SSCB Controls and Indicators
Compiled by Robert W. Meister WA1MIK

Photograph of a digital-capable station transmitting on channel 1, mode 1.

SSCB Controls and Indicators (described from left to right):

Control Jack

Accepts a local test microphone or handset for local keying of the transmitter. The test microphone recommended is HMN1001. This is a 6-pin, 6-contact modular jack.

Volume Control Knob

Rotate the volume control knob clockwise to increase or counterclockwise to decrease the local speaker audio volume. The local audio is available at the Control Jack and the Expansion Connector, for use by the optional Radio Metering Panel (RMP) or Diagnostic Metering Panel (DMP).

Squelch Control Knob

Rotate the squelch control knob to adjust the local receiver squelch. The local squelch control is active only when the **Acc Dis/Reset** switch is set to **Acc Dis**.

PA Full LED

A green light indicates a PA Key request is active and the PA is providing full, adjusted output power.

PA On LED

A green light indicates the PA is responding to a key request.

Rx Lock LED

A green light indicates the receive synthesizer is locked and functioning correctly.

Tx Lock LED

A green light indicates the transmit synthesizer is locked and functioning correctly.

PA Key LED

A yellow light indicates a PA Key request from the SSCB to the power control circuit in the RF tray.

This may not result in PA activity if the power control circuit senses a PA failure and disallows a key-up.

Disable LED

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A steady red light indicates the **Acc Dis/Reset** switch is set to **Acc Dis** or the **PL Dis/Xmit** switch is set to **PL Dis**.

A flashing red light indicates the power control service mode is active.

PL Dis/Xmit Switch

When **PL Dis** (Private Line Disable) is selected:

- Receiver audio gating qualifiers are set for carrier squelch operation (i.e. PL/DPL is not required to unsquelch the receiver).
- Repeater squelch qualifiers are not affected.
- Receiver audio signals are gated to the wire-line and local speaker when an on-channel carrier is detected.
- Front panel red **Disable** LED lights.
- MUXBus bit A3D3 (RX PL DS) is set.

When **Xmit** (transmit) is selected and held in the momentary position:

- Station transmitter is keyed with a Local PTT.
- Fail-soft code word, PL tone, DPL code, or TDATA is not present in the transmitted signal.
- Station strips any fails-soft code word, PL tone, DPL code, or TDATA from the transmitted signal. The code word is stripped even if another PTT occurs that normally generates PL, DPL, etc.
- MUXBus bit A2D2 (TX ACT) is set.
- Auto station ID will fire, if the timer is ready, when the **Xmit** switch is released.

Acc Dis / Reset Switch

When **Acc Dis** (Access Disable) is selected, the station is put into Access Disable mode. Access Disable mode disables the following operations:

- Transmitter key requests from the wire-line and repeater activity.
- PTT time-out timers, any remote control including channel, mode, and encryption key changes from the wire-line.
- Auto station ID timer is reset and inhibited.

While in Access Disable mode:

- Station tuning channel, mode, and encryption key can be selected using the Select/Set switch.
- Station receiver squelch control potentiometer on the front panel is enabled for local audio squelch adjustments.
- Front panel red **Disable** LED lights.
- MUXBus bit A6D3 (ACC DIS) is set.

When the switch is returned to the center (off) position:

- Previously disabled operations are re-enabled.

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- Station resumes operation on the channel last selected by the wire-line command, even if the wire-line command occurred while the station was access disabled.

When **Reset** is held in its momentary position:
- Reset mode is entered.
- Station's control processors are reset.
- Station operation is inhibited.

When the switch is returned to the center (off) position:
- Self-diagnostics routine is initiated.
- Fatal errors are displayed.
- Audio diagnostics (if enabled) are performed.
- Firmware version numbers of SSCB, TTRC, Secure, MCS, and SAM display in that order.

The station is operable after the self-diagnostics routine is completed if no fatal errors are detected.

Status Display - Chan Mode Key

A three digit, seven-segment display that indicates the following information:
- **Chan** digit indicates the current operating channel.
- **Mode** digit indicates the current operating mode.
- **Key** digit indicates the selected encryption key only when the system is equipped and configured for encode / decode (secure) operation.

The decimal point to the right of the digit indicates which digit is selected.

Select/Set Switch

The **Select/Set** switch allows local changes to channels, modes, keys, and provides access to Service and Adjustment features.

When **Select** is raised, one of the three digits in the Status display is selected and indicated by a decimal point illuminating to its right. You can change the value of that digit by pressing the **Set** switch, which increments the selected digit by one each time it is pressed. If the display times out and **Set** is pressed, the system exits the Status Display mode.

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Service and Adjustment Modes

Power Control Service Mode:
Press and hold the **Set** switch.
Press the **Xmit** switch.
Release the **Xmit** switch.
Release the **Set** switch.
To exit: reset the station using the **Reset** switch.

High Speed Ring Buffer Display Mode:
Press and hold the **Set** switch.
Raise the **Acc Dis** switch.
Release the **Set** switch.
Put the **Acc Dis** switch back in its middle (off) position.
To cycle through the display bytes: raise the **Select** switch.
To exit: press the **Set** switch.

EEPot Adjust Mode:
Press and hold the **Set** switch.
Raise the **PL Dis** switch.
Release the **Set** switch.
Put the **PL Dis** switch back in its middle (off) position.
To select the digit to modify: raise the **Select** switch.
To modify the digit's value: press the **Set** switch.
To exit: wait for the mode to time out then press the **Set** switch.

Forward/Reflected Power Alarm Set Mode (<u>Trunking Stations Only</u>):
Press and hold the **Set** switch.
Raise the **PL Dis** switch.
Raise the **Acc Dis** switch.
Release the **Set** switch.
Put the **PL Dis** switch back in its middle (off) position.
Put the **Acc Dis** switch back in its middle (off) position.
Follow the procedure in the Alignment section of the manual.

Most of this information came from the MSF5000 Digital Capable and Analog Plus Station Instruction Manual 6881092E05-O dated 3/14/94. This manual is, of course, No Longer Available (NLA).