

# PAC-2800BT ELECTRIC COOLING FAN CONTROLLER

# **Included components:**



**PAC-2800BT** 





#### Optional components sold separately:

- Second 70 amp relay for dual fan or two speed fan operation RLY-3
- Dakota Digital 300°F temperature sender 140022
- BIM cable for VFD or VHX systems with 3.5mm I/O AUX port 394193

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#### Installation

- Mount ONLY in vehicle cabin. Controller is not designed for engine compartment mounting.
- PAC-2800BT does NOT offer a constant temp display
- Locate the module so the LED display can be seen and the built-in programming switches can be reached for initial setup, future adjustments and troubleshooting.
- Settings for several aftermarket temperature gauges are included to make installation easier: Stewart Warner,
  Classic Instruments, VDO, and Autometer. If your gauge isn't listed, a custom calibration option allows the PAC2800BT to be calibrated to almost any gauge with clear numerical temp markings. The engine temperature can
  also be read directly from an OBDII diagnostic port with the use of a Dakota Digital BIM-01-2.

### Wiring Overview

#### PAC-2800 terminal strip connections:

• FAN HIGH Ground-trigger output; connect to the high fan relay harness white wire.

(for single fan applications leave unconnected)

FAN LOW Ground-trigger output; connect to the low fan relay harness white wire.

• SENDER Temperature sender input, connect to the engine temperature sender wire.

• A/C+ +12V trigger from AC compressor cycle switch.

(on systems without air conditioning leave unconnected)

• DISABLE- Ground trigger input to disable fans. This ignores the temperature input and keeps the fans off.

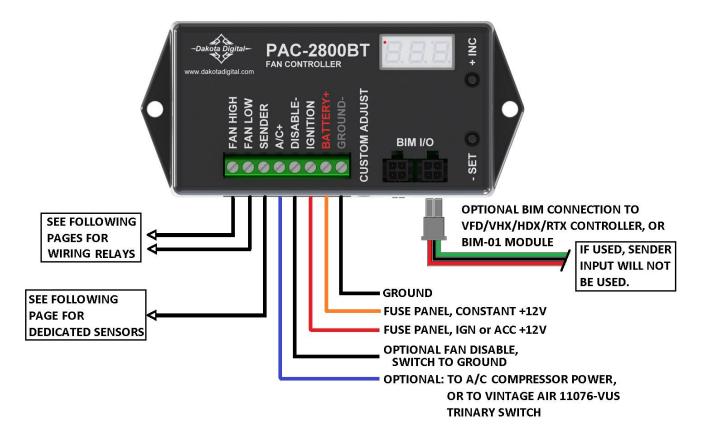
(normally left unconnected)

IGNITION Switched +12V input for PAC-2800; key-on hot (ignition power) only. Use a quality 5A fuse.

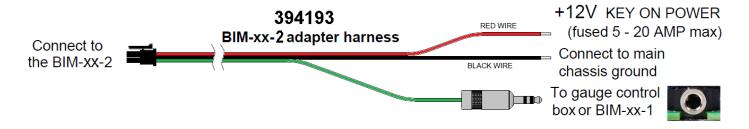
• BATTERY+ Constant +12V input for PAC-2800. Use a quality 5A fuse.

GROUND- Ground input for PAC-2800; connect to a good chassis ground.

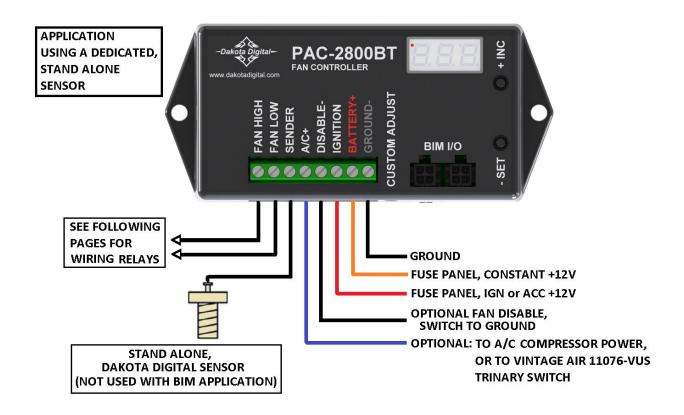
IGNITION, GROUND & SENDER will NOT need to be wired if the three wire BIM cable is used Ignition, ground & data will be fed from the HDX/RTX/VHX/VFD control box

