

Instruction Sheet

Follow these steps to update the fryer and install FQLink.

NOTE: FQLink **ONLY** functions on fryers with at least **ONE (1) Common Controller** (see Figure 1) installed in the far-left Vat #1 position.

Subject: FQ4000 General Market FQLink Installation Instructions

Models affected: FilterQuick 4000 (Touch Screen) Fryers

4.29.26



Figure 1

STEP 1: CONFIRM COMMON CONTROLLER IS INSTALLED

1. The fryer **MUST** have at least **ONE (1) Common Controller** (see Figure 1) installed in the battery. It must be located in the far-left Vat #1 position. If a Common Controller is installed in the far-left Vat #1 position, continue to step 2. The Common Controller can be identified by the large silver metal bezel that surrounds the touch screen. If the fryer **DOES NOT** have a Common Controller installed, **DO NOT PROCEED**. **A controller conversion kit will need to be installed in the far-left vat #1 position prior to continuing to STEP 2 for installation. See SB2025-17 for PN's.**



Figure 2

STEP 2: UPDATE THE FRYER SOFTWARE

1. Locate the USB with the **FRYER SOFTWARE FILES** and follow the enclosed instructions to update the fryer software using the USB port on the **FAR-LEFT** side of the fryer, just inside the left fryer door (see Figure 2). The software versions after update should be: UIC/X – 10.00.144; VIB – 01.03.003; FIB – 10.00.062

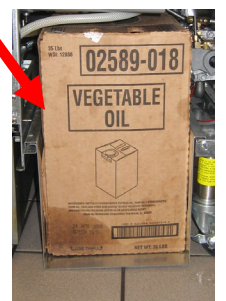


Figure 3

STEP 3: DISCONNECT KCCM & RELOCATE MODEM (IF INSTALLED)

For 30lb fryers continue to step 1 below. For 60, 80, 100 & 120 fryers skip to step 6 below

1. Disconnect power from the fryer.
2. For 30lb fryers open the **FAR-RIGHT** door of the fryer or door with the oil reservoir (it may be third door from the left in 4 vat fryers or larger) (see Figure 3).
3. Remove the JIB/BIB to access the FIB box (see Figure 3). Note: The appearance of the FIB box may differ depending on date of manufacture.

4. Remove the FIB box cover by removing the two (2) ¼" screws attaching the cover and lifting on the cover to remove (see Figure 5). This box may vary by date of manufacture.

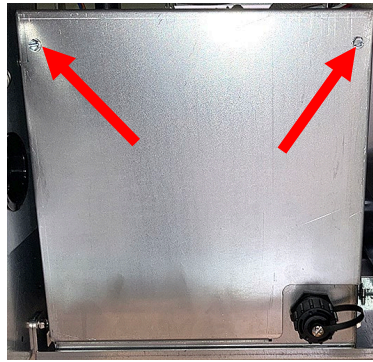


Figure 5

5. The KCCM board is located on the right side or rear of the FIB box (see Figure 6) depending on date of manufacture. Prior to starting, disconnecting the J1 harness may provide easier access to the RJ connectors on the FIB board (see Figure 6 & 6A).

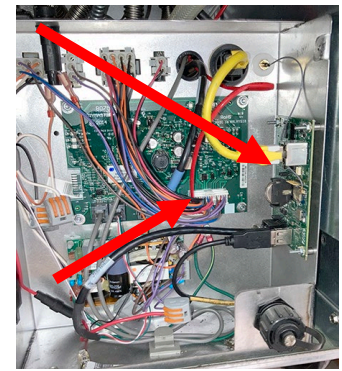


Figure 6

6. In FQ60, FQ80, FQ100 and FQ120 fryers, the KCCM board may be located in a control box, behind a controller.

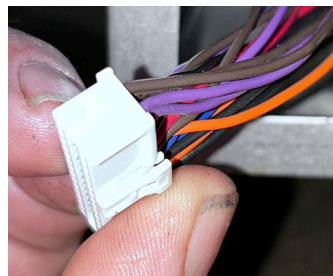


Figure 6A

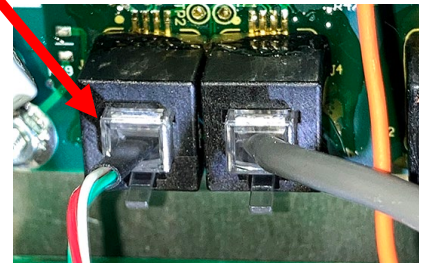


Figure 7

7. Disconnect the

RJ11 KCCM CAN/power Harness (see Figure 7) from the FIB board.

