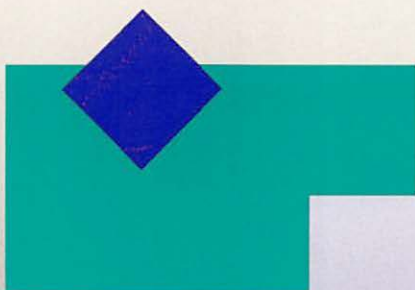


Radius Full Page Display™
User's Manual

radius™



Radius Full Page Display

User's Manual

April, 1991

Radius Inc.
San Jose, CA

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Introduction

Congratulations on your purchase of the Radius Full Page Display for your Macintosh computer. The Full Page Display is ideal for virtually all Macintosh applications, including word processing, spreadsheets, and presentations. Its full-page resolution displays clear, crisp images that are sharply defined and easy on the eyes.

Registration Card

A separate registration card is included with your Radius Full Page Display. Please fill it out and return it to Radius so we can provide you with the best customer support possible.

Overview of this User's Manual

This manual explains how to set up and use the Radius Full Page Display. The manual is divided into three chapters and includes a table of contents and an index.

Chapter 1*Unpacking* explains the proper way to remove the Full Page Display from its packaging.

Chapter 2*Using the Full Page Display* explains how to position the Full Page Display, connect the cables, and use its controls.

Chapter 3*Reference* contains a troubleshooting section as well as customer service and product line information.

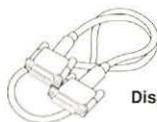
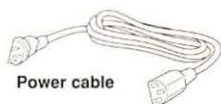
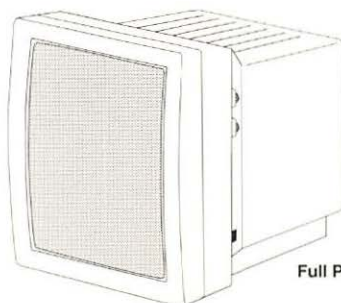
Chapter 1

Unpacking

Lift the Full Page Display out of its box and remove the foam casing that surrounds it.

Save your shipping box and packing material, including the foam insert. Use only the original packaging for shipping your equipment. Substitute packaging may not provide adequate protection.

Be sure you have all the components illustrated in the following diagram.



If you are missing any of the items shown on the previous page, please contact your Radius authorized reseller. If you are connecting the Full Page Display to a Radius interface card, which is sold separately, the interface card should already be installed in your Macintosh. Please refer to the installation instructions included with the Radius interface card.

The Full Page Display Tilt/Swivel Stand is an optional accessory that may be purchased from your Radius Authorized Reseller. This stand will enable you to rotate your display to the left and right and also up and down to ensure a comfortable view of the display.

Using the Full Page Display

The Radius Full Page Display System (FPD) is an economical, high resolution monochrome display that lets you view a full page of text or graphics without reducing or scrolling. Perfect for word processing, spreadsheets, and other business applications, the FPD offers a paper-like, flicker free image that maintains superior contrast, brightness and focus across the entire screen.

In 1986, Radius introduced the first Full Page Display for the Macintosh that revolutionized the way business professionals work. This redesigned FPD has all the features of the original plus compatibility with Apple's low-cost Macintosh models, the Classic and the LC. The combination of an FPD with the Macintosh LC or Classic offers users a low-cost, highly productive business system. In addition, the FPD supports the Macintosh II built-in video capability, eliminating the need for an interface card.

Positioning the Display

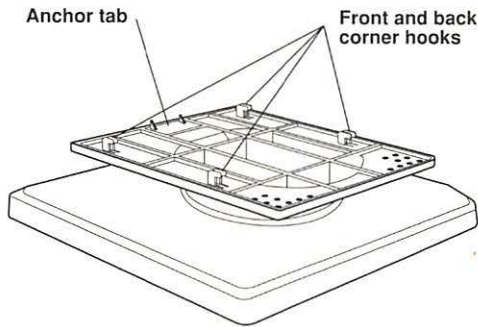
You may position the Full Page Display on either side or directly on top of your Macintosh, depending on the Macintosh model you have.

Leave at least a six-inch space between the display and any surrounding obstacles to provide adequate ventilation and prevent overheating.