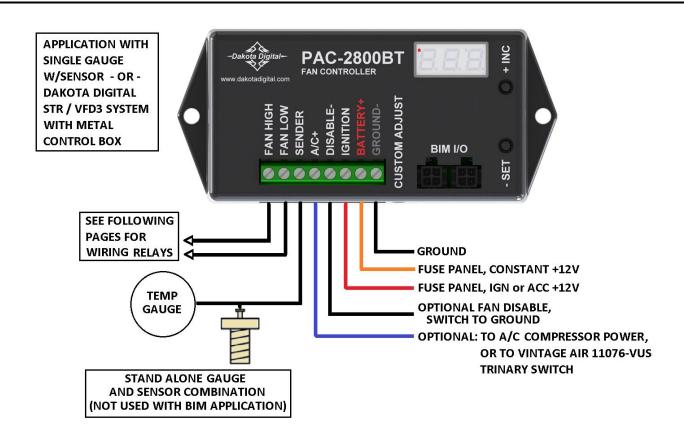


# Option to purchase for older VFD/VHX boxes

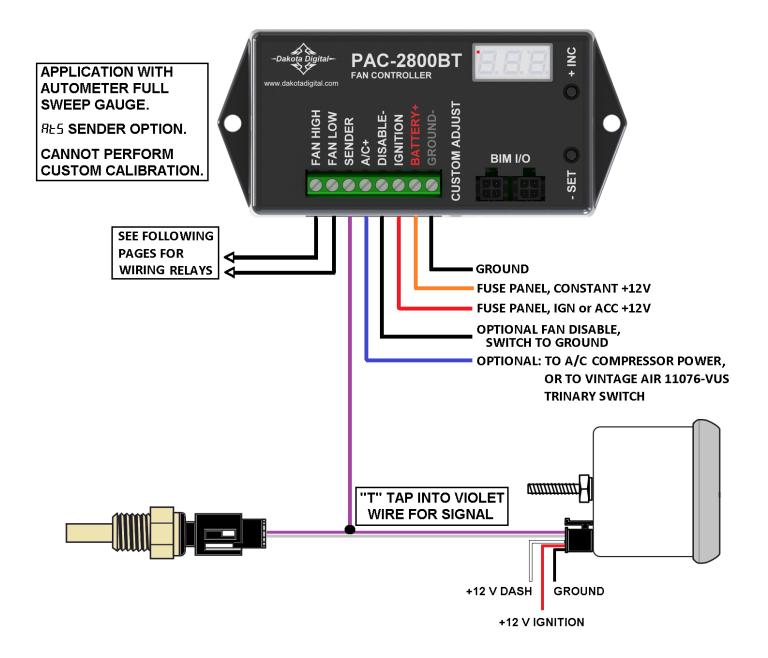


# Basic Wiring with Stand Alone Sender or Gauge



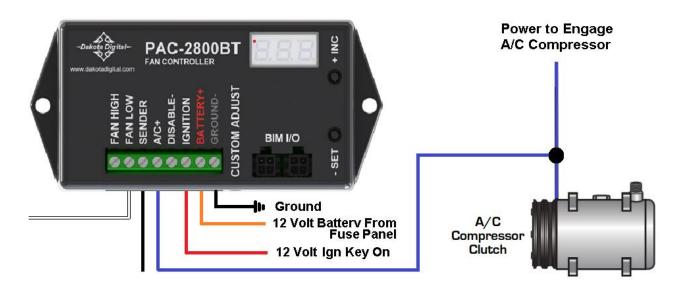


# Basic Wiring with Autometer Full Sweep Water Temp Gauge



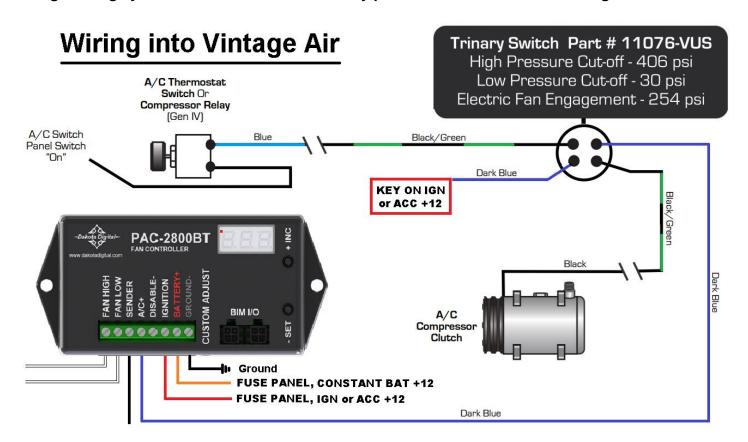
# Wiring A/C Compressor

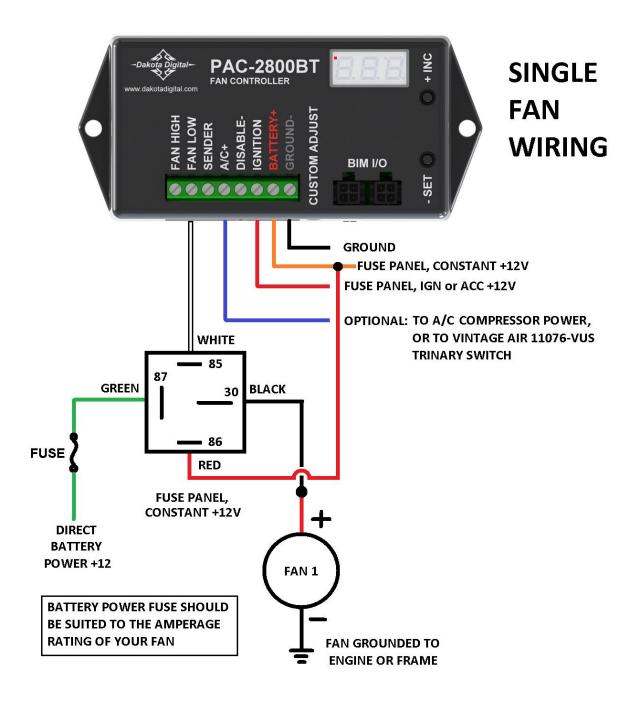
#### **OEM Air Conditioning**



# Vintage Air, Air Conditioning

Vintage Air highly recommends the use of a trinary pressure switch wire in the configuration below.