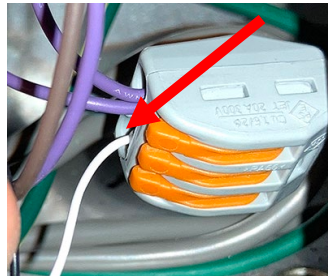


Figure 8

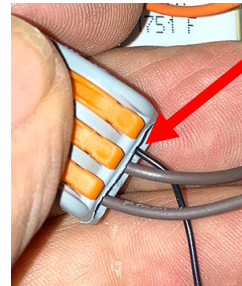


Figure 9

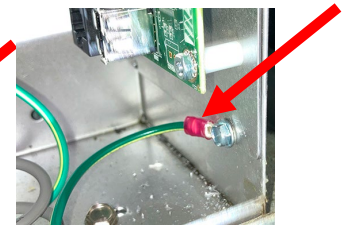


Figure 10

8. Disconnect the white & black wires from the harness in the previous step from the Wago snap connectors (see Figure 8 & 9.



Figure 11

9. Cut or disconnect the green ground wire of the harness from the box (see Figure 10).



Figure 12

10. If a cellular modem is **NOT CONNECTED** to the KCCM board, skip to step 11. If a modem is connected, disconnect the cellular modem USB cable from the KCCM board (see Figure 11).

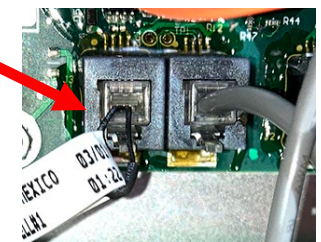


Figure 13

11. Disconnect the RJ45 connector from the KCCM board (see Figure 12). Discard the complete harness, it will no longer be used. Remove the KCCM board if accessible. If not it can remain in the box.

12. Connect the supplied RJ11 CAN terminator to the connector on the FIB board from step 7 above (see Figure 13). Reconnect the J1 connector to the FIB board if disconnected.

13. If a cellular modem is installed continue to the next step. If not, skip to step 18 if using ethernet, otherwise skip to next section "Install IoT software".

14. If applicable, relocate the cellular modem underneath or relocate the cellular modem between the controllers on the rear of the bezel using double sided tape (see Figures 14 and 14a).

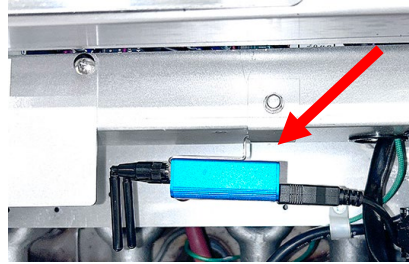


Figure 14

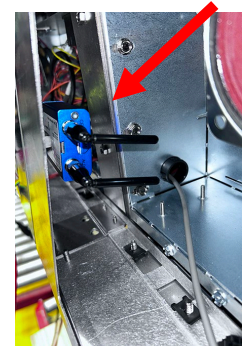


Figure 14a

15. If antenna extensions were used, disconnect the extensions and connect antennas directly to the modem if possible (see Figure 15). Ensure the antennas are parallel to each other (see Figure 16).

16. Using the supplied USB cable, route the USB cable from the modem to the rear of the vat #1 controller.

17. Connect to the USB plug on the rear of the Vat #1 controller. If a cooling housing is installed, connect the modem to the USB software update port (see Figure 17). Note: The appearance of the USB port may differ depending on date of manufacture.

18. If connecting using ethernet, route the ethernet cable to the rear of the Vat #1 controller ethernet connection and connect to the controller (see Figure 18).

