

INSTRUCTION MANUAL

SPOTMASTER PORTAPAK I
Portable Reproducer

BROADCAST ELECTRONICS, INC.



IMPORTANT INFORMATION

EQUIPMENT LOST OR DAMAGED IN TRANSIT

When delivering the equipment to you, the truck driver or carrier's agent will present a receipt for your signature. Do not sign it until you have (a) inspected the containers for visible signs of damage and (b) counted the containers and compared with the amount shown on the shipping papers. If a shortage or evidence of damage is noted, insist that notation to that effect be made on the shipping papers before you sign them.

Further, after receiving the equipment, unpack it and inspect thoroughly for concealed damage. If concealed damage is discovered, immediately notify the carrier, confirming the notification in writing, and secure an inspection report. This item should be unpacked and inspected for damage WITHIN 15 DAYS after receipt. Claims for loss or damage will not be honored without proper notification of inspection by the carrier.

TECHNICAL ASSISTANCE AND REPAIR SERVICE

Technical assistance is available from Broadcast Electronics by letter or prepaid telephone or telegram. Equipment requiring repair or overhaul should be sent by common carrier, prepaid, insured and well protected. Do not mail equipment. We can assume no liability for inbound damage, and necessary repairs become the obligation of the shipper. Prior arrangement is necessary. Contact Customer Service Department for a Return Authorization.

FOR TECHNICAL ASSISTANCE

Phone (217) 224-9600 Customer Service

WARRANTY ADJUSTMENT

Broadcast Electronics, Inc. warranty is included in the Terms and Conditions of Sale. In the event of a warranty claim, replacement or repair parts will be supplied F.O.B. factory. At the discretion of Broadcast Electronics, the customer may be required to return the defective part or equipment to Broadcast Electronics, Inc. F.O.B. Quincy, Illinois. Warranty replacements of defective merchandise will be billed to your account. This billing will be cleared by a credit issued upon return of the defective item.

RETURN, REPAIR AND EXCHANGES

Do not return any merchandise without our written approval and Return Authorization. We will provide special shipping instructions and a code number that will assure proper handling and prompt issuance of credit. Please furnish complete details as to circumstances and reasons when requesting return of merchandise. All returned merchandise must be sent freight prepaid and properly insured by the customer.

REPLACEMENT PARTS

Replacement and Warranty Parts may be ordered from the address below. Be sure to include equipment model and serial number and part description and part number.

Broadcast Electronics, Inc.
4100 N. 24th St., P.O. Box 3606
Quincy, Illinois 62305
Tel: (217) 224-9600
Telex: 25-0142
Cable: BROADCAST
Fax: (217) 224-9607

PROPRIETARY NOTICE

This document contains proprietary data of Broadcast Electronics, Inc. No disclosure, reproduction, or use of any part thereof may be made except by prior written permission.

MODIFICATIONS

Broadcast Electronics, Inc. reserves the right to modify the design and specifications of the equipment in this manual without notice. Any modifications shall not adversely affect performance of the equipment so modified.

B R O A D C A S T E L E C T R O N I C S , I N C .

SPOTMASTER PORTAPAK I

Portable Reproducer

SPECIFICATIONS

SIZE:	9-5/8" W x 10-3/4" L x 3-5/8" H
WEIGHT:	11-3/4 Lbs.
OUTPUT LEVEL:	2 watts
DISTORTION:	2% or less
FLUTTER AND WOW:	.3%
NOISE:	50 db below 3% THD
FREQUENCY RESPONSE:	60 - 12,000 cps (Adjustable equalization control)
CONTROLS:	Volume Equalization Control Lever
POWER REQUIREMENTS:	12 VDC (600.ma maximum) nickel-cadmium battery 115 VAC for integral recharging power supply
SPEED:	7-1/2 ips

B R O A D C A S T E L E C T R O N I C S , I N C .