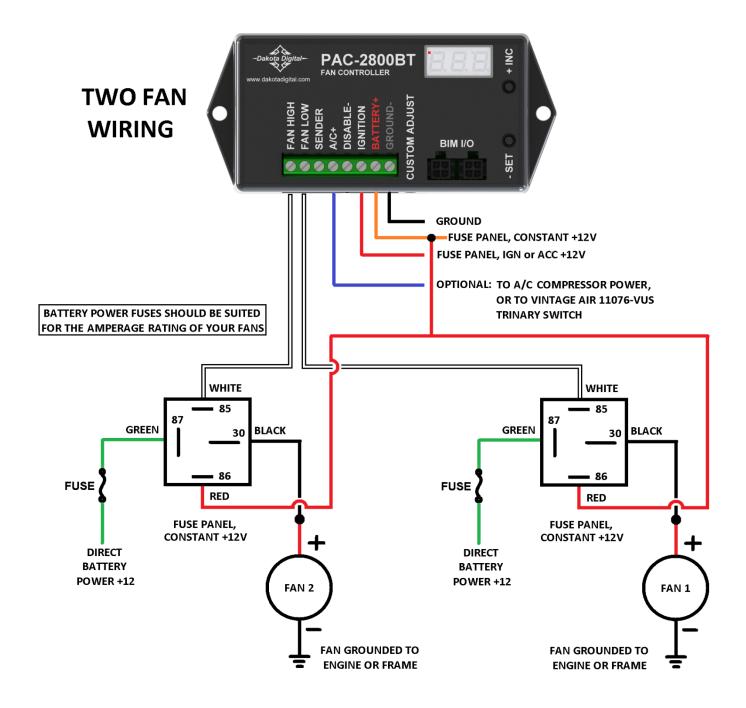




# **RLY-3 relay wiring**

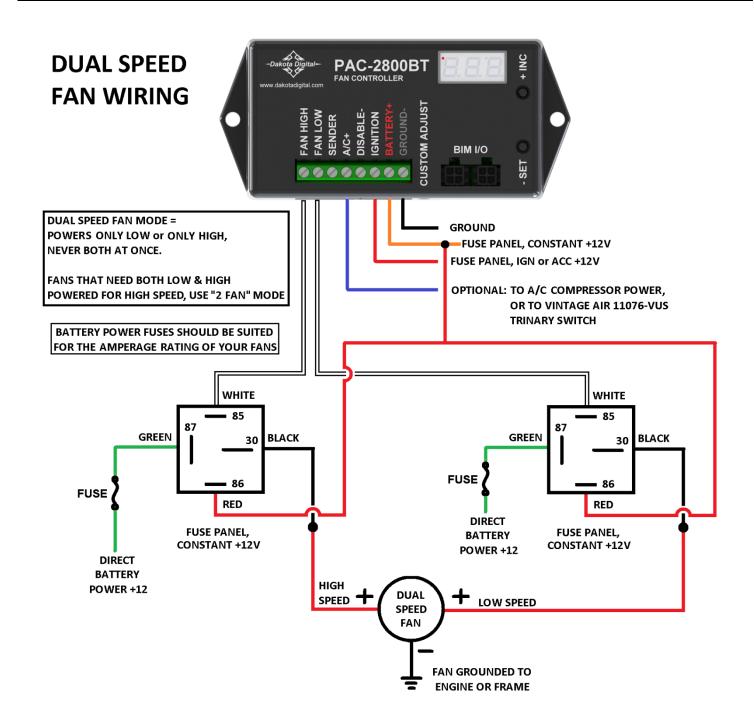
White	Ground-trigger input; connect to PAC-2800 output
Green	Relay input for fan power supply; fused, constant 12V battery input capable of supporting cooling fan AND is SEPARATE from the PAC-2800 +12V inputs
Red	Constant relay power, can share fused +12V battery connection with PAC-2800
Black	Relay output fan power supply; connect to cooling fan

