Simplified Service Manual

LCD Monitor

E2222HS

Service Manual Versions and Revision

No.	Version	Release Date	Revision
1	1.0	2021/03/26	Initial Release
2	2.0	2021/8/27	ErP lot 5 additional requirements

# Simplified Service Manual

1. Important Safety notice

Connecting your monitor

⚠ **WARNING: Before you begin any of the procedures in this section, follow the Safety Instructions.**

📝 **NOTE: Do not connect all cables to the computer at the same time. It is recommended to route the cables through the cable-management slot before you connect them to the monitor.**

📝 **NOTE: Dell monitors are designed to work optimally with Dell supplied inbox cables. Dell does not guarantee the video quality and performance when using non-Dell cables.**
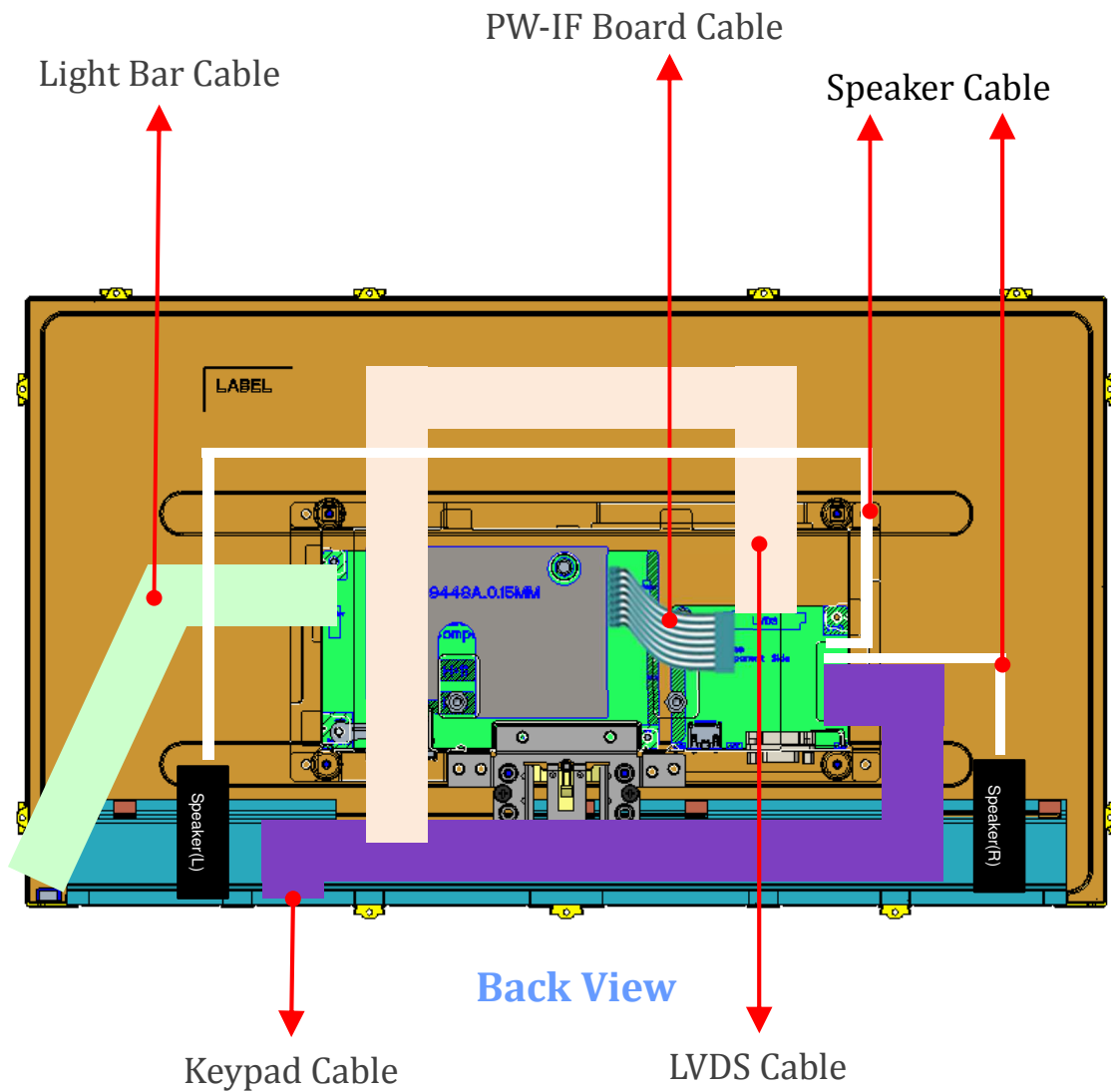
To connect your monitor to the computer:
1. Turn off your computer and disconnect the power cable.
2. Connect DP or HDMI or VGA cable from your monitor to the computer.

