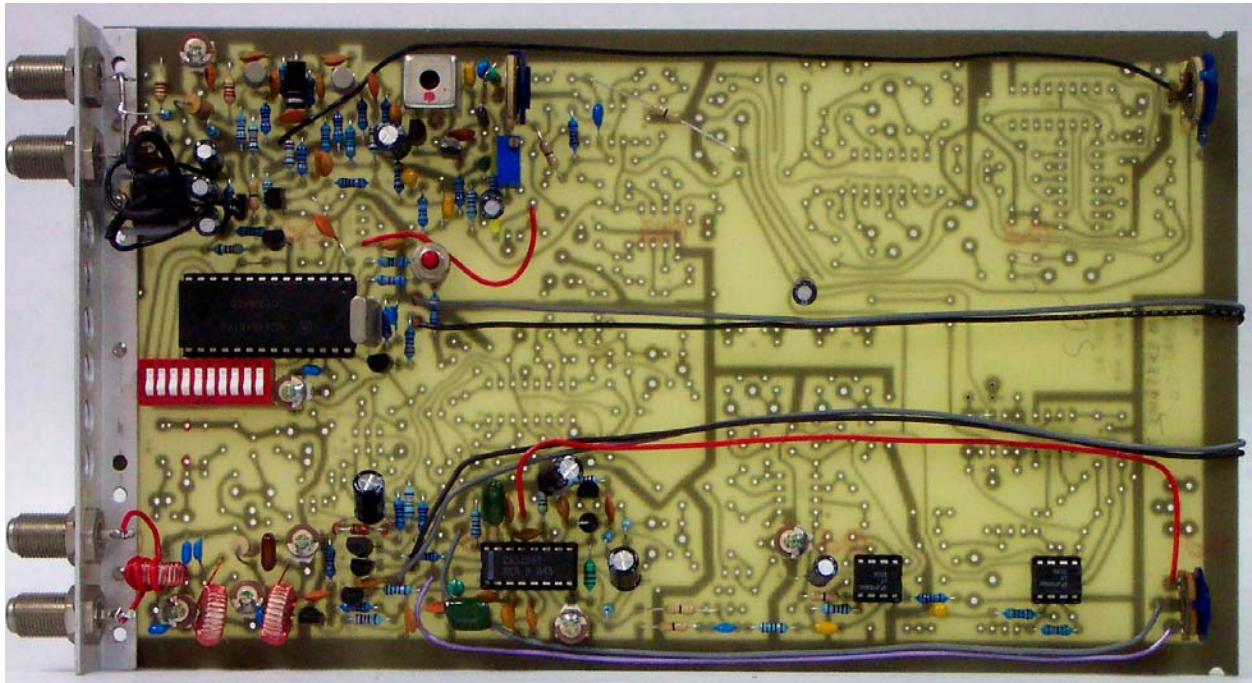


SCT611SE



SUBCARRIER TRANSLATOR

INSTRUCTION BOOK
IB622702

SCT611SE
SUBCARRIER TRANSLATOR

TABLE OF CONTENTS

	PAGE
<u>SHIPPING INSPECTION</u>	2
<u>MODULE CONFIGURATION</u>	2
<u>INSTALLING MODULES</u>	2-3
<u>CABLING</u>	3
<u>FRONT PANEL CONTROL ADJUSTMENT</u>	4
<u>HOW IT WORKS</u>	4

SHIPPING INSPECTION

Remove from shipping container and inspect for shipping damage. If any damage is detected contact the shipping carrier for further instructions. The SCT611SE is normally shipped fully tested and ready for use in the PMS610 Power Supply & Mainframe. If you ordered only the SCT611SE Card, please refer to the (MODULE CONFIGURATION) section of this manual for instructions on assembly into your existing PMS610 mainframe.

MODULE CONFIGURATION

The SCT611SE Subcarrier Translators output is frequency agile. Refer to the subcarrier tuning table to set the output frequency. The unit will be set at the factory for your output frequency if the frequency was specified at the time of order.

INSTALLING MODULES

The PMS610 is a mainframe power supply for mounting FM SYSTEMS 600 series equipment cards. Up to three circuit board modules may be accommodated. These modules may be readily installed in the field with common hand tools; no soldering is required.

CIRCUIT BOARD MODULE INSTALLATION

Select which of the three positions will be occupied by the new circuit board module. Disconnect the power and remove the mainframe from the rack. Remove the bottom cover and the 4-40 x 1/4" mounting studs where you wish to mount the circuit card. Next remove the rear metal panel in preparation to mounting the new card. Then remove the old Nameplate by carefully lifting one corner and slowly peel the nameplate from the aluminum panel.

Install the new circuit board module with the components toward the top cover. Take care to avoid moving any of the pre-set controls. Slip the connectors through the holes in the rear panel and drop the front edge of the circuit board onto the brackets attached to the front panel. Next install two 3/8" -32 nuts and lockwashers on the outermost "F" connector barrels. Gently tighten the nuts while holding the circuit board against the front mounting brackets. Install two 4-40 x 1/4" studs (without the lockwashers) to secure the front of the board to the mounting brackets. Next remove the top cover from the mainframe and connect the power supply and the circuit card with the power wire harness that is supplied. The power to multiple cards is wired as a "daisy chain". Push any L.E.D. (Light Emitting Diodes) straight into the appropriate mounting holes.

