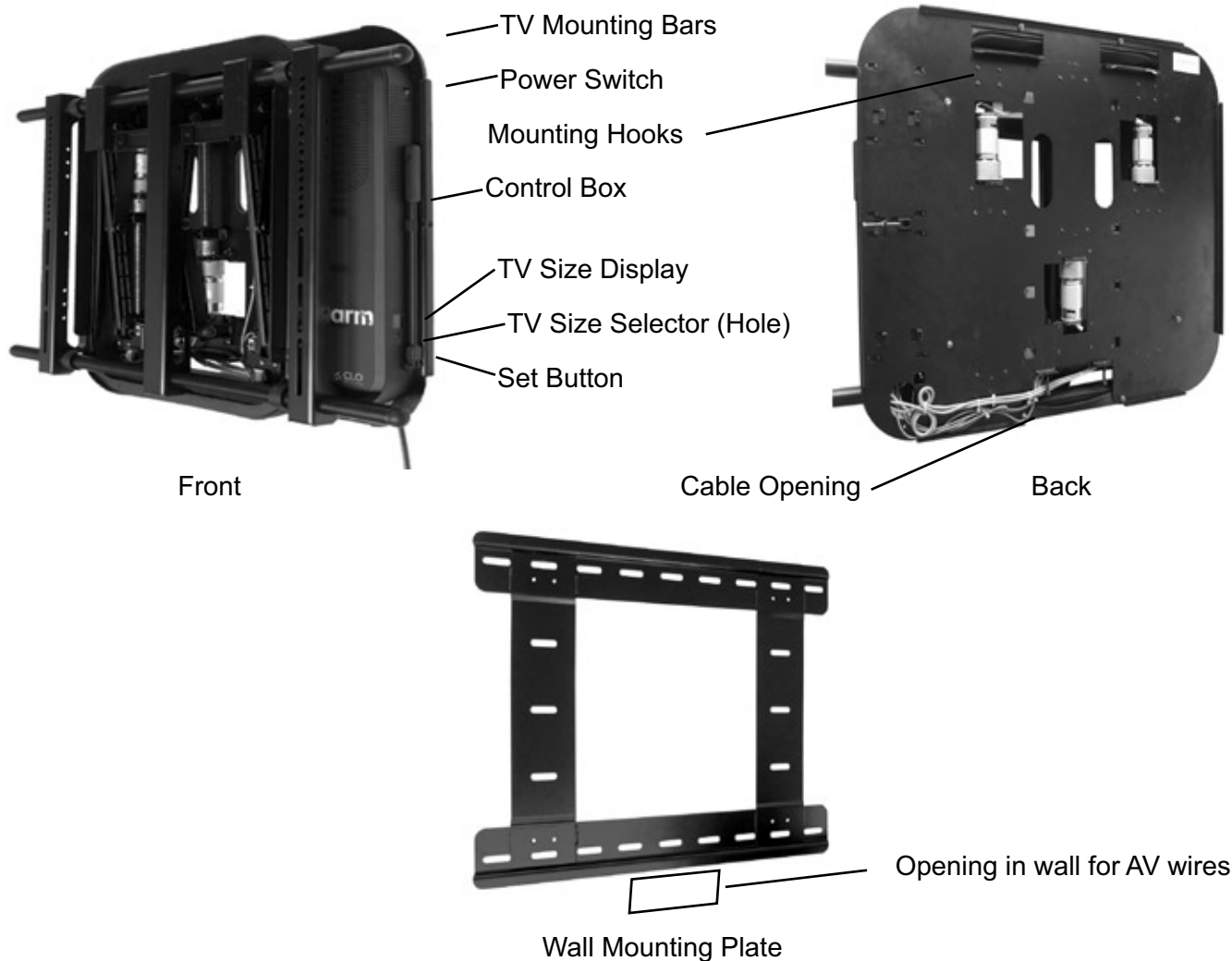



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## X-arm™ Overview

X-arm™ mount is a motorized mount for TVs from 40 to 60 inches, weighing up to 180 pounds. X-arm™ allows a viewer to adjust the viewing angle of the TV with the touch of a remote control button. In a retracted position, the TV is only 4.6 inches from the wall, showing only the TV. Activating X-arm™ smoothly extends the TV away from the wall about 12 inches to swivel the TV from side to side and tilt it up and down. As X-arm™ mount extends the TV from the wall, a bellows extends with the TV to cover the X-arm™ actuators and all of TV cables within the bellows. This gives X-arm™ a clean look.



