



REV. A

Cooler is **Better!**[™]



USER'S MANUAL

BLAST CHILLER / SHOCK FREEZER MODEL AP5BCF45-2



American Panel Corporation
5800 S.E. 78th Street, Ocala, Florida 34472-3412
Phone: (352) 245-7055 Fax: (352) 245-0726
E-mail: service@americanpanel.com

INDEX

INTRODUCTION	3
CONTROLLER FEATURES	3
OPERATING MODES	3
AUTOMATIC MODE	3
MANUAL MODE	3
OPERATING CYCLES	4
ADDITIONAL CYCLES	4
PC CONNECTION (OPTIONAL)	4
INSTALLATION	5
WARNINGS	5
PREPARATION	5
INSTALLATION	5
DIMENSIONS	5
LOCATION	5
SPACES AROUND THE CABINET	6
USING THE HURRICHILL™ TECHNOLOGY	7
BLAST CHILLING	7
SHOCK FREEZING	7
SOFT CHILL CYCLE	7
HARD CHILL CYCLE	7
SHOCK FREEZE CYCLE	7
CONTROL PANEL FOR MODEL AP5BCF45-2 BLAST CHILLER	8
KEYBOARD KEYS	9
KEY COMBINATIONS	9
PROGRAMMING	10
1. INITIAL PROGRAMMING	10
2. PROGRAMMING THE CYCLES	13
AUTOMATIC SOFT CYCLE PARAMETERS PROGRAMMING	13
AUTOMATIC HARD CYCLE PARAMETERS PROGRAMMING	14
AUTOMATIC SHOCK CYCLE PARAMETERS PROGRAMMING	15
UV LIGHT CYCLE PARAMETERS PROGRAMMING	16
DEFROST CYCLE PARAMETERS PROGRAMMING	16
HEATED PROBE CYCLE PARAMETERS PROGRAMMING	16
MANUAL SOFT CYCLE PARAMETERS PROGRAMMING	17
MANUAL HARD CYCLE PARAMETERS PROGRAMMING	18
MANUAL SHOCK CYCLE PARAMETERS PROGRAMMING	19
3. RECIPE NAME PROGRAMMING	20
OPERATION	21
1. AUTOMATIC MODE - SOFT CHILL	21
2. MANUAL MODE - SOFT CHILL	22
3. HARD CHILL CYCLE	22
4. SHOCK FREEZE CYCLE	23
5. UV (STERILIZATION) CYCLE	23
6. DEFROST CYCLE	23
7. HEATED FOOD PROBE	24

MAINTENANCE AND CLEANING	25
CLEANING THE CONDENSER	25
CLEANING THE STORAGE COMPARTMENT	25
WIRING DIAGRAMS	26
COMPUTER CONNECTION	29
PARTS LIST	30
STANDARD WARRANTY	31

INTRODUCTION

The Model AP5BCF45-2 Blast Chiller/Shock Freezer is used to rapidly chill cooked foods to temperatures suitable for refrigerated or frozen storage. It has a capacity of (5) 12" x 20" x 2-1/2" pans (not included). Model AP5BCF45-2, in chiller mode, is capable of lowering the core temperature of up to 45 lbs. of food from 160° F to 40° F within 90 minutes. In Shock Freeze mode it is capable of lowering the core temperature of up to 27 lbs. of food from 160° F to 0° F within 4 hours. Model AP5BCF45-2 can have as options UV sterilization and stainless steel wire shelves. A stainless steel stand (model APS-5) is also available (see page 6). Model AP5BCF45-2 employs a high velocity flow of cooled air to assure even cooling of the food product, and to quickly bring the food temperature through the danger zone in which bacteria multiply rapidly. This is done in accordance with HACCP, FDA and all state regulations.

CONTROLLER FEATURES

The electronic control system is solid state and is based on the latest microprocessor technology. The display is VFD Industrial Type. It displays 2 lines of 20 characters each and allows operator viewing from any angle. The display is programmed to show clear step-by-step instructions and operating data. It is capable of storing 250 sets of data and 150 recipes. The unit has built-in safety and self-diagnostic systems. The controller notifies the operator if various faults, as listed below, should occur:

- Power supply failure / Restoration of power
- Faulty air temperature probe
- Faulty food temperature probe
- High air temperature (above 140° F)
- Low air temperature (below -35° F)
- High food temperature (above 180° F)
- Low food temperature (below 35° F)
- Excessively high pressure.

As an option, the unit can be operated by a PC. The PC interface allows the operator to remotely program the unit, operate it, download the data and print the data.

OPERATING MODES

The operator can choose from the following modes:

AUTOMATIC MODE

This is the preferred mode, in which the food probe is active and takes part in controlling the chilling or freezing processes. The cycle will never proceed to its next step until the food probe has reached its set breaking temperature. The operator needs only to select the recipe number of the food to be processed (up to 150 recipes can be programmed), then insert the probe into the food. It is recommended that the operator remove the food when its temperature starts to flash and the display shows "Ready". The unit will automatically switch into holding mode (cavity air temperature between 35° F and 42° F) when the food has reached the end cycle programmed temperature.

MANUAL MODE

Operating time is set manually, by the operator, for the meal that has been chosen. Air temperature is controlled by the air probe. If the food probe has been inserted into the food it will provide temperature readouts only. The unit will automatically switch into the holding mode at the end of the cycle.

OPERATING CYCLES

The operator can choose from the following 3 operating cycles:

MODE	END FOOD TEMP.	USES	NOTES
SOFT CHILL	38° F TO 40° F	FOR LOW DENSITY FOODS	AIR TEMP. IS 28° F TO 35° F
HARD CHILL	38° F TO 40° F	FOR MEDIUM & HIGH DENSITY FOODS	AIR TEMP. STARTS AT 0° F, RISES TO 28° F TO 35° F WHEN FOOD CORE TEMP. REACHES 60° F
SHOCK FREEZE	0° F	FREEZE FOR LONGER STORAGE	AIR TEMP. IS HELD AT -25° F TO -15° F

NOTE: All Chill & Freeze Cycles automatically go into HOLDING MODE when the selected food core temperature is reached and remain there until the operator stops the cycle.

ADDITIONAL CYCLES

MODE	USES	NOTES
DEFROST	TO DEFROST THE EVAPORATOR, NOT THE FOOD	USE AFTER SHOCK FREEZING CYCLE
UV	TO STERILIZE THE CAVITY, NOT THE FOOD	USE WHEN DESIRED
HEAT PROBE	TO HEAT THE FOOD PROBE	ALLOWS EASIER EXTRACTION FROM THE FOOD

PC CONNECTION (OPTIONAL)

The unit can be programmed and operated from a remote PC via modem and software (Windows 95, 98, NT, XP). Maximum distance is 4000 ft. Full instructions are supplied on a computer disc, which is furnished when the computer connection is ordered.

INSTALLATION

WARNINGS

READ AND CAREFULLY FOLLOW ALL OF THE INSTRUCTIONS IN THIS MANUAL BEFORE YOU ATTEMPT TO INSTALL THIS EQUIPMENT.

NOTE: Any changes made to the equipment without authorization from the factory will void the warranty.

PREPARATION

- ✓ Check the integrity of the unit once it is unpacked
- ✓ Check to make sure the floor is level
- ✓ Check that the available power supply (Voltage, # of phases, Hz, Amps, max. fuse size) corresponds to the ratings on the nameplate and that correctly rated electrical protection is provided (**VOLTAGE MUST BE WITHIN ± 5% FROM THE NAMEPLATE VALUE**).