Temporarily set the new nameplate in place and check that all necessary cutouts are clear. Remove the paper peel coat from the adhesive backing of the nameplate, then slide the name plate down around the L.E.D.'s onto the panel. Press gently to set the adhesive. Mount any additional panel components (switches, meters, potentiometer, etc.) with the hardware supplied. Gently tighten the fasteners to secure the components: DO NOT OVER TIGHTEN.

INSTALLING MODULES (cont)

Mount the new rear panel connector identification stripes on the rear of the mainframe. Connect input, output, and power cables. The green "power-on" indicator should be illuminated.

CAUTION

Most circuit board modules have several adjustments which are carefully factory set with precision instruments for optimum performance. Change only those which must be adjusted. Some controls when mis-adjusted produce little change under "normal" operating conditions, but can seriously reduce the ability of the unit to function correctly under other conditions which may be encountered. Therefore, if you must adjust a control, place a mark on it before moving it, so that it may be returned to its original setting with reasonable accuracy.

Disconnect power. Replace top and bottom covers and mount mainframe to rack. Reconnect power and check for normal operation of each module.

CABLING

To install this equipment, select a convenient place in the equipment rack near the subcarrier source, and mount the PMS610 unit using four 10-32 screws and washers. The SCT511SS should be already mounted in the mainframe.

Next bring the subcarrier or composite video signal on a coaxial cable over to the Subcarrier Input "IN" and connect it. The Subcarrier Input "OUT" is either terminated, or used to carry the video signal to a video modulator or other equipment. BE SURE TO TERMINATE THE SUBCARRIER INPUT.

The subcarrier output "OUT" is connected to the fiber modulator or other equipment needed to carrier the signal to its final location. It IS NECESSARY TO TERMINATE the subcarrier output "IN" to prevent signal reflection and to properly terminate the video. This termination can come from your video source or other equipment.

FRONT PANEL CONTROL ADJUSTMENT

On the front panel there is a control that sets the squelch for the incoming subcarrier. Locate the SCXR control on the left hand side of the front panel. Rotate the control clockwise to turn on the green LED above the control. A full clockwise rotation of this control will turn on the translators receiver even if there is no subcarrier input. With no input, the output will have high level noise on it. To prevent this from happening, rotate the squelch control with an input signal clockwise until the green LED goes on. Then continue to rotate the control clockwise just a little bit further to allow for minor input RF level changes. This adjustment will turn off the output carrier if the input carrier goes away, preventing high level noise when loss of signal occurs.

The RF output level is adjustable from the front panel. Locate the control on the right side marked RF OUTPUT. A clockwise rotation will increase the RF output level, while a counter clockwise rotation will produce a reduction of RF level.

Use this control to set the subcarrier injection level of the output.

CARE AND MAINTENANCE

There is no periodic calibration or maintenance adjustments required and no user adjustable controls inside the unit. If the unit fails, it should be returned to the factory for repair. Call the factory at 800-235-6960 and ask for an RMA number for repair return if the unit requires repair.

HOW IT WORKS (theory of operation)

The SCT611SE is a subcarrier translator, it converts a subcarrier from one frequency to a different frequency. The system uses RF demodulation and remodulation with filtering to remove interstitial signals. This prevents signal polarity inversion on single conversions and makes it particularly useful for data subcarrier transmission systems. The triple pole multistage RF filters eliminate signals outside the pass band of the translator.

The input signal is buffered and filtered for optimum RF conversion. The signal is then demodulated to a wideband, base-band signal and then filtered to remove adjacent interfering signals. Next the signal is re-modulated on the new frequency with the same FM deviation as the received signal. Deviation enhancement can be done with this system. Then the signal is amplified with a variable control to set the output level as required. The video loop-through is passive and will not load the video.

