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Superior Court of California
County of Los Angeles

APR 30 2018

Sheri R. Carter, Executive Officer/Clerk of Court
By: Brittany Smith, Deputy

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

JEFFREY KOENIG and MARCELLUS
HOLT, on Behalf of Themselves and All
Others Similarly Situated,

Plaintiffs,

vs.

VIZIO, INC.,

Defendant.

Case No. **BC 702266**

**PLAINTIFFS' CLASS ACTION
COMPLAINT FOR VIOLATIONS OF:**

- 1. UNFAIR COMPETITION LAW,
BUS. & PROF. CODE, § 17200**
- 2. FALSE ADVERTISING LAW, BUS.
& PROF. CODE, § 17500**
- 3. CONSUMER LEGAL REMEDIES
ACT, CIV. CODE, § 1770**

DEMAND FOR JURY TRIAL

1 For this class action Complaint, Plaintiffs Jeffrey Koenig and Marcellus Holt, individually
2 and on behalf of all others similarly situated, allege as follows:

3 **SUMMARY OF THE ACTION**

4 1. The market for flat panel LCD (Liquid Crystal Display) televisions is competitive.
5 As such, product performance and technical capabilities are key factors in marketing and setting
6 the price television manufacturers and vendors can demand for their products.

7 2. A significant technical problem with LCD televisions (hereafter referred to as
8 “televisions”) is motion blurring, particularly with fast-moving scenes.

9 3. A solution to this problem is to increase the television’s refresh rate so it can
10 display more images per second to reduce or eliminate motion blurring and provide a better
11 picture compared to televisions lacking this technology. Because this technology is expensive,
12 however, these televisions command a premium price.

13 4. Defendant VIZIO states in its marketing materials and technical specifications that
14 its televisions use a higher refresh rate, and it makes these representations to try and influence
15 consumer decisions on whether to purchase its televisions.

16 5. In reality, the refresh rates of VIZIO’s televisions are half of what VIZIO claims,
17 and in many instances, VIZIO has done nothing to increase the television’s refresh rate.
18 Defendant VIZIO makes these false or misleading statements about the capabilities of its
19 televisions so it can market and sell lower-quality televisions at a higher price or, alternatively,
20 capture sales it otherwise would not have made.

21 6. Had Defendant VIZIO provided accurate information about the quality of its
22 televisions, Plaintiffs and the Class would have paid less for their televisions or purchased a
23 competing product from a different manufacturer.

24 7. Defendant VIZIO’s scheme injured Plaintiffs and members of the putative class
25 by, among other things, having them pay more for their VIZIO televisions than they otherwise
26 would have paid or, alternatively, duping them into buying a product they otherwise would not
27 have considered for purchase.

1 **PARTIES**

2 8. Defendant VIZIO, Inc. (hereafter, VIZIO) is a corporation organized under the
3 laws of the state of California. Its headquarters are located at 39 Tesla, Irvine, California.

4 9. Plaintiff Jeffrey Koenig is a resident of the state of California who resides in
5 Rosamond, California. On August 1, 2016, Plaintiff Koenig purchased a new VIZIO television
6 for personal use that VIZIO sold through bestbuy.com. He picked up the television at a Best Buy
7 store in Santa Clarita, CA.

8 10. Plaintiff Marcellus Holt is a resident of the state of California who resides in San
9 Bernardino, California. In November of 2016, Plaintiff Holt purchased a new VIZIO television
10 for personal use that VIZIO sold through a Target store located in Canoga Park, California.

11 **JURISDICTION AND VENUE**

12 11. The Court has personal jurisdiction over Defendant VIZIO as it resides in and does
13 business in the State of California.

14 12. This is a class action brought pursuant to Code of Civil Procedure, § 382, and this
15 Court has jurisdiction over the Plaintiffs' claims because the amount in controversy exceeds this
16 Court's jurisdictional minimum.

17 13. Federal jurisdiction under the Class Action Fairness Act, 28 U.S.C. § 1332(d), is
18 lacking because two-thirds or more of the members of the proposed plaintiff class in this case in
19 the aggregate, and the primary defendant, VIZIO, are citizens of the State of California. 28 U.S.C.
20 § 1332(d)(4)(B).

21 14. Venue is proper under Code of Civil Procedure sections 395, subdivision (a),
22 395.5, and Civil Code section 1780, subdivision (c) because a substantial part of the events or
23 omissions giving rise to the claims asserted in this complaint occurred in this county, to wit,
24 Defendant VIZIO made false and misleading statements about its televisions in this county to sell
25 its televisions to Plaintiffs Koenig, Holt and other putative class members in this county, and
26 certain of the transactions at issue occurred in this county and the State of California. Attached to
27 this Complaint is a Consumer Legal Remedies Act Affidavit of Venue.

1 **FACTS**

2 15. VIZIO assembles and sells televisions. It is one of the largest sellers (by volume)
3 of televisions in California and the United States.

4 16. VIZIO depends on the sale of televisions for a substantial portion of its net sales,
5 and a decline in the volume of those sales would harm its business and operating results.

6 17. The market for televisions is rapidly evolving and highly competitive, and VIZIO
7 sells the vast majority of its televisions to the end consumer through various retailers. In most
8 instances, retailers offer several competing brands of similar televisions. Retailers will cease
9 offering VIZIO products if consumers prefer a competing brand and VIZIO televisions are unable
10 to be sold at a profit.

11 18. Consumer demand for televisions is affected by, among other things, technological
12 innovations that advance the picture quality of display panels to achieve better clarity and detail
13 in images, especially during fast-moving scenes.

14 19. Thus, to remain competitive and stimulate consumer demand, VIZIO must keep
15 pace with technological advances that deliver better picture quality in televisions. If consumers
16 were to start choosing televisions manufactured by VIZIO's competitors, it would have a
17 materially adverse effect on VIZIO's financial condition.

18 20. As a result, both VIZIO and its competitors have continually focused on methods
19 to advance the picture quality of display panels to achieve better clarity and detail in images,
20 especially during fast-moving scenes.

21 **Refresh Rates: A Primer and its Importance**

22 21. The display panel of a television displays and holds one image at a time in rapid
23 succession to create the appearance of a moving picture. It determines overall performance
24 capabilities and is, for all intents and purposes, the television.

25 22. The number of images (per second) that a television's display panel can produce
26 and present to the viewer is measured in cycles per second, called Hertz ("Hz"), and is referred to
27 as refresh rate, that is, the number of times the display panel can "refresh" the image each second.

1 23. A television's Hz measurement, that is, refresh rate, are industry standard
2 specifications.

3 24. A television's refresh rate (Hz) is determined solely by, and correspond directly to,
4 the vertical frequency of the display panel used by the television. If, for example, the display
5 panel has a vertical frequency of 60Hz, the television has a Hz measurement of 60Hz and can
6 refresh at the rate of 60 images per second; if the display panel has a vertical frequency of 120Hz,
7 the television has a Hz measurement of 120Hz and can refresh at the rate of 120 images per
8 second; and if the display panel has a vertical frequency of 240Hz, the television has a Hz
9 measurement of 240Hz and can refresh at the rate of 240 images per second.

10 25. As stated, a television's Hz specification, it's refresh rate and the vertical
11 frequency of the display panel used by the television are unequivocally, identically and
12 numerically linked: knowing any one of these specifications reveals the numerical value for the
13 remaining two. In effect, these three specifications are one in the same.

14 26. The refresh rate (Hz) specification of a television is a material specification. If
15 enough images are not presented in rapid enough succession, the viewer will experience "motion
16 blur," especially with sports programing, camera panning, action sequences, video games and
17 during high-volume content presentation (as when information scrolls across the bottom of the
18 screen). Motion blur occurs when the television's display panel cannot produce and display
19 images quickly enough to maintain image presentation clarity.

20 27. Televisions with higher refresh rates (Hz) can reduce or eliminate motion blur and
21 produce clearer and consistently smoother pictures. To achieve higher refresh rates (Hz), the
22 display panel must have the technological capability to capture (or create) the images required to
23 achieve motion clarity.

24 28. Increasing the refresh rate (Hz) capabilities of display panels is an expensive and
25 significant technological accomplishment. In the United States, because the electric current is
26 supplied at 60Hz, the standard and basic refresh rate of display panels is 60Hz. To improve the
27 refresh rate (Hz), LCD display panel manufacturers have incorporated advanced technology and
28 high-end materials to produce 120Hz and 240Hz display panels for use in televisions.

1 29. These advanced display panels use image interpolation technology which predicts,
2 30. creates and displays an image (or images) in between the images supplied by the
3 60Hz current. To illustrate, a 60Hz display panel will produce the 60 images broadcast by the
4 60Hz current as follows: 1-2-3-4-5-6-7-8 and so on. A 120Hz display panel will use complex
5 algorithms to predict, create, and display an image in between each of the supplied 60 images to
6 display 120 images per second in the following manner: 1-1/2-2-2/3-3-3/4-4-4/5-5-5/6-6-6/7-7-
7 7/8-8 and so on. Consequently, the amount of blurring on a 120Hz display panel is halved from
8 the level at the rate of 60 images per second. A 240Hz display panel can use algorithms to
9 predict, create, and display three images in between each image supplied by the current and the
10 amount of blurring is further halved from the level at the rate of 120 images per second.

11 31. In addition, display panels greater than 60Hz require higher-end liquid crystals
12 capable of the faster response times needed to display, hold and rapidly change the images that
13 are displayed.

14 32. An alternative, less expensive method to address motion blur is to manipulate the
15 television's lighting element – the backlight. Backlight manipulation methods dim or cease to
16 illuminate a portion of the image while it appears on screen before displaying the next image.

17 33. Display panels that utilize backlight manipulation do not have the ability to display
18 more images than its stated vertical frequency specification: a 60Hz display panel with backlight
19 manipulation can only display a maximum of 60 images per second; a 120Hz display panel with
20 backlight manipulation can only display a maximum of 120 images per second; and a 240Hz
21 display panel with backlight manipulation can only display a maximum 240 images per second.

22 34. Backlight manipulation has no effect on the refresh rate (Hz) of a television
23 because backlight manipulation cannot, and does not, increase the Hz of the display panel used by
24 a television.

25 35. Backlight manipulation is less expensive for the television manufacturer to
26 implement. It is also less effective at reducing or eliminating motion blur, particularly in fast-
27 moving scenes, than using 120Hz or 240Hz display panels.

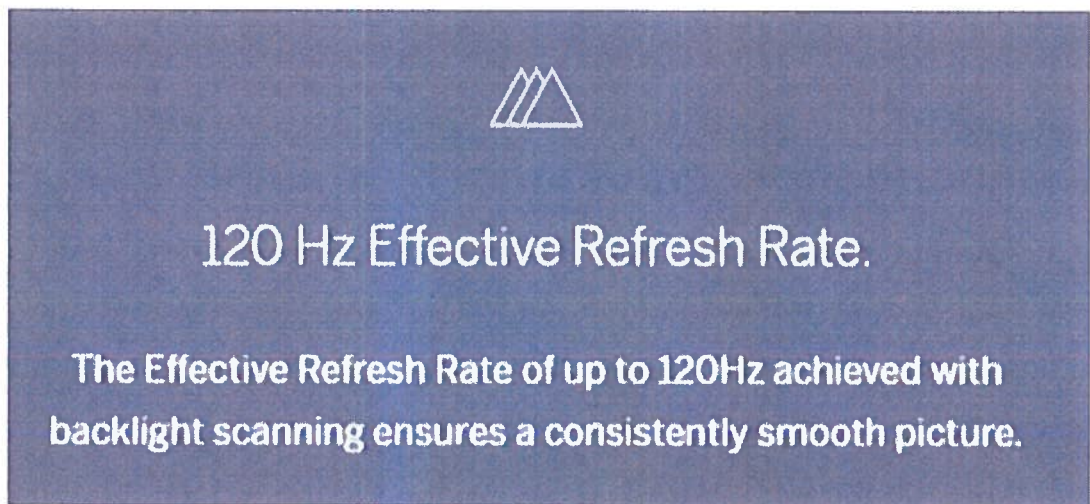
1 **VIZIO's Practice of Fraudulently Marketing Refresh Rate (Hz)**

2 36. VIZIO's competitors began developing and selling LCD televisions purporting to
3 have 120Hz or 240Hz display panels.


4 37. Instead of investing in the technology and materials to legitimately increase the
5 refresh rate (Hz) of its televisions, VIZIO opted to utilize the inferior and less expensive backlight
6 manipulation method to address motion blur. Nonetheless, VIZIO claimed the prestige of having
7 televisions with a higher refresh rate (Hz) even though they did not.

8 38. Thus, VIZIO marketed the technical specifications of its televisions with 60Hz
9 display panels as having a "120 Hz Effective Refresh Rate."

10 39. For example, in a section of VIZIO's current website for its television titled
11 "Picture Quality Specs," VIZIO states as follows:



21 40. VIZIO's marketing the technical specifications of televisions with 60Hz display
22 panels as having a "120Hz Effective Refresh Rate" is misleading and untrue. VIZIO's televisions
23 with 60Hz display panels, in fact, have an effective refresh rate of only 60Hz because they can
24 only display 60 images per second, not 120 images per second. Backlight manipulation methods
25 cannot and do not increase the effective Hz (refresh rate) of the television.

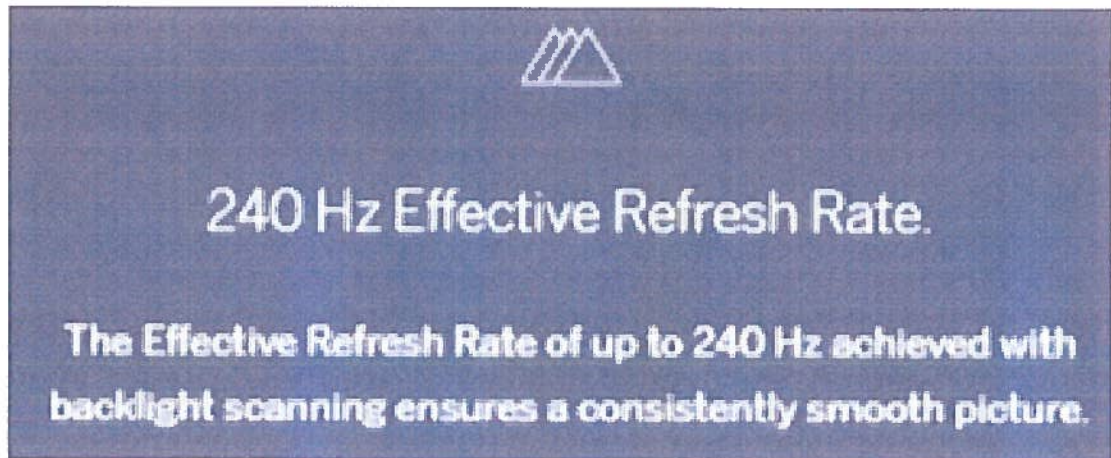
26 41. Yet, as further reflected by the  icon of multiple images in VIZIO's
27 specifications, the message VIZIO intends to convey to the consumers is that its televisions use a
28 larger number of multiple images to achieve a smooth picture (in this case, 120 images per

1 second) when they do not.


2 42. VIZIO knows, or at the very least should know, that its televisions with 60Hz
3 display panels have a refresh rate of 60 images per second and that backlight manipulation
4 methods cannot and do not increase the effective Hz (refresh rate) of a television.

5 43. VIZIO also manufactured and sold televisions with 120Hz display panels, but
6 marketed the technical specifications of its televisions with 120Hz display panels as having a
7 “240Hz Effective Refresh Rate” in order to compete with competitors offering legitimate 240Hz
8 televisions. See VIZIO Webpages, attached hereto as Exhibits D and E.

9 44. For example, in a section of VIZIO’s current website for televisions titled “Picture
10 Quality Specs,” VIZIO states as follows:



19 45. VIZIO’s marketing of the technical specifications of its televisions with 120Hz
20 display panels as having a “240Hz Effective Refresh Rate” is misleading and untrue. VIZIO’s
21 televisions with 120Hz display panels have an effective refresh rate of 120Hz because they can
22 only display 120 images per second, not 240 images per second. Backlight manipulation methods
23 cannot and do not increase the effective Hz (refresh rate) of the television.

24 46. Yet, as further reflected by the  icon of multiple images in VIZIO’s
25 specifications, the message VIZIO intends to convey to consumers is that its televisions use a
26 larger number of multiple images to achieve a smooth picture (in this case, 240 images per
27 second) when they do not.

28

1 47. VIZIO knows, or at the very least should know, that its televisions with 120Hz
2 display panels have a refresh rate of only 120 images per second and that backlight manipulation
3 cannot and does not increase the effective Hz (refresh rate) of a television.

4 48. Not only are VIZIO's statements about the technical specifications of its
5 televisions misleading and untrue, but the refresh rate (Hz) of the display panel used by a
6 television is not something that can be readily verified by the end consumer.

7 49. VIZIO repeats these misleading and false statements in its user manuals. For
8 example, in its user manual for its model M50-E1 television, attached hereto as Exhibit A, VIZIO
9 states that the television has the following specifications:

	M50-E1
Screen Size:	50"
Viewable Area:	49.50"
Dimensions w/ Stand:	44.40" x 27.98" x 8.70"
w/o Stand:	44.40" x 25.61" x 2.68"
Weight w/ Stand:	30.86 lbs
w/o Stand:	29.32 lbs
LCD Backlight:	Full Array LED
Active LED Zones:	32
Refresh Rate:	120 Hz Effective Refresh Rate
Maximum Resolution:	3840 x 2160 (UHD)
Dynamic Contrast Ratio:	20M:1

21 Exhibit A at Section B, page 35.

22 50. VIZIO's statement that the Refresh Rate of the M50-E1 is "120 Hz Effective
23 Refresh Rate" is false and misleading. Upon information and belief, VIZIO's model M50-E1
24 television uses a 60Hz display panel, and therefore, it has an "effective refresh rate" of 60Hz, not
25 120Hz.

26 51. VIZIO's misleading and untrue statements about the refresh rates (Hz) of its
27 televisions is likely to deceive members of the public and are intended to try and influence their
28

1 decisions on whether to purchase a VIZIO television or one manufactured by a competitor.

2 52. Upon information and belief, VIZIO also made these misleading and untrue
3 statements so that retailers would provide adequate and attractive space in their stores for
4 VIZIO's televisions and to motivate them to recommend VIZIO's televisions to consumers. If
5 VIZIO's retailers did not adequately display VIZIO's televisions or chose to promote
6 competitors' televisions over VIZIO's products, including through more prominent or higher-
7 impact store displays and through in-store recommendations to consumers from their sales
8 personnel, then VIZIO's net sales would have decreased and its business would have been
9 harmed.

10 53. Not only are VIZIO's statements misleading and untrue, but the refresh rate (Hz)
11 of a television cannot be readily verified by the consumer.

12 54. VIZIO's misleading and untrue statements about the technical specifications and
13 performance of its televisions allowed VIZIO to sell its lesser-quality product at a higher price
14 and allowed VIZIO to realize sales it may not have otherwise made if it were truthful regarding
15 the performance capabilities of its televisions.

16 **Plaintiff Koenig's purchase of a VIZIO television**

17 55. VIZIO markets and sells its televisions through its website, Vizio.com, as well as
18 through other online retailers.

19 56. VIZIO makes available "Tech Specs" on its website for its television models. It
20 also makes the user manuals for VIZIO television models available for inspection and viewing.
21 The Hz rating and refresh rate are among the specifications listed in the "Tech Specs" section of
22 VIZIO'S website and in the user manuals.

23 57. In the "Tech Specs" section, VIZIO markets the M65-D0 model television as
24 having a technical specification of "240Hz Effective Refresh Rate"; in the user manual, the M65-
25 D0 model television is listed as having a "Refresh Rate" of "240Hz w/ Effective Refresh Rate."

26 58. Upon information and belief, the model M65-D0 television VIZIO markets on its
27 website has a refresh rate and Hz value of 120, not 240.

28

1 59. On August 1, 2016, Plaintiff Koenig purchased a 65-inch VIZIO television, model
2 M65-D0, through Bestbuy.com.

3 60. Before he purchased this VIZIO television, Plaintiff Koenig reviewed this model
4 on VIZIO's website, reviewed its stated specifications and saw VIZIO's representations that this
5 model had a refresh rate of 240Hz. Indeed, one of the reasons Plaintiff Koenig purchased the
6 model M65-D0 VIZIO television was the advertised 240Hz refresh rate as he intended the
7 television to be used to watch sporting events and action movies.

8 61. The advertised 240Hz refresh rate was false. The VIZIO television Plaintiff
9 Koenig purchased has a refresh rate of 120Hz.

10 62. As a result of VIZIO's false and misleading statements, Plaintiff Koenig paid more
11 for his VIZIO television than he would have paid had VIZIO's advertising and representations
12 been truthful.

13 63. As a result of VIZIO's false and misleading statements, Plaintiff Koenig paid for a
14 television that VIZIO misrepresented as using technology it did not actually have and having
15 technical capabilities it did not actually have.

16 64. Indeed, Plaintiff Koenig experiences noticeable motion blur when using the VIZIO
17 television to watch sporting events and action movies.

18 **Plaintiff Marcellus Holt's purchase of a VIZIO television**

19 65. VIZIO markets and sells its televisions through Target.

20 66. Upon information and belief, VIZIO provides Target with marketing and other
21 advertising materials, including technical specifications about the refresh rates of different
22 models, for Target to use to advertise VIZIO's products in its stores and online.

23 67. VIZIO provides Target with false and misleading information about the refresh
24 rates of its LCD televisions so that Target will advertise the 120Hz or 240Hz refresh rate to end-
25 consumers.

1 the State of California that VIZIO labeled as having a “Hz” rating twice as high as
2 its actual refresh rate.

3 Plaintiff reserves the right to modify the class definitions or add sub-classes as necessary prior to
4 filing a motion for class certification.

5 76. The “Class Period” is the time period beginning on the date established by the
6 Court’s determination of any applicable statute of limitations, after consideration of any tolling
7 and accrual issues, and ending on the date of entry of judgment.

8 77. Excluded from the Class is VIZIO; any affiliate, parent, or subsidiary of VIZIO;
9 any entity in which VIZIO has a controlling interest; any officer, director, or employee of VIZIO;
10 any successor or assign of VIZIO; anyone employed by counsel in this action; any judge to whom
11 this case is assigned, his or her spouse and immediate family members; and members of the
12 judge’s staff.

13 78. Numerosity/Ascertainability: The members of the Class are so numerous that
14 joinder of all members would be unfeasible and not practicable. The exact number of Class
15 members is unknown to Plaintiff at this time; however, it is estimated that there are more than one
16 thousand (1,000) individuals in the Class. The identity of such membership is readily
17 ascertainable from VIZIO’s records and the records of its retailers.

18 79. Common Questions of Law and Fact Predominate/Well Defined Community of
19 Interest: There are common questions of law and fact as to Plaintiff and all other similarly
20 situated employees, which predominate over questions affecting only individual members
21 including, without limitation, the following:

- 22 a. Whether VIZIO’s statements and representations about the Hz (refresh rate) of
23 its televisions are false or misleading;
- 24 b. Whether VIZIO violated California’s Unfair Competition Law (“UCL”),
25 Business and Professions Code, § 17200 *et seq.*, by, *inter alia*, (i) advertising
26 its televisions as using technology that they actually do not; and (ii)
27 misrepresenting the Hz (refresh rate) of its televisions; and
28

- 1 c. Whether VIZIO violated California’s False Advertising Law, Business and
2 Professions Code, § 17500 *et seq.*, by, *inter alia*, (i) advertising its televisions
3 as using technology that they actually do not use; and (ii) misrepresenting the
4 Hz (refresh rate) of its televisions.
- 5 d. Whether VIZIO violated California’s Consumer Legal Remedies Act
6 (“CLRA”), Civil Code, § 1770, by, *inter alia*, (i) representing that its LCD
7 televisions have characteristics, uses, benefits, or quantities that they do not
8 have, in violation of Ca. Civil Code § 1770(a)(5); (ii) representing that its
9 televisions are of a particular standard, quality, or grade, when they are not, in
10 violation of Ca. Civil Code § 1770(a)(7); or (iii) advertising its televisions with
11 intent not to sell them as advertised, in violation of Ca. Civil Code §
12 1770(a)(9).

13 80. Predominance of Common Questions: Common questions of law and fact
14 predominate over questions that affect only individual members of the Class. The common
15 questions of law set forth above are numerous and substantial and stem from Defendant’s policies
16 and/or practices applicable to each individual Class member. As such, these common questions
17 predominate over individual questions concerning each individual Class member’s showing as to
18 his or her eligibility for recovery or as to the amount of his or her damages.

19 81. Typicality: Plaintiffs’ claims are typical of the claims of the Class because
20 Plaintiffs purchased a VIZIO televisions that VIZIO represented and sold at a higher price by
21 claiming it used a higher quality display panel to increase Hz (refresh rate) and reduce motion
22 blur that, in reality, it did not have.

23 82. Adequacy of Representation: Plaintiffs are fully prepared to take all necessary
24 steps to represent fairly and adequately the interests of the members of the Class. Moreover,
25 Plaintiffs’ attorneys are ready, willing and able to fully and adequately represent the members of
26 the Class and Plaintiffs. Plaintiffs’ attorneys are experienced in prosecuting class actions and
27 consumer fraud and product liability cases and are committed to vigorously prosecuting this
28

1 action on behalf of the members of the Class.

2 83. Superiority: The California statutory law on unfair competition is broadly remedial
3 in nature and serves an important public interest in preventing or deterring unfair, deceptive,
4 untrue or misleading advertising. The nature of this action and the format of laws available to
5 Plaintiffs and members of the Class make the class action format a particularly efficient and
6 appropriate procedure to redress the violations alleged herein.

7 84. As such, the Class is maintainable under Section 382 of the Code of Civil
8 Procedure.

9 **CAUSES OF ACTION**

10 **FIRST CAUSE OF ACTION**

11 **FOR VIOLATION OF CALIFORNIA’S UNFAIR COMPETITION LAW, BUSINESS &**
12 **PROFESSIONS CODE SECTION 17200**

13 85. Plaintiffs re-allege and incorporates by reference each of the preceding paragraphs
14 as though fully set forth herein.

15 86. Plaintiffs brings this claim on behalf of themselves and the Class.

16 87. VIZIO has engaged and continues to engage in unlawful, fraudulent and/or unfair
17 business acts or practices in California, as well as unfair, deceptive, untrue or misleading
18 advertising in California, in violation of California’s Unfair Competition Law (“UCL”), Business
19 and Professions Code, § 17200 *et seq.*

20 88. VIZIO violated the unlawful prong of section 17200 by its violation of Cal. Bus. &
21 Prof. Code § 17500 and the Consumer Legal Remedies Act, Civil Code section 1770 *et seq.*, as
22 alleged below.

23 89. VIZIO violated the fraud prong of section 17200 by making statements about the
24 refresh rates (Hz) and technology used in its television that are likely to deceive consumers and
25 did deceive Plaintiffs.

26 90. VIZIO violated the unfair prong of the UCL because the acts and practices set
27 forth in the Complaint offend established policy and work harm to Plaintiffs and the Class as well
28

1 as competition.

2 91. VIZIO violated the unfair, deceptive, untrue or misleading advertising prong of the
3 UCL because the acts and practices set forth in the Complaint regarding their misrepresentations
4 and untrue statements to Plaintiffs and the Class that are intended to deceive them and influence
5 the Plaintiffs' and the Class members' decision to purchase VIZIO's products.

6 92. VIZIO's utilization of these unlawful or unfair business practices, and the unfair,
7 deceptive, untrue or misleading advertising practices, injured Plaintiff and the Class because they
8 paid more for their televisions than they otherwise would have paid absent VIZIO's deceptive and
9 sharp practices.

10 93. Because Plaintiffs are victims of VIZIO's conduct alleged herein, Plaintiffs and
11 the members of the Class seek full restitution of monies, as necessary and according to proof.

12 94. The acts complained of herein occurred within the last four years immediately
13 preceding the filing of the Complaint in this action.

14 95. All of the wrongful conduct alleged herein occurred, and continues to occur, in the
15 conduct of VIZIO's business. VIZIO's wrongful conduct is a part of a pattern of generalized
16 course of conduct that is still perpetuated and repeated in the State of California.

17 96. Plaintiff request that this Court enter such orders or judgments as may be
18 necessary to enjoin VIZIO from continuing its unfair, unlawful and/or deceptive practices, and to
19 restore to Plaintiffs and the Class the monies that VIZIO acquired by means of such unfair
20 competition, including restitution and/or restitutionary disgorgement, unjust enrichment and for
21 such other relief as may be appropriate.

22 97. Plaintiffs were compelled to retain the services of counsel to file this action to
23 protect their interests and those of the Class, to obtain restitution, to secure injunctive relief and to
24 enforce important rights affecting the public interest. Plaintiff and the Class is therefore entitled to
25 an award of attorneys' fees that should not in the interest of justice be paid out of a recovery, if
26 any, under Code of Civil Procedure § 1021.5.

1 **SECOND CAUSE OF ACTION**

2 **FOR VIOLATION OF CALIFORNIA'S FALSE ADVERTISING LAW, BUSINESS &**
3 **PROFESSIONS CODE SECTION 17500**

4 98. Plaintiffs re-allege and incorporate by reference each of the preceding paragraphs
5 as though fully set forth herein.

6 99. Plaintiffs bring this claim on behalf of themselves and the Class.

7 100. VIZIO has disseminated, or caused to be disseminated, to Plaintiffs and the public
8 in California statements that are untrue or misleading, and which are known, or which by the
9 exercise of reasonable care should be known, to be untrue or misleading, in violation of
10 California's False Advertising Law, Business and Professions Code, § 17500 *et seq.* Specifically,
11 and as alleged above, VIZIO marketed and advertised the technical specifications its 60Hz
12 televisions with backlight manipulation as having a "120Hz Effective Refresh Rate," when in fact
13 it is 60Hz. VIZIO marketed and advertised the technical specifications its 120Hz televisions with
14 backlight manipulation as having a "240Hz Effective Refresh Rate" when in fact it is 120Hz.

15 101. VIZIO's utilization of these unlawful advertising practices injured Plaintiff and the
16 Class because they paid more for their televisions than they otherwise would have paid absent
17 VIZIO's deceptive practices.

18 102. Because Plaintiffs are victims of VIZIO's conduct alleged herein, Plaintiffs and
19 the members of the Classes seek full restitution of monies, as necessary and according to proof.

20 103. All of the wrongful conduct alleged herein occurred, and continues to occur, in the
21 conduct of VIZIO's business. VIZIO's wrongful conduct is a part of a pattern of generalized
22 course of conduct that is still perpetuated and repeated in the State of California.

23 104. Plaintiffs request that this Court enter such orders or judgments as may be
24 necessary to enjoin Defendants from continuing their unfair, unlawful and/or deceptive practices,
25 and to restore to Plaintiffs and the Class the monies that VIZIO acquired by means of such unfair
26 competition, including restitution and/or restitutionary disgorgement, unjust enrichment and for
27 such other relief as may be appropriate.

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EXHIBIT A

VIZIO



USER MANUAL

M50-E1, M55-E0, M65-E0, M70-E3 & M75-E1

Safety & Certification

THANK YOU FOR CHOOSING VIZIO

And congratulations on your new VIZIO Display.

To get the most out of your new VIZIO product, read these instructions before using your product and retain them for future reference. Be sure to inspect the package contents to ensure there are no missing or damaged parts.

PRODUCT REGISTRATION

To purchase or inquire about accessories and installation services for your VIZIO product, visit our website at www.VIZIO.com or call toll free at (877) 698-4946.

We recommend that you register your VIZIO product at www.VIZIO.com

Extended Warranties

For peace of mind, and to protect your investment beyond the standard warranty, VIZIO offers on-site extended warranty service plans. These plans provide additional coverage during the standard warranty period. To purchase an extended warranty service plan, visit www.VIZIO.com.

WHEN READING THIS MANUAL



When you see this symbol, please read the accompanying important warning or notice. It is intended to alert you to the presence of important operating instructions.



When you see this symbol, please read the accompanying helpful tip.

