

# RD40RF Remote Display



**RD40RF**

## **User Instructions**

**ENGLISH**

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#### IMPORTANT

When programming or configuring the equipment you must ensure that you comply with all relevant standards and legislation. The example settings given in this book may not be legal for trade with the public.

## Declarations of compliance

### United States

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### Canada

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

	<b>Declaration of Conformity</b> <b>Verklaring van overeenstemming</b> <b>Déclaration de Conformité</b>	<b>Konformitätserklärung</b> <b>Dichiarazione di Conformità</b> <b>Declaración de Conformidad</b>
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Manufacturer	Avery Weigh-Tronix
Type	640/640M/640XL RD40/RD40XL/ RD40RF
corresponds to the requirements of the following EC directives:	
EMC Directive	89/336/EEC
Low Voltage Directive	73/23/EEC
The applicable harmonised standards are:	
EN 60950-1:2002	EN 61000-6-1:2001
EN 61000-6-3:2001	
Avery Weigh-Tronix, LLC Reg. Office: Foundry Lane, Smethwick, West Midlands B66 2LP, England. Registered in England No: 595129	

Fabrikant	Avery Weigh-Tronix
Type	640/640M/640XL RD40/RD40XL/ RD40RF
is in overeenstemming met de voorschriften van de volgende EG richtlijnen:	
EMC Richtlijn	89/336/EEG
Laagspanningsrichtlijn	73/23/EEG
Toegepaste geharmoniseerde normen:	
EN 60950-1:2002	EN 61000-6-1:2001
EN 61000-6-3:2001	
Avery Weigh-Tronix, LLC Vestigingsadres: Foundry Lane, Smethwick, West Midlands B66 2LP, England. Geregistreerd in Engeland nr: 595129	

Fabricant	Avery Weigh-Tronix
Type	640/640M/640XL RD40/RD40XL/ RD40RF
correspond aux exigences des directives CE suivantes :	
Directive CEM	89/336/CEE
Directive Basse Tension	73/23/CEE
Les normes harmonisées applicables sont :	
EN 60950-1:2002	EN 61000-6-1:2001
EN 61000-6-3:2001	
Avery Weigh-Tronix, LLC Siège social : Foundry Lane, Smethwick, West Midlands B66 2LP, England. Société immatriculée en Angleterre sous le No : 595129	

Hersteller	Avery Weigh-Tronix
Typ	640/640M/640XL RD40/RD40XL/ RD40RF
entspricht den Anforderungen folgender EG-Richtlinien:	
EMV-Richtlinie	89/336/EWG
Niederspannungs-Richtlinie	73/23/EWG
Die angewendeten harmonisierten Normen sind:	
EN 60950-1:2002	EN 61000-6-1:2001
EN 61000-6-3:2001	
Avery Weigh-Tronix, LLC Geschäftssitz: Foundry Lane, Smethwick, West Midlands B66 2LP, England. Eingetragen in England unter Nr. 595129	

Produttore	Avery Weigh-Tronix
Modello	640/640M/640XL RD40/RD40XL/ RD40RF
è conforme alle caratteristiche previste dalle seguenti direttive CE:	
Normativa EMC	89/336/CEE
Normativa per la bassa tensione	73/23/CEE
Le norme standard armonizzate e nazionali applicate sono:	
EN 60950-1:2002	EN 61000-6-1:2001
EN 61000-6-3:2001	
Avery Weigh-Tronix, LLC Sede legale: Foundry Lane, Smethwick, West Midlands B66 2LP, England. Depositata in Gran Bretagna al numero di registro: 595129	

Fabricante	Avery Weigh-Tronix
Tipo	640/640M/640XL RD40/RD40XL/ RD40RF
conforme a las exigencias de las siguientes directivas CE:	
Directiva CME	89/336/CEE
Directiva de baja tensión	73/23/CEE
Las normas armonizadas en vigor son:	
EN 60950-1:2002	EN 61000-6-1:2001
EN 61000-6-3:2001	
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This manual covers the installation and setup of the RD40RF wireless remote display and the RF setup on the Model 640 Series indicator. If programming the backlight or changing the key volume, check the Model 640 manual for instructions. The RD40RF only interfaces with the following Models:

- Model 640M
- Model 640
- Model 640XL

In addition these indicators must be fitted with the RD40RF option. After installation, if the system was pre-configured from the factory, the system should be operational when they are turned on. If not please reference the *SETUP* section.

Below is an illustration of the remote display front panel.