# Wiring Relays for Two Fans



# **RLY-3 relay wiring**

White	Ground-trigger input; connect to PAC-2800 output
Green	Relay input for fan power supply; fused, constant 12V battery input capable of supporting cooling fan AND
	is SEPARATE from the PAC-2800 +12V inputs
Red	Constant relay power, can share fused +12V battery connection with PAC-2800
Black	Relay output fan power supply; connect to cooling fan



#### **RLY-3 relay wiring**

White	Ground-trigger input; connect to PAC-2800 output
Green	Relay input for fan power supply; fused, constant 12V battery input capable of supporting cooling fan AND is SEPARATE from the PAC-2800 +12V inputs
Red	Constant relay power, can share fused +12V battery connection with PAC-2800
Black	Relay output fan power supply; connect to cooling fan

# Operation

This electric cooling fan controller provides a way to run up to two electric engine cooling fans or one two-speed cooling fan. (A second relay, sold separately, is required for two-speed or dual fan operation). The controller monitors the engine temperature using a dedicated sender, a gauge and its sender, or directly from a Dakota Digital BIM connection.

When the engine temperature goes above the user-adjustable set point, the fan is turned on with a relay. When the engine has cooled below the user-adjustable off-temperature, the fan is shut off. Separate on and off temperatures can be set for the high and low fan outputs.

The common operation of one fan, or two fans, or a dual fan, is to have the low temp fan come on at a temp close to the thermostat in the engine, and the high temp fan to come on at a temperature 10 degrees above the first setting. Example – Single fan = FAN LOW On-190. Off 180.

Example - Two, (or dual), fan = FAN LOW On-190, Off 180. FAN HIGH On 200, Off 190

The 10 degree separation from on and off temps will prevent fans from quickly cycling on and off.

The controller will also run the fan when the air conditioner requires, by detecting when the air conditioning clutch is engaged.

Vintage Air highly recommends using their trinary pressure switch (11076-VUS) to control the fans through the A/C trigger on the PAC-2800. The trinary switch will engage the fans when the A/C pressure reaches 254 PSI, and power is passed through the switch, (see page 5)

When the temperature information is provided by a Dakota Digital BIM connection, a high speed shut-off is also available to disable the fans from turning on once the vehicle is above a user-adjustable speed.

The unit can be set to keep the fan running (if the engine is hot enough) after the key is turned off. Several delay times are available from no delay to five minutes. The display will countdown the seconds left before the fan is turned off. If the battery voltage drops too low, the fan will be turned off and a "La bat" message will display for the remainder of the time.

#### \* WARNING \*

As a fail-safe, the fan will turn on and run continuously if the sender is disconnected. Always keep clear of the fan unless the battery is disconnected. When entering setup mode in a VHX or VFD3 instrument system with the PAC-2800 connected via BIM cable, the fan will begin running continuously after a two-minute delay.

#### -IMPORTANT INSTALLATION NOTES-

- If pairing this unit with a gauge, always ensure that your gauge is working properly. If the gauge is not reading correctly, the fan control unit will not have correct temperature information and cannot be guaranteed to properly control the fan, possibly leading to overheating and engine damage.
- If a gauge is not used, ONLY a Dakota Digital 300°F sender should be used (Dakota Digital part SEN-04-1, SEN-04-2, SEN-04-4, SEN-04-5, SEN-04-6, SEN-04-7, or SEN-04-8). Other senders may not give a correct reading to the control unit.
- Custom gauge calibration requires numerical marks, stock "C-NORMAL-H" type gauges cannot be accurately calibrated to.

# **Factory Presets**

This controller comes preset to use a dedicated sender as follows:

- Dakota Digital Sender only (no gauge, see note above for 300°F sender options)
- One single speed fan (FAN LOW only)
- ➤ 205°F on temperature
- > 200°F off temperature
- 30 second key-off run time (delay)

If the factory settings don't fit your application, follow the setup procedure on page 10.

> At anytime during the setup procedure, the key may be turned off and the settings up to that point will be saved.

# Setup menu overview

\*To simplify the setup procedure, please download out IOS or Android app 'Dakota Digital Accessory'\*
Setup is entered by holding the SET switch while turning the key on. The INC switch is used to change selections and the SET switch is used to save or select.

