Samsung Electronics America

Samsung Tech Talk

Your source for service information

RIBBON CABLES: HANDLE WITH CARE!

Scott Whitman

Manager—Product Support

When replacing a T-Con board, please be aware of the fragile nature of the gold pads on the ribbon cabling coming from the panel. In the image below, you can see clearly that the pads have been pushed away from the Mylar ribbon. If the pads are damaged as shown below, the entire panel needs to be replaced. Worse, until the panel is replaced, the TV is unusable.

It is a good practice to take a quick visual of the pads before re-inserting the cable into the new T-Con board. Also, take your time and make sure you have good lighting so you can align the slot of the connector properly while inserting the cabling. The ribbon cable should be inserted straight into the connector. Avoid applying downward pressure or attempting to insert the cable at an angle into the connector.

This is true for all LVDS ribbon cables. Similar damage can create symptoms from an intermittent image to complete picture loss. In some cases, it could cause the TV to appear DEAD.
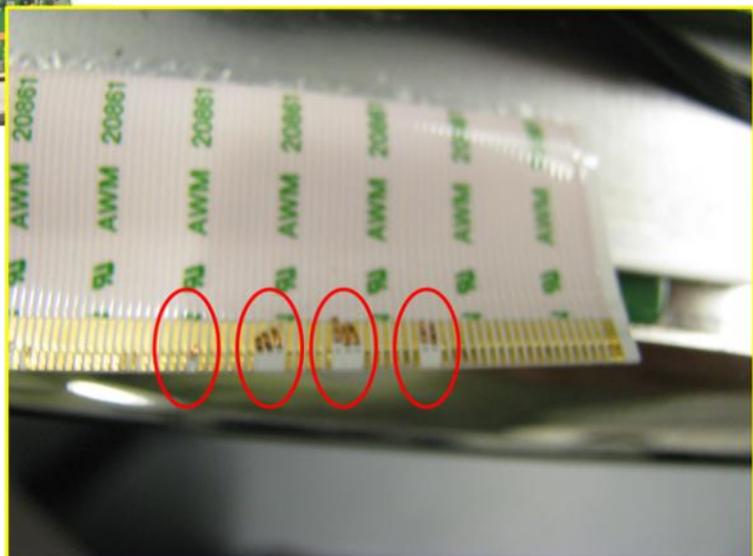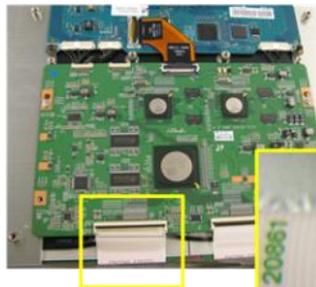
LVDS Handling Techniques

Adam Vogel

Product Support

When working on today's flat panel TV's, it's easy to point to such assemblies as the main board, SMPS, or even the panel as the primary causes of defects. Generally I would agree, but with the growing delicacy of the LVDS cables, we need to begin showing them a bit more attention. Below, I'll give you a few examples of how paying closer attention to the LVDS cable can prevent needless second calls, thereby saving you money!

CASE 1 – Traditional LCD
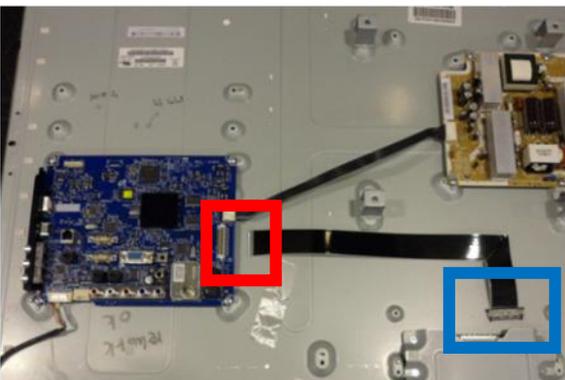
Notice the LVDS cable pictured left has two distinct ends. One end, which connects to the main board, is very delicate and can easily be damaged. The other end, which connects to the TCon board, has a bit more rigidity but it too can be easily damaged.

