



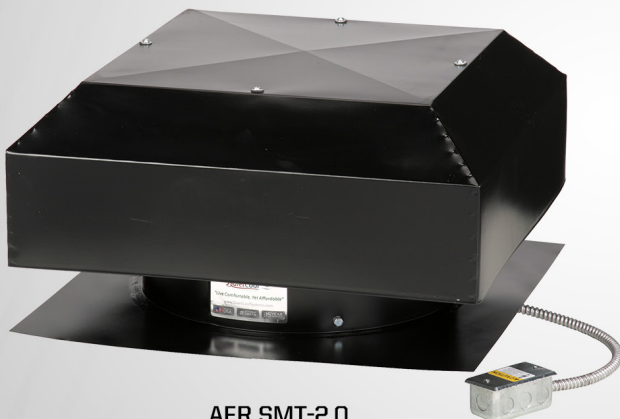
THE NATURAL CHOICE FOR ENERGY SAVINGS!

OWNER'S GUIDE

ROOF MOUNT MODELS

MODELS:

AFR & RM Models



AFR SMT-2.0



RM ES-2200



DO NOT THROW AWAY! SERIAL NUMBER FOR FAN IS LOCATED ON BACK COVER OF OWNER'S GUIDE. RETAIN IN A SAFE PLACE.

SEE // HEAR // FEEL
THE QUIETCOOL DIFFERENCE

GENERAL SAFETY INSTRUCTIONS

1. **Read Instructions** - All safety and operation instructions must be read. Failure to read and follow instructions as stated in this guide may void applicable warranty.
2. **Retain Instructions** - The safety and operating instructions should be kept for future reference.
3. **Heed Warnings** - All warnings should be followed.
4. **Follow Instructions** - All installation and operating instructions should be followed.
5. **Heat** - The QuietCool system should be situated away from heat sources.
6. **Damage Requiring Service** - Only qualified service personnel should service the QuietCool system. The user should not attempt to service the product.
7. **Building Codes** - Always follow Local Building Codes when installing appliances

CONTENTS

1. SYSTEM OVERVIEW.....	1
1.1 Introduction.....	1
1.2 Features	1
1.3 System Venting Requirements.....	2
2. INSTALLATION	3
2.1 Installing AFR Model Fans.....	3
2.2 Installing RM Model Fans	5
3. WIRING.....	8
3.1 Specialty Fan Wiring - Smart.....	8
3.2 Specialty Fan Wiring - Thermostat (Robert Shaw).....	9
3.3 Specialty Fan Wiring - Timer	10
4. SYSTEM OPERATING INSTRUCTIONS	11
4.1 QuietCool Smart Attic Fan.....	11
4.2 QuietCool Roof Mount Fans.....	11
WARRANTY	13



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1. SYSTEM OVERVIEW

1.1 INTRODUCTION

Congratulations on the purchase of your new QuietCool Specialty Series Fan!

The **QuietCool** Specialty Series was designed for every application imaginable. QuietCool Specialty Series fans dominate the market in energy efficiency. Our Specialty Series works great in practically all climate zones and most homes, mobile homes, and even warehouse buildings!

The QuietCool Roof Mount Fans offer great versatility for any system you are looking to put in. QuietCool Roof Mount Fans can be used as an attic fan, as a whole house fan with a duct, or as a whole house fan that pulls air through air intake grilles in multiple rooms.

New for 2018, we offer a smart roof mount attic fan. The AFR SMT-2.0 is the first roof mount smart attic fan on the market, and the most energy efficient too!

1.2 Series Features

- High Efficiency Design
- Designed and Built in California
- 15 Year Warranty
- Attic Fan (AFR SMT-2.0)
- Roof Mount Fans (RM ES-1100, RM ES-2200)

1.3 System Venting Requirements

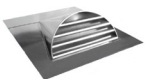


VERY IMPORTANT! - 1 SQUARE FOOT OF NET FREE VENT AREA PER 750 CFM

RECOMMENDED! - 2 TO 4 SQUARE FEET OF INLET VENTS PER FAN

Venting plays a very significant role in the performance of QuietCool fans. QuietCool recommends a minimum of 1 SQ. FT. of venting for every 750 CFM in the QuietCool system. If an attic has at least 1:750 attic venting, the QuietCool system will operate efficiently and effectively. If an attic has less than 1:750 attic venting, the system may not operate as efficiently, or effectively, as it could with 1:750 attic venting. But don't worry, the system will still operate if there is not enough venting.

Insufficient venting is a very simple problem to fix. Roofing contractors can add extra venting to most homes simply and easily. The most common types of venting is shown in the chart below.