SPOTMASTER PORTAPAK I

I. GENERAL

The SPOTMASTER PortaPak I is a portable, self-powered tape cartridge reproducer equipped with a built-in amplifier and speaker which offers an instant on-the-spot means to audition or demonstrate pre-recorded tape cartridges.

A long-life rechargeable nickel-cadmium battery supplies power for both the transport mechanism and transistorized amplifier.

Lightweight, compact and equipped with its own carrying handle, PortaPak I is ideally suited for sales presentations and client demonstration of broadcast spot announcements. A carrying case with space for extra cartridges is available as an option.

II. OPERATION

PortaPak I, with the battery at full-charge, is ready for instant use any time, anywhere. Place a pre-recorded NAB type cartridge A, B or C on the deck, guiding it along the right rail until it is fully seated, and the unit is ready for operation.

SPOTMASTER PortaPak I

Operation -

To start the tape in motion, press the control lever on the front panel down to the "play" position. Be sure the lever goes all the way down past the detent or the pressure roller will not fully engage the tape. This action both starts the tape in motion and applies power to the amplifier. No warm-up time is necessary, although if desired, the control lever may be moved to the "ready" position moments before "play" to allow the motor to reach full speed prior to engaging the tape.

During play, the volume and equalization controls should be adjusted for the most pleasing effect.

The cartridge is stopped by returning the control lever to the "off" position. Remove the cartridge by sliding it out; do not lift cartridge to remove it.

CAUTION: Always return the control lever to the "off" position when the unit is not in operation. Leaving the control lever in the "ready" or "play" positions will discharge the battery.

It is recommended that any cartridges reproduced on PortaPak I which are to be ultimately used with studio-type SPOTMASTER or other cartridge equipment be first re-cued by the automatic cueing action of the studio unit. PortaPak I is not equipped with automatic cueing circuitry.

III. OPTIONAL TONE HEAD

PortaPak I may be equipped with an optional tone head which allows any cue tones recorded on the tape to be audibly

SPOTMASTER PortaPak I

Optional Tone Head -

monitored simultaneously with material on the program channel. No automatic stopping or cueing feature is inherent with the optional tone head; it merely provides a means to monitor cue tones in relationship to program matter.

IV. BATTERY SERVICE

PortaPak I is equipped with a 500 mah heavy-duty nickel-cadmium battery which is rechargeable without removing it from the unit.

Each unit is equipped with a power cord for connecting the recessed plug on the rear panel to a 110-120v AC source for recharging. The PortaPak I contains a built-in "trickle charge" circuit specifically designed for use with long-life nickel-cadmium batteries.

With the battery at full charge, PortaPak I will operate for approximately one hour before exhausting the battery charge. Intermittent use may extend battery life between charges.

Any deterioration in motor speed, amplification or sound quality may indicate the battery needs recharging. At the beginning of a recharge cycle the indicator lamp on the front panel will be at peak illumination. As the battery reaches full charge the lamp brilliance will decrease or perhaps go out entirely. A normal recharge cycle takes about eighteen hours. The possibility of overcharging is minimized by in-built

SPOTMASTER PortaPak I

Battery Service -

protective circuitry. An average battery may be recharged approximately 150 times before reaching the end of its useful life.

A battery which, after full service life, will no longer hold a full charge will require replacement. SPOTMASTER Battery No. B1-PK1 is available from Broadcast Electronics, Inc. These batteries have exceptional shelf life and will accept full charge and give optimum service even after many months of storage.

Access to the battery is gained by removing the four corner screws on the back panel. To remove the battery, disconnect leads from the solder lugs at both positive and negative poles and pull the battery free of the clips. When replacing the battery, be sure the poles are properly oriented and that the leads are re-soldered securely.

V. SERVICE MAINTENANCE

Each PortaPak I is carefully adjusted and performance tested prior to shipment. Do not attempt any adjustments unless it has been definitely determined they are absolutely necessary.

A. Access

Removal of the two screws on the side of the unit will allow the lid to be pivoted up for access to head(s) and pressure roller for installation, cleaning or adjustment as well

SPOTMASTER PortaPak I

Service Maintenance - Access

as battery inspection.