Main Me	nu Sub N	Menu	Description
F-[			select temperature and speed units
FAn	1		one single speed fan
	2		two fans
	5Pd		dual speed fan
on or L-	. U		low speed on temperature (150F-250F) (an = 1 fan)
oFF or L-	·F		low speed off temperature ( $_{\Box}FF = 1$ fan)
H-n (o	nly 2 fan o	r dual speed)	high speed on temperature
H-F (o	nly 2 fan o	r dual speed)	high speed off temperature
d 15 (o	nly availab	ole if "๒ฃ5" is s	elected as sender type)
	OFF, E	3 1-74 MPH	vehicle speed to disable fans
aly Of	F,0.5,0.7,	1.0,2.0,3.0,5.0	fan delay after key off time in minutes
Snd	۵ م		no gauge, dedicated Dakota Digital sender only
	dd 1		Dakota Digital individual gauge with sender
	442		Dakota Digital instrument system with control box
	SEE		Stewart Warner gauge and sender
	CL5		Classic Instruments gauge and sender
	UdO		VDO gauge and sender
	ALO		Autometer gauge and sender
	RL5		Autometer gauge and sender (wide sweep 5V sender)
	ьи5	AEO	BIM connection with automatic selection of bus operation
		5L 1	BIM to RTX, HDX, VHX, VFD3 (SE47 &up), VFD3X (SE56 &up)
		SL2	BIM to VFD3 (SE46 or earlier), VFD3X (SE55 or earlier)
		PAC	PAC-2800 is master connected to BIM-01-X only
	CU5		Custom calibrated gauge
	[AL	Aqq	Set 4 – 6 temperature points for custom setup
Ł5Ł	In		use pot to raise temperature reading and turn on fans
	OUL	OFF	fans off
		□∩ or L□	ON for single fan on, LO for 2 fan or dual speed
		H I	high speed for 2 fan or dual speed
ЬЦИ	4 digi	t ID code	INC scroll the Bluetooth ID across the display
	SEŁ		select to allow changes only while in setup
	ALL		select to allow anytime
	ЬАС		saves and exits Bluetooth menu
ШЕг			show software revision for tech support assistance
r5E			reset PAC-2800 to factory default values
End			exit setup
			•

# Setup

To enter setup mode, press and hold the SET switch, then turn the key on. The display will show "5EL".

Release the SET switch, the display will show "F-[", as the first item in the menu list.

Tapping the INC switch will step through the menu list to the desired menu item you may need to alter.

Tapping the SET switch will enter the menu option displayed.

Once done with that menu option, saving by tapping the SET will move you onto the next menu item in the list.

#### Temperature unit

- Tap the SET switch. The display will show the current unit, F for F & MPH and C for C & km/h.
- 2. Tap the INC switch to change the selection. Tap the SET switch to save it.

#### Fan type

- 1. Tap the INC switch until "FAn" is displayed.
- 2. Tap the SET switch. The display will show the current setting: either 1, 2, or 5Pd.
  - a. I is for a single fan
  - b. ≥ is for two fans
  - c. 5Pd is for a dual speed fan
    - i. If the dual speed fan requires two powers at the same time for high speed, select ≥
- 3. Tap the INC switch to change the selection. Tap the SET switch to save it.

#### Fan on and fan off temperatures

1. Tap the INC switch until the desired setting is displayed

Display 1 fan	Display (2/SPD)	<u>Option</u>
on	L-n	fan low speed on / 5° F steps (150F-250F)
oFF	L-F	fan low speed off / 1° F steps (30F-2F below low on)
	H- n	fan high speed on / 2° F steps (2F above low on – 250F)
	H-F	fan high speed off / 1° F steps (30F-2F below high on)

- 2. Tap the SET switch. The display will show the current temperature setting.
- 3. Tap the INC+ switch to increase the temperature.
- 4. Tap the SET- switch to decrease the temperature
- 5. Press and HOLD either switch until "-" to save the temp setting.
- 6. The display swill how the next temp option until all temp options are set
  - a. One may skip past part of the temp settings by tapping the INC switch

### Driving speed fan disable (only available with a BIM connection)

- 1. Tap the INC switch until "d 15" is displayed.
- 2. Tap the SET switch. The display will show "DFF" or the current speed setting.

OFF. 3 1-74 MPH

3. Tap the INC switch to change the setting. Tap the SET switch to save it.

#### Fan remains running time after the key is turned off

This will set a time for the fan to run for a selected time after the ignition is turned off

- 1. Tap the INC switch until "dLY" is displayed.
- 2. Tap the SET switch. The display will show OFF or the current delay in minutes.