Vent Type	Model Type	Average Size	Venting Sq. Ft.
Gable vent		12" x 19.5"	1.20
Dormer Vent		14" x 8"	0.70
Eave Vent		4" 5" 6"	0.03 0.04 0.07
Ridge Vent		4' - 12'	0.125 per ft
Soffit Vent		16" x 4" 16" x 6" 16" x 8"	0.19 0.29 0.39
O'Hagin Vent		Low/Medium Profile Tapered Low Profile Low Profile Flat High Profile	0.5 0.6 0.68 0.68
Turbine Vent		8" 12" 14"	.35 .79 1.1

*Note: This table is only a guideline and is not a guarantee of venting capacity.

READ BEFORE ATTEMPTING TO INSTALL AN **AFR** OR **RM** FAN

Getting Started

Always follow Local Building Codes because the fan may require specific fasteners or anchoring systems not discussed in this installation guide. **Installation should be done by a licensed roofing contractor.**

Safety Information

Safety precautions should be taken when performing the roofing work described in this installation guide. You can significantly reduce your risk of danger by following the below recommendations:

- Do not install the fan in wet or windy conditions
- Tie-off both yourself and your equipment when working on steep pitched roofs to avoid falls
- Wear safety glasses and protective gloves when using power tools
- Always wear slip-resistant shoes when working on the roof
- Do not cut through any rafters or structural members of the roof during installation

Ventilation Requirements

If the fan is being installed as an attic fan, in order for it to operate at maximum performance, your attic must have enough intake ventilation (net free area) to support the amount of air that your fan is moving. We always recommend 1 SQFT of attic venting per 750 CFM in the system.

Materials Needed

- | | | |
|--|--------------------------------------|-------------------------------------|
| • Cordless Drill with Nut Driver | • Reciprocating Saw | • Roofing Knife |
| • Self-Tapping Screws with Rubber Bonded Washers | • Measuring Tape | • Ladder Marker or Carpenter Pencil |
| | • Weatherproof Roofing Grade Sealant | |

Choosing the Right Location

Choose a location to install your QuietCool roof mounted fan that allows for balanced airflow throughout the attic space. We always recommend the fan to be installed centrally located on the roof three feet below the ridge line. This will allow you to access the fan very easily. Your roof mount fan should not be installed any closer than within 5 feet to an existing passive vent, ridge vent, or additional fan unit.

IMPORTANT: DO NOT CUT THROUGH ANY RAFTERS OR STRUCTURAL MEMBERS WHILE CUTTING THE VENT HOLE. ONLY CUT OUT THE ROOF DECKING.

2. INSTALLATION

2.2 Installing AFR (Attic Fan Roof) model fans

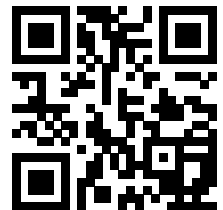
1. Determine in which area you would like to install your QuietCool Attic Roof Mount Fan.



IMPORTANT: After choosing the location where your roof mount attic fan will be installed, find the closest rafter to that location and determine if your roof has either 16" on center or 24" on center rafter spacing.

Installation Video:

Watch the video by scanning the QR code or visit www.QuietCoolSystems.com/support



2. Find the center point between the two rafters and mark it as the center of the vent hole. Partially insert a screw into the center point mark.

NOTE: If you have a tile roof, you will need to move the tiles out of the way before tracing and cutting. **(See Figure 2.2A)**

3. Go to the roof. Using the screw as a reference point, trace out a 16" diameter circle.
4. Use a reciprocating saw to cut out the traced hole pattern from the roof decking. Remove the cut out decking material from around the hole as needed. **(See Figure 2.2B)**
5. If you have a shingle roof, insert the reciprocating saw sideways between the shingles and roof decking. Starting at the 3 o'clock position of the vent hole, begin cutting in a sweeping motion under the shingles, cutting through any roofing nails or staples. Continue cutting counterclockwise around the vent hole until reaching the 9 o'clock position. Using a roofing knife, cut a 4 inch horizontal slit in the shingles at the 9 o'clock and 3 o'clock positions of the hole, **allowing the fan's flashing to slide underneath the shingles.**
6. Apply weatherproof material to the roof. **(See Figure 2.2C)**
7. Position the fan so that it is centered with the vent hole and allow the power cord to hang freely from the bottom of the fan unit. The power cord comes in 20 ft length. Make sure your fan is close enough to an outlet in your attic. **(See Figure 2.2D)**
8. Lifting the fan unit up at an angle, apply weatherproof caulking to the bottom side of the fan unit. This will help keep the fan in place and will seal nice and tight.