IMPORTANT SAFETY INSTRUCTIONS

Your Display is designed and manufactured to operate within defined design limits. Misuse may result in electric shock or fire. To prevent your Display from being damaged, the following instructions should be observed for the installation, use, and maintenance of your Display. Read the following safety instructions before operating your Display. Keep these instructions in a safe place for future reference.

- To reduce the risk of electric shock or component damage, switch off the power before connecting other components to your Display.
- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Unplug the power cord before cleaning your Display.
- When moving your Display from an area of low temperature to an area of high temperature, condensation may form in the housing. Wait before turning on your Display to avoid causing fire, electric shock, or component damage.
- A distance of at least three feet should be maintained between your Display and any heat source, such as a radiator, heater, oven, amplifier etc. Do not install your Display close to smoke, fire or electric shock.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of your Display and to protect it from overheating, be sure these openings are not blocked or covered. Do not place your Display in a bookcase or cabinet unless proper ventilation is provided.
- Never push any object into the slots and openings on your Display cabinet. Do not place any objects on the top of your Display. Doing so could short circuit parts causing a fire or electric shock. Never spill liquids on your Display.
- Your Display should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- Do not apply pressure or throw objects at your Display. This may compromise the integrity of the display. The manufacturer's warranty does not cover user abuse or improper installations.
- The power cord must be replaced when using different voltage than the voltage specified. For more information, contact your dealer.

- When connected to a power outlet, power is always flowing into your Display. To totally disconnect power, unplug the power cord.
- The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of un-isolated, dangerous voltage within the inside of your Display that may be of sufficient magnitude to constitute a risk of electric shock to persons.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- The wall socket should be installed near your Display and easily accessible.
- Only power of the marked voltage can be used for your Display. Any other voltage than the specified voltage may cause fire or electric shock.
- Do not touch the power cord during lightning. To avoid electric shock, avoid handling the power cord during electrical storms.
- Unplug your Display during a lightning storm or when it will not be used for long period of time. This will protect your Display from damage due to power surges.
- Do not attempt to repair or service your Display yourself. Opening or removing the back cover may expose you to high voltages, electric shock, and other hazards. If repair is required, contact your dealer and refer all servicing to qualified service personnel.
- **WARNING:** Keep your Display away from moisture. Do not expose your Display to rain or moisture. If water penetrates into your Display, unplug the power cord and contact your dealer. Continuous use in this case may result in fire or electric shock.
- Do not use your Display if any abnormality occurs. If any smoke or odor becomes apparent, unplug the power cord and contact your dealer immediately. Do not try to repair your Display yourself.
- Avoid using dropped or damaged appliances. If your Display is dropped and the housing is damaged, the internal components may function abnormally. Unplug the power cord immediately and contact your dealer for repair. Continued use of your Display may cause fire or electric shock.
- Do not install your Display in an area with heavy dust or high

- humidity. Operating your Display in environments with heavy dust or high humidity may cause fire or electric shock.
- Follow instructions for moving your Display. Ensure that the power cord and any other cables are unplugged before moving your Display.
- When unplugging your Display, hold the AC/DC power adapter, not the cord. Pulling on the power cord may damage the wires inside the cord and cause fire or electric shock. When your Display will not be used for an extended period of time, unplug the power cord.
- To reduce risk of electric shock, do not touch the connector with wet hands.
- Insert batteries in accordance with instructions. Incorrect polarities may cause the batteries to leak which can damage the remote control or injure the operator. Do not expose batteries to excessive heat such as sunshine, fire or the like.
- If any of the following occurs, contact the dealer:
 - The power cord fails or frays.
 - Liquid sprays or any object drops into your Display.
 - Your Display is exposed to rain or other moisture.
 - Your Display is dropped or damaged in any way.
 - The performance of your Display changes substantially.
- This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- The mains plug or appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- **CAUTION** - These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated DANGEROUS VOLTAGE within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.
- **WARNING:** Exposure to loud sounds can damage your hearing (causing hearing loss and tinnitus (ringing or buzzing in the ears)), with continued exposure to loud noises, ears may

- become accustomed to the sound level, which may result in permanent damage to hearing without any noticeable discomfort.
- Install the Display where it cannot be pulled, pushed or knocked over.
- Do not allow children to hang onto the product.
- Store the accessories (remote, batteries, etc.) in a location safely out of the reach of children.
- The American Academy of Pediatrics discourages television viewing for children younger than two years of age.
- **WARNING:** Never place a television set in an unstable location. A television set may fall, causing serious personal injury or death. Many injuries, particularly to children, can be avoided by taking simple precautions such as:
 - Using cabinets or stands recommended by the manufacturer of the television set.
 - Only using furniture that can safely support the television set
 - Ensuring the television set is not overhanging the edge of the supporting furniture.
 - Not placing the television set on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television set to a suitable support.
 - Not placing the television set on cloth or other materials that may be located between the television set and the supporting furniture.
 - Educating children about the dangers of climbing on furniture to reach the television set or its controls.
- If your existing television set is being retained and relocated, the same considerations as above should be applied.





For DTS patents, see <http://patents.dts.com>.

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Manufactured under license from Dolby Laboratories. Dolby, Dolby Audio, and the double-D symbol are registered trademarks of Dolby Laboratories.

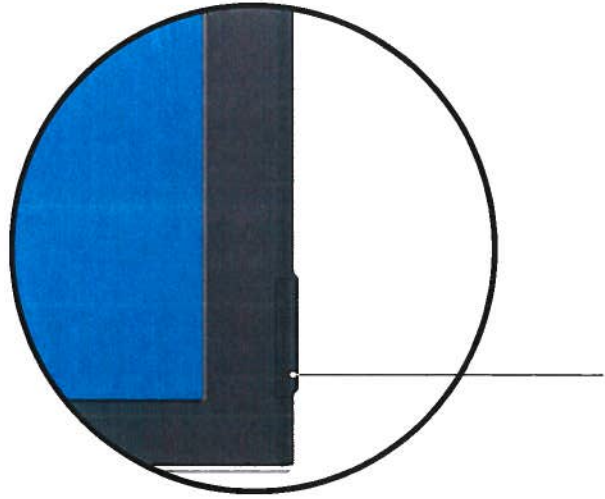


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Getting to Know Your Display



REMOTE SENSOR & POWER INDICATOR


When using the remote, aim it directly at this sensor.

The power indicator flashes on when the Display turns on, then goes out after several seconds. To keep the power indicator on as long as the Display is on, see *Turning the Power Indicator On or Off*.



INSTALLING THE DISPLAY ON A WALL

To mount your display on a wall, you will need a wall mount. Consult the information on this page to find the appropriate mount for your display model.

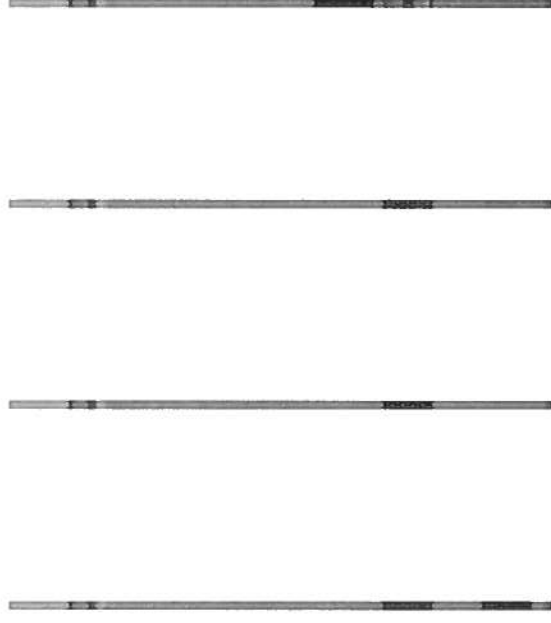
 Installing a Display on a wall requires lifting. To prevent injury or damage to the Display, ask someone to help you.

Be sure the mount you choose is capable of supporting the weight of the display. After you have determined that you have the correct mount for your display, you can begin the installation.

To install your display on a wall:

1. Disconnect any cables connected to your display.
2. Place the display face-down on a clean, flat, stable surface. Be sure the surface is clear of debris that can scratch or damage the display.
3. Remove the stands by loosening and removing the screws.
4. Attach your display and wall mount to the wall, carefully following the instructions that came with your mount. Use only with a UL-listed wall mount bracket rated for the weight/load of this display.

	M50-E1	M55-E0	M65-E0	M70-E3	M75-E1
Screw Size:	M6	M6	M6	M6	M8
Hole Pattern:	200 mm x 200 mm	400 mm x 400 mm	400 mm x 400 mm	400 mm x 400 mm	400 mm x 400 mm
Weight w/o Stands:	29.32 lb	34.17 lb	55.33 lb	58.64 lb	77.16 lb



WALL MOUNT SCREW LOCATIONS

Note: The images shown here is for illustrative purposes only, and may be subject to change. The actual number of pins, and their locations may vary, depending on the model.

USB - Connect a USB thumb drive to view videos

Component - Connect a component device.

HDMI - Connect an HDMI device.

Ethernet - Connect an Ethernet cable to modem/ router.

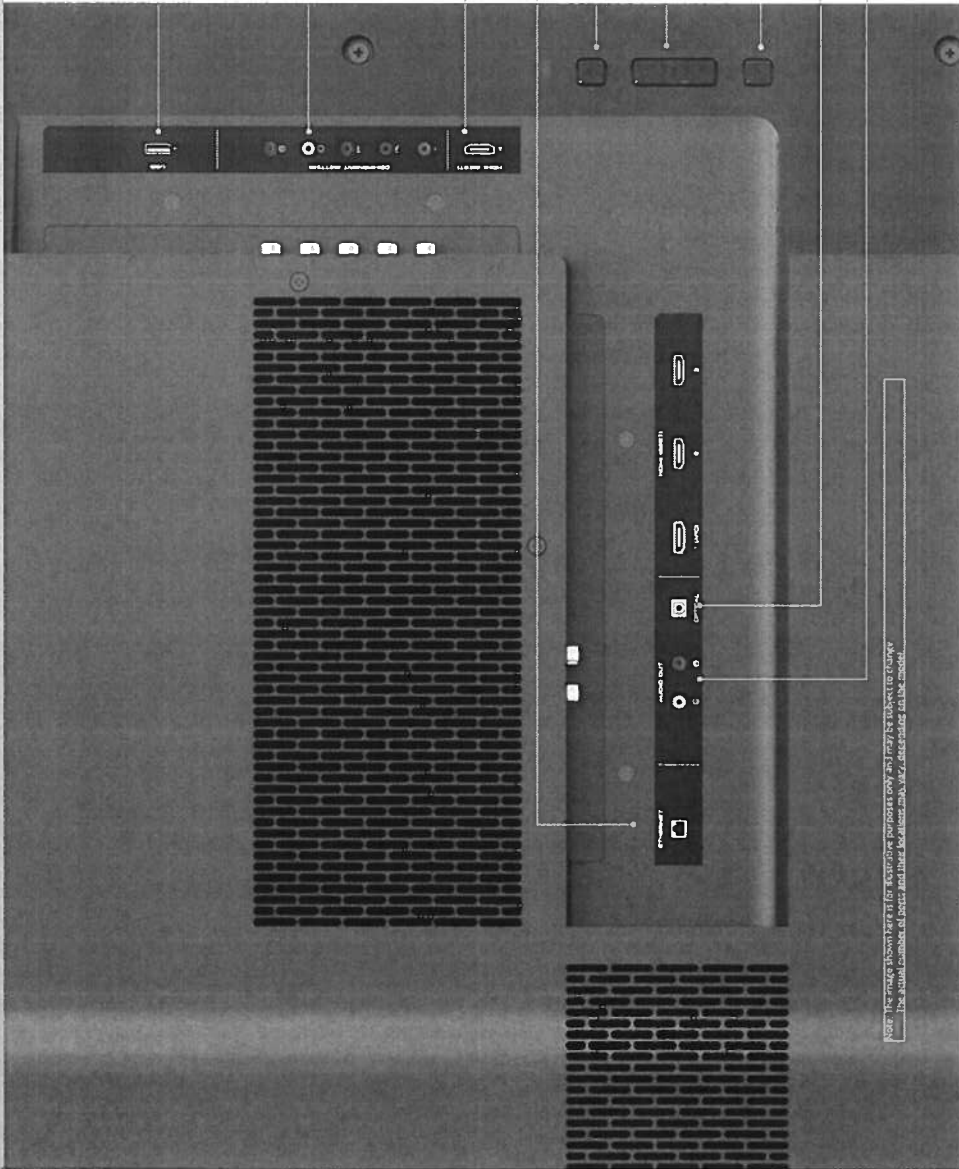
Power - Press to turn the Display on or off.

Volume - Press to adjust the Display volume.

Input - Press once to access the input menu.

Optical Audio Out - Connect an optical/SPDIF audio device, such as home audio receiver.

Stereo Audio Out - Connect an RCA audio device, such as sound bar.



USING THE REMOTE

- Input**
Change the currently displayed input.
- Exit**
Close the on-screen menu.
- OK/Play/Pause**
Select the highlighted menu option and play or pause content.
- Back**
Go to the previous on-screen menu.
- Volume Up / Down**
Increase or decrease the loudness of the audio.
- Pic**
Cycle through the different picture setting modes.
- Mute**
Turn the audio on or off.
- Setup/ Link**
Activate pairing mode on the Display.
- Power**
Turn Display on or off.
- Menu**
Display the on-screen menu.
- Arrow**
Navigate the on-screen menu.
- Closed Caption**
NOT SUPPORTED ON THIS MODEL.
- Info**
Display the info window.
- Channel Up / Down**
NOT SUPPORTED ON THIS MODEL.
- Wide**
Cycle through the different aspect ratio modes.
- Last**
NOT SUPPORTED ON THIS MODEL.
- Dash**
NOT SUPPORTED ON THIS MODEL.

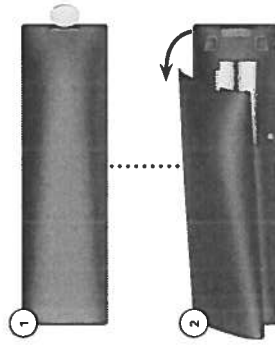
Number Pad
NOT SUPPORTED ON THIS MODEL.

Inserting and replacing batteries.

Two AAA alkaline batteries are included for you to use with the basic remote control.

To insert/replace the batteries:

1. Find the notch on the back of the remote. Insert a coin and pry open the back cover.
2. Remove the back cover and insert two AAA batteries (included). Be sure to align the + and - signs on the batteries and remote.



VIZIO supports the proper handling and disposal of batteries. Please visit <https://www.duracell.com/en-us/technology/battery-care-use-and-disposal/> for more information.

WARNING:
Keep the remote control batteries away from children. It may cause choking and/or lead to a fire or chemical burn if mishandled. Do not dispose of batteries in fire. Replace only with batteries of the correct type.

When needed, VIZIO recommends replacing the batteries that came with this remote with two new Duracell AAA alkaline batteries.

POWER UP WITH DURACELL

Completing The First-Time Setup

2

The first time you turn on the Display, you can choose between two setup methods.

Complete Setup with the VIZIO SmartCast™ App (recommended): Download the free VIZIO SmartCast™ App on your smartphone or tablet to set up your VIZIO display.

Use your phone to power on your display, adjust the volume, switch inputs, play and control streaming content from your iOS or Android device.

Go to <http://www.vizio.com/setup> to get started.



-OR-

Complete Setup with the IR Remote:

Use the included IR remote to manually set up your display.

The VIZIO SmartCast™ App is still VIZIO's recommended setup method. Please note that a mobile device (not included) is still required to cast content from apps like Netflix and YouTube.

Before you begin the first-time setup:

- Your Display should be installed and the power cord should be connected to an electrical outlet.
- Your devices should be connected.
- If you have a wireless network, have the network password ready.
- If you are connecting to your network with an Ethernet cable, connect it to the Ethernet port on the Display.

Setup with the VIZIO SmartCast™ App
1. Download the free VIZIO SmartCast™ App on to your mobile device and launch the app.



2. Pair your mobile device to your display.

iOS Device Pairing:

- a. Select **Get Started**
- b. Hold your mobile device next to the VIZIO logo on your Display.

Android Device Pairing:

Note the Wi-Fi setup name on the top corner of your Display.


- a. Select **Get Started** and Select your preferred language
 - b. Select your Display name from the list shown on your device
3. Follow the instructions on your mobile device and display screen to complete setup.



Setup with the IR Remote

1. Press the OK/Play key on your IR remote during the initial setup screen.
2. Use the Arrow Keys and the OK/Play button to select and confirm settings.
3. Follow the instruction on the screen to complete setup.



 **Need help installing the display?**
Refer to the printed Quick Start Guide for detailed instructions on how to install your new M-Series display. You can also find a digital copy on support.vizio.com

Your Display features an easy-to-use on-screen menu.

To open the on-screen menu, press the **MENU** button on the remote.

From this menu, you can:

- Adjust the Picture settings
- Adjust the Audio settings
- Adjust Network Settings
- Setting the Sleep Timers
- Name Inputs
- Adjust Display settings
- Access the user manual



NAVIGATING THE ON-SCREEN MENU

To open the on-screen menu, press the **MENU** button on the remote.

Use the **Arrow** buttons to highlight a menu option, and press the **OK** button to select that option.



While navigating the on-screen menu, you can press the **BACK** button at any time to return to the previous menu screen. The **EXIT** button will close the on-screen menu.



CHANGING THE INPUT SOURCE

External devices such as DVD players, Blu-ray Players, and video game consoles can be connected to your Display. To use one of these devices with your Display, you must first change the input source using the Input menu.

To change the input source:

1. Press the **INPUT** button on the remote. The Input menu is displayed.
2. Use the **Left/Right Arrow** buttons or the **INPUT** button on the remote to highlight the input you wish to view and press **OK**. The selected input is displayed.

Input Name



Note: Inputs may vary by Display



You can change the input names that appear on the Input menu to make your devices easy to recognize. See *Renaming Devices on the Input Menu* for more information.

CHANGING THE SCREEN ASPECT RATIO

The Display can display images in five different modes: Normal, Stretch, Panoramic, Wide, and Zoom. Each mode displays the picture differently.

Some programs have black bars on the top or sides of the picture so that the picture keeps its original shape. Examples include wide-screen movies and older television programs.

To change the screen aspect ratio:


1. Press the  WIDE button on the remote.
2. Use the Arrow buttons to highlight the aspect ratio you wish to view and press OK.
 - Normal preserves the content's original aspect ratio and size.
 - Standard Definition (480i and 480p—old Display programs) - Since the 4:3 aspect ratio is not large enough to fill the Display's screen, black bars are added to the left and right of the display image.
 - 720p - Fills a 720p or 1080p screen.
 - 1080p and 1080i HD - Fills a 720p or 1080p screen.
 - Stretch expands a widescreen image to fill the screen from top to bottom and stretches it half as much from right to left. Figures appear tall and thin.
 - Standard Definition - Not available.
 - 720p - If you are watching widescreen 1.85:1 content, the image will fill the screen. With 2.35:1 widescreen content, one-sixth of the image is cut off by the left and right sides of the screen.
 - 1080p and 1080i - Not available.
 - Panoramic stretches a 4:3 aspect ratio picture to the left and right edges of the screen. The center of the image is not stretched, but the sides of the image are extremely stretched. If you are watching widescreen (1.85:1 or 2.35:1) content with black bars on the top and bottom, the black bars will still appear on the top and bottom of the display

image.

- Standard Definition (480i and 480p) - Fills the screen from the left to right edges.
- 720p - Not available.
- 1080p and 1080i - Not available.
- Wide stretches a 4:3 aspect ratio picture to the edges of the screen. Since the picture is being stretched, the display image may appear distorted—figures appear short and fat. If the program is already formatted for widescreen viewing (1.85:1 or 2.35:1), then black bars will appear on the top and bottom of the display image.
- Zoom expands images evenly in all directions (33% taller and 33% wider) with black bars to fit the screen. A 720p image will fill a 1080p screen.
- Standard Definition - Not available.
- 720p - Fills a 720p screen
- 1080p and 1080i - Not available.



Tip: The aspect ratio cannot be changed for Ultra HD, HDR content or for any video content on HDMI-4.



Note: Aspect ratio settings may vary by input source

ADJUSTING THE PICTURE SETTINGS

Your Display can be adjusted to suit your preferences and viewing conditions.



If you've changes to the settings for a picture mode, an asterisks appears after its name (see *Saving a Custom Picture Mode*).

To adjust the picture settings:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Picture** and press **OK**. The **PICTURE** menu is displayed.

3. Use the **Arrow** buttons on the remote to highlight **Picture Mode**, then use the **Left/Right Arrow** buttons to change the picture mode:

- **Standard mode** sets the picture settings to the default settings.
- **Calibrated mode** sets the picture settings to values ideal for watching Display in a brightly-lit room.
- **Calibrated Dark mode** sets the picture settings to values ideal for watching Display in a dark room.
- **Vivid mode** sets the picture settings to values that produce a brighter, more vivid picture.
- **Game mode** reduces throughput delays and optimizes the picture settings for displaying game console output.
- **Computer mode** optimizes the picture settings for displaying computer output.



4. To manually change each of the picture settings, use the **Up/Down Arrow** buttons on the remote to highlight that picture setting, then use the **Left/Right Arrow** buttons to adjust the setting:
 - **Auto Brightness Control** - The auto brightness control detects the light levels in the room and automatically adjusts the backlight for the best picture. Select **Off**, **Low**, **Medium**, or **High**.
 - **Backlight** - Adjusts the LED brightness to affect the overall brilliance of the picture. Backlight cannot be adjusted when starting from some picture modes.
 - **Brightness** - Adjusts the black level of the picture. When this setting is too low, the picture may be too dark to distinguish details. When this setting is too high, the picture may appear faded or washed out.
 - **Contrast** - Adjusts the white level of the picture. When this setting is too low, the picture may appear dark. When this setting is too high, the picture may appear faded or washed out. If the setting is too high or too low, detail may be difficult to distinguish in dark or bright areas of the picture.
 - **Color** - Adjusts the intensity of the picture colors.
 - **Tint** - Adjusts the hue of the picture. This setting is useful in adjusting the flesh tones in the picture. If flesh appears too orange, reduce the level of color before adjusting tint.
 - **Sharpness** - Adjusts the edge sharpness of picture elements. It can be used to sharpen non-HD (high definition) content; however, it will not produce detail that does not otherwise exist.
5. When you have finished adjusting the picture settings, press the **EXIT** button on the remote.

Adjusting More Picture Settings

To adjust more picture settings:

1. From the PICTURE menu, use the **Arrow** buttons to highlight **More Picture**, and then press **OK**.
2. Use the **Arrow** buttons to highlight the setting you wish to adjust, then press the **Left/Right Arrow** buttons to change the setting:
 - **Color Temperature** - See *Adjusting the Color Temperature on this page*.
 - **Black Detail** - Adjusts the average brightness of the picture to compensate for large areas of brightness. Select **Off**, **Low**, **Medium**, or **High**.
 - **Active LED Zones** - Dynamically improves the contrast ratio of the picture by adjusting the backlight. The adjustment is controlled by the content on the screen. Select **On** or **Off**.
 - **Clear Action** - Reduces blur in scenes with fast action. Some sensitive viewers may notice flickering. Select **On** or **Off**.
 - **Reduce Noise** - Opens a sub-menu with two settings:
 - **Reduce Signal Noise** - Diminishes artifacts in the image caused by the digitizing of image motion content. Select **Off**, **Low**, **Medium**, or **High**.
 - **Reduce Block Noise** - Reduces pixelation and distortion for mpeg files. Select **Off**, **Low**, **Medium**, or **High**.
 - **Game Low Latency** - Select **On** to reduce video delay (lag) when gaming.

More Picture	
Color Temperature	Normal
Black Detail	Off
Active LED Zones	On
Clear Action	Off
Reduce Noise	Off
Game Low Latency	Off
Pure Cinema	Auto
Color Space	Auto
Gamma	2.1

- **Pure Cinema Mode** - Optimizes the picture for watching film. Select **Auto** or **Off**.
 - **Color Space** - Select **Color Space** for the source. Video sources uses YCbCr, but PC uses RGB.
 - **Gamma** - Set the shape of the Gamma curve. Use lower Gamma values for bright room conditions, and higher values when it's dark.
3. When you have finished adjusting More Picture Settings, press the **EXIT** button on the remote.

Adjusting the Color Temperature

Adjusting the color temperature changes the white balance of the picture.

To adjust the color temperature:


1. From the **MORE PICTURE** menu, use the **Arrow** buttons to highlight **Color Temperature**, and then press **OK**.
2. Use the **Arrow** buttons on the remote to highlight a color temperature preset and then press **OK**.
 - **Normal** is optimized for television viewing.
 - **Cool** produces a blue-hued picture.
 - **Computer** optimizes the picture for use as a PC monitor.
3. When you have finished adjusting the color temperature, press the **EXIT** button on the remote.

Color Temperature	
Normal	
Cool	
Computer	

Adjusting the Picture Mode Edit Settings

Picture Mode Edit Settings allow you to make precise adjustments to the picture and to create picture modes to save groups of picture settings.

To adjust the Picture Mode Edit settings:

1. From the PICTURE menu, use the **Arrow** buttons to highlight **Picture Mode Edit**, and then press **OK**. The PICTURE MODE EDIT menu is displayed.The screenshot shows the 'Picture Mode Edit' menu with options: Save Picture Mode, Lock Picture Mode, and Reset Picture Mode. The 'MyMode' label is visible at the bottom right.
2. Use the **Arrow** buttons to highlight the setting you wish to adjust, then press **OK** to change the setting:
 - **Save Picture Mode** - Save a custom picture mode.
 - **Lock Picture Mode** - Prevent changes to custom picture modes. Choose between **On** or **Off**
 - **Reset Picture Mode*** - Reset the picture mode settings to factory default values.




Saving a Custom Picture Mode

Custom picture modes allow you to save a group of custom settings for various viewing conditions and video sources.

- Changes made while on any preset picture mode will add an asterisk on the top right corner of the preset mode.
- The custom picture mode is not automatically saved.

To save a custom picture mode:


1. From the PICTURE MODE EDIT menu, use the **Arrow** buttons to highlight **Save Picture Mode**, and then press **OK**. The **SAVE PICTURE MODE** menu is displayed.The screenshot shows the 'Save Picture Mode' menu with a keyboard layout for naming the mode. The 'MyMode' label is visible at the bottom right.
2. Use the on-screen keyboard to enter a name for your custom picture mode.
3. Highlight **Save** and press **OK**.
4. Press the **EXIT** button to exit the menu screens.



Locking/Unlocking a Custom Picture Mode

Custom picture modes can be locked/unlocked with a system PIN to prevent accidental changes to their settings.

To lock all custom picture modes:

1. From the PICTURE MODE EDIT menu, use the **Arrow** buttons to highlight **Lock Picture Mode**, and then press **OK**. The **LOCK PICTURE MODE** menu is displayed.The screenshot shows the 'Lock Picture Mode' menu with options: New Pin, Confirm Pin, and Cancel. The 'MyMode' label is visible at the bottom right.
2. Use the **Arrow** buttons to select **On**.
3. Use the **Number Pad** on your remote to enter a unique 4-digit PIN.
--OR--
If a system pin code was previously created, use the **Number Pad** on your remote to enter your pin code.



To unlock all custom picture modes:

1. From the PICTURE MODE EDIT menu, use the **Arrow** buttons to highlight **Lock Picture Mode**, and then press **OK**. The **UNLOCK PICTURE MODE** menu is displayed.
2. Use the **Arrow** buttons to select **Off**.
3. Use the **Number Pad** on your remote to enter your 4-digit PIN.
4. Make any desired changes to the picture modes.
5. Relock the picture modes, if desired.
6. Press the **EXIT** button to exit the menu screens.

* Only available on customized preset modes.

Deleting a Custom Picture Mode

Custom picture modes that are no longer needed can be deleted.



Inputs assigned to a deleted custom picture mode become assigned to the *Calibrated* picture mode.

To delete a custom picture mode:

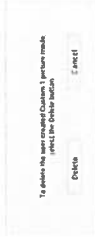
1. From the PICTURE MODE EDIT menu, use the **Arrow** buttons to highlight **Delete Picture Mode**, and then press **OK**. The DELETE PICTURE MODE window is displayed.
2. Use the **Left/Right** Arrow buttons to highlight **Delete** and press **OK**.
3. Press the **EXIT** button to exit the menu screens.

Resetting a Picture Mode

A preset picture mode that has been edited to a customized preset picture mode:


To reset a customized preset picture mode:

1. From the PICTURE MODE EDIT menu, use the **Arrow** buttons to highlight **Reset Picture Mode**, and then press **OK**. The RESET PICTURE MODE window is displayed.
2. Use the **Left/Right** Arrow buttons to highlight **Reset** and press **OK**.
3. Press the **EXIT** button to exit the menu screens.



Adjusting the Color Tuner Settings

The Color Tuner settings allow you to adjust the HSB color and 11 point white balance, turn color channels off for testing, and display color bar, flat, and ramp test patterns.

 The Color Tuner, 11 Point White Balance, and test patterns allow technicians to manually calibrate the Display. Calibration requires specialized training, an input with precisely set colors, and a specialized light meter.

To adjust the HSB color settings:

1. From the COLOR CALIBRATION menu, use the **Arrow** buttons to highlight **Color Tuner**, and then press **OK**. The Color Tuner menu is displayed.

	Color Tuner					
	Red	Green	Blue	Cyan	Magenta	Yellow
Hue	0	0	0	0	25	-14
Saturation	-1	5	-4	0	-2	0
Brightness	-24	0	22	0	0	0
Offset	0	0	0	0	0	0
Gain	0	0	0	0	0	0

2. Use the **Arrow** buttons on the remote to highlight the **Hue**, **Saturation**, **Brightness**, **Offset**, or **Gain** of the color you wish to adjust. Press the **OK** button.
3. Use the **Left/Right Arrow** buttons to adjust the value. When you are finished press the **OK** button to save the setting.
4. When you are finished adjusting the color tuner settings, press the **EXIT** button.

To turn color channels off and on:

1. From the COLOR CALIBRATION menu, use the **Arrow** buttons to highlight **Color Tuner**, and then press **OK**. The Color Tuner menu is displayed.

	Color Tuner					
	Red	Green	Blue	Cyan	Magenta	Yellow
Hue	0	0	0	0	25	14
Saturation	-1	5	-4	0	-2	0
Brightness	-24	0	22	0	0	0
Offset	0	0	0	0	0	0
Gain	0	0	0	0	0	0

2. Use the **Arrow** buttons on the remote to highlight **Red**, **Green**, or **Blue**.
3. Press the **OK** button to turn the color channel off or on. An X appears over a color channel that has been turned off.
4. Use the **Arrow** buttons to highlight another color channel to turn off or on. Only two color channels can be turned off at the same time.
5. When you are finished with the color channels, press the **EXIT** button.

To adjust the 11 Point White Balance settings:

1. From the Color Tuner menu, use the **Arrow** buttons to highlight **Color Tuner**, and then press the **Left/Right Arrow** buttons until the 11 Point White Balance menu is displayed.

	11 Point White Balance			
	Gain	Red	Green	Blue
	5%	0	0	0

2. Use the **Arrow** buttons on the remote to highlight the **Gain** and **Color values** you wish to adjust. Press the **OK** button and use the **Left/Right Arrow** buttons to adjust the value. When you are finished, press the **OK** button to save the setting.
3. When you are finished, press the **EXIT** button.

To show or hide the SMPTE Test Pattern:

1. From the Color Calibration menu, use the **Arrow** buttons to highlight **Calibration Test**, and then press the **Left/Right Arrow** buttons until the SMPTE Test Pattern menu is displayed.



2. Use the **Arrow** buttons on the remote to highlight **Off**. Use the **Left/Right Arrow** buttons to highlight **On** to show the SMPTE Pattern.

—or—

To hide the SMPTE Test Pattern, use the **Left/Right Arrow** buttons to highlight **Off**.

3. When you are finished, press the **EXIT** button.

To show or hide the Flat Test Pattern:

1. From the Color Calibration menu, use the **Arrow** buttons to highlight **Calibration Test**, and then press the **Left/Right Arrow** buttons until the Flat Test Pattern menu is displayed.



2. Use the **Arrow** buttons on the remote to highlight **Off**. Use the **Left/Right Arrow** buttons to select the percentage brightness for the flat test pattern. Selecting a percentage immediately shows the flat pattern at that brightness.