SUBCARRIER TUNING TABLE (10+4 SWITCH)
10.240 L.O. MASTER DIVIDE BY 8192

4 POSITION				10 POSITION										4 POSITION				10 POSITION											
MHz	(1	2	3	4)	1	2	3	4	5	6	7	8	9	0	MHz	(1	2	3	4)	1	2	3	4	5	6	7	8	9	0
4.50	-	-	-	-	1	-	-	-	-	6	7	8	-	-	5.00	-	-	-	-	-	2	-	4	5	6	7	8	-	-
4.51	-	-	-	4	1	-	-	-	-	6	7	8	-	-	5.01	-	-	-	4	-	2	-	4	-	6	7	8	-	-
4.52	-	-	-	-	-	2	-	-	-	6	7	8	-	-	5.02	-	-	-	-	1	2	-	4	5	6	7	8	-	-
4.53	-	-	-	4	-	2	-	-	-	6	7	8	-	-	5.03	-	-	-	4	1	2	-	4	5	6	7	8	-	-
4.54	-	-	-	-	1	2	-	-	-	6	7	8	-	-	5.04	-	-	-	-	-	-	3	4	5	6	7	8	-	-
4.55	-	-	-	4	1	2	-	-	-	6	7	8	-	-	5.05	-	-	-	4	-	-	3	4	5	6	7	8	-	-
4.56	-	-	-	-	-	-	3	-	-	6	7	8	-	-	5.06	-	-	-	-	1	-	3	4	5	6	7	8	-	-
4.57	-	-	-	4	-	-	3	-	-	6	7	8	-	-	5.07	-	-	-	4	1	-	3	4	5	6	7	8	-	-
4.58	-	-	-	-	1	-	3	-	-	6	7	8	-	-	5.08	-	-	-	-	-	2	3	4	5	6	7	8	-	-
4.59	-	-	-	4	1	-	3	-	-	6	7	8	-	-	5.09	-	-	-	4	-	2	3	4	5	6	7	8	-	-
4.60	-	-	-	-	-	2	3	-	-	6	7	8	-	-	5.10	-	-	-	-	1	2	3	4	5	6	7	8	-	-
4.61	-	-	-	4	-	2	3	-	-	6	7	8	-	-	5.11	-	-	-	4	1	2	3	4	5	6	7	8	-	-
4.62	-	-	-	-	1	2	3	-	-	6	7	8	-	-	5.12	-	-	-	-	-	-	-	-	-	-	-	9	-	-
4.63	-	-	-	4	1	2	3	-	-	6	7	8	-	-	5.13	-	-	-	4	-	-	-	-	-	-	-	9	-	-
4.64	-	-	-	-	-	-	-	4	-	6	7	8	-	-	5.14	-	-	-	-	1	-	-	-	-	-	-	9	-	-
4.65	-	-	-	4	-	-	-	4	-	6	7	8	-	-	5.15	-	-	-	4	1	-	-	-	-	-	-	9	-	-
4.66	-	-	-	-	1	-	-	4	-	6	7	8	-	-	5.16	-	-	-	-	-	2	-	-	-	-	-	9	-	-
4.67	-	-	-	4	1	-	-	4	-	6	7	8	-	-	5.17	-	-	-	4	-	2	-	-	-	-	-	9	-	-
4.68	-	-	-	-	-	2	-	4	-	6	7	8	-	-	5.18	-	-	-	-	1	2	-	-	-	-	-	9	-	-
4.69	-	-	-	4	-	2	-	4	-	6	7	8	-	-	5.19	-	-	-	4	1	2	-	-	-	-	-	9	-	-
4.70	-	-	-	-	1	2	-	4	-	6	7	8	-	-	5.20	-	-	-	-	-	-	3	-	-	-	-	9	-	-
4.71	-	-	-	4	1	2	-	4	-	6	7	8	-	-	5.21	-	-	-	4	-	-	3	-	-	-	-	9	-	-
4.72	-	-	-	-	-	-	3	4	-	6	7	8	-	-	5.22	-	-	-	-	1	-	3	-	-	-	-	9	-	-
4.73	-	-	-	4	-	-	3	4	-	6	7	8	-	-	5.23	-	-	-	4	1	-	3	-	-	-	-	9	-	-
4.74	-	-	-	-	1	-	3	4	-	6	7	8	-	-	5.24	-	-	-	-	-	2	3	-	-	-	-	9	-	-
4.75	-	-	-	4	1	-	3	4	-	6	7	8	-	-	5.25	-	-	-	4	-	2	3	-	-	-	-	9	-	-
4.76	-	-	-	-	-	2	3	4	-	6	7	8	-	-	5.26	-	-	-	-	1	2	3	-	-	-	-	9	-	-
4.77	-	-	-	4	-	2	3	4	-	6	7	8	-	-	5.27	-	-	-	4	1	2	3	-	-	-	-	9	-	-
4.78	-	-	-	-	1	2	3	4	-	6	7	8	-	-	5.28	-	-	-	-	-	-	-	4	-	-	-	9	-	-
4.79	-	-	-	4	1	2	3	4	-	6	7	8	-	-	5.29	-	-	-	4	-	-	-	4	-	-	-	9	-	-
4.80	-	-	-	-	-	-	-	-	5	6	7	8	-	-	5.30	-	-	-	-	1	-	-	4	-	-	-	9	-	-
4.81	-	-	-	4	-	-	-	-	5	6	7	8	-	-	5.31	-	-	-	4	1	-	-	4	-	-	-	9	-	-
4.82	-	-	-	-	1	-	-	-	5	6	7	8	-	-	5.32	-	-	-	-	-	2	-	4	-	-	-	9	-	-
4.83	-	-	-	4	1	-	-	-	5	6	7	8	-	-	5.33	-	-	-	4	-	2	-	4	-	-	-	9	-	-
4.84	-	-	-	-	-	2	-	-	5	6	7	8	-	-	5.34	-	-	-	-	1	2	-	4	-	-	-	9	-	-
4.85	-	-	-	4	-	2	-	-	5	6	7	8	-	-	5.35	-	-	-	4	1	2	-	4	-	-	-	9	-	-
4.86	-	-	-	-	1	2	-	-	5	6	7	8	-	-	5.36	-	-	-	-	-	-	3	4	-	-	-	9	-	-
4.87	-	-	-	4	1	2	-	-	5	6	7	8	-	-	5.37	-	-	-	4	-	-	3	4	-	-	-	9	-	-
4.88	-	-	-	-	-	-	3	-	5	6	7	8	-	-	5.38	-	-	-	-	1	-	3	4	-	-	-	9	-	-
4.89	-	-	-	4	-	-	3	-	5	6	7	8	-	-	5.39	-	-	-	4	1	-	3	4	-	-	-	9	-	-
4.90	-	-	-	-	1	-	3	-	5	6	7	8	-	-	5.40	-	-	-	-	-	2	3	4	-	-	-	9	-	-
4.91	-	-	-	4	1	-	3	-	5	6	7	8	-	-	5.41	-	-	-	4	-	2	3	4	-	-	-	9	-	-
4.92	-	-	-	-	-	2	3	-	5	6	7	8	-	-	5.42	-	-	-	-	1	2	3	4	-	-	-	9	-	-
4.93	-	-	-	4	-	2	3	-	5	6	7	8	-	-	5.43	-	-	-	4	1	2	3	4	-	-	-	9	-	-
4.94	-	-	-	-	1	2	3	-	5	6	7	8	-	-	5.44	-	-	-	-	-	-	-	-	5	-	-	9	-	-
4.95	-	-	-	4	1	2	3	-	5	6	7	8	-	-	5.45	-	-	-	4	-	-	-	-	5	-	-	9	-	-
4.96	-	-	-	-	-	-	-	4	5	6	7	8	-	-	5.46	-	-	-	-	1	-	-	-	5	-	-	9	-	-
4.97	-	-	-	4	-	-	-	4	5	6	7	8	-	-	5.47	-	-	-	4	1	-	-	-	5	-	-	9	-	-
4.98	-	-	-	-	1	-	-	4	5	6	7	8	-	-	5.48	-	-	-	-	-	2	-	-	5	-	-	9	-	-
4.99	-	-	-	4	1	-	-	4	5	6	7	8	-	-	5.49	-	-	-	4	-	2	-	-	5	-	-	9	-	-

