

T R A Y N O R

MODEL TS-140 - GUITAR AMPLIFIER

GENERAL DESCRIPTION:

The TS-140 is a professional amplifier for guitar which features special circuitry, controls and switching facilities to expand its versatility throughout a very wide range of performance requirements.

A system of dual Gain and Master controls with manual and footswitch selection of the pre-set Gain/Master combinations, permits smooth transitions between clean and overdriven performance. In addition, the 6-band graphic Equalization also features the ability to be pre-set and footswitched on or off as required.

Other features include a Balanced Line Output, Send and Return Effects loop jacks and a totally independant channel on the back pannel.

FEATURES: (Front Panel)

Dual Inputs:

The Normal input provides full sensitivity for maximum overload and sustain. The Lo input has attenuated sensitivity to permit wider Gain - control range when high-output pickups are in use.

Gain Controls & Lights:

The Normal Gain control acts as a submaster for this input section so its Indicator Light will remain on at all times. The Boost Gain control regulates a separate preamp circuit containing the Tri-Comp divider-compressor network. The output of this circuit goes to the Normal Gain control which must therefore be turned up slightly (to "2" or higher) in order for the Boost effect to be heard. The Boost Indicator Light will go on or off with use of the manual Boost Switch and Footswitch.

Master Controls & Lights:

The Master volume controls permit separate regulation of loudness for the Normal and Boost gain settings. The Indicator Lights illuminate over the Master selected by the manual Boost Switch and Footswitch.

Boost Switch and Footswitch:

The manual Boost Switch and/or the Boost Footswitch do two things simultaneously:

1. they turn the Boost Gain control and light on or off and
2. they select the Normal or Boost Masters.

The manual switch overrides the footswitch in the Boost position, therefore switch it down, out of the Boost position when using the footswitch. Now the Boost Footswitch will perform all functions.

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Test Setting:

The following test settings are included at this point to help illustrate function of the Gain, Master and switching features.

Boost Switch	-	down (not on Boost)
Boost Gain	-	on "10"
Normal Gain	-	on "2"
Boost Master	-	on "2"
Normal Master	-	on "6"
Boost Footswitch	-	inserted in Boost jack on back panel
Other Controls, etc.-		set as desired
Guitar Volume	-	at maximum

This particular setup simply demonstrates one of the variations in clean and over-driven performance you can obtain and how the switching system works. At stage playing volumes, you may require somewhat higher master settings and you may want to reduce the Boost Gain setting for less overdrive.

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Tone Controls:

Standard Middle, Bass and Treble controls. Set as desired.

Reverb Level and Mix:

Set the Reverb Level control as desired. The Reverb Mix fader may now be used to apply reverb to the rear channel if it is in use. Center setting applies equal amounts of reverb to both the front and rear channels.

Equalization, Footswitch & Light:

The graphic Equalization is non-operational with the faders all set at center. To increase or decrease the low, midrange or high-frequency response, adjust the left-hand, middle or right-hand faders above or below center. The E.Q. Footswitch turns the Equalization on and off so that pre-adjusted settings can be introduced for special effects. When the Footswitch is not connected, the Equalization and Indicator Light will stay on.

Bright Switch:

Full brightness may be selected for Boost or Normal operation, or both in the center position.

FEATURES: (Back Panel)

Balanced Line Out:

A balanced preamplifier output, connect it to the low-impedance input of a mixer for direct P.A. feed using a standard, low-impedance (Cannon-to-Cannon) microphone cable. Input attenuation on the mixer should be set at -30db. to -40db. to minimize mixer input clipping. This output is pre-Master i.e. it is not regulated by the Master controls. It sends front-channel signal only.

Rear Channel:

This channel is totally independant of all front channel features - E.Q., Masters, etc. - with the exception of Reverb which may be applied to it via the Mix fader. It may be used to additionally amplify rhythm guitar or any other instrument at moderate playing volumes.

E.Q. & Boost Footswitch Jacks:

Accept footswitch lead plugs to perform the functions previously described.

Effects Send & Return Jacks:

Provide a clean, low-noise method for connecting effects such as flange, phase, echo, etc. to the front channel (only).

Speaker Jacks:

Connect no less than 4 ohms total speaker load to either or both jacks.

Acc. Socket:

A non-switched power outlet for accessories.

Circuit Breaker (Fuse):

Protects against A.C. line voltage surges. Press to reset the breaker (replace fuse with similar type in 230 volt models).

Speakers:

The TS-140 features special high-efficiency, 12-inch speakers capable of handling 100 watts R.M.S. apiece, 200 watts R.M.S. combined. They are 8-ohm speakers wired in parallel for a total 4-ohm load. Extension speakers should be no less than 4 ohms total load.

TS-140 SPECIFICATIONS:

Speakers:

The premium grade 12-inch speakers were developed independantly by the Yorkville Sound engineering group. Standards of performance achieved in their design are equal to the best that the audio industry has to offer.

General Description:

Cone diameter - 12", voicecoil diameter - 3", magnet - 80 oz, ferrite core with rear venting, power capacity - 100 watts R.M.S., impedance - 8 ohms.