Problem – Due to the length and delicacy of the LVDS cable, it can sometimes be difficult to insert the cable after a main board assembly has been replaced.

Tip – Remove both ends of the LVDS cable from their respective boards, and then gently insert the delicate end first (main board side). Once the delicate end is inserted and the tab secured, insert the second end into the TCon board.

CASE 2 – UN55C9000

The LVDS cable pictured left is a directional cable, which means it will only function one way. To prevent the cables from being inserted incorrectly, we have clearly labeled each end.

Problem – The UN55C9000, because of its unique design, offers some equally unique challenges when it comes to service. As you can see in the picture to the left, the LVDS cable is rather short, which limits its flexibility and makes inserting it into the FRC/TCon board and the docking board one of those challenges.

Tip – Although it is possible to get the LVDS cable inserted without removing either of the boards, it is much easier to insert it before you screw the docking board into its mounting position.

Following these simple steps when reassembling a set can prevent additional damage to the LVDS cables, prevent additional visits to the customer's home, and essentially create the perfect service scenario.

Inside Intelli-Studio

Michael Vigliotti

Product Support

Samsung cameras and camcorders have been sold since 2009 with proprietary built-in software called Intelli-Studio (I-Studio). This software, which can run automatically when you connect your camera or camcorder to a Windows PC using a USB cable, has made it easy for customers to download and edit their pictures and videos. Unfortunately, Intelli-Studio software has also caused many troubleshooting and service issues. This article discusses the basics of I-Studio to help you prevent future No Defect Issues.

First, it is important to note that this software is only compatible with Windows PCs and is not compatible with Macs. In most case, users can still connect their device to a Mac and drag and drop the files to their hard drive, but if they want to edit any files, they will need to use 3rd party software.

Using Intelli-Studio on a Windows PC

Before you connect a camera or camcorder to a Windows PC, make sure that Intelli-Studio is enabled on your camera or camcorder. To enable the software, select Menu-> Settings -> PC Software -> ON. If the software is not enabled, it will not start automatically.

After you connect the camera or camcorder to a compatible Windows based PC, you must make sure that the device is on. If the camera or camcorder is off, the software will not run. Some cameras or camcorders will prompt you to select Computer or Printer after you connect it to a computer with the USB cable. If this message appears, you must select Computer to continue.

After the connection is established, I-Studio will Auto run and ask if you want to transfer files from the device to the PC. If you select Yes, you will see the transfer screen below. You must wait until the transfer process is complete.
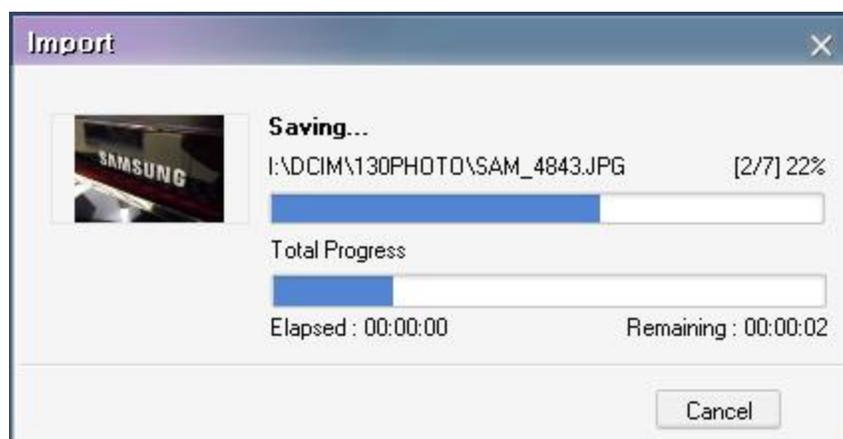
INSIDE INTELLI-STUDIO