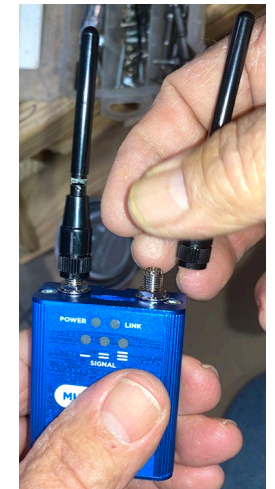


Figure 15

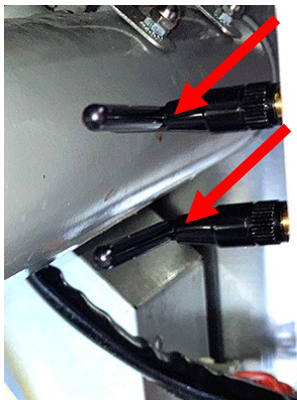


Figure 16

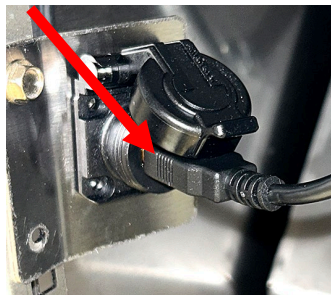


Figure 17

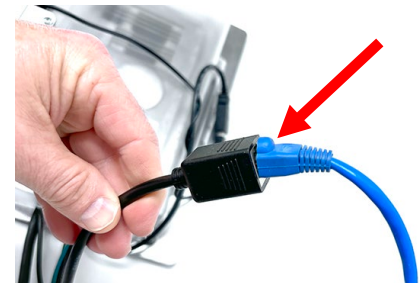


Figure 18

STEP 4: INSTALL THE IoT AGENT SOFTWARE

1. Ensure all controllers are OFF and in the standby mode (see Figure 19). Unplug any modems from the USB port if connected.

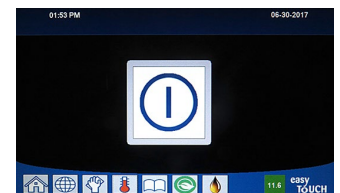


Figure 19

2. On the left screen, press  →  SERVICE →  SERVICE → 3000 →  → TECH MODES  → SOFTWARE UPGRADE

3. Locate the USB with the **IoT AGENT SOFTWARE FILES** and insert the USB drive into the USB port on the **FAR-LEFT** side of the fryer, just inside the left fryer door (see Figure 20). The USB port may differ in appearance based on date of manufacture
4. Follow the onscreen instructions.
5. Press **YES** when the screen displays **READING COMPLETED**.
6. Press **YES** when the screen displays **ALLOW 30 MINUTES FOR SOFTWARE UPGRADE. NO FRYING. UPDATE NOW?**
7. While updating the controller displays various messages. Once the update is finished it will either reboot the left controller, if deploying for the first time or instructions to remove USB and power cycle. The right controller may still have messages showing it's updating, but it is finished. As long as the left controller displays REMOVE USB & POWER CYCLE, advance to step 8.
8. Remove the USB flash drive and lower cover over the USB slot.
9. Press the **YES** button to confirm.
10. The screen displays **UPGRADE COMPLETED, POWER CYCLE SYSTEM**.
11. Power cycle the system for **60 SECONDS**. Failure to press and hold the **reset switch long enough, may cause an incomplete software update**.
12. Wait two (2) minutes and press the **"HOME"** button on the (see Figure 21).
13. Press the **?** button (see Figure 22).
14. Press the down arrow button (see Figure 23).
15. Press the software version button (see Figure 24).
16. Press the down arrow button **TWO** (2) times (see Figure 25).

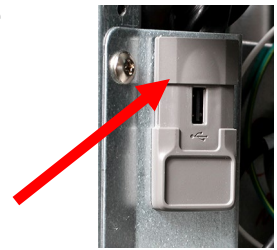


Figure 20

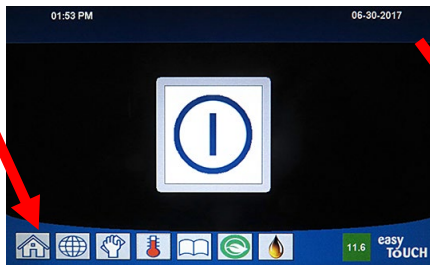


Figure 21

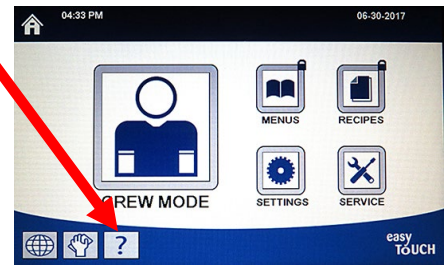


Figure 22

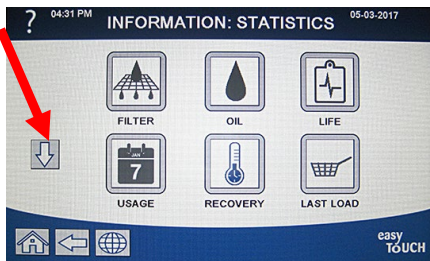


Figure 23



Figure 24

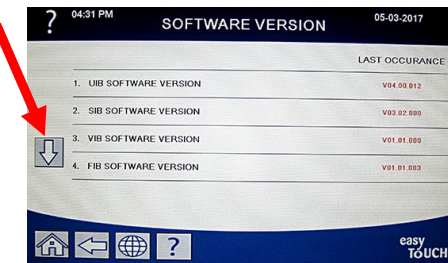



Figure 25

17. The **GATEWAY SOFTWARE VERSION** should be **60.99.067 for AWS or 61.99.051 Generic** (see Figure 26). If not, repeat steps 1-8 of this section. If after two tries of loading the software and the version below is **NOT** displayed, go to STEP 5 (Troubleshooting) on page 9.



