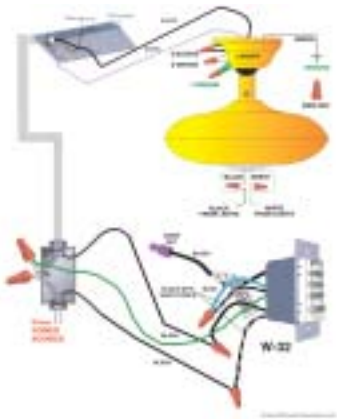
Inteli-Touch Series

Inteli•Touch™



Inteli•Touch™ RMM-V Information

Casablanca's Inteli•Touch control system introduced the world to the first computerized ceiling fan. Computer technology enables the system to use the two wires already in place in your home so costly electrical work is not required; a third wire is not needed.

In addition to allowing fan speed control, full range light dimming, and totally silent operation, Inteli•Touch offers a host of efficient programmable features that clearly distinguishes Casablanca from the competition. Nine different Casablanca fan series are available with this technology.

Variable Speeds

Select from 6 various fan speeds in forward and reverse for perfect comfort level and room ambience.

Fan Minder®

Automatically adjusts the speed of the fan as you sleep to compensate for cooler night air for all-night comfort.

Safe-Exit®

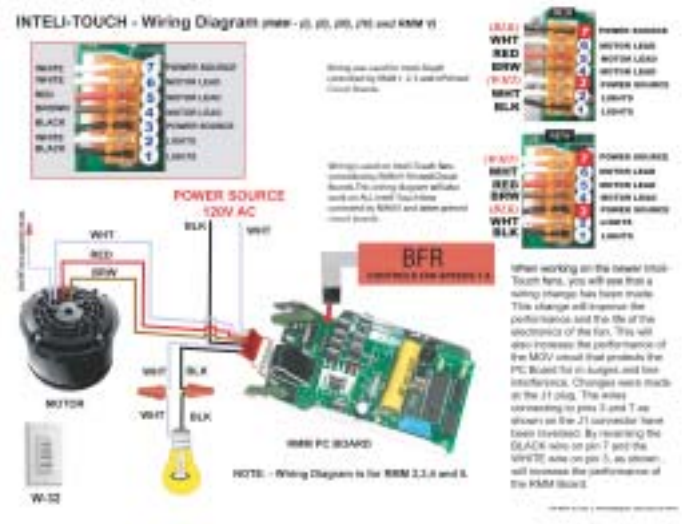
Turns lights off 30 seconds after pressing the light button, giving ample time to leave a room without stumbling in the dark.

Home-Safe®

Provides a controlled lighting cycle that makes your home look occupied when you're not there.

Light Minder®

Can automatically turn lights off two hours after they are turned on. A real energy saver!



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HI-REL OPERATIONAL NOTES

When using the Inteli-Touch wall control unit to program the fan by using the light-fan-power buttons, you may notice some of the following conditions:

- Lights flickering
- Irregular blade rotation
- Motor noise

This is caused by the use of the light and fan control buttons when you are programming the fan. The use of these buttons causes brief electrical transients on the AC power sine wave and is not a problem. When programming is completed and the buttons have been released, operation will return to normal.

Occasionally, electrical transients may cause the memory of the microcomputer to default or be “scrambled”. To reset the microcomputer:

1. Turn OFF power
2. Wait 3 seconds
3. Turn ON power
4. Reprogram to desired mode

Normal operation will return.

The Inteli-Touch wall control unit may feel warm to the touch. A small amount of heat is normal for the Inteli-Touch wall control unit.

THEORY OF OPERATION

The major electrical modules that comprise your Casablanca fan are,

Inteli-Touch wall control unit

RMM (Recognition & Memory Module) control logic board

LDM (Light Drive Module)

BFR (Bi-directional flow regulator)

Motor (with attached flywheel)

The quiet motor operation that you expect from your fan is directly related to the AC power waveform. The Inteli-Touch wall control unit is an active electronic control that passes an uninterrupted AC sine wave to the fan continuously except during program mode. The wall control unit is utilized to provide AC waveform signals or instructions that are interpreted by the microprocessor chip on the RMM board.

The control center for the fan is the RMM board with the microprocessor chip and processor memory. The microprocessor chip interprets the instructions provided from the wall control unit. The microprocessor chip/memory then controls all fan functions. The microprocessor controls one of six separate electronic switches (known as triacs) which in turn selects one of six available motor speeds. On speed six (high speed), a triac controls the motor directly. On speed five, a triac directs current first through a voltage dropping resistor in the BFR before going to the motor. This reduces the voltage to the motor so that it runs slower. On slower speeds, other triacs progressively switch higher resistances in series with the motor. Direction of fan rotation is controlled by a relay on the RMM.