continued

The most confusing part about I-Studio is the double screen format. The Top window (labeled 1 below) is the computer's hard drive and the bottom window (labeled 2 below) is the Camera's built in and external memory.
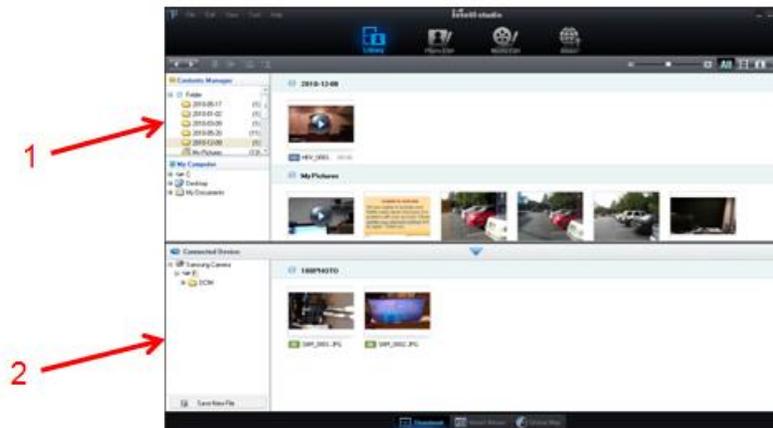
The most common complaint that we are receiving is that customers see nothing in window 2 and are unable to transfer pictures or video. See the illustration below.
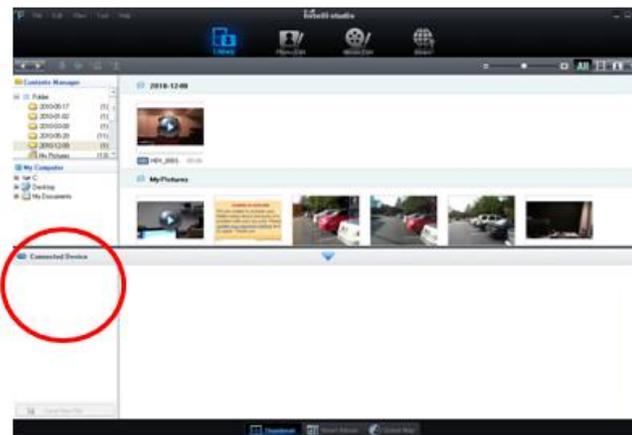
This can occur if the camera is:

- Not plugged in properly

- Not powered on or

- Has PC software disabled.

To troubleshoot, ask the customer to 1.) Check the USB connections from the PC and the camera or camcorder, 2.) Make sure the camera or camcorder is on, and 3.) Make sure they have enabled PC Software. To enable PC Software, the customer needs to select Menu -> Settings -> PC Software -> ON.

INSIDE INTELLI-STUDIO

continued

Some cameras have Internal and External Memory. If the customer complaint is that they do not have any pictures, it is possible that they are looking at the wrong drive in the lower left section. In this case, have the customer check all the drives listed under Connected Device before troubleshooting further.

Lastly, if the customer wants to edit pictures or videos on their PC, they must either install the I-Studio software onto their PC or connect their device each time they want to see and edit images. If the customer does not install I-Studio on their PC, they will not be able to use it when the camera is disconnected.

To install the software, follow these steps:

1.   Connect your device to the PC and turn it on, and then wait as Intelli-Studio auto-runs and loads.

2.   In the upper left corner of the Intelli-Studio screen, click Tools → Install Intelli-studio on PC.

You can also install Intelli-Studio by following these steps:

1.   Connect your device to the PC and turn it on.

2.   Double click My Computer.

3.   Right click the "IntelliStudio Drive" and click Explore.

4.   Double click the "Setup F" icon

5.   Follow the on screen prompts to install I-Studio to your desired location.

    a.   Click to accept the terms of I-Studio.

    b.   Select the location you wish to install to.

    c.   Click on Install and wait for the installation to finish.

