

## 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 Popeye's FQLink Installation Instructions

**Models affected:** FilterQuick 4000 (Touch Screen) Fryers

12.12.25



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 SB2024-19 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 – 15.99.158; VIB – 01.03.003; FIB – 15.99.051

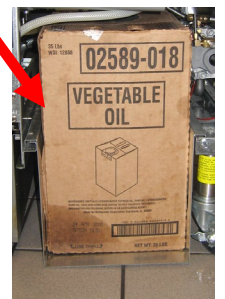


Figure 3

### 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.

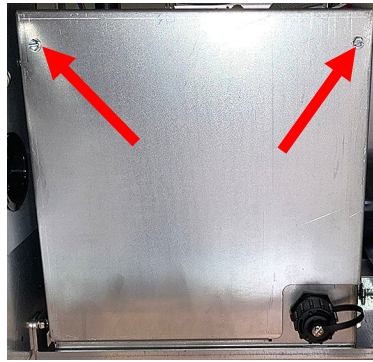


Figure 5

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).

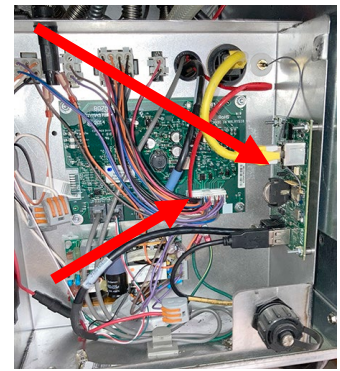


Figure 6

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

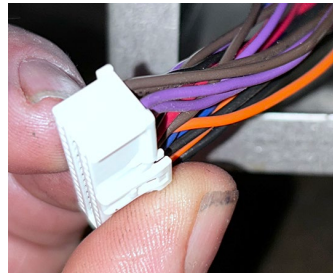


Figure 6A

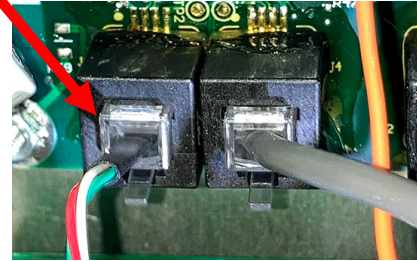


Figure 7

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

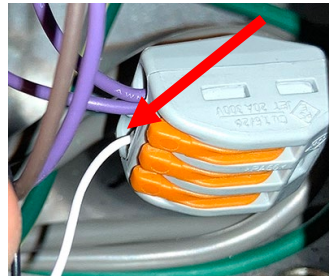


Figure 8

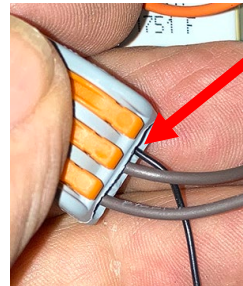


Figure 9

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).

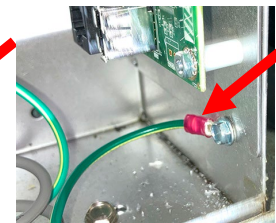


Figure 10

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).

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.



Figure 12

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.



Figure 13

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).

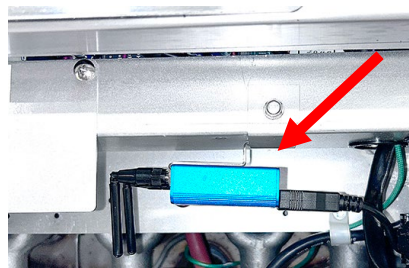


Figure 14

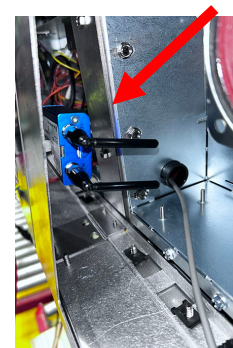


Figure 14a

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).