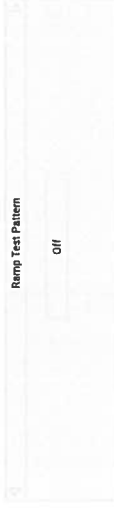
—or—

To disable the Flat Test Pattern, use the **Left/Right Arrow** buttons to highlight **Off**.

3. When you are finished, press the **EXIT** button.

To show or hide the Ramp Test Pattern:

1. From the Color Calibration menu, use the **Arrow** buttons to highlight **Calibration Test**, and then press the **Left/Right Arrow** buttons until the Ramp Test Pattern menu is displayed.



2. Use the **Arrow** buttons on the remote to highlight **Off**. Use the **Left/Right Arrow** buttons to select the color for the ramp test pattern. Selecting a color immediately shows that color ramp.

—or—

To hide the Ramp Test Pattern, use the **Left/Right Arrow** buttons to highlight **Off**.

3. When you are finished, press the **EXIT** button.

To show or hide the Uniformity Analyzer Test Pattern:

1. From the Color Calibration menu, use the **Arrow** buttons to highlight **Calibration Tests**, and then press the **Left/Right Arrow** buttons until the Uniformity Analyzer Test Pattern menu is displayed.



2. Use the **Arrow** buttons on the remote to highlight **Off**. Use the **Left/Right Arrow** buttons to highlight **On** to show the Uniformity Analyzer Test Pattern.

—OF—

To hide the Uniformity Analyzer Test Pattern, use the **Left/Right Arrow** buttons to highlight **Off**.

3. When you are finished, press the **EXIT** button.

ADJUSTING THE AUDIO SETTINGS

To adjust the audio settings:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Audio** and press **OK**. The **AUDIO** menu is displayed.
3. Use the **Arrow** buttons to highlight the setting you wish to adjust, then press **Left/Right Arrow** buttons to change the setting:
 - **Speakers** - Turns the built-in speakers **On** or **Off**.



When the Display speakers are set to **On**, DTS signals cannot be passed through digital audio outputs.

- **Volume Control Display** - Toggle between **On** or **Off** to hide or display the on-screen volume slider that appears when volume is adjusted.
- **Surround Sound** - Surround sound uses DTS TruSurround™ to deliver an immersive surround sound experience from the Display's internal speakers. TruSurround completes the entertainment experience by providing deep, rich bass and by delivering crisp details and clear, intelligible dialog. Select **On** or **Off**.
- **Volume Leveling** - Volume leveling uses DTS TruVolume™ to maintain consistent volume levels during transitions between program content, AV formats, and input sources. Select **On** or **Off**. In a few cases, volume leveling may artificially suppress volume increases, making it difficult to hear dialog or flattening sudden noises. If this occurs, turn

volume leveling off.

- **Balance** - Adjusts the loudness of the audio output from the left and right speakers.
- **Lip Sync** - Adjusts the synchronization between the display image and the accompanying audio track.
- **Digital Audio Out** - Changes the type of processing for digital audio out and HDMI ARC output when connected to a home theater audio system. Select **Auto**, **PCM**, **Dolby D** or **Bitstream**.



You must select **Bitstream** for audio with more than two channels (3.0, 5.0, or 5.1, for example).

- **Analog Audio Out** - Sets the volume control properties for the RCA connector when connected to a home theater audio system. Select **Variable** if you are controlling the volume with the Display's volume controls, or select **Fixed** if an external audio device (sound bar or AV receiver) will control the volume.
- **Equalizer** - Adjusts the boost or attenuation of different frequencies using either preset or custom settings. See *Changing the Equalizer Settings on this page*.

4. When you have finished adjusting the audio settings, press the **EXIT** button on the remote.

Changing the Equalizer Settings

The graphic equalizer has several pre-set modes and allows you to create one custom mode.

To select a pre-set audio mode:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Audio** and press **OK**. The **AUDIO** menu is displayed.
3. Use the **Arrow** buttons to highlight **Equalizer** and press **OK**. The **Audio Mode** and equalizer settings screen appears.
4. Use the **Left** and **Right Arrow** buttons to select an audio mode. The equalizer bars change to reflect the mode.
5. Press the **EXIT** button on the remote.

To create, modify, or replace the single custom equalizer setting:

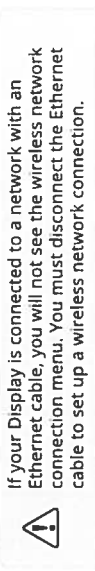
1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Audio** and press **OK**. The **AUDIO** menu is displayed.
3. Use the **Arrow** buttons to highlight **Equalizer** and press **OK**. The **Audio Mode** and equalizer settings screen appears.
4. Use the **Left** and **Right Arrow** buttons to select any audio mode as a starting point.
5. Use the **Arrow** buttons to highlight a frequency and then press **OK**.
6. Use the **Up** and **Down Arrow** buttons to adjust the boost (up) and attenuation (down) for the frequency.
7. Use the **Left** and **Right Arrow** buttons to select another frequency, if desired, and adjust it.
8. Press the **EXIT** button on the remote.

USING THE NETWORK CONNECTION MENU

Your Display is internet-ready, featuring both an Ethernet port and built-in high-speed Wireless-N.

Connecting to a Wireless Network

To connect to a wireless network whose network name (SSID) is being broadcast:



1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Network** and press **OK**. The **NETWORK** menu is displayed.
3. If you do not see your wireless network displayed, highlight **More Access Points** and press **OK**. The **WIRELESS ACCESS POINTS** menu, which is a list of available wireless networks, is displayed.
4. Highlight the name of your wireless network (this is the network's SSID) and press **OK**.
5. Using the on-screen keyboard, enter your network's password, then highlight **Connect** and press **OK**.
6. Press the **EXIT** button on the remote.

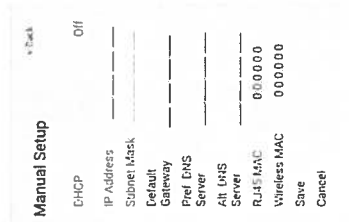


Changing the Manual Setup Settings

Advanced users can fine-tune the network settings using the Manual Setup feature.

To change advanced network settings:

1. From the **NETWORK** menu, highlight **Manual Setup** and press **OK**. The **MANUAL SETUP** menu is displayed.
2. To change the settings manually, use the **Arrow** buttons on the remote to highlight **DHCP** and then use the **Left/Right Arrow** buttons to change the setting to **Off**.
3. Use the **Arrow** and **OK** buttons to adjust each setting:
 - **IP Address** - The IP address assigned to the TV.
 - **Subnet Mask** - The subnet mask.
 - **Default Gateway** - Your network's default gateway address.
 - **Pref. DNS Server** - Your preferred domain name server address.
 - **Alt. DNS Server** - Your alternate domain name server address.



Finding MAC Addresses for Network Setup

The security settings on your router may require you to enter the Display's MAC address in the router's settings.

To find the Display's MAC address:

1. From the **NETWORK** menu, highlight **Manual Setup** and press **OK**. The **MANUAL SETUP** menu is displayed.
2. Find the MAC address for the TV at the bottom of the list. The MAC addresses for the connections in use are displayed:
 - **RJ45 MAC** - The Ethernet or RJ45 MAC address may be needed to set up your network when you have connected the TV to your network with an Ethernet (Cat 5) cable.
 - **Wireless MAC** - The Wireless (WiFi) MAC address may be needed to connect your TV to your network with WiFi.

Connecting to a Hidden Network

To connect to a wireless network whose network name (SSID) is not being broadcast:

1. From the NETWORK menu, highlight **Hidden Network** and press **OK**. The ENTER ACCESS POINT NAME screen is displayed.
2. Using the on-screen keyboard, enter your network's name (SSID), then highlight **Connect** and press **OK**.
3. Using the on-screen keyboard, enter your network's password, then highlight **Connect** and press **OK**.
4. Press the **EXIT** button on the remote.



Testing Your Network Connection

To test your network connection:

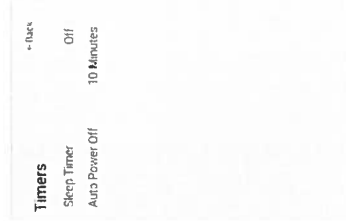
1. From the NETWORK menu, highlight **Test Connection** and press **OK**.
2. The TEST CONNECTION screen displays the connection method, network name, signal strength, and download speed of your network connection.
3. Press the **EXIT** button on the remote.

SETTING TIMERS

Setting the Sleep Timer

When activated, the Display's sleep timer will turn the Display off after a set period of time.

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Timers** and press **OK**. The **TIMERS** menu is displayed.
3. Use the **Left/Right Arrow** buttons on the remote to highlight the period of time after which you want the Display to go to sleep: **30**, **60**, **90**, **120**, or **180 minutes**. If you don't want the sleep timer to activate, change the setting to **Off**.
4. When you have finished setting the sleep timer, press the **EXIT** button on the remote.



Setting the Auto Power Off Feature

To help save energy, your Display is set by default to turn off after 10 minutes without a video or audio signal. This feature can be deactivated.

To set the Auto Power Off feature:

1. From the **TIMERS** menu, use the **Up/Down Arrow** buttons on the remote to highlight **Auto Power Off**.
2. Use the **Left/Right Arrow** buttons on the remote to change whether the Display will turn off. If you don't want the Display to turn off when there is no signal, change the setting to **Off**. Otherwise, select **10 minutes**.
3. When you have finished setting the auto power off time, press the **EXIT** button on the remote.

RENAMING DEVICES ON THE INPUT MENU

You can rename the inputs to make them easier to recognize on the Input menu. For example, if you have a DVD player connected to the Component input, you can rename that input to display "DVD Player." See *Changing the Input Source*.

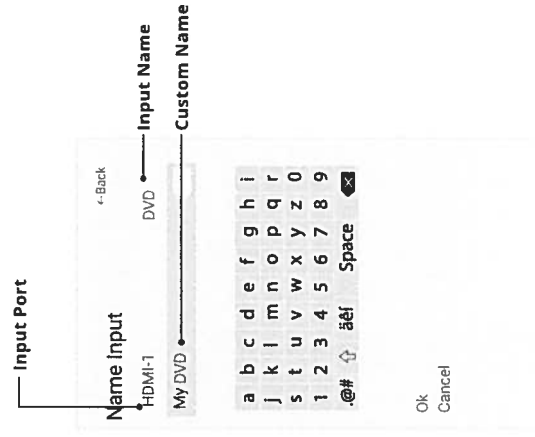
To change the name of an input:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Input** and press **OK**. The INPUT menu is displayed.
3. Highlight the input device that you want to rename and press **OK**.
4. To use a preset input name:
 - a. Highlight the **Input Port** row and press **Left/Right** arrow keys to scroll across the list of preset names.

—or—

To enter a custom name:

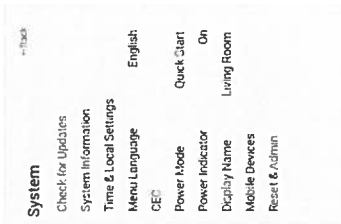
- a. Enter your custom label using the on-screen keyboard.
 - b. Highlight **OK** and press **OK**.
 - c. The Input Name changes to show the custom name that you created.
5. When you have finished naming your input, press the **EXIT** button on the remote.



CHANGING THE DISPLAY SETTINGS

Using the System menu, you can:

- Check for system updates
- View system information
- Change the on-screen menu language
- Set time zone and local settings
- Adjust the CEC settings
- Adjust when the power indicator is illuminated
- Change your Display's name
- Review and maintain the list of paired devices.
- Reset the Display settings & set up administrative controls



Checking for System Updates

To view technical data and status information about your Display and network connection:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Check for Updates** and press **OK**. The Display will begin to check for updates
3. If an update is found, the Display will ask to confirm the update.
If no update is found the display will note **No Update Available**.

Viewing System Information

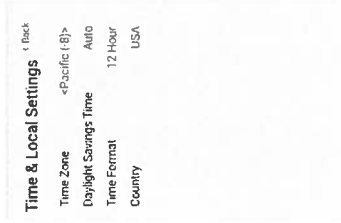
To view technical data and status information about your Display and network connection:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System Information** and press **OK**. The SYSTEM menu is displayed.
3. Highlight **System Information** and press **OK**.
4. Use the **Up/Down Arrow** buttons to scroll through the system information.
5. When you are finished reviewing the system information, press the **EXIT** button on the remote.

Setting the Time and Local Settings

To ensure the correct time is displayed when you press the **INFO** button, set the Display's time zone:

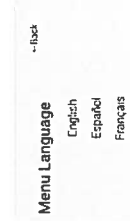
1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Time & Local Settings** and press **OK**. The menu headed by the local date and time is displayed.
4. Highlight **Time Zone** and press **OK**. The TIME ZONE menu is displayed.
5. Highlight your time zone and press **OK**.
6. Highlight **Daylight Saving Time** and press **OK**. The DAYLIGHT SAVING TIME menu is displayed. Choose **On** if it is currently Daylight Savings Time, **Off** if it is Standard Time, or **Auto** to have the system automatically detect Daylight Savings Settings.
7. Press the **EXIT** button on the remote.



Changing the On-Screen Menu Language

Your Display can display the on-screen menu in different languages. To change the on-screen menu language:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Menu Language** and press **OK**. The MENU LANGUAGE menu is displayed.
4. Highlight your preferred language (**English**, **Español**, or **Français**) and press **OK**.
5. Press the **EXIT** button on the remote.



Adjusting the CEC Settings

The CEC function on your Display enables you to control HDMI-connected devices with the included remote without any additional programming.



To enable, disable, or adjust CEC settings:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **CEC** and press **OK**. The CEC menu is displayed.
4. Use the **Arrow** and **OK** buttons to adjust each setting:
 - **CEC** - Select **Enable** to use the Display remote to control CEC devices connected to HDMI. Select **ARC** Only for plug and play of an audio device connected to the HDMI ARC input. The ARC setting does not support video devices connected to the audio device (Select **Enable** to enable support for these devices). Select **Disable** to turn CEC off.
 - **Device Discovery** - Use this function to determine if your device is connected and supports CEC. (Required for **Enable** option only)
5. Press the **EXIT** button on the remote.

Adjusting the Power Mode

Your Display is set to Eco Mode by default. When the Display is powered off, Eco Mode setting uses less than 0.5W of power. Quick Start Mode enables your Display to power on faster as well as automatically power on when casting content.



To switch between Eco Mode and Quick Start Mode:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Power Mode** and press **OK**. The Power Mode menu is displayed.
4. Highlight either Eco Mode or Quick Start Mode and press **OK** to select.

Turning the Power Indicator On or Off

The Power Indicator on the front of your Display normally does not glow when the Display is on. You can change this setting if you prefer the light to be on.

To turn the Power Indicator Light On or Off:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The **SYSTEM** menu is displayed.
3. Highlight **Power Indicator** and press **OK**.
4. Use the **Up/Down Arrow** buttons to select **On** or **Off**, then press **OK**.

Changing the Display Name

Naming your display helps to differentiate it from other cast devices you may have in your home.

To view or edit your Display name:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The **SYSTEM** menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Display Name** and press **OK**. The **Display Name** menu is displayed.
4. Enter your custom name using the on-screen keyboard.
5. Press the **EXIT** button on the remote.




Managing Mobile Devices

Your Display can be paired with multiple mobile devices so you can easily control your Display across multiple devices.

To see a list of paired devices or unpair a device:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The **SYSTEM** menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Mobile Devices** and press **OK**. The list of paired devices appears.
4. Highlight a device name to delete it and press **OK**.
5. Use the **Left/Right Arrows** to select **YES** or **NO** when asked to confirm.

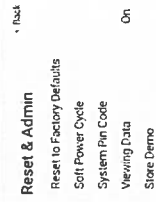


 It's recommended to name the display based on the room it is in or the location.

USING THE RESET & ADMIN MENU


You can use the Display's Reset & Admin menu to restore the Display to its factory default settings as well as access other system settings.

- Using the Reset & Admin, you can:
 - Reset the display to factory settings
 - Force the system to power off and on
 - Create a system pin code to lock content and picture settings
 - Turn Viewing Data On or Off
 - Start or stop the Store Demo Mode



Restoring the Display to Factory Default Settings

All of the on-screen menu settings can be reset to the factory defaults.

 If you restore the Display to the factory default settings, all changes you have made to the settings will be lost!

This includes any wireless or picture settings.

To restore the Display to its factory default settings:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The **SYSTEM** menu is displayed.
3. Highlight **Reset & Admin** and press **OK**. The **RESET & ADMIN** menu is displayed.
4. Highlight **Reset Display to Factory Defaults** and press **OK**. If you have changed the default parental control PIN, enter it now.

The Display displays, "Select Reset to restore all Display settings to factory defaults and clear all account information."

5. Highlight **Reset** and press **OK**.
6. Wait for the Display to turn off. The Display will turn back on shortly afterward and the Setup App will begin.

About Viewing Data

Video ACR collects data related to publicly available content displayed on your television/display, such as the identity of your broadcast, cable, or satellite television provider, and the television programs and commercials viewed (including time, date, channel, and whether you view them live or at a later time). We also collect unique identifiers about this TV, including the IP address. This data is collectively referred to as "Viewing Data." For more information about Viewing Data and how VIZIO protects its customers' privacy, please consult our privacy policy at www.vizio.com/privacy.

When ACR collection is turned on, we may share Viewing Data with authorized data partners including analytics companies, media companies and advertisers. VIZIO and its authorized data partners use Viewing Data to generate summary analysis and reports of how users engage with content on their TVs and other devices. VIZIO Viewing Data is sometimes enhanced with household demographic data and data about digital actions (e.g. digital purchases and other consumer behavior taken by devices associated with the IP Address we collect). Viewing Data also enables our authorized data partners to deliver advertising relevant to your profile that you might find useful, both on the VIZIO TV/display and other devices sharing your IP Address. Viewing Data is also used to help content publishers, broadcasters or content distribution services create or recommend more relevant entertainment based on summary insights, as well as helps us improve the design of our products, software and services.

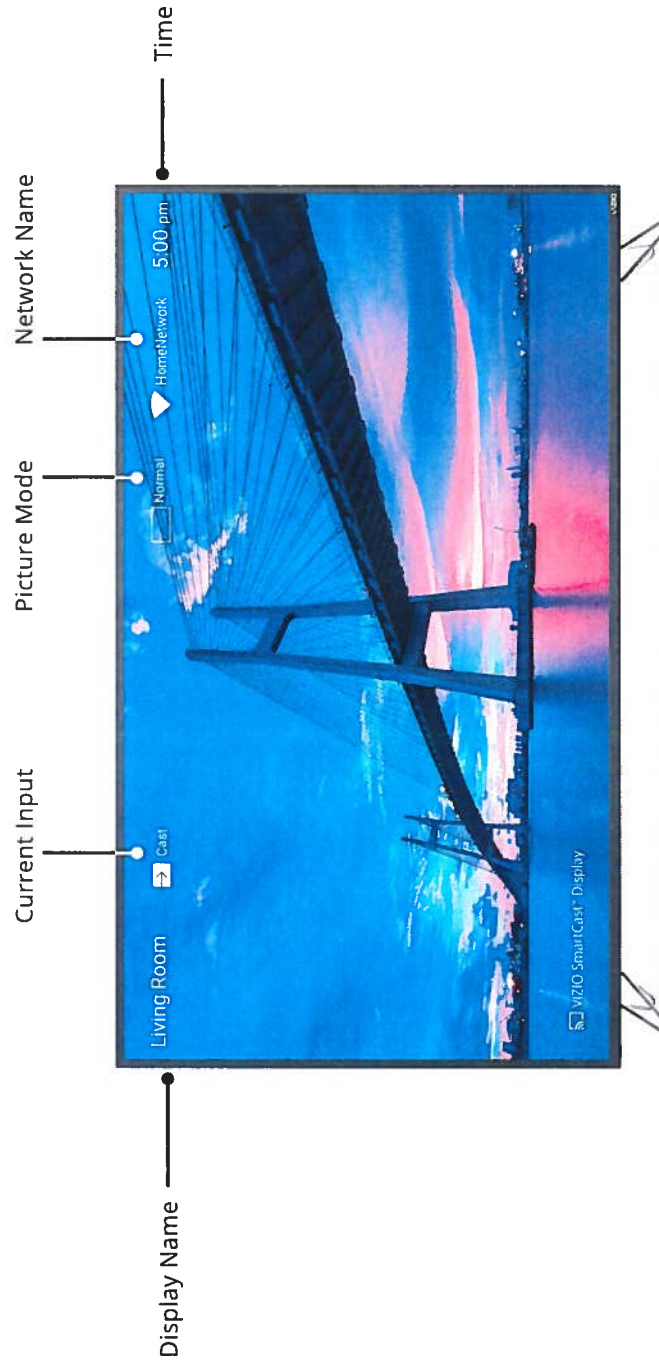
You can easily turn this feature On or Off in the RESET & ADMIN menu. If you have trouble enabling or disabling Viewing Data, please contact VIZIO customer service by emailing techsupport@vizio.com or calling (855) 472-8817.

For more information, see <https://www.vizio.com/viewingdata> and review VIZIO's privacy policy at <https://www.vizio.com/privacy>

USING THE INFO WINDOW

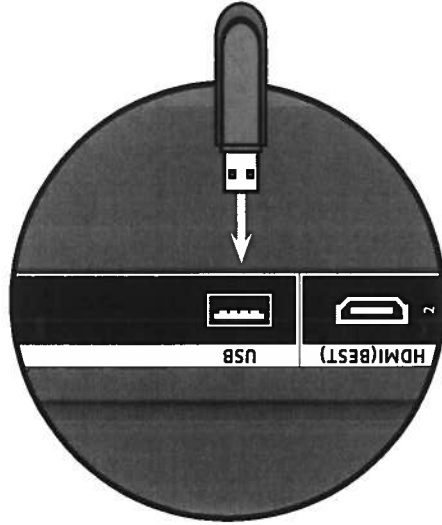
The Info Window can be displayed by pressing the **INFO** or **GUIDE** button on the remote:

- Press the **INFO** button one time to display input, display name, picture mode, time, and network information.



Playing USB Media

You to connect a USB thumb drive to your Display to play videos.



Preparing Your USB Drive to Play USB Media

To display USB media, you must first save your videos onto a USB thumb drive:

- The USB thumb drive must be formatted as FAT32.
- Files on the USB thumb drive must end in a supported file extension (.mp4 only).
- The player is not designed to play media from external hard drives, MP3 players, cameras, or smartphones.

Displaying USB Media

To display your USB media:

1. Connect your USB thumb drive to the USB port on the side of the Display.
2. The Display will recognize the USB stick and begin playing content on its own.

Removing the USB Drive from the Display

To safely remove your USB drive from the Display:

1. Turn off the Display.
2. Disconnect your USB thumb drive from the USB port on the side of the Display.



Do not remove the USB thumb drive while the Display is on. Doing so may damage the drive.

Do You Have Questions? Find Answers At

SUPPORT.VIZIO.COM

Find help with:

- New Product Setup
- Connecting Your Devices
- Technical Problems
- Product Updates
- And More



Live Chat
Support Available

**You can also contact our
award-winning support team at:**

Phone: (877) 698-4946 (TOLL-FREE)

Hours Of Operation:

Monday - Friday: 7 AM TO 11 PM (CST)

Saturday - Sunday: 8 AM TO 9 PM (CST)



Take A Moment To Register Your Product At

VIZIO.COM/PRODUCT-REGISTRATION

Why Register?



Customized Support

Get assistance quickly with your information on-hand.



News & Offers

Take advantage of the latest news and special offers from VIZIO.



Safety & Satisfaction


Stay up to date with important product updates and notifications.

REGISTER YOUR VIZIO PRODUCT NOW

How do I download the VIZIO SmartCast™ App?

- Make sure your phone or tablet is connected to a Wi-Fi network. Open a browser on your phone or tablet. Navigate to vizio.com/smartcastapp and follow the on-screen instructions to download the VIZIO SmartCast™ App.

How do I change the inputs?

- Make sure the VIZIO SmartCast™ App is installed on your phone or tablet. Open the VIZIO SmartCast™ App. Tap on the Device list and select your Display. Tap on the **Input** icon  and select the input of your choice.
- Press the **INPUT** button on the back of the Display to cycle through the inputs.
- Press the **INPUT** button on the back of the Display to cycle through the inputs.

How do I connect to my Wi-Fi network?

- On your IR remote, press the Menu button then go to Network → Select your Wi-Fi name → Enter password.
- Press the **Setup / Link** button twice on the IR remote. Open the VIZIO SmartCast™ App on your phone or tablet. Tap on the Device list and select **Setup a New Device** and follow the on-screen instructions.
- Open the VIZIO SmartCast™ App on your phone or tablet. Tap on the device list and select your Display. Tap on the **Settings** icon → **Network** → **Wireless Access Points**. Select your Wi-Fi network from the list, enter the Wi-Fi password, and tap **Connect**.
- Press the **Setup / Link** button twice on the IR remote. Press **Play / Pause** button to enter manual setup. Follow the on-screen instructions to complete setup and connect to a wireless network.

How do I stream apps like Netflix and Youtube to my VIZIO SmartCast™ Display?

- Download and open a Chromecast-enabled apps on your mobile device, such as like Netflix or Youtube. Then tap the Cast button.

How do I exit Demo Mode

- **Press and hold** the **INPUT** button on the back of the Display to exit the demo mode.

How do I watch Cable/Antenna TV channels?

- If you subscribe to cable or satellite, simply connect an HDMI cable (not included) to the receiver.
- If you use external antennas to watch local broadcast channels, a TV tuner is required and is sold separately by third parties.

The remote is not responding.

- Make sure the batteries are properly inserted matching the - and + symbols.
- Replace the batteries with fresh ones.

The Display displays "No Signal."

- Press the **INPUT** button on the remote control to select a different input source.

There is no power.

- Ensure the Display is plugged into a working electrical outlet.
- Ensure the power cable is securely attached to the Display.
- Press the **Power/Standby** button on the remote or on the back of the Display to turn the Display on.

The power is on, but there is no image on the screen.

- Ensure all cables are securely attached to the Display.
- Ensure all devices are connected correctly. Devices differ; see your device's user manual for details.
- Adjust Brightness, Contrast, or Backlight. See *Adjusting the Picture Settings*.
- Press the **INPUT** button on the remote to select a different input source.

There is no sound.

- Press Volume Up on the remote control.
- Press the **MUTE** button on the remote to ensure mute is off.
- Check the audio settings. See *Adjusting the Audio Settings*.
- Check the audio connections of external devices (Blu-ray player, game console, cable/satellite box) that are connected to the TV.

The sound is flat or dialog is not audible.

- Turn off Volume Leveling. See *Adjusting the Audio Settings*.

The colors on the TV don't look right.

- Adjust the Color and Tint settings in the Picture menu. See *Adjusting the Picture Settings*.
- Select a pre-set picture mode. See *Adjusting the Picture Settings*. VIZIO recommends selecting Calibrated.
- Check all cables to ensure they are securely attached.

The buttons on the remote aren't working.

- Ensure you are only pressing one button at a time.
- Point the remote directly at the Display when pressing a button.
- Replace the remote batteries with new ones. See *Replacing the Batteries*.


The image quality is not good.

- For the best image quality, view high-definition programs using digital sources. Connect your devices with HDMI cables.

The picture is distorted.

- Move the Display away from electrical appliances, cars, and fluorescent lights.
- Ensure all cables are securely attached.

The display image does not cover the entire screen.

- If you are using Display, AV, or Component with 480i input, press the  button on the remote to change the screen mode.

The Display has pixels (dots) that are always dark.

- Your HD Display is precision-manufactured using an extremely high level of technology. However, sometimes pixels may not display correctly. These types of occurrences are inherent to this type of product and do not constitute a defective product.

When I change input source, the display image changes size.

- The TV remembers the viewing mode on each input source. If the viewing mode on the new input source differs from the one on the input source you switch from, the difference may be noticeable.

Specifications

B

	M50-E1	M50-E1
Screen Size:	50"	Remote Control Model: XRT135
Viewable Area:	49.50"	Certifications: UL, cUL, FCC Class B, BET7/ICES-003 Class B, IC, HDMI (CEC, ARC), Dolby Audio™
Dimensions w/ Stand:	44.40" x 27.98" x 8.70"	Voltage Range: 120 V @ 60 Hz
Dimensions w/o Stand:	44.40" x 25.61" x 2.68"	Power Consumption: 43.66W
Weight w/ Stand:	30.86 lbs	Standby Power: <0.5W
Weight w/o Stand:	29.32 lbs	Zero Bright Pixel Guarantee: Yes
LCD Backlight:	Full Array LED	Screw Size M6
Active LED Zones:	32	Wallmount Hole Pattern 200 mm (V) x 200 mm (H)
Refresh Rate:	120 Hz Effective Refresh Rate	
Maximum Resolution:	3840 x 2160 (UHD)	
Dynamic Contrast Ratio:	20M:1	
Pixel Pitch:	0.315 mm (H) X 0.315 mm (V)	
Viewing Angle:	178° (H) / 178° (V)	
HDMI Inputs:	4	
Component Video Inputs:	1	
USB Port:	1	
Audio Outputs:	Analog Stereo, Optical Digital, HDMI ARC	
OSD Language:	English, French, Spanish	
Ambient Light Sensor:	Yes	

Specifications

B

	M55-EO	M55-EO
Screen Size:	55"	Remote Control Model: XRT135
Viewable Area:	54.64"	Certifications: C-US, CSA, FCC Class B, ICES-003 Class B, IC, HDMI (CEC, ARC), Dolby Audio™
Dimensions w/ Stand:	48.97" x 30.58" x 9.13"	Voltage Range: 120 V @ 60 Hz
w/o Stand:	48.97" x 28.31" x 2.51"	Power Consumption: 165W
Weight w/ Stand:	36.15 lbs	Standby Power: <0.5W
w/o Stand:	34.17 lbs	Zero Bright Pixel Guarantee: Yes
LCD Backlight:	Full Array LED	Screw Size: M6
Active LED Zones:	32	Wallmount Hole Pattern: 400 mm (V) x 400 mm (H)
Refresh Rate:	120 Hz Effective Refresh Rate	
Maximum Resolution:	3840 x 2160 (UHD)	
Dynamic Contrast Ratio:	20M:1	
Pixel Pitch:	0.315 mm (H) X 0.315 mm (V)	
Viewing Angle:	178° (H) / 178° (V)	
HDMI Inputs:	4	
Component Video Inputs:	1	
USB Port:	1	
Audio Outputs:	Analog Stereo, Optical Digital, HDMI ARC	
OSD Language:	English, French, Spanish	
Ambient Light Sensor:	Yes	

Specifications

B

	M65-ED	M65-ED
Screen Size:	65"	Remote Control Model: M65-ED XRT135
Viewable Area:	64.50"	Certifications: C-US, CSA, FCC Class B, ICES-003 Class B, iC, HDMI (CEC, ARC), Dolby Audio™
Dimensions w/ Stand:	57.59" x 35.78" x 10.87"	Voltage Range: 120 V @ 60 Hz
Dimensions w/o Stand:	57.59" x 33.14" x 2.51"	Power Consumption: 200W
Weight w/ Stand:	57.32 lbs	Standby Power: <0.5W
Weight w/o Stand:	55.33 lbs	Zero Bright Pixel Guarantee: Yes
LCD Backlight:	Full Array LED	Screw Size M6
Active LED Zones:	32	Wallmount Hole Pattern 400 mm (V) x 400 mm (H)
Refresh Rate:	120 Hz Effective Refresh Rate	
Maximum Resolution:	3840 x 2160 (UHD)	
Dynamic Contrast Ratio:	20M:1	
Pixel Pitch:	0.315 mm (H) X 0.315 mm (V)	
Viewing Angle:	178° (H) / 178° (V)	
HDMI Inputs:	4	
Component Video Inputs:	1	
USB Port:	2	
Audio Outputs:	Analog Stereo, Optical Digital, HDMI ARC	
OSD Language:	English, French, Spanish	
Ambient Light Sensor:	Yes	

Specifications

B

M70-E3

Screen Size:	70"
Viewable Area:	69.50"
Dimensions w/ Stand:	61.70" x 38.36" x 11.17"
w/o Stand:	61.70" x 35.53" x 2.72"
Weight w/ Stand:	60.41 lbs
w/o Stand:	58.64 lbs
LCD Backlight:	Full Array LED
Active LED Zones:	32
Refresh Rate:	120 Hz Effective Refresh Rate
Maximum Resolution:	3840 x 2160 (UHD)
Dynamic Contrast Ratio:	50M:1
Pixel Pitch:	0.4008 mm (H) X 0.4008 mm (V)
Viewing Angle:	178° (H) / 178° (V)
HDMI Inputs:	4
Component Video Inputs:	1
Composite Inputs:	1 (Shared with Component)
Audio Outputs:	Analog Stereo, Optical Digital, HDMI ARC
OSD Language:	English, French, Spanish
Ambient Light Sensor:	Yes

M70-E3

Remote Control Model:	XRT135
Certifications:	UL, cUL, FCC Class B, BET7/ICES-003 Class B, IC, HDMI (CEC, ARC), Dolby Audio™
Voltage Range:	120 V @ 60 Hz
Power Consumption:	280W
Standby Power:	<0.5W
Zero Bright Pixel Guarantee:	Yes
Screw Size:	M6
Wallmount Hole Pattern:	400 mm (V) x 400 mm (H)

Specifications

B

M75-E1

Screen Size:	75"
Viewable Area:	74.50"
Dimensions w/ Stand:	66.58" x 40.99" x 13.78"
w/o Stand:	66.58" x 38.24" x 3.11"
Weight w/ Stand:	77.91 lbs
w/o Stand:	77.16 lbs
LCD Backlight:	Full Array LED
Active LED Zones:	32
Refresh Rate:	120 Hz Effective Refresh Rate
Maximum Resolution:	3840 x 2160 (UHD)
Dynamic Contrast Ratio:	20M:1
Pixel Pitch:	0.4298 mm (H) X 0.4298 mm (V)
Viewing Angle:	178° (H) / 178° (V)
HDMI Inputs:	2
Component Video Inputs:	1
USB Port:	1
Audio Outputs:	Analog Stereo, Optical Digital, HDMI ARC
OSD Language:	English, French, Spanish
Ambient Light Sensor:	Yes

M75-E1

Remote Control Model:	XRT135
Certifications:	UL, cUL, FCC Class B, BET7/ICES-003 Class B, IC, HDMI (CEC, ARC), Dolby Audio™
Voltage Range:	120 V @ 60 Hz
Power Consumption:	178.25W
Standby Power:	<0.5W
Zero Bright Pixel Guarantee:	Yes
Screw Size	M8
Walmart Hole Pattern	400 mm (V) x 400 mm (H)

FCC Class B Radio Interference Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/Display technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

The manufacturer is not responsible for any radio or Display interference caused by unauthorized modification to this equipment. It is the responsibilities of the user to correct such interference.

