

INSTRUCTION BOOK
DUAL FREQUENCY SHIFT TONE KEYS SHELF
TYPE 244 MODEL 1



NORTHERN RADIO COMPANY
Incorporated

pace-setters

in quality

communication

equipment

STANDARD WARRANTY

All items of equipment and material used in this unit are guaranteed against defects in material, workmanship, or manufacture for a period of one year from date of shipment.

Under the terms of this Warranty, all items which fail within the period defined will be replaced or repaired F.O.B. point of manufacture without cost to purchaser. Prior approval of the company shall be obtained before returning any equipment. If upon examination of the defective item the company can show that failure was not due to any defective workmanship, material or manufacture, the company will bill the purchaser for the cost of replacement or repair.

TABLE OF CONTENTS

1. GENERAL
 - Purpose
 - Description
 - Technical Data
2. INSTALLATION AND MAINTENANCE
3. ELECTRICAL PARTS LIST
4. SCHEMATIC DIAGRAM, Dwg. No. A-244-1-01

1.

GENERAL

Purpose:

The Northern Radio Dual Frequency Shift Tone Keyer Shelf, Type 244 Model 1, is used as a mounting for holding up to two (2) Northern Radio Type 211 Keyers and one (1) Type 251 Power Supply. It includes a line isolation transformer and attenuator for adjusting the level of the outgoing tone multiple signals, as well as terminal blocks for making all necessary external tone and DC connections to the Keyer. It includes a power control panel section containing a power switch, pilot light, and line fuse for the Power Supply. It also includes a power cord for connecting to the AC line.

Description:

The Northern Radio Dual Frequency Shift Tone Keyer Shelf, Type 244 Model 1, is a 19" wide shelf, which mounts in a standard relay rack, occupying 1-3/4" height and approximately 15-1/4" overall depth. The Shelf is equipped with appropriate guides to accept two (2) Northern Radio Type 211 Keyers. Sockets are installed at the rear of the Shelf to automatically mate with matching plugs on the rear of the Type 211 Keyers. Tapped holes at appropriate places on the front of the Shelf allow individual units to be locked in place by tightening the thumbscrews provided on the units.

When fully equipped with Keyers and Power Supply, the Type 244 Model 1 Shelf provides a two-channel telegraph transmitting terminal, ready to operate when provided with appropriate AC input power and signal circuits.

Technical Data:

| | |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions: | 19" wide x 1-3/4" high x 15-1/4" deep |
| Mounting: | Mounts in a standard relay rack |
| Weight: | Unloaded: Approximately 4 lbs. Loaded with two (2) Keyers and one (1) Power Supply: Approximately 11 lbs. |
| AC Input: | 115 volts AC, 50/60 cycles \pm 10%, 2 watts |
| Special Features: | Mounts two (2) Type 211 Keyers and one (1) Type 251 Power Supply. Includes a line isolation transformer and attenuator for tone multiple circuit. Includes terminal blocks for connection with external signal circuits. |

2.

INSTALLATION AND MAINTENANCE

Necessary information for connecting signal lines to the Type 244 Model 1 Shelf is indicated on Northern Radio Drawing Number A-244-1-01.

Consult individual equipment Instruction Book for detailed information on those items.

3.

ELECTRICAL PARTS LIST

| <u>Sym- bol</u> | <u>Function</u> | <u>Description</u> | <u>Mfr.</u> | <u>Part No.</u> |
|---------------------|------------------------------|------------------------------------------------------------|-------------|-----------------|
| E1 | Terminal connector strip | 18 terminal barrier strip | KUL | 600-18-3/4ST |
| F1 | Power supply fuse | 1/2 amp "Slo Blo" fuse | LFU | 313.500 |
| I1 | Main power light | Bayonet base, neon lamp | GEC | NE 51 |
| J1 | Main power chassis connector | Male chassis power connector | CIN | P-202-B |
| J2 | Receptacle for Tone Keyer | 14 prong female connector with floating bushing | AMP | 57-20140 |
| J3 | Receptacle for Tone Keyer | 14 prong female connector with floating bushing | AMP | 57-20140 |
| J4 | Receptacle for Power Supply | 8 prong female connector with floating bushing | AMP | 26-4201-8S |
| R1 | Series resistor | 150K ohms \pm 10% 1/2 watt composition resistor | ALB | EB 1541 |
| R2 | Attenuator | 600 to 600 ohm variable attenuator | MAL | T 600 |
| S1 | Main power switch | DPST toggle switch | CHC | 8360K7 |
| T1 | Isolation transformer | Transformer 600-600 ohms | NRC | 234 |
| XF1 | Fuse holder for F1 | Fuse holder with light fuse indicator | BUS | HKLX |
| XI1 | Socket for I1 | Pilot light assembly with clear lens and internal resistor | DLA | 26408-1137 |
| Z1 | Main power cable | Two wire power cable connector | NRC | 788 |