Installing the Optional Tilt/Swivel Stand

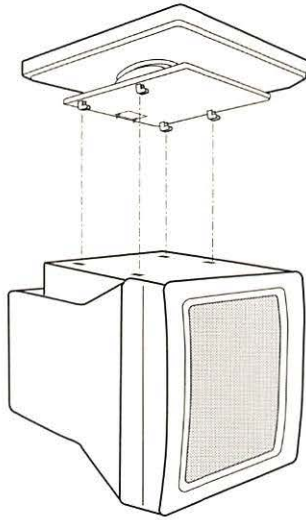
An optional Tilt/Swivel Stand is available for the Full Page Display which allows you to adjust the position of the display to a comfortable viewing level. The Tilt/Swivel Stand is available from your Radius Authorized Reseller.

The following diagram shows the components of the Tilt/Swivel Stand:



To attach the Tilt/Swivel Stand to the Full Page Display,

1. Turn the Full Page Display upside down, with the screen facing you.
2. Turn the Tilt/Swivel Stand upside down, with the front of the stand facing you. (The side with the anchor tab is considered to be the rear side.)
3. Fit the front and back corner hooks into the narrow slots on the bottom of the Full Page Display.



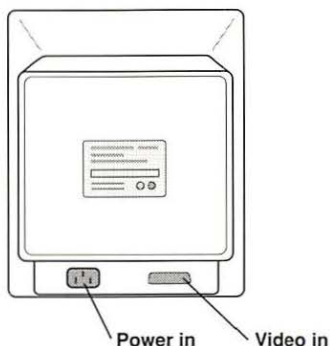
4. Slide the Tilt/Swivel Stand forward, so that the corner hooks are seated in the bottom of the Full Page Display. You should hear the anchor tab click when it is locked.
5. Turn the Full Page Display right side up, and place it in a convenient location at your Macintosh work station.

To remove the Tilt/Swivel Stand,

1. Turn the Full Page Display upside down, with the back facing you.
2. Use a flat head screwdriver and insert it under the back anchor tab.
3. Pry the anchor tab up until the tab hooks are unlocked and you can slide the Tilt/Swivel Stand towards the back of the Full Page Display.
4. Lift the Tilt/Swivel Stand directly upwards so that the corner and anchor tab hooks are released from the slots on the bottom of the Full Page Display.

Connecting the Cables

To connect the cables of your Full Page Display system, check the display's back panel and familiarize yourself with the location of the connectors:



1. VIDEO IN connects the Full Page Display to the Macintosh.
2. POWER IN accepts the power cable.

To connect the Full Page Display to your Macintosh,

1. Note the differences between the display end and the Macintosh end of the display cable. The display end of the cable has three rows of pins, where the Macintosh end only has two, as shown in the following diagram:



Display end



Macintosh end

2. Connect the display end of the display cable to the VIDEO IN socket on the Full Page Display's back panel.

3. Connect the Macintosh end of the display cable to the Macintosh's built-in video port, or to the appropriate Radius display interface on the back of your Macintosh.
4. Tighten the thumbscrews on both ends to keep the display cable from coming loose and to prevent radio and television interference.

To connect the power cable,

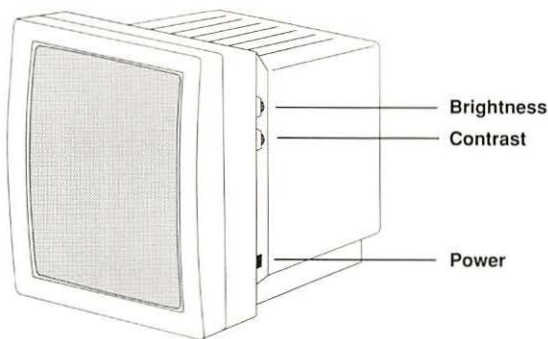
1. Insert the female end of the power cable into the POWER IN socket on the Full Page Display's back panel.
2. Connect the male end of the power cable to a grounded power outlet.

A switched AC outlet is available on some Macintosh models. This optional configuration will allow you to control the power to both the Full Page Display and the Macintosh through the Power On key at the top of the keyboard (to turn the system on) and through Shut Down from the Special menu (to turn the system off). You will need to purchase a shielded switched outlet power cable for this configuration.

If you need more specific information about Macintosh power connectors, please refer to your *Macintosh Owner's Guide* or your Radius Authorized Reseller.

Locating the Controls

The following diagram shows the location of the Full Page Display's user controls. They are located on the lower right-hand side of the display.