FCC Warning

Changes or modifications not expressly approved by the party responsible for compliance with the FCC Rules could void the user's authority to operate this equipment.

Caution

Always use an AC/DC power adapter that is properly grounded. Use the AC cords listed below for each area.

For USA / Canada

This equipment should be installed and operated with a minimum distance 20 cm between the antenna and your body. Users must follow the specific operating instructions for satisfying RF exposure compliance.

For Canada

The device for the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems. The maximum antenna gain permitted for devices in the 5725-5825 MHz band) to comply with the E.I.R.P. limits specified for point-to-point and non point-to-point operation as appropriate.

Canada Notice for License-Exempt Radio Apparatus

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device operates on a no-protection no-interference basis. Should the user seek to obtain protection from other radio services operating in the same TV bands, a radio license is required. Please consult Industry Canada's document CPC-2-1-28, Optional Licensing for Low-Power Radio Apparatus in the TV Bands, for details.

Cet appareil est conforme aux CNR exempts de licence d'Industrie Canada. Son fonctionnement est sujet aux deux conditions suivantes:

1. Le dispositif ne doit pas produire de brouillage préjudiciable,
- et
2. ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Cet appareil fonctionne sur une base sans protection et sans interférence. Dans le cas où l'utilisateur cherche à obtenir de la protection des autres services de radio fonctionnant sur les mêmes bandes TV, aucune licence est requise. Veuillez consulter le document CPC-2-1-28 d'Industrie Canada, License optionnelle pour les appareils radio de faible puissance, pour plus de détails.

Industry Canada Class B emission compliance statement

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Declaración de México:

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Limited Warranty

C

UNITED STATES AND CANADA

BY USING YOUR VIZIO PRODUCT YOU AGREE TO BE BOUND BY ALL THE TERMS OF THIS WARRANTY. BEFORE USING YOUR VIZIO PRODUCT, PLEASE READ THIS WARRANTY CAREFULLY. IF YOU DO NOT AGREE TO THE TERMS OF THIS WARRANTY, DO NOT USE THE VIZIO PRODUCT AND, WITHIN THIRTY (30) DAYS OF THE DATE OF PURCHASE, RETURN IT FOR A REFUND TO THE AUTHORIZED RETAILER WHERE YOU PURCHASED IT. This warranty contains a binding arbitration agreement and a class action waiver for United States residents. If you live in the United States, the binding arbitration agreement and class action waiver affect your rights under this warranty. Please read the text under the section titled "Binding Arbitration Agreement; Class Action Waiver (U.S. Residents Only)" carefully.

How Long This Warranty Lasts

For non-commercial use, VIZIO warrants the product on the terms set forth below for one (1) year from the date of original purchase. For commercial use, VIZIO warrants this product on the terms set forth below for ninety (90) days from the date of original purchase.

What This Warranty Covers

VIZIO warrants the product against defects in materials and workmanship when the product is used normally in accordance with VIZIO's user guides and manuals.

Except where restricted by law, this warranty applies only to the original purchaser of a new product. The purchase must have been made from an authorized retailer in the United States (including Puerto Rico) or Canada. The product must also be located in the country where it was purchased at the time of warranty service.

Zero Bright Pixel Defect Guarantee (Displays Only)

Your product may qualify for a warranty against "zero bright pixel" defects for the duration of the warranty on select new product purchases. To determine if this guarantee applies to your product, refer to the model's product information page at www.vizio.com, look for the "zero bright pixel" guarantee on the box, or contact VIZIO Technical Support at the email address or telephone number below.

How to Get Service

Before obtaining warranty service, you may visit www.vizio.com for additional help and troubleshooting. To obtain warranty service, contact

VIZIO Technical Support via email at TechSupport@VIZIO.com or via phone at 877 MY VIZIO (877-698-4946). The VIZIO Technical Support hours are 6:00AM to 9:00PM Monday through Friday and 7:00AM to 4:00PM Saturday and Sunday, Pacific Time.

Your Obligations Before Service

You must obtain pre-authorization before sending your product to a VIZIO service center. You may be required to supply a purchase receipt (or copy) to show that the product is within the warranty period. When you return a product to a VIZIO service center, you must ship the product in its original packaging or in packaging that affords an equal degree of protection. VIZIO Technical Support will provide instructions for packing and shipping the product to the VIZIO service center.

ALL USER DATA AND DOWNLOADED APPLICATIONS STORED ON A SHIP-IN WARRANTY SERVICE. If this occurs, your product will be restored to its original state. You will be responsible for restoring all applicable user data and downloaded applications. Recovery and reinstallation of user data and downloaded applications is not covered under this warranty. In order to protect your personal information, VIZIO recommends that you always clear all personal information from the product before it is serviced, regardless of the service.

VIZIO's Responsibilities

IF VIZIO determines that a product is covered by this warranty, VIZIO will (at its option) repair or replace it, or refund the purchase price to you. There will be no charge for parts or labor during the warranty period. Replacement parts may be new or recertified at VIZIO's option and sole discretion. Replacement parts and VIZIO's labor are warranted for the remaining portion of the original warranty or for ninety (90) days from warranty service, whichever is longer.

Types of Service

Displays that are 32 inches or larger will usually be serviced in-home. In-home service requires complete and easy access to the product and does not include de-installation or re-installation of the product. In-home service is subject to availability. VIZIO will provide other service options when in-home service is not available.

All other VIZIO products must be sent to a VIZIO service center to obtain warranty service. VIZIO is not responsible for transportation costs to the service center, but VIZIO will cover return shipping to the customer.

What This Warranty Does Not Cover
This warranty does not cover: (a) cosmetic damage; (b) normal wear and tear; (c) improper operation; (d) improper voltage supply or power surges; (e) signal issues; (f) damage from shipping; (g) acts of God; (h) customer misuse, modifications or adjustments; (i) installation, set-up, or repairs attempted by anyone other than by a VIZIO authorized service center; (j) products with unreadable or removed serial numbers; (k) products requiring routine maintenance; or (l) products sold "AS IS", "CLEARANCE", "FACTORY RECERTIFIED", or by a non-authorized reseller.

What to Do if You Are Not Satisfied With Service

If you feel VIZIO has not met its obligations under this warranty, you may attempt to resolve the issue informally with VIZIO. If you are unable to resolve the issue informally and wish to file a formal claim against VIZIO, and if you are a resident of the United States, you must submit your claim to binding arbitration according to the procedures described below, unless an exception applies. Submitting a claim to binding arbitration means that you do not have the right to have your claim heard by a judge or jury. Instead your claim will be heard by a neutral arbitrator.

Binding Arbitration Agreement; Class Action Waiver (U.S. Residents Only)

UNLESS YOU HAVE BROUGHT AN ELIGIBLE CLAIM IN SMALL CLAIMS COURT OR HAVE OPTED OUT AS DESCRIBED BELOW, ANY CONTROVERSY OR CLAIM RELATING IN ANY WAY TO YOUR VIZIO PRODUCT, INCLUDING ANY CONTROVERSY OR CLAIM ARISING OUT OF OR RELATING TO THIS WARRANTY, A BREACH OF THIS WARRANTY, OR THE VIZIO PRODUCTS SALE, CONDITION OR PERFORMANCE, WILL BE SETTLED BY BINDING ARBITRATION ADMINISTERED BY THE AMERICAN ARBITRATION ASSOCIATION AND CONDUCTED BY A SINGLE ARBITRATOR APPOINTED BY THE AMERICAN ARBITRATION ASSOCIATION, IN ACCORDANCE WITH ITS COMMERCIAL ARBITRATION RULES AND ITS SUPPLEMENTARY PROCEDURES FOR CONSUMER-RELATED DISPUTES. You may learn more about the American Arbitration Association and its rules for arbitration by visiting www.adr.org or by calling 800-778-7879. Since this warranty concerns a transaction in interstate or international commerce, the Federal Arbitration Act will apply.

The filing fees to begin and carry out arbitration will be shared between you and VIZIO, but in no event will your fees ever exceed the amount allowable by the American Arbitration Association, at which point VIZIO will cover all additional administrative fees and expenses. VIZIO waives its

right to recover attorneys' fees in connection with any arbitration under this warranty, if you are the prevailing party in an arbitration to which the Supplementary Procedures for Consumer-Related Disputes applies, then you are entitled to recover attorneys' fees as the arbitrator may determine.

The dispute will be governed by the laws of the state or territory in which you resided at the time of your purchase (if in the United States). The place of arbitration will be Irvine, California, or your county of residence (if in the United States). The arbitrator will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute. The arbitrator will not award consequential damages, and any award will be limited to monetary damages and will include no equitable relief, injunction, or direction to any party other than the direction to pay a monetary amount. Judgment on the award rendered by the arbitrator will be binding and final, except for any right of appeal provided by the Federal Arbitration Act, and may be entered in any court having jurisdiction. Except as may be required by law, neither you nor VIZIO nor an arbitrator may disclose the existence, content, or results of any arbitration under this warranty without the prior written consent of you and VIZIO.

ANY DISPUTE, WHETHER IN ARBITRATION, IN COURT, OR OTHERWISE, WILL BE CONDUCTED SOLELY ON AN INDIVIDUAL BASIS. VIZIO AND YOU AGREE THAT NO PARTY WILL HAVE THE RIGHT OR AUTHORITY FOR ANY DISPUTE TO BE ARBITRATED AS A CLASS ACTION, A PRIVATE ATTORNEY GENERAL ACTION, OR IN ANY OTHER PROCEEDING IN WHICH EITHER PARTY ACTS OR PROPOSES TO ACT IN A REPRESENTATIVE CAPACITY. NO ARBITRATION OR PROCEEDING WILL BE JOINED, CONSOLIDATED, OR COMBINED WITH ANOTHER ARBITRATION OR PROCEEDING WITHOUT THE PRIOR WRITTEN CONSENT OF ALL PARTIES TO ANY SUCH ARBITRATION OR PROCEEDING.

Exceptions to Binding Arbitration Agreement and Class Action Waiver
IF YOU DO NOT WISH TO BE BOUND BY THE BINDING ARBITRATION AGREEMENT AND CLASS ACTION WAIVER, THEN: (1) you must notify VIZIO in writing within sixty (60) days of the date that you purchased the product; (2) your written notification must be mailed to VIZIO at 39 Tesla, Irvine, CA 92618, Attn: Legal Department; and (3) your written notification must include (a) your name, (b) your address, (c) the date you purchased the product, and (d) a clear statement that you wish to opt out of the binding arbitration agreement and class action waiver.

In addition, you may pursue a claim in small claims court in your county of residence (if in the United States) or in Orange County, California, in such

case the provisions of the section titled "Binding Arbitration Agreement; Class Action Waiver (U.S. Residents)" will not apply.

Exclusions and Limitations

TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE DESCRIBED ABOVE. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WILL BE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE. SOME STATES AND PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

VIZIO WILL NOT BE RESPONSIBLE FOR LOSS OF USE, LOSS OF INFORMATION OR DATA, COMMERCIAL LOSS, LOST REVENUE OR LOST PROFITS, OR OTHER INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF VIZIO HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND EVEN IF THE REMEDY FAILS OF ITS ESSENTIAL PURPOSE. SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

IN LIEU OF ANY OTHER REMEDY FOR ANY AND ALL LOSSES AND DAMAGES RESULTING FROM ANY CAUSE WHATSOEVER (INCLUDING VIZIO'S NEGLIGENCE, ALLEGED DAMAGE, OR DEFECTIVE GOODS, NO MATTER WHETHER SUCH DEFECTS ARE DISCOVERABLE OR LATENT), VIZIO MAY, AT ITS SOLE AND EXCLUSIVE OPTION AND IN ITS DISCRETION, REPAIR OR REPLACE YOUR PRODUCT, OR REFUND ITS PURCHASE PRICE. AS NOTED, SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

How the Law Applies

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state and province to province. This warranty applies to the greatest extent permitted by applicable law.

General

No employee or agent of VIZIO may modify this warranty, if any term of this warranty, other than the class action waiver, is found to be unenforceable, that term will be severed from this warranty and all other terms will remain in effect. If the class action waiver is found to be unenforceable,

then the entire section titled "Binding Arbitration Agreement; Class Action Waiver (U.S. Residents Only)" will not apply. This warranty applies to the maximum extent not prohibited by law.

Changes to Warranty

This warranty may change without notice, but any change will not affect your original warranty. Check www.vizio.com for the most current version.

Mexico Limited Warranty

C

MEXICO

BY USING YOUR VIZIO PRODUCT YOU AGREE TO BE BOUND BY ALL THE TERMS OF THIS WARRANTY. BEFORE USING YOUR VIZIO PRODUCT, PLEASE READ THIS WARRANTY CAREFULLY. IF YOU DO NOT AGREE TO THE TERMS OF THIS WARRANTY, DO NOT USE THE VIZIO PRODUCT AND, WITHIN THIRTY (30) DAYS OF THE DATE OF PURCHASE, RETURN IT FOR A REFUND TO THE AUTHORIZED RETAILER WHERE YOU PURCHASED IT.

Warrantor

The warrantor under this warranty is VIZIO Sales & Marketing Mexico S. de R.L. de C.V.

How Long This Warranty Lasts

For non-commercial use, VIZIO warrants the product on the terms set forth below for one (1) year from the date of original purchase. For commercial use, VIZIO warrants this product on the terms set forth below for ninety (90) days from the date of original purchase.

What This Warranty Covers

VIZIO warrants the product against defects in materials and workmanship when the product is used normally in accordance with VIZIO's user guides and manuals. Except where restricted by law, this warranty applies only to the original purchaser of a new product. The purchase must have been made from an authorized retailer in Mexico. The product must also be located in Mexico at the time of warranty service.

Zero Bright Pixel Defect Guarantee (Displays Only)

Your product may qualify for a warranty against "zero bright pixel" defects for the duration of the warranty on select new product purchases. To determine if this guarantee applies to your product, refer to the model's product information page at www.vizio.mx, look for the "zero bright pixel" guarantee on the box, or contact VIZIO Technical Support at the email address or telephone number below.

How to Get Service

Before obtaining warranty service, you may visit www.vizio.com for additional help and troubleshooting. To obtain warranty service, contact VIZIO Technical Support via email at TechSupport@VIZIO.com or via phone at 877 MY VIZIO (877-698-4946). The VIZIO Technical Support hours are 9:00AM to 6:00PM Monday through Friday, Central Standard Time.

Your Obligations Before Service

You must obtain pre-authorization before sending your product to a VIZIO service center. You may be required to supply a purchase receipt (or copy) to show that the product is within the warranty period.

When you return a product to a VIZIO service center, you must ship the product in its original packaging or in packaging that affords an equal degree of protection. VIZIO Technical Support will provide instructions for packing and shipping the product to the VIZIO service center.

ALL USER DATA AND DOWNLOADED APPLICATIONS STORED ON A PRODUCT WILL BE DELETED IN THE COURSE OF SOME IN-HOME AND ALL-SHIP-IN-WARRANTY SERVICE. If this occurs, your product will be restored to its original state. You will be responsible for restoring all applicable user data and downloaded applications. Recovery and reinstallation of user data and downloaded applications is not covered under this warranty. In order to protect your personal information, VIZIO recommends that you always clear all personal information from the product before it is serviced, regardless of the service.

VIZIO's Responsibilities

If VIZIO determines that a product is covered by this warranty, VIZIO will (at its option) repair or replace it, or refund the purchase price to you. There will be no charge for parts or labor during the warranty period. Replacement parts may be new or recertified at VIZIO's option and sole discretion. Replacement parts and VIZIO's labor are warranted for the remaining portion of the original warranty or for ninety (90) days from warranty service, whichever is longer.

Types of Service

Displays that are 32 inches or larger will usually be serviced in-home. In-home service requires complete and easy access to the product and does not include de-installation or re-installation of the product. In-home service is subject to availability. VIZIO will provide other service options when in-home service is not available. All other VIZIO products must be sent to a VIZIO service center to obtain warranty service. VIZIO is not responsible for transportation costs to the service center, but VIZIO will cover return shipping to the customer.

What This Warranty Does Not Cover

This warranty does not cover: (a) cosmetic damage; (b) normal wear and tear; (c) improper operation; (d) improper voltage supply or power surges; (e) signal issues; (f) damage from shipping; (g) acts of God; (h) customer misuse, modifications or adjustments; (i) installation, set-up, or repairs attempted by anyone other than a VIZIO authorized service center; (j) products with unreadable or removed serial numbers; (k) products requiring routine maintenance; or (l) products sold "AS IS", "CLEARANCE", "FACTORY RECERTIFIED", or by a non-authorized reseller.

What to Do if You Are Not Satisfied With Service

If you feel VIZIO has not met its obligations under this warranty, you may attempt to resolve the issue informally with VIZIO. If you are unable to resolve the issue informally and wish to file a formal claim against VIZIO, you may do so.

Exclusions and Limitations

TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE DESCRIBED ABOVE. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WILL BE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE. SOME STATES AND PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

VIZIO WILL NOT BE RESPONSIBLE FOR LOSS OF USE, LOSS OF INFORMATION OR DATA, COMMERCIAL LOSS, LOST REVENUE OR LOST PROFITS, OR OTHER INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF VIZIO HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND EVEN IF THE REMEDY FAILS OF ITS ESSENTIAL PURPOSE. SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

IN LIEU OF ANY OTHER REMEDY FOR ANY AND ALL LOSSES AND DAMAGES RESULTING FROM ANY CAUSE WHATSOEVER (INCLUDING VIZIO'S NEGLIGENCE, ALLEGED DAMAGE, OR DEFECTIVE GOODS, NO MATTER WHETHER SUCH DEFECTS ARE DISCOVERABLE OR LATENT), VIZIO MAY, AT ITS SOLE AND EXCLUSIVE OPTION AND IN ITS DISCRETION, REPAIR OR REPLACE YOUR PRODUCT, OR REFUND ITS PURCHASE PRICE. AS NOTED, SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

How the Law Applies

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state and province to province. This warranty applies to the greatest extent permitted by applicable law.

General

No employee or agent of VIZIO may modify this warranty. If any term of this warranty is found to be unenforceable, that term will be severed from this warranty and all other terms will remain in effect. This warranty applies to the maximum extent not prohibited by law.

Changes to Warranty

This warranty may change without notice, but any change will not affect your original warranty. Check www.vizio.mx for the most current version.

INFORMATION EXCLUSIVELY FOR MEXICO

To make a warranty claim, or to obtain parts, components, supplies and accessories, you may contact the importer of record, the warranty service provider, or the establishment from whom you purchased the VIZIO product.

Importer of Record

VIZIO Sales & Marketing México S. de R.L. de C.V.
PRESIDENTE MASARYK 111, Of 152 - Of 111
COL. POLANCO V SECCIÓN
DELEGACIÓN MIGUEL HIDALGO,
CIUDAD DE MEXICO D.F. 11560

Warranty Service Provider

VIZIO Sales & Marketing México S de RL de CV
Presidente Masaryk 111, Of 152 - Of 111
Col. Polanco V Sección
Delegación Miguel Hidalgo
Ciudad de México, México
C.P. 11560
01-800-801-0096 or 001-855-472-7444

Date of purchase:

Model:

Brand:

To make a warranty claim, present your product and either this warranty, duly stamped by the establishment from whom you purchased the VIZIO product, or a valid invoice or receipt showing the date of purchase.

Under the terms of this warranty, VIZIO or its representative must exchange parts and components of the product and include labor and shipping expenses of the product on which this warranty is valid, within the service network, at no cost to the consumer.

VIZIO is not obligated to honor the warranty in the following cases.
(a) When the product has been used under other than normal conditions.

(b) When the product has not been operated according to the accompanying instructions for use.

(c) When the product has been altered or repaired by persons not authorized by VIZIO or the respective seller.

Software Licenses

All software is provided subject to a software license agreement(s) and you agree that you will be bound by such license agreement(s) in addition to these terms. Your use of this product is subject to VIZIO's privacy policy, which may be updated from time to time, and is available to view at <http://www.vizio.com/privacy>.

Export Regulations

Customer acknowledges that the VIZIO products, which include technology and software, are subject to customs and export control laws in the United States ("US"). The products may also be subject to the customs and export control laws and regulations of the country in which the products are manufactured and/or received.

Internet Connectivity

Network conditions, environmental and other factors may negatively affect connectivity and the resulting video quality, if any.

The applications and content of the applications pictured herein or described in accompanying documentation may only be available in certain countries or languages, may require additional fees or subscription charges, and may be subject to future updates, modifications or discontinuation without notice. VIZIO has no control over third party applications or content and assumes no responsibility for the availability or interruption of such applications or content. Additional third party terms, conditions and restrictions apply. A Google account is required to download applications from the Google Play store. A MyVIZIO account is required to access certain features of the VIZIO SmartCast™ App.

Information in this User Manual is subject to change without notice. To review the most updated version of this User Manual and the associated Quick Start Guide, go to <http://www.vizio.com>.

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Caution: Avoid exposing a drive to magnetic fields. Security devices with magnetic fields may include airport walk-through devices and security wands. Airport conveyor belts or similar security devices that check carry-on luggage generally use X-rays and should not cause magnetic damage to drives. If you are traveling internationally, check the customs regulations for device use for each country you will visit, and check the power cord and adapter requirements for each location in which you plan to use the display as voltage, frequency and plug configurations may vary.

Warning: To reduce risk of electric shock, fire or damage to your device or other property, do not attempt to power the device with a voltage converter kit sold for appliances.



Battery Disposal



Caution: Battery cells may explode. Do not dispose of the battery in a fire or with ordinary household waste. Dispose of batteries promptly. Replace the battery only with the same or equivalent type of battery recommended by VIZIO.

Always properly dispose of your VIZIO electronic products. For information on how to properly dispose of or recycle your VIZIO products please go to www.vizio.com/environment.

EXHIBIT B

free shipping on orders of \$35+ & free returns



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VIZIO® D-Series 48" Class 47.6" Diag. 1080p 120Hz LED Smart TV - D48-D0

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★★★★☆ 60 3 questions

3 year TV Protection Plan
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highlights

- EASY TO USE SMART TV
- BUILT-IN WIFI
- FULL ARRAY LED BACKLIGHT w/ 5 ACTIVE LED ZONES®

1

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The all-new 2016 D-series 48" (48" diag.) Full-Array LED Smart TV has arrived. Featuring brilliant picture quality, and faster, easier-to-use smart TV experience, the all-new D-series brings you premium HD entertainment at an incredible value. Built-in high-speed Wi-Fi gets you connected in a snap, and with the hottest apps to choose from like Netflix, Xumo, iHeartRadio, Hulu Plus, Spotify, YouTube and more. Enjoying what you want, when you want it is easier than ever before. Plus, you get brilliant picture quality using the latest advanced technologies — like Full-Array LED backlighting for superior light uniformity, and 5 Active LED Zones producing vivid details

9/23/2017

VIZIO® D-Series 48" Class 47.6" Diag. 1080p 120Hz LED Smart TV - D48-D0 : Target

with deeper, more pure black levels. For sports and action fans, D-series includes Clear Action 240, which combines powerful image processing with 120Hz effective refresh rate for enhanced detail in fast action scenes. VIZIO D-series: Incredible picture, unbeatable value.

Includes: User Manual, Table Stand, Remote Control Batteries, Detachable Base Stand, Quick Start Guide, Power Cord

Battery required, included.

Screen Size: 47.600 inches

Video Resolution: 1080p

Screen Refresh Rate: 120 Hz

Backlight Type: LED full array

Number of HDMI Inputs: 3

Wireless Technology: Wi-Fi

Dimensions: Without Stand: 25.2 inches H x 42.8 inches W x 2.90 inches D ; With Stand: 27.6 inches H x 42.8 inches W x 9.8 inches D

Weight: 25.1 pounds

Tuner Type: NTSC

Model #: D48-D0

VESA Mounting Standard: 200x200

TV Condition: new

Warranty Description: 1 Year Limited Warranty

TCIN: 15154593

UPC: 845226043475

Store Item Number (DPCI): 008-09-1489

EnergyGuide Label Required: ENERGYGUIDE LABEL REQUIRED

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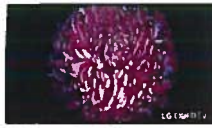
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Excellent value!

★★★★★ Bleudiable — 12 months ago

After 12 years of a bulky 34" traditional picture tube (over 100 lbs!) HDTV, we wanted to upgrade in size and function. ... [see more](#)

Excellent smart tv

★★★★★ LizinKC — 1 year ago

Easy to install - great features including the wireless. Longest part of the installation is the entry of my wireless ne. . [see more](#)

good TV

★★★★★ LynnT — 20 months ago

came in one piece, no problems on setting it up [see more](#)

Picture? Fantastic! Sound? Not so much.

★★★★ Jenluvs2sing — 10 months ago

I'd read a few reviews about the sound quality on this and got it anyway. I'd had a Vizio in the past and had great luck... [see more](#)

most helpful negative reviews

Lots of problems

★☆☆☆☆ Sad Vizio owner — 15 months ago

This may be the first product review that I have ever written but I felt obligated to let people know my experience with... [see more](#)

Randomly Shuts Off!!

★☆☆☆☆ Call — 1 year ago

We owned this tv for less than 24 hours and it shut off on its own. It only did it once so we decided to keep it. Over t... [see more](#)

Never got it to work

★☆☆☆☆ Roz — 9 months ago

We won this Vizio TV at a drawing for our race club. We brought it home and it wouldn't turn on. We then noticed it ha... [see more](#)

Don't like online

★☆☆☆☆ Arely Saucedo — 9 months ago

When I open the box and try to put the tv, the tv don't work and the entire screen was broken. [see more](#)

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EXHIBIT C

VIZIO



USER MANUAL

Models: M322i-B1



This product qualifies for ENERGY STAR in the "factory default" setting and this is the setting in which power savings will be achieved. Changing the factory default picture settings or enabling other features will increase power consumption that could exceed the limits necessary to qualify for ENERGY STAR rating.



For DTS patents, see

<http://patents.dts.com>

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Welcome

THANK YOU FOR CHOOSING VIZIO

And congratulations on your new VIZIO HDTV

To get the most out of your new VIZIO product, read these instructions before using your product and retain them for future reference. Be sure to inspect the package contents to ensure there are no missing or damaged parts.

PRODUCT REGISTRATION

To purchase or inquire about accessories and installation services for your VIZIO product, visit our website at www.VIZIO.com or call toll free at (877) 878-4946.

We recommend that you either:

- Register your VIZIO product at www.VIZIO.com
- Complete and mail the enclosed registration card

Extended Warranties

For peace of mind, and to protect your investment beyond the standard warranty, VIZIO offers on-site extended warranty service plans. These plans provide additional coverage during the standard warranty period. To purchase an extended warranty service plan, visit www.VIZIO.com.

WHEN READING THIS MANUAL



When you see this symbol, please read the accompanying important warning or notice. It is intended to alert you to the presence of important operating instructions.



When you see this symbol, please read the accompanying helpful tip.

IMPORTANT SAFETY INSTRUCTIONS

Your TV is designed and manufactured to operate within defined design limits. Misuse may result in electric shock or fire. To prevent your TV from being damaged, the following instructions should be observed for the installation, use, and maintenance of your TV. Read the following safety instructions before operating your TV. Keep these instructions in a safe place for future reference.

- To reduce the risk of electric shock or component damage, switch off the power before connecting other components to your TV.
- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.

- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
- Unplug the power cord before cleaning your TV.
- When moving your TV from an area of low temperature to an area of high temperature, condensation may form in the housing. Wait before turning on your TV to avoid causing fire, electric shock, or component damage.
- A distance of at least three feet should be maintained between your TV and any heat source, such as a radiator, heater, oven, amplifier etc. Do not install your TV close to smoke. Operating your TV close to smoke or moisture may cause fire or electric shock.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of your TV and to protect it from overheating, be sure these openings are not blocked or covered. Do not place your TV in a bookcase or cabinet unless proper ventilation is provided.
- Never push any object into the slots and openings on your TV cabinet. Do not place any objects on the top of your TV. Doing so could short circuit parts causing a fire or electric shock. Never spill liquids on your TV.
- Your TV should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer



or local power company.

- Do not apply pressure or throw objects at your TV. This may compromise the integrity of the display. The manufacturer's warranty does not cover user abuse or improper installations.
- The power cord must be replaced when using different voltage than the voltage specified. For more information, contact your dealer.
- When connected to a power outlet, power is always flowing into your TV. To totally disconnect power, unplug the power cord.
- The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of un-isolated, dangerous voltage within the inside of your TV that may be of sufficient magnitude to constitute a risk of electric shock to persons.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- The wall socket should be installed near your TV and easily accessible.
- Only power of the marked voltage can be used for your TV. Any other voltage than the specified voltage may cause fire or electric shock.
- Do not touch the power cord during lightning. To avoid electric shock, avoid handling the power cord during electrical storms.
- Unplug your TV during a lightning storm or when it will not be used for long period of time. This will protect your TV from damage due to power surges.
- Do not attempt to repair or service your TV yourself. Opening or removing the back cover may expose you to high voltages, electric shock, and other hazards. If repair is required, contact your dealer and refer all servicing to qualified service personnel.
- **WARNING:** Keep your TV away from moisture. Do not expose your TV to rain or moisture. If water penetrates into

your TV, unplug the power cord and contact your dealer. Continuous use in this case may result in fire or electric shock.