2. Exploded view diagram with list of items
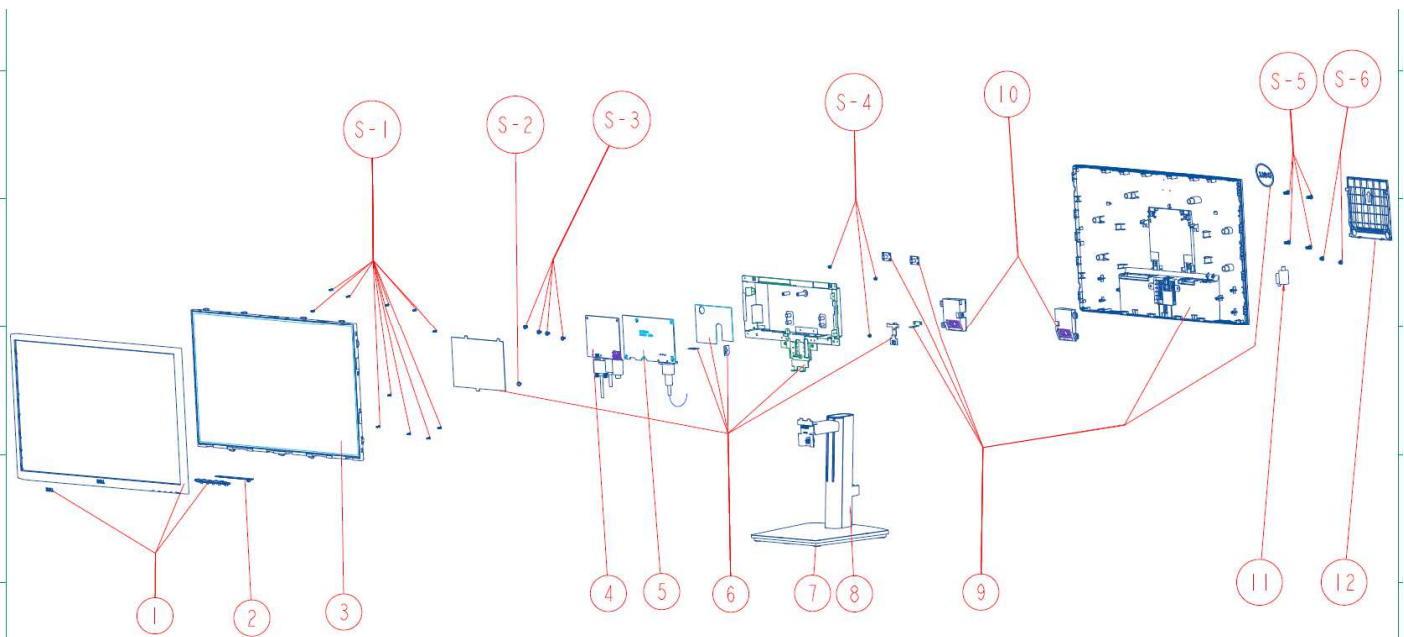
No.	Item	Description	Part Number	QTY	Remark
1	Front Logo	K64HV,FRONT LOGO,BDG, PET, 22MM,DELL	3C0T08R00-H5L-G	1	
	Front Bezel	FRONT BEZEL,L5,LE22T0,HF	1B612D000-600-G	1	
	OSD button	Power+OSD Button,FS,LE24SY,HF	7B2505U00-JRS-G	1	
2	Keypad	-		1	
3	Panel	-		1	
4	IF Board	-		1	1A1HIDP
5	Power Board	-		1	
6	Mylar			1	panel - PW board
	Mylar			2	chassis hole
	Mylar			1	chassis
	Main Chassis	E2222HS,MAIN CHASSIS,L5,HF	1B43UEH00-600-G	1	1A1HIDP
	Hinge Bracket	E2222HS,BRACKET,HF	1B43UF100-600-G	1	
	Release button	SE2422H,RELEASE BUTTON,LE24SF,FS,HF	7B122BU00-JRS-G	1	
7	Stand Base	-		1	
8	Stand Riser	-		1	
9	Vesa Bracket	VESA PLATE,SGCC,T1.2+Stand off,LE24SY	2A601Q500-600-G	2	
	Back cover	E2222HS,BACK COVER,L5,HF	1B612Q800-600-G	1	
	Rear Logo	D52K6,REAR LOGO,BDG,PET,Circle,50mm	3C1101900-H5L-G	1	
	K-lock plate	K-LOCK PLATE,SGCC,T0.5,CMMSG MESD,LE22SD	1B43KKR00-600-G	1	
10	Speaker			1	
11	K-lock	K-LOCK PLATE,SGCC,T0.5,CMMSG MESD,LE22SD	1B43KKR00-600-G	1	
12	Vesa cover	ASSY,VESA COVER,FS,LE24SY,HF	7B162LV00-JRS-G	1	
S-1	Screw T2x6			11	panel - front bezel
S-2	Screw M4			1	Grounding
S-3	Screw M3x6			4	PCB - chassis
S-4	Screw M3x4			3	chassis - panel
S-5	Screw M4x10			4	VESA
S-6	Screw M4			2	Hinge bracket
S-7	Screw VGA			2	VGA

