SERVICE BULLETIN

from: TRIO–KENWOOD COMMUNICATIONS, INC.

SUBJECT:

DATE Oct. 6, 1977

DG-5, DK-520 ADDENDUM FOR USE WITH SERIES TS-511, TS-900, AND T/R-599.

The DG-5, DK-520 package was primarily designed for the TS-520 transceiver. Their use with other Kenwood products requires certain alterations to the installation procedure included with the DK-520 kit. General power supply, and specific wiring considerations will be detailed.

POWER SUPPLY (All models)

A. DC Supply; a source of 13.8V, @1.5A min, may be directly connected to the DG-5. An AC Xfrmr, 12-16V, @ 1.5A may be wired to the DK-520. Direct wiring to Kenwood power supplies (PS-3, PS-5, and PS-6 for example) is also possible.

B. Power supply ripple must not exceed 4V P-P under load.

TOOLS REQUIRED (Additional to those listed for the DK-520 installation:

1. Electric drill and bits.
2. Hi-Z RF VTVM capable of measuring .1V to 5V.

MOUNTING, TS-511

DK-520 will be mounted between the screen switch and RF and bias pots on the rear panel, over the ground screw terminal, which will be used for support.

A. Remove DK-520 cover (3 screws). Mark and drill 4mm hole in rear cover to mate with TS-511 ground terminal screw. Mount cover using ground screw, and install DK-520 in place.

B. Mount supplied Buffer unit (X44-1210-00) between stand up filter caps C2, C3 (1000uF x2), and Driver PCB (X47-0005-01), using existing screw nearest "R1", and "V1", buffer foil towards filters.

1. Remove JJY & NOR leads from buffer.
2. Connect GND Black lead to driver GND near "R1".
3. Connect 14V Red lead to "C3", passing lead through existing hole between RIT & RF gain controls.
4. Connect the JJY terminal to the "OP" terminal through three (3) series wired 1pf caps, 50wv each. DO NOT WIRE DIRECT!!!

C. Coaxial cables must first be trimmed. DON'T LOSE THEIR

IDENTIFICATION.

Blue banded coax, Het input (HEI) trim to 450mm.
Black banded coax, CAR input (CAI), trim to 420mm, save cut length.
Red banded coax, VFO input (VFI), lengthen to 360mm.

C. (Con't)

Route the cables along the final enclosure right hand side, facing the rear of the unit.

1. VFI cable to VFO (X40-0016-05) coax output.
2. CAI cable to Carrier coax output.
3. HEI cable to Buffer PCB output and ground terminals.

D. Check mechanical work, and solder connections. Using a HI-Z RF Voltmeter, check for min/max voltages as specified; taking all measurments at the end of DK-520 output cables, before plugging into DG-5.

VFO 0.3V +/- 3dB, MAX 5 Volt.
CAR 0.3V +/- 3dB, MAX 5 Volt.
HET 0.15 to 0.3V, MAX 5 Volt.

If levels are not within nominal limits, adjust either the voltage dividers R1-R4 in the DK-520, or for HET adjustment, series capacitors between JJY and OP terminals, by substitution.

E. Adjust all oscillator coils to compensate for drive output loading. Using ALC indicator, tune each band ½ turn back from osc dropout. DO NOT TUNE FOR MAX.

MOUNTING, TS-900

A. Using supplied hardware, mount DK-520 over ground screw terminal. RTTY jack may be removed and the hole used as a convenient cable entry. Insulate and secure the RTTY jack. Protect against accidental shorting.

Cable length VFI	470mm
Cable length HEI	550mm
Cable length CAI	260mm

B. Mounting and wiring the Buffer Unit.

Mounting:

1. Remove NOR & GND leads.
2. Remove JJY brass cap only.
3. Mount the buffer, component side up, between the load shaft and RF unit, allowing clearance for the screen supply switch. Sweat-solder the bracket to the mixer coil shield.

Wiring:

Buffer 14V to RF 9V
JJY (yel) to TPI RF unit

C. Cables: VFO, fix unit terminals 23,25.
CAR; CAR/AVR unit terminals 19,21.
HET; HET osc/coil pack output & GND.

D. Levels check: Same as the TS-511, excluding the HET capacitors adjustment.

Note on R-599 Operation: R-599 must be in "transceive" mode to read both RX and TX frequency. If operated in "seperate" mode, only RX frequency will be read.

Power to drive the DG-5 cannot be taken from the R-599. An external AC transformer, or DC supply, may be used. Or, power may be taken from the T-599 X43-0011-00 power supply 14V output terminal. Either (or both) pins 2 or 5 of the transceive connector may be used to deliver power through an added cable into the R-599, and thence to the DK-520.

MOUNTING, R-599

A. May be mounted over a converter antenna port if no converters are installed. Otherwise, mount between serial plate and H.F. antenna input connector. Antenna connector port may be used as cable entry, otherwise, drill and deburr rear panel (and chassis) for cable access.

B. (Buffer unit not used.)

C. Coaxial cable connection
1. VFI to VFO Pin #1 transceive connector.
2. CAI to carrier output (X50-0002-00) or carrier input (X48-0011-00) IF unit.
3. HEI to HET Pin #8.

D. Check levels as listed, TS-511 section.