AMPLIFIER SPECIFICATIONS:

Power Output:

- 120V line, 1KHz sine wave into 4 ohms = 140Wrms  
(ref. to 230V line in export models)

Input Sensitivity:

Aux	2.0 mV
Normal	2.0 mV Boost off
	500 uV Boost on
Low	30.2 mV

Input Impedance:

Normal	270 K ohms
Low	35 K ohms
Aux	270 K ohms

Equalization:

± 12db. @ centre frequencies of:  
100Hz, 200Hz, 400Hz, 800Hz, 1.6KHz, 3.2KHz.

Line Out:

250 mV peak measured differentially across balanced line for rated output, master volume full.

Distortion: (power amp only)

Less than 1.0% at rated output

- All measurements referenced to 115 Vac line or 230 Vac in export models.

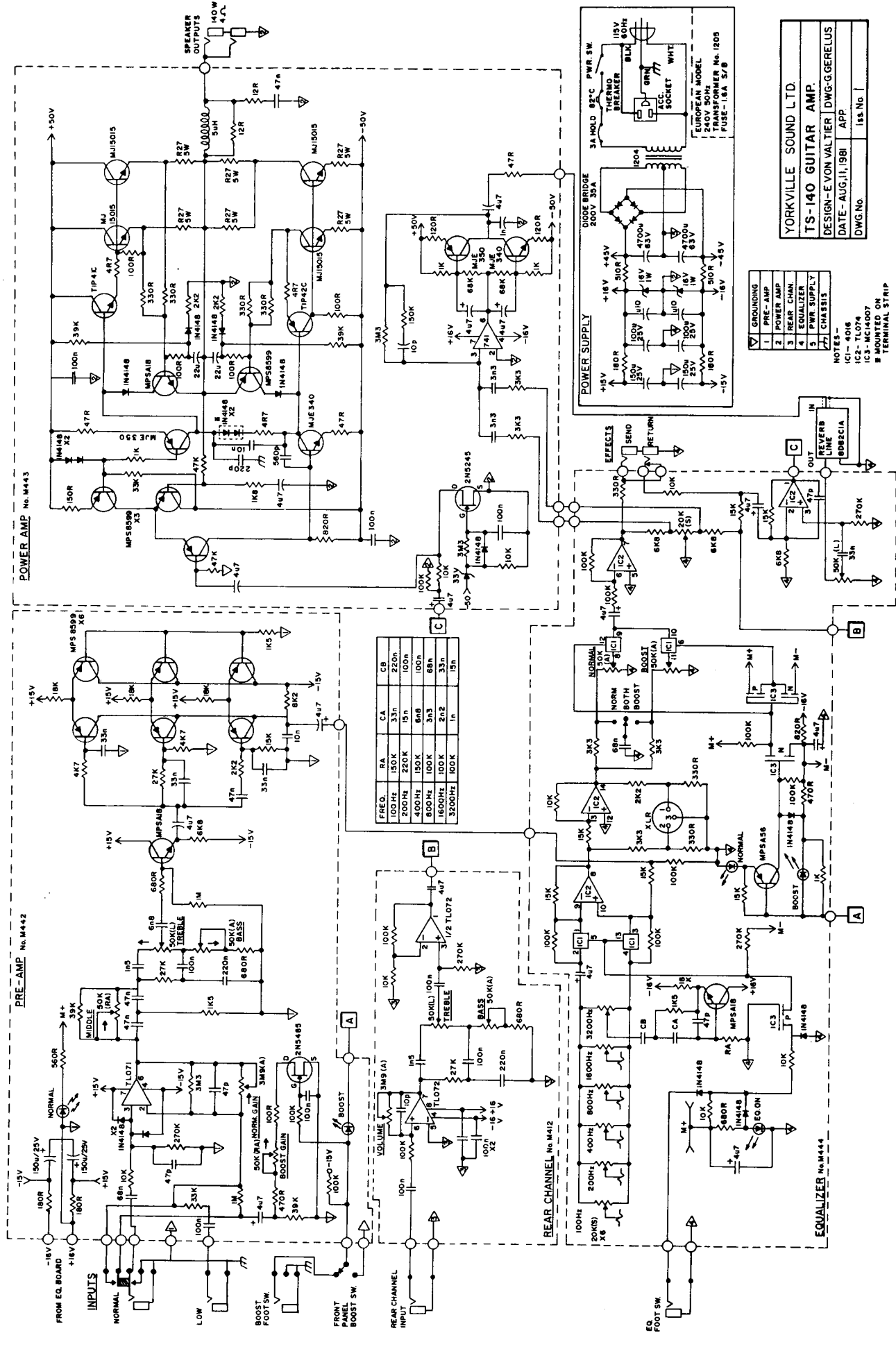
- All measurements taken with 1KHz. sine wave

All voltages in R.M.S. unless otherwise noted.

Dimensions: 22" x 27" x 11" approx. 90 lbs  
56 cm x 59 cm x 28 cm approx. 40 kg.







- NOTES -
- IC1 - 4016
  - IC2 - TL074
  - IC3 - MC14007
  - # MOUNTED ON TERMINAL STRIP

YORKVILLE SOUND LTD.  
 TS-140 GUITAR AMP.  
 DESIGN - E. VON VALTIER | DWG-G.GERELUS  
 DATE - AUG. 11, 1981 APP  
 DWG No. | Iss. No. |