## X-arm™ Specifications

 **Caution:** X-arm™ mounting bracket is intended for use only with the maximum weight and TV sizes indicated. Use with products heavier than the maximum weight or larger TV sizes indicated may result in instability and cause injury.

### Maximum Tilt and Swivel Ranges

42" TV: 7° up, 25° down, 32° left and right (total of 64°)  
50" TV: 7° up, 25° down, 26° left and right (total of 52°)  
60" TV: 7° up, 20° down, 20° left and right (total of 40°)

TV Sizes Accomodated: 42", 50" and 60".


Overall Mounted Size: 31 1/2" (W) X 22 3/4" (H) X 4 1/2" (D)

Maximum Weight Limit: 180 lbs.

Maximum Extension from Wall: 12 inches

Minimum Extension from Wall: 4.6 inches

## Setting X-arm™ TV Size

 **Caution:** X-arm™ restricts movement based upon the TV size selected by the user. The TV size must be set correctly before operating X-arm™. Setting the incorrect size may result in property damage and/or injury.

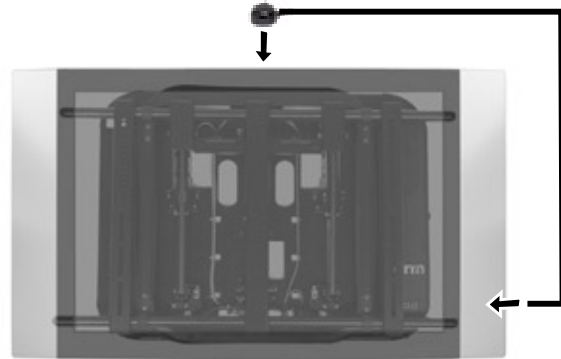


1. Plug in X-arm™.
2. Press the POWER switch to "1" (ON).
3. Insert the provided plastic pin into the Selector hole, and press on the button within the selector hole to scroll through three TV sizes: (1) 42 inch; (2) 50 inch; and (3) 60 inch. Press on the button until a TV size equal to or greater than your TV size is displayed.
4. Hold the Set button until the TV Size quits blinking and goes out.
5. X-arm™ will restrict the movement of the TV based upon the TV size selected.

## Connecting the IR Receiver

The IR receiver captures all the commands from X-arm™ remote and transfers it to X-arm™.

1. Plug the IR receiver into the side of X-arm™ control box.
2. Using the provided double stick tape, adhere the IR receiver eye-piece to the TV where it has a clear line of sight with the remote control.



## Adjusting the TV Tilt



*Before using X-arm™, it is important that the correct TV size is set to avoid property damage or personal injury. Keep everything and everyone away from X-arm™ while in motion.*

1. With X-arm™ plugged in, press the POWER switch to “1” (ON) on the control box. The switch will light.
2. First push the X-ARM button and then the POWER button on the remote. This will cause the IR receiver to light up. X-arm™ is now ready to receive control signals from the remote control.
3. Press the center button marked SEL/HOME on the remote to extend the TV away from the wall.
4. Press one of the four (4) arrow keys on the remote to start X-arm™ swivelling or tilting in the direction selected. Press a key on the remote to stop X-arm™.

OR

5. Press the SEL/HOME button once to send X-arm™ back to the resting/home position, which will retract the TV against the wall.

OR

6. Once the preset buttons P1 and P2 have been set (see page 6), press the P1 or P2 buttons to go to pre-programmed positions.



# Universal Remote Control

Once programmed, the universal remote can control TVs, VCRs, DVD Players and Cable boxes.

