

Fig. 3.5 Wire-Size Nomograph

plug (Fig. 3.3). Check for a snug fit because plugging and unplugging loosens these connections.

Figure 3.4 shows a typical system hookup.

Use speaker cables of sufficient gauge (thickness) for the length used. Otherwise power is lost through cable heating, and damping factor is decreased due to cable resistance. Refer to the nomograph (Fig. 3.5) for recommended wire sizes.

To prevent high-frequency oscillations output cables should always be carefully laced together so that large magnetic fields are not formed, resulting in current carrying loops. Such fields often will couple the input signal path and result in undesired feedback and oscillations. Of course, the output cables should never be routed with input cables for the same reason.

Amplifier input and output grounds should never be joined externally to the unit. Such a connection is almost always a form of regenerative feedback and results in system oscillations. High frequency coupling between output signals and input ground and signals is frequently difficult to eliminate. A common cause of this problem is capacitive coupling through the AC mains where the output and input signals are attached to AC powered devices. In some situations the only solution may be to low pass filter the input at the amplifier.

### 3.5 Monophonic Operation

Parallel mono mode is recommended for loads less than 4 ohms. Bridge mono mode is recommended for loads 4 ohms or greater.

#### Bridge Mono Operation - Method A

1. Remove the bottom cover.
2. Add a jumper wire as shown in Fig. 3.6.
3. Replace the cover.
4. Push in the "Parallel Mono" pushbutton switch on the rear of the amplifier.

5. Plug the input line into the Channel 1 input jack, and adjust the level with the Channel 1 input-level control only.
6. Do not use the Channel 2 input; otherwise distortion may result. Unplug the input to Channel 2 when operating in mono, and turn the Channel 2 level control fully CCW.

#### Bridge Mono Operation - Method B

This method is desirable for installations in which the amplifier is converted frequently between stereo and mono operation. With this method, the amplifier can be replaced without re-setting the parallel-mono switch, because switching is automatic.

For an unbalanced input signal, make a Y-adapter using stereo phone plugs as follows:

1. Connect the signal cable HOT lead to Ch. 1 tip and Ch. 2 ring.
2. Connect the signal cable SHIELD to Ch. 1 sleeve (ground) and ring, and to Ch. 2 sleeve and tip.
3. Connect the speakers as shown in Fig. 3.6.

For a balanced input signal, make a Y-adapter using stereo phone plugs as follows:

1. Connect the signal-cable POSITIVE lead to Ch. 1 tip and Ch. 2 ring.
2. Connect the signal-cable NEGATIVE lead to Ch. 1 ring and Ch. 2 tip.
3. Connect the signal-cable SHIELD to Ch. 1 and Ch. 2 sleeves (grounds).
4. Connect the loudspeakers as shown in Fig. 3.6.

**Caution: Be certain that all equipment (meters, switches, etc.) connected to the mono output lines is balanced. To prevent oscillations, both sides of the line must be totally isolated from the input grounds.**

The output from the Micro-Tech in BRIDGE MONO is BALANCED and is isolated from the chassis, and from the input grounds. Because of the panel-mounting configuration of the dual-banana output jack, it is possible to use only one banana plug. Connect both load leads to the red or "hot" connectors only.

