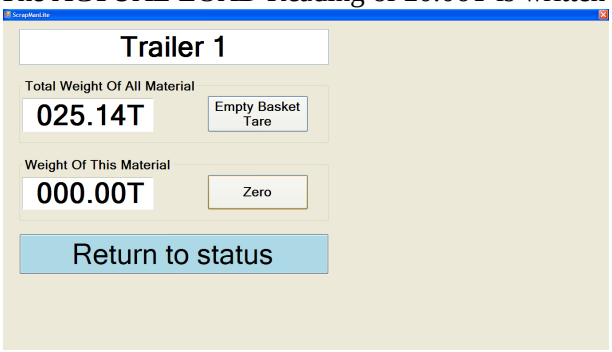
The ACTUAL LOAD Reading of 5.17T is written on the recipe and the Zero button is pressed showingé .



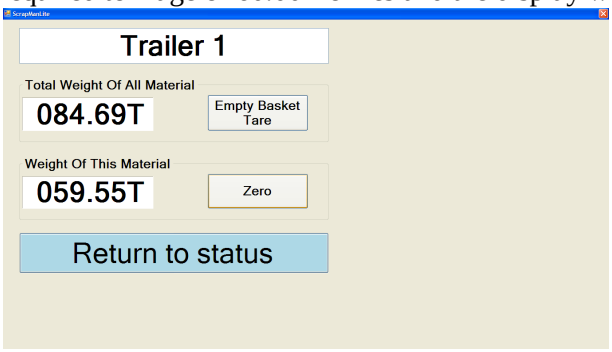
The second material ***Scrap 18/80 Stainless*** is loaded until the ***Weight Of This Material*** is approx equal to the required tonnage of 20.00 Tonnes and the display will showé .



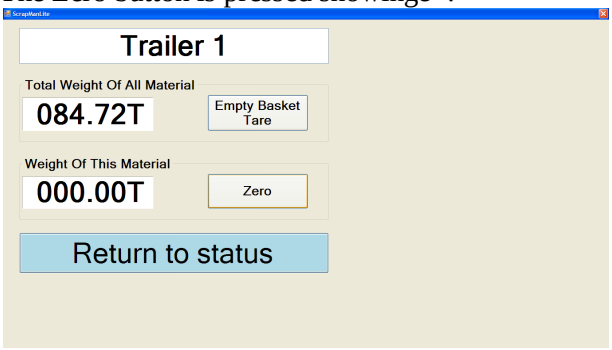
The ACTUAL LOAD Reading of 20.06T is written on the recipe and the Zero button is pressed showingé .



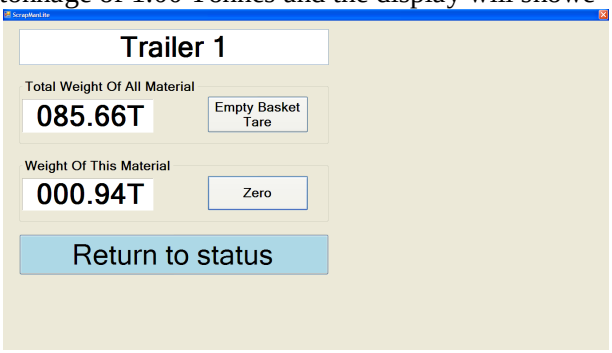
The third material ***Scrap Mild Steel*** is loaded until the ***Weight Of This Material*** is approx equal to the required tonnage of 60.00 Tonnes and the display will showé .



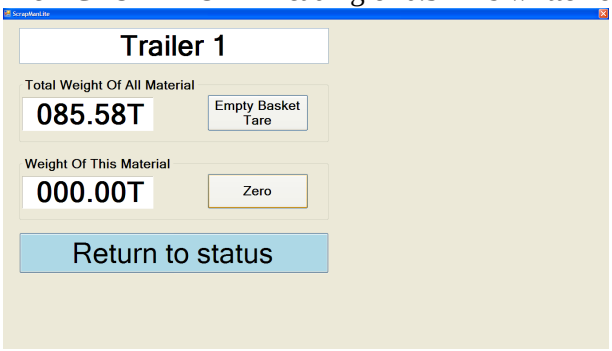
The Zero button is pressed showingé .



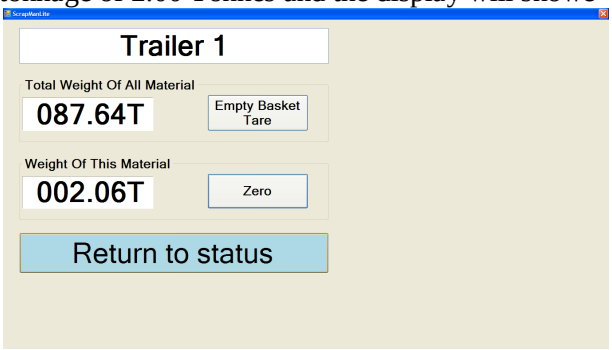
The Fourth material ***Nickel*** is loaded until the ***Weight Of This Material*** is approx equal to the required tonnage of 1.00 Tonnes and the display will showé .



The ACTUAL LOAD Reading of 0.94T is written on the recipe and the Zero button is pressed showingé .



The Fifth (Final) material ***Lime*** is loaded until the ***Weight Of This Material*** is approx equal to the required tonnage of 2.00 Tonnes and the display will showé .