**Power** turns on/off the selected component.

**TV**, once programmed to your TV, makes the TV the selected component.

**DVD/VCR**, once programmed, makes the VCR/DVD the selected component

**P1 SET** sets the P1 Memory Preset position to the current X-arm™ position.

**P1 Memory** moves X-arm™ to the Preset 1 position.

**Arrow Buttons** tilt the TV in the direction of the button in X-arm™ mode. In other modes these navigate on-TV menus.

**MENU** opens the setup menu for the selected component.

**VOL** adjusts the volume up or down.

**MUTE** turns the sound off for the selected component.

**INFO** displays information about the current video source.

**Number buttons** allow you to enter the corresponding number.

**Rewind** rewinds the current video.

**Play** plays the currently inserted media.

**Pause** Pauses the currently playing video.

**PIP** turns on the Picture in Picture.

**SWAP** switches the PIP and background video sources.

**POSITION** on TV changes the position of the PIP window. On CBL: Page Down.



**X-arm™** makes X-arm™ the selected component

**CBL**, once programmed to your Cable box, makes the Cable the selected component.

**P2 SET** sets the P2 Memory Preset position to the current X-arm™ position.

**P2 Memory** moves X-arm™ to the Preset 2 position.

**SEL/HOME**, in X-arm™ mode, returns X-arm™ to the home position. In other modes, this button selects or sets options.

**EXIT** leaves from the current menu.

**CH** changes to the next/previous channel or chapter.

**FAV** in CBL mode, returns to the programmed favorite channel.

**TV/VCR** rotates through the available video sources for the selected component.

**GUIDE** shows the guide in CBL mode and turns on Closed Captioning (CC) in TV mode.

**Fast Forward** fast forwards the currently inserted video.

**Stop** stops the currently playing video.

**Record** starts recording.

**OPEN/CLOSE** opens/closes the media tray of the selected component.

**SLEEP** Puts the selected component into a sleep/low power consumption state.

**FREEZE** on TV freezes the PIP, on DVD displays Setup menus, on VCR shows tape Speed, on CBL:Page Up

## Programming the Universal Remote

Once programmed, the universal remote can control TVs, VCRs, DVD Players and Cable boxes in addition to X-arm™. You can also set the P1 and P2 preset buttons so that you can reposition X-arm™ to your favorite two positions with one push of a button.

## Programming X-arm™ Preset Position Buttons



*Before using X-arm™, it is important that the correct TV size is set to avoid property damage or personal injury. Keep everything and everyone away from X-arm™ while in motion.*

1. With X-arm™ plugged in, turn on the power by pressing the power button on the side of control box. The button will light.
2. First push the **X-ARM** button and then the **POWER** button on the remote.
3. Move X-arm™ to the position you want for the preset.
4. To set the first preset button, press **P1 SET** then press **P1 memory**.
5. To set the second preset button, press **P2 SET** then press **P2 memory**.



## Programming the Remote to Operate Existing Components

### TV Programming

To program the universal remote to operate your TV:

1. Turn the TV on.
2. Press the **TV** and **SEL/HOME** buttons together until the **TV** button stays lit.
3. While pointing at the TV, enter a 3-digit code from the code list for your TV brand. Keep entering codes until the TV powers off. Then continue to step 4.
4. Press the **SEL/HOME** button. The TV button will blink 3 times and go out.
5. Test the remote to see that it works properly with the TV. If it does not, repeat steps 2-5 again.

TV Brand	Code Numbers	TV Brand	Code Numbers
Admiral	220 160 081 072	Emerson	245 155 154 143 096 076 051 048 047 043 028 005 004 001
Advent	231	Fisher	057 007
Aiwa	213	Fujitsu	244
Akai	146 001	Funai	245 043 028
Amark	143	Funai	245 043 028
Ampro	073	Futuretech	043
Amstrad	052	Gateway	041 202
Anam	242 131 080 056 043	GE	220 165 160 155 144 074 073 056 034 009 008 004 001
Aoc	058 004 001	Gradiente	218
Apex	247	Haier	203
Audiovox	076	Hallmark	004
Blaupunkt	088	Hitachi	143 075 072 023 012 011 010 009 004
Broksonic	241	Infinity	249 164
Cairn	201	JBL	249 164
Candel	004 003 002 001	JCPenney	160 143 101 065 030 024 009 008 004 001
Capehart	058	Jensen	013
Cetronic	043	JVC	237 230 145 083 070 038 034
Citizen	143 103 101 043 004 003 002 001	KEC	043
Classic	043	Kenwood	070 001
Concerto	004	Kloss	059 002
Contec	051 043	KMC	143
Cornea System	246	KTV	250 154 143 043 001
Coronado	143	LG (Goldstar)	143 127 119 106 004
Craig	043	Lodgenet	072
Crown	143 043	Loewe	249
Curtis Mathes	143 101 004 001	Logik	072
CXC	043	LXI	249 164 160 081 052 015 007
Daewoo	143 127 125 114 103 076 043 027 016 004	Magnovox	249 205 223 222 216 210 164 160 127 094 064 063 060 059 022 004 003 001 218 219
Daytron	143 004	Marantz	249 164 001
Dell	036	Matsui	164
Dwin	177	Memorex	096 072 007 004
Dynasty	043	Metz	088
Dynatech	062	MGA	042 028 024 004 001
Eiki	187	Minerva	088
Electrohome	196 143 076 024	Mitsubishi	225 146 124 109 042 040 031 028 021 024 004