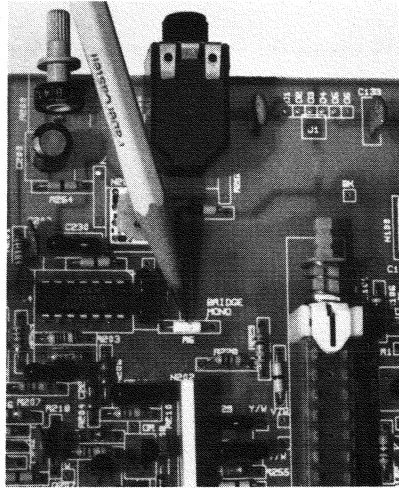
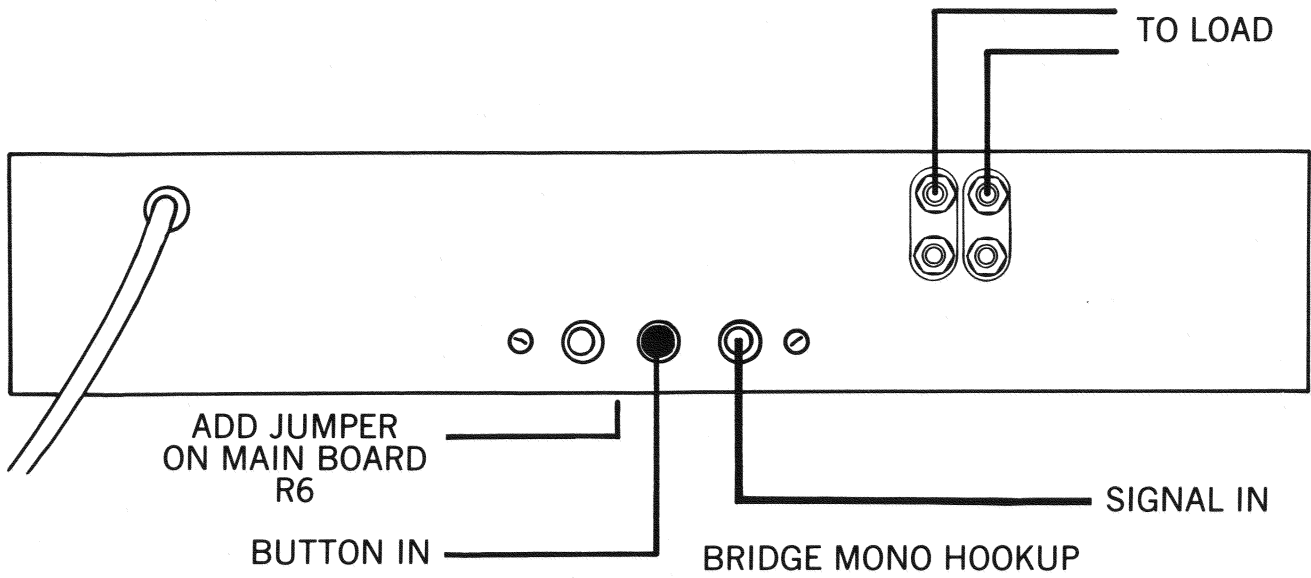


Fig. 3.6 Jumper-Wire Location for Bridge-Mono Operation

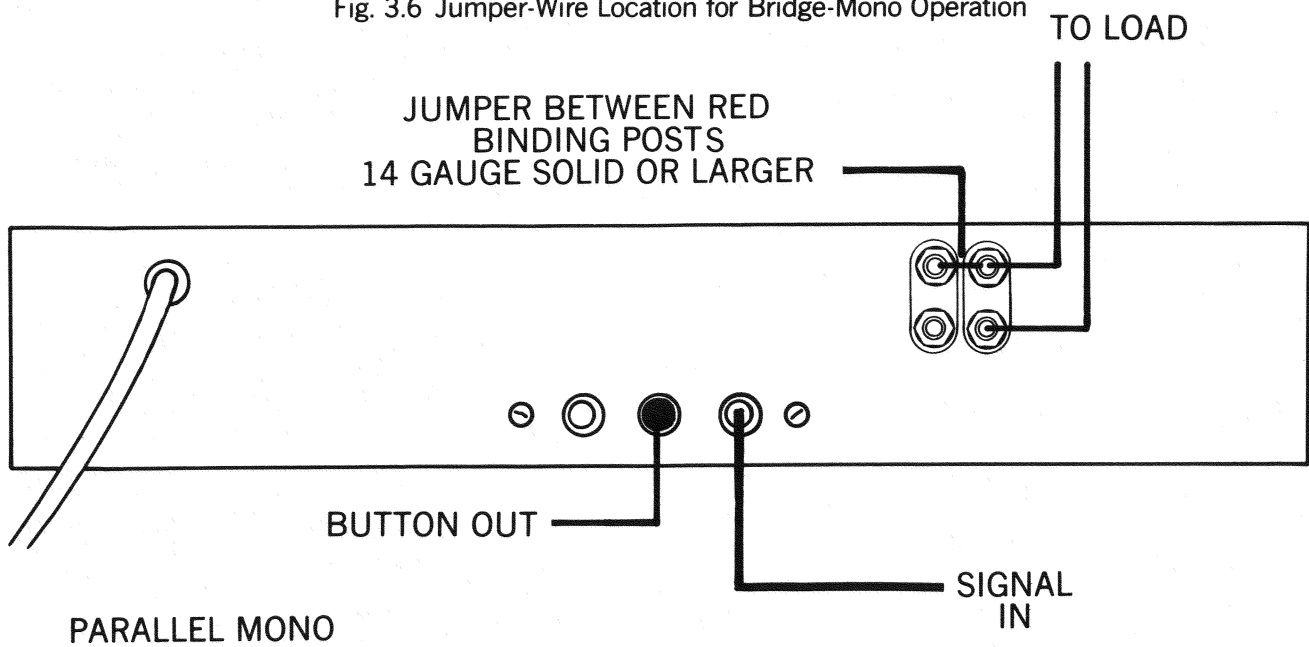


Fig. 3.7 Parallel Mono Hookup