3. Wiring connectivity diagram

PW-IF Board Cable

Light Bar Cable

Speaker Cable

LABEL

9448A_0.15MM

Speaker(L)
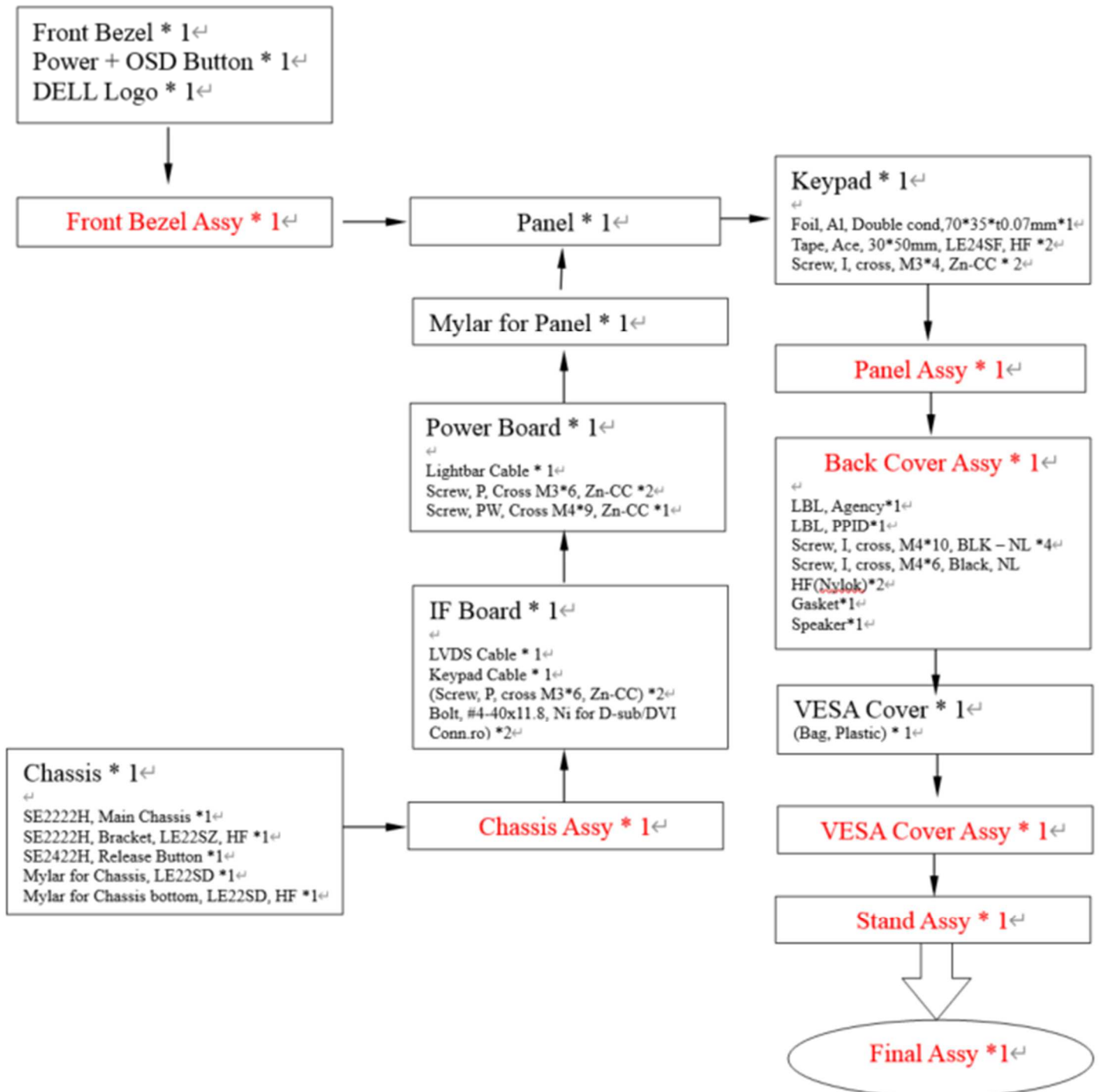
Speaker(R)