10. GATEWAY SOFTWARE VERSION

Figure 26



**V60.99.067
AWS
or 61.99.051
Generic**







18. Press the “HOME” button (see Figure 21) when finished.
19. This concludes installing hardware and updating software. The instructions on the following pages are for techs that are connecting the fryer to the cloud.

STOP!!!! THE NEXT SECTION SHOULD ONLY BE COMPLETED BY PERSONNEL THAT HAVE THE PASSWORDS, SSID, ETC. TO CONNECT THE FRYER TO THE CLOUD.

Appendix A

This section should ONLY be completed by IT departments or other personnel with the passwords, SSID, etc. to connect the fryer to the cloud.

STEP 1: EDIT THE CONFIG SETTINGS

1. Press  →  →  → **9000** →  →  **6X** → **CONNECTIVITY**
SETTINGS SERVICE
2. Select **SERIAL NUMBER**.
3. Enter the serial number that is located inside the door of the far-left fryer and press **√**.
4. Select **MODEL NUMBER**.
5. Enter the model number that is located inside the door of the far-left fryer and press **√**.
6. Select **NUMBER OF UIs**.
7. Select the number of controllers in the battery of fryers and press **√**.
8. Select **CONNECTION TYPE**.
9. Select **DISABLE** to disable FQLink; **ETHERNET** if connecting via Ethernet; **WIFI** if connecting via WiFi; **CELLULAR** if connecting via Cellular and press **√**.
10. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
11. Press **√**.
12. Select **KEY TYPE**.
13. Select the security type **NONE**; **WPA-PSK/WPA2-PSK**; **WPA-NONE**; **WPA-EPA** and press **√**.
14. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
15. Press **√**.
16. Select **SSID**.
17. Enter the SSID address of the store network to connect the fryer to and press **√**.
18. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
19. Press **√**.
20. Press 
21. Select **PASSWORD**. This parameter can be blank if it is open or unlocked network.
22. Enter the network password and press **√**.
23. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
24. Press **√**.
Settings in steps 24-34 below apply ONLY to cellular modem configurations. If using WIFI or Ethernet skip to step 35.
25. Select **APN**.
26. Enter the APN settings provided by the network provider (if using Telit sim card with Merlin modem enter **nxtesim1.net**) and press **√**.
27. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
28. Press **√**.
29. Select **PROVIDER**.



30. Enter the provider settings provided by the network provider (if using Telit sim card with Merlin modem enter **Telit**) and press **√**.
31. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
32. Press **√**.
33. Select **DIALIN**.
34. Enter the modem dial up number provided by the network provider (if using Telit sim card with Merlin modem enter ***99***1#**) and press **√**.
35. Select **TIMEZONE**.
36. Using the table beginning on page 10, enter the time zone exactly as shown in column 1. This name is case sensitive and must retain any special characters such as / or _. Example: **America/Chicago** for (Central Standard Time) or **America/New_York** for (Eastern Standard Time)
37. Press **√**.
38. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
39. Press **√**.
40. Press 
41. Select **NTP**.
42. Select **ON**. **NOTE: Enabling NTP will grey out the time and date settings, as these will be controlled by FQLink based off of GMT time.**
43. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
44. Press **√**.
Skip to step 55 unless Generic IoT is installed. Steps 45-54 apply **ONLY** to Generic IoT.
45. Select **MQTT SERVER ADDRESS**.
46. Enter the IP Address of the MQTT Broker Server on the network press **√**.
47. Select **MQTT PORT**.
48. Enter the socket port number of the MQTT Broker Server on the network press **√**.
Typical value is 1883, 1884, 8883, or 8884 depending on the type of security deployed on the MQTT broker server.
49. Select **MQTT USERNAME**.
50. Enter the MQTT broker username for logging into the MQTT Broker Server and press **√**.
51. Select **MQTT PASSWORD**.
52. Enter the MQTT broker password for logging into the MQTT Broker Server and press **√**.
53. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
54. Press **√**.
55. Press 
56. Power cycle the entire fryer by **PRESSING** and **HOLDING** the black toggle reset switch for **60 SECONDS**. The reset switch is located either under the USB port, near the USB port or under the control box (see Figures 26 and 27).