The four screws on the rear panel and the four rubber foot mounting screws when removed will allow the entire chassis to be slipped free of the case for access to the interior of the unit.

B. Lubrication

Motor, capstan and flywheel bearings are self-lubricating. No further lubrication is necessary. Occasional lubrication may be required at points on the tape deck assembly where sliding parts come together. Lubriplate or a similar lubricant prepared especially for tape decks and record changers is recommended. Be sure to keep the lubricant away from the motor belt or any place where it might come in contact with the tape.

C. Head Care

The head(s) is(are) a vital link in the chain between the program material on the tape and the amplifying system. When given proper care they should perform with many hours of satisfactory service.

1. Cleaning -- Over a period of time a certain amount of residue will accumulate on the face of the head. Such an accumulation will interfere with proper contact between the head and tape and will result in spotty playback, unsatisfactory frequency response and excessive head and tape wear.

SPOTMASTER PortaPak I

Service Maintenance - Head Care

The heads should be cleaned periodically with SPOTMASTER BE-903 Capstan and Head Cleaning Fluid or equivalent which may be applied with a soft clean cloth or cotton swab.

2. Demagnetization -- Over a period of time a head may become magnetized which in turn will record noise on a tape even though it is being used for playback. Periodic demagnetization is recommended with a head degausser such as the SPOTMASTER Head Demagnetizer.

D. Capstan Drive Belt

The capstan drive belt is of a specially developed synthetic and should give long, trouble-free service. It is not subject to any appreciable wear and is highly resistant to deterioration. If it becomes necessary to replace the belt, insist on genuine SPOTMASTER parts; do not attempt replacement with so-called "universal" belts.

E. Capstan Pressure Roller Adjustment

A screw driver adjustment at the rear of the unit makes readjustment of the capstan pressure roller a simple operation. Turning the screw driver adjustment clockwise increases pressure; counter-clockwise decreases pressure.

To adjust, remove the back panel, move the control lever to "play". Turn adjustment till the capstan pressure roller "just touches" the capstan, then increase pressure by three-fourths to one full turn.

CAUTION: EXCESSIVE PRESSURE WILL OVERLOAD THE MOTOR.

SPOTMASTER PortaPak I

Service Maintenance -

F. IMPORTANT

The signal light on the front of the panel acts both as a charge indicator (see Section IV) and as a surge limiting fuse. In the event this lamp does not glow when the PortaPak is connected to the power line the lamp should be checked and replaced, if necessary, with a type 49 (2v @ 60 ma) panel lamp. These lamps are usually available at any electronic parts house.

G. Service Data

The accompanying schematic diagram and parts list will assist in servicing the PortaPak I. Specific inquiries may be directed to: Service Department, Broadcast Electronics, Inc.

B R O A D C A S T E L E C T R O N I C S , I N C .