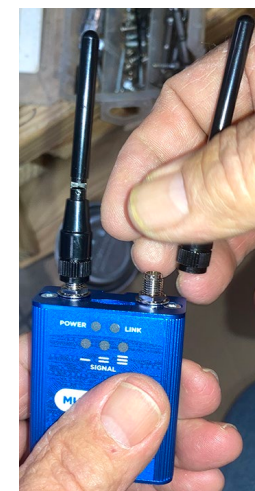


Figure 15

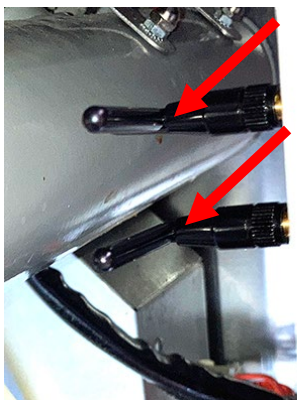


Figure 16

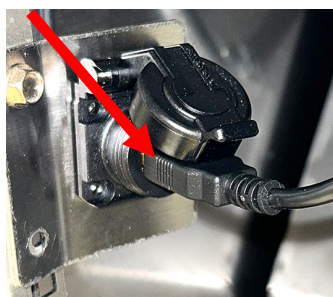


Figure 17

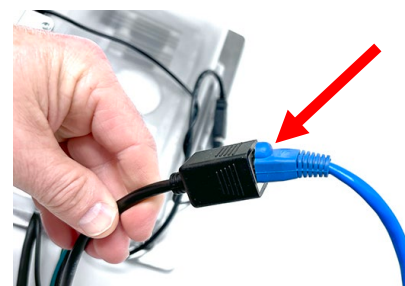


Figure 18

## 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.

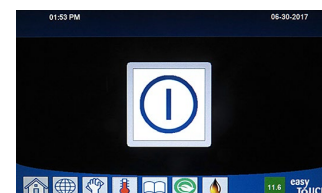


Figure 19

2. On the left screen, press  →  →  → 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.
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).

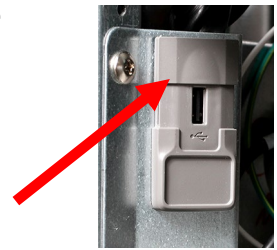


Figure 20

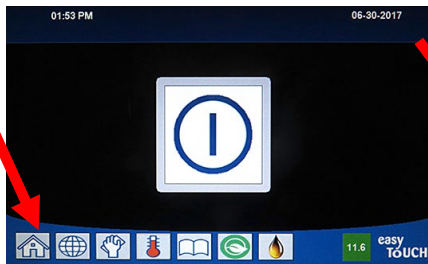


Figure 21

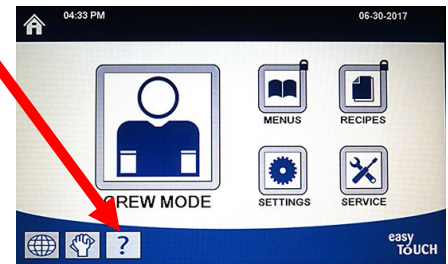


Figure 22



Figure 23



Figure 24

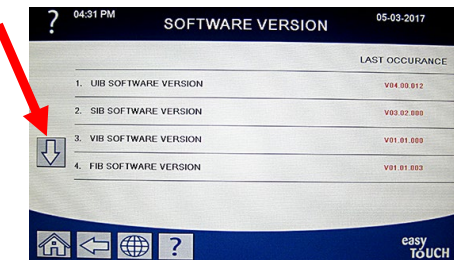
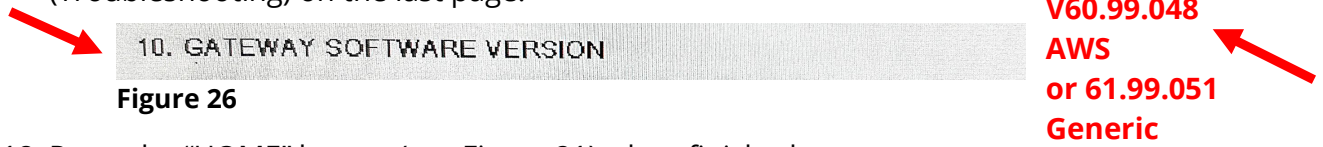


Figure 25

17. The **GATEWAY SOFTWARE VERSION** should be **60.99.048 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 4 (Troubleshooting) on the last page.



**Figure 26**

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   
Select **PASSWORD**. This parameter can be blank if it is open or unlocked network.
21. Enter the network password and press **✓**.
22. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
23. Press **✓**.  
**Settings in steps 24-33 below apply ONLY to cellular modem configurations. If using WIFI or Ethernet skip to step 34.**
24. Select **APN**.
25. Enter the APN settings provided by the network provider (if using Telit sim card with Merlin modem enter **nxtesim1.net**) and press **✓**.
26. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
27. Press **✓**.
28. Select **PROVIDER**.