- Do not use your TV if any abnormality occurs. If any smoke or odor becomes apparent, unplug the power cord and contact your dealer immediately. Do not try to repair your TV yourself.
- Avoid using dropped or damaged appliances. If your TV is dropped and the housing is damaged, the internal components may function abnormally. Unplug the power cord immediately and contact your dealer for repair. Continued use of your TV may cause fire or electric shock.
- Do not install your TV in an area with heavy dust or high humidity. Operating your TV in environments with heavy dust or high humidity may cause fire or electric shock.
- Follow instructions for moving your TV. Ensure that the power cord and any other cables are unplugged before moving your TV.
- When unplugging your TV, hold the AC/DC power adapter, not the cord. Pulling on the power cord may damage the wires inside the cord and cause fire or electric shock. When your TV will not be used for an extended period of time, unplug the power cord.
- To reduce risk of electric shock, do not touch the connector with wet hands.
- Insert batteries in accordance with instructions. Incorrect polarities may cause the batteries to leak which can damage the remote control or injure the operator. Do not expose batteries to excessive heat such as sunshine, fire or the like.
- If any of the following occurs, contact the dealer:
 - The power cord fails or frays
 - Liquid sprays or any object drops into your TV.
 - Your TV is exposed to rain or other moisture.
 - Your TV is dropped or damaged in any way.
 - The performance of your TV changes substantially.

- This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- The mains plug or appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- CAUTION - These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated DANGEROUS VOLTAGE within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

TELEVISION ANTENNA CONNECTION PROTECTION

If an outside antenna/satellite dish or cable system is to be connected to the TV, make sure that the antenna or cable system is electrically grounded to provide some protection against voltage surges and static charges.

Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of the grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements of the grounding electrode.

Lightning Protection

For added protection of the TV during a lightning storm or when it is left unattended or unused for long periods of time, unplug the TV from the wall outlet and disconnect the antenna or cable system.

Power Lines

Do not locate the antenna near overhead light or power circuits, or where it could fall into such power lines or circuits. Remember, the screen of the coaxial cable is intended to be connected to earth in the building installation.

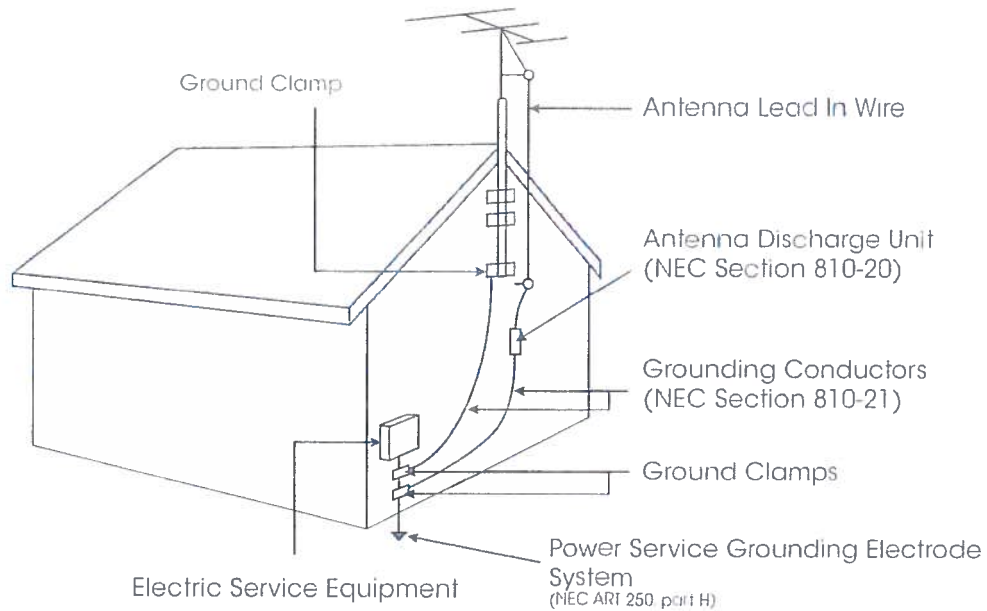


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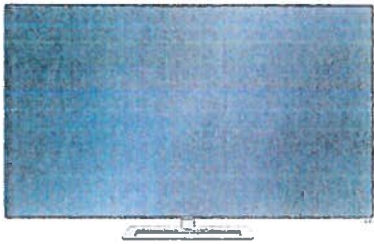
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Using the V.I.A. Plus App Dock	55		
Using the fullscreen V.I.A. Apps Window	56		

Installing the TV

1

INSPECTING THE PACKAGE CONTENTS

Before installing your new TV, take a moment to inspect the package contents. Use the images below to ensure nothing is missing or damaged.



VIZIO LED HDTV with Stand



Two-Sided Remote with Keyboard (Batteries Included)



Quick Start Guide



Power Cord



7 x 14mm M4 Phillips Screws

PACKAGE CONTENTS

INSTALLING THE TV

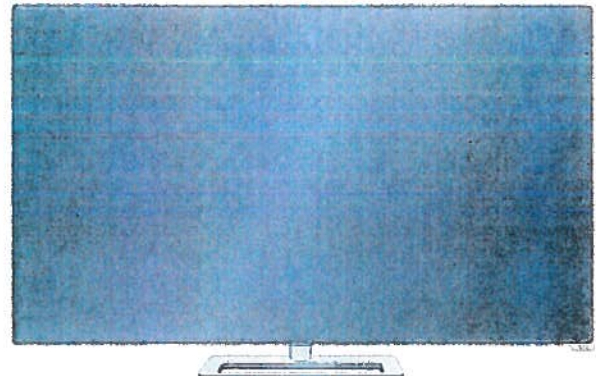
After removing the TV from the box and inspecting the package contents you can begin installing the TV. Your TV can be installed in two ways:

- On a flat surface, using the included stand
- On a wall, using a VESA-standard wall mount (not included)

Installing the TV Stand

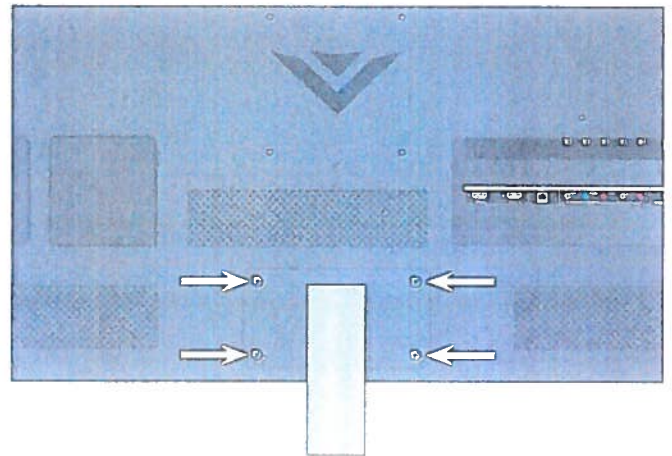
Your TV includes a stand designed to support the weight of the TV and keep it from falling over. However, the TV can still fall over if:

- It is placed on an uneven, unstable, or non-level surface
- It is pushed, pulled, or otherwise improperly moved
- If an earthquake occurs and the TV is not properly secured



TV ON STAND

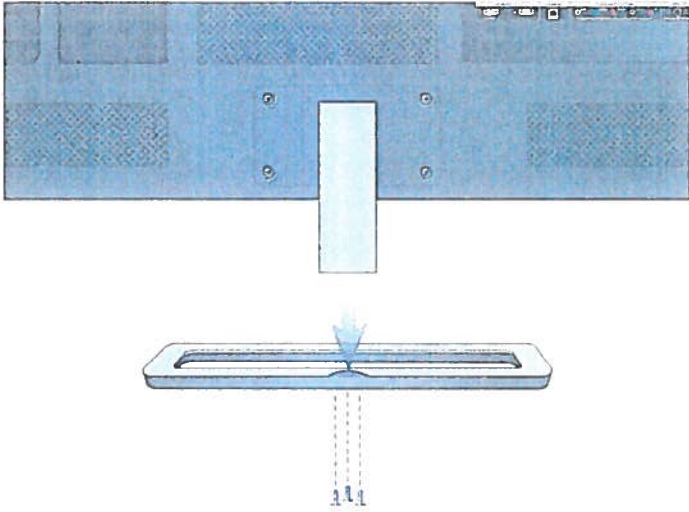
To install the base:



- 1 Remove any plastic wrapping from the TV and stand.

Place the TV screen-down on a clean, flat surface. To prevent scratches or damage to the screen, place the TV on a soft surface, such as a carpet, rug, or blanket.

- 2 Align the neck piece with the back of the TV. Insert and tighten four (4) included M4 14mm Phillips screws into the back of the TV as shown.



3. Align the base with the neck
4. Insert and tighten three (3) included M4 14mm Phillips screws into the bottom of the base as shown.
5. When you are finished, place the TV on a stable, level surface.

Installing the TV on a Wall

To mount your TV on a wall, you will need a wall mount. Consult the information below to find the appropriate mount for your TV model.



Installing a TV on a wall requires lifting. To prevent injury or damage to the TV, ask someone to help you.

M322i-B1	
Screw Size:	M4
Hole Pattern:	100mm (V) x 100mm (H)
Weight w/o stand:	13.23 lbs

Be sure the mount you choose is capable of supporting the weight of the TV. After you have determined that you have the correct mount for your TV, you can begin the installation.

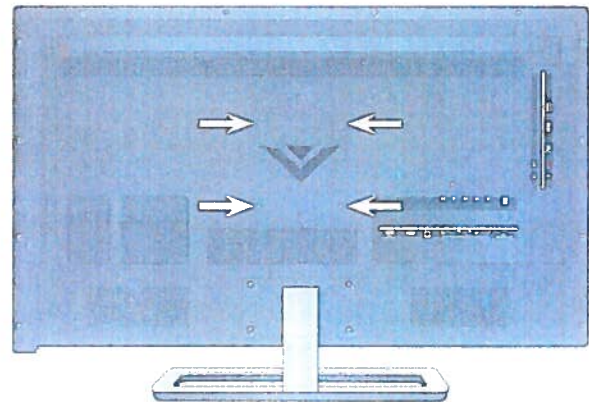
To install your TV on a wall:

1. Disconnect any cables connected to your TV.
2. Place the TV face-down on a clean, flat, stable surface. Be sure the surface is clear of debris that can scratch or damage the TV.
3. Remove the base and neck by loosening and removing the screws.
4. Attach your TV and wall mount to the wall, carefully following the instructions that came with your mount.

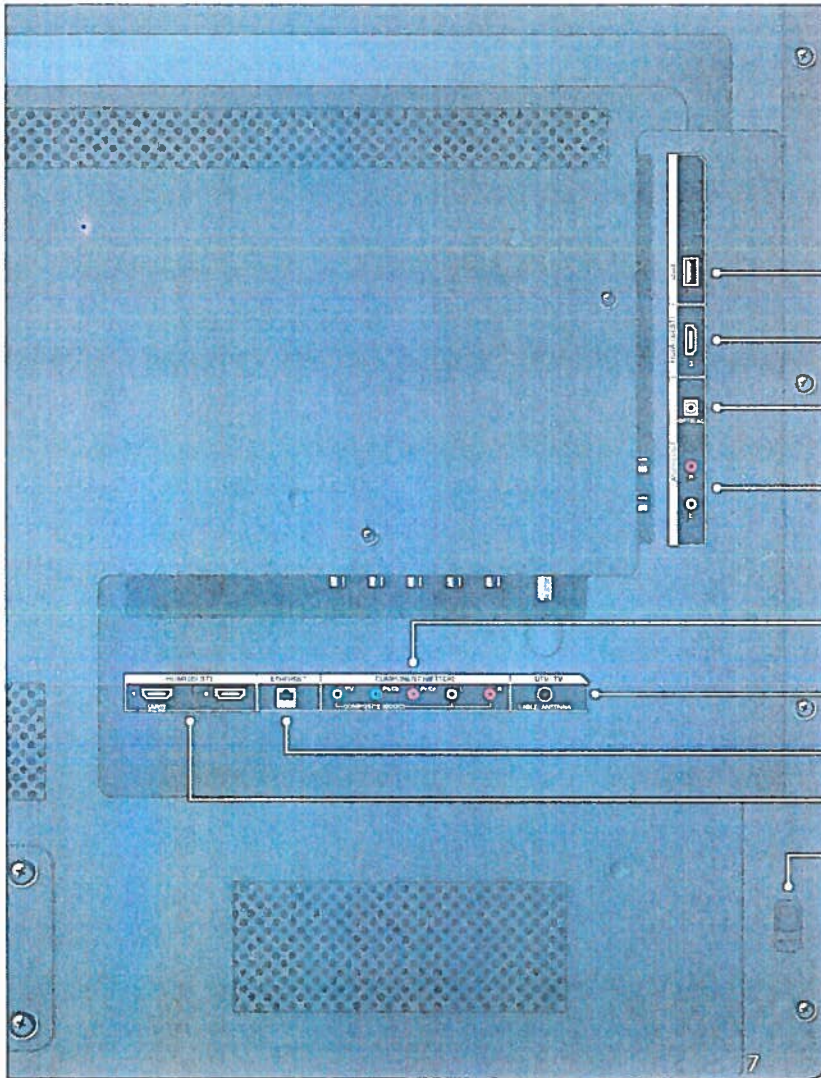
Use only with a UL-listed wall mount bracket rated for the weight/load of this TV.



For some wall mounts, you may want to use cables with right-angle connectors. This allows the TV to rest closer to the wall.



WALL-MOUNT SCREW LOCATIONS



USB - Connect a USB thumb drive to play photos, music, or video.

HDMI - Connect an HDMI device.

Optical Audio Out - Connect an optical/SPDIF audio device, such as home audio receiver.

Stereo Audio Out - Connect an RCA audio device, such as sound bar.

Component/Composite - Connect a component or composite device.

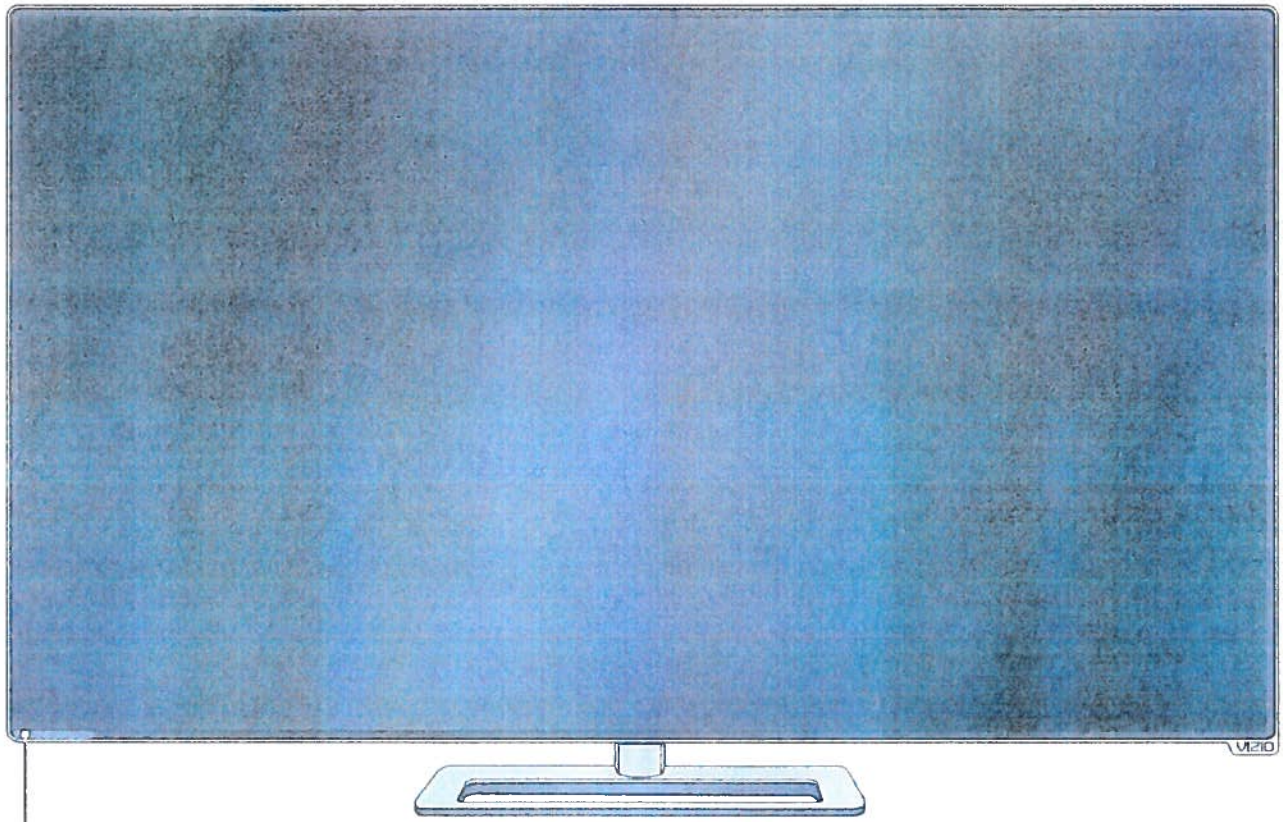
Coaxial - Connect a coaxial cable from an antenna or a cable or satellite box.

Ethernet - Connect an Ethernet cable from a home network.

HDMI - Connect an HDMI device.

Power/Input - Press once to turn on the TV. Press once to access the input menu. Press and hold to turn off the TV.

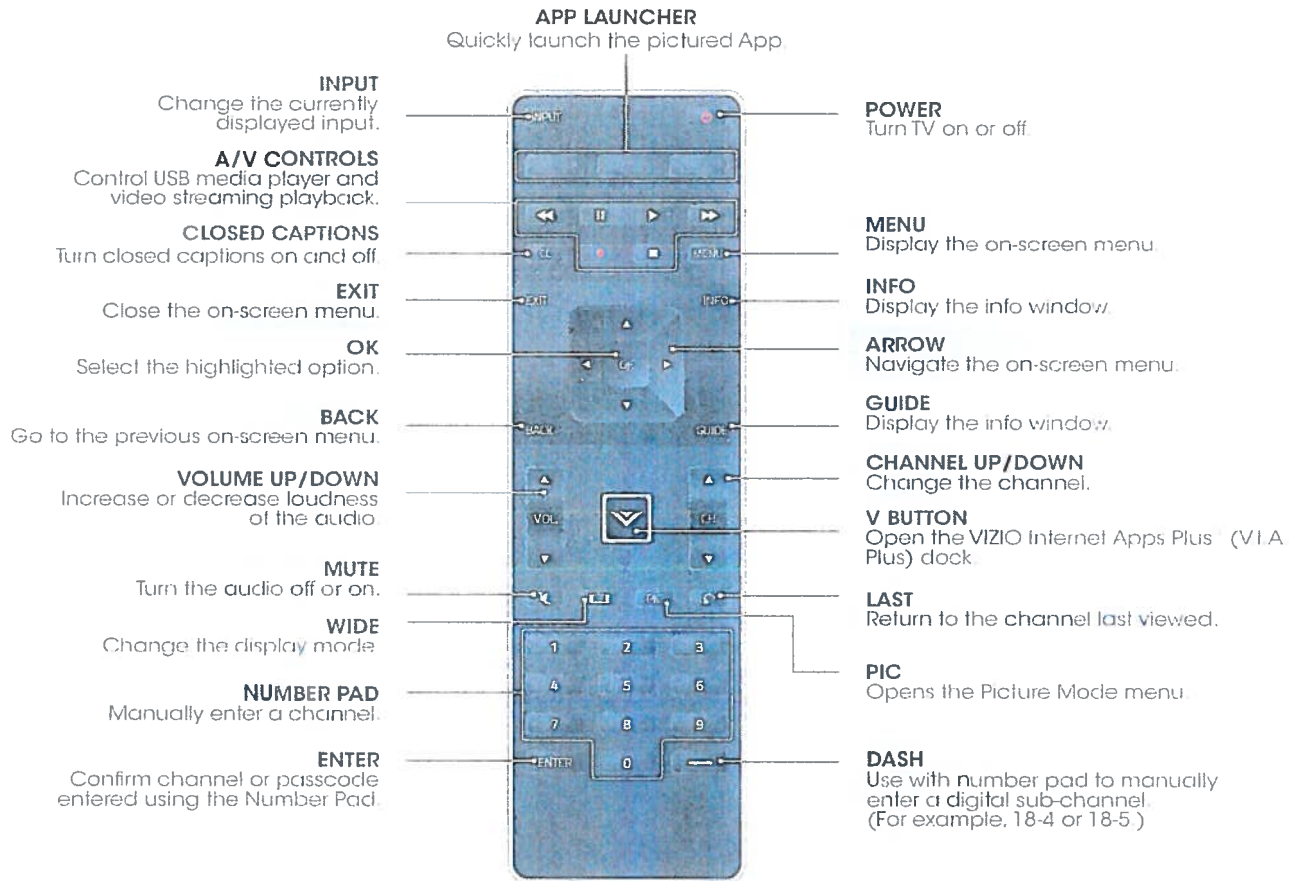
REAR PANEL

**REMOTE SENSOR & POWER INDICATOR**

When using the remote, aim it directly at this sensor.

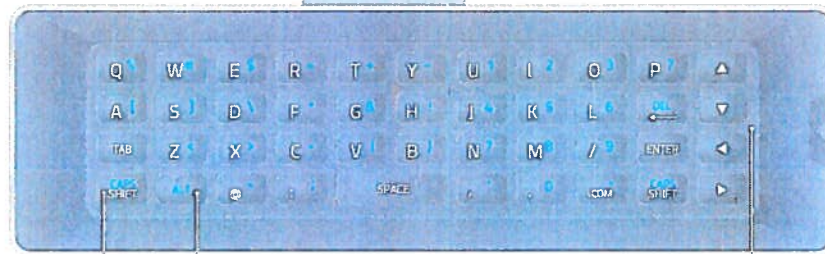
The power indicator flashes on when the TV turns on, then goes out after several seconds. To keep the power indicator on as long as the TV is on, see *Turning the Power Indicator On or Off* on page 48.

FRONT PANEL



REMOTE CONTROL

DO NOT COVER THIS AREA
This is the transmitter.



SHIFT
Press and hold while pressing another key to enter a capital letter.

ALT
Press and hold while pressing another key to enter a blue character. For example, press ALT and W to enter a # character.

ARROW
Navigate the on-screen menu.

REMOTE CONTROL

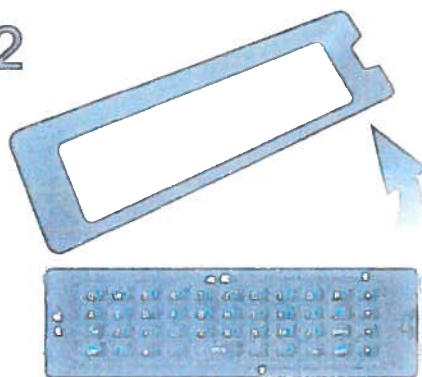
Replacing the Batteries

1



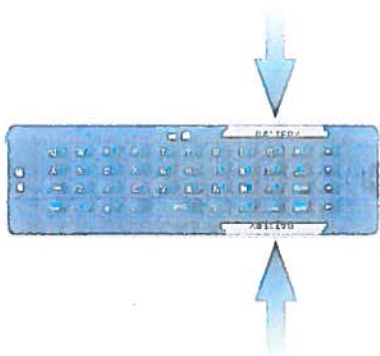
Press in on the button on the rear of the remote.

2



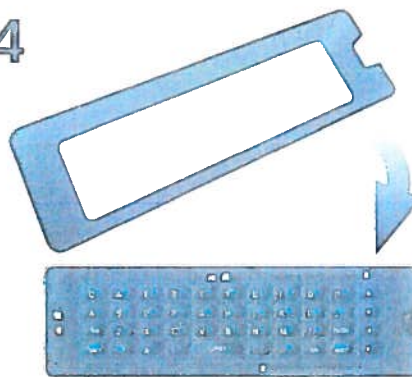
Remove the battery cover.

3



Insert two batteries into the remote control. Make sure that the (+) and (-) symbols on the batteries match the (+) and (-) symbols inside the battery compartment.

4



Replace the battery cover.

Connecting Your Devices

3

CONNECTING A DEVICE

Your TV can be used to display output from most devices.

1. Verify that your device has a video port that matches an available port on the TV (HDMI, Component, etc.)
2. Turn the TV and your device off.
3. Connect the appropriate cable (not included) to the TV and the device.
4. Turn the TV and your device on. Set the TV's input to match the connection you used (HDMI-1, HDMI-2, etc.).



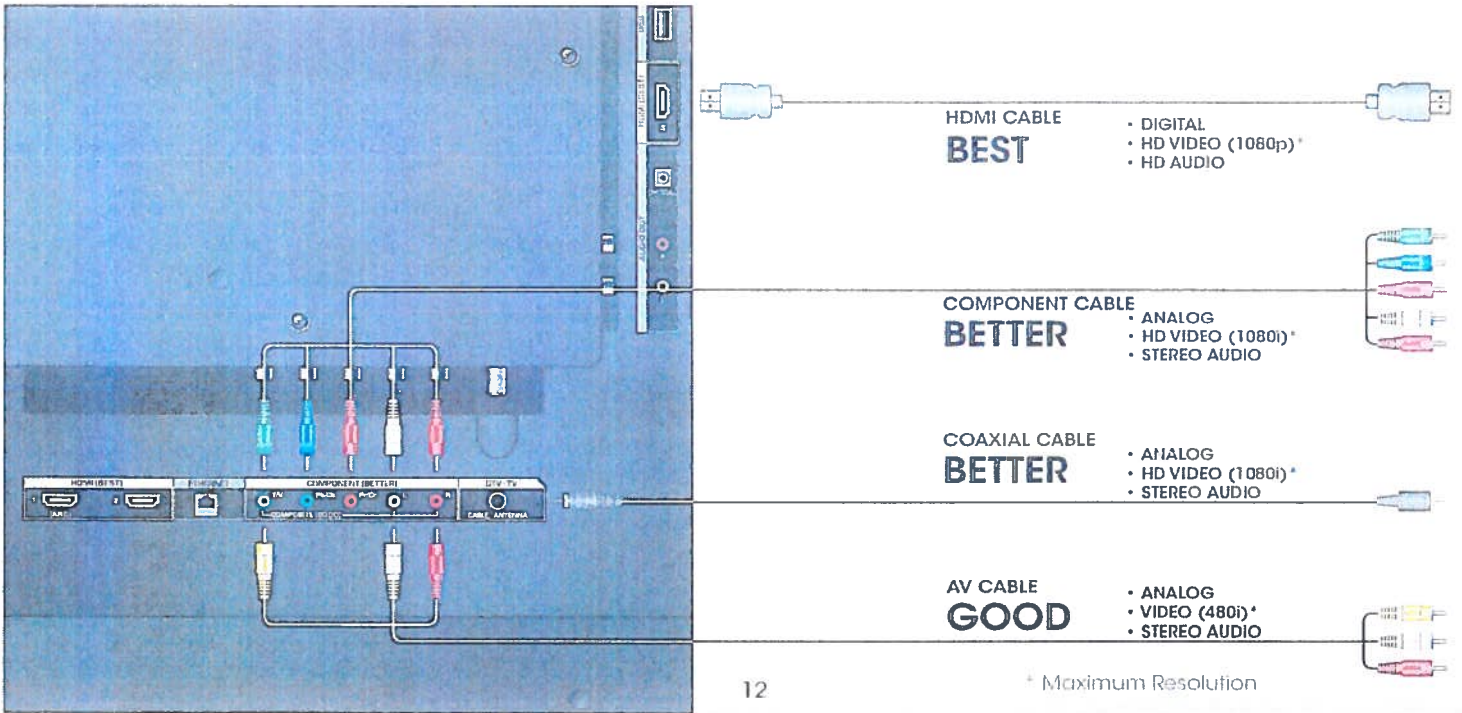
Cable/Satellite Box



Game Console



DVD/Blu-ray Player

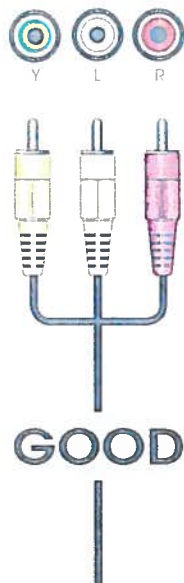


CONNECTING A DEVICE - AUDIO AND VIDEO CABLE TYPES

AV CABLE

AV cables (or Composite cables) are the traditional way of connecting your devices to your TV. Video signals are sent over the yellow connector while audio is sent over the red and white connectors.

- Video Resolutions up to 480i
- Analog Connection
- Audio and Video Signals



COAXIAL CABLE

Coaxial cables are the traditional way of connecting antennas and cable television signals to your TV. Coaxial cables carry both audio and video signals through a single connector.

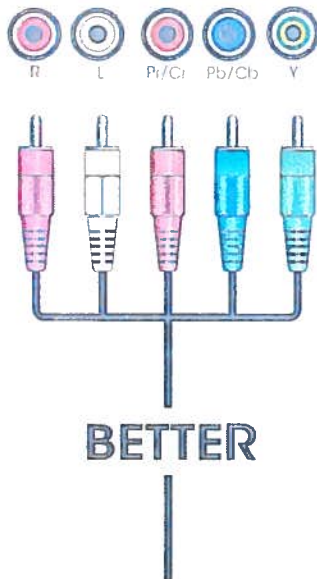
- HD Video Resolutions up to 1080i
- Analog Connection
- Audio and Video Signals



COMPONENT CABLE

Component cables are designed to carry high definition video signals along with additional audio connections. Colors are delivered with color information split up three different ways over three connectors for video (separated into Red, Blue and Green signals) and the left and right audio connectors (Red and White)

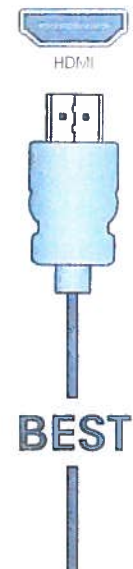
- HD Video Resolutions up to 1080i
- Analog Connection
- Audio and Video Signals



HDMI CABLE

HDMI is the intelligent, all-digital interface that delivers both dazzling quality and unmatched ease of use. HDMI technology transmits crystal-clear digital video along with multi-channel surround audio. HDMI-connected devices have the ability to automatically adjust themselves for optimal viewing.

- HD Video Resolutions up to 1080p
- HD Audio
- Digital Connection
- Audio and Video Signals



CONNECTING AN AUDIO DEVICE

Your TV can output sound to an audio device, such as a receiver or sound bar.

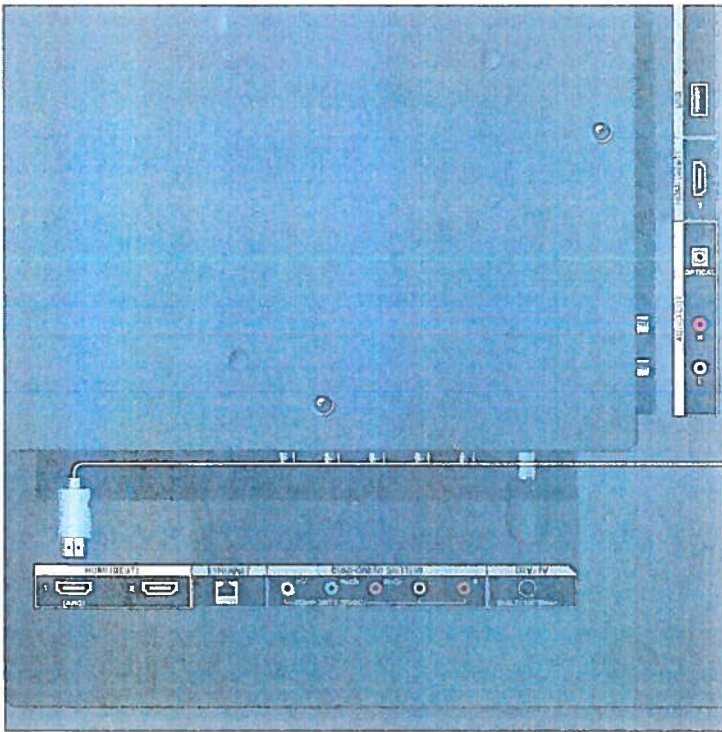
1. Verify that your device has a audio port that matches an available port on the TV (Optical, RCA, etc).
2. Turn the TV and your audio device off.
3. Connect the appropriate cable (not included) to the TV and the device
4. Turn the TV and your device on.