SUBCARRIER TUNING TABLE (10+4 SWITCH)
10.240 L.O. MASTER DIVIDE BY 8192

MHZ	4 POSITION				10 POSITION										MHZ	4 POSITION				10 POSITION									
	(1	2	3	4)	1	2	3	4	5	6	7	8	9	0		(1	2	3	4)	1	2	3	4	5	6	7	8	9	0
5.50	-	-	-	-	1	2	-	-	5	-	-	-	9	-	6.00	-	-	-	-	-	3	4	-	6	-	-	9	-	
5.51	-	-	-	-	1	2	-	-	5	-	-	-	9	-	6.01	-	-	-	-	-	3	4	-	6	-	-	9	-	
5.52	-	-	-	-	-	-	3	-	5	-	-	-	9	-	6.02	-	-	-	-	1	-	3	4	-	6	-	-	9	-
5.53	-	-	-	-	-	-	3	-	5	-	-	-	9	-	6.03	-	-	-	-	1	-	3	4	-	6	-	-	9	-
5.54	-	-	-	-	1	-	3	-	5	-	-	-	9	-	6.04	-	-	-	-	-	2	3	4	-	6	-	-	9	-
5.55	-	-	-	-	1	-	3	-	5	-	-	-	9	-	6.05	-	-	-	-	-	2	3	4	-	6	-	-	9	-
5.56	-	-	-	-	-	2	3	-	5	-	-	-	9	-	6.06	-	-	-	-	1	2	3	4	-	6	-	-	9	-
5.57	-	-	-	-	-	2	3	-	5	-	-	-	9	-	6.07	-	-	-	-	1	2	3	4	-	6	-	-	9	-
5.58	-	-	-	-	1	2	3	-	5	-	-	-	9	-	6.08	-	-	-	-	-	-	-	5	6	-	-	9	-	-
5.59	-	-	-	-	1	2	3	-	5	-	-	-	9	-	6.09	-	-	-	-	-	-	-	5	6	-	-	9	-	-
5.60	-	-	-	-	-	-	-	4	5	-	-	-	9	-	6.10	-	-	-	-	1	-	-	-	5	6	-	-	9	-
5.61	-	-	-	-	-	-	-	4	5	-	-	-	9	-	6.11	-	-	-	-	1	-	-	-	5	6	-	-	9	-
5.62	-	-	-	-	1	-	-	4	5	-	-	-	9	-	6.12	-	-	-	-	-	2	-	-	5	6	-	-	9	-
5.63	-	-	-	-	1	-	-	4	5	-	-	-	9	-	6.13	-	-	-	-	-	2	-	-	5	6	-	-	9	-
5.64	-	-	-	-	-	2	-	4	5	-	-	-	9	-	6.14	-	-	-	-	1	2	-	-	5	6	-	-	9	-
5.65	-	-	-	-	-	2	-	4	5	-	-	-	9	-	6.15	-	-	-	-	1	2	-	-	5	6	-	-	9	-
5.66	-	-	-	-	1	2	-	4	5	-	-	-	9	-	6.16	-	-	-	-	-	-	3	-	5	6	-	-	9	-
5.67	-	-	-	-	1	2	-	4	5	-	-	-	9	-	6.17	-	-	-	-	-	-	3	-	5	6	-	-	9	-
5.68	-	-	-	-	-	-	3	4	5	-	-	-	9	-	6.18	-	-	-	-	1	-	3	-	5	6	-	-	9	-
5.69	-	-	-	-	-	-	3	4	5	-	-	-	9	-	6.19	-	-	-	-	1	-	3	-	5	6	-	-	9	-
5.70	-	-	-	-	1	-	3	4	5	-	-	-	9	-	6.20	-	-	-	-	-	2	3	-	5	6	-	-	9	-
5.71	-	-	-	-	1	-	3	4	5	-	-	-	9	-	6.21	-	-	-	-	-	2	3	-	5	6	-	-	9	-
5.72	-	-	-	-	-	2	3	4	5	-	-	-	9	-	6.22	-	-	-	-	1	2	3	-	5	6	-	-	9	-
5.73	-	-	-	-	-	2	3	4	5	-	-	-	9	-	6.23	-	-	-	-	1	2	3	-	5	6	-	-	9	-
5.74	-	-	-	-	1	2	3	4	5	-	-	-	9	-	6.24	-	-	-	-	-	-	-	4	5	6	-	-	9	-
5.75	-	-	-	-	1	2	3	4	5	-	-	-	9	-	6.25	-	-	-	-	-	-	-	4	5	6	-	-	9	-
5.76	-	-	-	-	-	-	-	-	6	-	-	-	9	-	6.26	-	-	-	-	1	-	-	4	5	6	-	-	9	-
5.77	-	-	-	-	-	-	-	-	6	-	-	-	9	-	6.27	-	-	-	-	1	-	-	4	5	6	-	-	9	-
5.78	-	-	-	-	1	-	-	-	6	-	-	-	9	-	6.28	-	-	-	-	-	2	-	4	5	6	-	-	9	-
5.79	-	-	-	-	1	-	-	-	6	-	-	-	9	-	6.29	-	-	-	-	-	2	-	4	5	6	-	-	9	-
5.80	-	-	-	-	-	2	-	-	6	-	-	-	9	-	6.30	-	-	-	-	1	2	-	4	5	6	-	-	9	-
5.81	-	-	-	-	-	2	-	-	6	-	-	-	9	-	6.31	-	-	-	-	1	2	-	4	5	6	-	-	9	-
5.82	-	-	-	-	1	2	-	-	6	-	-	-	9	-	6.32	-	-	-	-	-	-	3	4	5	6	-	-	9	-
5.83	-	-	-	-	1	2	-	-	6	-	-	-	9	-	6.33	-	-	-	-	-	-	3	4	5	6	-	-	9	-
5.84	-	-	-	-	-	-	3	-	6	-	-	-	9	-	6.34	-	-	-	-	1	-	3	4	5	6	-	-	9	-
5.85	-	-	-	-	-	-	3	-	6	-	-	-	9	-	6.35	-	-	-	-	1	-	3	4	5	6	-	-	9	-
5.86	-	-	-	-	1	-	3	-	6	-	-	-	9	-	6.36	-	-	-	-	-	2	3	4	5	6	-	-	9	-
5.87	-	-	-	-	1	-	3	-	6	-	-	-	9	-	6.37	-	-	-	-	-	2	3	4	5	6	-	-	9	-
5.88	-	-	-	-	-	2	3	-	6	-	-	-	9	-	6.38	-	-	-	-	1	2	3	4	5	6	-	-	9	-
5.89	-	-	-	-	-	2	3	-	6	-	-	-	9	-	6.39	-	-	-	-	1	2	3	4	5	6	-	-	9	-
5.90	-	-	-	-	1	2	3	-	6	-	-	-	9	-	6.40	-	-	-	-	-	-	-	-	-	7	-	9	-	-
5.91	-	-	-	-	1	2	3	-	6	-	-	-	9	-	6.41	-	-	-	-	-	-	-	-	-	7	-	9	-	-
5.92	-	-	-	-	-	-	-	4	-	6	-	-	9	-	6.42	-	-	-	-	1	-	-	-	-	7	-	9	-	-
5.93	-	-	-	-	-	-	-	4	-	6	-	-	9	-	6.43	-	-	-	-	1	-	-	-	-	7	-	9	-	-
5.94	-	-	-	-	1	-	-	4	-	6	-	-	9	-	6.44	-	-	-	-	-	2	-	-	-	7	-	9	-	-
5.95	-	-	-	-	1	-	-	4	-	6	-	-	9	-	6.45	-	-	-	-	-	2	-	-	-	7	-	9	-	-
5.96	-	-	-	-	-	2	-	4	-	6	-	-	9	-	6.46	-	-	-	-	1	2	-	-	-	7	-	9	-	-
5.97	-	-	-	-	-	2	-	4	-	6	-	-	9	-	6.47	-	-	-	-	1	2	-	-	-	7	-	9	-	-
5.98	-	-	-	-	1	2	-	4	-	6	-	-	9	-	6.48	-	-	-	-	-	-	3	-	-	7	-	9	-	-
5.99	-	-	-	-	1	2	-	4	-	6	-	-	9	-	6.49	-	-	-	-	-	-	3	-	-	7	-	9	-	-