Display	<u>Option</u>
OFF	Fan will turn off when the key is turned off.
0.5	30 seconds
۵. ٦	45 seconds
1. 0	1 minute
2.0	2 minutes
3.0	3 minutes
5.0	5 minutes

3. Tap the INC switch to change the setting. Tap the SET switch to save it.

#### Temperature reading source

- 1. Tap the INC switch until "5nd" is displayed.
- 2. Tap the SET switch. The display will show the setting.

<u>Display</u>	Option
no	No gauge, dedicated Dakota Digital sender only
dd I	Dakota Digital individual temp gauge with sender
995	Dakota Digital instrument cluster with control box
SEE	Stewart Warner gauge and sender
CL5	Classic Instruments gauge and sender
UdO	VDO gauge and sender
AF0	Autometer gauge and sender
ALS	Autometer gauge and sender (wide sweep 5V sender)
ьи5	Dakota Digital BIM connection
CU5	Custom calibrated gauge

Custom calibration (for gauge sets not listed above) - see 'Custom Calibration' section below.

- 3. Press and release the INC switch to change the setting. Press and release the SET switch to save it.
- 4. If bus is selected, another set of options appear to help the bus to communicate correctly.

<u>Display</u>	<u>Option</u>
Ato	Automatically select the bus operation mode (HDX and RTX systems).
5L 1	Connect to a VHX, VFD3 (SE47 or higher), or VFD3X (SE56 or higher) system.
5L2	Connect to a VFD3 (SE46 or earlier) or VFD3X (SE55 or earlier) system.
PAc	PAC-2800BT is a master connected to a BIM-01-2 or similar unit

#### **Custom Calibration**

- Note 1: If your engine is warm you may need to disconnect the sender wire to get the lower points on the gauge.
- Note 2: If the key is turned off in custom setup, the previous gauge setting will be used and the custom gauge will not be saved.
- Note 3: If your gauge does not have defined ticks with numerical temp readings, it is highly recommended to use a dedicated sender as calibration to the gauge is very inaccurate or impossible without temp markings.
- Note 4: A minimum of four and a maximum of six, reference temperatures are required for a custom calibration.
- 1. Tap the INC switch until "ERL" is displayed
- 2. Tap the SET switch. The display will show "ศิสป"
- 3. Turn the potentiometer on the front of the PAC-2800 (marked CUSTOM ADJUST) with a small flat screw driver. While doing so, watch your temp gauge and line up the needle with the **lowest temperature tick** on the gauge **Custom gauge must be calibrated starting at cold temperatures and moving to hot temperatures**

Note: Turning potentiometer clockwise increases temperature reading.

- 4. Tap the SET switch. The display will show a temperature reading. Tap the INC+ switch to increase the reading and tap the SET- switch to decrease the reading until the display matches your gauge. Hold either switch to move on to the next temperature.
- 5. The display will show "ਸਰਪ" again. Repeat the previous steps at each tick mark on the gauge to get 4-6 readings saved.
- 6. When you are finished with setting calibration points, tap the SET switch, then tap the INC+ switch through the remaining temperature numbers until "d□n" is shown.
- 7. Hold the SET- switch until "-" is shown to save and exit.



#### Test

The test "£5£" mode offers two options " ¬¬", "¬ШE", and "ЬЯс", testing the operation of the fans to a specific temperature and testing to see if the fans will function.

#### Input test

This unit allows you to mimic normal operating temperatures using the adjustment pot to alter the temperature the PAC-2800BT may see from an actual sender wired to the SENDER input.

This will NOT work if you are using "bus" as a sender option!

- 1. When "£5£" is displayed tap the set switch, the display will show " In".
- 2. Tap the SET switch. CUSTOM ADJUST pot will be connected to the gauge and the display will show the temperature.
- 3. Turn the CUSTOM ADJUST pot clockwise to increase the gauge reading. The fan should start when the display reads hotter than the set ON temp. It should again shut off when the display reads lower than the OFF temp.
- 4. You may also look at your water temperature gauge (if unit is using a gauge) and compare the temperature reading of the unit to the gauge. The temperatures should be within a few degrees. If not, the wrong gauge may be selected in the setup routine. If a selection cannot be found that closely matches your gauge, you may have to custom calibrate to your gauge.

#### **Testing Fan operation**

A second diagnostic mode allows you to test the fan operation for the mode you have set. This can be used to verify proper wiring of the relays for fan operation without running the engine, regardless of engine temperature. Just follow these steps.