TV Brand	Codes	TV Brand	Codes
Mitsubishi	225 146 124 109 042 040 031 028 021 024 004	Siemens	088
Motorola	217	Signature	072
MTC	101 062 004 001	Sony	194 147 139 070
Nad	025 015	Soundesign	043 028 004 003
NEC	056 040 024 019 016 001	SSS	043 004
Nikei	043	Supremacy	002
Olevia	045	Sylvania	249 245 240 229 226 211 164 160 127 064 063 060 059 003
Onking	043	Symphonic	245
Omwa	043	Tandy	081
Optonica	081 019	Tatung	062 056
Orion	096	Technics	080 034
Panasonic	250 249 238 227 164 080 056 034 017 033	Techwood	004
Philco	164 064 063 060 059 056 024 004 003 001	Teknika	43 101 072 043 028 024 004 003 002
Philips	249 205 164 127 093 059 038 005 004 003 001	Telefunken	037
Pioneer	135 025 023 018 001	Telerent	072
Portland	143 004	Tera	172
Proscan	197 165 220 160 144	Thomas	245
Proton	173 171 143 131 058 004	TMK	004
Quasar	250 056 044 034 017	Toshiba	232 138 101 062 040 032 030 015 007
Radio Shack	143 127 043 019 004	Totevision	143
RCA	228 220 165 160 152 144 074 065 056 024 023 004 001	Universal	009 008
Realistic	047 043 019 007	Video Concepts	146
Roctec	186	Vidikron	184
Runco	182 168 073	Vidtech	004
Sampo	202 058 004 001	Visio	100
Samsung	251 248 209 160 143 127 105 101 089 026 004	Wards	249 164 143 074 072 064 063 060 034 028 019 009 008 004
Sanyo	082 057 053 020 007	Westinghouse	245 076
Sceptre	035	Yamaha	004 001
Scott	143 048 043 028 004	York	004
Sears	165 160 143 094 082 057 030 028 015 007 004	Yupiteru	043
Sharp	207 170 143 081 029 028 022	Zenith	103 095 073 072

## DVD Player Programming

To program the universal remote to operate your DVD Player:

1. Turn the DVD Player on.
2. Press the **DVD** and **SEL/HOME** buttons together until the **DVD** button stays lit.
3. While pointing at the DVD Player, enter a 3-digit code from the code list for your DVD Player brand. Keep entering codes until the DVD Player powers off. Then continue to step 4.
4. Press the **SEL/HOME** button. The **DVD** button will blink 3 times and go out.
5. Test the remote to see that it works properly with the DVD Player. If it does not, repeat steps 2-5 again.

DVD Brand	Codes	DVD Brand	Codes
Apex Digital	153 220	Nad	221
Broksonic	017	Onkyo	233 001
Cyberhome	165 020 004	Panasonic	234 228 167 152 149
Daewoo	193 171	Philips	237 166 168 016 007
Denon	240 226	Pioneer	230 229 189 015
Emerson	158 150 148	Proceed	219
GE	243 231	Proscan	231 229
Go Video	014 160 002	RCA	243 231 170 019
Gradiente	201 192	Samsung	248 161 013 005
Harman Kardon	225 218 173	Sansui	017
Humax	190 191	Sanyo	006
JVC	238 012	Sharp	222 202
Kenwood	224	Sony	244 232 204 169 003 009
KLH	223	Sylvania	172 150
LG (GoldStar)	249 247 241 235	Thompson	243 231
Lite On	021	TIVO	191
Magnavox	237 163 168 016	Toshiba	250 245 233 190 194 151 011 018
Marantz	168	Yamaha	246 234
Memorex	008	Zenith	247 241 235 014
Mitsubishi	227		

## VCR Programming

Note that the VCR button is actually labelled DVD on the button, but VCR next to the button. To program the universal remote to operate your VCR:

1. Turn the VCR on.
2. Press the **DVD** and **SEL/HOME** buttons together until the **DVD** button stays lit.
3. While pointing at the VCR, enter a 3-digit code from the code list for your VCR brand. Keep entering codes until the VCR powers off. Then continue to step 4.
4. Press the **SEL/HOME** button. The **DVD** button will blink 3 times and go out.
5. Test the remote to see that it works properly with the VCR. If it does not, repeat steps 2-5 again.