The BFR is a flexible resistor array with five series resistors with taps at the junctions. The BFR is adhered to the motor housing which acts as a sink for the heat generated by the resistors.

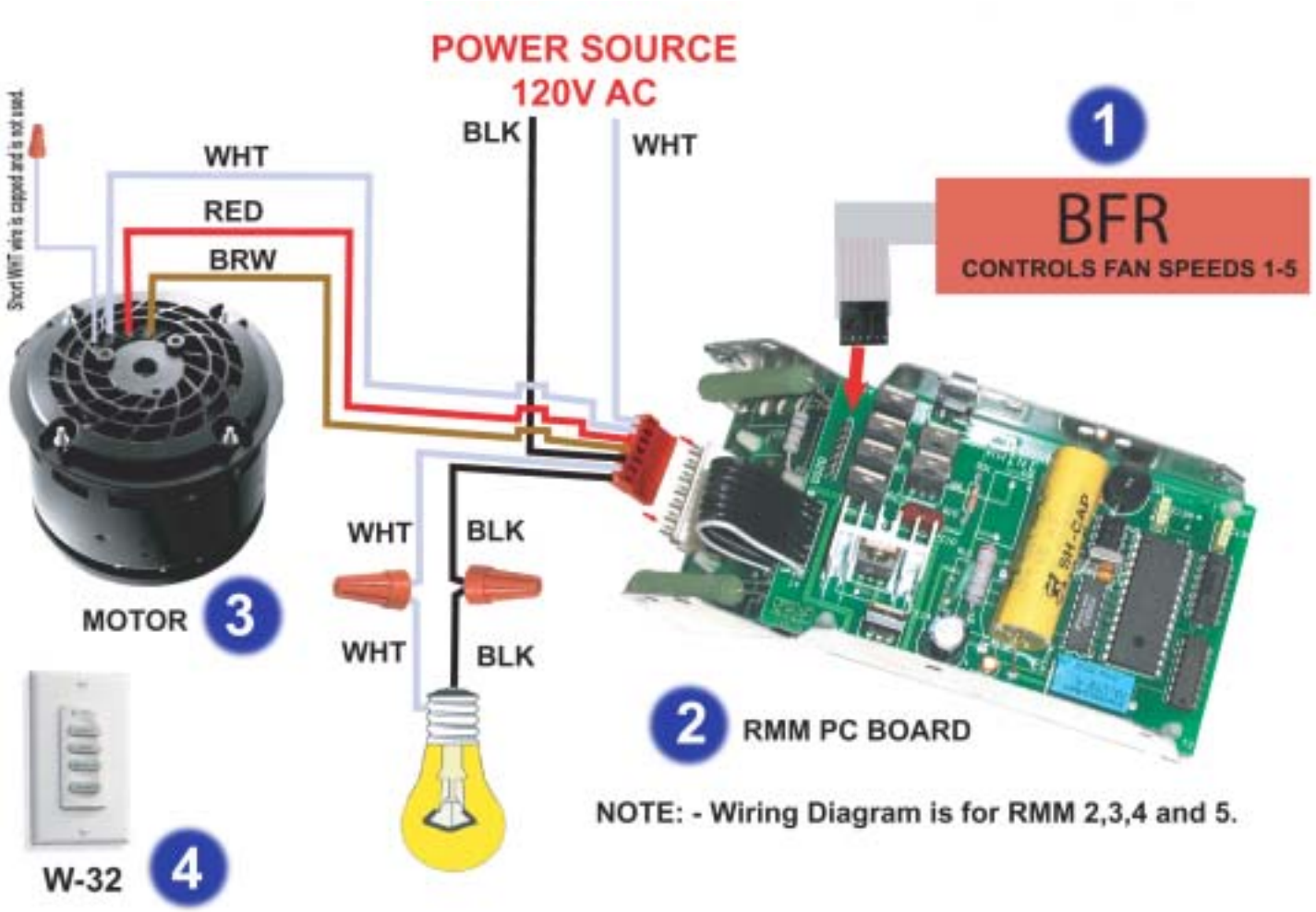
Light intensity and ON/OFF operation are controlled through another triac on the RMM. This triac is instructed by the microprocessor to perform in the manner of a light dimmer.

NOTE: Any time a light bulb is to be changed, the ON/OFF switch should be in the OFF position since AC power is still present at the light socket(s).