INSTALLATION

DIMENSIONS

Overall dimensions are 29 1/2" left to right, 28 1/4" front to back, 35-1/2" height. With the door open 90° the front to back distance is 55 1/2".

LOCATION

Ambient air temperature must be **no greater than 90°F** to ensure the rated performance.

Do NOT install the unit near a heat source, in an area exposed to direct sunlight, or in a closed area with high temperatures and insufficient air change.

Level the unit by rotating its adjustable feet, ensuring that the weight of the unit is off the legs when doing so.

Make certain that the unit is correctly leveled - correct functioning may be compromised if it is not.

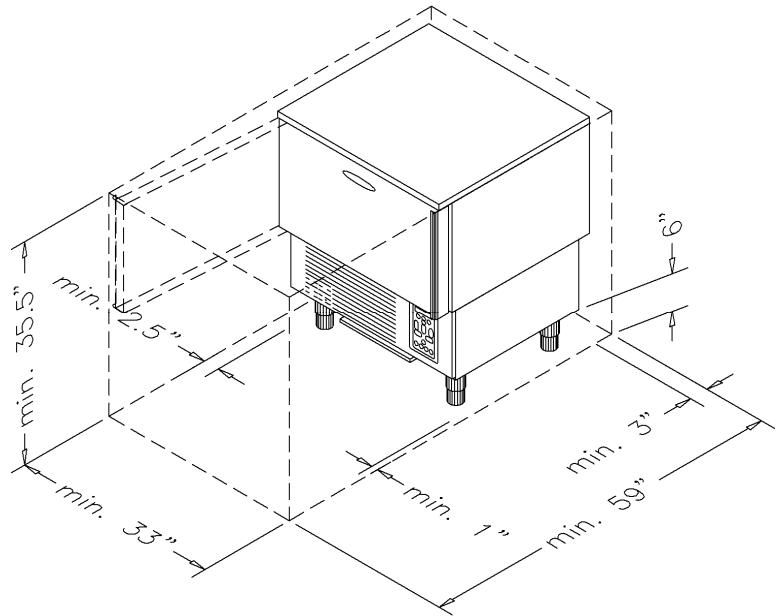
Mount the rails for the drain pan, using the screws sent with the unit. The mounting inserts are already in place under the unit. Slide the drain pan on the rails.

Plug the power supply cord into a proper outlet in accordance with the chart below.

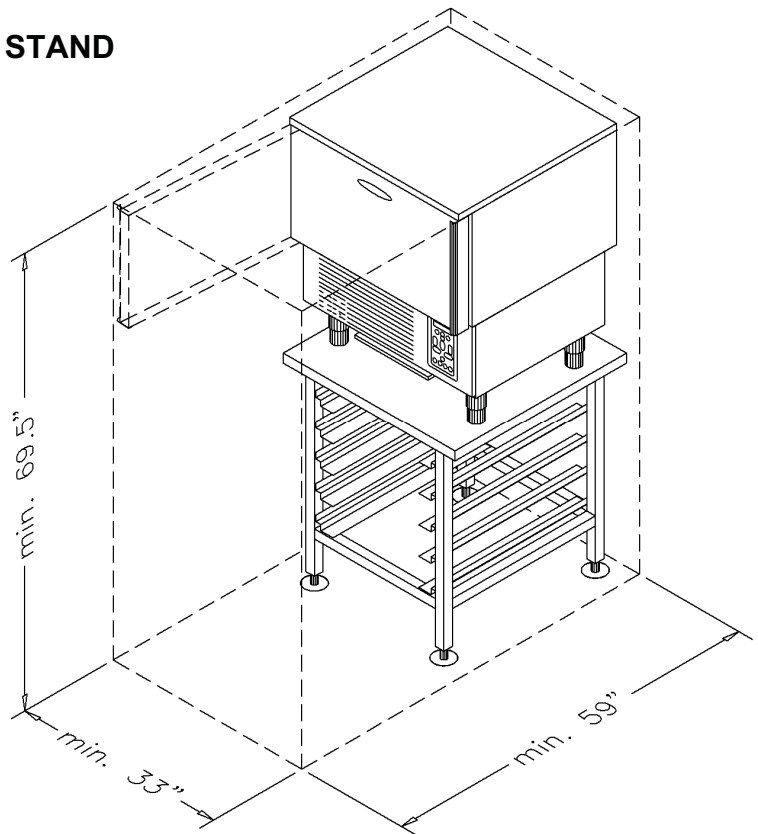
MODEL	VOLTAGE	Hz	HP	AMPS	NEMA
AP5BCF45-2	208, 1 PH	60	1	7	6-15P

SPACES AROUND THE CABINET

- At least 1" clear space is required on the right side of the cabinet for air flow and service.
- At least 2.5" clear space is required on the left side of the cabinet for door opening and air flow.
- At least 3" clear space is required on the rear of the cabinet for optimum air flow.
- Enough space should be provided in front of the cabinet to fully open the door.



AP5BCF45-2 ON THE OPTIONAL APS-5 STAND



USING THE HURRICHILL™ TECHNOLOGY

BLAST CHILLING

All cooked food rapidly loses its quality and aroma if it is not served promptly. Natural bacteria growth, the main reason why food becomes stale, takes place at an exponential rate between 140°F and 40°F. However lower temperatures have a hibernating effect that increases as the temperature drops, thereby gradually reducing bacterial activity until it stops altogether. Only fast reduction of the temperature at the product's core allows its initial characteristics to be maintained intact. The HurriChill™ blast chiller gets food through this high-risk temperature band rapidly, cooling the core of the product to 40°F within 90 minutes. This conserves food quality, color and aroma while increasing its storage life. After blast chilling, the food can be preserved at 38°F for up to 5 days.

SHOCK FREEZING

For storage over the medium-long term, food has to be shock frozen (to 0°F or below). Freezing means converting the water contained in food into crystals. Thanks to the high speed at which low temperature penetrates the food, the HurriChill™ shock freezer assures the formation of small crystals (micro-crystals) that do not damage the product in any way. Uncooked raw materials, semi-processed food and cooked food can be treated safely. When the food is thawed, no liquids, consistency, weight or aroma will be lost, and all its initial qualities will remain unchanged.

SOFT CHILL CYCLE

(160°F to 40°F)

This cycle is recommended for "delicate", light, thin products or small piece sizes, such as vegetables, creams, sweets, fish products and fried foods. Soft chilling lowers the food temperature quickly, but extremely delicately so as not to damage the outside of the food. This is the ideal cycle to chill any food quickly but delicately, even in haute cuisine.

HARD CHILL CYCLE

(160°F TO 40°F)

Hard chilling is suited for "dense" products and products with a high fat content, in large pieces or those products typically more difficult to chill. Careful chilling control ensures that the end temperature of 40°F is reached at the core of the product, with no danger of freezing and damaging the product, not even on its surface.

SHOCK FREEZE CYCLE
















(160°F TO 0°F)

This cycle is recommended when you want to store food for several weeks or months, at temperatures below 0°F. Freezers are suited for storing ready frozen foods, but not for freezing them. During shock freezing, the liquids contained in the food are transformed into micro-crystals that do not harm the tissue structure. When the food is used and thawed, its quality will be excellent. It is especially suited for all semi-processed food and raw products.