Figure 26

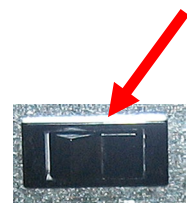


Figure 27

STEP 2: CONFIRM THE IP ADDRESS

1. **WAIT FIVE (5) MINUTES** before proceeding to the next step.

2. Press the “HOME” button on the (see Figure 28).

3. Press the ? button (see Figure 29).

4. Press the down arrow button (see Figure 30).

5. Press the software version button (see Figure 31).

6. Press the down arrow button **TWO** (2) times (see Figure 32).

7. The **GATEWAY CONNECTION STATUS** should be **CONNECTED** (see Figure 33) indicating that it is connected to the cloud. If not, wait 5 minutes and recheck. Other statuses are below with definitions.

- a. If it displays **NOT CONNECTED**, the customer needs to input the Wi-Fi connection details like serial #, SSID and password into the controller and ensure the access point (router) is available.
- b. If it displays **NOT REGISTERED**, the fryer can see the internet, but it is not registered to a customer portal. The customer needs to add the fryer to their store/portal with store, location and registration code.
- c. If it displays **MISSING CERTIFICATE**, the unit can see the internet and the customer portal. However, the certificate is not available to be issued or is not matching what is in the cloud. The fryer needs to be deleted and added back to the customer portal.
- d. If it displays **MODEM NOT DETECTED**, the customer needs to make sure the modem is attached and has power.



Figure 28

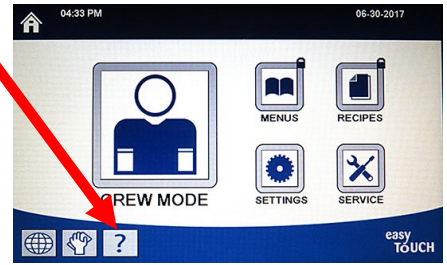


Figure 29

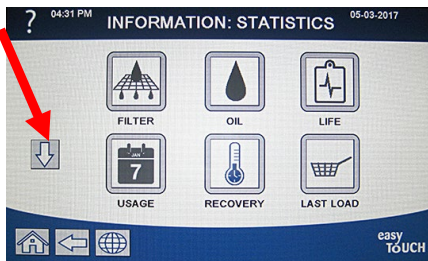


Figure 30

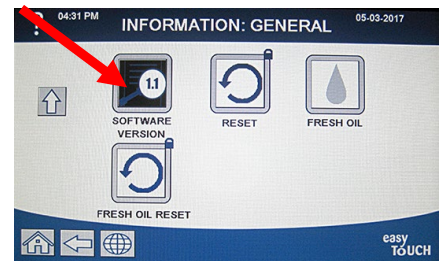


Figure 31

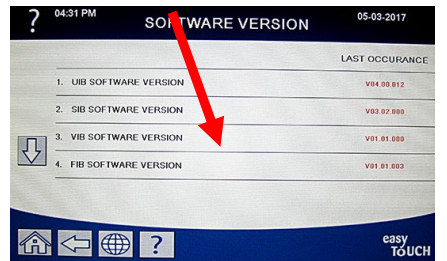
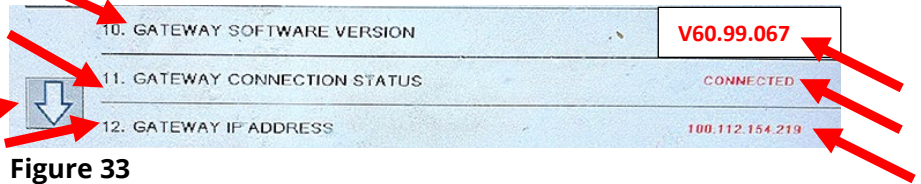


Figure 32

- The **GATEWAY IP ADDRESS** is shown. The **GATEWAY SOFTWARE IP ADDRESS** should have some numbers that are **NOT ALL ZEROS** (see Figure 33). **NOTE: The IP address WILL be different than shown (see Figure 33).** If only zeros are shown, power cycle the entire fryer battery and wait 5-10 minutes before checking the software version and IP address again. **NOTE: An IP address should NOT start with 4 or 82.** If so,



then it is **NOT** connected to a router or cell modem. If is not connected to a router or cell modem,

repeat steps 1-7 of this section. If after two tries of loading the software and the version above is **NOT** displayed, go to STEP 5 (Troubleshooting) on the next page.