SPOTMASTER PORTAPAK I

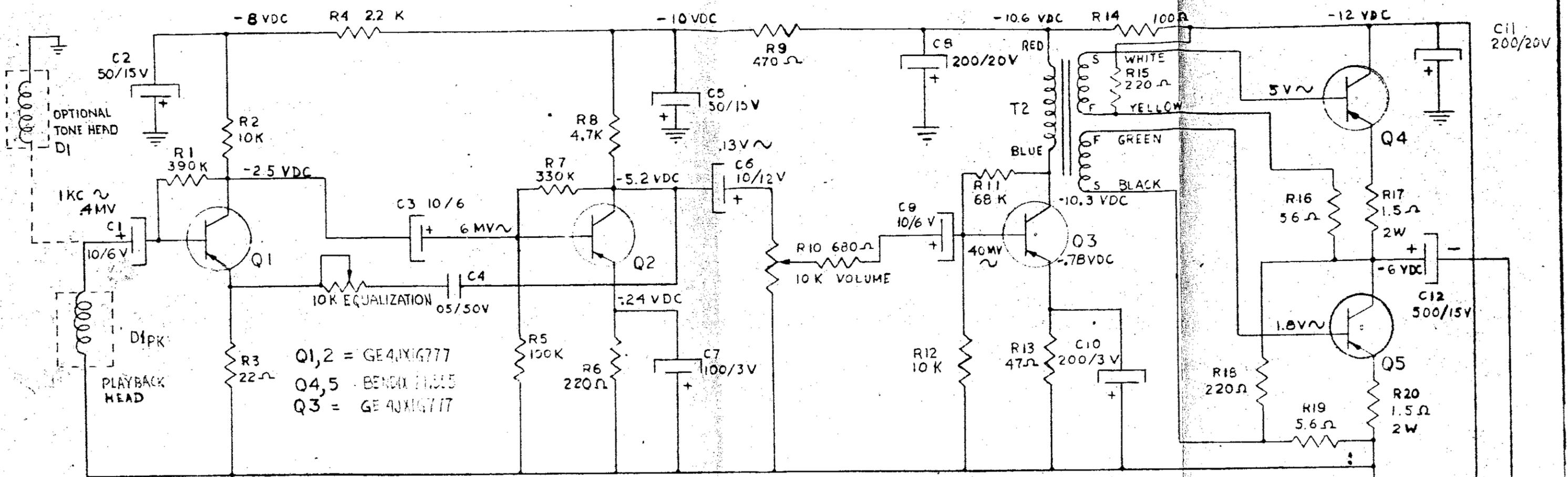
MAJOR PARTS PRICE LIST

<u>STOCK NUMBER</u>	<u>ITEM</u>	<u>PRICE</u>
D1PK	Head, Playback	\$12.00
D1	Head, Tone (Optional)	12.00
D9PK	Control Switch	1.40
D91PK	Control Switch Actuator	.30
D107A	Roller Shaft Assembly	4.80
D13	Pressure Roller	2.50
D14PK	Capstan & Flywheel Assembly	13.50
D15	Flywheel Thrust Bearing Assembly	3.00
D151	Capstan Thrust Button	.05
D20	Motor Belt	1.25
SP1PK	Speaker	3.30
SW1PK	Volume Control	.90
SW2PK	Equalization Control	.90
T1PK	Power Transformer	4.90
T2PK	Driver Transformer	2.50
2N555	Transistor, Q4 & Q5	.80
4JX1G777	Transistor, Q1, Q2 & Q3	.95
SR1692	CR1 Rectifier	.50
B1-PK1	Battery, Nickel-cadmium, 500mah	
	Carrying Case, black vinyl (Optional)	8.50