1. *Brightness* allows you to adjust brightness and distinguish between dark gray and black.
2. *Contrast* allows you to adjust contrast and vary the degree of difference between light and dark.
3. *Power* turns the display on and off.

Using the Power Switch

To turn on your Radius Full Page Display,

1. Make sure you have properly connected the display and power cables as described in the preceding section.
2. Press the Full Page Display's Power switch to ON.
3. Turn the Macintosh on.

If an image does not appear on the Full Page Display, be sure that both the power and display cables are properly connected, and adjust the brightness and contrast controls (see below).

To turn off your Radius Full Page Display,

1. Choose Shut Down from the Special menu in the Finder.
2. Turn the Macintosh off (on those models that do not turn off automatically with the Shut Down command).
3. Press the Full Page Display's Power switch to OFF.

Adjusting Brightness and Contrast

The correct setting for the brightness and contrast controls depends on the lighting conditions at your Macintosh work station, as well as your own personal preferences.

To adjust the brightness and contrast,

1. Refer to the preceding diagram if you are not sure of the location of these controls.
2. Turn both knobs clockwise for increased brightness and contrast.
3. Turn the brightness knob counterclockwise to set the desired brightness level.
4. Turn the contrast knob counterclockwise to set the desired contrast.

Because the two controls interact, you may need to fine tune your brightness setting.

Chapter 3

Reference

This chapter contains a troubleshooting section, information about Radius Customer Support and Service, and a listing of Radius products.

Warning:

TO PREVENT ELECTRICAL SHOCK, DO NOT REMOVE THE COVER OF THE RADIUS FULL PAGE DISPLAY. THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Troubleshooting

If you are not getting an image on your Radius Full Page Display, take a few minutes to try to isolate the difficulty. Following these few simple procedures will verify whether there is, in fact, a problem.

1. Verify that the power switches on your display and on your Macintosh are both in the ON position and that all power cables in your system are properly connected. Be sure the LED light below the Radius logo is on. Refer to *Connecting the Cables* for specific information.
2. Check to be certain that the display cable is securely connected to both the Full Page Display and the Macintosh. Refer to *Connecting the Cables* for details.
3. Try adjusting the brightness and contrast controls.

4. If neither your Full Page Display nor the Macintosh works, check to see if the power to the wall outlet has been interrupted.

If you are still not getting an image on your Full Page Display, contact your Radius Authorized Reseller for assistance.

Radius Customer Support and Service

Radius has created a worldwide authorized reseller network to provide extensive support in both sales and service. If you cannot return to the reseller from whom you purchased your Radius display system and do not know the location of the nearest Radius Authorized Reseller, please contact the Radius Information Center at (800) 227-2795. For reseller information, outside the United States, contact the local Radius International Distributor or write to:

Radius Inc.
International Sales Department
1710 Fortune Drive
San Jose, CA 95131-1744 USA

If you are experiencing problems, need answers to technical questions or information about product updates, you should contact your Radius Authorized Reseller for assistance.

If you have a problem, be sure that you have reviewed the steps outlined in the *Troubleshooting* section of this manual and have completed the following form before contacting your reseller. This will expedite the diagnosis and correction of your problem.

Radius Product(s) _____

Serial Number(s) _____

RadiusWare Version _____

Radius ROM Version _____

Macintosh Configuration _____

System Version _____

Finder Version _____

Other Peripherals _____

Applications (Versions) _____

INIT/CDEV Files Installed _____

If, after consulting with your Radius Authorized Reseller, you need further assistance, contact Radius Customer Support at (408) 434-1012, Monday through Thursday, 7:00 a.m. to 5:00 p.m., and Fridays 7:00 a.m. to 3:00 p.m., Pacific Standard Time.

Radius Customer Support can also be contacted via the following on-line information services:

<i>Service</i>	<i>Address</i>
AppleLink	RADIUS.TECH
CONNECT	RADIUS
CompuServe	76004,2155

You can contact the Radius Software Update Hotline at (800) 654-2822 for a pre-recorded message describing the latest software revisions available for all Radius products.