Home Audio Receiver



VIZIO Sound Bar



OPTICAL/SPDIF CABLE

BETTER

- PCM STREAM
- DOLBY DIGITAL 5.1 CHANNEL
- DTS 5.1 CHANNEL



RCA CABLE

GOOD

- ANALOG STEREO CONNECTION
- 2.0 CHANNEL



HDMI CABLE

BEST

- ARC 2-WAY COMMUNICATION
- 2.0-5.1 DIGITAL AUDIO
- PCM, DTS, DOLBY DIGITAL

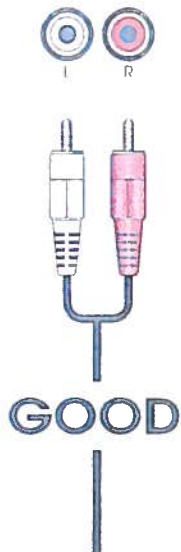


CONNECTING AN AUDIO DEVICE - AUDIO CABLE TYPES

RCA CABLE

RCA cables (or Composite cables) are the traditional way of connecting your devices to your audio device. Audio signals are sent over the red and white connectors.

- Quality Stereo Connection
- 2.0 Channel
- Analog Connection
- Audio Signal Only



OPTICAL/SPDIF CABLE

Optical/SPDIF cables transmit audio signals as pulses of light through a cable made of plastic fibers. Audio signals are digitally transmitted between devices.

- PCM Stream (Lossless)
- Dolby Digital 5.1 Channel
- DTS 5.1 Channel
- Digital Connection
- Audio Signal Only



HDMI CABLE

HDMI technology transmits crystal-clear digital multi-channel surround audio through a single HDMI cable. Audio Return Channel-enabled (ARC) TVs allow audio to be sent over an already connected HDMI cable, eliminating the need for a separate audio cable. See *Connecting an Audio Device - ARC* on page 17.

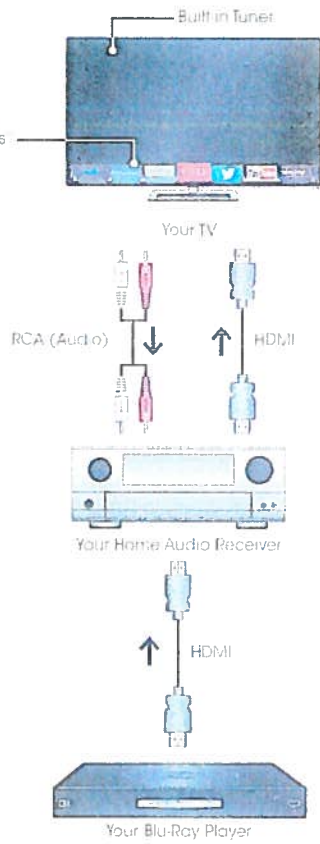
- CEC 2-way Communication (Auto setup)
- PCM, DTS, Dolby Digital
- 2.0 - 5.1 Scalable Lossless Digital Audio Connection
- Audio and Video Signals



CONNECTING AN AUDIO DEVICE - ARC

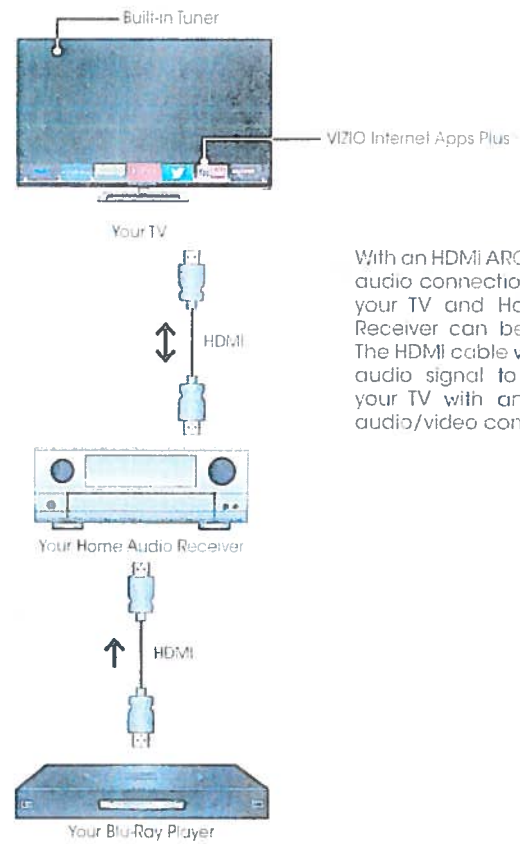
Without HDMI ARC

Without an HDMI ARC setup, your TV will transmit audio signal from the built-in tuner and VIA apps to your home audio receiver through a separate audio connection



With HDMI ARC

With an HDMI ARC setup, the audio connection between your TV and Home Audio Receiver can be removed. The HDMI cable will transmit audio signal to and from your TV with an all-digital audio/video connection.



CONNECTING TO YOUR NETWORK

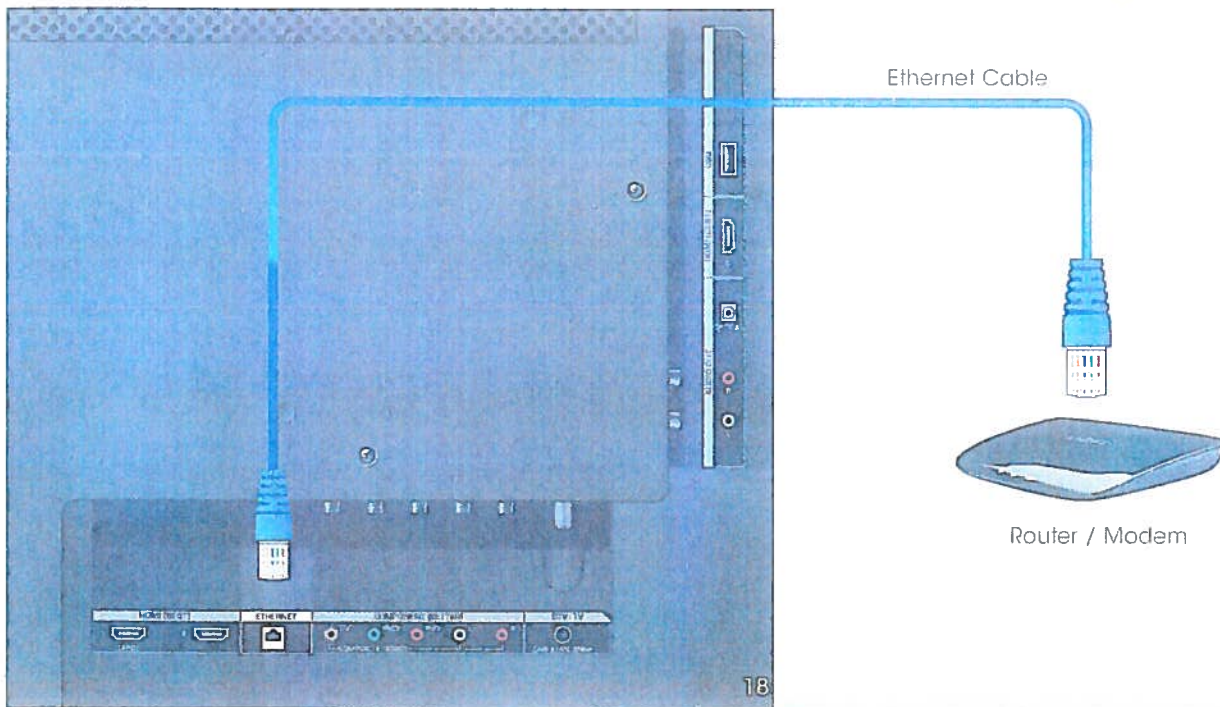
Your TV is Internet-ready. It can be connected to your home network with a Wired or Wireless connection.

Connecting to a Wired Network (Best)

1. Connect an Ethernet cable to your router and to the Ethernet port on the back of the TV. See below.
2. Use the Guided Network Setup to configure the TV. See *Using Guided Setup* on page 49.

Connecting to a Wireless Network

1. Ensure you have a router or modem broadcasting as high-speed wireless signal (802.11n recommended).
2. Use the Guided Network Setup to configure the TV. See *Using Guided Setup* on page 49.



Completing the First-Time Setup

4

The first time you turn on the TV, the Setup App will guide you through each of the steps necessary to get your TV ready for use.

Before you begin the first-time setup:

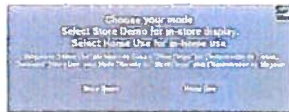
- Your TV should be installed and the power cord should be connected to an electrical outlet.
- Your devices should be connected.
- If you have a wireless network, have the network password ready.
- If you are connecting to your network with an Ethernet cable, connect it to the Ethernet port on the TV.

To complete the first-time setup:

1. Press the **Power** button on the remote. The TV powers on and the Setup App starts.



2. Use the **Arrow** buttons on the remote to highlight **Home Use** and press **OK**.



3. Use the **Arrow** buttons on the remote to highlight your language of preference and press **OK**. Then highlight your country and press **OK**.



4. Use the **Arrow** buttons on the remote to highlight your country, and then press the **OK** button.



5. Select the name of your wireless network from the list of available networks and press **OK**.

Enter the network password using the keyboard on the remote, then highlight **Connect** and press **OK**.



6. Use the **Arrow** and **OK** buttons on the remote to review the Terms and Conditions and Privacy Policy. When you are finished, highlight **I Accept** and press **OK**.



7. Enter your E-mail Address, First Name, Last Name, and ZIP Code using the keyboard on the remote.

Highlight **Next** and press **OK**.



8. Use the **Arrow** buttons on the remote to highlight your TV source and press **OK**.



If you have cable TV, select whether you have a cable box or if you connect the TV directly to a cable from the wall.



9. If the TV Signal channel scan screen appears, the TV will need to scan for channels, which takes several minutes. Use the arrow buttons on the remote to highlight **Begin Scan** and press **OK**.



Otherwise, use the **Arrow** and **OK** buttons on the remote to select the input your TV source is connected to.



10. When you are finished, the message "Your VIZIO TV is set up" will appear.

The First-Time Setup is complete.

Using the On-Screen Menu

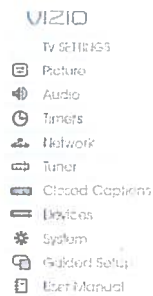
5

Your TV features an easy-to-use on-screen menu.

To open the on-screen menu, press the **MENU** button on the remote. You can also open the on-screen menu by pressing the **VIA** button and selecting **HDTV Settings** from the VIA Dock, then pressing **OK**.

From this menu, you can:

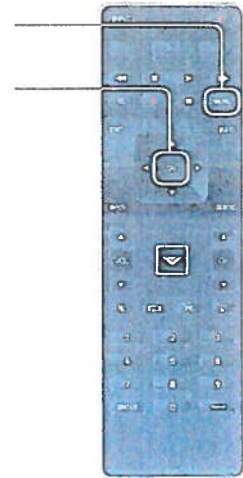
- Adjust the Picture settings
- Adjust the Audio settings
- Set the Sleep Timers
- Adjust the Network settings
- Adjust the Tuner settings
- Set up Closed Captioning
- Set up Devices
- Adjust TV settings
- Access the Guided Setup
- Access the User Manual



NAVIGATING THE ON-SCREEN MENU

To open the on-screen menu, press the **MENU** button on the remote.

Use the **Arrow** buttons to highlight a menu option, and press the **OK** button to select that option.



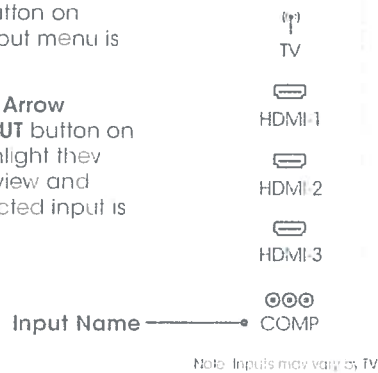
While navigating the on-screen menu, you can press the **BACK** button at any time to return to the previous menu screen. The **EXIT** button will close the on-screen menu.

CHANGING THE INPUT SOURCE

External devices such as DVD players, Blu-ray Players, and video game consoles can be connected to your TV. To use one of these devices with your TV, you must first change the input source using the Input menu.

To change the input source:

1. Press the **INPUT** button on the remote. The Input menu is displayed.
2. Use the **Up/Down Arrow** buttons or the **INPUT** button on the remote to highlight the input you wish to view and press **OK**. The selected input is displayed.



You change the input names that appear on the Input menu to make your devices easy to recognize. See *Renaming Devices on the Input Menu* on page 43 for more information.

CHANGING THE SCREEN ASPECT RATIO

The TV can display images in five different modes: Normal, Stretch, Panoramic, Wide, and Zoom. Each mode displays the picture differently.

To change the screen aspect ratio:

1. Press the  button on the remote.
2. Use the **Arrow** buttons to highlight the aspect ratio you wish to view and press **OK**.



Note: Aspect ratio settings may vary by input source.


- **Normal** preserves the content's original aspect ratio. Since the 4:3 aspect ratio is not large enough to fill the TV's screen, black bars are added to the left and right of the display image.
- **Stretch** expands the display image to fill the screen. Images may appear wider than intended. If you are watching widescreen (1.85:1 or 2.35:1) content, black bars will still appear on the top and bottom of the display image. **This option is only available when the TV is displaying a 720p/1080i source.**
- **Panoramic** expands the display image to fill the screen. Images may appear wider than intended. If you are watching widescreen (1.85:1 or 2.35:1) content, black bars will still appear on the top and bottom of the display image. **This option is only available when the TV is displaying a 480i/480p source.**
- **Wide** stretches a 4:3 aspect ratio picture to the edges of the screen. Since the picture is being stretched, the display image may appear distorted. If the program is already formatted for widescreen viewing (1.85:1 or 2.35:1), then black bars will appear on the top and bottom of the display image.
- **Zoom** expands images with black bars to fit the screen.

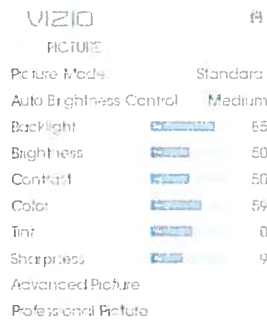
VIEWING VIDEO WITH THE MENU OPEN

When the on-screen menu opens, it covers the left-hand portion of the picture. The picture can be displayed in three different ways:

- **Full-sized and centered on the screen** - The left-hand portion of the picture covered by the menu
- **Resized to fit** - The entire picture is visible in the space to the right of the menu
- **Full-sized and aligned to the right edge of the menu** - The picture extends off of the right side of the screen

To change the position of the picture while the on-screen menu is displayed:

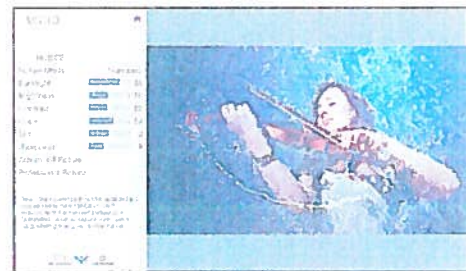
1. Use the **Arrow** buttons on the remote to highlight  Resize Video
2. Press **OK** to cycle through the three display methods.
3. Press the **Up Arrow** button on the remote to the menu.



Select from preset picture menus. Standard picture mode meets ENERGY STAR requirements. For the best picture, use Calibrated mode. To reduce UI load, turn (off) when gaming, use Game mode.



Full-sized and centered



Resized to fit



Full-sized and aligned to right of menu

ADJUSTING THE PICTURE SETTINGS

Your TV display can be adjusted to suit your preferences and viewing conditions.



Changes made while any preset picture mode is selected are automatically saved as a new custom picture mode (see *Custom Picture Modes on pages 29 through 31*). Automatically-created custom picture modes are given generic names, beginning with "Custom 1."

To adjust the picture settings:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Picture** and press **OK**. The PICTURE menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Picture Mode**, then use the **Left/Right Arrow** buttons to change the picture mode:
 - **Standard mode** sets the various picture settings to values that meet ENERGY STAR® requirements.
 - **Calibrated mode** sets the picture settings to values perfect for watching TV in a brightly-lit room.
 - **Calibrated Dark mode** sets the picture settings to values perfect for watching TV in a dark room.

VIZIO		A
PICTURE		
Picture Mode	Standard	
Auto Brightness Control	Medium	
Backlight		85
Brightness		50
Contrast		50
Color		59
Tint		0
Sharpness		9
Advanced Picture		
Professional Picture		

Select from preset picture modes. Standard picture mode meets ENERGY STAR requirements. For the best picture, use Calibrated mode. To reduce video delay (LIP) when gaming, use Game mode.



- **Vivid mode** sets the picture settings to values that produce a brighter, more vivid picture.
 - **Game mode** reduces throughput delays and optimizes the picture settings for displaying game console output.
 - **Computer mode** optimizes the picture settings for displaying computer output.
4. To manually change each of the picture settings, use the **Up/Down Arrow** buttons on the remote to highlight that picture setting, then use the **Left/Right Arrow** buttons to adjust the setting:
 - **Auto Brightness Control** - The auto brightness control detects the light levels in the room and automatically adjusts the backlight for the best picture. Select **Off**, **Low**, **Medium**, or **High**.
 - **Backlight** - Adjusts the LED brightness to affect the overall brilliance of the picture. Backlight cannot be adjusted when starting from some picture modes.
 - **Brightness** - Adjusts the black level of the picture. When this setting is too low, the picture may be too dark to distinguish details. When this setting is too high, the picture may appear faded or washed out.
 - **Contrast** - Adjusts the white level of the picture. When this setting is too low, the picture may appear dark. When this setting is too high, the picture may appear faded or washed out. If the setting is too high or too low, detail may be difficult to distinguish in dark or bright areas of the picture.
 - **Color** - Adjusts the intensity of the picture colors.
 - **Tint** - Adjusts the hue of the picture. This setting is useful in adjusting the flesh tones in the picture. If flesh appears too orange, reduce the level of color before adjusting tint.
 - **Sharpness** - Adjusts the edge sharpness of picture elements. It can be used to sharpen non-HD (high definition) content; however, it will not produce detail that does not otherwise exist.
 5. When you have finished adjusting the picture settings, press the **EXIT** button on the remote.

Adjusting the Advanced Picture Settings

To adjust the advanced picture settings:

- From the PICTURE menu, use the **Arrow** buttons to highlight **More** and then press **OK**.

- Use the **Arrow** buttons to highlight **Advanced Picture**, and then press **OK**. The ADVANCED PICTURE menu is displayed.

- Use the **Arrow** buttons to highlight the setting you wish to adjust, then press the **Left/Right Arrow** buttons to change the setting.

VIZIO		▲
ADVANCED PICTURE		
Color Temperature		Cool
Black Detail		Medium
Active LED Zones		On
Motion Blur Reduction		On
Reduce Signal Noise		Low
Reduce Block Noise		Low
Picture Size		
Picture Position		
Film Mode		Auto
Wide		

- **Color Temperature** - Adjusts the 'warmness' and 'coolness' of the white areas of the picture. Select **Cool**, **Normal**, or **Computer**.

- **Cool** produces a blue-hued picture.

- **Computer** optimizes the picture for use as a PC monitor.

- **Normal** is optimized for television viewing.

- **Black Detail** - Adjusts the average brightness of the picture to compensate for large areas of brightness. Select **Off**, **Low**, **Medium**, or **High**.

- **Active LED Zones** - Dynamically improves the contrast ratio of the picture by adjusting the backlight. The adjustment is controlled by the content on the screen. Select **On** or **Off**.

- **Motion Blur Reduction** - Reduces blur in scenes with fast action. Some sensitive viewers may notice flicker. Select **On** or **Off**.

- **Reduce Signal Noise** - Diminishes artifacts in the image caused by the digitizing of image motion content. Select **Off**, **Low**, **Medium**, or **High**.

- **Reduce Block Noise** - Reduces pixelation and distortion for mpeg files. Select **Off**, **Low**, **Medium**, or **High**.

- **Picture Size** - Increase or decrease the vertical and horizontal size of the displayed picture. Use the **Left/Right Arrow** buttons to adjust the horizontal size of the displayed picture. Use the **Up/Down Arrow** buttons to adjust the vertical size of the displayed picture. Press the **OK** button when you are finished.

- **Picture Position** - Adjust the vertical and horizontal positions of the picture to ensure the image is centered and completely fills the screen. Use the **Left/Right Arrow** buttons to adjust the horizontal position of the displayed picture. Use the **Up/Down Arrow** buttons to adjust the vertical position of the displayed picture. Press the **OK** button when you are finished.

- **Film Mode** - Optimizes the picture for watching film. Select **Auto** or **Off**.

- **Wide** - Opens the Screen Aspect Ratio menu. See *Changing the Screen Aspect Ratio* on page 22.

- When you have finished adjusting the Advanced Picture Settings, press the **EXIT** button on the remote.



Adjusting the Professional Picture Settings

Professional Picture Settings allow you to make precise adjustments to the picture and to create picture modes to save groups of picture settings.



The Color Tuner, 11 Point White Balance, and test patterns allow technicians to manually calibrate the TV. Calibration requires specialized training, an input with precisely set colors, and a specialized light meter.

To adjust the professional picture settings:

1. From the PICTURE menu, use the **Arrow** buttons to highlight **Professional Picture**, and then press **OK**. The PROFESSIONAL PICTURE menu is displayed.



2. Use the **Arrow** buttons to highlight the setting you wish to adjust, then press **OK** to change the setting:
 - **Color Tuner** - Adjust the HSB color and 11-point white balance, and display calibration test patterns
 - **Rename Picture Mode** - Rename a custom picture mode.
 - **Create Picture Mode** - Create a custom picture mode.
 - **Lock Picture Mode** - Prevent changes to custom picture modes.
 - **Unlock Picture Mode** - Allow changes to custom picture modes.
 - **Delete Picture Mode** - Delete a custom picture mode. Inputs assigned to that custom picture mode will be set to Calibrated picture mode.

Adjusting the Color Tuner Settings

The Color Tuner settings allow you to adjust the HSB color and 11 point white balance, turn color channels off for testing, and display color bar, flat, and ramp test patterns.

To adjust the HSB color settings:

1. From the PROFESSIONAL PICTURE menu, use the **Arrow** buttons to highlight **Color Tuner**, and then press **OK**. The Color Tuner menu is displayed.

	Color Tuner					
	Red	Green	Blue	Cyan	Magenta	Yellow
Hue	0	0	0	0	25	-14
Saturation	-1	5	-1	0	-2	0
Brightness	24	0	-22	0	0	0
Offset	0	0	0			
Gain	0	0	0			

2. Use the **Arrow** buttons on the remote to highlight the **Hue**, **Saturation**, **Brightness**, **Offset**, or **Gain** of the color you wish to adjust. Press the **OK** button.
3. Use the **Left/Right Arrow** buttons to adjust the value. When you are finished press the **OK** button to save the setting.
4. When you are finished adjusting the color tuner settings, press the **EXIT** button.

To turn color channels off and on:

1. From the PROFESSIONAL PICTURE menu, use the **Arrow** buttons to highlight **Color Tuner**, and then press **OK**. The Color Tuner menu is displayed.

Color Tuner						
	Red	Green	Blue	Cyan	Magenta	Yellow
Hue	0	0	0	0	25	-14
Saturation	-1	5	-4	0	-2	0
Brightness	24	0	-32	0	0	0
Offset	0	0	0			
Gain	0	0	0			

2. Use the **Arrow** buttons on the remote to highlight **Red**, **Green**, or **Blue**.
3. Press the **OK** button to turn the color channel off or on. An X appears over a color channel that has been turned off.
4. Use the **Arrow** buttons to highlight another color channel to turn off or on. Only two color channels can be turned off at the same time.
5. When you are finished with the color channels, press the **EXIT** button.

To adjust the 11 Point White Balance settings:

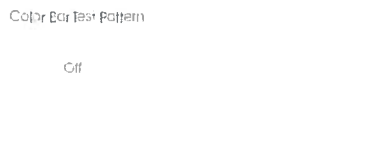
1. From the Color Tuner menu, use the **Arrow** buttons to highlight **Color Tuner**, and then press the **Left/Right Arrow** buttons until the 11 Point White Balance menu is displayed.

11 Point White Balance			
Gain	Red	Green	Blue
5%	0	0	0

2. Use the **Arrow** buttons on the remote to highlight the **Gain** and **Color values** you wish to adjust. Press the **OK** button and use the **Left/Right Arrow** buttons to adjust the value. When you are finished, press the **OK** button to save the setting.
3. When you are finished, press the **EXIT** button.

To show or hide the Color Bar Test Pattern:

1. From the Color Tuner menu, use the **Arrow** buttons to highlight **Color Bar Test Pattern**, and then press the **Left/Right Arrow** buttons until the Color Bar Test Pattern menu is displayed.



2. Use the **Arrow** buttons on the remote to highlight **Off**. Use the **Left/Right Arrow** buttons to highlight **On** to show the Color Bar.

--or--

To hide the Color Bar Test Pattern, use the **Left/Right Arrow** buttons to highlight **Off**.

3. When you are finished, press the **EXIT** button.

To show or hide the Flat Test Pattern:

1. From the Color Tuner menu, use the **Arrow** buttons to highlight **Flat Test Pattern**, and then press the **Left/Right Arrow** buttons until the Flat Test Pattern menu is displayed.



2. Use the **Arrow** buttons on the remote to highlight **Off**. Use the **Left/Right Arrow** buttons to select the percentage brightness for the flat test pattern. Selecting a percentage immediately shows the flat pattern at that brightness.

--or--

To disable the Flat Test Pattern, use the **Left/Right Arrow** buttons to highlight **Off**.

3. When you are finished, press the **EXIT** button.

To show or hide the Ramp Test Pattern:

1. From the Color Tuner menu, use the **Arrow** buttons to highlight **Color Tuner** and then press the **Left/Right Arrow** buttons until the Ramp Test Pattern menu is displayed.



2. Use the **Arrow** buttons on the remote to highlight **Off**. Use the **Left/Right Arrow** buttons to select the color for the ramp test pattern. Selecting a color immediately shows that color ramp.

—or—

To hide the Ramp Test Pattern, use the **Left/Right Arrow** buttons to highlight **Off**.

3. When you are finished, press the **EXIT** button.

Creating a Custom Picture Mode

Custom picture modes allow you to save a group of custom settings for various viewing conditions and video sources.

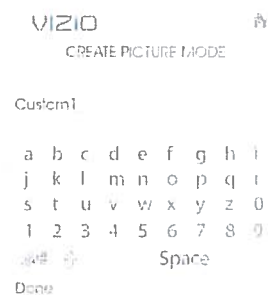
- Custom picture modes can be created manually.
- A new custom picture mode is created automatically whenever picture settings are changed while in any preset picture mode.



A custom picture mode only applies to the input (HDMI-1, COMP, etc.) in use when it was created. Each input can have up to eight custom picture modes.

To create a custom picture mode manually:

1. From the PROFESSIONAL PICTURE menu, use the **Arrow** buttons to highlight **Create Picture Mode**, and then press **OK**. The CREATE PICTURE MODE menu is displayed.
2. Use the **Arrow** buttons to enter a name for your custom picture mode using the keyboard on the remote.
3. Highlight **Done** and press **OK**.
4. Make any desired changes to the picture settings.
5. Press the **EXIT** button to exit the menu screens.



Renaming a Custom Picture Mode

Automatically-created custom picture modes are given generic names, beginning with "Custom 1", but you can rename custom picture modes to make them easy to remember.

To rename a custom picture mode:

1. Set the Picture Mode to an existing custom setting. See *Adjusting the Picture Settings* on page 24.
2. From the PROFESSIONAL PICTURE menu, use the **Arrow** buttons to highlight **Rename Picture Mode** and then press **OK**. The RENAME PICTURE MODE menu is displayed.
3. Use the **Arrow** buttons to enter a custom name using the keyboard on the remote.
4. Highlight **Done** and press **OK**.
5. Press the **EXIT** button to exit the menu screens.

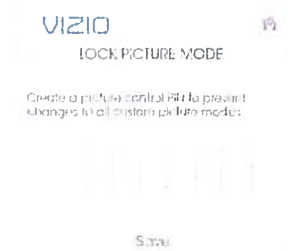


Locking a Custom Picture Mode

Custom picture modes can be locked with a unique PIN to prevent accidental changes to their settings.

To lock all custom picture modes:

1. From the PROFESSIONAL PICTURE menu, use the **Arrow** buttons to highlight **Lock Picture Mode**, and then press **OK**. The LOCK PICTURE MODE menu is displayed.
2. Use the **Number Pad** on your remote to enter a unique 4-digit PIN.
3. Highlight **Save** and press **OK**.
4. Press the **EXIT** button to exit the menu screens.



Enter a 4-digit PIN code using the green button on the remote.

To unlock all custom picture modes:

1. From the PROFESSIONAL PICTURE menu, use the **Arrow** buttons to highlight **Unlock Picture Mode**, and then press **OK**. The UNLOCK PICTURE MODE menu is displayed.
2. Use the **Number Pad** on your remote to enter your 4-digit PIN.
3. Make any desired changes to the picture modes.
4. Relock the picture modes, if desired. You must create a new 4-digit PIN.
5. Press the **EXIT** button to exit the menu screens.



Deleting a Custom Picture Mode

Custom picture modes that are no longer needed can be deleted.



Inputs assigned to a deleted custom picture mode become assigned to the *Calibrated* picture mode.

To delete a custom picture mode:

1. From the PROFESSIONAL PICTURE menu, use the **Arrow** buttons to highlight **Delete Picture Mode**, and then press **OK**. The DELETE PICTURE MODE window is displayed.





2. Use the **Left/Right Arrow** buttons to highlight **Delete** and press **OK**.
3. Press the **EXIT** button to exit the menu screens.


ADJUSTING THE AUDIO SETTINGS

To adjust the audio settings:


1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Audio** and press **OK**. The **AUDIO** menu is displayed.
3. Use the **Arrow** buttons to highlight the setting you wish to adjust, then press **Left/Right Arrow** buttons to change the setting:

VIZIO		
AUDIO		
TV Speakers		On
Surround Sound		On
Volume Leveling		On
Balance		0
Lip Sync		0
Digital Audio Out		PCM
Analog Audio Out		Fixed
Equalizer Settings		
Delete Audio Mode		

- **TV Speakers** - Turns the built-in speakers on or off.

 When an external audio device (such as a VIZIO sound bar) is set up, TV Speakers is automatically set to **Off** and Volume Control to **External**.


To use the TV speakers, set TV Speakers to **On** and Volume Control to **TV**.

 When the TV speakers are set to **On**, DTS signals cannot be passed through digital audio outputs.

- **Surround Sound** - Surround sound uses DTS TruSurround™ to deliver an immersive surround sound experience from the TV's internal speakers. TruSurround completes the entertainment experience by providing deep, rich bass and by delivering crisp details and clear, intelligible dialog. Select **On** or **Off**.
- **Volume Leveling** - Volume leveling uses DTS TruVolume™ to maintain consistent volume levels during transitions

between program content, AV formats, and input sources. Select **On** or **Off**. In a few cases, volume leveling may artificially suppress volume increases, making it difficult to hear dialog or flattening sudden noises. If this occurs, turn volume leveling off.

- **Balance** - Adjusts the loudness of the audio output from the left and right speakers.
- **Lip Sync** - Adjusts the synchronization between the display image and the accompanying audio track.
- **Digital Audio Out** - Changes the type of processing for digital audio out and HDMI ARC output when connected to a home theater audio system. Select **PCM** or **Bitstream**.

 You must select **Bitstream** for audio with more than two channels (3.0, 5.0, or 5.1, for example).

- **Analog Audio Out** - Sets the volume control properties for the RCA connector when connected to a home theater audio system. Select **Variable** if you are controlling the volume with the TV's volume controls, or select **Fixed** if an external audio device (sound bar or AV receiver) will control the volume.
- **Equalizer Settings** - Adjusts the boost or attenuation of different frequencies using either preset or custom settings. See *Changing the Equalizer Settings* on page 33.
- **Delete Audio Mode** - Deletes a custom audio mode created using the Equalizer Settings. See *Deleting the Custom Audio Mode* on page 33.

4. When you have finished adjusting the audio settings, press the **EXIT** button on the remote.

Changing the Equalizer Settings

The graphic equalizer has several pre-set modes and allows you to create one custom mode.