CONTROL PANEL FOR MODEL AP5BCF45-2 BLAST CHILLER



KEYBOARD KEYS

<p>ON/OFF & START/STOP</p> <p> ON/OFF</p> <p> START/STOP</p>	<p>CYCLE KEYS</p> <p> SOFT CYCLE</p> <p> HARD CYCLE</p> <p> SHOCK CYCLE</p> <p> AUTOMATIC CYCLE</p> <p> MANUAL CYCLE</p> <p> UV LIGHT CYCLE</p> <p> DEFROST CYCLE</p> <p> PRINT</p> <p> HEAT PROBE CYCLE</p>
<p>PROGRAMMING KEYS</p> <p> UP</p> <p> DOWN</p> <p> SELECT</p> <p> ENTER</p>	

KEY COMBINATIONS





- **Initial Programming** state – to initially set the device
 - With the display reading **"OFF"**, press and hold  (**"START/STOP"**) for 5 seconds
- **Cycles programming** state – to initially set the cycles
 - With the display reading **"OFF"**, press  (**"ENTER"**) for 1 second
- **Recipe name programming** state – to enter recipe names
 - With the display reading **"OFF"**, press  (**"A"**) for 10 seconds
- **Load default values** state – to load the standard parameters
 - With the display reading **"OFF"**, press  (**"UP"**) for 10 seconds
- **Clear events memory** state – to clear obsolete data
 - With the display reading **"OFF"**, press  +  (**"UP"+"DOWN"**) for 10 seconds
- **Ready To Go** state – in order to start a cycle
 - If the controller is not **"OFF"**, press  **"ON/OFF"** once.






PROGRAMMING


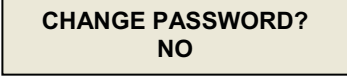
1. INITIAL PROGRAMMING




NOTE: Initial programming is preset at the factory. Use this section only if changes are desired. If no changes are to be made, skip to Page 13 (2. Programming the cycles).

a. With the display reading "OFF", press   OFF





b. To change the language, press  or  then press . 


c. Enter the default password by pressing, in order, the    and  buttons. 

d. If you do **not** wish to change the password, press . 

To change the default password, press  or  for "YES" then press .




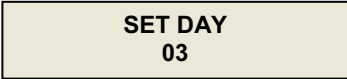

The password will always be a combination of three of the six available cycles:




      ("SOFT", "HARD", "SHOCK", "DEF", "UV", "HEAT PROBE").

Type the new password, then press . Be sure to remember the new password and keep a record of it in a safe place.

e. To change the year, press  or  then press .  

f. To change the month, press  or  then press .  

g. To set the day, press  or  then press .  

h. To set the hour, press  or  (be sure to continue to press the buttons until the hour and "AM" or "PM" show correctly) then press .

SET TIME
10:25 AM




10(hours)
Blinks

i. To set the minutes, press  or  then press .

SET TIME
10:25 AM

25(minutes)
Blinks




The high air alarm temperature should be left at 140 °F. However, if a change is desired:

j. To change the temperature, press  or  then press .

HIGH AIR ALARM
140 °F

140 Blinks




The low air alarm temperature should be left at -35 °F. However, if a change is desired:

k. To change the temperature, press  or  then press .

LOW AIR ALARM
-35 °F

-35 Blinks

The high food alarm temperature should be left at 180 °F. However, to make a change:

l. To change the temperature, press  or  then press .

HIGH FOOD ALARM
180 °F




180 Blinks

The low food alarm temperature should be left at 35 °F. However, to make a change:

m. To change the temperature, press  or  then press .



LOW FOOD ALARM
35 °F

35 Blinks

n. To change to **YES** or **NO**, press  or  then press .

SHOCK FREEZE?
YES

YES Blinks

o. To change the temperature, press  or  then press .

SHOCK FREEZE
-5 °F




-5 Blinks

(LOW FOOD ALARM)

p. To change to **YES** or **NO**, press  or  then press .




UV CYCLE?
NO

NO Blinks

q. To change to **YES** or **NO**, press  or  then press  .

DEFROST CYCLE?
YES

YES Blinks

r. To change to **YES** or **NO**, press  or  then press  .




PC CONNECTION?
NO

NO Blinks

For **YES**, the display will show:




The P.C. baud rate should be left at 38400.

However, to make a change:

s. To change the baud rate, press  or  then press  .




PC BAUDRATE
38400

38400 Blinks

t. To change the number (between 01 & 32), press  or  then press  .


CHILLER NETWORK ID
01

01 Blinks

u. To change to **YES** or **NO**, press  or  then press  .




PRINTER CONNECTION?
NO

NO Blinks

v. To change the timing, press  or  then press  .




PRINT & SAVE EVENTS
EVERY 15 MIN

15 Blinks

w. To change to **YES** or **NO**, press  or  then press  .




PRINT DURING CYCLE
NO

NO Blinks

x. To change to **YES** or **NO**, press  or  then press  .

RECIPES?
NO

NO Blinks


y. To change to **YES** or **NO**, press  or  then press  .

NAFEM COMMUNICATION
NO

NO Blinks

The display will show:


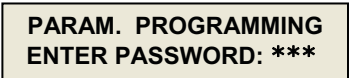
INITIAL PROGRAMMING
COMPLETE


NOTE: During programming  key can be used to return to the previous screen (except at the steps 1h, 1i and 3d, when it has different functions).

 key is used to confirm the settings and advance to the next screen.



2. PROGRAMMING THE CYCLES

a. With the display reading **"OFF"**, press  . 






b. Enter your password (see page 10), then press  . 






The **LED** for **"A"** will be **"ON"**. The **LED'S** for cycles will be blinking. 



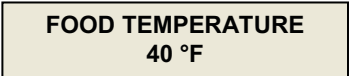


AUTOMATIC SOFT CYCLE PARAMETERS PROGRAMMING






c. Press  . The **LED** for **"SOFT"** will be **"ON"**. 




After about 2 seconds the display will automatically change to:

d. To change the temperature, press  or   
then press  .

e. To change the temperature, press  or   
then press  .

f. To change the temperature, press  or   
then press  .

g. To change the temperature, press  or   
then press  .

h. To change the temperature, press  or 
then press  .

HOLDING HIGH TEMP
42 °F

42 Blinks


The display will show:

AUTOMATIC SOFT CYCLE
PROGRAMMING COMPLETE

After about 2 seconds the display will automatically change to:

AUTOMATIC MODE
PROGRAMMING CYCLE

AUTOMATIC HARD CYCLE PARAMETERS PROGRAMMING




i. Press the  button. The LED for "HARD" will be "ON".




PARAM. PROGRAMMING
AUTOMATIC HARD CYCLE

After about 2 seconds the display will automatically change to:

LOW AIR TEMP PART 1
0 °F




0 Blinks

j. To change the temperature, press  or 
then press  .

k. To change the temperature, press  or 
then press  .




HIGH AIR TEMP PART 1
10 °F

10 Blinks

l. To change the temperature, press  or 
then press  .




BREAKING TEMP
60 °F

60 Blinks

m. To change the temperature, press  or 
then press  .




LOW AIR TEMP PART 2
28 °F

28 Blinks

n. To change the temperature, press  or 
then press  .




HIGH AIR TEMP PART 2
35 °F

35 Blinks

o. To change the temperature, press  or 
then press  .




HARD FOOD TEMP
40 °F

40 Blinks

p. To change the temperature, press  or 
then press  .

HOLDING LOW TEMP
35 °F

35 Blinks

q. To change the temperature, press  or 
then press  .

HOLDING HIGH TEMP
42 °F

 Blinks


The display will show:

AUTOMATIC HARD CYCLE
PROGRAMMING COMPLETE

After about 2 seconds the display will automatically change to:

AUTOMATIC MODE
PROGRAMMING CYCLE

AUTOMATIC SHOCK CYCLE PARAMETERS PROGRAMMING




r. Press the  button. The LED for "SHOCK" will be "ON".