Back View

Keypad Cable

LVDS Cable

4. List of tools / equipment

1. Philips-head screwdriver

2. electric screwdriver

3. Hex-head screwdriver

5. Disassembly and Assembly Procedures
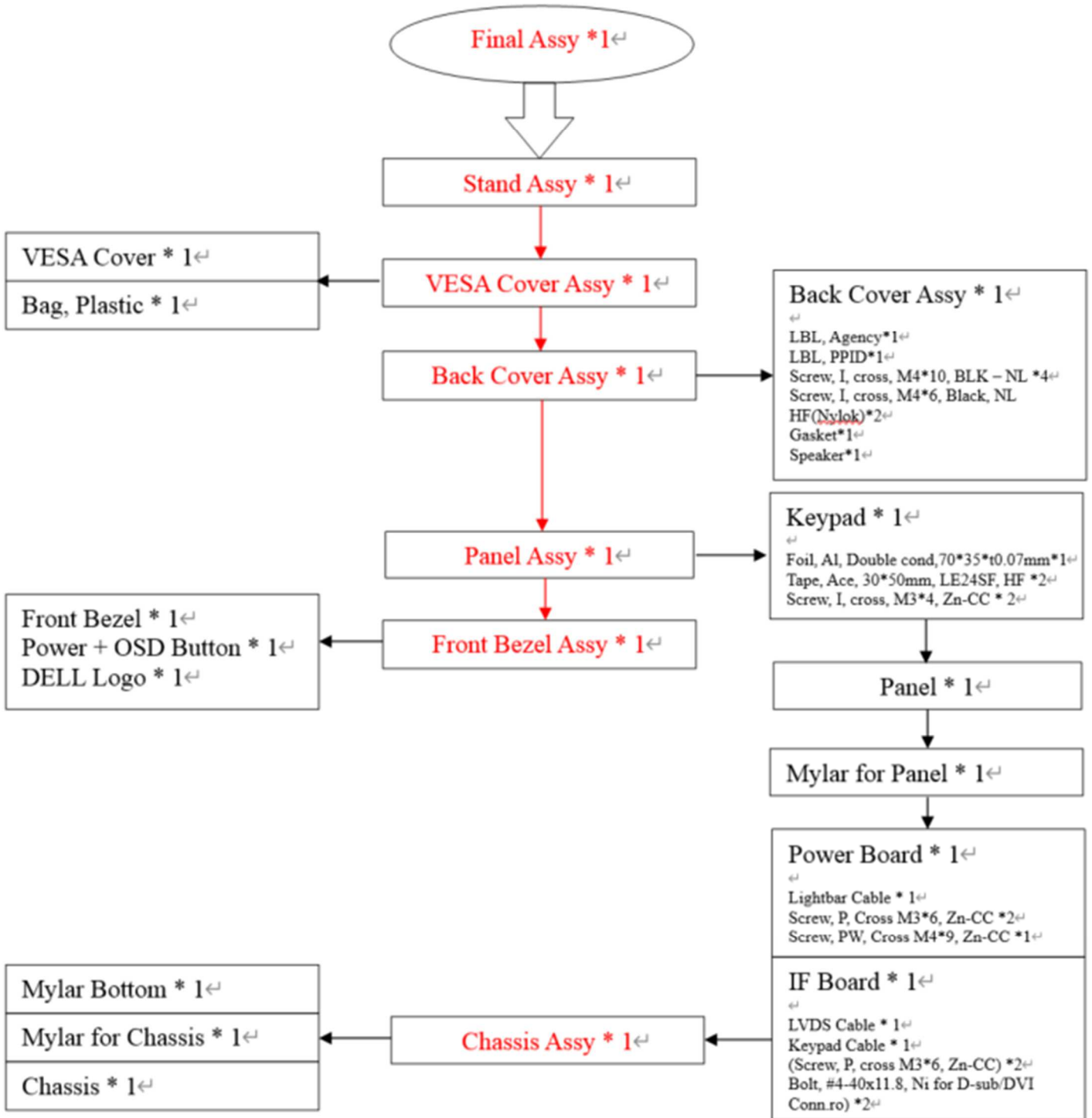
1. E2222HS Assembly Block

LE22TA ASSEMBLY BLOCK

Front Bezel * 1
Power + OSD Button * 1
DELL Logo * 1

↓

Front Bezel Assy * 1 → **Panel** * 1 → **Keypad** * 1
Foil, Al, Double cond,70*35*t0.07mm*1
Tape, Ace, 30*50mm, LE24SF, HF *2
Screw, I, cross, M3*4, Zn-CC * 2

Mylar for Panel * 1

↑

Power Board * 1
Lightbar Cable * 1
Screw, P, Cross M3*6, Zn-CC *2
Screw, PW, Cross M4*9, Zn-CC *1

↑

IF Board * 1
LVDS Cable * 1
Keypad Cable * 1
(Screw, P, cross M3*6, Zn-CC) *2
Bolt, #4-40x11.8, Ni for D-sub/DVI
Conn.ro) *2

Panel Assy * 1

↓

Back Cover Assy * 1
LBL, Agency*1
LBL, PPID*1
Screw, I, cross, M4*10, BLK – NL *4
Screw, I, cross, M4*6, Black, NL
HF(Nylok)*2
Gasket*1
Speaker*1

↓

VESA Cover * 1
(Bag, Plastic) * 1

Chassis * 1
SE2222H, Main Chassis *1