SUBCARRIER TUNING TABLE (10+4 SWITCH)
10.240 L.O. MASTER DIVIDE BY 8192

MHZ	4 POSITION				10 POSITION										MHZ	4 POSITION				10 POSITION										
	(1	2	3	4)	1	2	3	4	5	6	7	8	9	0		(1	2	3	4)	1	2	3	4	5	6	7	8	9	0	
6.50	-	-	-	-	1	-	3	-	-	-	7	-	9	-	7.00	-	-	-	-	-	2	3	4	5	-	7	-	9	-	
6.51	-	-	-	-	1	-	3	-	-	-	7	-	9	-	7.01	-	-	-	-	-	2	3	4	5	-	7	-	9	-	
6.52	-	-	-	-	-	2	3	-	-	-	7	-	9	-	7.02	-	-	-	-	1	2	3	4	5	-	7	-	9	-	
6.53	-	-	-	-	-	2	3	-	-	-	7	-	9	-	7.03	-	-	-	-	1	2	3	4	5	-	7	-	9	-	
6.54	-	-	-	-	1	2	3	-	-	-	7	-	9	-	7.04	-	-	-	-	-	-	-	-	-	6	7	-	9	-	
6.55	-	-	-	-	1	2	3	-	-	-	7	-	9	-	7.05	-	-	-	-	-	-	-	-	-	6	7	-	9	-	
6.56	-	-	-	-	-	-	4	-	-	-	7	-	9	-	7.06	-	-	-	-	1	-	-	-	-	6	7	-	9	-	
6.57	-	-	-	-	-	-	4	-	-	-	7	-	9	-	7.07	-	-	-	-	1	-	-	-	-	6	7	-	9	-	
6.58	-	-	-	-	1	-	4	-	-	-	7	-	9	-	7.08	-	-	-	-	-	2	-	-	-	6	7	-	9	-	
6.59	-	-	-	-	1	-	4	-	-	-	7	-	9	-	7.09	-	-	-	-	-	2	-	-	-	6	7	-	9	-	
6.60	-	-	-	-	-	2	-	4	-	-	7	-	9	-	7.10	-	-	-	-	1	2	-	-	-	6	7	-	9	-	
6.61	-	-	-	-	-	2	-	4	-	-	7	-	9	-	7.11	-	-	-	-	1	2	-	-	-	6	7	-	9	-	
6.62	-	-	-	-	1	2	-	4	-	-	7	-	9	-	7.12	-	-	-	-	-	-	3	-	-	6	7	-	9	-	
6.63	-	-	-	-	1	2	-	4	-	-	7	-	9	-	7.13	-	-	-	-	-	-	3	-	-	6	7	-	9	-	
6.64	-	-	-	-	-	-	3	4	-	-	7	-	9	-	7.14	-	-	-	-	1	-	3	-	-	6	7	-	9	-	
6.65	-	-	-	-	-	-	3	4	-	-	7	-	9	-	7.15	-	-	-	-	1	-	3	-	-	6	7	-	9	-	
6.66	-	-	-	-	1	-	3	4	-	-	7	-	9	-	7.16	-	-	-	-	-	2	3	-	-	6	7	-	9	-	
6.67	-	-	-	-	1	-	3	4	-	-	7	-	9	-	7.17	-	-	-	-	-	2	3	-	-	6	7	-	9	-	
6.68	-	-	-	-	-	2	3	4	-	-	7	-	9	-	7.18	-	-	-	-	1	2	3	-	-	6	7	-	9	-	
6.69	-	-	-	-	-	2	3	4	-	-	7	-	9	-	7.19	-	-	-	-	1	2	3	-	-	6	7	-	9	-	
6.70	-	-	-	-	1	2	3	4	-	-	7	-	9	-	7.20	-	-	-	-	-	-	4	-	-	6	7	-	9	-	
6.71	-	-	-	-	1	2	3	4	-	-	7	-	9	-	7.21	-	-	-	-	-	-	4	-	-	6	7	-	9	-	
6.72	-	-	-	-	-	-	-	5	-	-	7	-	9	-	7.22	-	-	-	-	1	-	-	4	-	-	6	7	-	9	-