- Press the down arrow button (see Figure 32).

- View the Gateway signal strength (see Figure 34).



It should show a strength of 1/5 to 4/5. The higher the number the better. If it displays 0/5, it does NOT have a connection to cell or router (Wi-Fi) service. See item #2 SERIAL NUMBER on page 5 to ensure the serial # is correct.

- Confirm the IP address matches with what the router displays.
- Press the "HOME" button (see Figure 28) when finished.

STEP 3: CONFIRM THE UNIT APPEARS IN THE CLOUD

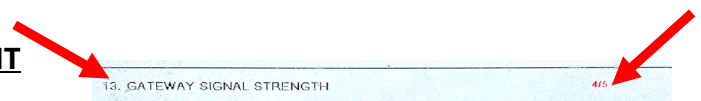
- If an account exists with KitchenConnect and the fryer has been set up in KitchenConnect, confirm that the fryer appears online in the cloud.
- If an account does not exist with KitchenConnect, an account will need to be setup and the fryer will need to be added to the cloud. Go to <https://www.welbiltconnect.com/>.
- If using a generic IoT agent, confirm that the unit appears online in the cloud.

STEP 4: VERIFY DATA IN THE CLOUD

- Perform a cook on the fryer.
- Perform a filter on the fryer.
- Confirm that the cloud displays the proper cooks and filters performed on the fryer.

STEP 5: TROUBLESHOOTING

- If the software version is all zeros (0), **WAIT AN ADDITIONAL FIVE (5) MINUTES** and



recheck using steps 1-7 in STEP 2 (Confirm the IP address).

2. The first number on gateway signal strength (refer to Figure 35) (Gateway Signal Strength Quality) which is shown at 4/5.
Below is breakdown of first number:
 - a. 4 = Excellent signal; always associated; lightning fast.
 - b. 3 = Good signal; always associated; very fast.
 - c. 2 = Fair signal; always associated; usually fast.
 - d. 1 = Poor signal; mostly associated; mostly slow.
 - e. 0 = No signal; not associated; no go.
3. If the IP address is not being displayed but the link quality and signal strength are good, then the modem, router, KitchenConnect or the cloud has some issues and/or configuration file needs to be confirmed for accuracy and updated again.

Time Zone Settings

Enter the Time Zone name from Column 1 **exactly** as displayed. The names are case specific. Ensure that any special characters such as / or _ are left as displayed. If not, the time zone name will display an error.

Column 1 Timezone Name	Region	Region 2	Region 3	Comments
Africa/Kinshasa	Africa	Kinshasa		Dem. Rep. of Congo (west)
Africa/Lubumbashi	Africa	Lubumbashi		Dem. Rep. of Congo (east)
Africa/Cairo	Africa	Cairo		
Africa/Nairobi	Africa	Nairobi		
Africa/Monrovia	Africa	Monrovia		
Africa/Tripoli	Africa	Tripoli		
Africa/Casablanca	Africa	Casablanca		
Africa/Maputo	Africa	Maputo		
Africa/Windhoek	Africa	Windhoek		
Africa/Lagos	Africa	Lagos		
Africa/Khartoum	Africa	Khartoum		
Africa/Juba	Africa	Juba		
Africa/Sao_Tome	Africa	Sao_Tome		
Africa/Harare	Africa	Harare		
America/Argentina/San_Juan	America	Argentina	San_Juan	San Juan (SJ)
America/Argentina/Buenos_Aires	America	Argentina	Buenos_Aires	Buenos Aires (BA, CF)
America/La_Paz	America	La_Paz		
America/Rio_Branco	America	Rio_Branco		Acre
America/Cuiaba	America	Cuiaba		Mato Grosso
America/Manaus	America	Manaus		Amazonas (east)
America/Araguaina	America	Araguaina		Tocantins
America/Sao_Paulo	America	Sao_Paulo		Brazil (southeast: GO, DF, MG, ES, RJ, SP, PR, SC, RS)
America/Fortaleza	America	Fortaleza		Brazil (northeast: MA, PI, CE, RN, PB)
America/Vancouver	America	Vancouver		Pacific - BC (most areas)
America/Whitehorse	America	Whitehorse		Pacific - Yukon (south)
America/Regina	America	Regina		CST - SK (most areas)
America/Halifax	America	Halifax		Atlantic - NS (most areas); PE
America/St_Johns	America	St_Johns		Newfoundland; Labrador (southeast)
America/Santiago	America	Santiago		Chile (most areas)
America/Punta_Arenas	America	Punta_Arenas		Region of Magallanes
America/Bogota	America	Bogota		
America/Havana	America	Havana		
America/Cayenne	America	Cayenne		
America/Godthab	America	Godthab		Greenland (most areas)
America/Tijuana	America	Tijuana		Pacific Time US - Baja California
America/Mazatlan	America	Mazatlan		Mountain Time - Baja California Sur, Nayarit, Sinaloa
America/Mexico_City	America	Mexico_City		Central Time
America/Monterrey	America	Monterrey		Central Time - Durango; Coahuila, Nuevo Leon, Tamaulipas (most areas)
America/Lima	America	Lima		