Figure 2.2A



Figure 2.2B



Figure 2.2C

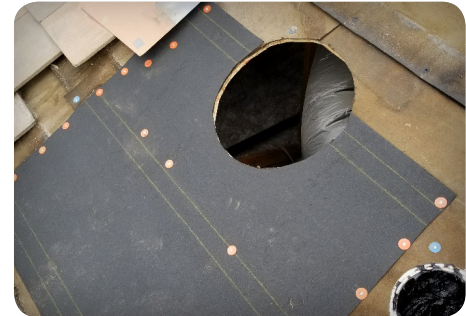


Figure 2.2D

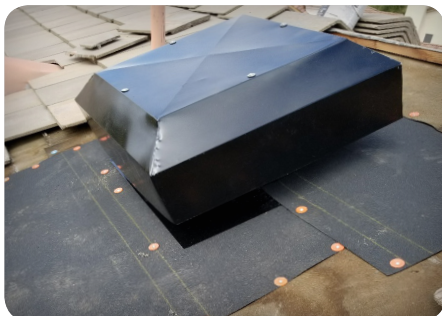
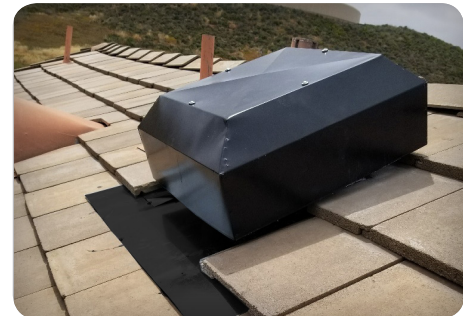


Figure 2.2E



Figure 2.2F



9. With all fan cables connected and hanging inside the vent hole, slide the fan unit underneath the shingles until the fan reaches the top of the hole. Secure the fan flashing to the roof. Finish caulking around the fan and flashing it into the roof to make a nice seal. **(See Figure 2.2E)**

10. Your install is complete! **(See Figure 2.2F)**

2.3 Installing RM (Roof Mount) model fans

1. Determine in which area you would like to install your QuietCool Roof Mount Fan. (See Figure 2.3A on pg. 7 for assistance in figuring out how to install the fan)



IMPORTANT: After choosing the location where your roof mount attic fan will be installed, find the closest rafter to that location and determine if your roof has either 16" on center or 24" on center rafter spacing.



IMPORTANT: If you are installing the RM fan as a ducted fan, it's time to find the exact location for your ceiling box and grille using a stud finder. Locate the wall studs and mark the location for the box to be installed. Minimum of 20" clearance required. Make sure the duct will fit between the fan location and the ceiling box location. Using a drywall saw, cut out the drywall.

2. Find the center point between the two rafters and mark it as the center of the vent hole. Partially insert a screw into the center point mark.



NOTE: If you have a tile roof, you will need to move the tiles out of the way before tracing and cutting. **(See Figure 2.24)**

3. Go to the roof. Using the screw as a reference point, trace out either a 14" (RM ES-1100) or 16" (RM ES-2200) diameter circle. **NOTE: The RM ES-2200 will only fit 24" on center.**
4. Use a reciprocating saw to cut out the traced hole pattern from the roof decking. Remove the cut out decking material from around the hole as needed. **(See Figure 2.2B on pg. 4)**
5. If you have a shingle roof, insert the reciprocating saw sideways between the shingles and roof decking. Starting at the 3 o'clock position of the vent hole, begin cutting in a sweeping motion under the shingles, cutting through any roofing nails or staples. Continue cutting counterclockwise around the vent hole until reaching the 9 o'clock position. Using a roofing knife, cut a 4 inch horizontal slit in the shingles at the 9 o'clock and 3 o'clock positions of the hole, allowing the fan's flashing to slide underneath the shingles.
6. Apply weatherproof material to the roof. **(See Figure 2.2C on pg. 4)**
7. Position the fan so that it is centered with the vent hole and allow the power cord to hang freely from the bottom of the fan unit. The power cord comes in 20 ft length. Make sure your fan is close enough to an outlet in your attic. **(See Figure 2.2D on pg. 4)**

7. Lifting the fan unit up at an angle, apply weatherproof caulking to the bottom side of the fan unit. This will help keep the fan in place and will seal nice and tight.
8. With all fan cables connected and hanging inside the vent hole, slide the fan unit underneath the shingles until the fan reaches the top of the hole. Secure the fan flashing to the roof. Finish caulking around the fan and flashing it into the roof to make a nice seal. **(See Figure 2.2E on pg. 4)**



IMPORTANT: If installing as an attic fan, you are done!