VCR Brand	Codes	VCR Brand	Codes	VCR Brand	Codes
Aiwa	461 334	Harman Kardon	346 312	MTC	404 334
Akai	446 425 424 346 343 316	Hitachi	460 343 334 326 320	Multitech	334 324
Ampro	372	Instant Replay	445	NEC	348 343 339 312
Anam	445	JCL	445	Nordmende	343
Audio Dynamics	343 339 312	JCPenney	406 404 445 320	Optonica	353
Bloksonic	429 337	Jensen	343	Orion	325
Canon	445	JVC	452 430 445 360 348 312	Panasonic	511 502 445 374 370
Capehart	408	Kenwood	348 347 334 314	Pentax	445 320
Craig	435 404 301	LG (GoldStar)	423 414 406 320 312	Philco	445 367 334
Curtis Mathes	445 341	Lloyd	334	Philips	406 445
Daewoo	417 412 411 408 310 307 305	LXI	406 334 309 301	Pilot	406
Daytron	408	Magin	404	Pioneer	348 321 320
DBX	343 339 312	Magnavox	464 456 445 367 334	Portland	408
Dynatech	353 334	Marantz	445 369 367 312	Proscan	505 504
Electrohome	359	Marta	406	Pulsar	372

VCR Brand	Codes	VCR Brand	Codes	VCR Brand	Codes
Emerson	467 431 429 417 406 445 346 337 336 334 325 306	Matsui	330	Quartz	341 302
Fisher	310 309 308 301	Mei	445	Quasar	445
Funia	334	Memorex	445 439 406 372 353 334 314 310 301	Radio Shack	423
GE	447 444 409 407 445 372	MGA	359 346	RCA	509 458 447 445 444 409 407 404 341 334 320
Go Video	468 455 436 432 404	Minolta	501	Realistic	406 404 445 353 334 314 310 308 301
RICO	358	Soundesign	34	Totevision	406 404
Runco	448	STS	320	Unitech	404
Salora	314	Sylvania	520 519 518 445 367 359 334	Vector Research	312
Samsung	508 468 425 412 409 407 404 445 332	Symphonic	334	Victor	348
Sansui	435 348 343	Tandy	334 310	Video Concepts	346 334 312
Sanyo	404 314 310 307 301	Tatung	343 339	Videosonic	404
Scott	431 429 412 337	TEAC	343 339 334	Wards	431 404 445 353 324 320 301
Sears	412 406 320 314 310 309 308 301	Technics	445 370	Yamaha	343 339 334 312
Sharp	515 465 459 445 353	Teknika	406 445 334 319	Zenith	467 406 380 372 358 356 348 334
Shintom	324	Thomas	334		
Signature	334	TMK	306		
Sony	512 506 454 453 445 378 376 358 357 356 353 352 301	Toshiba	521 431 413 412 382 359 347 320 308		

## Cable TV Set-Top Box Programming

To program the universal remote to operate your Cable Box:

1. Turn the Cable Box and TV on.
2. Press the **CBL** and **SEL/HOME** buttons together until the **CBL** button stays lit.
3. While pointing at the Cable Box, enter a 3-digit code from the code list for your Cable Box brand. Keep entering codes until the Cable Box powers off. Then continue to step 4.
4. Press the **SEL/HOME** button. The **CBL** button will blink 3 times and go out.
5. Test the remote to see that it works properly with the Cable Box. If it does not, repeat steps 2-5 again.