TYPE 2 - 5 RMM-II, RMM-III, RMM-IV & V REPAIR

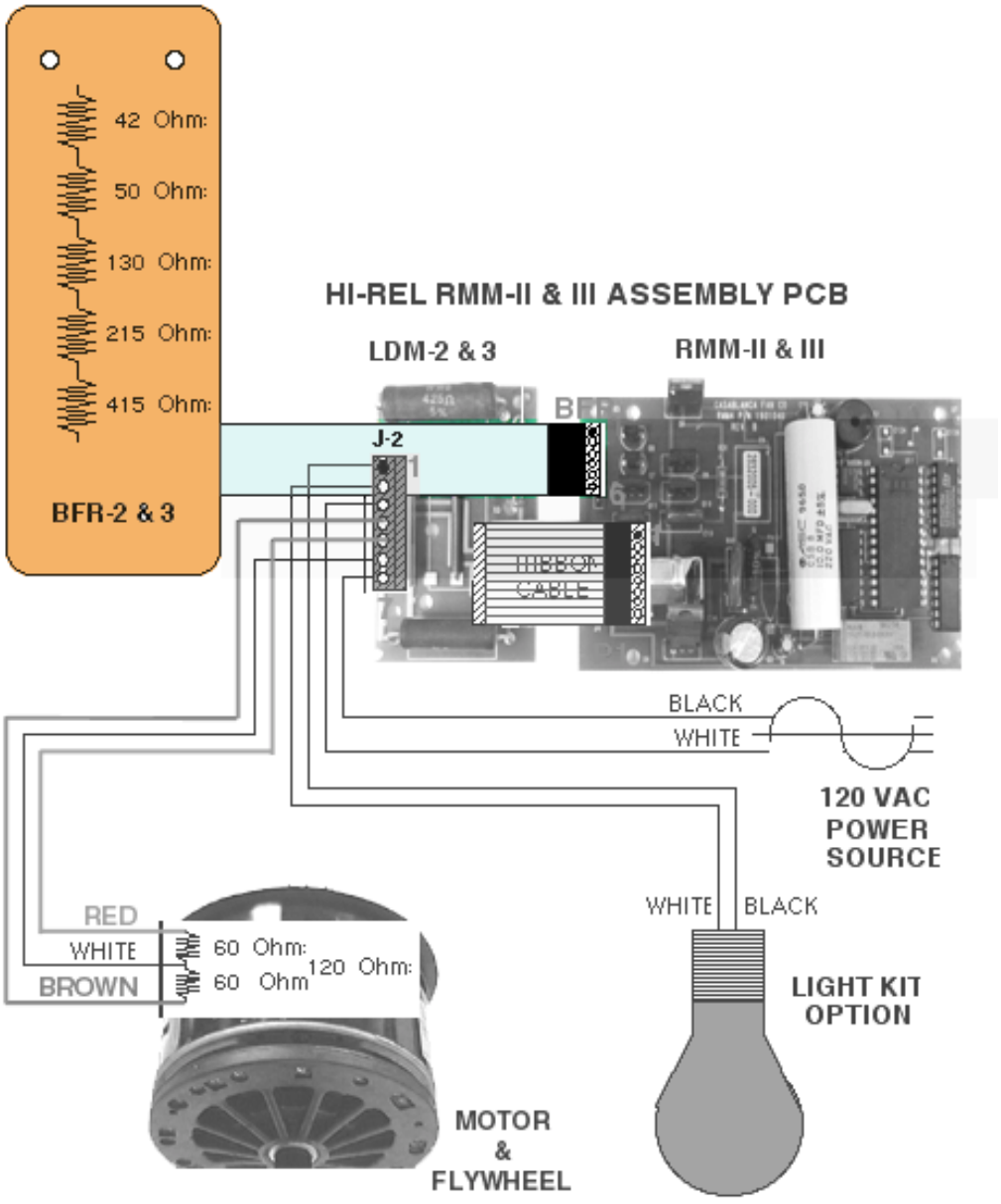
1. BFR Type-2 & 3 (Bi-directional Flow Regulator)
2. RMM-II,III,IV & V (Receive Memory Module)
3. Motor Unit
4. W-32 or W-33 Wall Switch

INTELI-TOUCH Hi-Rel RMM-II, RMM-III, RMM-IV & RMM-V WIRING DIAGRAM



1 BFR Type 2 & 3 (Bi-Directional Flow Regulator)

HI-REL RMM ASSEMBLY WIRING DIAGRAM



DESCRIPTION

The BFR is a flexible, printed circuit resistance network of five resistors for the motor drive, diving speeds 1 throw 5 of the motor. The BFR also contains two power resistors used in the power supply circuitry for the RMM.

NOTE: Sharp bending MUST be avoided!

*BFR Replacement - **CONTINUED***

*BFR Replacement - **CONTINUED***

HI-REL BFR REPLACEMENT

To test or replace a BFR it is necessary to partially disassemble the fan.

