

**TCF-10B**

**Jumpers, links and dip switches**

**POWER SUPPLY (1617C38G0X)**

**JU1** Power Alarm 🗆 NO 🗆 NC

**RF Interface Module (1609C32G01)**

**JU1** 2-Wire/4-Wire 🗆 IN (2 Wire) 🗆 Out (4 Wire)

**JU2** Impedance -100 ohm 🗆 IN 🗆 Out

**JU3** Impedance -75 ohm 🗆 IN 🗆 Out

**JU4** Impedance -50 ohm 🗆 IN 🗆 Out

**JU5** 2-Wire/4-Wire 🗆 IN (2 Wire) 🗆 Out (4 Wire)

**JU6** Sensitivity 🗆 HIGH 🗆 NORM

**KEYING MODULE (1606C50G01)**

**JU1** Power Off 🗆 NORM 🗆 INV

**JU2** DCR/PCR 🗆 DCR 🗆 PC

**JU3** 1/10 or 10/10 🗆1W/10W 🗆 10W/10W

**JU4** 2F/3F 🗆 2F 🗆 3F

**JU5** Shift High Relay 🗆 IN 🗆 OUT

**JU7** Shift Low Relay 🗆 IN 🗆 OUT

**JU8** Shift High Contacts 🗆 NO 🗆 NC

**JU9** Shift Low Contacts 🗆 NO 🗆 NC

**JU10** DTT Keying Voltage 🗆 15 V 🗆 48 V 🗆 125 V 🗆 250 V

**JU11** Ext. Voice Keying 🗆 15 V 🗆 48 V 🗆 125 V 🗆 250 V

**JU12** PWR Boost/52b Key 🗆 15 V 🗆 48 V 🗆 125 V 🗆 250 V

**JU13** Power On Keying Voltage 🗆 15 V 🗆 48 V 🗆 125 V 🗆 250 V

**JU14** UB,POTT,PC Keying Voltage 🗆 15 V 🗆 48 V 🗆 125 V 🗆 250 V

**RECEIVER LOGIC MODULE (Directional Comparison) (CF20-RXLMN-004)**

**FUNCTION: Trip Delay**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **TIME IN MS** | **SW1-1** | **SW1-2** | **SW1-3** | **SW1-4** |
| 🗆 | 0 | OPEN | OPEN | OPEN | OPEN |
| 🗆 | 2 | CLOSED | OPEN | OPEN | OPEN |
| 🗆 | 4 | OPEN | CLOSED | OPEN | OPEN |
| 🗆 | 6 | CLOSED | CLOSED | OPEN | OPEN |
| 🗆 | 8 | OPEN | OPEN | CLOSED | OPEN |
| 🗆 | 10 | CLOSED | OPEN | CLOSED | OPEN |
| 🗆 | 12 | OPEN | CLOSED | CLOSED | OPEN |
| 🗆 | 14 | CLOSED | CLOSED | CLOSED | OPEN |
| 🗆 | 16 | OPEN | OPEN | OPEN | CLOSED |
| 🗆 | 18 | CLOSED | OPEN | OPEN | CLOSED |
| 🗆 | 20 | OPEN | CLOSED | OPEN | CLOSED |
| 🗆 | 22 | CLOSED | CLOSED | OPEN | CLOSED |
| 🗆 | 24 | OPEN | OPEN | CLOSED | CLOSED |
| 🗆 | 26 | CLOSED | OPEN | CLOSED | CLOSED |
| 🗆 | 28 | OPEN | CLOSED | CLOSED | CLOSED |
| 🗆 | 30 | CLOSED | CLOSED | CLOSED | CLOSED |

**FUNCTION: Trip Hold time**

|  |  |  |
| --- | --- | --- |
| **TIME IN MS** | **SW1-5** | **SW1-6** |
| 🗆 DISABLED | OPEN | OPEN |
| 🗆 10 | CLOSED | OPEN |
| 🗆 50 | OPEN | CLOSED |
| 🗆 100 | CLOSED | CLOSED |

**FUNCTION: Guard Hold Time**

|  |  |  |
| --- | --- | --- |
| **TIME IN MS** | **SW1-7** | **SW1-8** |
| 🗆 DISABLED | OPEN | OPEN |
| 🗆 10 | CLOSED | OPEN |
| 🗆 50 | OPEN | CLOSED |
| 🗆 100 | CLOSED | CLOSED |

**FUNCTION: Unblock Time**

|  |  |  |
| --- | --- | --- |
| **TIME IN MS** | **SW2-1** | **SW2-2** |
| 🗆 DISABLED | OPEN | OPEN |
| 🗆 150 | CLOSED | OPEN |
| 🗆 300 | OPEN | CLOSED |
| 🗆 500 | CLOSED | CLOSED |