Cable Brand	Codes	Cable Brand	Codes	Cable Brand	Codes
ABC	205 200 103 039 004	Hitachi	103	Regency	057
Amricast	099	Jerrold	231 201 200 101 069 004 001 103	Samsung	030
Antronit	014	Magnavox	095 094	Scientific Atlanta	231 205 200 118 117 110 042 037 034 011 008 001
Archer	014 007	Media One	017	Signal	030
Bell South	099	Memorex	008	Signature	103
Centurion	092	Mitsubishi	102	SL Marx	030
Century	007	M-Net	204	Sony	214 213 212 211
Citizen	007	Motorola	001 002	Starcom	231 201 004
Combano	081 080	Movie Time	032	Stargate	201 104 030
Consat	001	Novaplex	092	Tadiran	030
Comtronics	030	NSC	038	Time Warner	231
Digicable	206	Oak	204 037	Tocom	056 039 003
Eagle	003 030 020	Panasonic	047 044	Toshiba	008
Eastern	066 057	Paragon	008	Unika	014 007
Echostar	106	Philips	095 085 020 017	United Cable	004
Electricord	032	Pioneer	203 231 121 105 034 103	Universal	035 032 014 007
Gemini	201 054	Prucer	078 047	Viewstar	089 087 086 020 018
General Electric	072	PTS	202 001	Zenith	093 060 008
General Instrument	104 001 103	Pulsar	008		
GNC	099	RCA	047		
Golden Channel	030	Reconton	098		
Hamlin	049	Regal	049		

## Controlling X-arm™ with Home Automation Controls through RS232 port

X-arm™ can be controlled through Home Automation remote controls and control panels such as those made by Crestron and AMX. To do this, do the following:

1. Remove X-arm™ from the wall and set on a stable surface such as the floor.
2. Loosen the control box screw with a philips screw driver.
3. Carefully slide the control box to the right and lift it away from the back plate.
4. Turn the control box over to reveal the ports.

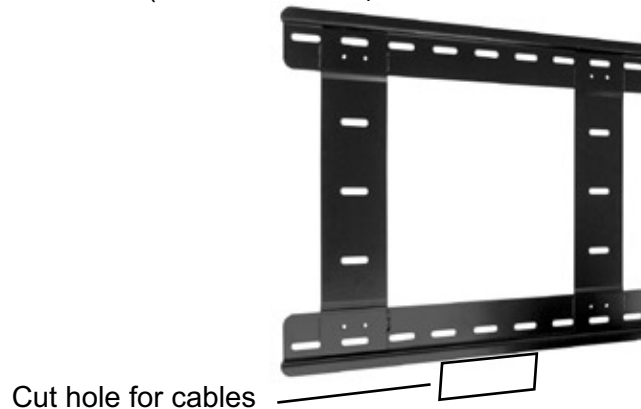


5. Download the RS232 codes from the Home Automation vendor's web site.
6. Plug the home automation control into the RS232 port on X-arm™ and follow the vendor's instructions.
7. Place the control box over the mounting holes and slide it to the left about 1/2 inch.
8. Tighten the control box screw.
9. Remount X-arm™ onto the TV.

## Cable Routing

It is important that all of the AV and power cables pass from the TV through the bellows of X-arm™, and to the wall. Use the cable-separating hooks built into X-arm™ to keep the power and AV cables separated as shown below, minimizing electrical interference. Also, if cables are being run through the wall, a hole can be cut to accommodate them just below the wall plate after it is mounted (as shown below).

<Insert Cable Routing Picture Here>



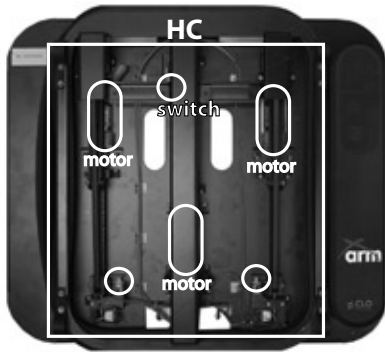
## Troubleshooting

If X-arm™ becomes unresponsive, look at the value displayed on the control box Screen Size window. Follow the directions below based upon what is displayed.

If “42”, “50” or “60” is displayed:

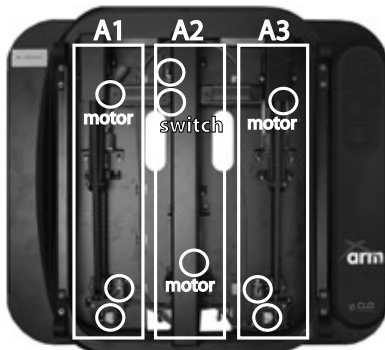
1. Insert the provided plastic pointer into the Selector hole on the side of X-arm™, and press the button until a “t” is shown.
2. Using the remote control, straighten X-arm™ so that it is parallel with the wall and then press the Set button for three seconds.  
X-arm™ will return to the home position.
3. Unplug X-arm™ and plug it in again.