PARAM. PROGRAMMING
AUTO SHOCK CYCLE

After about 2 seconds the display will automatically change to:

LOW AIR TEMPERATURE
-25 °F




 Blinks

s. To change the temperature, press  or 
then press  .

t. To change the temperature, press  or 
then press  .




HIGH AIR TEMPERATURE
-15 °F

 Blinks

u. To change the temperature, press  or 
then press  .




FOOD TEMPERATURE
0 °F

 Blinks

v. To change the temperature, press  or 
then press  .

HOLDING LOW TEMP
-4 °F

 Blinks

w. To change the temperature, press  or 
then press  .

HOLDING HIGH TEMP
3 °F

 Blinks


The display will show:

AUTO SHOCK CYCLE
PROGRAMMING COMPLETE

After about 2 seconds the display will automatically change to:

AUTOMATIC MODE
PROGRAMMING CYCLE

UV LIGHT CYCLE PARAMETERS PROGRAMMING




- x. Press the  button. The LED for "UV LIGHT" will be "ON".

PARAM. PROGRAMMING
UV CYCLE

After about 2 seconds the display will automatically change to:

UV CYCLE TIME
H 00:30 MIN

00:30 Blinks

- y. To change the time, press  or  then press .


The display will show:

UV CYCLE
PROGRAMMING COMPLETE

After about 2 seconds the display will automatically change to:

AUTOMATIC MODE
PROGRAMMING CYCLE

DEFROST CYCLE PARAMETERS PROGRAMMING




- z. Press the  button. The LED for "DEFROST" will be "ON".

PARAM. PROGRAMMING
DEFROST CYCLE

After about 2 seconds the display will automatically change to:

TOTAL TIME
05 MIN

05 Blinks

- aa. To change the time, press  or  then press .

The display will show:


DEFROST CYCLE
PROGRAMMING COMPLETE

After about 2 seconds the display will automatically change to:

AUTOMATIC MODE
PROGRAMMING CYCLE

NOTE: The defrost is done by running the evaporator fan for 5 minutes with the door open.

HEATED PROBE CYCLE PARAMETERS PROGRAMMING




- bb. Press the  button. The LED for "HEATED PROBE" will be "ON".

PARAM. PROGRAMMING
HEATED PROBE CYCLE

After about 2 seconds the display will automatically change to:

HEATING TEMPERATURE
30 °F

30 Blinks

- cc. To change the temperature, press  or  then press .

dd. To change the time, press  or  then press  .

HEATING TIME
05 SEC


 Blinks

The display will show:

HEATED PROBE CYCLE
PROGRAMMING COMPLETE

After about 2 seconds the display will automatically change to:

AUTOMATIC MODE
PROGRAMMING CYCLE

ee. Press  to program the manual mode. The "M" LED will be steady "ON" and the 6 "CYCLE LED's" will all blink.

MANUAL MODE
PROGRAMMING CYCLE

MANUAL SOFT CYCLE PARAMETERS PROGRAMMING




ff. Press  . The LED for "SOFT" will be "ON".




PARAM. PROGRAMMING
MANUAL SOFT CYCLE

After about 2 seconds the display will automatically change to:

LOW AIR TEMPERATURE
28 °F




 Blinks

gg. To change the temperature, press  or  then press  .

hh. To change the temperature, press  or  then press  .




HIGH AIR TEMPERATURE
35 °F

 Blinks

ii. To change the time, press  or  then press  .




TOTAL TIME
H 01:30 MIN

 Blinks

jj. To change the temperature, press  or  then press  .

HOLDING LOW TEMP
35 °F

 Blinks

kk. To change the temperature, press  or  then press  .

HOLDING HIGH TEMP
42 °F

 Blinks


























The display will show:

MANUAL SOFT CYCLE
PROGRAMMING COMPLETE

















After about 2 seconds the display will automatically change to:

MANUAL MODE
PROGRAMMING CYCLE

MANUAL HARD CYCLE PARAMETERS PROGRAMMING

<p>ll. Press the  button. The LED for "HARD" will be "ON".</p>	<p>PARAM. PROGRAMMING MANUAL HARD CYCLE</p>
<p>After about 2 seconds the display will automatically change to:</p>	
<p>mm. To change the temperature, press  or  then press .</p>	<p>LOW AIR TEMP PART 1 0 °F 0 Blinks</p>
<p>nn. To change the temperature, press  or  then press .</p>	<p>HIGH AIR TEMP PART 1 10 °F 10 Blinks</p>
<p>oo. To change the time, press  or  then press .</p>	<p>TIME 1 H 01:00 MIN 01:00 Blinks</p>
<p>pp. To change the temperature, press  or  then press .</p>	<p>LOW AIR TEMP PART 2 28 °F 28 Blinks</p>
<p>qq. To change the temperature, press  or  then press .</p>	<p>HIGH AIR TEMP PART 2 35 °F 35 Blinks</p>
<p>rr. To change the time, press  or  then press .</p>	<p>TIME 2 H 01:00 MIN 01:00 Blinks</p>
<p>ss. To change the temperature, press  or  then press .</p>	<p>HOLDING LOW TEMP 35 °F 35 Blinks</p>
<p>tt. To change the temperature, press  or  then press .</p>	<p>HOLDING HIGH TEMP 42 °F 42 Blinks</p>
<p>The display will show:</p>	<p>MANUAL HARD CYCLE PROGRAMMING COMPLETE</p>
<p>After about 2 seconds the display will automatically change to:</p>	<p>MANUAL MODE PROGRAMMING CYCLE</p>

MANUAL SHOCK CYCLE PARAMETERS PROGRAMMING


<p>uu. Press the  button. The LED for "SHOCK" will be "ON".</p>	<p>PARAM. PROGRAMMING MANUAL SHOCK CYCLE</p>
<p>After about 2 seconds the display will automatically change to:</p>	
<p>vv. To change the temperature, press  or  then press .</p>	<p>LOW AIR TEMPERATURE -25 °F -25 Blinks</p>
<p>ww. To change the temperature, press  or  then press .</p>	<p>HIGH AIR TEMPERATURE -15 °F -15 Blinks</p>
<p>xx. To change the time, press  or  then press .</p>	<p>TOTAL TIME H 04:00 MIN 04:00 Blinks</p>
<p>yy. To change the temperature, press  or  then press .</p>	<p>HOLDING LOW TEMP -4 °F -4 Blinks</p>
<p>zz. To change the temperature, press  or  then press .</p>	<p>HOLDING HIGH TEMP 3 °F 3 Blinks</p>
<p>The display will show:</p>	<p>MANUAL SHOCK CYCLE PROGRAMMING COMPLETE</p>
<p>After about 2 seconds the display will automatically change to:</p>	<p>MANUAL MODE PROGRAMMING CYCLE</p>

NOTE: PROGRAMMING FOR "UV", "DEFROST" & "HEAT PROBE" WILL BE THE SAME IN MANUAL MODE AS IT IS IN AUTOMATIC MODE.




3. RECIPE NAME PROGRAMMING

a. With the display reading **"OFF"**, press the  button and hold it for 10 seconds.

OFF





b. Enter your the password (see page 10), then press .

RECIPES PROGRAMMING
ENTER PASSWORD:





c. Press  or  to change to the desired recipe number (from 1 to 150), then press  which will move you to the **"NAME"** line.