**FUNCTION: Guard Before Trip**

|  |  |  |
| --- | --- | --- |
|  | **SW2-4** | **SW2-5** |
| 🗆 OFF | OPEN | OPEN |
| 🗆ON W/O OVER | CLOSED | OPEN |
| 🗆 ON W OVER | OPEN | CLOSED |
| 🗆 NOT USED | CLOSED | CLOSED |

**FUNCTION: Low Level Delay**

|  |  |  |  |
| --- | --- | --- | --- |
| **TIME IN MS** | **SW3-6** | **SW3-7** | **SW3-8** |
| 🗆 DISABLED | OPEN | OPEN | OPEN |
| 🗆 10 | CLOSED | OPEN | OPEN |
| 🗆 15 | OPEN | CLOSED | OPEN |
| 🗆 20 | CLOSED | CLOSED | OPEN |
| 🗆 40 | OPEN | OPEN | CLOSED |

**FUNCTION: Noise Block of Unblock**

|  |  |
| --- | --- |
| **FUNCTION** | **SW2-3** |
| 🗆 NOISE ALLOWS UB TRIP | OPEN |
| 🗆 NOISE BLOCKS UB TRIP | CLOSED |

**Please note: the UNBLOCK Timer must be disabled for a Direct Transfer Trip System.**

**10W POWER AMPLIFIER (1606C33G01)**

**JU1** Power Monitor 🗆 NO 🗆 NC

**transmitter module (1610C01G01)**

**Shift select:**

🗆 100 Hz

🗆 250 Hz

🗆 500 Hz

|  |  |  |
| --- | --- | --- |
| Dip Switch (S5) | Open (Up) | Closed (Down) |
| Pos 1 (50 Hz) | 🗆 | 🗆 |
| Pos 2 (100 Hz) | 🗆 | 🗆 |
| Pos 3 (200 Hz) | 🗆 | 🗆 |
| Pos 4 (400 Hz) | 🗆 | 🗆 |

**Receiver Module: (C020-RXVMN-202)**

**FSK Receiver (TCF-10B):**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Dip Switch (SW1) | | OPEN (Down or OFF) | | | Closed (Up or ON) | |
| Pos 1 | | ☑ **FSK** | | |  | |
| Pos 2 | | 🗆 No voice | | | 🗆 Voice | |
| Pos 3 | | 🗆 DTT (50 ms D.O. on noise clamp) | | | 🗆 UB 2Freq (10 ms D.O. on noise clamp) or 3 Freq | |
| Pos 4 | | 🗆 DCR | | | 🗆 PCR | |
| Pos 5 | | 🗆 Shift Down to trip 2 Freq or 3 Freq | | | 🗆 Shift Up to trip 2 Freq only | |
| FSK | Bandwidth | Shift | 2F/3F | Pos 6 | Pos 7 | Pos 8 |
| 🗆 | 380 | 100 | 2F | OFF | OFF | OFF |
| 🗆 | 800 | 250 | 2F | OFF | OFF | ON |
| 🗆 | 1600 | 500 | 2F | OFF | ON | OFF |
| 🗆 | 800 | 250 | 3F | OFF | ON | ON |
| 🗆 | 1660 | 500 | 3F | ON | OFF | OFF |
| 🗆 | 800 | 100 | 2F | ON | OFF | ON |
| 🗆 | 1600 | 250 | 2F | ON | ON | OFF |

**JU3** Low Signal Contact 🗆 NO 🗆 NC

**EM Output Module (1606C53G01)**

**JU1** Relay 1 Driver 🗆 Trip 1 🗆Trip 2 🗆 Guard

**JU2** Relay 2 Driver 🗆 Trip 1 🗆Trip 2 🗆 Guard

**JU3** Relay 3 Driver 🗆 Trip 1 🗆Trip 2 🗆 Guard

**JU4** Relay 4 Driver 🗆 Trip 1 🗆Trip 2 🗆 Guard

**JU5** Relay 5 Driver 🗆 Trip 1 🗆Trip 2 🗆 Guard

**JU6** Relay 6 Driver 🗆 Trip 1 🗆Trip 2 🗆 Guard

(Note: Trip 2 is not AVAILABLE on a 2 frequency unit)

**JU7** Relay 1 Contact 🗆 NO 🗆 NC

**JU8** Relay 2 Contact 🗆 NO 🗆 NC

**JU9** Relay 3 Contact 🗆 NO 🗆 NC

**JU10** Relay 4 Contact 🗆 NO 🗆 NC

**JU11** Relay 5 Contact 🗆 NO 🗆 NC

**JU12** Relay 6 Contact 🗆 NO 🗆 NC

**JU13** Trip Delay (only on G02 units)

**JU14** Trip Delay (only on G02 units)

# Voice Adapter (CO20-VADMN-001)

**JMP1** 🗆 NO 🗆 NC

## SW1 (Function active when in “ON” position)

POS 1 – Front Panel pushbutton gives alarms at opposite end (TCF-10B)