To select a pre-set audio mode:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Audio** and press **OK**. The AUDIO menu is displayed.
3. Use the **Arrow** buttons to highlight **Equalizer Settings** and press **OK**. The Audio Mode and equalizer settings screen appears.
4. Use the **Left** and **Right Arrow** buttons to select an audio mode. The equalizer bars change to reflect the mode.
5. Press the **EXIT** button on the remote.

To create, modify, or replace the single custom equalizer setting:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Audio** and press **OK**. The AUDIO menu is displayed.
3. Use the **Arrow** buttons to highlight **Equalizer Settings** and press **OK**. The Audio Mode and equalizer settings screen appears.
4. Use the **Left** and **Right Arrow** buttons to select any audio mode as a starting point.
5. Use the **Arrow** buttons to highlight a frequency and then press **OK**.
6. Use the **Up** and **Down Arrow** buttons to adjust the boost (up) and attenuation (down) for the frequency.
7. Use the **Left** and **Right Arrow** buttons to select another frequency, if desired, and adjust it.
8. Press the **EXIT** button on the remote.

Deleting the Custom Audio Mode

To delete the custom audio mode that has been created:

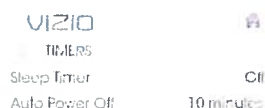
1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Audio** and press **OK**. The AUDIO menu is displayed.
3. Use the **Arrow** buttons to highlight **Delete Audio Mode** and press **OK**. The TV displays, "To delete the user created custom audio mode, select the Delete button."
4. Highlight **Delete** and press **OK**.
5. Press the **EXIT** button on the remote.

SETTING TIMERS

Setting the Sleep Timer

When activated, the TV's sleep timer will turn the TV off after a set period of time.

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Timers** and press **OK**. The **TIMERS** menu is displayed.
3. Use the **Left/Right Arrow** buttons on the remote to highlight the period of time after which you want the TV to go to sleep: **30, 60, 90, 120,** or **180 minutes**. If you don't want the sleep timer to activate, change the setting to **Off**.
4. When you have finished setting the sleep timer, press the **EXIT** button on the remote.



Setting the Auto Power Off Feature

To help save energy, your TV is set by default to turn off after 10 minutes without a video or audio signal. This feature can be deactivated.

To set the Auto Power Off feature:

1. From the **TIMERS** menu, use the **Up/Down Arrow** buttons on the remote to highlight **Auto Power Off**.
2. Use the **Left/Right Arrow** buttons on the remote to change whether the TV will turn off. If you don't want the TV to turn off when there is no signal, change the setting to **Off**. Otherwise, select **10 minutes**.
3. When you have finished setting the auto power off time, press the **EXIT** button on the remote.

USING THE NETWORK CONNECTION MENU

Your TV is Internet-ready, featuring both an Ethernet port and built-in high-speed Wireless-N.

Connecting to a Wireless Network

To connect to a wireless network whose network name (SSID) is being broadcast:



If your TV is connected to a network with an Ethernet cable, you will not see the wireless network connection menu. You must disconnect the Ethernet cable to set up a wireless network connection.

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Network** and press **OK**. The NETWORK menu is displayed.
3. If you do not see your wireless network displayed, highlight **More Access Points** and press **OK**. The WIRELESS ACCESS POINTS menu, which is a list of available wireless networks, is displayed.
4. Highlight the name of your wireless network (this is the network's SSID) and press **OK**.
5. Using the keyboard on the remote, enter your network's password, then highlight **Connect** and press **OK**.
6. Press the **EXIT** button on the remote.



Changing the Manual Setup Settings

Advanced users can fine-tune the network settings using the Manual Setup feature.

To change advanced network settings:

1. From the NETWORK menu, highlight **Manual Setup** and press **OK**. The MANUAL SETUP menu is displayed.
2. To change the settings manually, use the **Arrow** buttons on the remote to highlight **DHCP** and then use the **Left/Right Arrow** buttons to change the setting to **Off**.
3. Use the **Arrow** and **OK** buttons to adjust each setting:
 - **IP Address** - The IP address assigned to the TV.
 - **Subnet Mask** - The subnet mask.
 - **Default Gateway** - Your network's default gateway address.
 - **Pref. DNS Server** - Your preferred domain name server address.
 - **Alt. DNS Server** - Your alternate domain name server address.
4. Use the **Arrow** buttons on the remote to highlight **Save** and press **OK**.
5. Press the **EXIT** button on the remote.



Finding MAC Addresses for Network Setup

The security settings on your router may require you to enter the TV's MAC address in the router's settings.

To find the TV's MAC address:

1. From the NETWORK menu, highlight **Manual Setup** and press **OK**. The MANUAL SETUP menu is displayed.
2. Find the MAC address for the TV at the bottom of the list. The MAC addresses for the connections in use are displayed.
 - **RJ45 MAC** - The Ethernet or RJ45 MAC address may be needed to set up your network when you have connected the TV to your network with an Ethernet (Cat 5) cable.
 - **Wireless MAC** - The Wireless (WiFi) MAC address may be needed to connect your TV to your network with WiFi.

Connecting to a Hidden Network

To connect to a wireless network whose network name (SSID) is not being broadcast:

1. From the NETWORK menu, highlight **Hidden Network** and press **OK**. The ENTER ACCESS POINT NAME screen is displayed.
2. Using the keyboard on the remote, enter your network's name (SSID), then highlight **Connect** and press **OK**.
3. Using the keyboard on the remote, enter your network's password, then highlight **Connect** and press **OK**.
4. Press the **EXIT** button on the remote.



Testing Your Network Connection

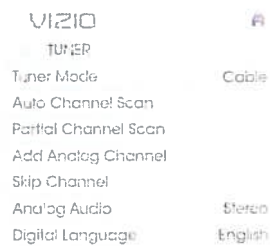
To test your network connection:

1. From the NETWORK menu, highlight **Test Connection** and press **OK**.
2. The TEST CONNECTION screen displays the connection method, network name, signal strength, and download speed of your network connection.
3. Press the **EXIT** button on the remote.

SETTING UP THE TUNER

You can use the TV's Tuner menu to:

- Select a Tuner Input
- Perform an Auto Channel Scan
- Perform a Partial Channel Scan
- Manually Add Channels
- Select channels to skip
- Select Analog MTS modes
- Select Digital Languages



Selecting a Tuner Input

Select the type of tuner input you will be using. You can select either Antenna (Over-the-air) or Cable (Out-of-the-wall) connections.

1. From the TUNER menu, highlight **Tuner Mode** and press **OK**. The TUNER MODE menu displays.
2. Highlight **Antenna** or **Cable** and press **OK**. Press **EXIT**.

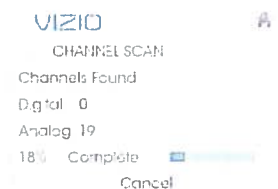
Scanning for Channels

The TV may need to scan for channels before it can display programs and their associated information. A channel scan is required for free over-the-air channels (using an antenna) and cable channels from an out-of-the-wall connection (without a cable box). Moving the TV to an area with different channels requires the TV to scan for channels again.

To perform an Auto Channel Scan:

1. From the TUNER menu, highlight **Auto Channel Scan** and press **OK**. The auto channel scan begins.
2. Wait until the channel scan is 100% complete. Highlight **Done** and press **OK**.
3. Press the **EXIT** button on the remote.

If the channel scan is cancelled, the channels that were already discovered are retained. A new channel scan will clear all channels.



Cancel the channel scan



Adding New Channels

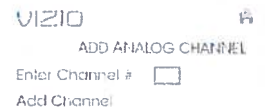
Occasionally, you may need to add a new range of channels or add a new analog channel. You can do this by using the Partial Channel Scan and Add Analog Channel options. This is quicker than scanning all possible channels.

To add a range of new channels:

1. From the TUNER menu, highlight **Partial Channel Scan**, and press **OK**. The PARTIAL CHANNEL SCAN menu is displayed.
2. Highlight **Scan Mode** and select the type of channel you are adding: **Analog**, **Digital**, or **Analog/Digital**.
3. Highlight **From Channel** and enter the channel where you want to begin the scan. (Use the **Left Arrow** button to backspace. Use the **Number Pad** on the remote to enter the channel.)
4. Highlight **To Channel** and enter the channel where you want to end the scan. (Use the **Left Arrow** button to backspace. Use the **Number Pad** on the remote to enter the channel.)
5. Highlight **Start** and press **OK**. The partial channel search begins.
6. Wait until the partial channel search is 100% complete. Highlight **Done** and press **OK**.
7. Press the **EXIT** button on the remote.

To add a single new analog channel:

1. From the TUNER menu, highlight **Add Analog Channel** and press **OK**. The ADD ANALOG CHANNEL menu is displayed.
2. Highlight **Enter Channel #** and use the **Number Pad** on the remote to enter the number of the channel you are adding.
3. Highlight **Add Channel** and press **OK**. The TV scans for the channel.
4. When the TV is done scanning for the channel, press the **EXIT** button on the remote.



Skipping Channels

After a channel scan is completed, you may find that some channels are too weak to watch comfortably. There may also be some channels you do not want to view. You can remove these channels from the TV's memory with the Skip Channel feature.



Channels that have been removed with the Skip Channel feature can still be viewed if the channel is entered using the Number Pad. If you wish to completely block a channel from being viewed, use the parental controls. See *Locking and Unlocking Channels* on page 45.

To remove a channel:

1. From the TUNER menu, highlight **Skip Channel**, and press **OK**. The SKIP CHANNEL menu is displayed.
2. For each channel you wish to remove, use the **Up/Down Arrow** buttons on the remote to highlight the channel and press **OK**. A ✓ appears to the right of each channel you select.
3. When you have selected all of the channels you wish to remove, press the **EXIT** button on the remote.

VIZIO		
SKIP CHANNEL		
1	Test 0	<input type="checkbox"/>
1	Test 1	<input type="checkbox"/>
1-2	Test 2	<input type="checkbox"/>
2	Test 3	<input type="checkbox"/>
2-2	Test 4	<input type="checkbox"/>
2-3	Test 5	<input type="checkbox"/>



LISTENING TO ALTERNATE AUDIO

Changing the Analog Audio Language

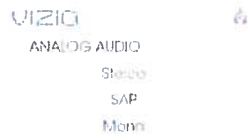
Some analog over-the-air (free) and cable channels broadcast programs in more than one language. The TV's Analog Audio feature allows you to listen to audio in an alternate language using Secondary Audio Programming (SAP).



Not all programs are broadcast in SAP. The Analog Audio Language feature only works when the program being viewed is being broadcast with Secondary Audio Programming.

To use the Analog Audio feature:

1. From the TUNER menu, highlight **Analog Audio** and press **OK**. The ANALOG AUDIO menu is displayed.
2. Select **Stereo SAP** (secondary audio programming), or **Mono**. Press **OK**.
3. Press the **EXIT** button on the remote.



Changing the Digital Audio Language

Some digital over-the-air (free), cable, and satellite channels broadcast programs in more than one language. The TV's Digital Audio feature allows you to listen to audio in alternate languages.



Not all programs are broadcast in alternate languages. The Digital Audio Language feature only works when the program being viewed is being broadcast in the language you select.

1. From the TUNER menu, highlight **Digital Language** and press **OK**. The DIGITAL LANGUAGE menu is displayed.
2. Select your preferred language: **English**, **Español**, or **Français**. Press **OK**.
3. Press the **EXIT** button on the remote.



SETTING UP CLOSED CAPTIONING

Your TV can display closed captions for programs that include them. Closed captions display a transcription of a program's dialogue.



If the program you are viewing is not being broadcast with closed captions, the TV will not display them.



The Closed Captions menu does not appear when an HDMI input is selected.

To activate or deactivate closed captions:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Closed Captions** and press **OK**. The CLOSED CAPTIONING menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Closed Captions** and then use the **Left/Right Arrow** buttons to select **On** or **Off**.
4. Use the **Arrow** buttons on the remote to highlight either **Analog Closed Captions** or **Digital Closed Captions**.
5. Use the **Left/Right Arrow** buttons on the remote to select the caption channel you wish to display, then press **EXIT**.



Changing the Appearance of Digital Closed Captions

Digital closed captions can be displayed according to your preference. See the diagram on the next page for an explanation of the parts of the closed caption area.

To change the appearance of digital closed captions:

1. From the CLOSED CAPTIONING menu, use the **Arrow** buttons to highlight **Digital Style** and press **OK**.
2. Use the **Left/Right Arrow** buttons on the remote to select **Custom**. The DIGITAL STYLE menu appears as shown.
3. Use the **Up/Down Arrow** buttons on the remote to highlight the setting you wish to change, then use the **Left/Right Arrow** buttons to change the setting.



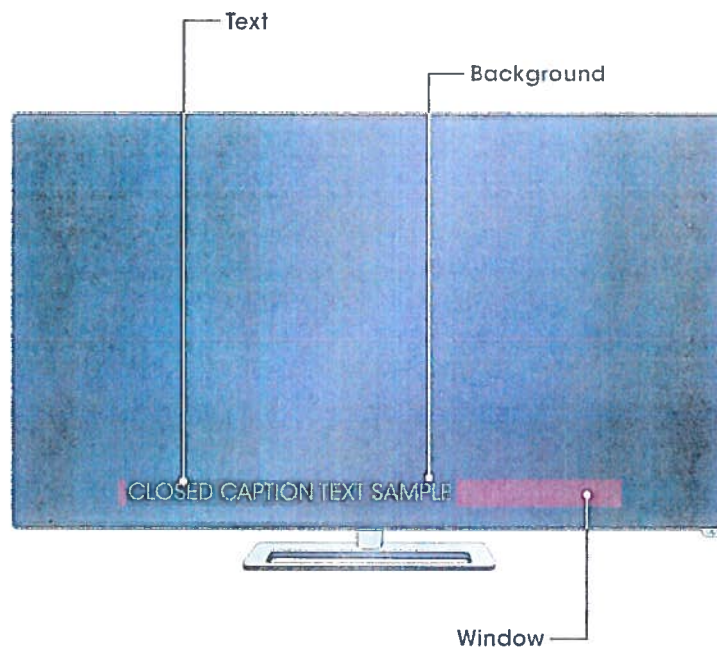
- **Caption Style** - Choose **As Broadcast** to keep default settings or **Custom** to manually change each setting.
- **Text Style** - Change the font used for the closed captioning text.
- **Text Size** - Make the text larger or smaller.
- **Text Color** - Change the color of the text.
- **Text Opacity** - Change the transparency of the text.
- **Text Edges** - Change the effects at the edges of the text, such as raising the edges or adding drop shadows.
- **Text Edges Color** - Change the color of the text edge effects.

- **Background Color** - Change the color of the background directly behind the text.
 - **Background Opacity** - Change the transparency of the background directly behind the text.
 - **Window Color** - Change the color of the closed captioning box.
 - **Window Opacity** - Change the opacity of the closed captioning box.
4. When you are satisfied with the appearance of the closed captions, press the **EXIT** button on the remote.

Typical choices include:

- Opaque background, transparent window—Only a strip of background appears behind the text, expanding as the text appears. This is the typical "As Broadcast" mode.
- Opaque background and window in the same color—When text appears, the entire line fills with color at once.

In the example below, the closed caption text is green, the background is black, and the window is red.



CLOSED CAPTIONS SCREEN LAYOUT

RENAMING DEVICES ON THE INPUT MENU

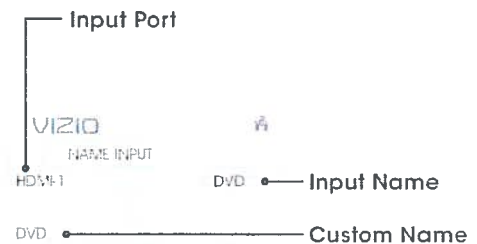
You can rename the inputs to make them easier to recognize on the Input menu. For example, if you have a DVD player connected to the Component input, you can rename that input to display "DVD Player." See *Changing the Input Source* on page 22.

To change the name of an input:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **Devices** and press **OK**. The DEVICES menu is displayed.
3. Highlight the input device that you want to rename and press **OK**.
4. Highlight **Name Input** and press **OK**.
5. To use a preset input name:
 - a. Highlight the **Input Port** row and press **OK**.
 - b. Highlight the input name you want to use and press **OK**.

To enter a custom name:

- a. Enter your custom label using the keyboard on the remote.
 - b. Highlight **OK** and press **OK**.
 - c. The Input Name changes to show the custom name that you created.
6. When you have finished naming your input, press the **EXIT** button on the remote.



a b c d e f g h i
 j k l m n o p q r
 s t u v w x y z 0
 1 2 3 4 5 6 7 8 9
 .@# [] Space
 OK
 Cancel

Select the input name from a list of common device names (Bluray, Cable Box, DVD, etc).



CHANGING THE TV SETTINGS

Using the System menu, you can:

- View system information
- Set up parental controls
- Change the on-screen menu language
- Set time zone and local settings
- Adjust the CEC settings
- Adjust the when the power indicator is illuminated
- Reset the TV settings & set up administrative controls



View status information for the TV, Port's current input and your network.



Viewing System Information

To view a summary of the TV settings:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Highlight **System Information** and press **OK**.
4. Use the **Up/Down Arrow** buttons to scroll through the system information.
5. When you are finished reviewing the system information, press the **EXIT** button on the remote.

Using the Parental Controls

The TV's parental controls allow you to prevent the TV from displaying certain channels or programs without a password.

The Parental Controls menu only appears when:

- You are using the tuner to receive your TV signals, such as when you are using an antenna for Over-the-Air signals or when connected to cable TV directly from the wall (no cable box).
- You have a device connected using a composite video cable or a coaxial cable, such as a VCR, satellite or cable box, or DVR.

Accessing the Parental Controls Menu

To access the Parental Controls menu:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The **SYSTEM** menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Parental Controls** and press **OK**.
4. Enter your parental PIN. If you have not set a PIN, enter the default: **0000**. The **PARENTAL CONTROLS** menu is displayed.



To set a custom parental passcode, see *Changing the Parental Control PIN* on page 46.

Enabling or Disabling Program Ratings

To manage program content according to its rating, you must enable the Program Rating feature.

To enable or disable the Program Rating feature:

1. From the **PARENTAL CONTROLS** menu, highlight **Locks** and press **OK**. The **LOCKS** menu is displayed.
2. Select **On** or **Off** and press **OK**.

Locking and Unlocking Channels

When a channel is locked, it will be inaccessible. Locking a channel is a good way to prevent children from viewing inappropriate material.

To lock or unlock a channel:

1. From the **PARENTAL CONTROLS** menu, highlight **Channel Locks** and press **OK**. The **CHANNEL LOCKS** menu is displayed.
2. Highlight the channel you want to lock or unlock and press **OK**.
3. When a channel is **locked**, the **Lock** icon appears **locked**. The channel is not accessible unless the parental PIN is entered.
4. When a channel is **unlocked**, the **Lock** icon appears **unlocked**. The channel is accessible.

Blocking and Unblocking Content by Rating

A channel may sometimes broadcast programs that are meant for children, and at other times broadcast programs that are meant for mature audiences. You may not want to block the channel completely using a channel lock, but you may wish to block certain programs from being viewed.

When this is the case, you can use the TV's Rating Block feature to block content based on its rating.



For a list of content ratings and their definitions, visit www.tvguidelines.org.

To block or unblock content by its rating:

1. From the PARENTAL CONTROLS menu, highlight the content type you want to adjust and press **OK**:
 - USA TV** - USA television program broadcasts
 - USA Movie** - USA movie broadcasts
 - Canadian English** - Canadian English television program broadcasts
 - Canadian French** - Canadian French television program broadcasts.
2. For each rating type you want to block or unblock, use the **Up/Down** and **Left/Right Arrow** buttons on the remote to highlight the rating type and press **OK**.
3. When the rating type is **blocked**, the **Lock** icon appears **locked**. Content with this rating and all higher ratings cannot be viewed.
4. When the rating type is **unblocked**, the **Lock** icon appears **unlocked**. Content with this rating and all lower ratings can be viewed.

If you want to block all unrated content, highlight **Block Unrated Shows** and use the **Arrow** buttons on the remote to select **On**.
5. When you are finished adjusting the rating level blocks, press the **EXIT** button on the remote.

Changing the Parental Control PIN

If you use the parental controls, you should change the PIN to prevent children from accessing inappropriate material.

To change the parental control PIN:

1. From the PARENTAL CONTROLS menu, highlight **Change PIN** and press **OK**. The CHANGE PIN menu is displayed.
2. In the **New PIN** field, use the **Number Pad** on the remote to enter your new 4-digit parental control PIN.
3. In the **Confirm PIN** field, use the **Number Pad** on the remote to re-enter your new 4-digit parental control PIN.
4. Write down your new parental control PIN and save it in a secure location.
5. Press the **EXIT** button on the remote.

Resetting the Content Locks

To reset the content locks to the factory default settings:

1. From the PARENTAL CONTROLS menu, highlight **RESET LOCKS** and press **OK**. The TV displays, "Are you sure you want to RESET ALL LOCKS SETTINGS to the factory defaults?"
2. Highlight **Yes** and press **OK**.

Changing the On-Screen Menu Language

Your TV can display the on-screen menu in different languages.

To change the on-screen menu language:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Menu Language** and press **OK**. The MENU LANGUAGE menu is displayed.
4. Highlight your preferred language (**English**, **Español** or **Français**) and press **OK**.
5. Press the **EXIT** button on the remote.



Setting the Time and Local Settings

To ensure the correct time is displayed when you press the **INFO** button, set the TV's time zone:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **Time & Local Settings** and press **OK**. The menu headed by the local date and time is displayed.
4. Highlight **Time Zone** and press **OK**. The TIME ZONE menu is displayed.
5. Highlight your time zone and press **OK**.
6. Highlight **Daylight Saving Time** and press **OK**. The DAYLIGHT SAVING TIME menu is displayed. Choose **On** if your locale observes daylight savings time, or **Off** if it does not.
7. If you are in the United States, highlight **Zip Code**. Enter your Zip code using the keypad on the remote, then press **OK**. Zip codes are often used by V.I.A. Plus Apps to give you the most accurate location-based information, such as weather or news.
8. Highlight **Country** and press **OK**. The COUNTRY menu is displayed.
9. Highlight your country and press **OK**.
10. Press the **EXIT** button on the remote.



Adjusting the CEC Settings

The CEC function on your TV enables you to control HDMI-connected devices with the included remote without any additional programming.



Not all HDMI devices support CEC. See your device's user manual for details.

To enable, disable, or adjust CEC settings:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Use the **Arrow** buttons on the remote to highlight **CEC** and press **OK**. The CEC menu is displayed.
4. Use the **Arrow** and **OK** buttons to adjust each setting:
 - **CEC** - To use CEC, you must select **On**.
 - **System Audio Control** - When system audio control is on, you can control your device's audio using the TV's remote control.
 - **Device Discovery** - Use this function to determine if your device is connected and supports CEC.
5. Press the **EXIT** button on the remote.

Turning the Power Indicator On or Off

The Power Indicator on the front of your TV normally does not glow when the TV is on. You can change this setting if you prefer the light to be on.

To turn the Power Indicator Light on or off:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Highlight **Power Indicator** and press **OK**.
4. Use the **Up/Down Arrow** buttons to select **On** or **Off**, then press **OK**.

USING THE RESET & ADMIN MENU

You can use the TV's **Reset & Admin** menu to restore the TV to its factory default settings.

Restoring the TV to Factory Default Settings

All of the on-screen menu settings can be reset to the factory defaults.



If you restore the TV to the factory default settings, all changes you have made to the settings will be lost!

This includes any V.I.A. Plus Apps that you have added and any changes you have made to the settings for those Apps.

To restore the TV to its factory default settings:

1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Use the **Arrow** buttons on the remote to highlight **System** and press **OK**. The SYSTEM menu is displayed.
3. Highlight **Reset & Admin** and press **OK**. The RESET & ADMIN menu is displayed.
4. Highlight **Reset TV to Factory Defaults** and press **OK**.
5. If you have changed the default parental control PIN, enter it now.

The TV displays, "Select Reset to restore all TV settings to factory defaults and clear all account information."

6. Highlight **Reset** and press **OK**.
7. Wait for the TV to turn off. The TV will turn back on shortly afterward and the Setup App will begin.

USING THE GUIDED SETUP MENU

Using Guided Setup

The TV's Setup App can be used to easily set up the TV tuner, remote control, and connected devices, or to connect the TV with your network.

To use guided setup:

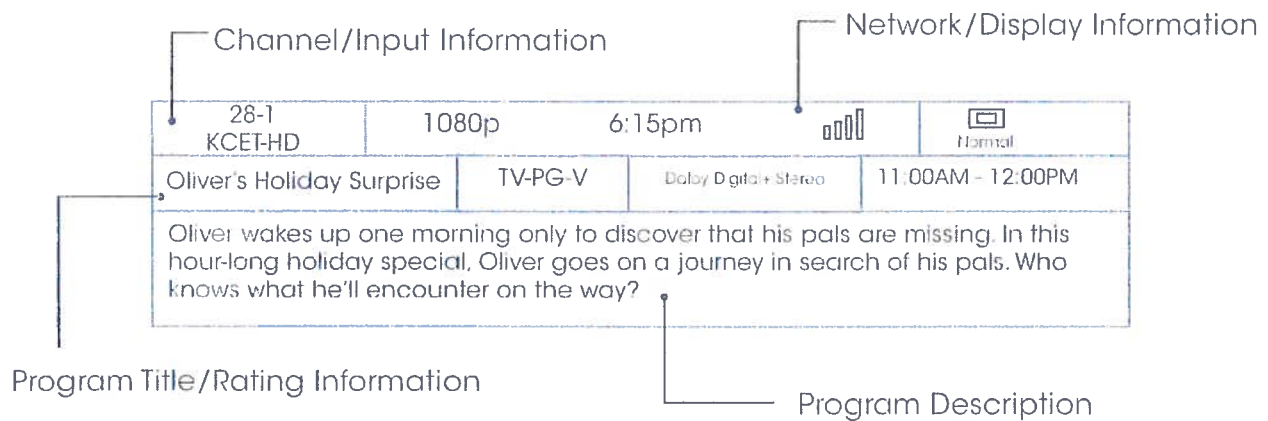
1. Press the **MENU** button on the remote. The on-screen menu is displayed.
2. Highlight **Guided Setup** and press **OK**.
3. Highlight the guided setup you want to use and press **OK**:
 - **Tuner Setup** - Set up the TV tuner.
 - **Network Setup** - Connect the TV to the Internet using your network.
4. Follow the on-screen instructions. When finished, press the **EXIT** button on the remote.



USING THE INFO WINDOW

The Info Window can be displayed by pressing the **INFO** or **GUIDE** button on the remote:

- Press the **INFO** or **GUIDE** button one time to display channel, input, and display information.
- Press the **INFO** or **GUIDE** button two times to display the program title, program rating, audio information, and the start and end times of the program.



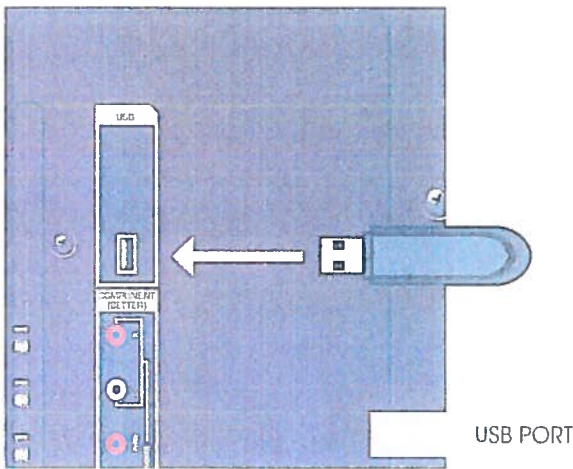
DIGITAL EPISODE GUIDE & INFO WINDOW

Using the USB Media Player

6

USING THE USB MEDIA PLAYER

The USB Media Player allows you to connect a USB thumb drive to your TV and play music, video, or photos.



Preparing Your USB Drive to Play USB Media

To play USB media, you must first save your photos onto a USB thumb drive.

- The USB thumb drive must be formatted as FAT32.
- Files on the USB thumb drive must end in a supported file extension (mp3, .jpg, etc)
- The player is not designed to play media from external hard drives, MP3 players, cameras, or smartphones

Playing USB Media

To play your USB media:

1. Connect your USB thumb drive to the USB port on the side of the TV.
2. Press the **V button** on the remote.
3. Use the **Arrow** buttons to highlight the **Multimedia** app in the V.I.A. Plus Dock and press **OK**. (The highlighted App is in the center of the dock.)
4. Use the **Arrow** buttons to highlight the type of media to display (**Music**, **Video**, or **Photo**) and press **OK**.
5. Use the **Arrow** buttons to highlight the file you want to display. Press **OK**. Music or video files play, photos display.



You can display your photos in fullscreen. Select the photo, press **OK**, then highlight **Fullscreen** and press **OK**.

Removing the USB Drive from the TV



Do not remove the USB thumb drive while the TV is on. Doing so may damage the drive.

To safely remove your USB drive from the TV:

1. Turn off the TV.
2. Disconnect your USB thumb drive from the USB port on the side of the TV.

Connected Sources
Displays connected USB devices

Back Button
Highlight this button and press **OK** to return to the previous screen.

Now Playing Information
Displays song title, album title, and artist name.

Progress Bar
Displays the duration of the currently-playing song. The blue bar will lengthen as the song progresses.

Album Art
If included on the USB thumb drive and associated with your music, the album art will display here.

Current Folder

Playback Controls
Use to control audio playback. Highlight Play/Pause, Previous, or Next and press **OK**

Toggle Music/Photos

Sort by Album/Artist/Track

Folder Contents / Playlist
This area displays the contents of the currently selected folder. You can browse files and folders using the **Arrow** and **OK** buttons on the remote.

Page Information
If your USB thumb drive has more files than can be displayed on a single screen, the page information is displayed here.