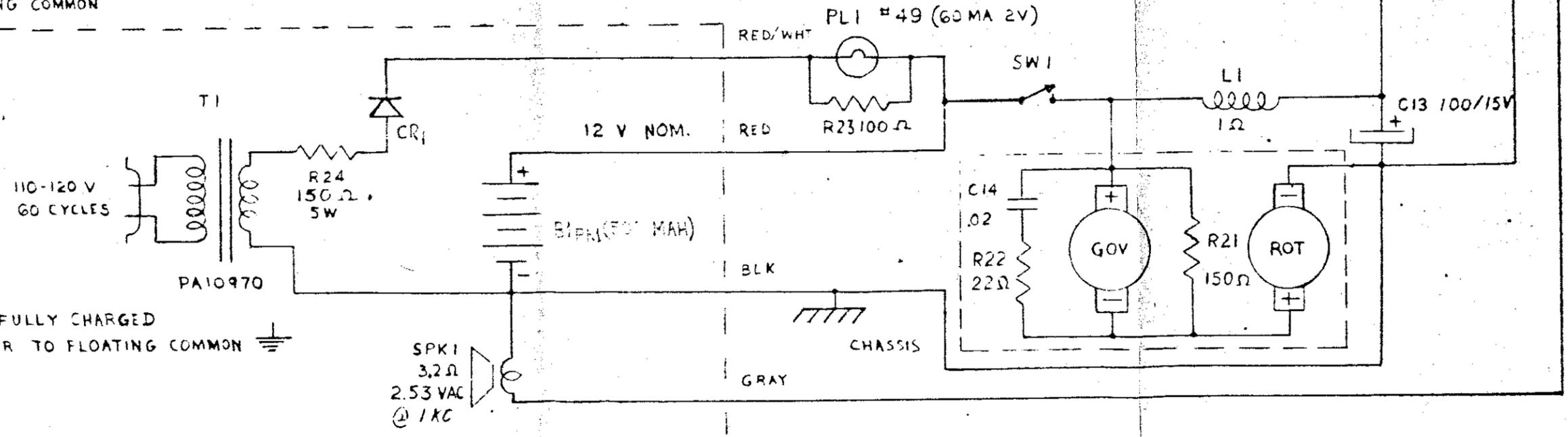
ALWAYS INDICATE EQUIPMENT SERIAL NUMBER WHEN ORDERING PARTS

(Prices Subject to Change Without Prior Notice)

MARCH 1965



Q1,2 = GE 4JXIG777
 Q4,5 = BENDIX 71315
 Q3 = GE 4JXIG777



NOTES:
 DC VOLTAGES MEASURED WITH FULLY CHARGED BATTERY WITH 20,000 OPV METER TO FLOATING COMMON
 MAX. POWER OUTPUT = 2W
 AMP. CURRENT = IDLE 54 MA. DC
 FULL OUTPUT = 428 MA. DC
 HARMONIC DIST. = 2%
 S/N RATIO = 50db FULL VOLUME
 62db BEHIND VC
 MOTOR CURRENT = 325 MA

SFOTMASTER
 PORTA PAK I
 BROADCAST ELECTRONICS, INC.
 SILVER SPRING, MD.

PRODUCT WARRANTY

LIMITED ONE YEAR

While this warranty gives you specific legal rights, which terminate one (1) year (6 months on turntable motors) from the date of shipment, you may also have other rights which vary from state to state.

Broadcast Electronics, Inc. ("BE"), 4100 North 24th Street, P. O. Box 3606, Quincy, Illinois 62305, hereby warrants cartridge machines, consoles, transmitters and other new Equipment manufactured by BE against any defects in material or workmanship at the time of delivery thereof, that develop under normal use within a period of one (1) year (6 months for turntable motors) from the date of shipment. Other manufacturers' Equipment, if any, shall carry only such manufacturers' standard warranty. This warranty extends to the original user and any subsequent purchaser during the warranty period. BE's sole responsibility with respect to any Equipment or parts not conforming to this warranty is to replace such equipment or parts upon the return thereof F.O.B. BE's factory or authorized repair depot within the period aforesaid.

In the event of replacement pursuant to the foregoing warranty, only the unexpired portion of the warranty from the time of the original purchase will remain in effect for any such replacement. However, the warranty period will be extended for the length of time that the original user is without the services of the Equipment due to its being serviced pursuant to this warranty. The terms of the foregoing warranty shall be null and void if the Equipment has been altered or repaired without specific written authorization of BE, or if Equipment is operated under environmental conditions or circumstances other than those specifically described in BE's product literature or instruction manual which accompany the Equipment purchased. BE shall not be liable for any expense of any nature whatsoever incurred by the original user without prior written consent of BE.

BE shall not be liable to the original user for any and all incidental or consequential damages for breach of either expressed or implied warranties. However, some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. All express and implied warranties shall terminate at the conclusion of the period set forth herein.

Except as set forth herein, and except as to title, there are no warranties, or any affirmations of fact or promises by BE, with reference to the Equipment, or to merchantability, fitness for a particular application, signal coverage, infringement, or otherwise, which extend beyond the description of the Equipment in BE's product literature or instruction manual which accompany the Equipment. Any card which is enclosed with the Equipment will be used by BE for survey purposes only.

BROADCAST ELECTRONICS, INC.
4100 North 24th Street, P. O. Box 3606, Quincy, Illinois 62305