Supplementary Manual
for
Model 287a
Ionizer Performance Analyzer

287a-1/100A
V1.13
P/N 0345006
040811
IPA 287a Display and Operational Chart

Press [On/Off] to turn on the unit

ME MONROE 287a
Version 1.12

Press [On/Off] or wait for 5 seconds

MemUsed A30%M50%
ClrData Y/N? N


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Main entrance display

Temperature=28C, Battery=9.0V, Humidity=34%RH

Press and hold [On/Off] for less than 2 seconds
between 2 - 4 seconds
longer than 4 seconds

Off
28C 9.0V 34%RH

Set-Up
28C 9.0V 34%RH

Null
28C 9.0V 34%RH

See Page 2

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Review data

Press [*] or [v]: scroll through the menu
[Enter]: select the menu item
[ON/OFF]: back to Main

Clear data

Press [Enter]

Auto Sequence

Test delay

Balance test

Balance duration

Auto shut down

Restore factory defaults:
AutoSeq= ++++
Tst delay= 5 sec
Balance= Y
Balance duration= 30 sec.
AutoShutDwn= 1 minute

Press [Enter]

Auto Seq ++++
^ v ENT ON=Exit

Press [Enter]

Tst delay 5 sec
^ v ENT ON=Exit

Press [Enter]

Bal (Y/N) Y
^ v ENT ON=Exit

Press [Enter]

Bal dur 22 sec
^ v ENT ON=Exit

Press [Enter]

AutoShutDwn 10min
^ v ENT ON=Exit

Press [Enter]

Fac. Default N
Y/N?

Press [Enter] or [ON/OFF] back to Main
**Manual Plus Decay Test** (press [+] button less than 2 seconds)
The 287 unit will start by zeroing then Charge to over +1050V, then Decay. The decay timer starts at +1000V and stops at +100V.

**Manual Balance Test** (press and hold [+] or [v] button for 2-4 seconds)
The 287 will start by zeroing, then Balance for the time duration. Start recording Min and Max voltage levels after 5 seconds.

Up to 10 Manual test results can be stored in memory. They are named M1 thru M0 where M0 is the 10th test.

Press [Enter] will abort any on-going test.
After the test complete, review data begins. Press [+] or [v] will scroll through the data. Press [Enter] or [ON/OFF] back to Main
Manual Minus Decay Test (press [v] button less than 2 seconds)
The 287 unit will start by zeroing then Charge to over \(+1050V\), then Decay.
The decay timer starts at \(+1000V\) and stops at \(+100V\).

Manual Balance Test (press and hold ['^'] or [v] button for 2-4 seconds)
The 287 will start by zeroing, then Balance for the time duration. Start recording Min and Max peaks after 5 seconds.
Auto Sequence Group Test (press [AUTO] button less than 2 seconds)
The 287 unit will perform up to 10 groups of automatic test sequences and store the results in memory. Groups are named 1 thru 0 where 0 is the 10th. Each group has 3 +decay, 3-decay, and an optional balance test. The sequence can be set in the Set-Up Menu.

Decay test: Zeroing to <5V, Charge to over +/-1050V, then Decay. The decay timer starts at +/-1000V and stops at +/-100V.

Balance Test: Zeroing to <5V, then Balance for the time duration. Start recording Voltage peaks after 5 seconds. The delay time between the tests can be set in the Set-Up Menu.

Auto Sequence Test

Main entrance display
---
V A30%M50%
28C 9.0V 34%RH

less than 2 seconds
Press [AUTO] and hold

AUTO
28C 9.0V 34%RH

+ 1V Zeroing
28C 9.0V 34% 11+

+ 950V +Charge
28C 9.0V 34% 11+

+1030V +Decay
28C 9.0V 34% 11+

+ 800V 3.6s
28C 9.0V 34% 11+

+ 20V 8.6s
Delay 6 sec

go on for the other 5 decay tests...

+ 1V Zeroing
28C 9.0V 34% 11+

+ 5.2s
+0002mx -0004mn

Voltage update Balance duration timer
Max and min voltages start recording after 5 seconds.

Press [Enter] will abort any on going test and back to Main. After the test complete, review data begins. Press [^] or [v] will scroll through the data. Press [Enter] or [ON/OFF] back to Main.
## Error Messages

<table>
<thead>
<tr>
<th>Battery Low 6.2V Off in 5 sec.</th>
<th>Change the battery.</th>
</tr>
</thead>
<tbody>
<tr>
<td>---V A30%M50% 28C 9.0V Er%RH</td>
<td>Humidity is out of 10% - 90% range or sensor failure. If sensor failure, contact factory for repair.</td>
</tr>
<tr>
<td>+1012V +Charge Unable to charge</td>
<td>Unable to charge to 1050V. Make sure nothing is contacting the charge plate and the standoffs underneath are clean. This may also be caused by too much load on the plate. Press enter to return to the main screen. Remove the 287 from the ionizer and recheck. If problem persists contact the manufacturer for calibration.</td>
</tr>
<tr>
<td>+ 216V 200.s Decay failed</td>
<td>Decay time out at 200 seconds, and the plate reading is still above 100V. Check your ionizer. Recommend using Monroe Model 288</td>
</tr>
<tr>
<td>EEPROM Fail</td>
<td>Contact factory.</td>
</tr>
</tbody>
</table>