Timewave DSP-599zx Operation Reference Card

All Modes

Feature	Required Actions	Description/Notes
Change Primary Operating Mode (Voice, CW, Data)	Press **[Mode]**	Each time **[Mode**] is press, the DSP-599zx the operating mode changes to the next mode.
Select Test or Setup modes	Press **[Shift+Mode]**	Press **[Shift+Mode]** once for Test mode and twice for Setup mode.
Cancel **[Shift]** action	Press **[Shift]** or wait three seconds	Pressing **[Shift]** twice in a row with no other button pressed cancels **[Shift].** By waiting three second without any other action, **[Shift]** will time out.
Turn speaker on/off.	Press **[Spkr/Chan]**	Pressing **[Spkr/Chan]** toggles the speaker on and off.
Change channels	Press **[Shift+Spkr/Chan]**	Pressing **[Shift+Spkr/Chan]** toggles between channels.
Store a setting in memory	Press **[Shift+Rcl/Store+{#}]** # = memory number (1 - 6)	Stores a common operating configuration to memory for easy recall. Stores every setting except audio gain control position. Six memories available.
Recall a stored setting	Press **[Rcl/Store+{#}]** # = memory number (1 - 6)	Recalls a common operating configuration from memory. Recalls all settings except audio gain control position. Six memories available.
Restore previous setting	Press **[Rcl/Store+Rcl/Store]**	Recalls previous setting before the memory recall. Allows quick toggling between two operating settings.
Change power-up mode	Press **[Shift+Rcl/Store+Mode]**	Stores the operating mode and channel that you wish to power up with. Can be changed at any time by repeating process.
Bypass all settings	Press **[Bypass]**	Actual operation varies with mode of operation. Generally routes signal past all signal processing.
Turn AGC on/off	Press **[AGC]**	Optimizes signal levels for best filter performance and enhances listening by minimizing audible signal level variation.
Enable random noise reduction	Press **[Random]**	An adaptive multi-tone filter that can remove multiple tones simultaneously. Removes multiple heterodynes almost completely.

Voice Mode

Feature	Required Actions	Description/Notes
Adjust high pass filter	Turn **left knob [High Pass]**	By turning the left knob, you can adjust the high pass filter from 100 Hz to 1000 Hz
Adjust low pass filter	Turn **middle knob** **[Low Pass]**	By turning the middle knob, you can adjust the low pass filter from 1000 Hz to 5000 Hz
Enable random noise reduction	Press **[Random]**	Can be very effective in reducing offending background noise.
Adjust aggressiveness of noise reduction	Press **[Shift+Random],** turn **left knob** to adjust. **Press left knob** to accept.	The aggressiveness can be adjusted from one to nine with default value of five. The higher the value, the greater the noise reduction.
Turn AM line noise filter on/off	Press **[Function].** LED illuminated indicates on.	This does not work on SSB signals. It is designed primarily for AM signals.
Eliminate heterodyne tones	Press **[Tone].** LED illuminated indicates on.	The automatic filter can virtually eliminate multiple heterodynes and reduce CW and FSK data signals.
Turn on/adjust notch filter	Press **[Shift+Tone].** Turn **left knob [Center Freq]** to change Notch Center Frequency. Rotate **middle knob** to adjust Notch Bandwidth. Accept by pressing **left knob**.	Rotate left knob until unwanted signal disappears. Rotate middle knob to adjust width of filter. The lower the value the narrower the filter. Filter widths 1 - 5 are single notch filters. Filter widths 6 - 9 are dual notch filters for data signals. As a reminder, a S or D will be displayed.
Turn off notch filter	Press **[Shift+Tone]** or press **middle knob**.	Removes notch filter after it is no longer needed.
Change freq of AM line noise filter	Press **[Shift+Mode]** twice. Turn **left knob** until Voice appears. Press **left knob** to accept. Turn **left knob** until AM Line Noise appears. Press **left knob** to accept. **Turn left knob** until desired value is viewed. Press **left knob** to accept, press **middle knob** to cancel and escape.	You can select between 50 and 60 cycles. Your choice will depend upon the frequency of the local AC electrical power.

CW Mode

Feature	Required Actions	Description/Notes
Adjust center frequency	Turn **left knob [Center Freq]**	By turning the left knob, you can adjust the center frequency from 200 to 2100 Hz.
Adjust CW bandwidth	Turn **middle knob [Bandwidth]**	By turning the middle knob, you can adjust the CW bandwidth from 10 Hz to 600 Hz.
Enable random noise reduction	Press **[Random]**	Can be very effective in reducing offending background noise.
Turn on/adjust notch filter	Press **[Shift+Tone].** Turn **left knob [Center Freq]** to change Notch Center Frequency. Rotate **middle knob** to adjust notch bandwidth Accept by pressing **left knob**.	Rotate left knob until unwanted signal disappears. Rotate middle knob to adjust bandwidth of filter. The lower the value the narrower the filter.
Turn off notch filter	Press **[Shift+Tone]** or press **middle knob**.	Removes notch filter after it is no longer needed.
Turn CW marker tone on/off	Press **[Tone].** Turn left knob to adjust marker tone frequency.	The tone is generated at the bandpass filter center frequency. Use the marker to center a wide bandpass filter (300-600 Hz) on a signal by matching the marker tone pitch to the signal pitch by ear.
Enable CW tone pitch shift	Press **[Shift+Function**]. Rotate **left knob [Center Freq]** to shift output CW pitch you hear. Turn the **middle knob** to adjust the incoming CW pitch. Press **[Shift+Function]** or press the **left knob** to accept the pitch shift..	Shift CW tone pitch to another frequency. Works well with receivers that have non-adjustable, relatively high pitch CW tones.
Disable CW tone pitch shift	Press **[Shift+Function]**. Press the **middle knob** to disable the pitch shift..	Return CW tone pitch to received tone.

Data Mode

Feature	Required Actions	Description/Notes
Select Data tuning display	Press **[Shift+Function].**	
Adjust data carrier detect (DCD)	Press **[Shift+Function]** to turn data tuning display on. Press **[Function]** to switch **middle knob** from **[Bandwidth]** to [DCD]. Turn **middle knob [DCD]** to clean error free copy.	DCD value is displayed in the lower left of the data tuning display. Range is 0 - 9. The greater the value, the higher the DCD threshold. Setting the DCD to "0" (zero) turns DCD off.
Enable random noise reduction	Press **[Random]**	Not designed for data but does work for some conditions.
Enable RTTY FSK test signals	Press **[Tone].**	If baud rate in non burst data mode is 75 baud or less, a diddle tone is activated. If baud rate is 100 baud or higher, a space-mark reference calibration tone is enabled.
Enable RTTY FSK test signals	Press **[Shift+Tone].**	If baud rate in non burst data mode is 75 baud or less, a "RYRY" test tone is activated. The signal is centered at 2210 Hz with a frequency shift of +/- 85 Hz. Baud rate is determined by RTTY parameter settings. If baud rate is 100 baud or higher, no tone is enabled.
RTTY Modem	Always on in RTTY operation	See *Section 2* of DSP-599zx *Operating Manual* for proper connection information.
RTTY Remodulator	Press **[Function]** in RTTY operation	Sends regenerated RTTY signal to line output. You can still monitor the incoming RTTY tones through the speaker/headphone.

Test Instrument

Audio Millivoltmeter, Sinewave Generator, Two-tone generator, CTCSS decoder	See *Section 7* of *DSP 599zx Operating Manual* for complete information.	A group of tools to help analyze signals and other equipment.