IMPORTANT: If you are installing the RM fan in a flat or sloped ceiling application without duct, find the location for your ceiling box and grille using a stud finder. Locate the wall studs and mark the location for the box to be installed (Figure 2.3B). Using a drywall saw, cut out the drywall (Figure 2.3C) Place the ceiling box (if applicable) over the ceiling cut out (Figure 2.3D). Attach the ceiling box using screws into the ceiling joists. (Figure 2.3E) Install the ceiling grille. (Figure 2.3F)



IMPORTANT: If you are installing the RM fan in a flat or sloped ceiling application without duct, find the location for your ceiling box and grille using a stud finder. Locate the wall studs and mark the location for the box to be installed (Figure 2.3B). Using a drywall saw, cut out the drywall (Figure 2.3C) Place the ceiling box (if applicable) over the ceiling cut out (Figure 2.3D). Attach the ceiling box using screws into the ceiling joists. (Figure 2.3E) Install the ceiling grille. (Figure 2.3F) Connect the duct from the ceiling box to the fan unit.

Figure 2.3B



Figure 2.3C

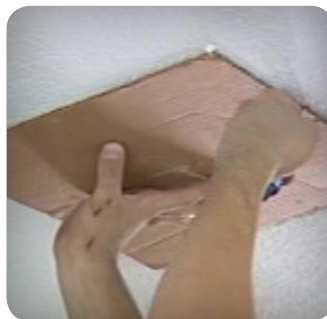


Figure 2.3D



Figure 2.3E

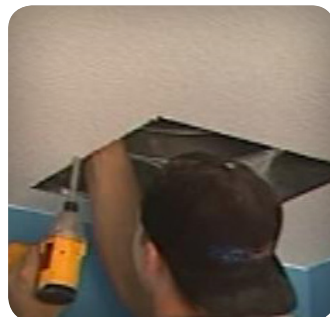


Figure 2.3F

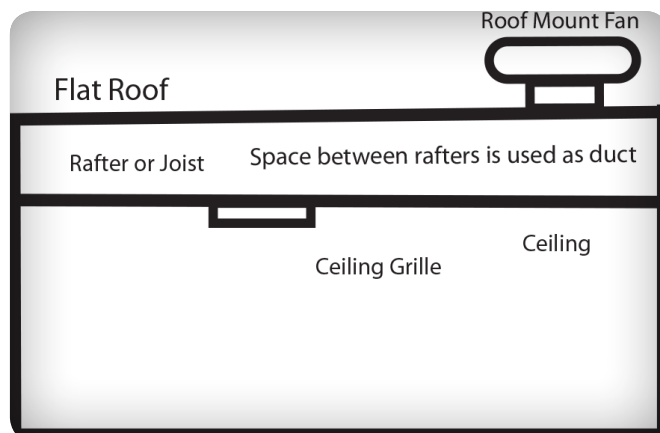


Figure 2.3A: Roof Mount Application Diagrams

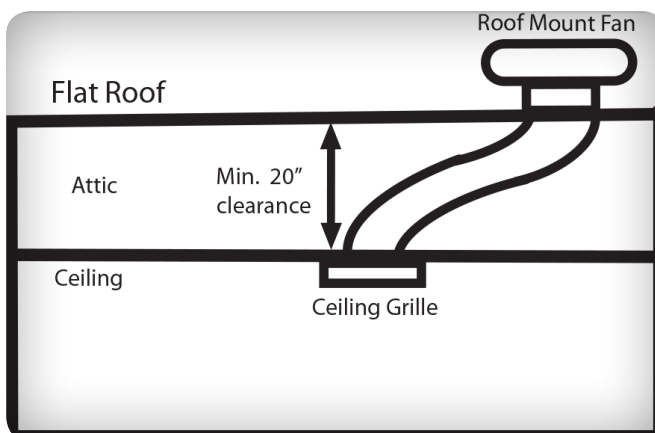


EXTREMELY IMPORTANT: It is very important that you install the RM fans correctly, as shown in the following diagrams, as it will dramatically affect the sound level of the fan. **NEVER** install the ceiling grille directly underneath the fan. Always offset at least two feet.