ENTER RECIPE NO 1
NAME:

1 Blinks

d. Using  or  type the letters or numbers required, then press . To confirm the recipe and go to the next one press .

ENTER RECIPE NO 1
NAME: CHICKEN

If a mistake is made in writing a recipe, use  to go to the desired location and correct it using  or . There is a blank space after number 9. It can be used to add a space or delete a letter. Press  when the recipe is corrected.


To finish the recipe name programming press  (**"ON/OFF"**).

OPERATION


1. AUTOMATIC MODE - SOFT CHILL

a. With the display reading "OFF", press the  button.

OFF

b. To select a cycle, press the appropriate button . The LED for "SOFT" will be "ON".

OPERATING MODE CHOOSE CYCLE

c. The LED's for "AUTOMATIC" and "MANUAL" are now blinking. To select an "AUTOMATIC" cycle, press the button . The LED for "AUTOMATIC" will now be steady "ON".

SOFT CYCLE CHOOSE MODE AUTO/MAN

d. To choose your recipe, press  or  then press .

ENTER RECIPE NO 1 CHICKEN


This screen is shown only if the **RECIPE** parameter is set to "ON" in the **INITIAL PROGRAMMING**. To enter additional recipe names, refer to Page 20 "**RECIPE NAME PROGRAMMING**".

The display will show:

03.07.2006	10:28 AM
READY TO START	

alternating with

AIR	75°F
F / CHICKEN	140°F

e. Press the  ("START/STOP") button to start the cycle.

READY TO START Blinks

The display will show:

03.07.2006	10:28 AM
ELAPSED TIME	00:01

alternating with

AIR	75°F
F / CHICKEN	140°F

00:01 Will count up

The **AUTOMATIC** mode uses both the food probe and air probe temperatures to control the cycle. When the food temperature has reached the final setting of 40° F, the unit will automatically go into holding mode and a beep will sound for 5 seconds.

The display will show:

03.07.2006	11:56 AM
ELAPSED TIME	01:28


alternating with

AIR	34°F
F / CHICKEN	40°F

alternating with

AIR	34°F
FOOD	Ready

01:28 Blinks

The operator can now end this cycle by pressing the  ("START/ STOP") button.

The display will now show:

OPERATING MODE CHOOSE CYCLE
--

2. MANUAL MODE - SOFT CHILL

IF INSTEAD OF AUTOMATIC you wish to select a **MANUAL** cycle, perform steps 1.a, 1.b, 1.c

and 1.d (above), except in step 1.c press button  **instead of button** . The LED for **"MANUAL"** will then be steady **"ON"**. The four readouts in those steps will be the same as before.

Cycle time can be changed only in Cycle Programming mode. To change the programmed cycle time for any cycle see the instructions on Pages 13 to 19.

e. Press the  ("START/STOP") button to start the cycle.

The display show will:

alternating with

03.07.2006	10:41 AM
REMAINING TIME	01:29

AIR	72°F
F / CHICKEN	140°F

01:29
Will count down

The **MANUAL** mode uses time and the air probe temperature to control the cycle. The default total time for a soft cycle is 90 minutes. After the 90 minutes the unit will automatically go into holding mode.


The display show will:

alternating with

03.07.2006	12:11 PM
REMAINING TIME	00:00

AIR	34°F
F / CHICKEN	40°F

00:00
Blinks



The operator can now end this cycle by pressing  ("START/ STOP").

The display will now show:

OPERATING MODE CHOOSE CYCLE
--

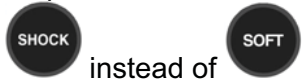
3. HARD CHILL CYCLE

To perform a hard chill cycle, follow steps **1 or 2** (above), **EXCEPT** in step 1.b (above) press

 **instead of** .


4. SHOCK FREEZE CYCLE

To perform a shock freeze cycle, follow steps 1 or 2 (above), **EXCEPT** in step 1.b (above) press



5. UV (STERILIZATION) CYCLE

a. To perform a UV cycle **remove all food**, then press

the  ("UV LIGHT") button.

OPERATING MODE
CHOOSE CYCLE

b. Press the  ("START/STOP") button to start the UV cycle.

UV CYCLE
READY TO START

READY TO
START
Blinks

The display will now show:

03.07.2006 11:43 AM
UV CYCLE TIME 29:59

29:59
Will count
down to 00:00


After 30 minutes the display will show:
The controller will beep for a few seconds.

03.07.2006 12:13 PM
UV CYCLE COMPLETE

UV CYCLE
COMPLETE
Blinks

6. DEFROST CYCLE


The defrost cycle runs the evaporator fan for 5 minutes with the door open.

a. To perform a defrost cycle, press  ("DEFROST") button.

OPERATING MODE
CHOOSE CYCLE

b. Open the door.

DEFROST CYCLE
OPEN DOOR!

c. Press the  ("START/STOP") button to start the defrost cycle.

DEFROST CYCLE
READY TO START

READY TO
START
Blinks

The display will now show:

03.07.2006 12:15 PM
DEFROST TIME 04:59





04:59
Will count
down to 00:00

After 5 minutes the display will show:
The controller will beep for a few seconds.

03.07.2006 12:20 PM
DEFROST COMPLETE

DEFROST
COMPLETE
Blinks

7. HEATED FOOD PROBE

<p>a. To select the heated food probe, press  ("HEATED PROBE").</p>	<p>OPERATING MODE CHOOSE CYCLE</p>
<p>If the food probe temperature is >30 °F, the display will show:</p> <p>After a few seconds it will go back to reading:</p>	<p>HEATED FOOD PROBE NOT NEEDED</p> <p>OPERATING MODE CHOOSE CYCLE</p>
<p>If the food probe temperature is <30 °F, the display will show:</p> <p>b. Open the door.</p>	<p>HEAT FOOD PROBE OPEN DOOR!</p>
<p>c. Press the  ("START/STOP") button to start the cycle.</p>	<p>HEAT FOOD PROBE READY TO START</p> <p>READY TO START Blinks</p>
<p>The display will now show:</p> <p>After 5 seconds the display will show:</p>	<p>HEATING FOOD PROBE</p> <p>HEATING COMPLETE FOOD PROBE</p>
<p>NOTE: To stop any cycle before it has finished, press  ("START/STOP").</p>	
<p>The controller will beep for a few seconds. If you still want to stop the cycle, press  ("START/STOP") again. If you do NOT want to stop, do nothing and the cycle will continue.</p>	<p>UNIT IN PROCESS ! DO YOU WANT TO STOP?</p>

MAINTENANCE AND CLEANING

CLEANING THE CONDENSER

For correct and efficient operation of the blast chiller, it is necessary that the condenser be kept clean so that air can circulate around it freely and come into contact with the whole of its surface.

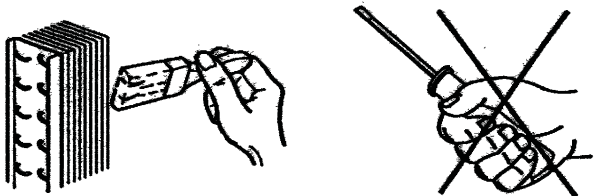


Fig. 1

This operation (to be performed every 30 days, max.) can be accomplished using a brush (non-metallic) to remove all the dust and dirt from the condenser fins. Remove the finned grid to gain access to the condenser.

CLEANING THE STORAGE COMPARTMENT

Clean the inside of the storage compartment daily to avoid altering the taste and aroma of the food.

Clean the inside, the grid supports and the grids with a non-corrosive detergent and then rinse thoroughly.