PLASMA TV REPAIR MADE SIMPLE, PART 3

Charles Russo

Trainer—RTSC

In the first two articles, we emphasized the importance of taking the "Vital Signs" (Vs, Vsc, Va, Ve) before or during every repair. You can take these voltage readings in less than 5 minutes and in most cases, the readings will lead you directly to the failure. Even if a unit is shutting down after only 3 seconds, there is still plenty of time to take the readings.

Now let's look at other key repair observations.

The SMPS Switching Mode Power Supply

① CN801 (SMPS) ↔ CN2001 (Main Board)	
Pin No.	Signal
1	PS_ON
2	STBY
3	GND
4	VAMP
5	GND
6	GND
7	D5.3V
8	D5.3V
9	GND
10	15V
11	15V
12	D5.3V

② CN801 (SMPS) ↔ CN201(Main Board)			
Pin No.	Signal	Pin No.	Signal
1	PS_ON	10	18V
2	STD5V	11	18V
3	5.3V	12	5.3V
4	GND	13	5.3V
5	GND	14	GND
6	GND	15	GND
7	GND	16	15V
8	N/C	17	15V
9	N/C	18	15V

Figure 1

CN802 (SMPS) ↔ CN2000 (Logic Board)	
Pin No.	Signal
1	D5.3V
2	D5.3V
3	GND
4	GND
5	PS_ON
6	VS_ON

Figure 2

The supply first delivers the important 5V Standby Voltage (normally 5.3V on pin 2, STBY, in the Figure 1 examples) to the Main Board Assembly which in turn provides the PS_ ON, "Power Supply On command" to the supply. Stand-by voltage is also provided to the Logic Board. The SMPS may also supply other un-switched voltages, and, depending on the model, 33V to the tuner so the tuner remains active during stand-by and 12V to the Logic Board (older models).

Switched voltages also include Vs (approximately 210V), Va (approximately 55V), and, in Figure 1 – the 9 and 12 pin configurations - connectors to the Main Board: 5.3V, 15V, 18V, and 6.3V.

Testing and Turning On the Supply

You can check the Standby Voltage by first observing the Red LED Power indicator on the front of the panel. Red LED illumination normally indicates operating 5V standby to the Main and Logic Boards.

The Main Board then turns on the SMPS by providing a "Low" (3.3V to 0 V) voltage signal, PS-ON, to the SMPS and additionally to the Logic Board connectors. The Logic Board then provides VS_ ON (pin 6 CN802 in Fig 2), a "High" activation signal (0V to 3.3V) to the SMPS to turn on Vs which starts the operation of the Panel Drive Boards.

You can test the Power Supply turn on operation without the Main Board operation by simply removing the Supply connector off of the Main Board side and shorting out (with a bare wire) PS-ON to circuit ground. (Pin 1 to pin 5 of Figure 1, in both connector examples.)

Plasma TV Repair Made Simple, Part 3
continued

Example 1

The TV's Red LED Standby Indicator is off and the TV will not turn on.

Troubleshooting:

1. Measuring 5V Standby (pin 2, Figure 1) confirms the standby voltage is missing (0V).

2. Removing CN801 to the Main Board and CN802 to the Logic Board (since Main and Logic get 5V standby) confirms neither assembly is loading down the missing 5V supply.

Repair:

Replace the defective Power Supply.

Example 2

The TV's Red LED Standby Indicator is on, but the TV won't power on.

Troubleshooting:

1. Measuring 5V Standby (pin 2, in Figure 1) to the Main Board confirms the LED Indicator is accurate and that the Standby voltage is good.

2. Measuring PS-ON shows that PS-ON stays at 3.3V and does not go to 0V "low".

3. Removing the connector at the Main Board and inserting a short from PS-ON to the circuit ground (pin 1 to pin 5 of the Figure 1 connector examples) confirms proper Power Supply On.

Repair:

Replace the defective Main Board.

Example 3

The TV's Red LED Standby Indicator is on, but the TV won't power on. The panel shuts off after 3 seconds.