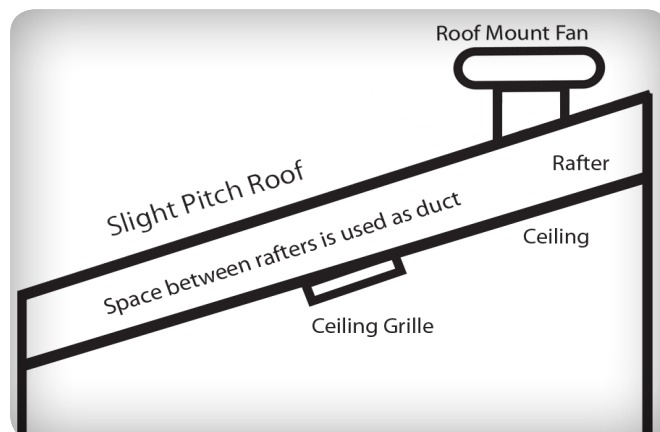
Flat Roof - No Duct: Works with CRB and FLT Models



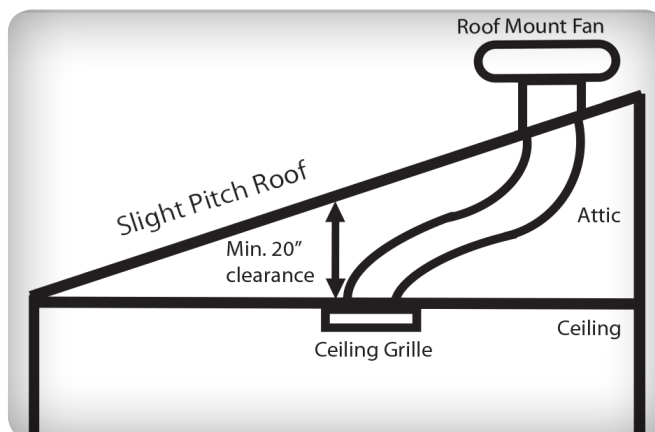
Flat Roof - With Duct: Works with CRB and FLT Models



Sloped Roof - No Duct: Works with SLP Models



Sloped Roof - With Duct: Works with SLP Models



3. WIRING



NOTE: Wiring Diagrams are for examples ONLY. Wiring should be done by an experienced electrician.



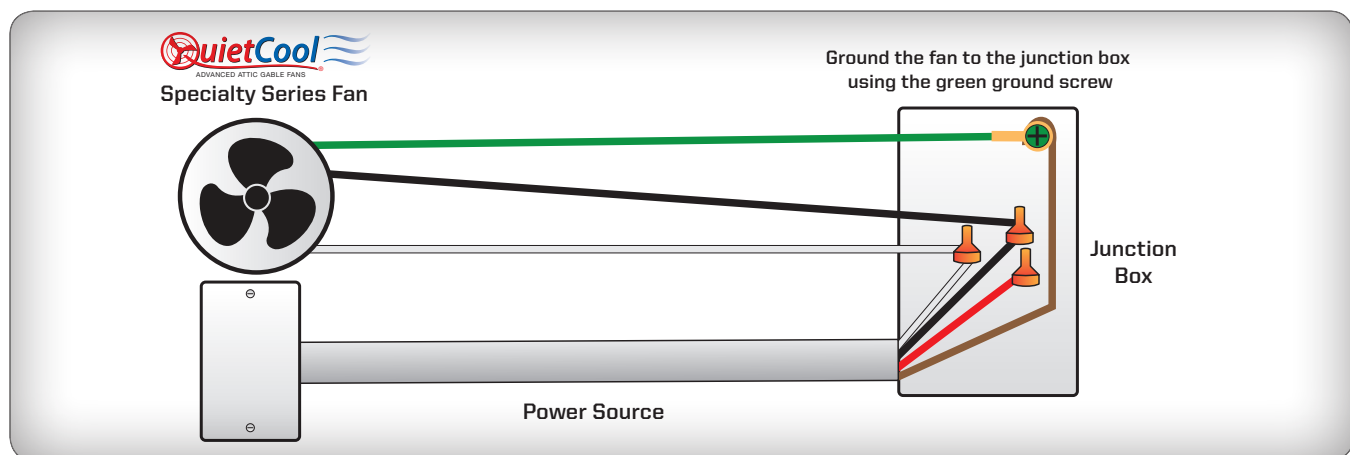
NOTE: Your fan may have come with the thermostat pre-wired to a power cord. If this is the case, simply mount the thermostat or junction box, find a power source in your attic, and plug the fan in. If you would like to hard-wire the fan, or it is required by your local building codes, please follow the wiring instructions below.

3.1. Specialty Fan Wiring - Smart (AFR SMT-2.0)

If you purchased a specialty fan with a smart motor, the fan has the thermostat and humidistat built into the motor. This makes the installation extremely simply.