The storage compartment and its internal components have been designed to aid all cleaning operations.

Clean the outside surfaces regularly with a detergent for stainless steel and dry using a soft cloth.

Always defrost the unit (see manual).

DO NOT USE ABRASIVES, SOLVENTS OR GLASS WOOL (Fig. 3).

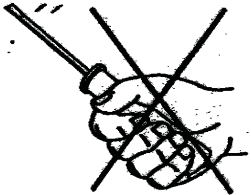


Fig.2

Avoid using sharp implements and abrasives, especially when cleaning the evaporator (Fig. 2).

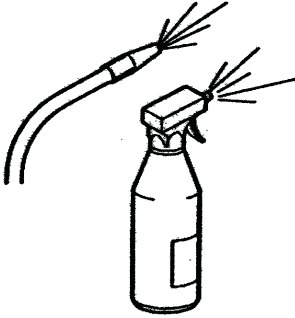
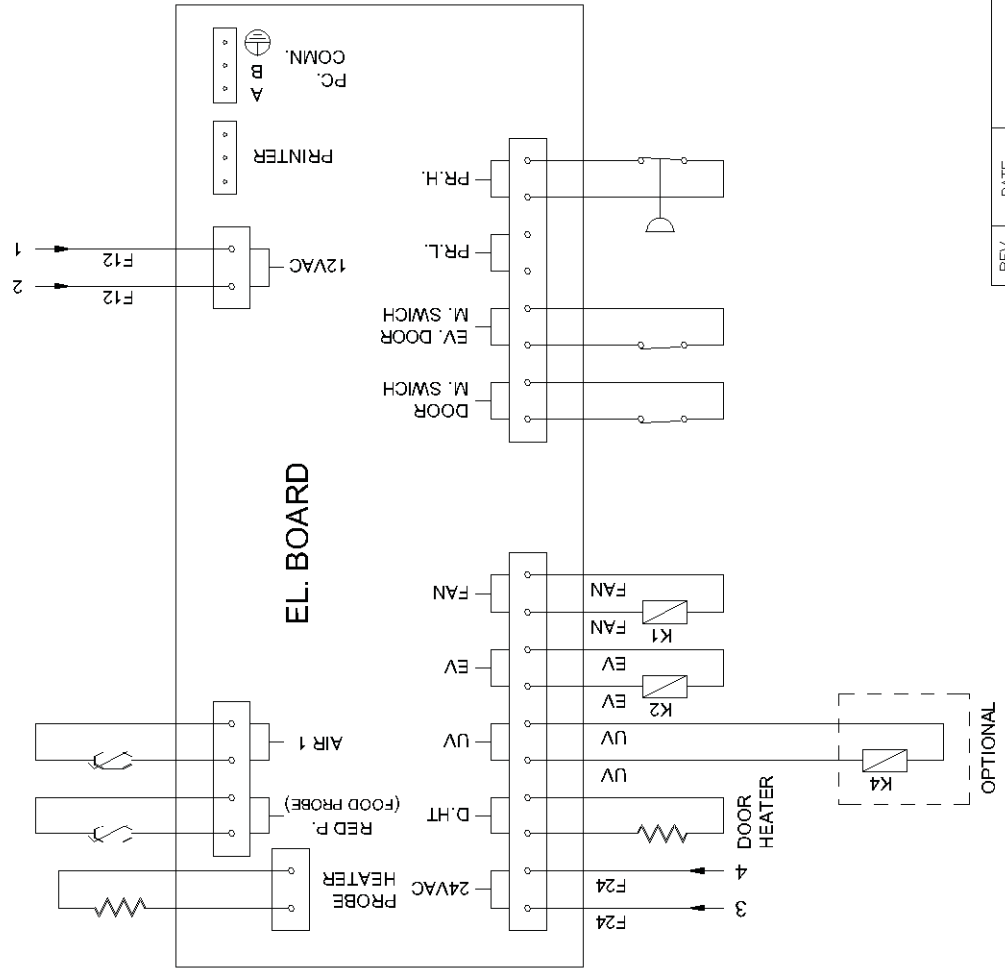


Fig. 3

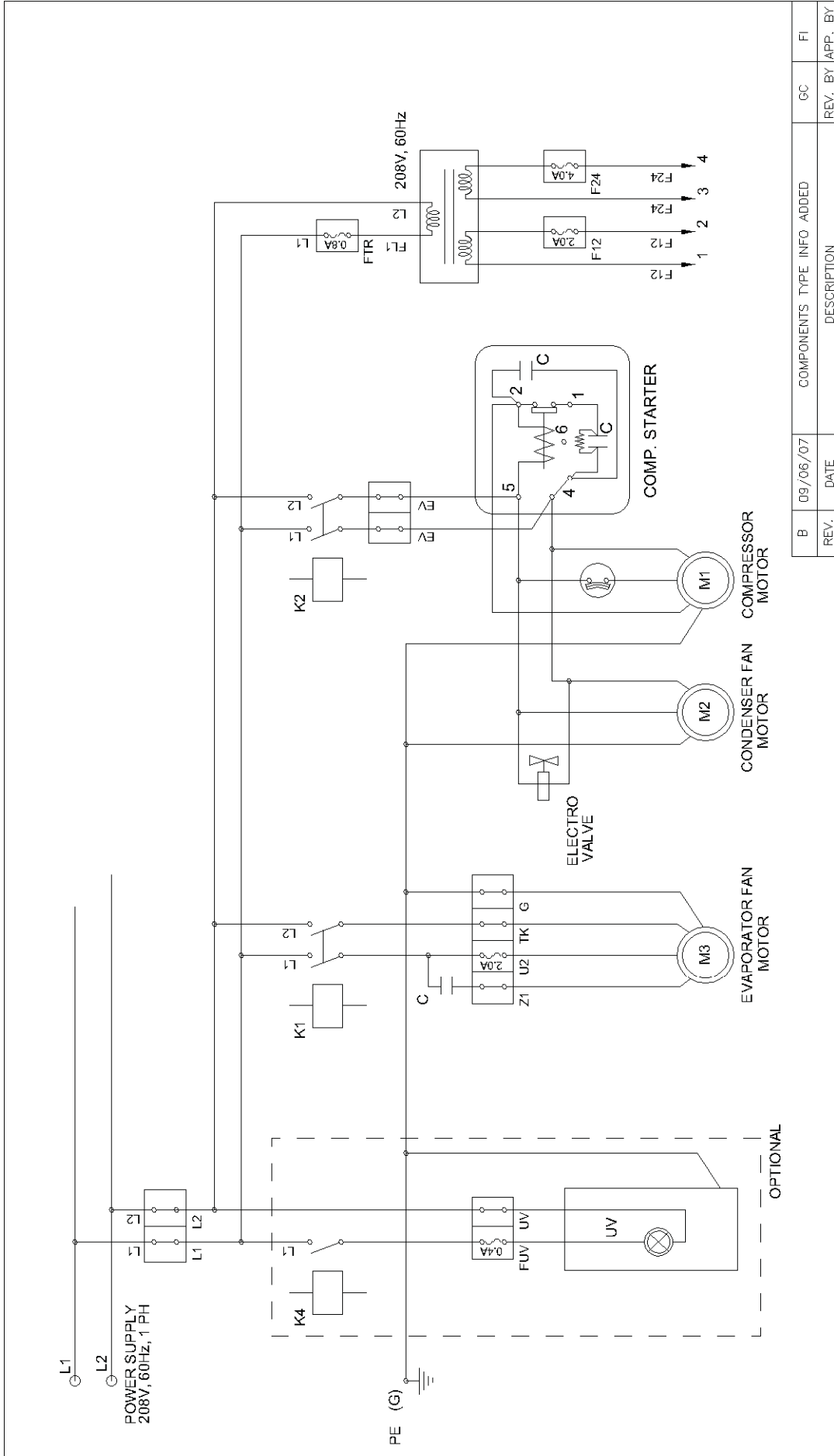
NOTE: If additional refrigerant should be needed, be certain to use the correct type and amount as shown on the nameplate.