CAUTION: SHARP BENDING OR FOLDING OF THE BFR COULD DAMAGE IT. HANDLE WITH CARE.

1. TURN POWER OFF BEFORE DISASSEMBLING FAN.

2. Remove the blades and blade holder assemblies.

3. Remove the housing thru-bolts while holding the bottom plate in place.

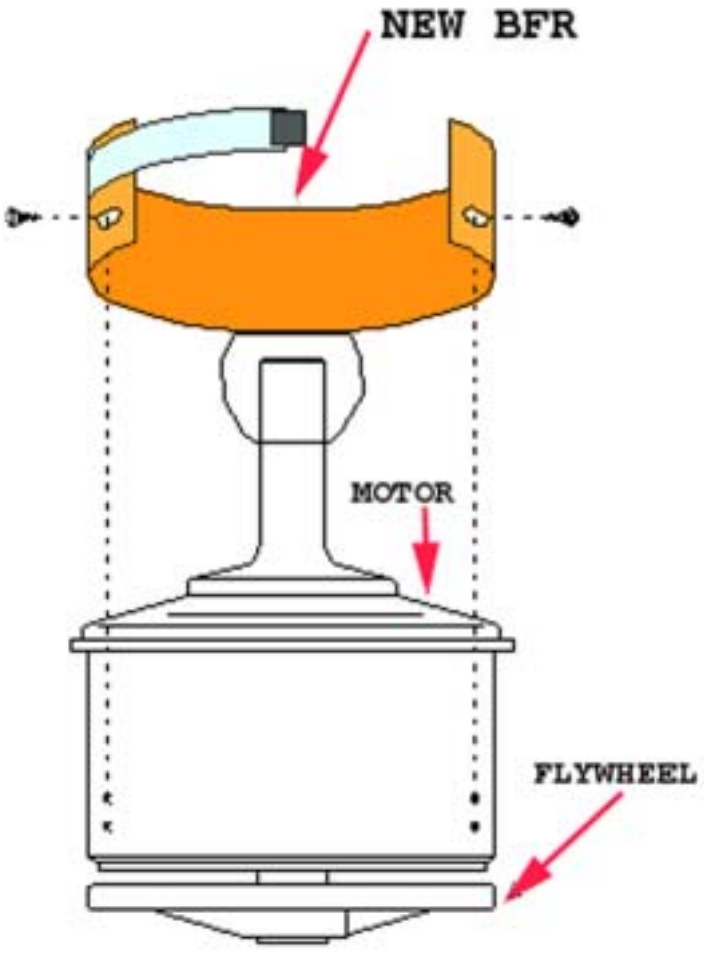
4. Remove the bottom plate and center band.

5. To test for a defective BFR remove the BFR connector from the RMM board and plug a new BFR into the RMM board. If the problem is eliminated, replace the BFR as follows:

To remove the defective BFR, the RMM support shroud must first be removed. To do this, first remove both connectors from the RMM board by grasping the edges and gently pulling out with a very slight rocking motion. Loosen the two support screws to remove the RMM support. Now completely remove the two support screws. CAREFULLY peel the BFR from the motor housing, starting at one end. Clean any remaining adhesive from the motor using naphtha or lighter fluid.