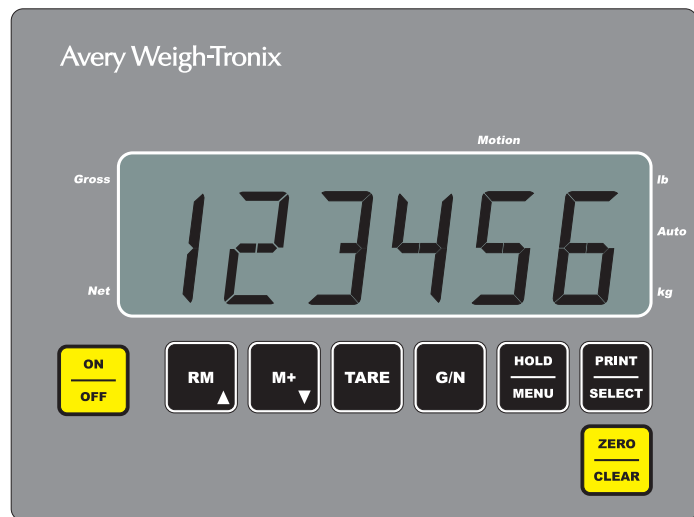


Figure 1.1 RD40RF front panel

## 1.1 RD40RF Operation

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Once the system has been properly programmed, check the operation observing the following:

- The wireless RD40RF should display the same weight as on the Model 640
- All of the function keys should function in the weighing mode on the RD40RF just like they would on the Model 640RF indicator.
- If the display shows - - - - - then this means the RF is not communicating back and forth between the RD40RF and the Model 640RF unit. Reference [RD40RF Setup of the Wireless Option](#) on page 12 and configure the RD40RF and indicator properly.

# Installation

# 2

## 2.1 Installation



*WARNING: Do not plug into a 24VDC output as this can damage the RD40RF and will void the warranty.*

The installation of the RD40RF system amounts to installing the RD40RF into the following situations:

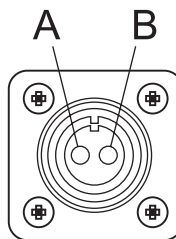
A Remote Location installation – Such as a feed room, or any place the wireless remote needs to be placed in order to use for the proper application. This installation requires a 115VAC to 12VDC wall mount transformer (AWT P/N 46869-0011) that is plugged into a 115VAC outlet and then the 12VDC output of the wall mount transformer then plugs into the 10-17VDC 2 pin connector on the bottom of the RD40RF.

- Front End Loader – When installing into a front end loader than a 10-17 VDC power cable is included, simply wire the cable into the 12VDC supplied on the front end loader.
  - White +12VDC
  - Black GND

The Model 640, 640XL or 640M are the only indicators that will work with the RD40RF and require the indicator to be fitted with the RD40RF wireless option. Please consult your distributor or dealer to make sure the indicator you have has been properly fitted with this option.

Power connector the RD40RF is shown below.

### 2-Pin power input



Pin	Description
A	+12V
B	GND

Outside view  
(Female)

## 2.2 Front Panel /Connector Options

The wireless RD40RF uses the same overlay as the Model 640M, but has only a 2 pin 10-17 VDC connector and an antenna on the bottom of the indicator. See Figure 2.1.