POS 2 – Carrier Alarm (TC-10B)

POS 3 – Push to talk function (TC-10B)

POS 4 – Beeper enabled (Both)

**TC-10B**

**Jumpers, links and dip switches**

**POWER SUPPLY (1617C38G0X)**

**JU1** Power Alarm 🗆 NO 🗆 NC

**10W POWER AMPLIFIER (1606C33G01)**

**JU1** Power Monitor 🗆 NO 🗆 NC

**RF Interface Module (1609C32G01)**

**JU1** 2-Wire/4-Wire ☑ IN (2 Wire) 🗆 Out (4 Wire)

**JU2** Impedance -100 ohm 🗆 IN 🗆 Out

**JU3** Impedance -75 ohm 🗆 IN 🗆 Out

**JU4** Impedance -50 ohm 🗆 IN 🗆 Out

**JU5** 2-Wire/4-Wire ☑ IN (2 Wire) 🗆 Out (4 Wire)

**JU6** Sensitivity 🗆 HIGH 🗆 NORM

**transmitter module (1610C01G01)**

**Shift select:**

☑ No shift (all open)

🗆 100 Hz

🗆 250 Hz

🗆 500 Hz

|  |  |  |
| --- | --- | --- |
| Dip Switch (S5) | Open (Up) | Closed (Down) |
| Pos 1 (50 Hz) | ☑ | 🗆 |
| Pos 2 (100 Hz) | ☑ | 🗆 |
| Pos 3 (200 Hz) | ☑ | 🗆 |
| Pos 4 (400 Hz) | ☑ | 🗆 |

**Receiver Module: (Co20-RXVMN-201)**

**AM receiver (TC-10B):**

|  |  |  |
| --- | --- | --- |
| Dip Switch (SW1) | OPEN (Down or OFF) | Closed (Up or ON) |
| Pos 1 |  | ☑ **AM** |
| Pos 2 | 🗆 No voice | 🗆 Voice |
| Pos 3 | 🗆 UNUSED |  |
| Pos 4 | 🗆 UNUSED |  |
| Pos 5 | 🗆UNUSED |  |
| Pos 6 | 🗆 UNUSED |  |
| Pos 7 | 🗆 Phase comparison Relaying, 3500 Hz Bandwidth | 🗆 Directional Comp. Relaying, BW per Pos. 8. |
| Pos 8 | 🗆 1600 Hz Bandwidth | 🗆 800 Hz Bandwidth |

**JU3** Detect Contact 🗆 NO 🗆 NC

**KEYING (1606C29G01)**

**JU1** Carrier Start 🗆 15 V 🗆 48 V 🗆 125 V 🗆 250 V

**JU2** Carrier Stop 🗆 15 V 🗆 48 V 🗆 125 V 🗆 250 V

**JU3** Low Level Key 🗆 15 V 🗆 48 V 🗆 125 V 🗆 250 V

**JU4** Low Level 🗆 INV 🗆 NORM

**JU5** Stop 🗆 INV 🗆 NORM

**JU6** Start 🗆 INV 🗆 NORM

**JU7** Stop/Start Priority 🗆 Stop 🗆 Start

**JU8** KA-4/SKBU-1 🗆 IN 🗆 Out

**RECEIVER OUTPUT (CC20-RXSMN-001)**

**JU1** Output #1 🗆 48 V 🗆 125/250 V

**JU2** Output #2 🗆 48 V 🗆 125/250 V

# Voice Adapter (CO20\_VADMN-001)

**JMP1** 🗆NO 🗆 NC

## SW1 (Function active when in “ON” position)

POS 1 – Front Panel pushbutton gives alarms at opposite end (TCF-10B)

POS 2 – Carrier Alarm (TC-10B)

POS 3 – Push to talk function (TC-10B)

POS 4 – Beeper enabled (Both)

**Universal Checkback Module (Cc20-UCBMN-001)**

**SW3:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S1** | **S2** | **S3** | **S4** | **Settings** |
| **OFF** | **OFF** | **OFF** | **NOT USED** | **CUSTOM** |
| **ON** | **OFF** | **OFF** | **NOT USED** | **FACTORY PRESET 1** |
| **OFF** | **ON** | **OFF** | **NOT USED** | **FACTORY PRESET 2** |
| **ON** | **ON** | **OFF** | **NOT USED** | **FACTORY PRESET 3** |
| **OFF** | **OFF** | **ON** | **NOT USED** | **FACTORY PRESET 4** |