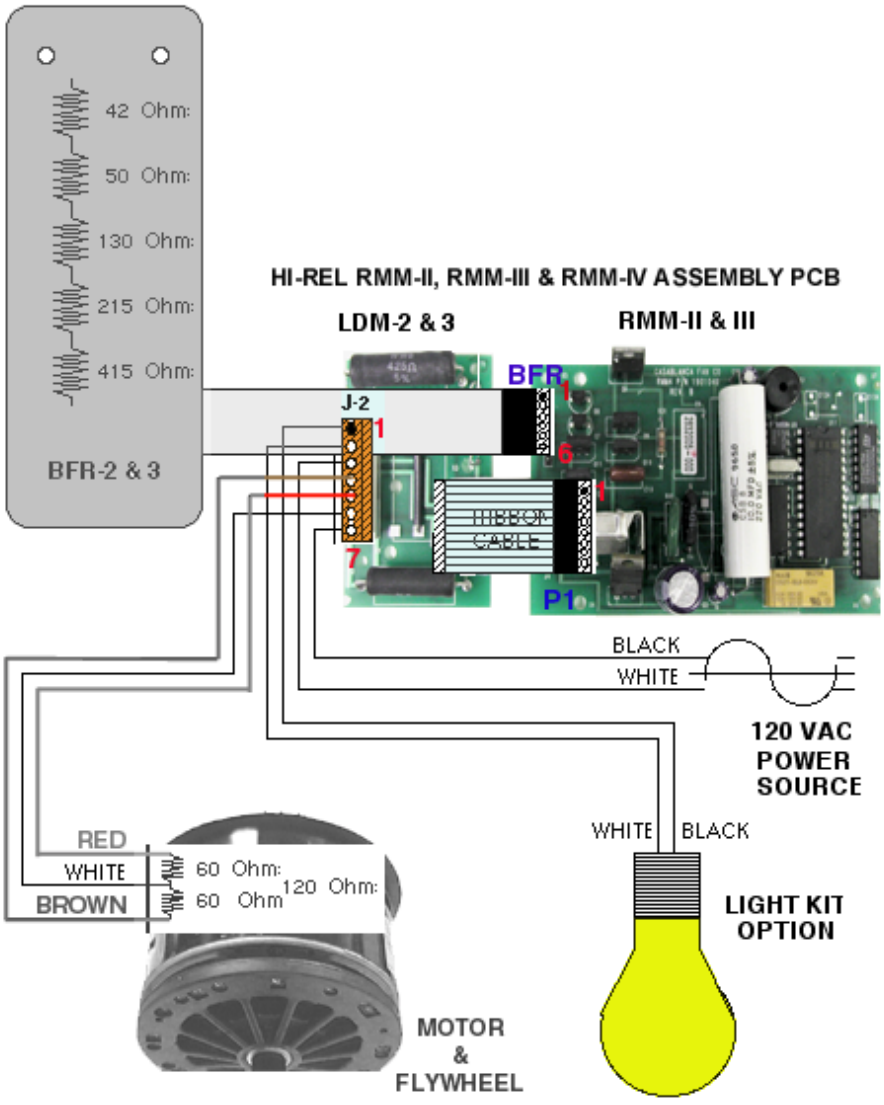
6. CAREFULLY peel the paper backing from the new BFR. CAREFULLY position one end over the support screw hole, then gently but firmly wrap the BFR around the motor, CAREFULLY keeping it in alignment so that the holes and slots in the ends of the BFR will align with the holes in the motor. Make sure there are no air bubbles or wrinkles in the BFR; it must adhere as tightly as possible to the motor. Next, reinstall the two support screws and slide the RMM support into place. Tighten the screws and CAREFULLY reinstall the connectors, insuring the cable connector pin #1 matches with jumper pin #1.

7. To complete the re-assembly, raise the center band and bottom plate into place. Use several pieces of masking tape to hold the assembly together while inserting the thru-bolts.



2 RMM Type 2, 3, 4 & 5 (Recognition & Memory Module)

HI-REL RMM ASSEMBLY WIRING DIAGRAM



DESCRIPTION

The microcomputer sends commands to the light drive module, (LDM), which in turn controls the on/off and dimming range of the light fixture. Note: The microcomputer "reads" the presence of the LDM by detecting the operation of a small light emitting diode within the optocoupler on the LDM.

The microcomputer also controls the direction of the fan through a small reversing relay mounted on the RMM circuit board.

To control motor speed, the microcomputer selects one of six outputs, each of which turns on an electronic switch known as a triac. These six triacs are located on the RMM circuit board. In high speed, a triac drives the motor directly. In all other speeds, a triac drives the motor through one or all five dropping resistors contained within the BFR. This reduces power to the motor while maintaining a pure sine wave drive.

RMM PC BOARD Replacement - ***CONTINUED***

RMM PC BOARD Replacement - ***CONTINUED***

HI-REL PCB REPLACEMENT

To test or replace an RMM or HI-REL assembly, it is necessary to partially disassemble the fan. Proceed as follows:

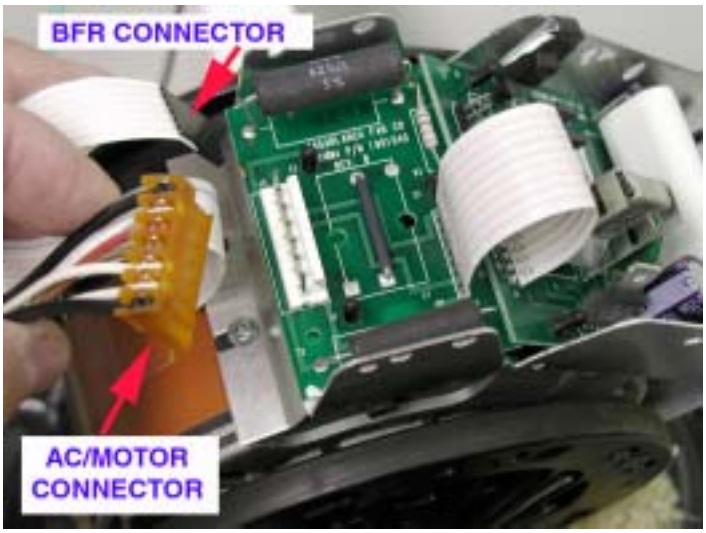
TURN POWER OFF.