MANUFACTURERS' DESIGNATION

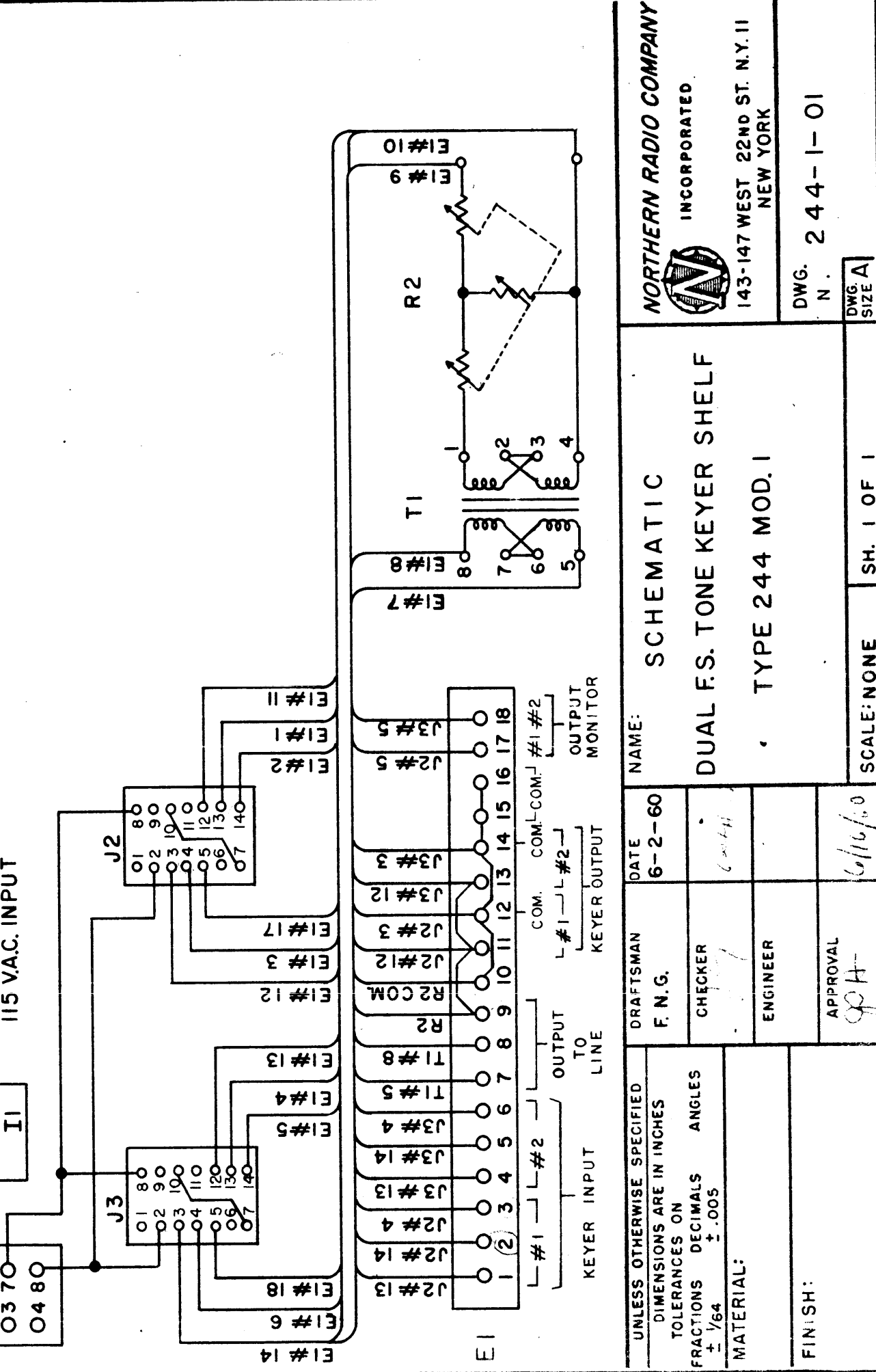
| | |
|---------------|--------------------------------------|
| ALB | Allen-Bradley Company |
| AMP | American Phenolic Corporation |
| BUS | Bussman Manufacturing Company |
| CHC | Cutler-Hammer, Incorporated |
| CIN | Cinch Manufacturing Corporation |
| DLA | Dialight Corporation |
| GEC | General Electric Company |
| KUL | Kulka Electric Mfg. Company, Inc. |
| LFU | Littelfuse, Incorporated |
| MAL | P. R. Mallory Company, Incorporated |
| NRC | Northern Radio Company, Incorporated |

DWG. 244-1-01
N.

REV.

| REVISIONS | |
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| SYM. | DATE |
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| DESCRIPTION | DATE | APPROVAL |
|-------------|------|----------|
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NORTHERN RADIO COMPANY
INCORPORATED
143-147 WEST 22ND ST. N.Y. 11
NEW YORK

NAME: SCHEMATIC
DUAL F.S. TONE KEYS SHELF
TYPE 244 MOD. 1

| | | |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± 1/64 ± .005 | DRAFTSMAN F. N. G. | DATE 6-2-60 |
| MATERIAL: | CHECKER | |
| FINISH: | ENGINEER | |
| | APPROVAL <i>[Signature]</i> | |
| | SCALE: NONE | SH. 1 OF 1 |
| | DWG. SIZE A | |