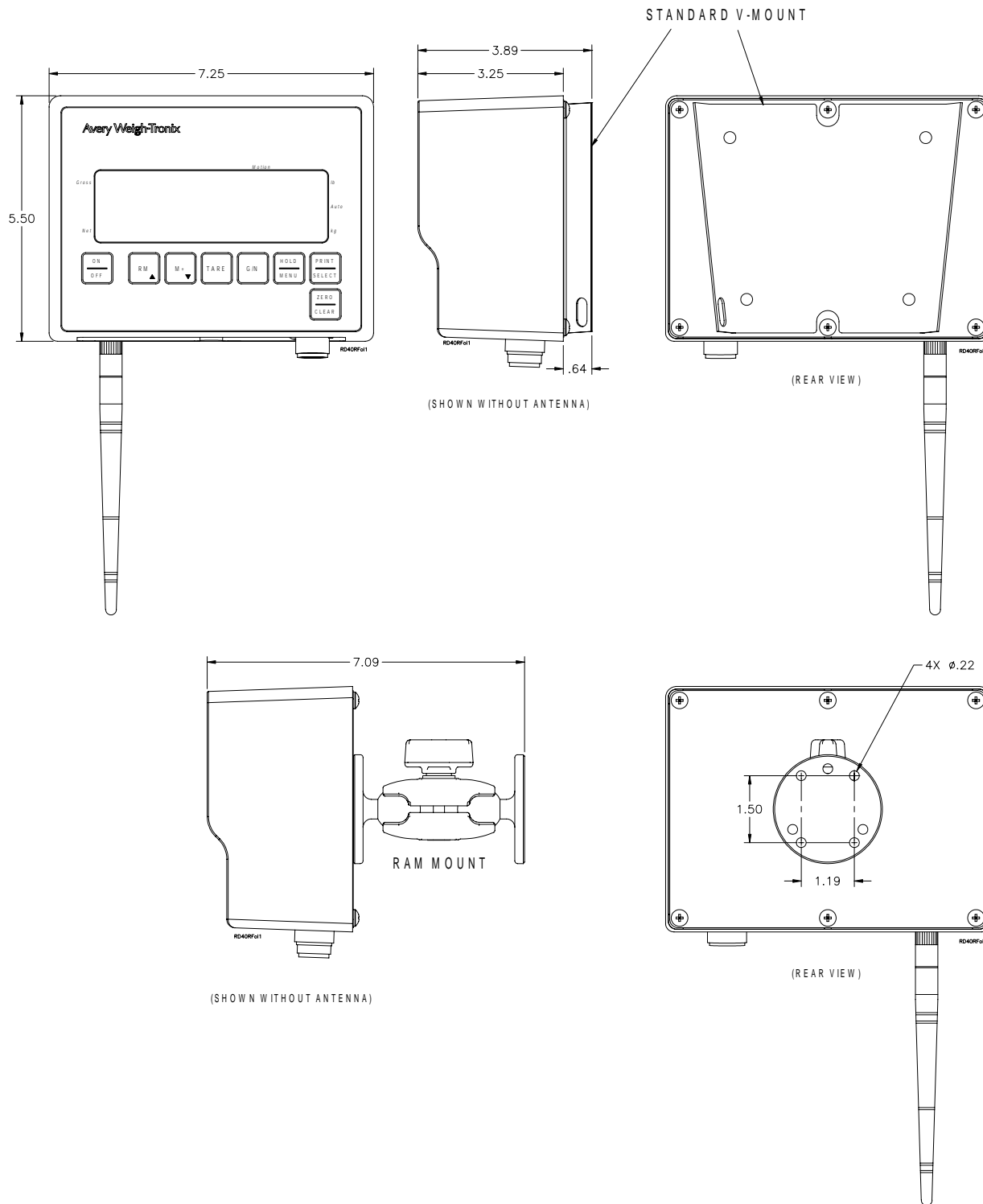


Figure 2.1 Front panel and mounting options.

Figure 2.2 shows the bottom connections on the remote display.

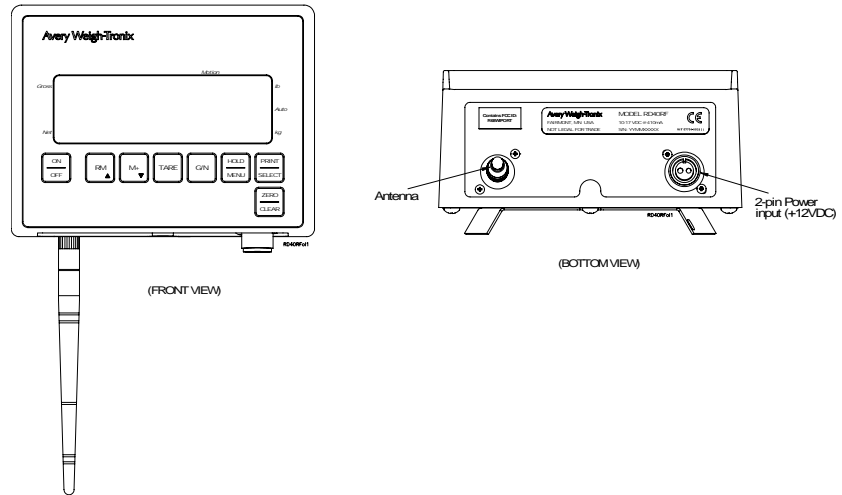


Figure 2.2 Bottom connections

## 3.1 Configuration Menu

Figure shows the configuration menu for the RD40RF.