1. Remove the blades and blade holder assemblies.

2. Remove the housing thru-bolts while holding the bottom plate in place.

3. Remove the bottom plate and center band.

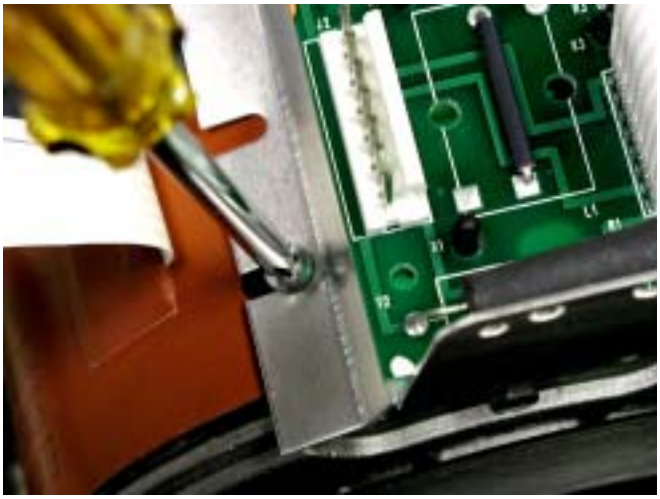
4. To test for a defective RMM or HI-REL assembly, remove the two connectors (AC/Motor & BFR) by grasping the edges and gently pulling out with a very slight rocking motion. Plug the connectors into a new RMM board.



(Figure #1)

Be sure thatthe connector and jumper pin positions are aligned and pin #1 is inserted into pin #1.

5. If the problem is eliminated, remove the defective ASSEMBLY. To remove the ASSEMBLY, unplug the two (2) plugs as shoen in (figure #1) blow. Next loosen the two (2) holding screws ion the motor as shown in (figure #2)



(Figure #2)

and gently pull the unit away from the motor as shown in (figure #3) shown below.

(Figure #3)

RMM PC BOARD Replacement - ***CONTINUED***

RMM PC BOARD Replacement ***- CONTINUED***

RMM V PC Board
> With UP and DOWN light feature
Part Number 9901150

INFORMATION ONLY

Casablanca Fan Co. has updated the electronics in the Inteli-Touch® to level 5, the New RMM V has been the replacement board in product since December 2000. The NEW RMM V will be used as the replacement for all levels of RMM PC boards, such as the RMM II, RMM III and RMM IV.

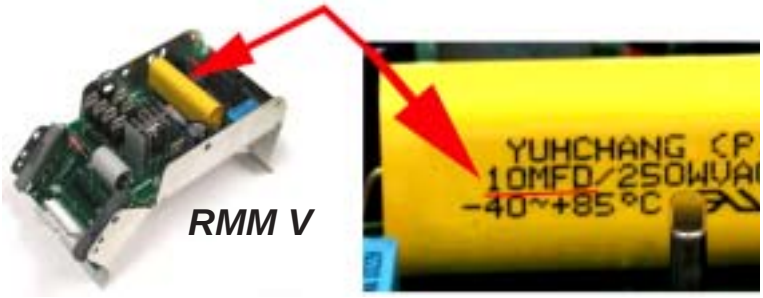
When replacing RMM Boards you will need to match the electronics with the motor or PC Board that is being replaced. This Technical Bulletin will help in the identification of the motor run capacitors on the different PC boards. Because of the different motors Casablanca has used over the years, it's very important that you match the correct PC board with the right motor. By using the wrong board, the run capacitor on the board will make the motor run hot. At the time you are replacing a motor or PC board you must look at the run capacitors and match the values, either being 9mfd, 10mfd or 11mfd. The following information will help you locate and identify motor run capacitors on the different PC boards. run capacitors on the different PC boards.

NOTE: As for the Control W-32 OR W-33 <u>MUST</u> be use with the NEW RMM V PC Board.

<u>Part Number 9901120</u> - General Usage, RMM V Assy - to be used on most all Inteli-Touch fans with the exception of those models that have their own.

RMM V parts in production models as of March 1st, 2001

W-32



<u>10mfd</u> Motor Run Capacitor

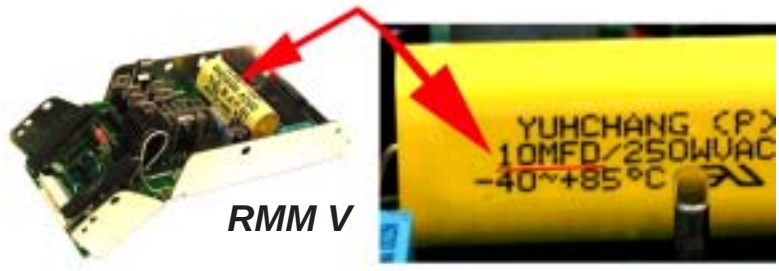
Used with XLP 2000 and EMERSON motors used in most standard Inteli-Touch fans.