1. For this installation, you will need a 2 wire Romex.
2. Open up the junction box from the fan. Remove the power cord. Bring your 2 wire Romex from the power source into the junction box.
3. With a wire nut, tie the white common wire together. Then tie the black wires together.
4. Ground the green wire from the fan and the ground wire from the Romex to the junction box.
5. **TO DISABLE THE HUMIDISTAT, TIE THE BLACK WIRES AND THE RED WIRE TOGETHER.**

Figure 3.1A: Smart Attic Fan at the Junction Box



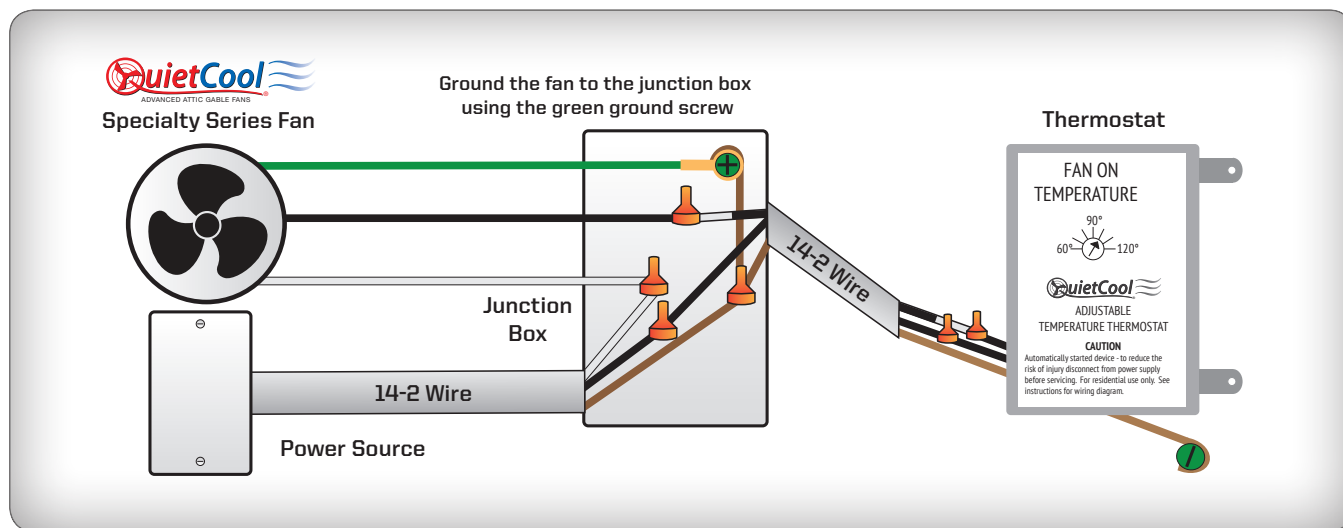
NOTE: When the Smart Attic Fan is connected to power for the first time, it will start in test mode. It will run for 60 seconds to ensure it runs properly. After 60 seconds, if the temperature is in operating range (as shown on page 11), the fan will continue to run. If the temperature is not in operating range, the fan will shut off. If the fan does not come on the first time it is connected to power, there may be a problem with the wiring. Please contact us if you have any issues.

3.2 Specialty Fan Wiring - Thermostat (RM ES-1100, RM ES-2200)

For wiring of a Specialty Series Fan with a Robert Shaw thermostat. This wiring method works with our RM models but we do not recommend using it with a RM model fan that is being used as a whole house fan. **(See 3.2A wiring diagram)**

1. Mount a junction box for your thermostat in the best location for thermostat readings which is usually on the wall next to the light switch or garage door opener in the garage. Begin wiring the thermostat.
2. With a 3 wire Romex, tie the black wire to the black wire from the thermostat.
3. Tape the white common wire on both sides of the 3 wire Romex because we will be using this as our switch leg.
4. Tie the red wire and the taped white wire together.
5. Attach the ground wire to the ground screw on the timer.
6. In the fan's junction box, tie the black wire from the fan to the taped white wire.
7. Tie the two remaining black wires together. Then, tie the remaining copper wires together.