SE2222H, Bracket, LE22SZ, HF *1
SE2422H, Release Button *1
Mylar for Chassis, LE22SD *1
Mylar for Chassis bottom, LE22SD, HF *1

→ **Chassis Assy** * 1

VESA Cover Assy * 1

↓

Stand Assy * 1

↓

Final Assy *1

Note: 1. The arrows point out the direction of disassembly.
Disassemble the slot of Back cover from monitor

2. **E2222HS Disassembly Block**

LE22TA DISASSEMBLY BLOCK

Final Assy *1

Stand Assy * 1

VESA Cover * 1
Bag, Plastic * 1

VESA Cover Assy * 1

Back Cover Assy * 1

Back Cover Assy * 1

LBL, Agency*1
LBL, PPID*1
Screw, I, cross, M4*10, BLK − NL *4
Screw, I, cross, M4*6, Black, NL
HF(Nylok)*2
Gasket*1
Speaker*1

Panel Assy * 1

Keypad * 1

Foil, Al, Double cond,70*35*t0.07mm*1
Tape, Ace, 30*50mm, LE24SF, HF *2
Screw, I, cross, M3*4, Zn-CC * 2

Front Bezel * 1
Power + OSD Button * 1
DELL Logo * 1

Front Bezel Assy * 1

Panel * 1

Mylar for Panel * 1

Power Board * 1

Lightbar Cable * 1
Screw, P, Cross M3*6, Zn-CC *2
Screw, PW, Cross M4*9, Zn-CC *1