(OLD Part Number 1901760)
<u>NEW Part Number 9901120</u>
In the Box.

<u>Part Number 9901160</u> - Stealth RMM V Assy - Short shroud for stealth and other fans requiring use of a short shroud.

RMM V part in production models as of March 1st, 2001

W-32



<u>10mfd</u> Motor Run Capacitor

Used with XLP 2000 and EMERSON motors used in most standard Inteli-Touch fans.

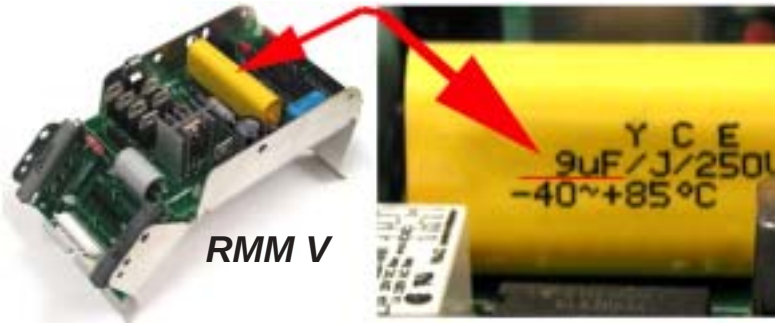
(OLD Part Number 1901770)
<u>NEW Part Number 9901160</u>
In the Box.

RMM PC BOARD Replacement ***- CONTINUED***

RMM PC BOARD Replacement ***- CONTINUED***

Part Number 9901140 - 9uf board is used in the 19th Century an the Alpine fans, the Alpine fan was manufactured in 1988 using the SAMSUNG motor.
RMM V part in production models as of December 1st, 2000

W-32



RMM V

9mfd Motor Run Capacitor

19th Century using XLP 2000 and SAMSUNG motors

(OLD Part Number 9901100)
NEW Part Number 9901140
In the Box.

Part Number 7801100 - RMM IV with the 11mfd Run Capacitor will still be used for the XLP 2100.

W-33

RMM IV

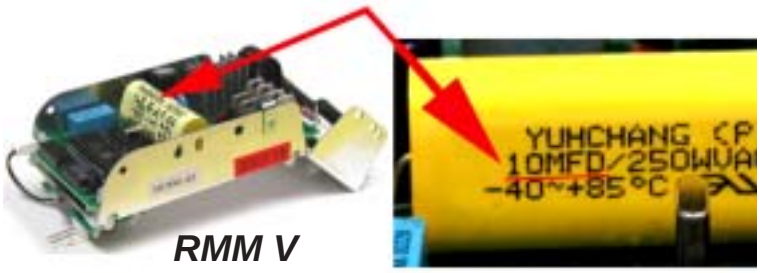
11mfd Motor Run Capacitor

Used with XLP 2100 MOTOR ONLY, fans, such as the Nouvelle, Mission and Cathay Fan's.

Part Number 7801100
In the Box.

Part Number 9901150 - Used in the Bel Air (Duel) Halo, this is a 2-light Board for the Duel Halo only.
RMM V part in production models as of December 1st, 2000

W-32



RMM V

10mfd Motor Run Capacitor

Used with XLP 2000 motor and fans featuring UP and DOWN LIGHT ONLY.

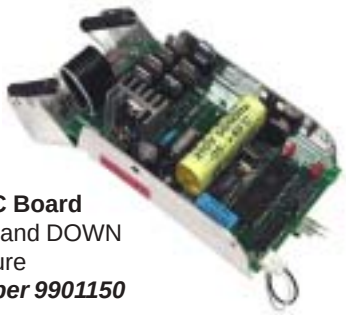
NEW Part Number 9901150
In the Box.