Figure 3.2A

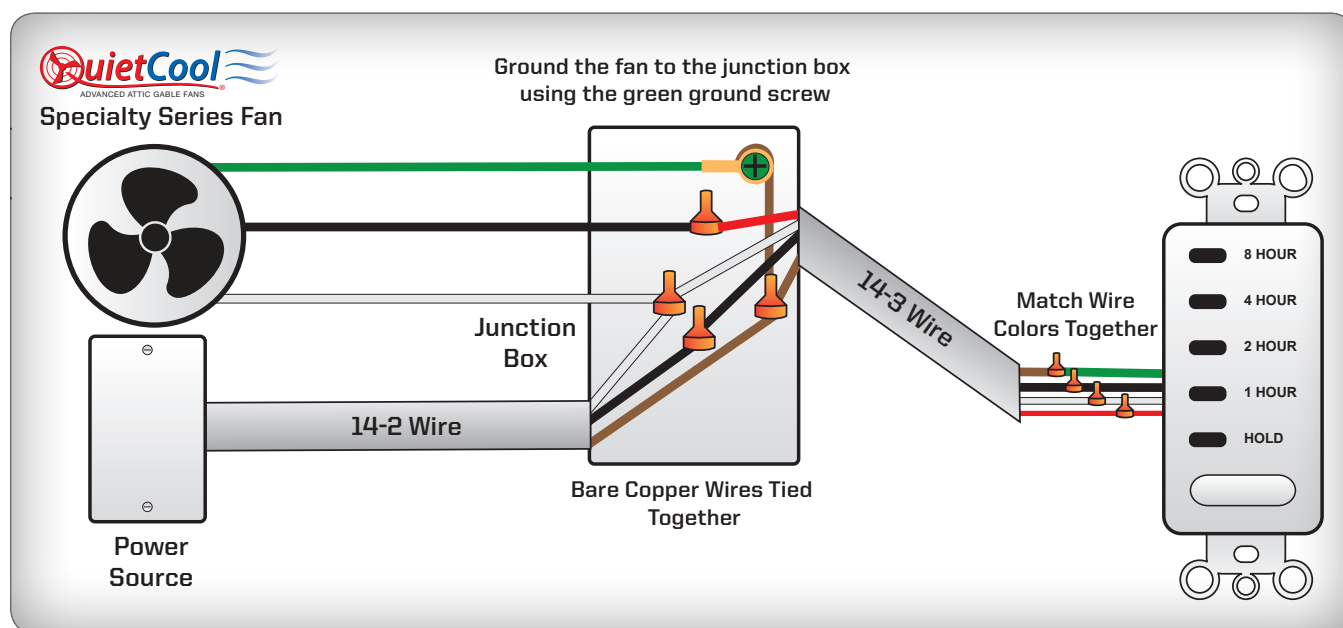


3.3 Specialty Fan Wiring - Timer

For wiring of a Specialty Series Fan with a timer. This wiring method works with all of our Specialty Series fans.

1. For this installation, you will need a 2 & 3 wire Romex, and an 8 Hour Timer.
2. Begin wiring the timer. From your 3 wire Romex, using a wire nut, tie the two red wires together, the two white wires together, the two black wires together, and the two ground wires together.
3. Open up the junction box that is connected to the fan. Bring your 2 wire and 3 wire into the junction box.
4. Tie the white common wires from the fan, the power source, and the timer together. Then, using the green ground screw, ground the green wire from the fan to the handy box.
5. With a wire nut, tie the black wire from the fan to the red wire from the timer.
6. Then, tie the black wire from the power source to the black wire from the timer.
7. Lastly, tie the copper ground wire from the power source to the copper ground wire from the timer.

Figure 3.3A



4. SYSTEM OPERATING INSTRUCTIONS

4.1 QuietCool Smart Attic Fan (AFR SMT-2.0)

QuietCool Attic Fans work almost everywhere, anytime. During the summer, an attic can be 40-50 degrees hotter than the outside temperature, which in turn heats up the house much faster. With an attic fan, you can cool the attic to the same temperature as it is outside, greatly reducing the house from heating as quickly.

With the QuietCool Smart Attic Fan, gone are the days of having to adjust the thermostat for your attic fan. Featuring a built-in thermostat and humidistat, the self-adjusting, 10-speed ECM motor is always reading the temperature and humidity in the attic.

When the fan detects temperature over 80 degrees, or humidity over 60%, the Smart Attic Fan comes on at the lowest speed. As the attic starts to heat up, the Smart Attic Fan automatically adjusts it's speed.

AFR SMT-2.0 Attic Fan - Roof

Temp.	80°	85°	90°	95°	100°	105°	110°	115°	120°	125°+
Humidity	60%+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Speed	1	2	3	4	5	6	7	8	9	10
CFM	1015	1118	1273	1427	1557	1731	1840	2030	2116	2116
Watts	26	35	47	62	81	104	129	159	170	170

*All specs are approximate. For the most up-to-date specs, please visit QuietCoolSystems.com

The QuietCool Smart Attic Fan will help your attic stay cooler than with a traditional single-speed attic fan, and will help save you energy by running the fan at a lower speed (thus a lower wattage) when the attic is not as hot.