Troubleshooting:

1. Measuring Power Supply Va (Address Voltage) indicates that the voltage is OK (approximately 55V), however, Vs remains at 0 Volts during the 3 seconds of the activation attempt.

2. Removing AC power and testing Vs indicates a short to ground.

3. Removing SMPS Vs supply connectors, one at a time, to the X Board and Y Board indicates Vs is shorted at the X Board.

4. Connecting the AC and powering on the TV while keeping the Vs feed connector to the X Board disconnected re-stored the Vs voltage reading on the Power Supply during the 3 seconds of activation.

Repair:

Replace defective X Drive Board.

Look for the next installment in this series "Plasma Repair Made Simple, Part 4" in the next issue of Tech Talk.

HOT TECH TIPS

Jorge Tavora

Product Support Manager/Tech Support Hotline/Triage

Model: LN52A550P3FXZA

Symptom: Vertical bar with lines in it

Cure: Call the customer before running the service call and ask the customer to bring up the OSD menu. If the symptom affects the menu, replace the panel.

*While at the customer's home, be sure to reseat all the cables first.

HOT TECH TIPS

Continued

Model: UN55C8000XFXZA

Symptom: Black areas around the screen, delaminating.

Cure: Call the customer before running the service call and ask the customer to unplug everything from the TV, and then turn on the TV to make sure that the symptom is not caused by a signal source. If the symptom occurs when all sources have been removed, replace the panel.

HOT TECH TIPS

Continued

Model: PN63B550T2FXZA

Symptom: Vertical bar distortion on the left side of the screen
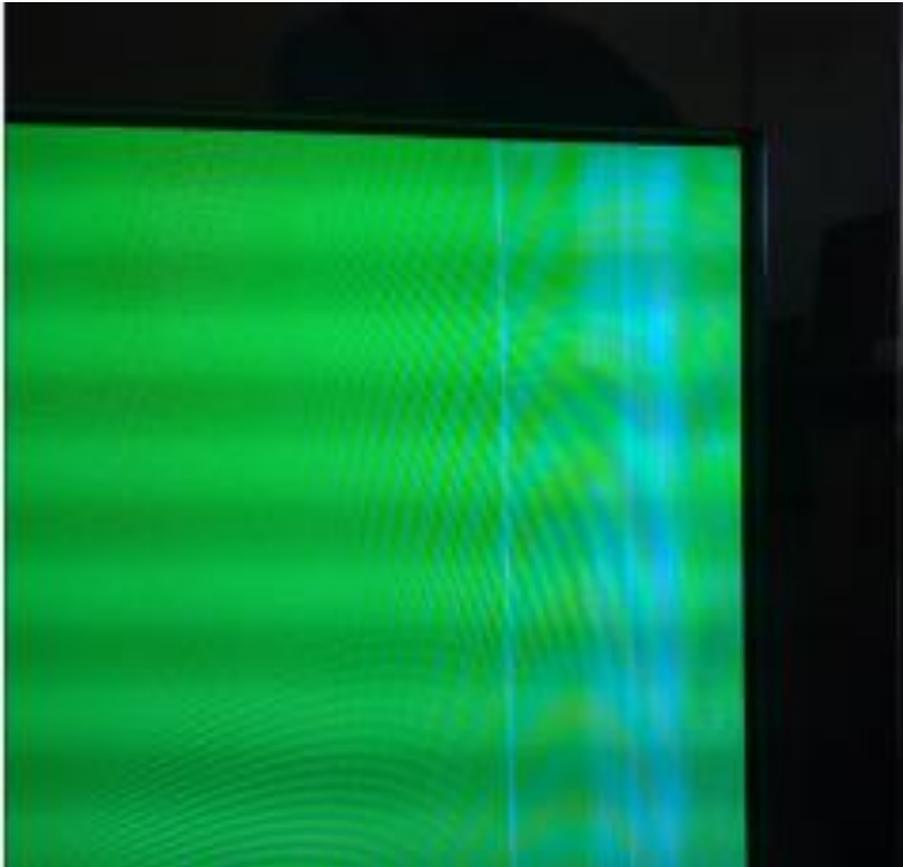
Cure: Display an internal test pattern. If the symptom affects the test pattern, replace the panel.