WIRING DIAGRAMS



REV.	DATE	DESCRIPTION	REV. BY	APP. BY
		AMERICAN PANEL CORPORATION 5800 S.E. 78th St. Ocala, Florida 34472 Ph. (352) 245-7055 Fax (352) 245-0726		
American Panel				
TITLE: WIRING DIAGRAM #1				
MODEL: AP5BCF45-2				
DATE:	05/05/06	DRAWN BY:	RT	P.O.#:
SCALE:	NTS	DWG#:	98008-00	JOB#:
				SHEET: 1 of 1

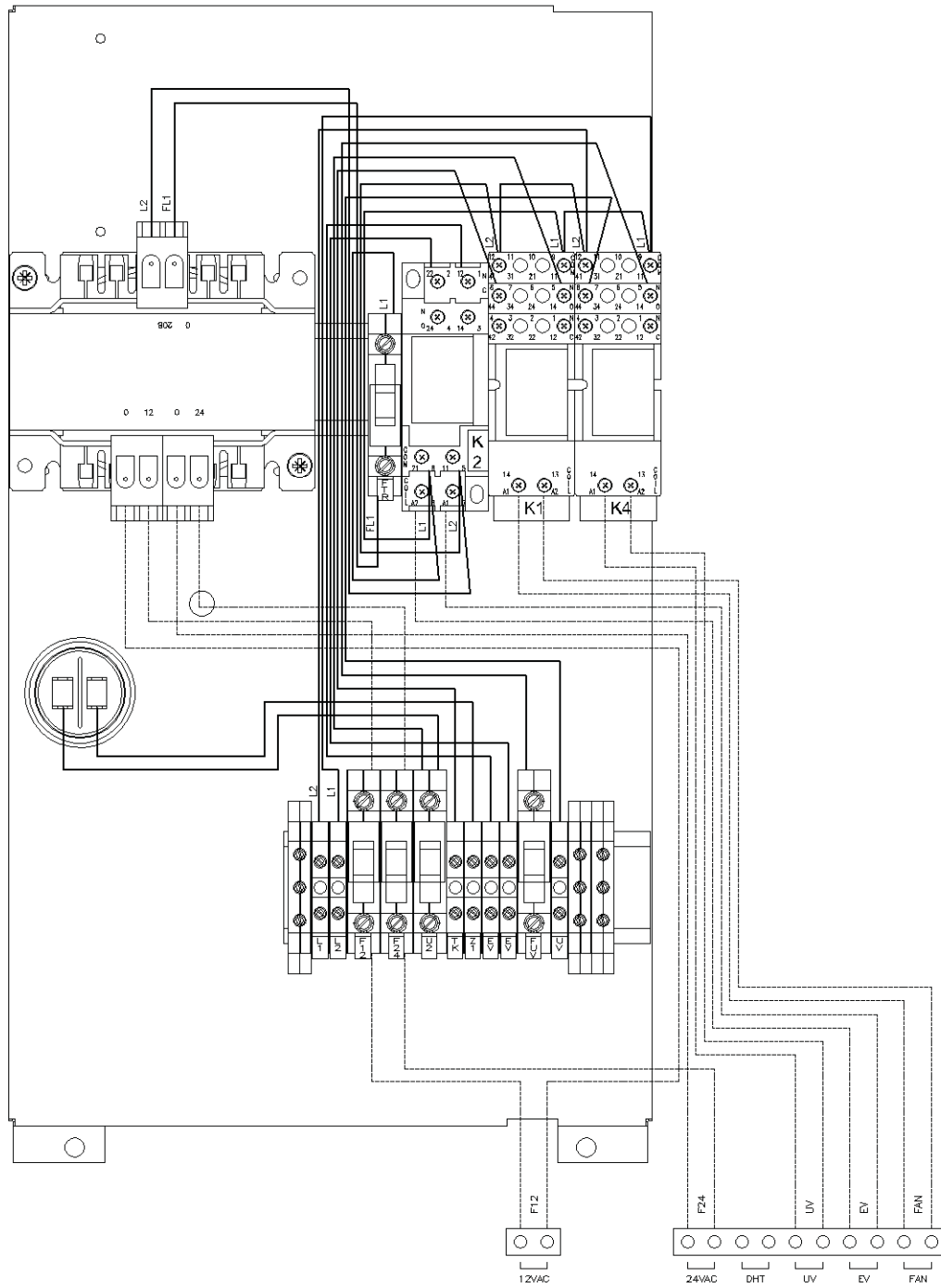
This drawing and information contained herein are the exclusive property of American Panel Corporation. It shall be returned to American Panel Corporation upon demand and shall not be reproduced in whole or part, disclosed to anyone else, or used without the written consent of American Panel Corporation.



REV.	DATE	COMPONENTS TYPE INFO ADDED	GC	FI
B	09/06/07			
REV.	DATE	DESCRIPTION	REV. BY	APP. BY

AMERICAN PANEL CORPORATION 5800 S.E. 78th St. Ocala, Florida 34472 Ph. (352) 245-7055 Fax (352) 245-0726				
TITLE: WIRING DIAGRAM #2				
MODEL: AP5BCF45-2				
DATE: 05/05/06	DRAWN BY: RT	P.O.#:	REV:	B
SCALE: NTS	DWG#: 98008-01	JOB#:	SHEET:	1 of 1

This drawing and information contained herein are the exclusive property of American Panel Corporation. It shall be returned to American Panel Corporation upon demand and shall not be reproduced in whole or part, disclosed to anyone else, or used without the written consent of American Panel Corporation.