6.73	-	-	-	-	-	-	-	5	-	-	7	-	9	-	7.23	-	-	-	-	1	-	-	4	-	-	6	7	-	9	-
6.74	-	-	-	-	1	-	-	5	-	-	7	-	9	-	7.24	-	-	-	-	-	2	-	4	-	-	6	7	-	9	-
6.75	-	-	-	-	1	-	-	5	-	-	7	-	9	-	7.25	-	-	-	-	-	2	-	4	-	-	6	7	-	9	-
6.76	-	-	-	-	-	2	-	-	5	-	7	-	9	-	7.26	-	-	-	-	1	2	-	4	-	-	6	7	-	9	-
6.77	-	-	-	-	-	2	-	-	5	-	7	-	9	-	7.27	-	-	-	-	1	2	-	4	-	-	6	7	-	9	-
6.78	-	-	-	-	1	2	-	-	5	-	7	-	9	-	7.28	-	-	-	-	-	-	3	4	-	-	6	7	-	9	-
6.79	-	-	-	-	1	2	-	-	5	-	7	-	9	-	7.29	-	-	-	-	-	-	3	4	-	-	6	7	-	9	-
6.80	-	-	-	-	-	-	3	-	5	-	7	-	9	-	7.30	-	-	-	-	1	-	3	4	-	-	6	7	-	9	-
6.81	-	-	-	-	-	-	3	-	5	-	7	-	9	-	7.31	-	-	-	-	1	-	3	4	-	-	6	7	-	9	-
6.82	-	-	-	-	1	-	3	-	5	-	7	-	9	-	7.32	-	-	-	-	-	2	3	4	-	-	6	7	-	9	-
6.83	-	-	-	-	1	-	3	-	5	-	7	-	9	-	7.33	-	-	-	-	-	2	3	4	-	-	6	7	-	9	-
6.84	-	-	-	-	-	2	3	-	5	-	7	-	9	-	7.34	-	-	-	-	1	2	3	4	-	-	6	7	-	9	-
6.85	-	-	-	-	-	2	3	-	5	-	7	-	9	-	7.35	-	-	-	-	1	2	3	4	-	-	6	7	-	9	-
6.86	-	-	-	-	1	2	3	-	5	-	7	-	9	-	7.36	-	-	-	-	-	-	-	-	5	6	7	-	9	-	
6.87	-	-	-	-	1	2	3	-	5	-	7	-	9	-	7.37	-	-	-	-	-	-	-	-	5	6	7	-	9	-	
6.88	-	-	-	-	-	-	4	5	-	-	7	-	9	-	7.38	-	-	-	-	1	-	-	-	5	6	7	-	9	-	
6.89	-	-	-	-	-	-	4	5	-	-	7	-	9	-	7.39	-	-	-	-	1	-	-	-	5	6	7	-	9	-	
6.90	-	-	-	-	1	-	-	4	5	-	7	-	9	-	7.40	-	-	-	-	-	2	-	-	5	6	7	-	9	-	
6.91	-	-	-	-	1	-	-	4	5	-	7	-	9	-	7.41	-	-	-	-	-	2	-	-	5	6	7	-	9	-	
6.92	-	-	-	-	-	2	-	4	5	-	7	-	9	-	7.42	-	-	-	-	1	2	-	-	5	6	7	-	9	-	
6.93	-	-	-	-	-	2	-	4	5	-	7	-	9	-	7.43	-	-	-	-	1	2	-	-	5	6	7	-	9	-	
6.94	-	-	-	-	1	2	-	4	5	-	7	-	9	-	7.44	-	-	-	-	-	-	3	-	5	6	7	-	9	-	
6.95	-	-	-	-	1	2	-	4	5	-	7	-	9	-	7.45	-	-	-	-	-	-	3	-	5	6	7	-	9	-	
6.96	-	-	-	-	-	-	3	4	5	-	7	-	9	-	7.46	-	-	-	-	1	-	3	-	5	6	7	-	9	-	
6.97	-	-	-	-	-	-	3	4	5	-	7	-	9	-	7.47	-	-	-	-	1	-	3	-	5	6	7	-	9	-	
6.98	-	-	-	-	1	-	3	4	5	-	7	-	9	-	7.48	-	-	-	-	-	2	3	-	5	6	7	-	9	-	
6.99	-	-	-	-	1	-	3	4	5	-	7	-	9	-	7.49	-	-	-	-	-	2	3	-	5	6	7	-	9	-	