PLEASE SEND US YOUR COMMENTS!

Something you'd like to see in the Samsung Tech Talk Newsletter? If there a topic/issue we haven't covered that you'd like us to write about, **LET US KNOW!**

Please send your comments to:

training@sea.samsung.com

Hot Tech Tips

Continued

Model: UN46B6000VFXZA

Symptom: Half the screen has vertical lines

Cure: In this model, the T-CON has two output ICs that control the panel. Replace the T-CON. Before replacing the T-CON, reseat the LVDS cable.

Model: LN46C630K1FXZA

Subject: On/Off Timer

Symptom: The customer has set the On/Off timer to come on at a certain time and has chosen HDMI as the input he wants the TV to switch too. He claims that the On/Off timer keeps switching to RF input instead of HDMI. Customer does not use the RF input. Instead, uses HDMI1 with a SAT system.

Cure: This is normal. The On/Off timer only works with RF (Air/cable) and with USB.

Consult Samsung Service Website (GSPN) at http://service.samsungportal.com for the Service Manual and other information on these products.

GSPN Updates

Jim Foster

Manager, Training/Publications

We encourage you to use our GSPN site to find the latest service bulletins to aid you with your repairs.

http://service.samsungportal.com

CE Service Bulletins uploaded to GSPN November, 2010

Bulletin Number	Subject	Applicable Models
ASC20101102001	Cannot power on TV with remote or front keyboard.	LN32C530F1FXZA, LN32C450E1DXZA, LN32C550J1FXZA
ASC20101102002	TV changes Channel, Volume or Source by itself	U46C8000XFXZA/ U55C8000XFXZA

To access service bulletins on GSPN, first visit http://service.samsungportal.com. Login using your **User ID** and **Password**. Click on "Documents" at the top, then "Product Information" in the left column. The Product Information menu will appear. Click on "Service Bulletin (Local) to bring up the Service Bulletins. To search for a bulletin, enter the bulletin number in the search window at the upper left. If for some reason the bulletin does not appear, it can still be searched using the "Select Depth 1, 2, and 3" drop-down menus.

BILLING FLAT PANELS FOR LCD AND PDP REPAIRS ON YOUR WARRANTY CLAIM

Jet Nyamwange

Warranty Department

If you have not passed Samsung's yearly Flat Panel Certification course given by PlusOne you are Non Exempt, and Samsung (SEA) policy requires that you obtain approval from SEA Tech Support before you replace any panel on LCD or PDP TV's. If you replace any panel without prior approval, your Warranty Claim will be rejected.

Regarding Flat Panel replacements, there are two classes of ASCs -

Exempt - Certified ASCs who have passed the Yearly Flat Panel Certification course given by PlusOne Solutions. You do not need to call Tech Support for approval to replace LCD or PDP panels.

Note: Certification/Recertification is for one year starting from the time you pass the certification course. You must get re-certified every year.

Non Exempt: Non Certified ASCs who have not passed the yearly Flat Panel Certification course given by PlusOne. You must call tech support for approval to replace an LCD or PDP panel.

For Non Exempt ASCs

To obtain Panel Authorizations, follow these steps:

1. Contact Samsung Tech Support to have your SO (Service Order) validated.

    • Call Tech Support at 888-751-4086 or Email Tech Support at technicalsupport@sea.samsung.com

    Note: The following information is required to obtain approval:

        ➢ ASC account #
        ➢ SO #
        ➢ Version of unit
        ➢ Detailed symptom of defect
        ➢ Any parts already installed in defective unit

2. Complete the repair.
3. Bill your warranty claim on the Panel approved SO number.
4. DO NOT enter any data in the Tech Id Field (See screen capture below. That field is for Flat Panel Certified ASCs only.)
5. The system will recognize the approval validated on the SO by Tech Support.
6. Save your Warranty Claim.