Mylar Bottom * 1
Mylar for Chassis * 1
Chassis * 1

Chassis Assy * 1

IF Board * 1

LVDS Cable * 1
Keypad Cable * 1
(Screw, P, cross M3*6, Zn-CC) *2
Bolt, #4-40x11.8, Ni for D-sub/DVI
Conn.ro) *2

6. Trouble shooting instructions

Troubleshooting

⚠ WARNING: Before you begin any of the procedures in this section, follow the Safety instructions.

Self-test

Your monitor provides a self-test feature that allows you to check if your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark, run the monitor self-test by performing the following steps:

1. Turn off both your computer and the monitor.
2. Disconnect all video cables from the monitor. This way, the computer does not have to be involved.
3. Turn on the monitor.

If the monitor is working correctly, it detects that there is no signal and one of the following message appears. While in self-test mode, the power LED remains white.
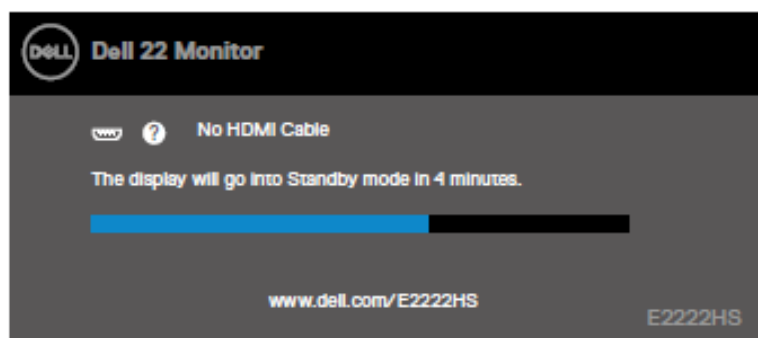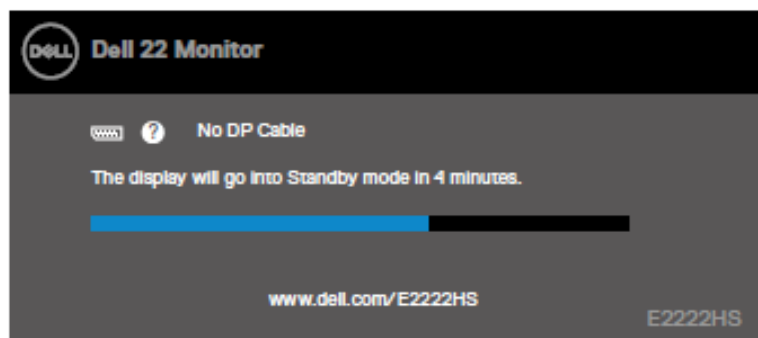
NOTE: This message also appears during normal operation, when the video cable is disconnected or damaged.

4. Turn off your monitor and reconnect the video cable; then turn on your computer and the monitor.

If your monitor remains dark after you reconnect the cables, check your video controller and computer.

Built-in diagnostics

Your monitor has a built-in diagnostic tool that helps you determine if any screen abnormality you experience is an inherent problem with your monitor, or with your computer and video card.

Label	Description
1	Button 1
2	Button 2
3	Button 3
4	Button 4

To run the built-in diagnostics:

1. Ensure that the screen is clean (no dust particles on the surface of the screen).
2. Press and hold **Button 4** for about 4 seconds and wait for a pop up menu.
3. Use **Button 1** or **2** to select the ⬚ and press ✔ to confirm.

   A gray test pattern appears at the beginning of the diagnostic program.
4. Carefully inspect the screen for abnormalities.
5. Press **Button 1** to change the test patterns.
6. Repeat steps 4 and 5 to inspect the display in red, green, blue, black, white and text screens.
7. When in White color test screen, check for white color uniformity and if there white color appears greenish/reddish, etc.
8. Press **Button 1** to end the diagnostic program.