SUBCARRIER TUNING TABLE (10+4 SWITCH)
10.240 L.O. MASTER DIVIDE BY 8192

MHz	4 POSITION				10 POSITION										MHz	4 POSITION				10 POSITION										
	(1)	(2)	(3)	(4)	1	2	3	4	5	6	7	8	9	0		(1)	(2)	(3)	(4)	1	2	3	4	5	6	7	8	9	0	
7.50	-	-	-	-	1	2	3	-	5	6	7	-	9	-	8.00	-	-	-	-	-	-	-	5	-	-	8	9	-		
7.51	-	-	-	-	1	2	3	-	5	6	7	-	9	-	8.01	-	-	-	-	-	-	-	5	-	-	8	9	-		
7.52	-	-	-	-	-	-	-	4	5	6	7	-	9	-	8.02	-	-	-	-	1	-	-	-	5	-	-	8	9	-	
7.53	-	-	-	-	-	-	-	4	5	6	7	-	9	-	8.03	-	-	-	-	1	-	-	-	5	-	-	8	9	-	
7.54	-	-	-	-	1	-	-	4	5	6	7	-	9	-	8.04	-	-	-	-	-	2	-	-	5	-	-	8	9	-	
7.55	-	-	-	-	1	-	-	4	5	6	7	-	9	-	8.05	-	-	-	-	-	2	-	-	5	-	-	8	9	-	
7.56	-	-	-	-	-	2	-	4	5	6	7	-	9	-	8.06	-	-	-	-	1	2	-	-	5	-	-	8	9	-	
7.57	-	-	-	-	-	2	-	4	5	6	7	-	9	-	8.07	-	-	-	-	1	2	-	-	5	-	-	8	9	-	
7.58	-	-	-	-	1	2	-	4	5	6	7	-	9	-	8.08	-	-	-	-	-	-	3	-	5	-	-	8	9	-	
7.59	-	-	-	-	1	2	-	4	5	6	7	-	9	-	8.09	-	-	-	-	-	-	3	-	5	-	-	8	9	-	
7.60	-	-	-	-	-	-	3	4	5	6	7	-	9	-	8.10	-	-	-	-	1	-	3	-	5	-	-	8	9	-	
7.61	-	-	-	-	-	-	3	4	5	6	7	-	9	-	8.11	-	-	-	-	1	-	3	-	5	-	-	8	9	-	
7.62	-	-	-	-	1	-	3	4	5	6	7	-	9	-	8.12	-	-	-	-	-	2	3	-	5	-	-	8	9	-	
7.63	-	-	-	-	1	-	3	4	5	6	7	-	9	-	8.13	-	-	-	-	-	2	3	-	5	-	-	8	9	-	
7.64	-	-	-	-	-	2	3	4	5	6	7	-	9	-	8.14	-	-	-	-	1	2	3	-	5	-	-	8	9	-	
7.65	-	-	-	-	-	2	3	4	5	6	7	-	9	-	8.15	-	-	-	-	1	2	3	-	5	-	-	8	9	-	
7.66	-	-	-	-	1	2	3	4	5	6	7	-	9	-	8.16	-	-	-	-	-	-	-	4	5	-	-	8	9	-	
7.67	-	-	-	-	1	2	3	4	5	6	7	-	9	-	8.17	-	-	-	-	-	-	-	4	5	-	-	8	9	-	
7.68	-	-	-	-	-	-	-	-	-	-	-	-	8	9	-	8.18	-	-	-	-	1	-	-	4	5	-	-	8	9	-
7.69	-	-	-	-	-	-	-	-	-	-	-	-	8	9	-	8.19	-	-	-	-	1	-	-	4	5	-	-	8	9	-
7.70	-	-	-	-	1	-	-	-	-	-	-	-	8	9	-	8.20	-	-	-	-	-	2	-	4	5	-	-	8	9	-
7.71	-	-	-	-	1	-	-	-	-	-	-	-	8	9	-	8.21	-	-	-	-	-	2	-	4	5	-	-	8	9	-
7.72	-	-	-	-	-	2	-	-	-	-	-	-	8	9	-	8.22	-	-	-	-	1	2	-	4	5	-	-	8	9	-