For 1 fan, the "ollt" submenu can step through "oFF", "on"

For 2 fans or dual speed fan, the "oUL" submenu can step through "oFF", "Lo" and "H I" with the INC switch

- 1. Tap the INC switch until "DUL" is displayed
- 2. Tap the SET switch. The display will show "DFF".
- 3. Tap the INC switch to change the fan drive state to "pn"
  - a. 2 fans with toggle between "oFF", "Lo", and "HI"
- 4. Hold the SET switch to enable the fan(s) when "pn", "Lp", or "H I" is displayed
- 5. Tap the INC to display "oFF". Tap the SET switch
- 6. When "ЬЯс" is displayed, tap the SET switch to exit

#### Bluetooth

The Bluetooth options are the ID code / "5EL"/ "ALL "/"bAc"

#### Pairing notes:

- Androids MUST be paired first, before opening app
- Apple devices need not be paired before opening the app

#### **View Bluetooth ID**

- 1. Tap the INC until "bLU" is displayed
- 2. Tap the SET switch. The display will show part of the ID
- 3. Example: "-£7" is first displayed. Tap INC to display the second half: "bE-"
- 4. The code will be listed in the app, and as a Bluetooth pairing option in Android settings
- 5. Tap SET to exit and move to the Bluetooth operation mode

#### **Set Bluetooth operation**

1. The display will show the last chosen option of "5EL"/ "ALL" or "bAE"

<u>Display</u>	<u>Option</u>
SEŁ	The Bluetooth app can only make changes while the PAC-2800 is in setup
ALL	The Bluetooth app can make changes anytime the key is on
ЬЯС	Exits Bluetooth setup

- 2. Tap the INC switch to change the setting
- 3. Tap the SET switch to save the selection and exit to the next option

#### View software version

- 1. Tap the INC switch until "UEr" is displayed.
- 2. Tap the SET switch. The display will show software code.
- 3. The code is split in two parts, the first may show "-90", tap the INC to show the second half "00 l".
- 4. Tap the SET switch to exit.

#### **Factory Reset**

- 1. Tap the INC switch until "r5t" is displayed.
- 2. Tap the SET switch. The display will show "YE5".
- 3. Tap the SET switch to return the PAC-2800BT for factory default settings.
- 4. If you do not want to reset, tap INC to display "no", then tap SET to exit.
  - a. You may also turn off the ignition to cancel the reset.

#### **Exit Setup**

Tap SET when "End" is on the screen to save and exit setup.

## Checking the current reading

The current temperature reading can be displayed at request. The LED will never display the continuous temp.

- Key on Press and hold the SET button on the PAC-2800BT
- The temp will be displayed as long as the SET button is held.
- Temp will not show if status LED is flashing rapidly, indicating low ignition power.

# **Checking Fan Status**

- Key on Press and hold INC button.
  - o "A-L" if the A/C input is commanding the fan to run,
    - "OFF" when the fan is not running,
  - o "LO" or "On" for low speed fan, and "H I" for high speed fan.
  - o If the DISABLE input is grounded the display will continuously flash "DFF".

# **Dakota Digital Bluetooth Accessory App**

Available at the Google Play Store and Apple App Store



#### **Pairing**

- Apple No pairing is required.
  - Simply open the app and it will pair in the background
  - The app will find a device that you can tap on to open
- Android MUST be paired before opening app
  - Not pairing first will generate a "Waiting" message in the app
  - Using the cascade button, access running programs and close all
  - o Go to Settings, Connections, Bluetooth and pair new device
    - "bLU" option in PAC setup will display device name
  - Open app and tap on device name to open