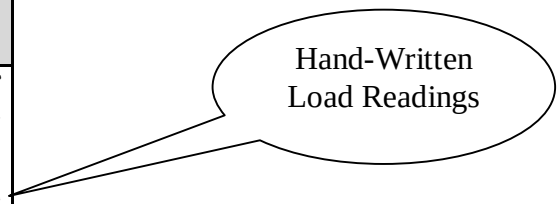


The ACTUAL LOAD Reading of 2.06T is written on the recipe and the cycle is complete

Once the basket has been removed, emptied and put pack on the Car Frame the whole cycle can repeat again.

The example of a recipe with 5 items completed and Actual Loads hand written

Item	Material Description	Required Tonnage	Actual Tonnage
1	Turnings	5.00	5.17
2	Scrap 18/80 Stainless	20.00	20.06
3	Scrap Mild Steel	60.00	59.55
4	Nickel	1.00	0.94
5	Lime	2.00	2.06
6			
7			
8			
9			
10			
	Totals	88.00	87.78



Important Summary

Empty Bucket TARE will TARE the weighing system at the trailer itself and the effects will be seen by ALL the computer terminals on site; it will normally be actioned by the crane driver at first port of call in the scrapyard **AFTER** loading an empty bucket in the meltshop and **BEFORE** commencing loading. This will set *Total Weight Of All Material* to zero which will obviously rise upward as material is loaded.

ZERO will zero the *Weight of this Material* on that one terminal **ONLY**. It is local and WILL NOT be seen by any other terminal. It will be carried out in the individual crane computer itself and will deduct the value of the accumulated net load so far (to the point of pressing Zero) from all subsequent accumulated load readings until the target weight is achieved. This can be done repeatedly and would normally be done at each loading pen.

Example 1 Two cranes loading two buckets quite independently – first loading point
When the empty bucket arrives on a trailer to the loading point for Crane 1, the crane driver will select the appropriate trailer (1,2 or 3) from the *Opening Screen* and once the trailer is parked and stable he will press *Empty Bucket Tare* and when prompted ñAre you Sure Y/N?ò press the ñ***Y***ò button. This will clear both displays (*Total Weight Of All Material* and *Total Weight Of This Material*) to zero.

He can then load material at will until the *Total Weight Of This Material* is about the correct Target Weight. He can then press *Accept* to revert to the *Opening Screen*

The second crane driver will be doing EXACTLY the same but with a different Crane, Bucket and Trailer.

Example 2 Two cranes loading two buckets quite separately - subsequent scrap loading points
When the partially loaded bucket arrives on its trailer to the next scarp loading point for Crane 1, the crane driver will select the appropriate trailer (1,2 or 3) from the *Opening Screen* and once the trailer is parked and stable he will press the *Zero* button. This will clear the *Total Weight Of This Material*) to zero but the *Total Weight Of All Material* will remain untouched ï an accumulated total.

He can then load material at will until the *Total Weight Of This Material* is about the correct Target Weight and can then press *Accept* to revert to the *Opening Screen*

The second crane driver will be doing EXACTLY the same but with a different Crane, Bucket and Trailer.

Example 3 Two cranes loading the SAME material to one Bucket / Trailer
When the empty bucket arrives on a trailer to the loading point for Crane 1, the crane driver will select the appropriate trailer (1,2 or 3) from the *Opening Screen* and once the trailer is parked and stable he will press *Empty Bucket Tare* and when prompted ñAre you Sure Y/N?ò press the ñ***Y***ò button. This will clear both displays (*Total Weight Of All Material* and *Total Weight Of This Material*) to zero.

At the same time, Crane driver 2 will also select the SAME trailer from the Opening Screen. When at the Weighing Screen he can press *Zero* and will see the same *Total Weight Of This Material* as Crane 1 driver.

Both drivers can then load material at will until the *Total Weight Of This Material* is about the correct Target Weight. He can then press accept to revert to the *Opening Screen*

Example 4 One crane loading material to two Buckets / Trailers at the same time
When the empty bucket arrives on a trailer to the loading point for Crane 1, the crane driver will select the appropriate trailer (1,2 or 3) from the *Opening Screen* and once the trailer is parked and stable he will press *Empty Bucket Tare* and when prompted ñAre you Sure Y/N?ò press the ñ***Y***ò button. This will clear both displays (*Total Weight Of All Material* and *Total Weight Of This Material*) to zero.

When the second bucket arrives on a trailer to the loading point the crane driver will select the appropriate trailer (1,2 or 3) from the *Opening Screen* and once the trailer is parked and stable he will press *Empty Bucket Tare* and when prompted ñAre you Sure Y/N?ò press the ñ***Y***ò button. This will clear both displays (*Total Weight Of All Material* and *Total Weight Of This Material*) to zero.

He can then load material at will ñflippingò between the two trailers from the opening screen to display the loads until the *Total Weight Of This Material* is about the correct Target Weight. He can then press accept to revert to the *Opening Screen*

Most permutations of loading material are permissible with this application program with one notable exception: two cranes CANNOT load two DIFFERENT materials to the **SAME** bucket at the **SAME** time. This calls for on-board crane weighing (notoriously inaccurate) as well as trailer weighing with considerably more sophisticated software.