7.73	-	-	-	-	-	2	-	-	-	-	-	-	8	9	-	8.23	-	-	-	-	1	2	-	4	5	-	-	8	9	-
7.74	-	-	-	-	1	2	-	-	-	-	-	-	8	9	-	8.24	-	-	-	-	-	-	3	4	5	-	-	8	9	-
7.75	-	-	-	-	1	2	-	-	-	-	-	-	8	9	-	8.25	-	-	-	-	-	-	3	4	5	-	-	8	9	-
7.76	-	-	-	-	-	-	3	-	-	-	-	-	8	9	-	8.26	-	-	-	-	1	-	3	4	5	-	-	8	9	-
7.77	-	-	-	-	-	-	3	-	-	-	-	-	8	9	-	8.27	-	-	-	-	1	-	3	4	5	-	-	8	9	-
7.78	-	-	-	-	1	-	3	-	-	-	-	-	8	9	-	8.28	-	-	-	-	-	2	3	4	5	-	-	8	9	-
7.79	-	-	-	-	1	-	3	-	-	-	-	-	8	9	-	8.29	-	-	-	-	-	2	3	4	5	-	-	8	9	-
7.80	-	-	-	-	-	2	3	-	-	-	-	-	8	9	-	8.30	-	-	-	-	1	2	3	4	5	-	-	8	9	-
7.81	-	-	-	-	-	2	3	-	-	-	-	-	8	9	-	8.31	-	-	-	-	1	2	3	4	5	-	-	8	9	-
7.82	-	-	-	-	1	2	3	-	-	-	-	-	8	9	-	8.32	-	-	-	-	-	-	-	-	6	-	-	8	9	-
7.83	-	-	-	-	1	2	3	-	-	-	-	-	8	9	-	8.33	-	-	-	-	-	-	-	-	6	-	-	8	9	-
7.84	-	-	-	-	-	-	-	4	-	-	-	-	8	9	-	8.34	-	-	-	-	1	-	-	-	6	-	-	8	9	-
7.85	-	-	-	-	-	-	-	4	-	-	-	-	8	9	-	8.35	-	-	-	-	1	-	-	-	6	-	-	8	9	-
7.86	-	-	-	-	1	-	-	4	-	-	-	-	8	9	-	8.36	-	-	-	-	-	2	-	-	6	-	-	8	9	-
7.87	-	-	-	-	1	-	-	4	-	-	-	-	8	9	-	8.37	-	-	-	-	-	2	-	-	6	-	-	8	9	-
7.88	-	-	-	-	-	2	-	4	-	-	-	-	8	9	-	8.38	-	-	-	-	1	2	-	-	6	-	-	8	9	-
7.89	-	-	-	-	-	2	-	4	-	-	-	-	8	9	-	8.39	-	-	-	-	1	2	-	-	6	-	-	8	9	-
7.90	-	-	-	-	1	2	-	4	-	-	-	-	8	9	-	8.40	-	-	-	-	-	-	3	-	6	-	-	8	9	-
7.91	-	-	-	-	1	2	-	4	-	-	-	-	8	9	-	8.41	-	-	-	-	-	-	3	-	6	-	-	8	9	-
7.92	-	-	-	-	-	-	3	4	-	-	-	-	8	9	-	8.42	-	-	-	-	1	-	3	-	6	-	-	8	9	-
7.93	-	-	-	-	-	-	3	4	-	-	-	-	8	9	-	8.43	-	-	-	-	1	-	3	-	6	-	-	8	9	-
7.94	-	-	-	-	1	-	3	4	-	-	-	-	8	9	-	8.44	-	-	-	-	-	2	3	-	6	-	-	8	9	-
7.95	-	-	-	-	1	-	3	4	-	-	-	-	8	9	-	8.45	-	-	-	-	-	2	3	-	6	-	-	8	9	-
7.96	-	-	-	-	-	2	3	4	-	-	-	-	8	9	-	8.46	-	-	-	-	1	2	3	-	6	-	-	8	9	-
7.97	-	-	-	-	-	2	3	4	-	-	-	-	8	9	-	8.47	-	-	-	-	1	2	3	-	6	-	-	8	9	-
7.98	-	-	-	-	1	2	3	4	-	-	-	-	8	9	-	8.48	-	-	-	-	-	-	-	4	-	6	-	8	9	-
7.99	-	-	-	-	1	2	3	4	-	-	-	-	8	9	-	8.49	-	-	-	-	-	-	-	4	-	6	-	8	9	-