RMM PC BOARD Replacement ***- CONTINUED***

RMM PC BOARD Replacement ***- CONTINUED***

BEL AIR Duel HALO
> With UP and DOWN light feature

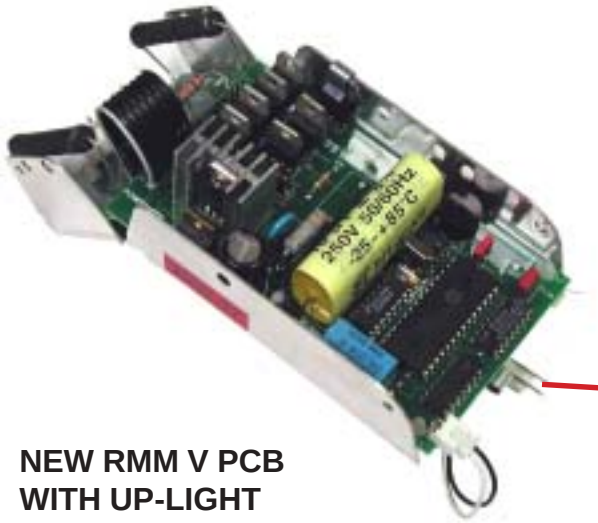
Bel Air Halo 38DH32T



RMM V PC Board
> With UP and DOWN light feature
Part Number 9901150

BEL AIR HALO - Inspired by Casablanca's original Bel Air ceiling fan, the Bel Air Halo is one of Casablanca's most elegant offering. Projects a warm, soft glow onto the ceiling, it creates a mood of subtle sophistication, The addition of exquisite rope detailing adds further refinement to this stunning fan. New in year 2001 for the Bel Air Halo has the ability to control the up and down light independently, using the same Inteli-Touch wall control (W-32) and the NEW RMM-V PC Board with the Up-Light features.

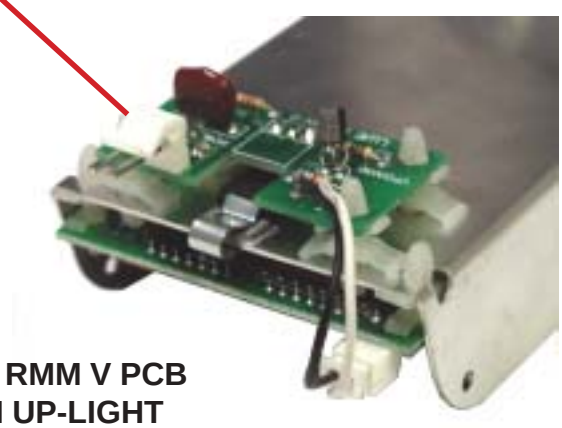
Shown below is the New RMM V PC Board with the Up-Light features, as you can see there is a small PC Board mounted to the bottom of the shroud. This part of the RMM V controls the up and down light independently when using a W-32. NO changes have been made to the W-32 wall control., ONLY to the PC Board.



NEW RMM V PCB
WITH UP-LIGHT
Part Number - 9901150
In the Box

Plug for the Up-lights

W-32



NEW RMM V PCB
WITH UP-LIGHT

RMM PC BOARD Replacement ***- CONTINUED***

RMM PC BOARD Replacement ***- CONTINUED***

INTELI•TOUCH OPERATION © LIGHT

To turn the lights off and on, press and release the **LIGHT** button for less than one second.
To vary the light brightness:
1. With lights off, press and hold the **LIGHT** button. After one second the lights come on at their lowest level and gradually become brighter.
2. Release the button when the desired brightness level is reached.

The brightness level is now in the fan memory and will automatically come on at the same brightness the next time the **LIGHT** button is used. To maintain this level of brightness, press the **LIGHT** button for less than one second. To lower the brightness, turn the lights off, then press and hold the **LIGHT** button until the desired brightness level is reached. When the light is on, you may increase the brightness level by pressing and holding the **LIGHT** button until the desired level is reached, then release it.

LIGHT CONTROL

ON - OFF:
A momentary press of the LIGHT button

CHANGE BRIGHTNESS:
PRESS AND HOLD LIGHT BUTTON LONGER THAN ONE SECOND

INTELI•TOUCH OPERATION © LIGHT (NEW UP-LIGHT OPERATION)

To turn the lights off and on, press and release the **LIGHT** button for less than one second.

THE SEQUENCE IS, WHEN THE POWER IS ON:
First touch of the light button - both lights come on
Second touch of the light button - down light only
Third touch of the light button - up light only

To vary the light brightness at each touch level:
Make sure where you are the sequence to the right.

To dim both lights at the same time:
1. Make sure you have the uplight on.
2. Turn the light off, then press and hold the **LIGHT** button. After one second, both lights will come on at their lowest setting and qradually become brighter.
3. Release the **LIGHT** button when the desired brightness is reached.

To dim both lights at the same time:
1. Make sure you have both lights on.
2. Turn the light off, then press and hold the **LIGHT** button. After one second, both light will come on at their lowest setting and qradually become brighter.
3. Release the **LIGHT** button when the desired brightness is reached.

LIGHT CONTROL
CYCLES THROUGH SEQUENCE:
1. Both lights come on
2. Down light only
3. Up light only