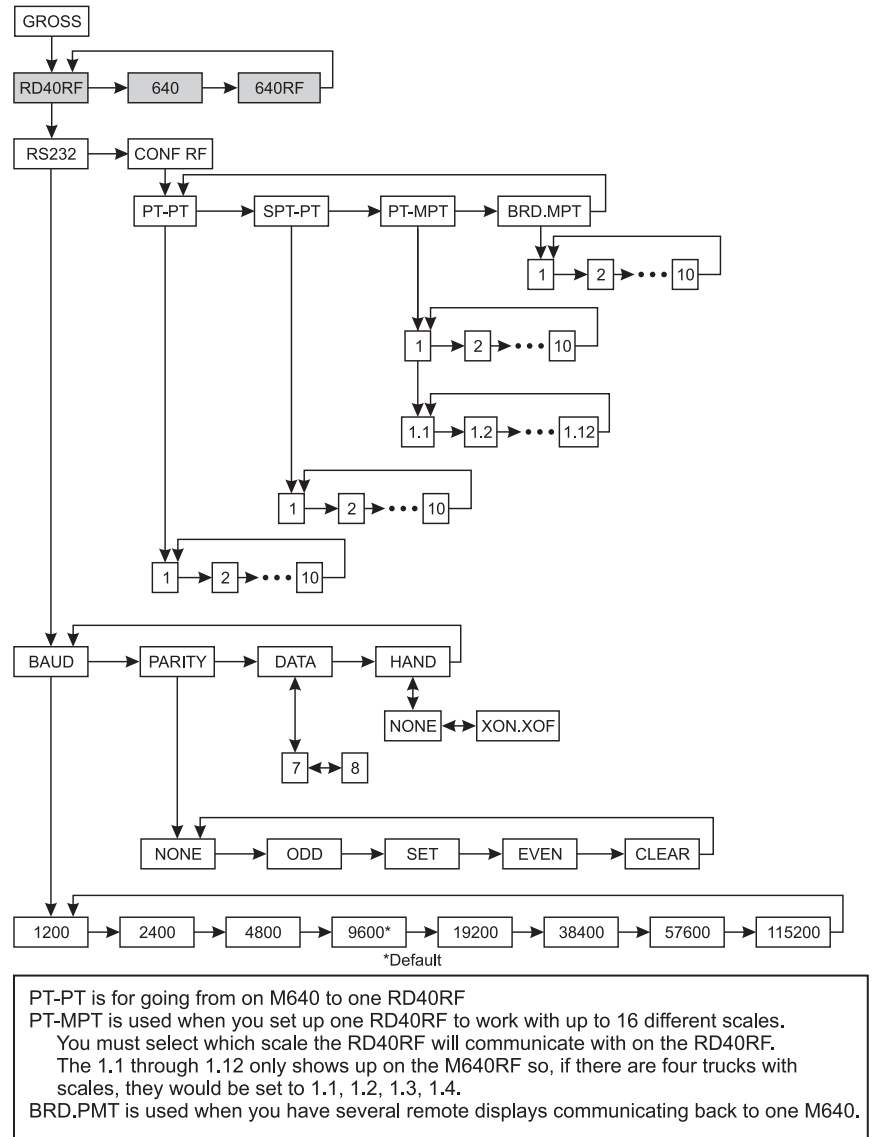


Figure 3.1 Configuration menu

## 3.2 Access the RD40RF Configuration Menu

### Numeric Entry Procedure



Press this key to enter a value on the screen and increment the value being entered.



Press this key to decrement the numeric value being entered.



Press this key to move the numeric entry cursor one position to the right.

To access the configuration menu, follow these steps:

1. From the G/N mode, press and hold the **HOLD/MENU** key for three beeps (3 seconds), then release...  
**SET.PAS** is displayed.
2. Use the numeric entry procedure, shown at left, and enter the password 640, then press the **PRINT/SELECT** key to accept it ...  
**RD40RF** is displayed.
3. Press the **PRINT/SELECT** key...  
**RS232**, the first menu item, is displayed.

Use the menu navigation legend below to move through the menu and set your choices for the parameters shown in the menu in Figure 3.1.

### Menu Navigation



Moves right in the menu structure.



Moves up in the menu structure.



Selects displayed option and moves up/down in menu structure at 

The RS232 section of the menu is only used for special applications. You need to choose what form of communication your situation requires and set up your system accordingly. Each type is explained in section 3.3 and refers to the menu in Figure 3.1 under the CONF.RF (configure RF) menu item.

## 3.3 RD40RF Setup of the Wireless Option

The RD40RF can be setup for four different wireless scenarios. See the [Configuration Menu on page 11](#)

### 1. PT-PT

This is the standard RF setup, used when one RD40RF is communicating to one Model 640 indicator.