4.4 QuietCool Roof Mount Fans (RM ES-1100 and RM ES-2200)

The QuietCool (RM) Roof Mount Fans are the most versatile fans that we offer. They can be used as an attic fan, a whole house fan with a duct, or a whole house fan with multiple inlet vents. QuietCool Roof Mount Fans also work where a conventional QuietCool Whole House Fan will not. Roof Mount fans work with homes that have a sealed attic, manufactured homes with no attic, homes with cathedral ceilings, and even industrial buildings such as warehouses.

If you installed your Roof Mount as a whole house fan, run the fan when it is cooler outside than it is inside your home. Be sure to crack open a few select windows in your home and let the Roof Mount fan do the rest.

If you installed your Roof Mount as an attic fan, set your thermostat and let it run! When installed as an attic fan, it is effective almost everywhere, almost anytime.

If you have any trouble installing or operating your new **QuietCool** Specialty Series Fan, please visit our website at www.QuietCoolSystems.com or call us at 951-325-6340 for support.

QuietCool is Proudly Designed and Built in California



SPECIALTY SERIES FANS LIMITED WARRANTY

15 YEAR LIMITED WARRANTY QUIETCOOL SPECIALTY SERIES FANS



QC Manufacturing Inc. extends this warranty to the original purchaser of the following QuietCool Specialty Series Fans ---- AFG SMT-3.0, AFG PRO-3.0, AFR SMT-2.0, GA ES-1500, GX ES-1100, RM ES-1100, RM ES-2200 ---- installed and used in a residence under normal conditions within the United States:

- A. Fifteen year coverage applies to the QuietCool motor fan assembly. At our option we will repair or replace any part of the assembly should it fail to operate during the first fifteen years from the date of original purchase.
- B. One year coverage for all other components including grills, housings, controls and accessories furnished by QC Manufacturing Inc. At our option we will repair or replace any part which fails as a result of defective material or workmanship during the first year from the original date of purchase.
- C. This warranty does not cover any of the following:
 - 1. Incidental or consequential damage resulting from the operation of our equipment or any malfunction thereof.
 - 2. Cost of service calls to diagnose the cause of problems or the labor charge to un-install any components.
 - 3. Product failure or damage due to faulty installation, abuse, misuse, unauthorized alteration to factory specs, lack of maintenance, or transportation damage.
 - 4. Shipping or postage for warranty claims.
- D. To obtain service under this warranty, contact the dealer where you purchased the equipment. If you are unable to find or reach your dealer, contact Customer Service at QC Manufacturing, Inc., at the number below
- E. Registration is no longer required for QuietCool fans. If service is required under this warranty, you must retain your proof of purchase.

This warranty is the only warranty extended by QC Manufacturing, Inc. to purchasers or suppliers of our equipment. QC Manufacturing Inc. disclaims all other warranties, express or implied, that arise by operation of the law.



PRODUCT INFORMATION

QC Serial #

QC Serial #

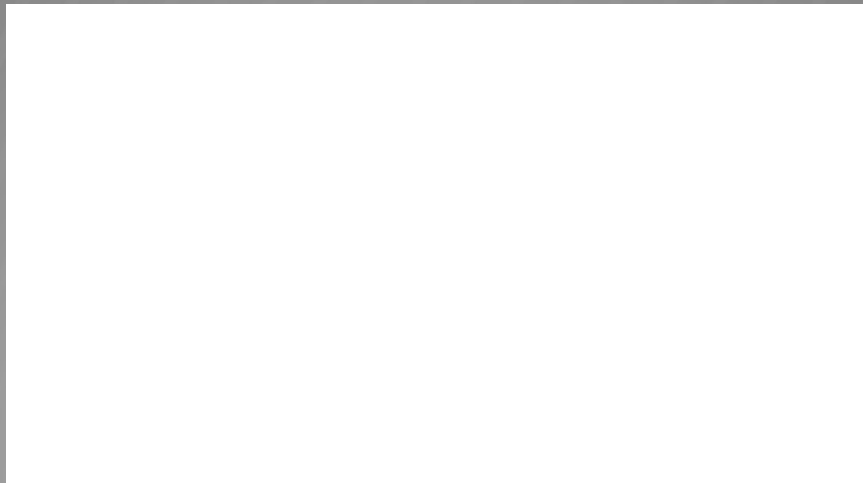
QC Serial #

QC Serial #

Rev. 3/20/18

QuietCool is Proudly Designed and Built in California

Fan Serial Number Information



Retain for your records. Serial number is required for warranty purposes.