America/Miquelon	America	Miquelon		
America/Asuncion	America	Asuncion		
America/El_Salvador	America	El_Salvador		
America/Grand_Turk	America	Grand_Turk		
America/Adak	America	Adak		Aleutian Islands
America/Anchorage	America	Anchorage		Alaska (most areas)
America/Los_Angeles	America	Los_Angeles		Pacific
America/Phoenix	America	Phoenix		MST - Arizona (except Navajo)
America/Denver	America	Denver		Mountain (most areas)
America/Chicago	America	Chicago		Central (most areas)
America/New_York	America	New_York		Eastern (most areas)
America/Detroit	America	Detroit		Eastern - MI (most areas)
America/Indiana/Indianapolis	America	Indiana	Indianapolis	Eastern - IN (most areas)
America/Yakutat	America	Yakutat		Alaska - Yakutat
America/Montevideo	America	Montevideo		
America/Caracas	America	Caracas		
Asia/Dubai	Asia	Dubai		
Asia/Kabul	Asia	Kabul		
Asia/Yerevan	Asia	Yerevan		
Asia/Baku	Asia	Baku		
Asia/Dhaka	Asia	Dhaka		
Asia/Shanghai	Asia	Shanghai		Beijing Time
Asia/Urumqi	Asia	Urumqi		Xinjiang Time
Asia/Hong_Kong	Asia	Hong_Kong		
Asia/Jakarta	Asia	Jakarta		Java, Sumatra
Asia/Jerusalem	Asia	Jerusalem		
Asia/Kolkata	Asia	Kolkata		
Asia/Baghdad	Asia	Baghdad		
Asia/Tehran	Asia	Tehran		
Asia/Amman	Asia	Amman		
Asia/Tokyo	Asia	Tokyo		
Asia/Bishkek	Asia	Bishkek		
Asia/Pyongyang	Asia	Pyongyang		
Asia/Seoul	Asia	Seoul		
Asia/Kuwait	Asia	Kuwait		
Asia/Beirut	Asia	Beirut		
Asia/Yangon	Asia	Yangon		
Asia/Hovd	Asia	Hovd		Bayan-Olgii, Govi-Altai, Hovd, Uvs, Zavkhan
Asia/Ulaanbaatar	Asia	Ulaanbaatar		Mongolia (most areas)
Asia/Kuala_Lumpur	Asia	Kuala_Lumpur		Malaysia (peninsula)
Asia/Kathmandu	Asia	Kathmandu		
Asia/Muscat	Asia	Muscat		
Asia/Karachi	Asia	Karachi		
Asia/Gaza	Asia	Gaza		Gaza Strip