29. Enter the provider settings provided by the network provider (if using Telit sim card with Merlin modem enter **Telit**) and press **√**.
30. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
31. Press **√**.
32. Select **DIALIN**.
33. Enter the modem dial up number provided by the network provider (if using Telit sim card with Merlin modem enter **\*99\*\*\*1#**) and press **√**.
34. Select **TIMEZONE**.
35. 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)
36. Press **√**.
37. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
38. Press **√**.
39. Press .
40. Select **NTP**.
41. 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.**
42. Controller displays **SETUP COMPLETE RESTART THE SYSTEM**.
43. Press **√**.
44. 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

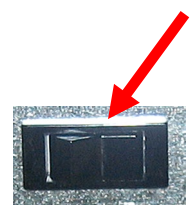


Figure 27

## 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

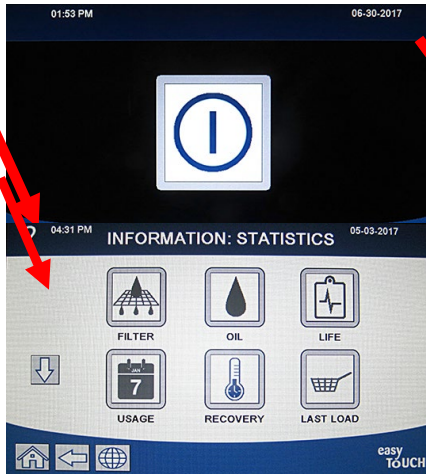


Figure 30

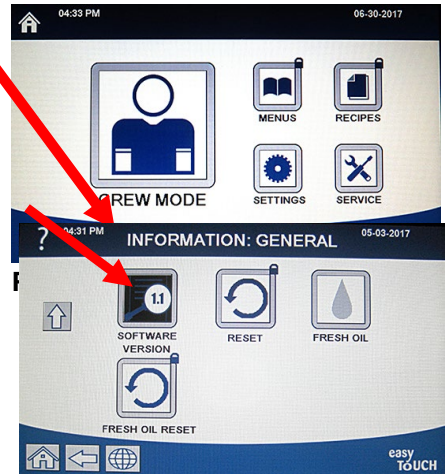


Figure 31

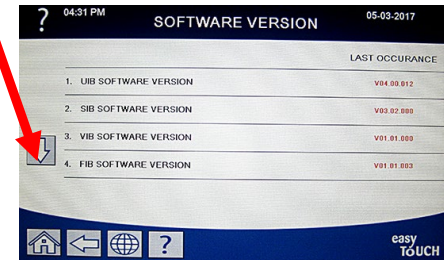


Figure 32

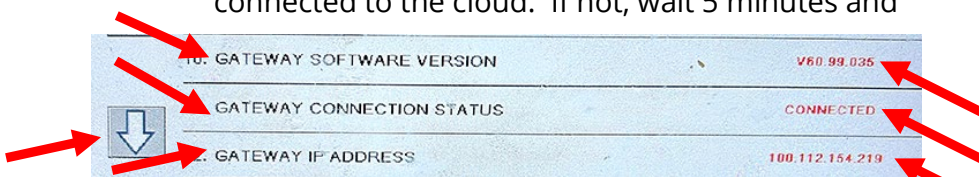


Figure 33

recheck.

8. 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 may be different than shown below (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 modem. If is not connected to a router or 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) below.
9. Press the down arrow button (see Figure 33).
10. 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



Figure 34

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.

11. Confirm the IP address matches with what the router displays.
12. Press the "HOME" button (see Figure 33) when finished.

### STEP 3: CONFIRM THE UNIT APPEARS IN THE CLOUD

1. If an account exists with KitchenConnect and the fryer has been set up in KitchenConnect, confirm that the fryer appears online in the cloud.
2. 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/>.
3. If using a generic IoT agent, confirm that the unit appears online in the cloud.

### STEP 4: VERIFY DATA IN THE CLOUD

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

### STEP 5: TROUBLESHOOTING

1. 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 or KitchenConnect has some issues and/or configuration file needs to be confirmed for accuracy and updated again.



13. GATEWAY SIGNAL STRENGTH

Figure 35

## 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                        |