If “HC” is displayed:



1. Unplug X-arm™ from power. Warning: Failure to remove power could result in an electrical shock and death.
2. Check that the TV or X-arm™ is not trapped against the wall or any other object.
3. Check that there are no foreign objects in the areas shown.
4. Plug in X-arm™. Turn on the power, and try to move X-arm™ using the remote control.

If “A1”, “A2”, or “A3” is displayed:



1. Unplug X-arm™ from power. Warning: Failure to remove power could result in an electrical shock and death.
2. Check that all of the wire connections are securely connected in the area corresponding to the error code. For example, if the error code is A1, check all of the connections circled in the A1 area on the picture.
3. Plug in X-arm™. Turn on the power, and try to move X-arm™ using the remote control.

## Warranty

CLO warrants its products, under normal use, to be free from defects in material and workmanship for a period of one year from the date of purchase. CLO, at its sole discretion, will repair or replace such defective equipment within the warranty period free of charge provided that the products are returned prepaid to CLO. Thereafter, repairs will be made at established factory prices. Unauthorized service or repairs by anyone other than authorized CLO personnel renders this Warranty void and releases CLO from any further responsibility or obligation. Any damage caused by failure to observe proper packing or to observe instructions for installation, by accident or in transit or elsewhere will not be covered by the Warranty. This Warranty is in lieu of all other Warranties expressed or implied, and no one is authorized to assume any liability on behalf of CLO or impose any obligation on it in connection with the sale of any product other than as outlined above. In no event will responsibility be assumed or implied for consequential damage arising from the theft of any product secured by a CLO security device, by delay of installation, interrupted operation or other causes.

## Important Safety Instructions

Read the entire users manual before attempting to use X-arm™.

Follow the Installation Instructions provided to correctly install X-arm™.

X-arm™ restricts movement based upon the TV size set on the side controls of X-arm™. The TV size must be set correctly before operating X-arm™.

Keep everything and everyone away from X-arm™ while in motion. Do not contact moving parts.

X-arm™ mounting bracket is intended for use only with the maximum weight of 180 pounds. Use with TVs heavier than 180 pounds may result in instability and cause injury.

To reduce the risk of injury, close supervision is necessary when an appliance is used near children.

Only use attachments recommended or sold by the manufacturer.

Do not use outdoors.

To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.

Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

Unplug from outlet when not in use and before servicing or cleaning.

Do not operate any appliance with a damaged cord or plug, or after the appliance malfunctions or is dropped or damaged in any manner. Return appliance to the nearest authorized service facility for examination, repair, or electrical or mechanical adjustment.

Connect to a properly grounded outlet only. See Grounding Instructions.

## Grounding Instructions

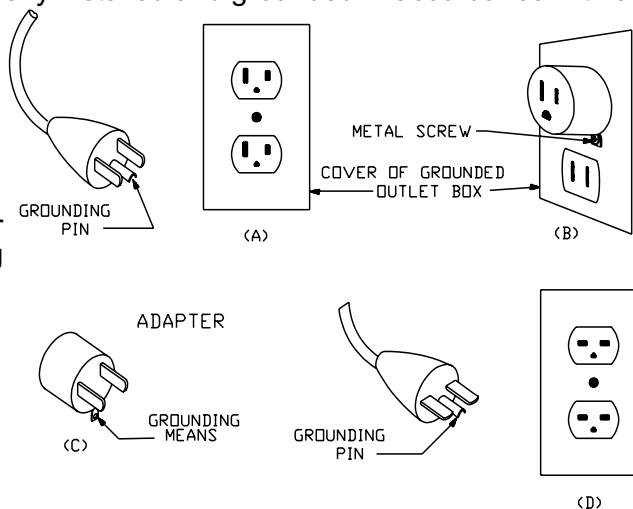
This appliance must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

This appliance is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

**DANGER** – Improper connection of the equipment-grounding conductor can result in a risk of electric shock.

The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the appliance is properly grounded. Do not modify the plug provided with the appliance – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.



AA210

This appliance is for use on a circuit having a nominal rating more than 120 V, 15 A and is for use on a circuit having a nominal rating of 120 V), and is factory equipped with a specific electric cord and plug. No adapter should be used with this appliance. If the appliance must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after the reconnection, the appliance should comply with all local codes and ordinances.

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