# **TROUBLESHOOTING**

PROBLEM	CAUSE	SOLUTION
Display reads ""	Wrong gauge selected	Select proper gauge in setup or use CUSTOM CAL if
(shorted sender)	Gauge disconnected from sender	needed.
	(gauge option only)	Reconnect gauge to sender.
	Sender is shorted	Check sender wire for short to ground, look for pinched sender wire or bare connection touching ground.
	Unit not connected to sender	Connect SENDER terminal on unit to engine temp sender.
Dioplay roads "FFF"	Wrong gauge selected	Use setup to select proper gauge, or use CUSTOM CAL if
Display reads "EEE" (open sender)	Wrong gauge selected	needed.
(open sender)	Sender not connected to PAC-	Connect SENDER terminal on unit to engine temp sender.
	2800BT	Gormoor Garage and Gorman and Gorgania to the Gorman
Display reads "5EL"	Setup data is out of valid range	Go through setup again, custom cal may be incorrect.
"Err"		
Display reads "Err"	+12v terminal does not have constant	Connect +12 BAT terminal to fused battery connection. This
"ьЯŁ" when entering	power	terminal should have constant power at all times.
setup	·	·
Display alternates	Battery voltage dropped too low	Ensure battery is fully charged. Check and replace
between "ಓ₀" and	during key off extended fan on	weak battery. Shorten fan delay time to prevent
"bAL"	time	excessive battery drain.
Fan turns on early, late,	Unit has no constant power.	Connect +12 BAT terminal to constant power and GROUND
or not at all	(Display is blank)	terminal to a good ground.
	Unit has no keyed power.	Connect IGNITION terminal to a circuit powered when the
	(dot on display flashes slowly)	key is on.
	Broken/shorted wire to sender.	Check wire to sender for breaks or shorts and repair.
	Wrong gauge is selected	Hold SW1, if temperature read is lower than expected or
	(gauge setup)	doesn't match gauge, redo setup.
	Wrong sender used	For sender-only applications, ONLY a Dakota Digital 300°F
	(for "no gauge" setup)	sender can be used. Other senders may not give a
	Wrong bug type got	correct temperature reading.
	Wrong bus type set (for BIM gauge setup)	For early VFD3/3X systems select bu5 – 5L2 to read the temperature correctly.
	On temperature in setup is too high	Hold SW1, if temperature read is above the desired on
	on temperature in estap is tee mgm	temperature, and fan is not running, redo setup.
	Fan not connected properly	Remove fan output from unit and short wire to ground. If fan
		does not run, check relay and fan connections.
	Display shows "5Pd"/"0FF". Speed	Turn off or raise the high speed disable setting.
	shut-off is set too low.	
	Display is flashing "d 15"/"DFF". Disable	Disable input should not be grounded for normal operation.
	input is active.	
Fan runs constantly	Controller has an error	Check display for error message.
	Fan off temp too low	Increase off temp in setup.
	Broken/shorted wire to sender	Check wire to sender for breaks or shorts and repair.
	Wrong gauge is selected	Select appropriate gauge in setup, or custom calibrate if
	A /O :	your gauge is not supported.
	A/C input is powered.	Make sure this only has power when the A/C clutch is
Custom gouge setup	Not anough points used	active.
Custom gauge setup	Not enough points used Points not input in correct order	Make sure that at least 4 points of gauge are set. Set gauge points in order from cold points to hot points.
displays "Err" and	Point entered twice	Each point set must be different than the point before it.
returns to "5nd" setup option	- Citt Official Wild	243.1 point out must be amerent than the point belofe it.
Fans cycle on-off	+12v for controller taken from same	Connect the +12V for the controller to a different circuit
especially when	circuit as the fan power +12V	separate from the circuit connected to fan relays.
engine temp is close	(green wire on relays)	Soparato nom the eneat connected to fair folays.
to ON/OFF set point	(3.20	
Display is flashing 645	Unit set to BIM input with no BUS data	Connect BIM cable from Dakota Digital instrument system
opia, is hadring bus	input detected.	plastic control box or BIM-01-X or change temperature
	·	reading source to the appropriate sender.
		reading source to the appropriate sender.

PAC-2800 specifications			
SETTINGS			
Minimum Fan On Temp	150° F (65 C)		
Maximum Fan On Temp	250° F (121 C)		
SUPPLY			
Voltage Input (+12) Range	6.3 to 22 V		
Key Off Current (+12)	< 0.001 A		
Key On Current (+12)	< 0.075 A		
OUTPUTS (to turn on relay)			
Fan Low, High (maximum) 1.5 A			

Included relay specifications	
Typical Coil Current	0.175 A
Relay Contacts Max Current	70 A (14VDC)

#### **SERVICE AND REPAIR**

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical support is available to help you work through any questions or problems you may be having installing one of our products. Please read through the Troubleshooting Guide. There, you will find the solution to most problems.

For additional support, please visit www.dakotadigital.com. A "Product Support" link will be found at the bottom of the home page.

Should you ever need to send the unit back for repairs, please call our technical support line, (605) 332-6513, to request a Return Merchandise Authorization number.

- Package the product in a good quality box along with plenty of packing material.
- Ship the product by a common carrier with tracking abilities.
- Be sure to include the RMA number on the package.
- Include a complete description of the problem, with RMA number, your full name and address (street address preferred), and a telephone number where you can be reached during the day.
- Any returns for warranty work must include a copy of the dated sales receipt from your place of purchase.
- Send no money. We will contact you for payment.

### **Dakota Digital 24 Month Warranty**

DAKOTA DIGITAL warrants to the ORIGINAL PURCHASER of this product that should it, under normal use and condition, be proven defective in material or workmanship for 24 MONTHS FROM THE DATE OF PURCHASE, such defect(s) will be repaired or replaced at Dakota Digital's option.

This warranty does not cover nor extend to damage to the vehicle's systems, and does not cover diagnosis, removal or reinstallation of the product.

This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.

Dakota Digital assumes no responsibility for loss of time, vehicle use, owner inconvenience nor related expenses.

Dakota Digital will cover the return standard freight once the product has been evaluated for warranty consideration, however the incoming transportation is to be covered by the owner.

This Warranty is in lieu of all other expressed warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. No person or representative is authorized to assume, for Dakota Digital, any liability other than expressed herein in connection with the sale of this product.

▲ WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



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