How do you confirm that the Approval Number is tagged to your Service Order Number?

• Check the SAW Section on your Service Order Ticket

• If you don't have panel approval noted under Status as shown in the screen capture on the next page, please contact Tech Support before completing your Ticket.

Note: Do not submit SAW to request approval. You must contact Tech support via email or phone prior to completing the ticket for approval.

BILLING FLAT PANELS FOR LCD AND PDP REPAIRS

continued

To Gain Exempt Status

Take and pass the Flat Panel Certification course so you can avoid calling SEA Tech Support each time you replace a flat panel.

Here's the access site for Technical Training: **http://my.plus1solutions.net/clientPortals/samsung/**

For Exempt ASCs Who Have Passed the Flat Panel Certification

When you replace a flat panel, please do the following:

Enter your Tech Id Number *(that you received after passing Flat Panel Certification)* in the Technician ID field. See the screen capture below.

Note: You do not need to call Samsung Tech Support for a Panel Authorization number.

If a claim is re-routed back to you for review even though you entered your Tech ID Number, please confirm the following:

- You took and passed the correct course (Flat Panel Certification) offered by PlusOne.

- You keyed in the correct Tech Id Number.

If you have not taken and passed the Yearly Flat Panel Certification course and have not been re-certified, you must request approval from Tech Support prior to completing your ticket.

If you need assistance, please call Warranty at 800-849-2198 Option 08.

CONTACTS, PHONE NUMBERS, AND E-MAIL ADDRESSES

Jet Nyamwange

Warranty Department

Have a question? A problem? Here's a list of Samsung personnel you can talk to or contact to straighten things out.

Field Service Support:
Phone: 888-341-2561
ASC Admin: Elisa Pagliaro: epagliaro@sea.samsung.com
ASC Webmaster: Jay Reynolds Jr.: jayrjr@sea.samsung.com

Warranty Claims:
Phone: 800-849-2198 Option 08
Fax: 201-548-5064
Vladimir Davila: vladimir.d@fsmusa.net
Jet Nyamwange: jnyamwange@sea.samsung.com
Ronald Peter: ronaldp@sea.samsung.com

Parts:
Ordering/ Backorder/ Research: 800-634-8276
Parts Accounting: 800-849-2198 Option 6
Shiffat Sharmin: ssharmin@sea.samsung.com
Luis Jarrin: luisj@sea.samsung.com

CE and HA Regional Service Engineer (RSE)

West Zone:
Nelson Diaz: ndiaz@sea.samsung.com
Phone: 310-900-5280
David Stiltz: dstiltz@sea.samsung.com
Phone: 310-900-5277

Central Zone:
Mark Rowland: markr@sea.samsung.com
Phone: 630-879-1401
Bett Harvey: bharvey@sea.samsung.com
Phone: 972-890-4253

East Zone:
Al Kucinski: akucinski@sea.samsung.com
Phone: 201-229-4444
Joseph Ramos: jramos@sea.samsung.com
Phone: 201-229-4766

Technical Support:
Email: technicalsupport@sea.samsung.com
Phone #'s:
Electronics: 888-751-4086 - *FE ONLY: 866-894-0637*
Home Appliance: 888-751-4086 - *ME ONLY: 866-894-0637*
Printer: 877-873-7279
Large Format Display: 800-634-8770