————— 14 AWG BLACK WIRE
 - - - - - 16 AWG RED WIRE

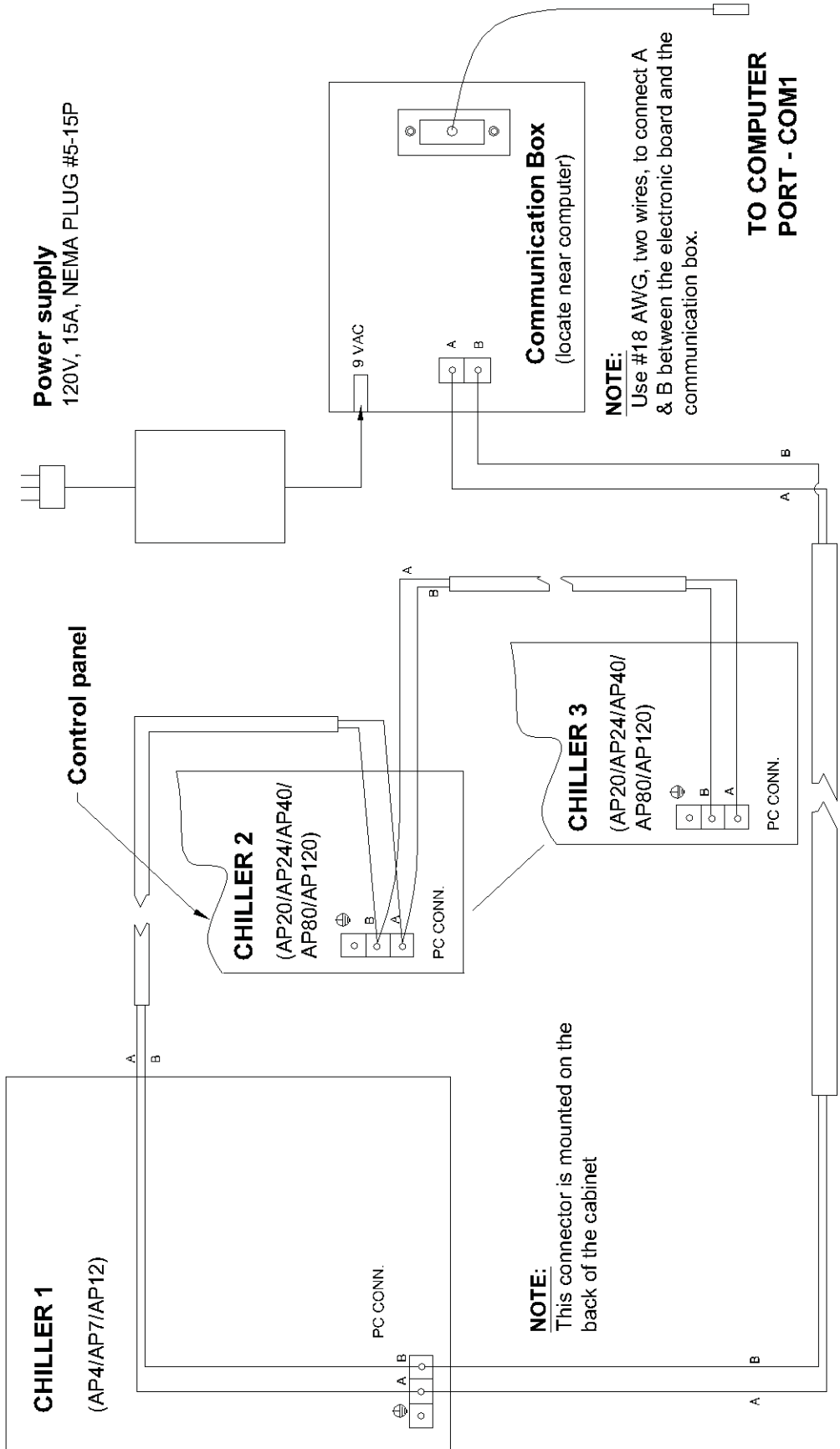
REV.	DATE	DESCRIPTION	REV. BY	APP. BY

This drawing and information contained herein are the exclusive property of American Panel Corporation. It shall be returned to American Panel Corporation upon demand and shall not be reproduced in whole or part, disclosed to anyone else, or used without the written consent of American Panel Corporation.

American Panel AMERICAN PANEL CORPORATION
 5800 S.E. 78th St. Ocala, Florida 34472
 Ph. (352) 245-7055 Fax (352) 245-0726

TITLE: WIRING DIAGRAM #3
 MODEL: AP4BCF45-2
 DATE: 10/05/06 DRAWN BY: GC P.O.#: REV A
 SCALE: NTS DWG#: 98008-02 JOB#: SHEET 1 of 1

COMPUTER CONNECTION



NOTE:
Use #18 AWG, two wires, to connect A & B between the electronic board and the communication box.

NOTE:
This connector is mounted on the back of the cabinet

REV.	DATE	DESCRIPTION	REV. BY	APP. BY

American Panel
AMERICAN PANEL CORPORATION
5800 S.E. 78th St. Ocala, Florida 34472
Ph. (352) 245-7055 Fax (352) 245-0726

TITLE: COMPUTER CONNECTION

MODEL: AP4/AP7/AP12/AP20/AP24/AP40/AP80/AP120

DATE: 06/02/06 DRAWN BY: GC REV: A

SCALE: NTS DWG#: 98018-00 JOB#: P.O.#:

SHEET 1 of 1

This drawing and information contained herein are the exclusive property of American Panel Corporation. It shall be returned to American Panel Corporation upon demand and shall not be reproduced in whole or part, disclosed to anyone else, or used without the written consent of American Panel Corporation.

PARTS LIST

PART #	DESCRIPTION
990060	RELAY 10 A FINDER (UV)
990074	TRANSFORMER 208V/24V/12V
990101	ELECTRONIC BOARD "BLUE SYS" (B)
990104	PC CONNECTION BOX
990108	AIR PROBE PT100
990120	COMPRESSOR ASPERA (R404A REFRIGERANT)
990126	CONDENSER FAN MOTOR
990135	EVAPORATOR FAN, CAST ALUMINUM
990145	FOOD PROBE - HEATED
990147	MAGNETIC DOOR SWITCH
990150	RELAY 10 A
990154	SOLENOID, DANFOSS
990159	UV LAMP, 6W
990160	COMPRESSOR STARTER KIT
990178	AC ADAPTOR PC CONNECTION
990191	RELAY 30 A FINDER
991019	CONDENSER
991023	EVAPORATOR
991025	EXPANSION VALVE, TES2
991028	FILTER DRIER
991030	HIGH PRESSURE SWITCH
991032	RECEIVER
991036	ORIFICE 00
991038	SIGHT GLASS
991041	SOLENOID VALVE EVR3
992087	WIRE SHELF AP3/AP5/AP10
993021	DOOR GASKET 28"X16"
993028	DRIP PAN
993052	STAND APS-5

STANDARD WARRANTY

AMERICAN PANEL CORP.

5800 S.E. 78th Street, Ocala, Florida 34472-3412

American Panel Corporation products are warranted to the original user installed within the United States and Puerto Rico to be free from defects in materials and workmanship under normal use and service for the applicable period shown in the chart below.

NOTE: This Warranty does not apply to altered or misused parts.

BLAST CHILLERS / SHOCK FREEZERS (ONLY)

WARRANTY COVERS	PARTS	LABOR
Complete unit	1 year from date of shipment	1 year from date of shipment
COMPRESSOR ONLY	Additional 4 years	NONE
Food probes, UV and incandescent lamps	NONE	NONE

American Panel Corporation agrees to repair or replace at its option, FOB Factory, any part which proves to be defective due to defects in material or workmanship during the warranty period, providing the equipment has been properly installed, maintained and operated in accordance with the HurriChill™ User’s Manual. Refer to the above chart for details and exceptions for various equipment items. Labor covered by this warranty must be authorized by American Panel Corporation and performed by a factory-authorized service agency.

This warranty does not apply to remote or pre-assembled remote refrigeration systems requiring electrical inter-wiring or refrigerant piping provided by others. In no event shall American Panel Corporation be liable for the loss of use, revenue or profit or for any other indirect, incidental, special or consequential damages including, but not limited to, losses involving food spoilage or product loss. American Panel Corporation reserves the right to withdraw this warranty if it is determined that the equipment is not being operated properly. There are no other warranties expressed or implied.

During the warranty period, all requests for service **MUST** be made before any work is begun. Such requests must be directed to American Panel Corporation Service Department, which will issue written authorization when applicable. Without this authorization, the Warranty may be voided. The Service Department can be contacted by mail at American Panel Corp., 5800 S.E. 78th Street, Ocala, Florida 34472-3412; or by telephone at 1-800-327-3015; or by fax at (352) 245-0726.

Proper installation is the responsibility of the dealer, the owner-user, or the installing contractor. It is not covered by this Warranty.