The Family of Radius Products

- Radius TV™ System for the Macintosh II Family.
- Radius Pivot™ Display Systems for the Macintosh SE/30, LC, and II Family. For use with Macintosh built-in video or the Pivot interface.
- Radius Color Pivot™ Display Systems for the Macintosh SE/30, LC, and II Family. For use with Macintosh built-in video or the Pivot interface.
- Radius Full Page Display™ Systems for the Macintosh Classic, SE, SE/30, LC, and II Family. For use with Macintosh built-in video or the FPD interface.
- Radius Two Page Display™ Systems (TPD/19 & TPD/21) for the Macintosh SE, SE/30, and II Family. For use with the Two Page Display interface.
- Radius Gray Scale Display™ Systems for the Macintosh II Family.
- Radius Color Display™ Systems for the Macintosh II Family.
- Radius DirectColor/8™ Systems for the Macintosh II Family.
- Radius DirectColor/24™ Systems for the Macintosh II Family.
- Radius DirectColor/GX™ Systems for the Macintosh II Family.
- Radius Rocket™ Accelerator for the Macintosh II Family.

- Radius Accelerator 16™ and Radius Accelerator 25™ Systems for the Macintosh SE.
- Radius QuickColor™ Graphics Engine for the Macintosh II Family.
- Radius QuickCAD™ Graphics Engine for the Macintosh II Family.
- Radius PrecisionColor™ Calibrator for Radius 8-, 16-, and 24-bit display systems.
- Radius Two Page Display™ Systems for the PC.
- Radius ImpressIt™ Software for the Macintosh LC, SE/30, and Macintosh II Family.

Appendix A: Specifications

CRT

Display size:	Diagonal: 15 inches
Phosphor:	P104
Image size:	Horizontal: 208 mm (8.2 inches) Vertical: 279 mm (11.0 inches)
Resolution:	(H) 640 × (V) 870 pixels
Glass surface:	Anti-reflective etch
Pixel density:	78 dpi
Warm-up time:	20 minutes to meet all specifications

Video

Video signal:	Analog RS-343A
Horizontal scan rate:	68.9 kHz
Vertical refresh rate:	75.0 Hz
Controls:	Brightness Contrast Power ON/OFF

Display Physical Attributes

Width:	318 mm (12.5 inches)
Height:	363 mm (14.3 inches)
Depth:	351 mm (13.8 inches)
Weight:	16 kg (35.5 lbs)

Environmental

Operating temperature:	10° to 35° C
Humidity, noncondensing:	20% to 80%
Operating altitude:	3,000 meters (10,000 ft.) maximum

Power

Input voltage range:	100 to 240 VAC, self-configuring
Frequency:	50/60 Hz, ± 3 Hz
Current:	1.2 amps
Consumption:	100 watts maximum
Cable:	6 ft. Power cable and display cable included

NOTE:

Specifications are subject to change without notice.

Appendix B: Regulatory Approvals

Safety: UL Listed, CSA Certified, TUV Licensed (Including Ergonomic Requirements per ZH1/618).

Ergonomic Statement:

Dieses Gerät erfüllt in Verbindung mit den hierfür geprüften weiteren Geräten Apple Macintosh die Anforderungen an Bildschirmarbeitsplätze im Bürobereich.

RFI: FCC Class B, Canadian DOC Class B, VDE Class B.

FCC Statement:

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/TV technician for help.

Modifications or changes to this product not expressly approved by Radius could void the user's authority to operate

the equipment. To insure compliance to FCC non-interference regulations, peripherals attached to this computer require shielded cables.

Canadian RFI statement:

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

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

ZZF Self certification statement for VDE B:

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß des Full Page Display in Übereinstimmung mit den Bestimmungen der Vfg. 1046/1984 funk-entstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Von Benutzer zusammengestellte Systeme, die dieses Gerät beihalten, müssen den Bestimmungen von Vfg. 1046/1984 entsprechen.

Radius Inc.

X-Ray Radiation Emission:

This product is in compliance with DHHS Rules 21 CFR, Subchapter J, applicable at the date of manufacture. Emission less than 0.5 mR per hour.

Appendix C: Radius Display Care and Maintenance

The following is a list of care and maintenance suggestions.

- Be sure to position the Radius display away from bright light sources to reduce the amount of light that is reflected from the screen.
- Do not expose the Radius display to heat sources such as direct sunlight or radiators. Excess heat can damage both electronic components and the case.
- Move the Radius display away from other equipment if radio frequency interference is suspected.
- Be sure to leave at least six inches of space between the Radius display and any surrounding equipment to provide sufficient clearance on both sides to allow for necessary air flow through the ventilation slits. Do not cover the ventilation area on top of the Radius display when it is in use — this may cause the display to overheat.