Santa Comes To SAMSUNG

Directions: Decipher the clues and enter the correct words into the blanks. The solution is on the following page.
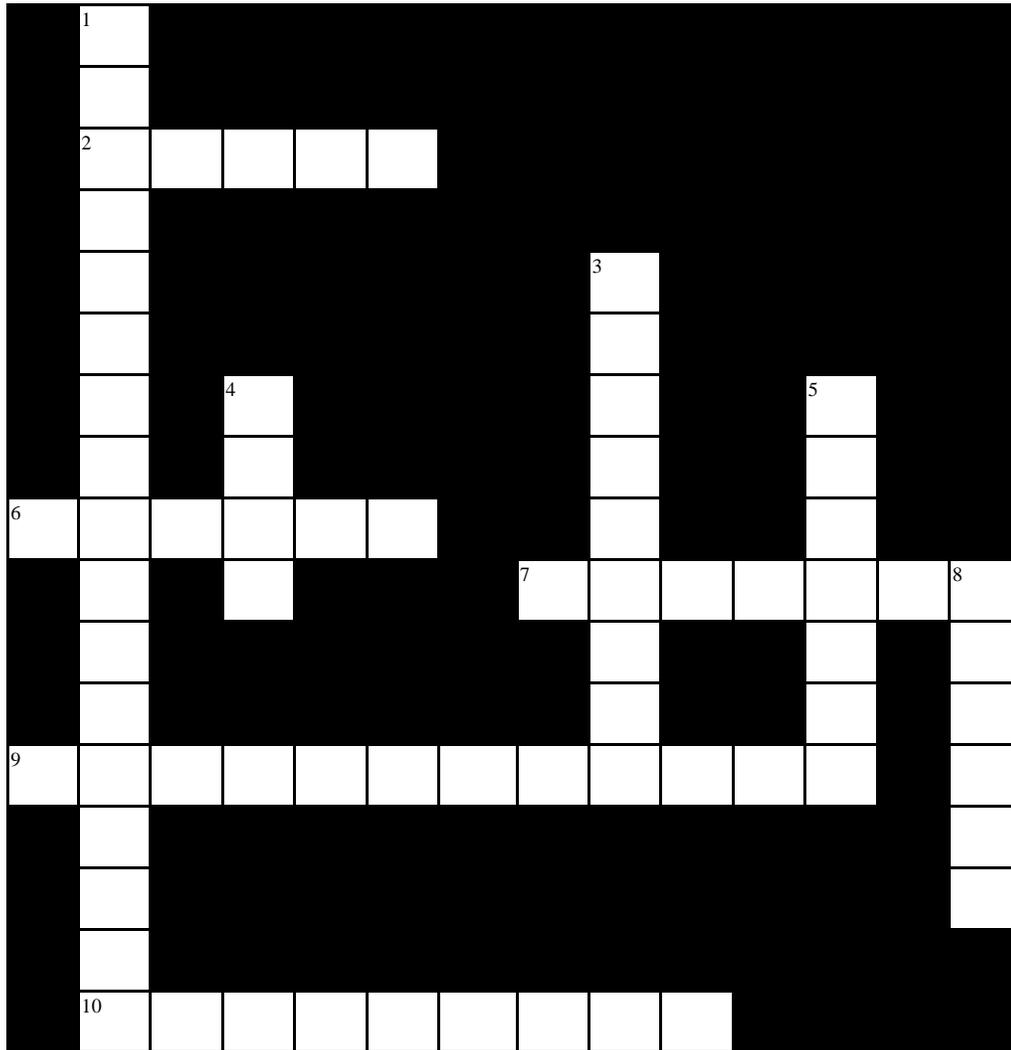
Across

2. Santa's helpers, not yours

6. Looks better on your front door than your van

7. A miserly customer no technician wants to meet

9. Potential Parking problem for Mr. Claus (2 words)

10. A high latitude place with no FE/ME coverage (2 words)

Down

1. Run, run as fast as you can, you won't catch him he's (3 words)

3. Sweet, affordable customer giveaway to ensure good QOS (2 Words)

4. Have a high redo rate and get this in your stocking.

5. Hit him with the van and Santa loses his fog light.

8. A quick warm me up (liquor free of course) (2 words)

Santa Comes To SAMSUNG—Solution

Answer Key

1. The Gingerbread Man   2. Elves   3. Candy Cane   4. Coal   5. Rudolph
6. Wreath   7. Scrooge   8. Eggnog   9. Santa's Sleigh   10. North Pole