Asia/Hebron	Asia	Hebron		West Bank
Asia/Yekaterinburg	Asia	Yekaterinburg		MSK - Urals
Asia/Omsk	Asia	Omsk		MSK - Omsk
Asia/Barnaul	Asia	Barnaul		MSK - Altai
Asia/Krasnoyarsk	Asia	Krasnoyarsk		MSK - Krasnoyarsk area
Asia/Novosibirsk	Asia	Novosibirsk		MSK - Novosibirsk
Asia/Tomsk	Asia	Tomsk		MSK - Tomsk
Asia/Irkutsk	Asia	Irkutsk		MSK - Irkutsk, Buryatia
Asia/Chita	Asia	Chita		MSK - Zabaykalsky
Asia/Yakutsk	Asia	Yakutsk		MSK - Lena River
Asia/Vladivostok	Asia	Vladivostok		MSK - Amur River
Asia/Magadan	Asia	Magadan		MSK - Magadan
Asia/Sakhalin	Asia	Sakhalin		MSK - Sakhalin Island
Asia/Anadyr	Asia	Anadyr		MSK - Bering Sea
Asia/Kamchatka	Asia	Kamchatka		MSK - Kamchatka
Asia/Riyadh	Asia	Riyadh		
Asia/Singapore	Asia	Singapore		
Asia/Damascus	Asia	Damascus		
Asia/Bangkok	Asia	Bangkok		
Asia/Ashgabat	Asia	Ashgabat		
Asia/Taipei	Asia	Taipei		
Asia/Samarkand	Asia	Samarkand		Uzbekistan (west)
Asia/Tashkent	Asia	Tashkent		Uzbekistan (east)
Atlantic/Cape_Verde	Atlantic	Cape_Verde		
Atlantic/Reykjavik	Atlantic	Reykjavik		
Atlantic/Azores	Atlantic	Azores		Azores
Australia/Perth	Australia	Perth		Western Australia (most areas)
Australia/Eucla	Australia	Eucla		Western Australia (Eucla)
Australia/Adelaide	Australia	Adelaide		South Australia
Australia/Darwin	Australia	Darwin		Northern Territory
Australia/Brisbane	Australia	Brisbane		Queensland (most areas)
Australia/Melbourne	Australia	Melbourne		Victoria
Australia/Sydney	Australia	Sydney		New South Wales (most areas)
Australia/Hobart	Australia	Hobart		Tasmania (most areas)
Australia/Lord_Howe	Australia	Lord_Howe		Lord Howe Island
Europe/Vienna	Europe	Vienna		
Europe/Sarajevo	Europe	Sarajevo		
Europe/Brussels	Europe	Brussels		
Europe/Sofia	Europe	Sofia		
Europe/Minsk	Europe	Minsk		
Europe/Zurich	Europe	Zurich		
Europe/Prague	Europe	Prague		
Europe/Berlin	Europe	Berlin		Germany (most areas)
Europe/Copenhagen	Europe	Copenhagen		

Europe/Tallinn	Europe	Tallinn		
Europe/Madrid	Europe	Madrid		Spain (mainland)
Europe/Helsinki	Europe	Helsinki		
Europe/Paris	Europe	Paris		
Europe/London	Europe	London		
Europe/Athens	Europe	Athens		
Europe/Zagreb	Europe	Zagreb		
Europe/Budapest	Europe	Budapest		
Europe/Dublin	Europe	Dublin		
Europe/Rome	Europe	Rome		
Europe/Vilnius	Europe	Vilnius		
Europe/Riga	Europe	Riga		
Europe/Chisinau	Europe	Chisinau		
Europe/Skopje	Europe	Skopje		
Europe/Amsterdam	Europe	Amsterdam		
Europe/Warsaw	Europe	Warsaw		
Europe/Lisbon	Europe	Lisbon		Portugal (mainland)
Europe/Bucharest	Europe	Bucharest		
Europe/Belgrade	Europe	Belgrade		
Europe/Kaliningrad	Europe	Kaliningrad		MSK-01 - Kaliningrad
Europe/Moscow	Europe	Moscow		MSK - Moscow area
Europe/Simferopol	Europe	Simferopol		MSK - Crimea
Europe/Volgograd	Europe	Volgograd		MSK - Volgograd
Europe/Astrakhan	Europe	Astrakhan		MSK - Astrakhan
Europe/Ulyanovsk	Europe	Ulyanovsk		MSK - Ulyanovsk
Europe/Samara	Europe	Samara		MSK - Samara, Udmurtia
Europe/Saratov	Europe	Saratov		MSK - Saratov
Europe/Stockholm	Europe	Stockholm		
Europe/Ljubljana	Europe	Ljubljana		
Europe/Bratislava	Europe	Bratislava		
Europe/Istanbul	Europe	Istanbul		
Europe/Kiev	Europe	Kiev		Ukraine (most areas)
Pacific/Easter	Pacific	Easter		Easter Island
Pacific/Fiji	Pacific	Fiji		
Pacific/Guam	Pacific	Guam		
Pacific/Kiritimati	Pacific	Kiritimati		Line Islands
Pacific/Norfolk	Pacific	Norfolk		
Pacific/Auckland	Pacific	Auckland		New Zealand (most areas)
Pacific/Chatham	Pacific	Chatham		Chatham Islands
Pacific/Marquesas	Pacific	Marquesas		Marquesas Islands
Pacific/Port_Moresby	Pacific	Port_Moresby		Papua New Guinea (most areas)
Pacific/Bougainville	Pacific	Bougainville		Bougainville
Pacific/Honolulu	Pacific	Honolulu		Hawaii