NOTE:

The Radius display will generate some heat, as will most electronic equipment. Do not become alarmed if the Radius display feels warm.

- Keep your Radius display in a dry environment. Excess moisture or a spilled liquid can damage the display circuitry.
- Fingerprints, dust, and grease can be removed from the display case and the screen with a damp, lint-free cloth or paper towel. A household glass cleaner (sprayed onto the cloth) can be used if necessary. Do not spray a cleaner directly onto the display screen or case. The liquid can drip inside the case and damage the display circuitry.

NOTE:

Do not use solvents or abrasives that may damage the surface of the Radius display.

- Operate your Radius display at a comfortable level of brightness, *not* at the maximum brightness setting.
- Use the Screen Saver (in the Radius Control Panel) to preserve the life of the phosphor in your screen.
- Turn your Radius display off when you have finished your work session.

Appendix D: Warranty

Limited Warranty: Radius Hardware

What is covered: All Radius hardware (but not software) defective in materials or workmanship.

Who is covered: You, as the original purchaser of this Radius product, are covered under this warranty. If you sell or give this product to someone else, that person will also be covered under this warranty.

For how long: One year from the original purchaser's date of purchase.

What we will do: Repair or replace the product, at our option, without charge and return it freight prepaid to an Authorized Radius Reseller.

What we will *not* do: Pay inbound shipping, transportation or insurance charges, or accept responsibility for loss or damage in transit.

What you must do: Return the defective product, all transportation and insurance charges prepaid, to an Authorized Radius Reseller within the country of original retail purchase. Please include your name, address, telephone number, a description of the problem and a copy of a bill of sale bearing a Radius serial number as proof of original retail purchase. If you do not know the location of an Authorized Radius Reseller in your area, please contact Radius at the address listed at the back of this manual.

Other conditions: This warranty does not apply if the Radius serial number has been removed or if the product has been damaged by misuse, accident, modification or unauthorized repair. Radius may use remanufactured, refurbished, or used parts and modules in making warranty repairs.

Radius hardware is designed to work with computers manufactured by other companies. It may be that certain features of software designed for such computers will not operate when used with our hardware. Accordingly, Radius does not warrant or represent that all

software will function uninterrupted or error-free when used in conjunction with Radius hardware.

THIS WARRANTY IS IN LIEU OF ALL WARRANTIES, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF PURCHASE OF THIS PRODUCT. IN NO EVENT WILL RADIUS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES FOR THE BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING DAMAGE TO PROPERTY AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY, EVEN IF RADIUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR IF THIS WARRANTY IS FOUND TO FAIL ITS ESSENTIAL PURPOSE. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Warning:

TO PREVENT ELECTRICAL SHOCK, DO NOT REMOVE THE COVER OF ANY RADIUS DISPLAY. THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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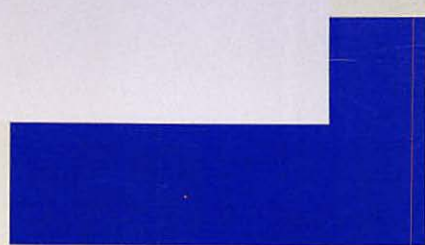

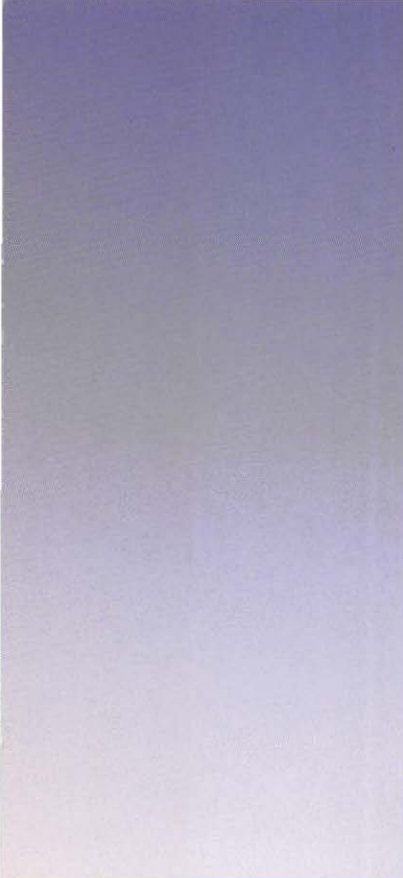
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