Common problems

The following table provides general information about common monitor problems you might encounter and the possible solutions:

Common symptoms	Possible solutions
No video/Power LED off	• Ensure that the video cable connecting the monitor and the computer is properly connected and secure. • Verify that the power outlet is functioning properly using any other electrical equipment. • Ensure that the power button is pressed. • Ensure that the correct input source is selected via the **Input Source** menu.
No video/Power LED on	• Increase brightness and contrast controls using the OSD. • Perform monitor self-test feature check. • Check for bent or broken pins in the video cable connector. • Run the built-in diagnostics. • Ensure that the correct input source is selected via the **Input Source** menu.
Poor focus	• Eliminate video extension cables. • Reset the monitor to Factory Settings (**Factory Reset**). • Change the video resolution to the correct aspect ratio.
Shaky/Jittery video	• Reset the monitor to Factory Settings (**Factory Reset**). • Check environmental factors. • Relocate the monitor and test in another room.
Missing pixels	• Cycle power On-off. • Pixel that is permanently off is a natural defect that can occur in LCD technology. • For more information about Dell Monitor Quality and Pixel Policy, see Dell Support site at: **www.dell.com/pixelguidelines.**
Stuck-on pixels	• Cycle power On-off. • Pixel that is permanently off is a natural defect that can occur in LCD technology. • For more information about Dell Monitor Quality and Pixel Policy, see Dell Support site at: **www.dell.com/pixelguidelines.**
Brightness problems	• Reset the monitor to Factory Settings (**Factory Reset**). • Adjust brightness and contrast controls using OSD.
Geometric distortion	• Reset the monitor to Factory Settings (**Factory Reset**). • Adjust horizontal and vertical using OSD.
Horizontal/Vertical lines	• Reset the monitor to Factory Settings (**Factory Reset**). • Perform monitor self-test feature check and determine if these lines are also in self-test mode. • Check for bent or broken pins in the video cable connector. • Run the built-in diagnostics.

Common symptoms	Possible solutions
Synchronization problems	• Reset the monitor to Factory Settings (**Factory Reset**). • Perform monitor self-test feature check to determine if the scrambled screen appears in self-test mode. • Check for bent or broken pins in the video cable connector. • Restart the computer in safe mode.
Safety related issues	• Do not perform any troubleshooting step. • Contact Dell immediately.
Intermittent problems	• Try different **Preset Modes** in **Color** settings OSD. Adjust **R/G/B** value in **Custom Color** in **Color** settings OSD. • Change the **Input Color Format** to **RGB** or **YPbPr** in the **Color** settings OSD. • Run the built-in diagnostics.
Missing color	• Perform monitor self-test feature check. • Ensure that the video cable connecting the monitor to the computer is connected properly and is secure. • Check for bent or broken pins in the video cable connector.
Wrong color	• Try different **Preset Modes** in **Color** settings OSD. Adjust **R/G/B** value in **Custom Color** in **Color** settings OSD. • Change the **Input Color Format** to **RGB** or **YCbCr/YPbPr** in the **Color** settings OSD. • Run the built-in diagnostics.
Image retention from a static image left on the monitor for a long period of time	• Set the screen to turn off after a few minutes of screen idle time. These can be adjusted in Windows Power Options or Mac Energy Saver setting. • Alternatively, use a dynamically changing screensaver.
Video ghosting or overshooting	• Change the **Response Time** in the **Display** OSD to **Fast** or **Normal** depending on your application and usage.

Product-specific problems

Specific symptoms	Possible solutions
Screen image is too small	• Check the **Aspect Ratio** setting in the **Display** settings OSD. • Reset the monitor to Factory Settings (**Factory Reset**).
Cannot adjust the monitor with the buttons on the bottom of the panel	• Turn off the monitor, unplug the power cord, plug it back, and then turn on the monitor. • Check if the OSD menu is locked. If yes, press and hold the Exit button (button 4) for four seconds to unlock.
No input signal when user controls are pressed	• Check the signal source. Ensure that the computer is not in standby or sleep mode by moving the mouse or pressing any key on the keyboard. • Check if the video cable is plugged in properly. Disconnect and reconnect the video cable if necessary. • Reset the computer or video player.
The picture does not fill the entire screen	• Due to different video formats (aspect ratio) of DVDs, the monitor may display in full screen. • Run the built-in diagnostics.