Now Playing Information

Fab Apple Dream
On January Mix Comp
By Oliver

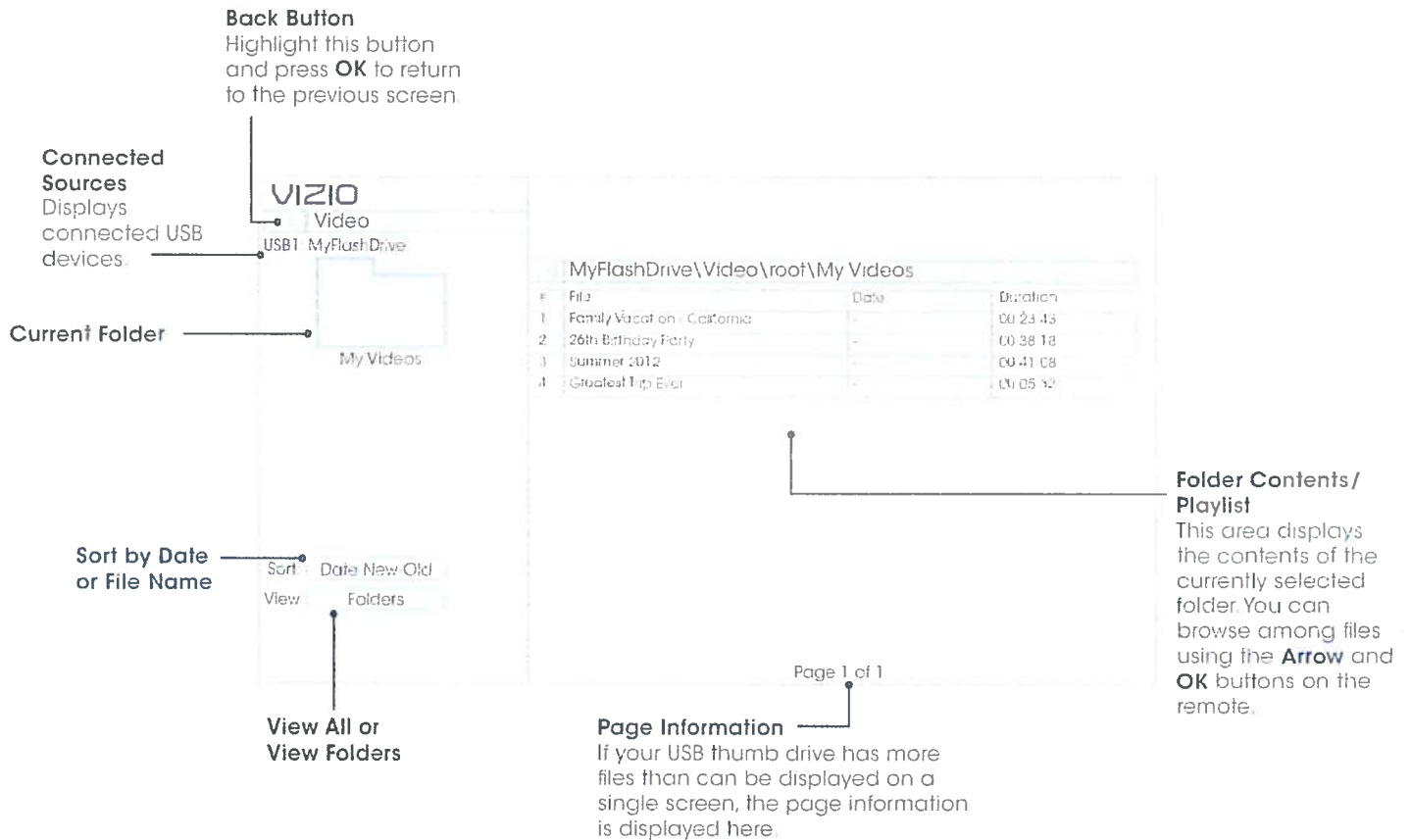
5:50 ————— 8:45

MyFlashDrive\Audio\root\My Music

#	Track	Album	Artist	Duration
1	Summer Summer	January Mix Comp	JCheesy	2:42
2	Downspin	January Mix Comp	JCheesy	6:20
3	Fab Apple Dream	January Mix Comp	Oliver	8:46
4	Man of the Year	January Mix Comp	The Dicks	4:21
5	Maximal Smooth	January Mix Comp	Rio Steve	7:58

Page 1 of 1

MUSIC PLAYER



VIDEO PLAYER

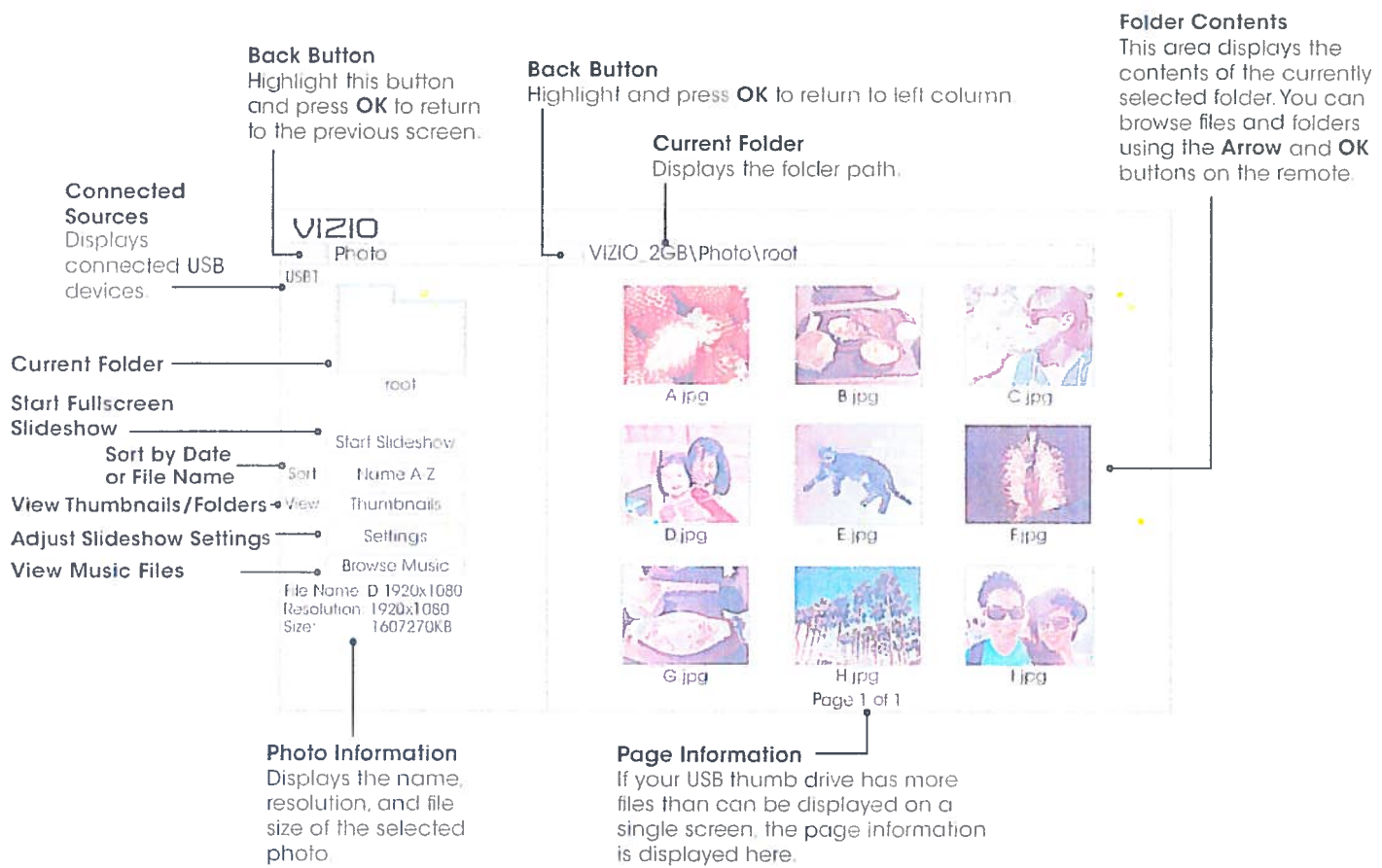


PHOTO VIEWER

Using VIZIO Internet Apps Plus® (V.I.A. Plus)

7

VIZIO Internet Apps Plus® (V.I.A. Plus) delivers popular online content to your TV. V.I.A. Plus features a selection of Apps that allow you to watch movies and TV shows, listen to music, get weather and news information, and more—all on demand.



A high-speed Internet connection is required to receive product updates and to access online content.

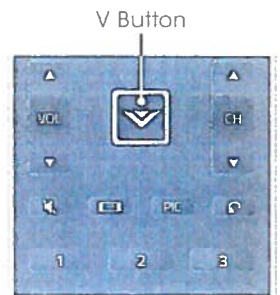
See *Using the Network Connection Menu* on page 35 if your TV is not yet connected to your home network.

USING THE V.I.A. PLUS APP DOCK

The V.I.A. Plus App Dock is where all of your V.I.A. Apps are accessed.

To launch an App from the Dock:

1. Press the **V Button** on the remote.
2. Highlight a V.I.A. Plus App by scrolling left and right using the **Left/Right Arrow** buttons on the remote. (The highlighted App is in the center of the dock.)
3. Press the **OK** button on the remote to launch the App.



Note: App location, appearance, and availability subject to change without notice.

USING THE FULLSCREEN V.I.A. APPS WINDOW

The Fullscreen V.I.A. Plus Apps window allows you to add and store Apps. The Apps on the first page are displayed in the Dock and Apps on additional pages can be moved to the Dock.

To open the Fullscreen V.I.A. Plus Apps Window:

1. Press the **V Button** on the remote twice.
2. Highlight an App by using the **Arrow** buttons on the remote.

3. Press the **OK** button on the remote to launch the App.
4. To exit from an open App or to close the App Dock, press the **Exit** button on the remote.



Note: App location, appearance, and availability subject to change without notice.

FULLSCREEN V.I.A. PLUS APPS WINDOW OVERVIEW


The Fullscreen V.I.A. Plus Apps Window allows you to add, delete and organize your Apps. The My Apps tab displays Apps that are already installed on your TV. The Apps on the first page are displayed in the V.I.A. Plus App Dock.

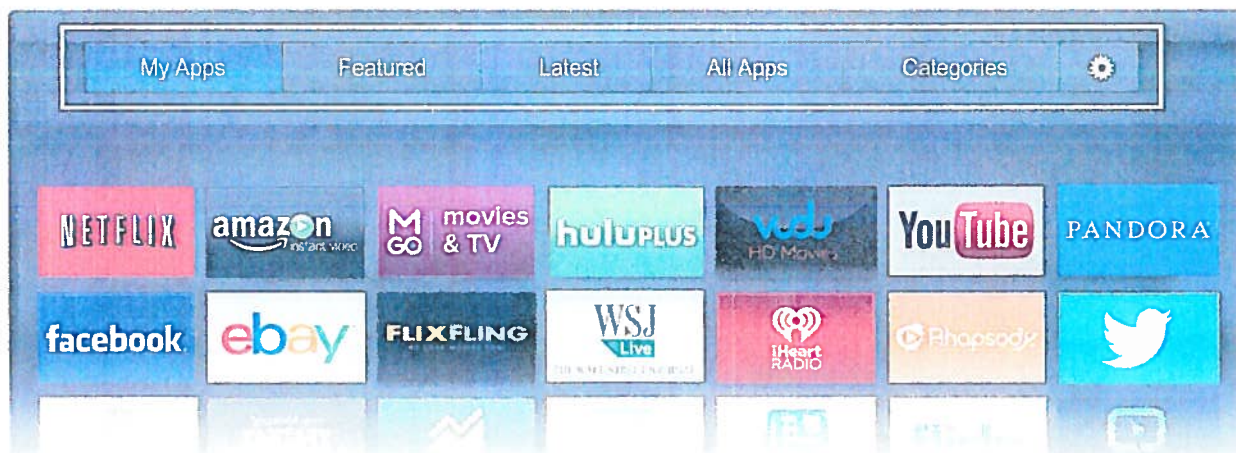
 Apps with a small lock icon in the right-hand corner cannot be deleted.

The following tabs are located at the top of your Fullscreen V.I.A. Plus Apps Window:

- **My Apps:** Displays apps that are installed on your TV.
- **Featured:** Displays apps that are recommended by Yahoo!
- **Latest:** Displays apps that were most recently added to the library of apps.

- **All Apps:** Displays every app that is available for download.
- **Categories:** Displays apps sorted into categories: Spotlight, Yahoo!, Weather, News and Finance, Movies and TV, Photos and Video, Sports, Music, Social, Information, Fun and Games, Shopping, and Local TV.
- **App Info (i):** Displays App software information and development settings.

 You can also preview Apps without installing them. Simply highlight the App you wish to preview and press **OK** to open it.



Note: App location, appearance, and availability subject to change without notice.

CUSTOMIZING THE V.I.A. PLUS APPS WINDOW

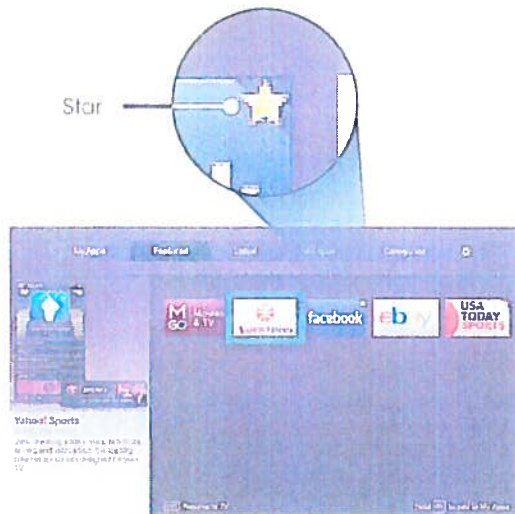
You can add, delete, and move apps around on your My Apps tab for a custom look and feel.

Adding an App to the My Apps Tab

To add an app to your TV:

1. Use the **Arrow** buttons on the remote to highlight the app you wish to add.
2. **Press and hold** the **OK** button until [App Name] has been added to your My Apps list appears.

Once the app has been installed, a star appears in the top right-hand corner of the app icon as shown below.



Note: App location, appearance, and availability subject to change without notice.

Deleting an App from the My Apps Tab

To delete an app from your TV:

1. Use the **Arrow** buttons on the remote to highlight the App you wish to delete.
2. **Press and hold** the **OK** button. The following options appear:

Note: App location, appearance, and availability subject to change without notice.



3. Press **OK** to delete the app. The following dialog box appears:



4. Use the **Left/Right Arrow** buttons to select **Delete** and press **OK**. The App is removed from your My Apps tab.

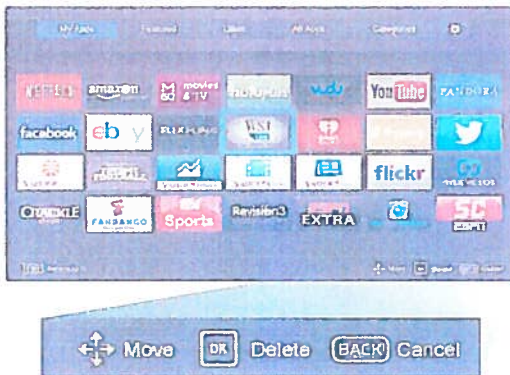
Moving an App in My Apps

You can organize your Apps on your My Apps tab by moving them where you want.

To move the Apps on your My Apps tab:

1. Use the **Arrow** buttons on the remote to highlight the app you wish to move.
2. Press and hold the **OK** button. The following options appear:

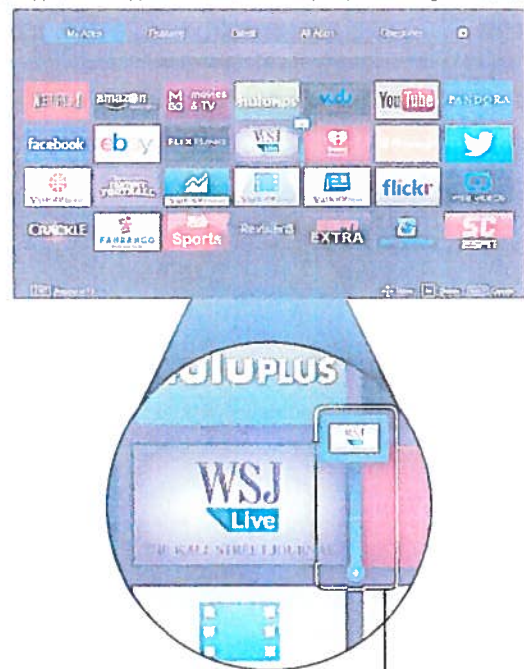
Note: App location, appearance, and availability, subject to change without notice.



💡 Only the Apps on the first page appear in the Dock.

3. Use the **Arrow** buttons to move the app to the desired location and press **OK** to place the app. When you can move the app, it appears as shown below.

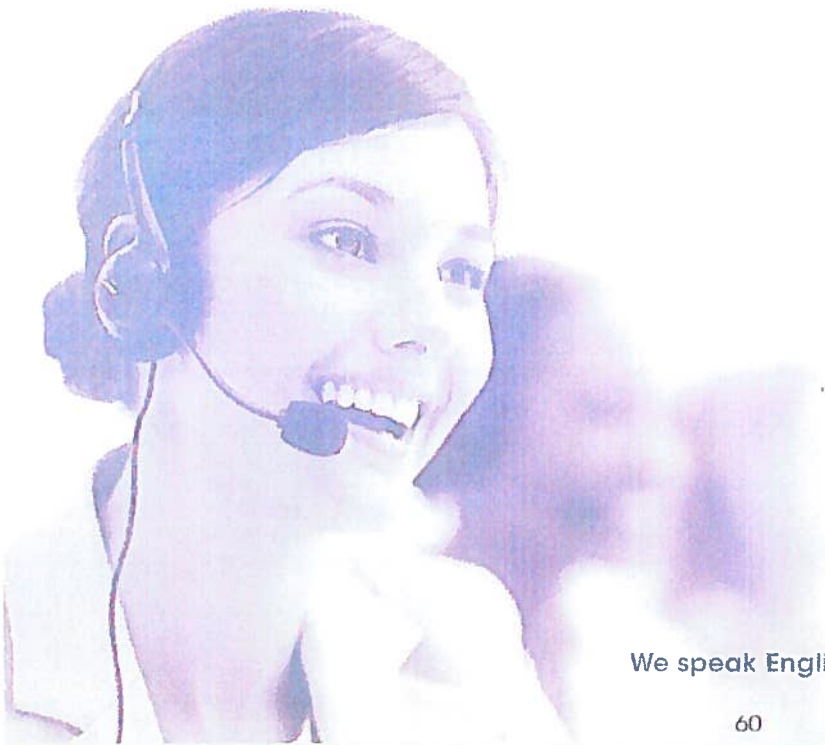
Note: App location, appearance, and availability, subject to change without notice.



Cursor showing the location that the app will move to

DO YOU HAVE QUESTIONS?
LET US HELP!

YOUR PRODUCT INCLUDES FREE LIFETIME TECH SUPPORT



The VIZIO support team is highly trained and is based in the United States.

We can help with:

- New Product Setup
- Connecting Your Devices
- Technical Problems
- And More

Phone: (877) 878-4946 (TOLL-FREE)

Email: techsupport@VIZIO.com

Web: www.VIZIO.com/support

Hours of operation:

Monday - Friday: 5 AM TO 8 PM (PST)

Saturday - Sunday: 7 AM TO 4 PM (PST)

We speak English • Se habla Español • Nous parlons Français

The TV displays "No Signal."

- Press the **INPUT** button on the remote control to select a different input source.
- If you are using cable TV or antenna connected directly to the TV, scan for channels. See *Scanning for Channels* on page 37.

There is no power.

- Ensure the TV is plugged into a working electrical outlet.
- Ensure the power cable is securely attached to the TV.
- Press the **Power/Standby** button on the remote or on the back of the TV to turn the TV on.

The power is on, but there is no image on the screen.

- Ensure all cables are securely attached to the TV.
- Ensure all devices are connected correctly. Devices differ; see your device's user manual for details.
- Adjust Brightness, Contrast, or Backlight. See *Adjusting the Picture Settings* on page 24.
- Press the **INPUT** button on the remote to select a different input source.

There is no sound.

- Press Volume Up on the remote control.
- Press the **MUTE** button on the remote to ensure mute is off.
- Check the audio settings. See *Adjusting the Audio Settings* on page 32.
- Ensure the speakers are set to **On**.
- Check the audio connections of external devices (Blu-ray player, game console, cable/satellite box) that are connected to the TV.
- If you are using an antenna, the signal strength of the channel may be low. Ensure your antenna is connected securely to the TV and move the antenna around the room or close to a window for the best signal.

The sound is flat or dialog is not audible.

- Turn off Sound Leveling. See *Adjusting the Audio Settings* on page 32.

The colors on the TV don't look right.

- Adjust the Color and Tint settings in the Picture menu. See *Adjusting the Picture Settings* on page 24.
- Delete a custom picture mode to return to the default picture settings. See *Deleting a Custom Picture Mode* on page 31.
- Check all cables to ensure they are securely attached.

The buttons on the remote aren't working.

- Ensure you are only pressing one button at a time.
- Point the remote directly at the TV when pressing a button.
- Replace the remote batteries with new ones. See *Replacing the Batteries on page 11*.
- Make sure the batteries are properly inserted matching the - and + symbols.

The image quality is not good.

- For the best image quality view high-definition programs using digital sources. Connect your devices with HDMI cables.
- If you are using an antenna, the signal strength of the channel may be low. Ensure your antenna is connected securely to the TV and move the antenna around the room or close to a window for the best signal.

The picture is distorted.

- Move the TV away from electrical appliances, cars, and fluorescent lights.
- Ensure all cables are securely attached.

The display image does not cover the entire screen.

- If you are using TV, AV, or Component with 480i input, press the  button on the remote to change the screen mode.

The TV has pixels (dots) that are always dark or always lit.

- Your HDTV is precision-manufactured using an extremely high level of technology. However, sometimes pixels may not display correctly. These types of occurrences are inherent to this type of product and do not constitute a defective product.

I see "noise" or static on the screen.

- When your TV's digital capabilities exceed a digital broadcast signal, the signal is up-converted (improved) to match your TV's display capabilities. This up-converting can sometimes cause irregularities in the image.
- If you are using an antenna, the signal strength of the channel may be low. Ensure your antenna is connected securely to the TV and move the antenna around the room or close to a window for the best signal.

When I change input source, the volume changes.

- The TV remembers the volume level on each input source. If the volume level on the new input source is higher or lower than the level on the source you switch from, the difference may be noticeable.
- Use the Volume Up/Down buttons on the remote to adjust the volume.

When I change input source, the display image changes size.

- The TV remembers the viewing mode on each input source. If the viewing mode on the new input source differs from the one on the input source you switch from, the difference may be noticeable.
- See *Changing the Screen Aspect Ratio on page 22*.

Specifications

B

	M322i-B1
Screen Size:	32"
Viewable Area:	31.50"
Dimensions w/ Stand:	28.61" x 18.74" x 5.92"
w/o Stand:	28.61" x 17.09" x 2.08"
Weight w/ Stand:	15.65 lbs
w/o Stand:	13.23 lbs
TV Type:	D-LED
Refresh Rate:	120 Hz Effective Refresh Rate
Maximum Resolution:	1920 x 1080
Pixel Pitch:	.36375 mm (H) x .36375 mm (V)
Dynamic Contrast Ratio	5,000,000:1
Response Time:	8 ms
Active LED Zones:	5 (1 H x 5 V)
Brightness:	350 nits
Viewing Angle:	178° (H) / 178° (V)
HDMI Inputs:	3
Component Video Inputs:	1
Composite Inputs:	1 (Shared with Component)
RF Antenna Input:	1
USB 2.0 Ports:	1
Ethernet:	1

M322i-B1	
Audio Outputs:	RCA Analog Stereo Output, Optical Digital
OSD Language:	English, Spanish, French
Ambient Light Sensor:	Yes
Remote Control Model:	XRT500
Certifications:	UL/CUL, FCC Class B, HDMI 1.4b, Dolby Digital Plus
Compliance:	Energy Star
Voltage Range:	120V @ 60 Hz
Power Consumption:	40W
Standby Power:	<1W
Zero Bright Pixel Guarantee:	Yes

Limited Warranty



ON PARTS AND LABOR

Covers units purchased as new in United States and Puerto Rico Only. VIZIO provides a warranty to the original purchaser of a new Product against defects in materials and workmanship for a period of one (1) year of non-commercial usage and ninety (90) days of commercial use. If a Product covered by this warranty is determined to be defective within the warranty period, VIZIO will either repair or replace the Product at its sole option and discretion.

To obtain warranty service, contact VIZIO Technical Support via e-mail: TechSupport@VIZIO.com or via phone at 877 MY VIZIO (877.698.4946) from 5:00AM to 9:00PM Monday through Friday and 8:00AM to 4:00PM Saturday and Sunday, Pacific Time, or visit www.VIZIO.com. PRE-AUTHORIZATION MUST BE OBTAINED BEFORE SENDING ANY PRODUCT TO A VIZIO SERVICE CENTER. Proof of purchase in the form of a purchase receipt or copy thereof is required to show that a Product is within the warranty period.

Parts and Labor

There will be no charge for parts or labor during the warranty period. Replacement parts and Products may be new or recertified at VIZIO's option and sole discretion. Replacement parts and Products are warranted for the remaining portion of the original warranty or for ninety (90) days from warranty service or replacement, whichever is greater.

Type of Service

Defective Products must be sent to a VIZIO service center to obtain warranty service. VIZIO is not responsible for transportation costs to the service center, but VIZIO will cover return shipping to the customer. PRE-AUTHORIZATION IS REQUIRED BEFORE SENDING ANY PRODUCT TO A VIZIO SERVICE CENTER FOR WARRANTY SERVICE.

Product returns to VIZIO's service centers must utilize either the original carton box and shipping material or packaging that affords an equal degree of protection. VIZIO Technical Support will provide instructions for packing and shipping the covered Product to the VIZIO service center.

Limitations and Exclusions

VIZIO's one-year limited warranty only covers defects in materials and workmanship. This warranty does not cover, for example: cosmetic damage, normal wear and tear, improper operation, improper voltage supply or power surges, signal issues, damages from shipping, acts of God, any type of customer misuse, modifications or adjustments, as well as installation and set-up issues or any repairs attempted by anyone

other than by a VIZIO authorized service center. Products with unreadable or removed serial numbers or requiring routine maintenance are not covered. This one year limited warranty does not cover Products sold "AS IS", "FACTORY RECERTIFIED", or by a non-authorized reseller.

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Personal Data

If your VIZIO product is capable of storing personal data and other information, ALL CONTENTS AND INFORMATION WILL BE DELETED IN THE COURSE OF SOME IN-HOME AND ALL SHIP-IN WARRANTY SERVICE. If this occurs, your product will be restored to you configured as originally purchased. You will be responsible for restoring all applicable data and passwords. Recovery and reinstallation of user data is not covered under this Limited Warranty. In order to protect your personal information, VIZIO recommends that you always clear all personal information from the unit before it is serviced, regardless of the service.

Zero Bright Pixel Defect Guarantee

This policy covers "zero bright pixel" defects for the duration of the limited "ONE YEAR WARRANTY" on select new product purchases. To determine if this guarantee applies to your product, refer to the "DETAILS" tab of the model's product information page (www.VIZIO.com) or look for the "zero bright pixel" guarantee on the box.

FCC Class B Radio Interference Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.
3. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibilities of the user to correct such interference.

FCC warning

Changes or modifications not expressly approved by the party responsible for compliance with the FCC Rules could void the user's authority to operate this equipment.

Caution

Always use an AC/DC power adapter that is properly grounded. Use the AC cords listed below for each area:

- USA: UL
- Canada: CSA
- Germany: VDE
- UK: BASE/BS
- Japan: Electric Appliance Control Act

Open Source Software Notice

Your VIA device may contain GPL executables and LGPL libraries that are subject to the PL2.0/LGPL2.1 License Agreements. VIZIO offers to provide source code to you on CD-ROM for a processing fee covering the cost of performing such distribution, such as the cost of media, shipping and handling upon request made to VIZIO at www.VIZIO.com.

This offer is valid for a period of three (3) years from the date of the distribution of this VIA device by VIZIO.

You can obtain a copy of the GPL, LGPL licenses from <http://www.gnu.org/licenses/old-licenses/gpl-2.0.html> and

<http://www.gnu.org/licenses/old-licenses/lgpl-2.1.html>

You can also obtain a copy of gSOAP public license from

<http://www.cs.fsu.edu/~engelen/license.html>

Please visit www.VIZIO.com for attribution of copyrights to any open source software on your VIZIO VIA device.

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To use these VIA Services, you must obtain access to the Internet, either directly or through devices that access the Internet and pay any service fees associated with such access. In addition, you must provide all equipment necessary to make such connection to the Internet including a modem or other Internet access device.

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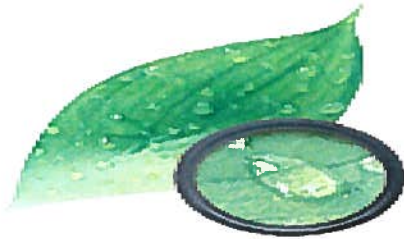
The all-new M-Series has been crafted to revolutionize your entertainment.

Featuring a new, simpler Smart TV experience.

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Brilliance Redefined.

Experience Full HD in a whole new way with M-Series, packed with industry-defining innovations like Active LED Zones and Full Array LED backlight technologies, the richest picture quality, a simpler Smart TV experience and more.



Full Array LED.

Full Array LED backlight technology and up to 32 Active LED Zones dynamically adjust to onscreen content and produce vibrant whites and richer darks.



Smarter TV.

VIZIO Internet Apps Plus® offers a library of the most popular apps. Stream the latest movies and TV shows, listen to your favorite Internet radio stations and more.



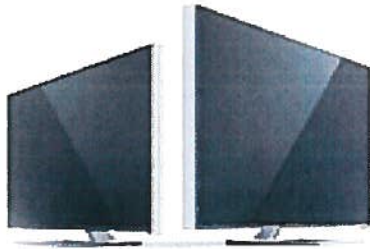
QWERTY Keyboard.

M-Series TVs come with a double-sided backlit Smart Remote featuring a QWERTY keyboard that offers simple, one-touch access to your favorite apps and entertainment.



Picture Perfected.

M-Series features an amazingly fast 240Hz effective refresh rate and a Clear Action of up to 720 to deliver blur-free images and a smoother viewing experience.



Stunning Design.

M-Series is stylish, modern and remarkably beautiful, featuring a miniscule 8mm bezel and 20% slimmer frame. Its subtle, sophisticated design is undeniably inspiring.



Better Connections.

With HDMI capability, an optical audio port and multiple USB ports, plus wireless technology like MiMo and 802.11n Wi-Fi built in, M-Series offers unparalleled connectivity.

Reviews. See what the critics are saying.

CNET

VIZIO M-Series Review

The VIZIO M-Series M1D-A2R is an excellent value with great design and a snappy picture...

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Sound & Vision

VIZIO M-Series Review

The physical appearance of the M601d-A3R is the best I've seen to date in a VIZIO TV.

[Read More →](#)

CNET

VIZIO M-Series Review

Local dimming is a technology that allows LED LCDs to overcome one of their biggest picture quality problems...

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Enhance your M-Series TV with premium home theater audio in a variety of sizes.

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See All HDTVs

*Fullscreen apps window functionality coming Summer, 2013. Screen images simulated.

-High-speed/Broadband internet service and access equipment are required and not provided by VIZIO.

-Additional fees and/or subscriptions required for certain content and services.

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EXHIBIT E



M SERIES

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Beautifully

The all-new M-Series has been crafted to revolutionize your entertainment.

Featuring a new, simpler Smart TV experience.

Brilliance Redefined.

Experience Full HD in a whole new way with M-Series, packed with industry-defining innovations

like Active LED Zones and Full Array LED backlight technologies, the richest picture quality, a simpler Smart TV experience and more.

<red>Razor LED</red> Brilliance



Full Array LED.

Full Array LED backlight technology and up to 32 Active LED Zones dynamically adjust to onscreen content and produce vibrant whites and richer darks.

Smarter TV.

VIZIO Internet Apps Plus® offers a library of the most popular apps. Stream the latest movies and TV shows, listen to your favorite Internet radio stations and more.

QWERTY Keyboard.

M-Series TVs come with a double-sided backlit Smart Remote featuring a QWERTY keyboard that offers simple, one-touch access to your favorite apps and entertainment.



Picture Perfected.

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Stunning Design.

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Big Screen <red>Connectivity</red>

Better Connections.

With HDMI capability, an optical audio port and multiple USB ports, plus wireless technology like MiMo and 802.11n Wi-Fi built in, M-Series offers unparalleled connectivity.

Reviews. See what the critics are saying.

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EXHIBIT F

1 I, Marcellus Holt, hereby declare and state as follows:

2 1. I am over the age of 18, and I am a plaintiff in the above-captioned action. The
3 facts contained in this declaration are based on my personal knowledge. If called upon to do so, I
4 could and would testify competently to the facts stated in this declaration.

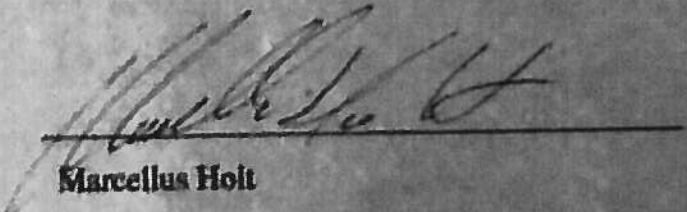
5 2. I am making this declaration regarding venue pursuant to Civil Code section 1780,
6 subdivision (d).

7 3. This action has been commenced in a county described in Civil Code section 1780,
8 subdivision (d) as a proper place for the trial of the action. In November of 2016, I purchased a
9 new VIZIO television for personal use that VIZIO sold through a Target store located in Canoga
10 Park, California ("Transaction") in Los Angeles County. The Transaction forms the
11 underpinnings of the claims that I am asserting in this lawsuit, for which I seek to represent a
12 class of similarly situated individuals. It is also my belief, based on the Transaction, that VIZIO
13 does business in Los Angeles County County.

14 I declare under penalty of perjury under the laws of the State of California that the
15 foregoing is true and correct.

16 Executed on this 13 day of ^{April} ~~March~~, 2018 at Palmdale, CA.

17 California.

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19 
20 Marcellus Holt
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