For proper PT-PT operation the RD40RF and the Model 640 indicator need to be configured as follows:

**RD40RF** Set the RD40RF for PT-PT and network scale ID 1...10

**M640** Setup the Model 640 in the Setup menu. Access the Setup menu and follow this path in the menu to get to the parameters you need to set: **640 > 640RF v CONF.RF v PT-PT**. Set up as network scale ID 1...10.

Networks must match on both the indicator and the RD40RF. So, if configured for network 1, then both products must be configured for network scale ID 1.

## 2. SPT-PT

This mode is recommended when there are multiple RD40RF's that can select which Model 640 they want to communicate with: (Example: Two front end loaders with four different trucks with model 640's). User can access on the RD40RF which RF scale channel, (which scale) the RD40RF will communicate with when selected. (RF-01 through RF-10)

For proper SPT-PT operation the RD40RF's and the Model 640 indicators need to be configured as follows:

**RD40RF** Setup the RD40RF's for SPT-PT, and setup for network ID 1...10

**M640** Setup the Model 640 in the Setup menu. Access the Setup menu and follow this path in the menu to get to the parameters you need to set: **640 > 640RF v CONF.RF v SPT-PT**. Set up as network scale ID 1...10.

## 3. PT-MPT

Ideal for applications like one front end loader wanting to be able to communicate with any of 16 different trucks, by selecting RF scale ID RF-01 through RF16. The RF scale addresses would correspond to each truck (truck 1 = RF-01, truck 2 = RF-02, etc.)

For proper PT-MPT operation the RD40RF and the Model 640 indicators need to be configured as follows:

**RD40RF** Setup the RD40RF for PT-MPT, and setup for network ID 1...10

**M640** Setup the Model 640 in the Setup menu. Access the Setup menu and follow this path in the menu to get to the parameters you need to set: **640 > 640RF v CONF.RF v PT-MPT**. Set up as network scale ID 1, and then each Model 640 scale address for 1.1 (truck 1) 1.2 (truck 2) etc.

## 4. bRD.MPT

Setup when having multiple remotes ( ex: RD40RF in both the feedroom and in the front end loader , communicating back to the indicator on the mixer). All the RD40RF's have full access of the functional features of the Model 640.

For proper PT-PT operation the RD40RF and the Model 640 indicator need to be configured as follows:

**RD40RF** Setup the RD40RF for PT-PT and network scale ID 1...10

**M640** Setup the Model 640 in the Setup menu. Access the Setup menu and follow this path in the menu to get to the parameters you need to set: **640 > 640RF v CONF.RF v bRD.MPT**. Set up as network scale ID 1...10.

Networks must match on both the indicator and the RD40RF. So if configured for network 1, then both products must be configured for network scale ID 1.

## Viewing or Changing the Active RF Channel.

The user can select the proper RF channel (scale specific) that the RD40RF will communicate with, so if there are multiple scales and only one RD40RF the RF channel is selected and then the weight information from that particular scale is shown on the RD40RF. This is only applicable in the following modes:

Selectable point to point (SPT-PT)

Point to Multi-Point (PT-MPT)

### View the Active RF

1. Press the **PRINT/SELECT** key...  
Active RF channel is shown (**RF-XX**)
2. Either press **G/N** to return to weighing mode or after 5-6 seconds will automatically return to the weighing mode.

### Changing the Active RF Channel

1. Press the **PRINT/SELECT** key...  
Active RF channel is shown (**RF-XX**)
2. Press the **MENU** key several times or press the **RM** key repeatedly until proper **RF** channel is shown...  
New channel is shown.
3. Press **PRINT/SELECT** key...  
**BUSY** is shown for 5-10 seconds, then returns to weighing mode.

## 3.4 RD40RF Troubleshooting

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If the system does not function properly and the ----- is displayed check the following:

- Access the SETUP menus ([Access the RD40RF Configuration Menu on page 12](#)) on both M640 and RD40RF. The Model 640 should be setup for **640RF** Menu. The Model RD40RF should be setup for **RD40RF** Menu. Verify the settings have been configured properly.
- If the RF system still does not operate, contact the Avery Weigh-Tronix Service Department at:  
Phone:1-800-458-7062  
1-507-238-4461

If the product needs to be returned for service either contact the dealer/distributor or send prepaid to approved warranty center or return both the RD40RF and the Model 640 to:

Service Department  
Avery Weigh-Tronix  
1000 Armstrong Drive  
Fairmont, MN 56031

Please include:

Name and Address

Supplier name and address

Date of Purchase

An informal note explaining the problem.



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